

Industrial Ethernet

Version 2025



Weidmüller 

Industrial Ethernet – Active components

Catalogue 9

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Catalogue 9

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Active components

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Unmanaged Power over Ethernet

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Managed Switches

Fast Ethernet, Fast / Gigabit Ethernet, Gigabit Ethernet
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Managed Power over Ethernet

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Managed Switches IEC 61850-3

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Modular Managed Switches IEC 61850-3

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Media interface modules for modular switches

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Active components

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Configuration backup and restore module

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Antennas and antenna accessories

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Mounting kit for 19" rack

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Passive components

An overview of our portfolio

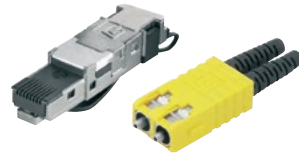
Single Pair Ethernet (SPE)

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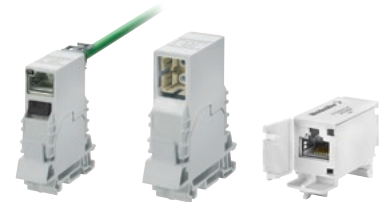
IP20 plug-in connectors

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IP20 mounting rail outlets

Page K.13



IP65 service interface FrontCom® Vario

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IP67 plug-in connectors

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Cabling solutions

An overview of our portfolio

Raw cable Single Pair Ethernet (SPE)

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Connecting cables

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Single Pair Ethernet (SPE) patch cables

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FO connecting cables

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FO patch cables

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FO system cables

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Passive components

Accessories from a single source

Cable connector

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Copper cabling tools

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Cabtite

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Cable Bender

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Protective caps

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Inkjet printer

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Service and support

Service connects – worldwide

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- Service connects – worldwide
- Engineering services and customised products
- easyConnect – Your Industrial Service Platform
- Support Center
- Additional support services
- Weidmüller Configurator

Digital ordering options

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Purchasing made easy:

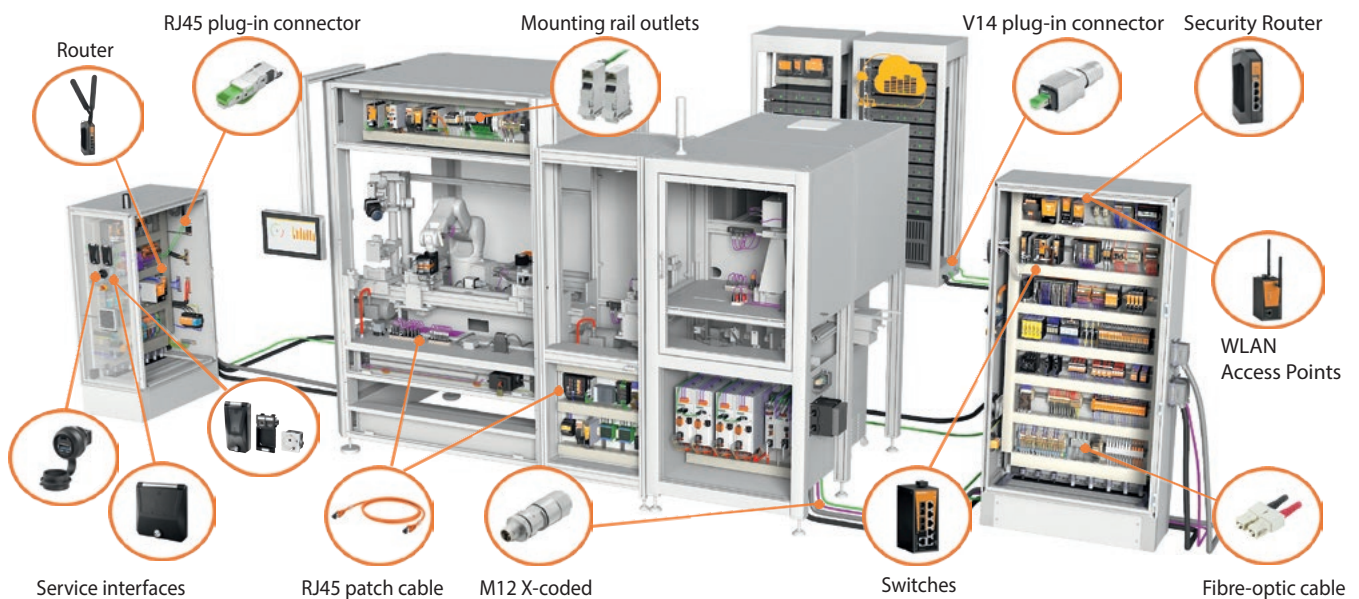
- Weidmüller eShop
- OCI interface
- EDI interface

Intended use for Industrial Ethernet

A complete range of products for industrial communications infrastructure

The trend to network industrial plant components using Ethernet protocols was already apparent several years ago. Ethernet communication is now well established in all market segments; including automotive, general machine construction, process industry, transportation, energy and even Maritime. The requirements of these differ in terms of protocols, environmental conditions, certifications and standards. As well as being a leading provider of industrial connection and network products, Weidmüller embraces solutions for these differing requirements with a comprehensive and highquality product range of active and passive components for Ethernet communications.

The basic requirements of these industrial markets are high reliability, availability and safeguarding against failure. These are met by extremely high MTBF times of our network components. Using Weidmüller's high-quality STEADYTEC® connector system means that maximum reliability and simple operation is ensured. Indeed, Weidmüller's network components create a complete communications infrastructure for industrial applications in machine construction, process and plant engineering and energy.





Automotive

The automotive manufacturers of AIDA (Automation Initiative of the German Automotive Industry) are the drivers behind the use of the Industrial Ethernet in manufacturing. Extremely harsh environmental conditions place high demands on the components used: Cabling must be torsion-resistant and there are increased EMC requirements for connectors and active devices. For these areas of application, Weidmüller offers a complete product range consisting of copper and fibre optic connectors that are designed to meet the special needs of robot cabling.



Machinery & Plant Engineering

Machinery has to stand out from the competition with special services and a stronger customer focus. This results in a dynamic change in machinery and plant construction, demanding greater economic efficiency, quality, flexibility and performance from machines. The networking of machine segments and plant parts and their connection to higher-level office networks is playing an increasingly important role in this. Our products are perfectly adapted to these requirements and offer not only robustness and reliability, but are also easy to configure.



Ships

The shipbuilding industry is also experiencing disruptive market development in the face of rapidly advancing technological developments. Autonomous shipping, sustainability, networking, digitalisation concepts and advanced data analytics are the key topics in this respect. To meet the requirements of this industry, the various products in our portfolio include variants with a marine approval according to DNV.



Transmission & Distribution

The energy market is booming – especially in the field of renewable energies. The products used here must often be able to withstand harsh environmental conditions. To ensure that power grids function reliably and stably, intelligent solutions are being integrated more and more in order to minimise downtimes and to reduce maintenance work. This requires uninterrupted communication. We support the energy sector with reliable components that are approved according to IEC 61850-3 and IEEE 1613 standards.



Process industry

In large-scale process plants, fibre optic media are often used for communication over long distances. However, for reliable data transmission in the field, the components used must be protected from harmful environmental influences. These include high temperature fluctuations, vibrations, dust exposure and electromagnetic influences. Our active and passive Ethernet components have ATEX approval and can reliably withstand these influences.

Active components

Introduction

Active components

Introduction - Active components

A.2

Transfer data between devices in the network flexibly and reliably

Active Industrial Ethernet – the perfect solution for countless applications

A

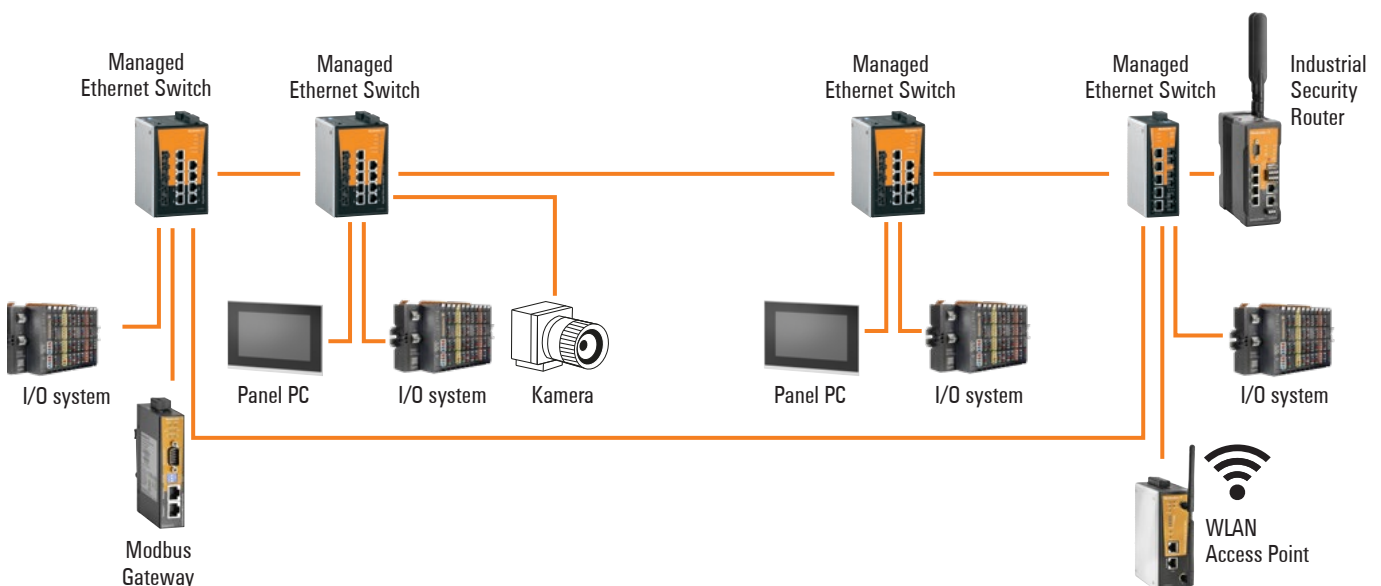
The Industrial Ethernet has proved itself in many areas of automation. With its high performance and flexibility, it opens up a multitude of design options for the network infrastructure. Our Industrial Ethernet components are the perfect connection solution for data communication between Ethernet-capable devices in industrial automation. They have various features and approvals, which is why they are ideally suited to many industrial applications.

As a complete supplier of industrial network infrastructures, we are active in machinery and plant engineering, shipbuilding, the process industry and energy, including traditional/renewable power generation, as well as transmission and distribution.

Our broad product range includes a variety of products with a wide range of approvals for individual requirements. These include Fast/Gigabit switches (unmanaged/managed including Power over Ethernet variants), routers, WLAN devices, IoT gateways, media converters and protocol gateways, as well as u-link, our remote maintenance solution. All our Ethernet components meet the highest demands and enable reliable, flexible Ethernet communication.

Thanks to the highly differentiated Eco, Basic, Value, Advanced, Premium and SubstationLine product lines, our switches are suitable for meeting a wide range of requirements. This allows us to guarantee optimal data transmission at all times – from simple communication structures to the complex data meshes of extensive systems.

As an ideal complement to this, we offer you a comprehensive passive product portfolio of RJ45 and fibre optic connectors and cables. This makes Weidmüller your perfect partner for Industrial Ethernet solutions.





Always the best choice for your requirements

Our switch product lines for all-round application-oriented solutions

A

Ethernet networks must allow the exchange of data packets between specific participants. For this purpose, the participants are connected to each other via Ethernet switches. Ethernet switches thus collect all data streams and distribute them to the respective participants to enable communication to take place. Since Ethernet switches have to meet very different requirements depending on the area of application, we offer a variety of product lines. They differ in terms of their properties, special features and technical highlights.



EcoLine:

Our unmanaged EcoLine switches are characterised by a rich variety of different models and high economic efficiency. They can be used in a uniquely wide temperature range of -40 to +75 °C, which enables them to be operated both inside production plants and in the field. The robust devices have 5 to 24 ports as well as a redundant voltage input. Their SFP ports allow especially flexible use, regardless of the available communication media and/or the required distance. Power over Ethernet switches are also available within the EcoLine in order to reduce the required cabling work.



EcoLine series B:

The best choice when it comes to simple and reliable communication. Compared to their predecessors, the switches are even more compact and can be accommodated in even the smallest of spaces thanks to their rotatable locking base. The product series includes the most frequently used switches in industry and building automation with 5 to 16 ports in Fast Ethernet and Gigabit or with flexible SFPs.



BasicLine:

The BasicLine series consists of an extensive range of unmanaged plug and play switches. All devices were developed for use in harsh industrial environments and have numerous international approvals, such as cULus, Class I, Div. 2, ATEX and DNV. This makes them ideal for use in many different industries. The devices are available with Fast Ethernet and Gigabit Ethernet ports. In addition, the series also includes individual variants with Power over Ethernet ports.



BasicLine series B:

Highly integrated and powerful. The BasicLine Series B sets new standards and surpasses the BasicLine in terms of ATEX, IECEx, CCCEX, DNV, ABS, BV, RINA and LR certifications. It also sets new standards in terms of handling thanks to the improved DIN clip and push-in connection technology. With up to 24 ports and SFP slots for a high degree of flexibility for every application.



ValueLine:

Our ValueLine series features unmanaged and managed switches available with Fast Ethernet and Gigabit Ethernet ports. Our ValueLine managed switches support various industrial communication protocols, e.g. MODBUS/TCP, PROFINET/RT and ETHERNET/IP. This enables optimal integration into the most common automation networks. They also support a variety of helpful management functions, such as port mirroring and error messaging via e-mail or relay. All of these functions can be set up with ease via the web-based management interface. ValueLine switches also have numerous international approvals to ensure proper operation in a variety of industries (cULus, Class I Div. 2 / ATEX Zone 2, DNV).



AdvancedLine:

The managed switches of our AdvancedLine are characterised by a wide assortment of variants and economic efficiency. The different model variants designed for Fast Ethernet and Gigabit as well as integrating 5 to 24 ports and SFP slots ensure a high degree of flexibility. Their especially wide temperature range of -40 to +75 °C allows them to be used both in production plants and in the field. All switches in the series can be intuitively configured via a browser-based web interface. The comprehensive management tool can be used to set up various redundancy, monitoring, traffic filtering and security functions. The AdvancedLine ranges from full-managed switches for demanding applications to lite-managed switches for simpler requirements within a network and offers an excellent price-performance ratio. Power over Ethernet switches are also available in the AdvancedLine in order to reduce cabling work.



SubstationLine:

The SubstationLine comprises managed Ethernet switches that comply with the IEC 61850-3 standard, making them robust enough for operation in harsh environments. All switches include a redundant power supply, and the series also includes variants with Fast Ethernet, Gigabit, all the way up to 10 Gigabit Ethernet, as well as sophisticated features like PTPv2 time synchronisation. All devices were designed for use in substations and other energy (T&D) systems, where electromagnetic interference is higher than in other industries. To cope with the complexity of larger networks, the SubstationLine also offers switches with Layer 3 functionality.

Unmanaged Switches

Overview

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| Unmanaged Switches | Introduction - Unmanaged Switches | B.2 |
| | Unmanaged Switches Fast Ethernet | B.4 |
| | Unmanaged Power over Ethernet Switches Fast Ethernet | B.23 |
| | Unmanaged Switches Fast/Gigabit Ethernet | B.25 |
| | Unmanaged Switches Gigabit Ethernet | B.27 |
| | Unmanaged Power over Ethernet Switches Gigabit Ethernet | B.39 |
| | Power over Ethernet Injector Gigabit Ethernet | B.41 |
| | Unmanaged Single Pair Ethernet Switches | B.42 |

The proven standard for active network components

Unmanaged switches – adaptable and economical

B

Unmanaged switches require no configuration and are nevertheless adaptable. They use basic standardised protocols, such as autonegotiation, autocrossing and flow control, allowing them to adapt automatically to widely varying transmission speeds or connector assignments. In addition, the switches are protocol-transparent. Each port of a switch forms its own collision domain. All switches support the use of twisted pair cabling with RJ45 interface or fibre optic cable based on the interfaces specified in IEEE 802.3.

Our unmanaged switches are the simple and economical standard start-up solution for the Industrial Ethernet. We offer different versions with different features. In addition to the unmanaged switches of the EcoLine, BasicLine and ValueLine, we can also offer you Power over Ethernet variants within all lines that can significantly reduce your wiring work. This means you can also operate Ethernet devices in areas that are difficult to access – without a separate power supply cable.

Your special advantage:

- Wide variety of ports in terms of number and features to meet individual requirements
- Fast Ethernet and Gigabit versions available, including Power over Ethernet variants
- Rapid fault diagnosis thanks to the clearly visible LED display
- Robust housing for reliable long-term use in different environments

See
chapter A for
details about
the product
lines



Variety of versions

Variety of port numbers and media types for a wide range of applications (up to 24 ports)

Design advantage

Space-saving design for high economic efficiency



Variety of models

Numerous international approvals, such as cULus, KC, Class 1 Div. 2 / ATEX Zone 2 and DNV

Variety of models

Fast Ethernet | Gigabit and Power over Ethernet versions

5 and 8-Port unmanaged Fast Ethernet Switches

- Compact design
- Wide temperature range
- AC/DC power supply input
- Redundant voltage inputs

IE-SW-EL05-5TX



IE-SW-EL08-8TX



Technical data

| | |
|-------------------------------------|--|
| Technology | |
| Standard | |
| Data switching | |
| Flow control | |
| Switch characteristics | |
| MAC table size | |
| Packet buffer size | |
| Interfaces | |
| RJ45 ports | |
| Number of ports | |
| Fibre-optic ports | |
| Power supply | |
| Connection type | |
| Voltage supply range | |
| Voltage supply | |
| Current consumption | |
| Overload current protection | |
| Reverse polarity protection | |
| Physical characteristics | |
| Housing main material | |
| Protection degree | |
| Type of mounting | |
| Dimensions H x W x D | |
| Net weight | |
| Environmental conditions | |
| Operating temperature | |
| Humidity | |
| Operating altitude | |
| EMC conformity and approvals | |
| EMC standards | |
| Safety standard | |
| Shock | |
| Vibration | |
| MTBF | |
| Operating time (hours), min. | |
| According to Standard | |
| Approvals | |
| Approvals | |
| Note | |

| |
|--|
| IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3x for flow control |
| Store and Forward |
| IEEE 802.3x flow control |
| 1 K |
| 448 kBit |
| 10/100BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| 5x RJ45 |
| 1 removable 4-pin terminal block |
| 10.8...52.8VDC / 18...36VAC |
| 12/24/48 V DC, 24 V AC, 2 redundant inputs |
| 0.1A @ 24V |
| Yes |
| Yes |
| Metal |
| IP30 |
| DIN rail |
| 95 / 26.1 / 70 mm (3.7402 / 1.0276 / 2.7559 inch) |
| 205 GRM |
| -40 °C...75 °C |
| 5 to 95 % (non-condensing) |
| 2000m in acc. with UL |
| EN 55032, EN 55024, CISPR 32, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0.5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms, IEC 61000-4-8 |
| UL 61010-1, UL 61010-2-201 |
| according to IEC 60068-2-27 |
| according to IEC 60068-2-6 |
| 2638236h |
| Telcordia SR-332 |
| CE; CULUS; KOREANCERT; UKCA |

| |
|--|
| IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3x for flow control |
| Store and Forward |
| IEEE 802.3x flow control |
| 1 K |
| 448 kBit |
| 10/100BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| 8x RJ45 |
| 1 removable 4-pin terminal block |
| 10.8...52.8VDC / 18...36VAC |
| 12/24/48 V DC, 24 V AC, 2 redundant inputs |
| 0.14A @ 24V |
| Yes |
| Yes |
| Metal |
| IP30 |
| DIN rail |
| 95 / 41 / 90 mm (3.7402 / 1.6142 / 3.5433 inch) |
| 350 GRM |
| -40 °C...75 °C |
| 5 to 95 % (non-condensing) |
| 2000m in acc. with UL |
| EN 55032, EN 55024, CISPR 32, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0.5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms, IEC 61000-4-8 |
| UL 61010-1, UL 61010-2-201 |
| according to IEC 60068-2-27 |
| according to IEC 60068-2-6 |
| 1390019h |
| Telcordia SR-332 |
| CE; CULUS; KOREANCERT; UKCA |

Ordering data

| | |
|-------------|--|
| Note | |
|-------------|--|

| Type | Qty. | Order No. |
|----------------|------|------------|
| IE-SW-EL05-5TX | 1 | 2682130000 |

| Type | Qty. | Order No. |
|----------------|------|------------|
| IE-SW-EL08-8TX | 1 | 2682140000 |

8-Port unmanaged Fast Ethernet Switches

- Compact design
- Wide temperature range

Technical data

| | |
|--|----------|
| Technology | Standard |
| Data switching | |
| Flow control | |
| Switch characteristics | |
| MAC table size | |
| Packet buffer size | |
| Interfaces | |
| RJ45 ports | |
| Number of ports | |
| Fibre-optic ports | |
| Fibre optic transceiver characteristics | |
| Transmission rate | |
| Connector type | |
| Transceiver type | |
| Transmission distance, typ. | |
| Wavelength | |
| Receive power | |
| Transmission power | |
| Link-budget | |
| Power supply | |
| Connection type | |
| Voltage supply range | |
| Voltage supply | |
| Current consumption | |
| Overload current protection | |
| Reverse polarity protection | |
| Physical characteristics | |
| Housing main material | |
| Protection degree | |
| Type of mounting | |
| Dimensions H x W x D | |
| Net weight | |
| Environmental conditions | |
| Operating temperature | |
| Humidity | |
| Operating altitude | |
| EMC conformity and approvals | |
| EMC standards | |
| Safety standard | |
| Shock | |
| Vibration | |
| MTBF | |
| Operating time (hours), min. | |
| According to Standard | |
| Approvals | |
| Approvals | |
| Note | |

Ordering data

| Type | Qty. | Order No. |
|--------------------|------|------------|
| IE-SW-EL08-6TX-2SC | 1 | 2682170000 |

Note

IE-SW-EL08-6TX-2SC



| |
|---|
| IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX and 100BASE-FX, IEEE 802.3x for flow control |
| Store and Forward |
| IEEE 802.3x flow control |
| 1 K |
| 448 kBit |
| 10/100BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| 6x RJ45, 2x SC Multi-mode |
| 100BaseFX ports (SC connector), Multimode |
| 100 Mbps |
| SC-Duplex |
| Multimode |
| 2 km |
| 1310nm |
| -31...0dBm |
| -23.5...-14dBm |
| 7.5 dB |
| 1 removable 3-pole terminal block |
| 9...33VDC |
| 12/24 V DC, 1 single input |
| 0.14A @ 24V |
| Yes |
| Yes |
| Metal |
| IP30 |
| DIN rail |
| 115 / 41 / 84 mm (4.5276 / 1.6142 / 3.3071 inch) |
| 350 GRM |
| -40 °C...75 °C |
| 5 to 95 % (non-condensing) |
| 2000m in acc. with UL |
| EN 55032, EN 55024, CISPR 32, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0.5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms |
| UL 61010-1, UL 61010-2-201 according to IEC 60068-2-27 according to IEC 60068-2-6 |
| 1218117h |
| Telcordia SR-332 |
| CE; CULUS; KOREANCERT; UKCA |

| Type | Qty. | Order No. |
|--------------------|------|------------|
| IE-SW-EL08-6TX-2SC | 1 | 2682170000 |

IE-SW-EL08-6TX-2SCS



| |
|---|
| IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX and 100BASE-FX, IEEE 802.3x for flow control |
| Store and Forward |
| IEEE 802.3x flow control |
| 1 K |
| 448 kBit |
| 10/100BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| 6x RJ45, 2x SC Single-mode |
| 100BaseFX ports (SC connector), Singlemode |
| 100 Mbps |
| SC-Duplex |
| Singlemode |
| 30 km |
| 1310nm |
| -34...0dBm |
| -15...-8dBm |
| 19 dB |
| 1 removable 3-pole terminal block |
| 9...33VDC |
| 12/24 V DC, 1 single input |
| 0.14A @ 24V |
| Yes |
| Yes |
| Metal |
| IP30 |
| DIN rail |
| 115 / 41 / 84 mm (4.5276 / 1.6142 / 3.3071 inch) |
| 350 GRM |
| -40 °C...75 °C |
| 5 to 95 % (non-condensing) |
| 2000m in acc. with UL |
| EN 55032, EN 55024, CISPR 32, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0.5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms |
| UL 61010-1, UL 61010-2-201 according to IEC 60068-2-27 according to IEC 60068-2-6 |
| 1060513h |
| Telcordia SR-332 |
| CE; CULUS; KOREANCERT; UKCA |

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-SW-EL08-6TX-2SCS | 1 | 2682180000 |

16-Port unmanaged Fast Ethernet

Switches

- Wide temperature range
- Reliable operation due to redundant voltage inputs, fault relay and LED diagnostics

IE-SW-EL16-16TX



Technical data

| | |
|-------------------------------------|----------|
| Technology | Standard |
| Data switching | |
| Flow control | |
| Switch characteristics | |
| MAC table size | |
| Packet buffer size | |
| Interfaces | |
| RJ45 ports | |
| Number of ports | |
| Fibre-optic ports | |
| Power supply | |
| Connection type | |
| Voltage supply range | |
| Voltage supply | |
| Current consumption | |
| Overload current protection | |
| Reverse polarity protection | |
| Physical characteristics | |
| Housing main material | |
| Protection degree | |
| Type of mounting | |
| Dimensions H x W x D | |
| Net weight | |
| Environmental conditions | |
| Operating temperature | |
| Humidity | |
| Operating altitude | |
| EMC conformity and approvals | |
| EMC standards | |
| Safety standard | |
| Shock | |
| Vibration | |
| MTBF | |
| Operating time (hours), min. | |
| According to Standard | |
| Approvals | |
| Approvals | |
| Note | |

| |
|---|
| IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3x for flow control |
| Store and Forward |
| IEEE 802.3x flow control |
| 8 K |
| 1 Mbit |
| 10/100BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| 16x RJ45 |
| 1 removable 6-pin terminal block |
| 10.8...52.8VDC |
| 12/24/48 V DC, 2 redundant inputs |
| 0.27A @ 24V |
| Yes |
| Yes |
| Metal |
| IP30 |
| DIN rail |
| 153.6 / 74.3 / 107.5 mm (6.0472 / 2.9252 / 4.2323 inch) |
| 1188 GRM |
| -40 °C...75 °C |
| 5 to 95 % (non-condensing) |
| 2000m in acc. with UL |
| EN 55032, EN 55024, CISPR 32, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0.5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms |
| UL 61010-1, UL 61010-2-201 |
| according to IEC 60068-2-27 |
| according to IEC 60068-2-6 |
| 1160204h |
| Telcordia SR-332 |
| CE; CULUS; KOREANCERT; UKCA |

Ordering data

| |
|-------------|
| Note |
|-------------|

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-SW-EL16-16TX | 1 | 2682150000 |

24-Port unmanaged Fast Ethernet Switches

- Wide temperature range
- Reliable operation due to redundant voltage inputs, fault relay and LED diagnostics

IE-SW-EL24-24TX



Technical data

| | |
|-------------------------------------|----------|
| Technology | Standard |
| Data switching | |
| Flow control | |
| Switch characteristics | |
| MAC table size | |
| Packet buffer size | |
| Interfaces | |
| RJ45 ports | |
| Number of ports | |
| Fibre-optic ports | |
| Power supply | |
| Connection type | |
| Voltage supply range | |
| Voltage supply | |
| Current consumption | |
| Overload current protection | |
| Reverse polarity protection | |
| Physical characteristics | |
| Housing main material | |
| Protection degree | |
| Type of mounting | |
| Dimensions H x W x D | |
| Net weight | |
| Environmental conditions | |
| Operating temperature | |
| Humidity | |
| Operating altitude | |
| EMC conformity and approvals | |
| EMC standards | |
| Safety standard | |
| Shock | |
| Vibration | |
| MTBF | |
| Operating time (hours), min. | |
| According to Standard | |
| Approvals | |
| Approvals | |
| Note | |

| |
|---|
| IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3x for flow control |
| Store and Forward |
| IEEE 802.3x flow control |
| 8 K |
| 1 Mbit |
| 10/100BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| 24x RJ45 |
| 1 removable 6-pin terminal block |
| 10.8...52.8VDC |
| 12/24/48 V DC, 2 redundant inputs |
| 0.39A @ 24V |
| Yes |
| Yes |
| Metal |
| IP30 |
| DIN rail |
| 154 / 96.4 / 108.5 mm (6.063 / 3.7953 / 4.2716 inch) |
| 1369 GRM |
| -40 °C...75 °C |
| 5 to 95 % (non-condensing) |
| 2000m in acc. with UL |
| EN 55032, EN 55024, CISPR 32, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0.5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms |
| UL 61010-1, UL 61010-2-201 |
| according to IEC 60068-2-27 |
| according to IEC 60068-2-6 |
| 959803h |
| Telcordia SR-332 |
| CE; CULUS; KOREANCERT; UKCA |

Ordering data

| |
|-------------|
| Note |
|-------------|

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-SW-EL24-24TX | 1 | 2682190000 |

5-Port unmanaged Fast Ethernet Switches

- Support of real-time communication through prioritization of data traffic by means of Quality of Service functionality (PROFINET Conformance Class A)
- Containment of broadcast storms in the network through broadcast storm protection functionality
- AC/DC power supply input
- Rotatable locking foot for optimized use in applications with limited vertical installation height
- Very compact design for space-critical applications

Technical data

| | |
|-------------------------------------|----------|
| Technology | Standard |
| Data switching | |
| Flow control | |
| Switch characteristics | |
| MAC table size | |
| Packet buffer size | |
| Management features | |
| Network traffic filter | |
| Industrial protocol support | |
| Interfaces | |
| RJ45 ports | |
| Number of ports | |
| Fibre-optic ports | |
| Power supply | |
| Connection type | |
| Voltage supply range | |
| Voltage supply | |
| Current consumption | |
| Overload current protection | |
| Reverse polarity protection | |
| Physical characteristics | |
| Housing main material | |
| Protection degree | |
| Type of mounting | |
| Dimensions H x W x D | |
| Net weight | |
| Environmental conditions | |
| Operating temperature | |
| Humidity | |
| Operating altitude | |
| EMC conformity and approvals | |
| EMC standards | |
| Safety standard | |
| Shock | |
| Vibration | |
| MTBF | |
| Operating time (hours), min. | |
| According to Standard | |
| Approvals | |
| Approvals | |
| Note | |
| Ordering data | |
| Note | |

IE-SW-ELB-05-5TX



| | | |
|--|-------------|------------------|
| IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3x for flow control, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS) | | |
| Store and Forward | | |
| IEEE 802.3x flow control | | |
| 1 K | | |
| 448 kBit | | |
| Quality of Service (QoS) | | |
| PROFINET device acc. to conformance class A | | |
| 10/100BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port | | |
| 5x RJ45 | | |
| 1 removable 2-pin terminal block | | |
| 9.6...60VDC / 18V...36VAC | | |
| 12/24/48 V DC, 24 V AC, 1 single input | | |
| 0.12A @ 24V | | |
| Yes | | |
| Yes | | |
| Metal | | |
| IP40 | | |
| DIN rail | | |
| 103 / 26 / 64 mm (4.0551 / 1.0236 / 2.5197 inch) | | |
| 135 GRM | | |
| -10 °C...60 °C | | |
| 5 to 95 % (non-condensing) | | |
| 2000m in acc. with UL | | |
| EN 55032, EN 55024, CISPR 32, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0.5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms, IEC 61000-4-8 | | |
| UL 61010-1, UL 61010-2-201 according to IEC 60068-2-27 | | |
| according to IEC 60068-2-6 | | |
| 488236h | | |
| Telcordia SR-332 | | |
| CE; CULUS; KOREANCERT; UKCA | | |
| Type | Qty. | Order No. |
| IE-SW-ELB-05-5TX | 1 | 2828540000 |
| Note | | |

IE-SW-ELB-05-4TX-1FESFP



| | | |
|--|-------------|------------------|
| IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX and 100BASE-FX, IEEE 802.3x for flow control, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS) | | |
| Store and Forward | | |
| IEEE 802.3x flow control | | |
| 1 K | | |
| 448 kBit | | |
| Quality of Service (QoS) | | |
| PROFINET device acc. to conformance class A | | |
| 10/100BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port | | |
| 4x RJ45, 1x 100BaseSFP slot | | |
| 100BaseSFP-Slot | | |
| 1 removable 2-pin terminal block | | |
| 9.6...60VDC / 18V...36VAC | | |
| 12/24/48 V DC, 24 V AC, 1 single input | | |
| 0.17A @ 24V | | |
| Yes | | |
| Yes | | |
| Metal | | |
| IP40 | | |
| DIN rail | | |
| 103 / 26 / 64 mm (4.0551 / 1.0236 / 2.5197 inch) | | |
| 130 GRM | | |
| -10 °C...60 °C | | |
| 5 to 95 % (non-condensing) | | |
| 2000m in acc. with UL | | |
| EN 55032, EN 55024, CISPR 32, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0.5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms, IEC 61000-4-8 | | |
| UL 61010-1, UL 61010-2-201 according to IEC 60068-2-27 | | |
| according to IEC 60068-2-6 | | |
| 463236h | | |
| Telcordia SR-332 | | |
| CE; CULUS; KOREANCERT; UKCA | | |
| Type | Qty. | Order No. |
| IE-SW-ELB-05-4TX-1FESFP | 1 | 2828590000 |
| Note | | |

8-Port unmanaged Fast Ethernet Switches

- Support of real-time communication through prioritization of data traffic by means of Quality of Service functionality (PROFINET Conformance Class A)
- Containment of broadcast storms in the network through broadcast storm protection functionality
- AC/DC power supply input
- Rotatable locking foot for optimized use in applications with limited vertical installation height
- Very compact design for space-critical applications

Technical data

| | |
|-------------------------------------|----------|
| Technology | Standard |
| Data switching | |
| Flow control | |
| Switch characteristics | |
| MAC table size | |
| Packet buffer size | |
| Management features | |
| Network traffic filter | |
| Industrial protocol support | |
| Interfaces | |
| RJ45 ports | |
| Number of ports | |
| Fibre-optic ports | |
| Power supply | |
| Connection type | |
| Voltage supply range | |
| Voltage supply | |
| Current consumption | |
| Overload current protection | |
| Reverse polarity protection | |
| Physical characteristics | |
| Housing main material | |
| Protection degree | |
| Type of mounting | |
| Dimensions H x W x D | |
| Net weight | |
| Environmental conditions | |
| Operating temperature | |
| Humidity | |
| Operating altitude | |
| EMC conformity and approvals | |
| EMC standards | |
| Safety standard | |
| Shock | |
| Vibration | |
| MTBF | |
| Operating time (hours), min. | |
| According to Standard | |
| Approvals | |
| Approvals | |
| Note | |
| Ordering data | |
| Note | |

IE-SW-ELB-08-8TX



| | | |
|--|-------------|------------------|
| IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3x for flow control, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS) | | |
| Store and Forward | | |
| IEEE 802.3x flow control | | |
| 1 K | | |
| 448 kBit | | |
| Quality of Service (QoS) | | |
| PROFINET device acc. to conformance class A | | |
| 10/100BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port | | |
| 8x RJ45 | | |
| 1 removable 2-pin terminal block | | |
| 9.6...60VDC / 18V...36VAC | | |
| 12/24/48 V DC, 24 V AC, 1 single input | | |
| 0.13A @ 24V | | |
| Yes | | |
| Yes | | |
| Metal | | |
| IP40 | | |
| DIN rail | | |
| 103 / 43.5 / 64 mm (4.0551 / 1.7126 / 2.5197 inch) | | |
| 195 GRM | | |
| -10 °C...60 °C | | |
| 5 to 95 % (non-condensing) | | |
| 2000m in acc. with UL | | |
| EN 55032, EN 55024, CISPR 32, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0.5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms, IEC 61000-4-8 | | |
| UL 61010-1, UL 61010-2-201 according to IEC 60068-2-27 | | |
| according to IEC 60068-2-6 | | |
| 463836h | | |
| Telcordia SR-332 | | |
| CE; CULUS; KOREANCERT; UKCA | | |
| Type | Qty. | Order No. |
| IE-SW-ELB-08-8TX | 1 | 282850000 |
| Note | | |

IE-SW-ELB-08-6TX-2FESFP



| | | |
|--|-------------|------------------|
| IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX and 100BASE-FX, IEEE 802.3x for flow control, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS) | | |
| Store and Forward | | |
| IEEE 802.3x flow control | | |
| 1 K | | |
| 448 kBit | | |
| Quality of Service (QoS) | | |
| PROFINET device acc. to conformance class A | | |
| 10/100BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port | | |
| 6x RJ45, 2x 100BaseSFP slot | | |
| 100BaseSFP-Slot | | |
| 1 removable 2-pin terminal block | | |
| 9.6...60VDC / 18V...36VAC | | |
| 12/24/48 V DC, 24 V AC, 1 single input | | |
| 0.25A @ 24V | | |
| Yes | | |
| Yes | | |
| Metal | | |
| IP40 | | |
| DIN rail | | |
| 103 / 43.5 / 64 mm (4.0551 / 1.7126 / 2.5197 inch) | | |
| 200 GRM | | |
| -10 °C...60 °C | | |
| 5 to 95 % (non-condensing) | | |
| 2000m in acc. with UL | | |
| EN 55032, EN 55024, CISPR 32, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0.5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms, IEC 61000-4-8 | | |
| UL 61010-1, UL 61010-2-201 according to IEC 60068-2-27 | | |
| according to IEC 60068-2-6 | | |
| 435270h | | |
| Telcordia SR-332 | | |
| CE; CULUS; KOREANCERT; UKCA | | |
| Type | Qty. | Order No. |
| IE-SW-ELB-08-6TX-2FESFP | 1 | 282860000 |
| Note | | |

16-Port unmanaged Fast Ethernet Switches

- Support of real-time communication through prioritization of data traffic by means of Quality of Service functionality (PROFINET Conformance Class A)
- Containment of broadcast storms in the network through broadcast storm protection functionality
- AC/DC power supply input
- Rotatable locking foot for optimized use in applications with limited vertical installation height
- Very compact design for space-critical applications

Technical data

| | |
|-------------------------------------|----------|
| Technology | Standard |
| Data switching | |
| Flow control | |
| Switch characteristics | |
| MAC table size | |
| Packet buffer size | |
| Management features | |
| Network traffic filter | |
| Industrial protocol support | |
| Interfaces | |
| RJ45 ports | |
| Number of ports | |
| Fibre-optic ports | |
| Power supply | |
| Connection type | |
| Voltage supply range | |
| Voltage supply | |
| Current consumption | |
| Overload current protection | |
| Reverse polarity protection | |
| Physical characteristics | |
| Housing main material | |
| Protection degree | |
| Type of mounting | |
| Dimensions H x W x D | |
| Net weight | |
| Environmental conditions | |
| Operating temperature | |
| Humidity | |
| Operating altitude | |
| EMC conformity and approvals | |
| EMC standards | |
| Safety standard | |
| Shock | |
| Vibration | |
| MTBF | |
| Operating time (hours), min. | |
| According to Standard | |
| Approvals | |
| Approvals | |
| Note | |

Ordering data

| |
|-------------|
| Note |
|-------------|

IE-SW-ELB-16-16TX



| |
|--|
| IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3x for flow control, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS) |
| Store and Forward |
| IEEE 802.3x flow control |
| 8 K |
| 4 Mbit |
| Quality of Service (QoS) |
| PROFINET device acc. to conformance class A |
| 10/100BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| 16x RJ45 |
| 1 removable 2-pin terminal block |
| 9.6...60VDC / 18V...36VAC |
| 12/24/48 V DC, 24 V AC, 1 single input |
| 0.17A @ 24V |
| Yes |
| Yes |
| Metal |
| IP40 |
| DIN rail |
| 143 / 50 / 110 mm (5.6299 / 1.9685 / 4.3307 inch) |
| 627 GRM |
| -10 °C...60 °C |
| 5 to 95 % (non-condensing) |
| 2000m in acc. with UL |
| EN 55032, EN 55024, CISPR 32, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0.5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms, IEC 61000-4-8 |
| UL 61010-1, UL 61010-2-201 |
| according to IEC 60068-2-27 |
| according to IEC 60068-2-6 |
| 412528h |
| Telcordia SR-332 |
| CE; CULUS; KOREANCERT; UKCA |

| Type | Qty. | Order No. |
|-------------------|------|------------|
| IE-SW-ELB-16-16TX | 1 | 2828580000 |

5-Port unmanaged Fast Ethernet Switches

- Extensive approvals
- Compact design
- Redundant voltage inputs

Technical data

| | |
|--|--|
| Technology | |
| Standard | |
| Data switching | |
| Flow control | |
| Switch characteristics | |
| MAC table size | |
| Packet buffer size | |
| Interfaces | |
| RJ45 ports | |
| Number of ports | |
| Fibre-optic ports | |
| Function DIP switch | |
| Fibre optic transceiver characteristics | |
| Transmission rate | |
| Connector type | |
| Transceiver type | |
| Transmission distance, typ. | |
| Wavelength | |
| Receive power | |
| Transmission power | |
| Link-budget | |
| Power supply | |
| Connection type | |
| Voltage supply range | |
| Voltage supply | |
| Current consumption | |
| Overload current protection | |
| Reverse polarity protection | |
| Physical characteristics | |
| Housing main material | |
| Protection degree | |
| Type of mounting | |
| Dimensions H x W x D | |
| Net weight | |
| Environmental conditions | |
| Operating temperature | |
| Humidity | |
| EMC conformity and approvals | |
| EMC standards | |
| Safety standard | |
| Shock | |
| Vibration | |
| MTBF | |
| Operating time (hours), min. | |
| According to Standard | |
| Approvals | |
| Approvals | |
| Note | |

Ordering data

| | | |
|-----------------|-------------|------------------|
| Type | Qty. | Order No. |
| IE-SW-BL05-5TX | 1 | 1240840000 |
| IE-SW-BL05T-5TX | 1 | 1240850000 |
| Note | | |

IE-SW-BL05-5TX



| |
|--|
| IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3x for flow control |
| Store and Forward |
| IEEE 802.3x flow control, Back pressure flow control |
| 1 K |
| 448 kBit |
| 10/100BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| 5x RJ45 |
| 1x for enabling/disabling the broadcast storm protection |
| 1 removable 4-pin terminal block |
| 9.6...60VDC |
| 12/24/48 V DC, 2 redundant inputs |
| 0.1 A at 24 V |
| 1.1 A |
| Available |
| Aluminium |
| IP30 |
| DIN rail, Panel (with optional mounting kit) |
| 115 / 30 / 70 mm (4.5276 / 1.1811 / 2.7559 inch) |
| 175 GRM |
| 1240840000: -10 °C...60 °C; 1240850000: -40 °C...75 °C |
| 5 to 95 % (non-condensing) |
| EN 55032, EN 55035, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz - 6 GHz: 10 V/m, IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 1 kV, IEC 61000-4-6 CS: 10 V, IEC 61000-4-8 PFMF: 100A/m |
| UL508 |
| according to IEC 60068-2-27 |
| according to IEC 60068-2-6 |
| 3040784h |
| Telcordia (Bellcore), GB |
| CE; CULUS; CULUSEX; DEMKOATEX; DETNORVER; KOREANCERT; UKCA |

| | | |
|-----------------|-------------|------------------|
| Type | Qty. | Order No. |
| IE-SW-BL05-5TX | 1 | 1240840000 |
| IE-SW-BL05T-5TX | 1 | 1240850000 |

IE-SW-BL05-4TX-1SC



| |
|--|
| IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3x for flow control |
| Store and Forward |
| IEEE 802.3x flow control, Back pressure flow control |
| 1 K |
| 448 kBit |
| 10/100BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| 4 x RJ45, 1 * SC Multi-mode |
| 100BaseFX ports (SC connector), Multimode |
| 1x for enabling/disabling the broadcast storm protection |
| 100 Mbps |
| SC-Duplex |
| Multimode |
| 5 km |
| typ.: 1300nm / TX: 1260...1360nm / RX: 1100...1600nm |
| -32...-3dBm |
| -20...-10dBm |
| 12 dB |
| 1 removable 4-pin terminal block |
| 9.6...60VDC |
| 12/24/48 V DC, 2 redundant inputs |
| 0.11 A at 24 V |
| 1.1 A |
| Available |
| Aluminium |
| IP30 |
| DIN rail, Panel (with optional mounting kit) |
| 115 / 30 / 70 mm (4.5276 / 1.1811 / 2.7559 inch) |
| 175 GRM |
| 1240890000: -10 °C...60 °C; 1286550000: -40 °C...75 °C |
| 5 to 95 % (non-condensing) |
| EN 55032, EN 55035, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz - 6 GHz: 10 V/m, IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 1 kV, IEC 61000-4-6 CS: 10 V, IEC 61000-4-8 PFMF: 100A/m |
| UL508 |
| according to IEC 60068-2-27 |
| according to IEC 60068-2-6 |
| 3040784h |
| Telcordia (Bellcore), GB |
| CE; CULUS; CULUSEX; DEMKOATEX; DETNORVER; KOREANCERT; UKCA |

| | | |
|---------------------|-------------|------------------|
| Type | Qty. | Order No. |
| IE-SW-BL05-4TX-1SC | 1 | 1240890000 |
| IE-SW-BL05T-4TX-1SC | 1 | 1286550000 |

IE-SW-BL05-4TX-1ST



| |
|--|
| IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3x for flow control |
| Store and Forward |
| IEEE 802.3x flow control, Back pressure flow control |
| 1 K |
| 448 kBit |
| 10/100BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| 4 x RJ45, 1 * ST Multi-mode |
| 100BaseFX ports (ST connector), Multimode |
| 1x for enabling/disabling the broadcast storm protection |
| 100 Mbps |
| ST-Duplex |
| Multimode |
| 5 km |
| typ.: 1300nm / TX: 1260...1360nm / RX: 1100...1600nm |
| -32...-3dBm |
| -20...-10dBm |
| 12 dB |
| 1 removable 4-pin terminal block |
| 9.6...60VDC |
| 12/24/48 V DC, 2 redundant inputs |
| 0.11 A at 24 V |
| 1.1 A |
| Available |
| Aluminium |
| IP30 |
| DIN rail, Panel (with optional mounting kit) |
| 115 / 30 / 70 mm (4.5276 / 1.1811 / 2.7559 inch) |
| 175 GRM |
| 1240880000: -10 °C...60 °C; 1286540000: -40 °C...75 °C |
| 5 to 95 % (non-condensing) |
| EN 55032, EN 55035, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz - 6 GHz: 10 V/m, IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 1 kV, IEC 61000-4-6 CS: 10 V, IEC 61000-4-8 PFMF: 100A/m |
| UL508 |
| according to IEC 60068-2-27 |
| according to IEC 60068-2-6 |
| 3040784h |
| Telcordia (Bellcore), GB |
| CE; CULUS; CULUSEX; DEMKOATEX; DETNORVER; KOREANCERT; UKCA |

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-SW-BL05-4TX-1ST | 1 | 1240880000 |
| IE-SW-BL05T-4TX-1ST | 1 | 1286540000 |

IE-SW-BL05-4TX-1SCS



| |
|--|
| IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3x for flow control |
| Store and Forward |
| IEEE 802.3x flow control, Back pressure flow control |
| 2 K |
| 768 kBit |
| 10/100BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| 4 x RJ45, 1 * SC Single-mode |
| 100BaseFX ports (SC connector), Singlemode |
| Broadcast storm protection enable/disable, QoS (on/off), MAC frame filtering (on/off) |
| 100 Mbps |
| SC-Duplex |
| Singlemode |
| 40 km |
| typ.: 1310nm / TX: 1280...1340nm / RX: 1100...1600nm |
| -34...-3dBm |
| -5...0dBm |
| 29 dB |
| 1 removable 4-pin terminal block |
| 9.6...60VDC |
| 12/24/48 V DC, 2 redundant inputs |
| 0.11 A at 24 V |
| 1.1 A |
| Available |
| Aluminium |
| IP30 |
| DIN rail, Panel (with optional mounting kit) |
| 115 / 30 / 70 mm (4.5276 / 1.1811 / 2.7559 inch) |
| 175 GRM |
| 1240870000: -10 °C...60 °C; 1286530000: -40 °C...75 °C |
| 5 to 95 % (non-condensing) |
| EN 55032, EN 55035, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz - 6 GHz: 10 V/m, IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 V, IEC 61000-4-8 PFMF: 100A/m |
| UL 61010-1, UL 61010-2-201, EN 62368-1 |
| according to IEC 60068-2-27 |
| according to IEC 60068-2-6 |
| 2797013h |
| Telcordia (Bellcore), GB |
| CE; CULUS; CULUSEX; DEMKOATEX; DETNORVER; KOREANCERT; UKCA |

| Type | Qty. | Order No. |
|----------------------|------|------------|
| IE-SW-BL05-4TX-1SCS | 1 | 1240870000 |
| IE-SW-BL05T-4TX-1SCS | 1 | 1286530000 |

8-Port unmanaged Fast Ethernet Switches

- Extensive approvals
- Compact design
- Redundant voltage inputs

Technical data

| | |
|--|----------|
| Technology | Standard |
| Data switching | |
| Flow control | |
| Switch characteristics | |
| MAC table size | |
| Packet buffer size | |
| Interfaces | |
| RJ45 ports | |
| Number of ports | |
| Fibre-optic ports | |
| Function DIP switch | |
| Fibre optic transceiver characteristics | |
| Transmission rate | |
| Connector type | |
| Transceiver type | |
| Transmission distance, typ. | |
| Wavelength | |
| Receive power | |
| Transmission power | |
| Link-budget | |
| Power supply | |
| Connection type | |
| Voltage supply range | |
| Voltage supply | |
| Current consumption | |
| Overload current protection | |
| Reverse polarity protection | |
| Physical characteristics | |
| Housing main material | |
| Protection degree | |
| Type of mounting | |
| Dimensions H x W x D | |
| Net weight | |
| Environmental conditions | |
| Operating temperature | |
| Humidity | |
| EMC conformity and approvals | |
| EMC standards | |
| Safety standard | |
| Shock | |
| Vibration | |
| MTBF | |
| Operating time (hours), min. | |
| According to Standard | |
| Approvals | |
| Approvals | |
| Note | |

Ordering data

| Type | Qty. | Order No. |
|----------------|------|------------|
| IE-SW-BL08-8TX | 1 | 1240900000 |
| IE-SW-BL08-8TX | 1 | 1286560000 |

Note

IE-SW-BL08-8TX



| |
|--|
| IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3x for flow control |
| Store and Forward |
| IEEE 802.3x flow control, Back pressure flow control |
| 2 K |
| 768 kBit |
| 10/100BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| 8x RJ45 |
| 1x for enabling/disabling the broadcast storm protection |
| 1 removable 4-pin terminal block |
| 9.6...60VDC |
| 12/24/48 V DC, 2 redundant inputs |
| 0.13 A at 24 V |
| 1.1 A |
| Available |
| Aluminium |
| IP30 |
| DIN rail |
| 114 / 50 / 70 mm (4.4882 / 1.9685 / 2.7559 inch) |
| 275 GRM |
| 1240900000: -10 °C...60 °C; 1286560000: -40 °C...75 °C |
| 5 to 95 % (non-condensing) |
| EN 55032, EN 55035, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz - 6 GHz: 10 V/m, IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 1 kV, IEC 61000-4-6 CS: 10 V, IEC 61000-4-8 PFMF: 100A/m |
| UL508 |
| according to IEC 60068-2-27 |
| according to IEC 60068-2-6 |
| 2701531h |
| Telcordia (Bellcore), GB |
| CE; CULUS; CULUSEX; DEMKOATEX; DETNORVER; KOREANCERT; UKCA |

IE-SW-BL08-6TX-2SC



| |
|--|
| IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3x for flow control |
| Store and Forward |
| IEEE 802.3x flow control, Back pressure flow control |
| 2 K |
| 768 kBit |
| 10/100BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| 6x RJ45, 2 * SC Multi-mode |
| 100BaseFX ports (SC connector), Multimode |
| 1x for enabling/disabling the broadcast storm protection |
| 100 Mbps |
| SC-Duplex |
| Multimode |
| 5 km |
| typ.: 1300nm / TX: 1260...1360nm / RX: 1100...1600nm |
| -32...-3dBm |
| -20...-10dBm |
| 12 dB |
| 1 removable 4-pin terminal block |
| 9.6...60VDC |
| 12/24/48 V DC, 2 redundant inputs |
| 0.22 A at 24 V |
| 1.1 A |
| Available |
| Aluminium |
| IP30 |
| DIN rail |
| 115 / 50 / 70 mm (4.5276 / 1.9685 / 2.7559 inch) |
| 275 GRM |
| 1240910000: -10 °C...60 °C; 1240920000: -40 °C...75 °C |
| 5 to 95 % (non-condensing) |
| EN 55032, EN 55035, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz - 6 GHz: 10 V/m, IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 1 kV, IEC 61000-4-6 CS: 10 V, IEC 61000-4-8 PFMF: 100A/m |
| UL508 |
| according to IEC 60068-2-27 |
| according to IEC 60068-2-6 |
| 2428212h |
| Telcordia (Bellcore), GB |
| CE; CULUS; CULUSEX; DEMKOATEX; DETNORVER; KOREANCERT; UKCA |

| Type | Qty. | Order No. |
|--------------------|------|------------|
| IE-SW-BL08-6TX-2SC | 1 | 1240910000 |
| IE-SW-BL08-6TX-2SC | 1 | 1240920000 |

IE-SW-BL08-6TX-2ST



| | | |
|--|--|--|
| IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3x for flow control | | |
| Store and Forward | | |
| IEEE 802.3x flow control, Back pressure flow control | | |
| 2 K | | |
| 768 kBit | | |
| 10/100BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port | | |
| 6x RJ45, 2 * ST Multi-mode | | |
| 100BaseFX ports (ST connector), Multimode | | |
| 1x for enabling/disabling the broadcast storm protection | | |
| 100 Mbps | | |
| ST-Duplex | | |
| Multimode | | |
| 5 km | | |
| typ.: 1300nm / TX: 1260...1360nm / RX: 1100...1600nm | | |
| -32...-3dBm | | |
| -20...-10dBm | | |
| 12 dB | | |
| 1 removable 4-pin terminal block | | |
| 9.6...60VDC | | |
| 12/24/48 V DC, 2 redundant inputs | | |
| 0.22 A at 24 V | | |
| 1.1 A | | |
| Available | | |
| Aluminium | | |
| IP30 | | |
| DIN rail | | |
| 115 / 50 / 70 mm (4.5276 / 1.9685 / 2.7559 inch) | | |
| 275 GRM | | |
| 1240930000: -10 °C...60 °C; 1286570000: -40 °C...75 °C | | |
| 5 to 95 % (non-condensing) | | |
| EN 55032, EN 55035, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz - 6 GHz: 10 V/m, IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 1 kV, IEC 61000-4-6 CS: 10 V, IEC 61000-4-8 PFMF: 100A/m | | |
| UL508 | | |
| according to IEC 60068-2-27 | | |
| according to IEC 60068-2-6 | | |
| 2428212h | | |
| Telcordia (Bellcore), GB | | |
| CE; CULUS; CULUSEX; DEMKOATEX; DETNORVER; KOREANCERT; UKCA | | |

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-SW-BL08-6TX-2ST | 1 | 1240930000 |
| IE-SW-BL08T-6TX-2ST | 1 | 1286570000 |

IE-SW-BL08-6TX-2SCS



| | | |
|--|--|--|
| IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3x for flow control | | |
| Store and Forward | | |
| IEEE 802.3x flow control, Back pressure flow control | | |
| 2 K | | |
| 768 kBit | | |
| 10/100BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port | | |
| 6x RJ45, 2 * SC Single-mode | | |
| 100BaseFX ports (SC connector), Singlemode | | |
| 1x for enabling/disabling the broadcast storm protection | | |
| 100 Mbps | | |
| SC-Duplex | | |
| Singlemode | | |
| 40 km | | |
| typ.: 1310nm / TX: 1280...1340nm / RX: 1100...1600nm | | |
| -34...-3dBm | | |
| -5...0dBm | | |
| 29 dB | | |
| 1 removable 4-pin terminal block | | |
| 9.6...60VDC | | |
| 12/24/48 V DC, 2 redundant inputs | | |
| 0.22 A at 24 V | | |
| 1.1 A | | |
| Available | | |
| Aluminium | | |
| IP30 | | |
| DIN rail | | |
| 115 / 50 / 70 mm (4.5276 / 1.9685 / 2.7559 inch) | | |
| 275 GRM | | |
| 1412110000: -10 °C...60 °C; 1412120000: -40 °C...75 °C | | |
| 5 to 95 % (non-condensing) | | |
| EN 55032, EN 55035, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz - 6 GHz: 10 V/m, IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 1 kV, IEC 61000-4-6 CS: 10 V, IEC 61000-4-8 PFMF: 100A/m | | |
| UL508 | | |
| according to IEC 60068-2-27 | | |
| according to IEC 60068-2-6 | | |
| 2428212h | | |
| Telcordia (Bellcore), GB | | |
| CE; CULUS; CULUSEX; DEMKOATEX; KOREANCERT; UKCA | | |

| Type | Qty. | Order No. |
|----------------------|------|------------|
| IE-SW-BL08-6TX-2SCS | 1 | 1412110000 |
| IE-SW-BL08T-6TX-2SCS | 1 | 1412120000 |

IE-SW-BL08-7TX-1SC



| | | |
|--|--|--|
| IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3x for flow control | | |
| Store and Forward | | |
| IEEE 802.3x flow control, Back pressure flow control | | |
| 2 K | | |
| 768 kBit | | |
| 10/100BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port | | |
| 7x RJ45, 1 * SC Multi-mode | | |
| 100BaseFX ports (SC connector), Multimode | | |
| 1x for enabling/disabling the broadcast storm protection | | |
| 100 Mbps | | |
| SC-Duplex | | |
| Multimode | | |
| 5 km | | |
| typ.: 1300nm / TX: 1260...1360nm / RX: 1100...1600nm | | |
| -32...-3dBm | | |
| -20...-10dBm | | |
| 12 dB | | |
| 1 removable 4-pin terminal block | | |
| 9.6...60VDC | | |
| 12/24/48 V DC, 2 redundant inputs | | |
| 0.17 A at 24 V | | |
| 1.1 A | | |
| Available | | |
| Aluminium | | |
| IP30 | | |
| DIN rail | | |
| 115 / 50 / 70 mm (4.5276 / 1.9685 / 2.7559 inch) | | |
| 275 GRM | | |
| 1412070000: -10 °C...60 °C; 1412080000: -40 °C...75 °C | | |
| 5 to 95 % (non-condensing) | | |
| EN 55032, EN 55035, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz - 6 GHz: 10 V/m, IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 1 kV, IEC 61000-4-6 CS: 10 V, IEC 61000-4-8 PFMF: 100A/m | | |
| UL508 | | |
| according to IEC 60068-2-27 | | |
| according to IEC 60068-2-6 | | |
| 2428212h | | |
| Telcordia (Bellcore), GB | | |
| CE; CULUS; CULUSEX; DEMKOATEX; KOREANCERT; UKCA | | |

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-SW-BL08-7TX-1SC | 1 | 1412070000 |
| IE-SW-BL08T-7TX-1SC | 1 | 1412080000 |

5-Port unmanaged Fast Ethernet Switches

- Support for real-time communication using QoS and LLDP frame blocking functionality (PROFINET Conformance Class A)
- Broadcast Storm Protection functionality
- AC/DC power supply input
- Optimized DIN rail clip and PUSH IN connection
- Approvals for maritime and potentially explosive environments
- Energy-efficient Ethernet (EEE)

Technical data

| | | |
|---|---|------------------|
| Technology | Standard | |
| Data switching | Store and Forward | |
| Flow control | IEEE 802.3x flow control | |
| Switch characteristics | | |
| MAC table size | 2 K | |
| Packet buffer size | 768 kBit | |
| Management features | | |
| Network traffic filter | Quality of Service (QoS), MAC frame filtering (LLDP frame blocking) | |
| Industrial protocol support | PROFINET device acc. to conformance class A | |
| Interfaces | | |
| RJ45 ports | 10/100BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port | |
| Number of ports | 5x RJ45 | |
| Fibre-optic ports | | |
| Function DIP switch | QoS (on/off), Broadcast storm protection enable/disable, MAC frame filtering (on/off), Activate/deactivate IEEE 802.3az energy-efficient Ethernet | |
| Power supply | | |
| Connection type | 1 removable 4-pin terminal block | |
| Voltage supply range | 9...60VDC / 18V...30VAC | |
| Voltage supply | 12/24/48 V DC, 24 V AC, 2 redundant inputs | |
| Current consumption | 0.04A @ 24V | |
| Overload current protection | Yes | |
| Reverse polarity protection | Yes | |
| Physical characteristics | | |
| Housing main material | Metal | |
| Protection degree | IP30 | |
| Type of mounting | DIN rail | |
| Dimensions H x W x D | 114 / 26 / 70 mm (4.4882 / 1.0236 / 2.7559 inch) | |
| Net weight | 272 GRM | |
| Environmental conditions | | |
| Operating temperature | -40 °C...75 °C | |
| Humidity | 5 to 95 % (non-condensing) | |
| EMC conformity and approvals | | |
| EMC standards | EN IEC 61000-6-2, EN IEC 61000-6-4, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m, IEC 61000-4-3 RS: 1.4 GHz to 6 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 Vrms, IEC 61000-4-8 PFMF: 30 A/m | |
| Explosive risk zone | EN IEC 60079-0, EN IEC 60079-7, UL/cUL, Class I, Division 2, Groups A, B, C and D, ATEX Zone 2 Ex ec IIC T4 Gc | |
| Ship use | DNV, BV, ABS, LR, RINA pending approval | |
| Safety standard | UL 61010-1, UL 61010-2-201 | |
| Shock | according to IEC 60068-2-27 | |
| Vibration | according to IEC 60068-2-6 | |
| MTBF | | |
| Operating time (hours), min. | 1799620h | |
| According to Standard | Telcordia SR-332 | |
| Approvals | | |
| Approvals | CE; CULUS; CULUSEX; DEMKOATEX; IECEXULD; KOREANCERT; UKCA; RINA | |
| Note | | |
| Ordering data | | |
| Type | Qty. | Order No. |
| IE-SW-BLB-05-5TX | 1 | 2908030000 |
| DNV, BV, ABS, LR, RINA pending approval | | |
| Note | | |

IE-SW-BLB-05-5TX



| | | |
|---|---|------------------|
| Technology | Standard | |
| Data switching | Store and Forward | |
| Flow control | IEEE 802.3x flow control | |
| Switch characteristics | | |
| MAC table size | 2 K | |
| Packet buffer size | 768 kBit | |
| Management features | | |
| Network traffic filter | Quality of Service (QoS), MAC frame filtering (LLDP frame blocking) | |
| Industrial protocol support | PROFINET device acc. to conformance class A | |
| Interfaces | | |
| RJ45 ports | 10/100BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port | |
| Number of ports | 5x RJ45 | |
| Fibre-optic ports | | |
| Function DIP switch | QoS (on/off), Broadcast storm protection enable/disable, MAC frame filtering (on/off), Activate/deactivate IEEE 802.3az energy-efficient Ethernet | |
| Power supply | | |
| Connection type | 1 removable 4-pin terminal block | |
| Voltage supply range | 9...60VDC / 18V...30VAC | |
| Voltage supply | 12/24/48 V DC, 24 V AC, 2 redundant inputs | |
| Current consumption | 0.04A @ 24V | |
| Overload current protection | Yes | |
| Reverse polarity protection | Yes | |
| Physical characteristics | | |
| Housing main material | Metal | |
| Protection degree | IP30 | |
| Type of mounting | DIN rail | |
| Dimensions H x W x D | 114 / 26 / 70 mm (4.4882 / 1.0236 / 2.7559 inch) | |
| Net weight | 272 GRM | |
| Environmental conditions | | |
| Operating temperature | -40 °C...75 °C | |
| Humidity | 5 to 95 % (non-condensing) | |
| EMC conformity and approvals | | |
| EMC standards | EN IEC 61000-6-2, EN IEC 61000-6-4, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m, IEC 61000-4-3 RS: 1.4 GHz to 6 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 Vrms, IEC 61000-4-8 PFMF: 30 A/m | |
| Explosive risk zone | EN IEC 60079-0, EN IEC 60079-7, UL/cUL, Class I, Division 2, Groups A, B, C and D, ATEX Zone 2 Ex ec IIC T4 Gc | |
| Ship use | DNV, BV, ABS, LR, RINA pending approval | |
| Safety standard | UL 61010-1, UL 61010-2-201 | |
| Shock | according to IEC 60068-2-27 | |
| Vibration | according to IEC 60068-2-6 | |
| MTBF | | |
| Operating time (hours), min. | 1799620h | |
| According to Standard | Telcordia SR-332 | |
| Approvals | | |
| Approvals | CE; CULUS; CULUSEX; DEMKOATEX; IECEXULD; KOREANCERT; UKCA; RINA | |
| Note | | |
| Ordering data | | |
| Type | Qty. | Order No. |
| IE-SW-BLB-05-5TX | 1 | 2908030000 |
| DNV, BV, ABS, LR, RINA pending approval | | |
| Note | | |

IE-SW-BLB-05-4TX-1FESFP



| | | |
|---|---|------------------|
| Technology | Standard | |
| Data switching | Store and Forward | |
| Flow control | IEEE 802.3x flow control | |
| Switch characteristics | | |
| MAC table size | 2 K | |
| Packet buffer size | 768 kBit | |
| Management features | | |
| Network traffic filter | Quality of Service (QoS), MAC frame filtering (LLDP frame blocking) | |
| Industrial protocol support | PROFINET device acc. to conformance class A | |
| Interfaces | | |
| RJ45 ports | 10/100BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port | |
| Number of ports | 4x RJ45, 1x 100BaseSFP slot | |
| Fibre-optic ports | 100BaseSFP Slot | |
| Function DIP switch | QoS (on/off), Broadcast storm protection enable/disable, MAC frame filtering (on/off), Activate/deactivate IEEE 802.3az energy-efficient Ethernet | |
| Power supply | | |
| Connection type | 1 removable 4-pin terminal block | |
| Voltage supply range | 9...60VDC / 9V...30VAC | |
| Voltage supply | 12/24/48 V DC, 24 V AC, 2 redundant inputs | |
| Current consumption | 0.07A @ 24V | |
| Overload current protection | Yes | |
| Reverse polarity protection | Yes | |
| Physical characteristics | | |
| Housing main material | Metal | |
| Protection degree | IP30 | |
| Type of mounting | DIN rail | |
| Dimensions H x W x D | 114 / 26 / 70 mm (4.4882 / 1.0236 / 2.7559 inch) | |
| Net weight | 272 GRM | |
| Environmental conditions | | |
| Operating temperature | -40 °C...75 °C | |
| Humidity | 5 to 95 % (non-condensing) | |
| EMC conformity and approvals | | |
| EMC standards | EN IEC 61000-6-2, EN IEC 61000-6-4, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m, IEC 61000-4-3 RS: 1.4 GHz to 6 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 Vrms, IEC 61000-4-8 PFMF: 30 A/m | |
| Explosive risk zone | EN IEC 60079-0, EN IEC 60079-7, UL/cUL, Class I, Division 2, Groups A, B, C and D, ATEX Zone 2 Ex ec IIC T4 Gc | |
| Ship use | DNV, BV, ABS, LR, RINA pending approval | |
| Safety standard | UL 61010-1, UL 61010-2-201 | |
| Shock | according to IEC 60068-2-27 | |
| Vibration | according to IEC 60068-2-6 | |
| MTBF | | |
| Operating time (hours), min. | 1920055h | |
| According to Standard | Telcordia SR-332 | |
| Approvals | | |
| Approvals | CE; CULUS; CULUSEX; DEMKOATEX; IECEXULD; KOREANCERT; UKCA; DETNORVER; BURVER; ABS; LLOYDSREG; RINA | |
| Note | | |
| Ordering data | | |
| Type | Qty. | Order No. |
| IE-SW-BLB-05-4TX-1FESFP | 1 | 2908140000 |
| DNV, BV, ABS, LR, RINA pending approval | | |
| Note | | |

8-Port unmanaged Fast Ethernet Switches

- Support for real-time communication using QoS and LLDP frame blocking functionality (PROFINET Conformance Class A)
- Broadcast Storm Protection functionality
- AC/DC power supply input
- Optimized DIN rail clip and PUSH IN connection
- Approvals for maritime and potentially explosive environments
- Energy-efficient Ethernet (EEE)

Technical data

| | |
|-------------------------------------|----------|
| Technology | Standard |
| Data switching | |
| Flow control | |
| Switch characteristics | |
| MAC table size | |
| Packet buffer size | |
| Management features | |
| Network traffic filter | |
| Industrial protocol support | |
| Interfaces | |
| RJ45 ports | |
| Number of ports | |
| Fibre-optic ports | |
| Function DIP switch | |
| Power supply | |
| Connection type | |
| Voltage supply range | |
| Voltage supply | |
| Current consumption | |
| Overload current protection | |
| Reverse polarity protection | |
| Physical characteristics | |
| Housing main material | |
| Protection degree | |
| Type of mounting | |
| Dimensions H x W x D | |
| Net weight | |
| Environmental conditions | |
| Operating temperature | |
| Humidity | |
| EMC conformity and approvals | |
| EMC standards | |
| Explosive risk zone | |
| Ship use | |
| Safety standard | |
| Shock | |
| Vibration | |
| MTBF | |
| Operating time (hours), min. | |
| According to Standard | |
| Approvals | |
| Approvals | |
| Note | |
| Ordering data | |
| Note | |

IE-SW-BLB-08-8TX



| | | |
|---|---|------------------|
| | IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3x for flow control, IEEE 802.3az Energy-Efficient Ethernet, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS) | |
| Store and Forward | IEEE 802.3x flow control | |
| | 2 K | |
| | 768 kBit | |
| | Quality of Service (QoS), MAC frame filtering (LLDP frame blocking) | |
| | PROFINET device acc. to conformance class A | |
| | 10/100BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port | |
| | 8x RJ45 | |
| | QoS (on/off), Broadcast storm protection enable/disable, MAC frame filtering (on/off), Activate/deactivate IEEE 802.3az energy-efficient Ethernet | |
| | 1 removable 4-pin terminal block | |
| | 9...60VDC / 18V...30VAC | |
| | 12/24/48 V DC, 2 redundant inputs | |
| | 0.06A @ 24V | |
| | Yes | |
| | Yes | |
| | Metal | |
| | IP30 | |
| | DIN rail | |
| | 114 / 44 / 70 mm (4.4882 / 1.7323 / 2.7559 inch) | |
| | 353 GRM | |
| | -40 °C...75 °C | |
| | 5 to 95 % (non-condensing) | |
| | EN IEC 61000-6-2, EN IEC 61000-6-4, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m, IEC 61000-4-3 RS: 1.4 GHz to 6 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 Vrms, IEC 61000-4-8 PFMF: 30 A/m | |
| | EN IEC 60079-0, EN IEC 60079-7, UL/cUL, Class I, Division 2, Groups A, B, C and D, ATEX Zone 2 Ex ec IIC T4 Gc | |
| | DNV, BV, ABS, LR, RINA pending approval | |
| | UL 61010-1, UL 61010-2-201 | |
| | according to IEC 60068-2-27 | |
| | according to IEC 60068-2-6 | |
| | 1314643h | |
| | Telcordia SR-332 | |
| | CE; CULUS; CULUSEX; DEMKOATEX; IECEXULD; KOREANCERT; UKCA; DETNORVER; BURVER; ABS; LLOYDSREG; RINA | |
| Type | Qty. | Order No. |
| IE-SW-BLB-08-8TX | 1 | 2908040000 |
| DNV, BV, ABS, LR, RINA pending approval | | |

IE-SW-BLB-08-6TX-2FESFP



| | | |
|---|---|------------------|
| | IEEE 802.3 for 10BASE-T, IEEE 802.3x for flow control, IEEE 802.3az Energy-Efficient Ethernet, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS), IEEE 802.3u for 100BaseT(X) and 100BaseFX | |
| Store and Forward | IEEE 802.3x flow control | |
| | 2 K | |
| | 768 kBit | |
| | Quality of Service (QoS), MAC frame filtering (LLDP frame blocking) | |
| | PROFINET device acc. to conformance class A | |
| | 10/100BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port | |
| | 6x RJ45, 2x 100BaseSFP slot | |
| | 100BaseSFP-Slot | |
| | QoS (on/off), Broadcast storm protection enable/disable, MAC frame filtering (on/off), Activate/deactivate IEEE 802.3az energy-efficient Ethernet | |
| | 1 removable 4-pin terminal block | |
| | 9...60VDC / 18V...30VAC | |
| | 12/24/48 V DC, 24 V AC, 2 redundant inputs | |
| | 0.1A @ 24V | |
| | Yes | |
| | Yes | |
| | Metal | |
| | IP30 | |
| | DIN rail | |
| | 114 / 44 / 70 mm (4.4882 / 1.7323 / 2.7559 inch) | |
| | 359 GRM | |
| | -40 °C...75 °C | |
| | 5 to 95 % (non-condensing) | |
| | EN IEC 61000-6-2, EN IEC 61000-6-4, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m, IEC 61000-4-3 RS: 1.4 GHz to 6 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 Vrms, IEC 61000-4-8 PFMF: 30 A/m | |
| | EN IEC 60079-0, EN IEC 60079-7, UL/cUL, Class I, Division 2, Groups A, B, C and D, ATEX Zone 2 Ex ec IIC T4 Gc | |
| | DNV, BV, ABS, LR, RINA pending approval | |
| | UL 61010-1, UL 61010-2-201 | |
| | according to IEC 60068-2-27 | |
| | according to IEC 60068-2-6 | |
| | 1448944h | |
| | Telcordia SR-332 | |
| | CE; CULUS; CULUSEX; DEMKOATEX; IECEXULD; KOREANCERT; UKCA; DETNORVER; BURVER; ABS; LLOYDSREG; RINA | |
| Type | Qty. | Order No. |
| IE-SW-BLB-08-6TX-2FESFP | 1 | 2908160000 |
| DNV, BV, ABS, LR, RINA pending approval | | |

8-Port unmanaged Fast Ethernet Switches

- Support for real-time communication using QoS and LLDP frame blocking functionality (PROFINET Conformance Class A)
- Broadcast Storm Protection functionality
- AC/DC power supply input
- Optimized DIN rail clip and PUSH IN connection
- Approvals for maritime and potentially explosive environments
- Energy-efficient Ethernet (EEE)

Technical data

| | |
|-------------------------------------|----------|
| Technology | Standard |
| Data switching | |
| Flow control | |
| Switch characteristics | |
| MAC table size | |
| Packet buffer size | |
| Management features | |
| Network traffic filter | |
| Industrial protocol support | |
| Interfaces | |
| RJ45 ports | |
| Number of ports | |
| Fibre-optic ports | |
| Function DIP switch | |
| Power supply | |
| Connection type | |
| Voltage supply range | |
| Voltage supply | |
| Current consumption | |
| Overload current protection | |
| Reverse polarity protection | |
| Physical characteristics | |
| Housing main material | |
| Protection degree | |
| Type of mounting | |
| Dimensions H x W x D | |
| Net weight | |
| Environmental conditions | |
| Operating temperature | |
| Humidity | |
| EMC conformity and approvals | |
| EMC standards | |
| Explosive risk zone | |
| Ship use | |
| Safety standard | |
| Shock | |
| Vibration | |
| MTBF | |
| Operating time (hours), min. | |
| According to Standard | |
| Approvals | |
| Approvals | |
| Note | |

Ordering data

| | |
|-------------|--|
| Note | |
|-------------|--|

IE-SW-BLB-08-7TX-1FESFP



| |
|---|
| IEEE 802.3 for 10BASE-T, IEEE 802.3x for flow control, IEEE 802.3az Energy-Efficient Ethernet, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS), IEEE 802.3u for 100BaseT(X) and 100BaseFX |
| Store and Forward |
| IEEE 802.3x flow control |
| 2 K |
| 768 kBit |
| Quality of Service (QoS), MAC frame filtering (LLDP frame blocking) |
| PROFINET device acc. to conformance class A |
| 10/100BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| 7x RJ45, 1x 100BaseSFP slot |
| 100BaseSFP-Slot |
| QoS (on/off), Broadcast storm protection enable/disable, MAC frame filtering (on/off), Activate/deactivate IEEE 802.3az energy-efficient Ethernet |
| 1 removable 4-pin terminal block |
| 9...60VDC / 18V...30VAC |
| 12/24/48 V DC, 24 V AC, 2 redundant inputs |
| 0.1A @ 24V |
| Yes |
| Yes |
| Metal |
| IP30 |
| DIN rail |
| 114 / 44 / 70 mm (4.4882 / 1.7323 / 2.7559 inch) |
| 355 GRM |
| -40 °C...75 °C |
| 5 to 95 % (non-condensing) |
| EN IEC 61000-6-2, EN IEC 61000-6-4, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m, IEC 61000-4-3 RS: 1.4 GHz to 6 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 Vrms, IEC 61000-4-8 PFMF: 30 A/m |
| EN IEC 60079-0, EN IEC 60079-7, UL/cUL, Class I, Division 2, Groups A, B, C and D, ATEX Zone 2 Ex ec IIC T4 Gc |
| DNV, BV, ABS, LR, RINA pending approval |
| UL 61010-1, UL 61010-2-201 |
| according to IEC 60068-2-27 |
| according to IEC 60068-2-6 |
| 1379287h |
| Telcordia SR-332 |
| CE; CULUS; CULUSEX; DEMKOATEX; IECEXULD; KOREANCERT; UKCA; DETNORVER; BURVER; ABS; LLOYDSREG; RINA |

| Type | Qty. | Order No. |
|---|------|------------|
| IE-SW-BLB-08-7TX-1FESFP | 1 | 2908150000 |
| DNV, BV, ABS, LR, RINA pending approval | | |

16-Port unmanaged Fast Ethernet Switches

- Support for real-time communication using QoS and LLDP frame blocking functionality (PROFINET Conformance Class A)
- Broadcast Storm Protection functionality
- AC/DC power supply input
- Optimized DIN rail clip and PUSH IN connection
- Approvals for maritime and potentially explosive environments
- Energy-efficient Ethernet (EEE)

Technical data

| | |
|-------------------------------------|----------|
| Technology | Standard |
| Data switching | |
| Flow control | |
| Switch characteristics | |
| MAC table size | |
| Packet buffer size | |
| Management features | |
| Network traffic filter | |
| Industrial protocol support | |
| Interfaces | |
| RJ45 ports | |
| Number of ports | |
| Function DIP switch | |
| Power supply | |
| Connection type | |
| Voltage supply range | |
| Voltage supply | |
| Current consumption | |
| Overload current protection | |
| Reverse polarity protection | |
| Physical characteristics | |
| Housing main material | |
| Protection degree | |
| Type of mounting | |
| Dimensions H x W x D | |
| Net weight | |
| Environmental conditions | |
| Operating temperature | |
| Humidity | |
| EMC conformity and approvals | |
| EMC standards | |
| Explosive risk zone | |
| Ship use | |
| Safety standard | |
| Shock | |
| Vibration | |
| MTBF | |
| Operating time (hours), min. | |
| According to Standard | |
| Approvals | |
| Approvals | |
| Note | |

IE-SW-BLB-16-16TX



| |
|---|
| IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3x for flow control, IEEE 802.3az Energy-Efficient Ethernet, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS) |
| Store and Forward |
| IEEE 802.3x flow control |
| 4 K |
| 4 Mbit |
| Quality of Service (QoS), MAC frame filtering (LLDP frame blocking) PROFINET device acc. to conformance class A |
| 10/100BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| 16x RJ45 |
| QoS (on/off), Broadcast storm protection enable/disable, MAC frame filtering (on/off), Activate/deactivate IEEE 802.3az energy-efficient Ethernet, 2x for enabling/disabling power fault alarm via relay |
| 1 removable 6-pin terminal block |
| 18...30VAC / 9V...60VDC |
| 12/24/48 V DC, 24 V AC, 2 redundant inputs |
| 0.16A @ 24V |
| Yes |
| Yes |
| Metal |
| IP30 |
| DIN rail |
| 144 / 44 / 95 mm (5.6693 / 1.7323 / 3.7402 inch) |
| 526 GRM |
| -40 °C...75 °C |
| 5 to 95 % (non-condensing) |
| EN IEC 61000-6-2, EN IEC 61000-6-4, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m, IEC 61000-4-3 RS: 1.4 GHz to 6 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 Vrms, IEC 61000-4-8 PFMF: 30 A/m |
| EN IEC 60079-0, EN IEC 60079-7, EN IEC 60079-15, UL/cUL, Class I, Division 2, Groups A, B, C and D, ATEX Zone 2 Ex ec nC IIC T4 Gc |
| DNV, BV, ABS, LR, RINA pending approval |
| UL 61010-1, UL 61010-2-201 |
| according to IEC 60068-2-27 |
| according to IEC 60068-2-6 |
| 841302h |
| Telcordia SR-332 |
| CE; CULUS; CULUSEX; DEMKOATEX; IECEXULD; KOREANCERT; UKCA; DETNORVER; BURVER; ABS; LLOYDSREG; RINA |

Ordering data

| |
|-------------|
| Note |
|-------------|

| Type | Qty. | Order No. |
|---|------|------------|
| IE-SW-BLB-16-16TX | 1 | 2908050000 |
| DNV, BV, ABS, LR, RINA pending approval | | |

24-Port unmanaged Fast Ethernet Switches

- Support for real-time communication using QoS and LLDP frame blocking functionality (PROFINET Conformance Class A)
- Broadcast Storm Protection functionality
- AC/DC power supply input
- Optimized DIN rail clip and PUSH IN connection
- Approvals for maritime and potentially explosive environments
- Energy-efficient Ethernet (EEE)

Technical data

| | |
|-------------------------------------|----------|
| Technology | Standard |
| Data switching | |
| Flow control | |
| Switch characteristics | |
| MAC table size | |
| Packet buffer size | |
| Management features | |
| Network traffic filter | |
| Industrial protocol support | |
| Interfaces | |
| RJ45 ports | |
| Number of ports | |
| Function DIP switch | |
| Power supply | |
| Connection type | |
| Voltage supply range | |
| Voltage supply | |
| Current consumption | |
| Overload current protection | |
| Reverse polarity protection | |
| Physical characteristics | |
| Housing main material | |
| Protection degree | |
| Type of mounting | |
| Dimensions H x W x D | |
| Net weight | |
| Environmental conditions | |
| Operating temperature | |
| Humidity | |
| EMC conformity and approvals | |
| EMC standards | |
| Explosive risk zone | |
| Ship use | |
| Safety standard | |
| Shock | |
| Vibration | |
| MTBF | |
| Operating time (hours), min. | |
| According to Standard | |
| Approvals | |
| Approvals | |
| Note | |

Ordering data

| |
|-------------|
| Note |
|-------------|

IE-SW-BLB-24-24TX



| |
|---|
| IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3x for flow control, IEEE 802.3az Energy-Efficient Ethernet, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS) |
| Store and Forward |
| IEEE 802.3x flow control |
| 4 K |
| 4 Mbit |
| Quality of Service (QoS), MAC frame filtering (LLDP frame blocking) |
| PROFINET device acc. to conformance class A |
| 10/100BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| 24x RJ45 |
| QoS (on/off), MAC frame filtering (on/off), Activate/deactivate IEEE 802.3az energy-efficient Ethernet, 2x for enabling/disabling power fault alarm via relay |
| 1 removable 6-pin terminal block |
| 9...60VDC / 18V...30VAC |
| 12/24/48 V DC, 24 V AC, 2 redundant inputs |
| 0.21A @ 24V |
| Yes |
| Yes |
| Metal |
| IP30 |
| DIN rail |
| 144 / 65 / 95 mm (5.6693 / 2.5591 / 3.7402 inch) |
| 690 GRM |
| -40 °C...75 °C |
| 5 to 95 % (non-condensing) |
| EN IEC 61000-6-2, EN IEC 61000-6-4, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m, IEC 61000-4-3 RS: 1.4 GHz to 6 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 Vrms, IEC 61000-4-8 PFMF: 30 A/m |
| EN IEC 60079-0, EN IEC 60079-7, EN IEC 60079-15, UL/cUL, Class I, Division 2, Groups A, B, C and D, ATEX Zone 2 Ex ec nC IIC T4 Gc |
| DNV, BV, ABS, LR, RINA pending approval |
| UL 61010-1, UL 61010-2-201 |
| according to IEC 60068-2-27 |
| according to IEC 60068-2-6 |
| 581976h |
| Telcordia SR-332 |
| CE; CULUS; CULUSEX; DEMKOATEX; IECEXULD; KOREANCERT; UKCA; DETNORVER; BURVER; ABS; LLOYDSREG; RINA |

| Type | Qty. | Order No. |
|---|------|------------|
| IE-SW-BLB-24-24TX | 1 | 2908060000 |
| DNV, BV, ABS, LR, RINA pending approval | | |

16-Port unmanaged Fast Ethernet Switches

- Extensive approvals
- Warning via relay output in case of power failure and port error
- Redundant voltage inputs

IE-SW-VL16-16TX



Technical data

| |
|-------------------------------------|
| Technology |
| Standard |
| Data switching |
| Flow control |
| Switch characteristics |
| MAC table size |
| Packet buffer size |
| Interfaces |
| RJ45 ports |
| Number of ports |
| Function DIP switch |
| Power supply |
| Connection type |
| Voltage supply range |
| Voltage supply |
| Current consumption |
| Overload current protection |
| Reverse polarity protection |
| Physical characteristics |
| Housing main material |
| Protection degree |
| Type of mounting |
| Dimensions H x W x D |
| Net weight |
| Environmental conditions |
| Operating temperature |
| Humidity |
| EMC conformity and approvals |
| EMC standards |
| Safety standard |
| Shock |
| Vibration |
| MTBF |
| Operating time (hours), min. |
| According to Standard |
| Approvals |
| Approvals |
| Note |

| |
|--|
| IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3x for flow control |
| Store and Forward |
| IEEE 802.3x flow control, Back pressure flow control |
| 4 K |
| 1.25 Mbit |
| 10/100BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| 16x RJ45 |
| Port surveillance, Broadcast storm protection enable/disable |
| 1 removable 6-pin terminal block |
| 9.6...60VDC |
| 12/24/48 V DC, 2 redundant inputs |
| 0.27 A at 24 V |
| 1.6 A |
| Available |
| metal |
| IP30 |
| DIN rail |
| 135 / 80.5 / 105 mm (5.315 / 3.1693 / 4.1338 inch) |
| 1140 GRM |
| 1241000000: 0 °C...60 °C; |
| 1286590000: -40 °C...75 °C |
| 5 to 95 % (non-condensing) |
| EN 55032, EN 55024, CISPR 32, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 GHz: 20 V/m, IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 V, IEC 61000-4-8 |
| UL508, UL 60950-1, EN 60950-1 |
| according to IEC 60068-2-27 |
| according to IEC 60068-2-6 |
| 257000h |
| MIL-HDBK-217F, GB 25°C |
| CE; CULUS; CULUSEX; DEMKOATEX; DETNORVER; KOREANCERT; UKCA |

Ordering data

| |
|-------------|
| Note |
|-------------|

| Type | Qty. | Order No. |
|------------------|------|------------|
| IE-SW-VL16-16TX | 1 | 1241000000 |
| IE-SW-VL16T-16TX | 1 | 1286590000 |

Unmanaged Switches Fast Ethernet – IP67

5-Port IP67 unmanaged Fast Ethernet Switches

- M12 connection system and IP67 protected housing
- 10/100BaseT (X), 4-pin M12 (D-coded)
- Full/half duplex mode and auto MDI/MDI-X
- Input voltage 12 to 45 V DC, 18 to 30 V AC

IE-SW-IP67-5M12



Technical data

| | |
|-------------------------------------|-----------|
| Technology | Standard |
| Data switching | |
| Flow control | |
| Switch characteristics | |
| MAC table size | |
| Packet buffer size | |
| Interfaces | M12-Ports |
| Number of ports | |
| Power supply | |
| Voltage supply | |
| Current consumption | |
| Overload current protection | |
| Connection type | |
| Reverse polarity protection | |
| Physical characteristics | |
| Housing main material | |
| Protection degree | |
| Type of mounting | |
| Dimensions H x W x D | |
| Net weight | |
| Environmental conditions | |
| Operating temperature | |
| Humidity | |
| EMC conformity and approvals | |
| EMC standards | |
| Safety standard | |
| Shock | |
| Vibration | |
| MTBF | |
| Operating time (hours), min. | |
| According to Standard | |
| Approvals | |
| Approvals | |
| Note | |

| |
|---|
| IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3x for flow control |
| Store and Forward |
| IEEE 802.3x flow control, Back pressure flow control |
| 2 K |
| 384 kBit |
| 10/100BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X connection, D-coded, 4-pole |
| 5 * M12 D coded |
| 24/36 V DC, 24 V AC |
| 0.12 A |
| 1.1 A |
| 1 x M12 socket, A-coded, Pin |
| Available |
| Plastic |
| IP67 encapsulated |
| Wall mounting, when screwed in |
| 125 / 60 / 29.6 mm (4.9213 / 2.3622 / 1.1654 inch) |
| 270 GRM |
| 1504410000: -25 °C..60 ; |
| 1504420000: -40 °C..75 |
| 5 to 95 % (non-condensing) |
| EN 55032, EN 55024, FCC Part 15 Subpart B Class A, IEC 61000-4-2 |
| ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 GHz: 20 V/m, IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 V, IEC 61000-4-8 |
| UL508 |
| according to IEC 60068-2-27 |
| according to IEC 60068-2-6 |
| 370224h |
| Telcordia (Bellcore), GB |
| CE; CULUS; UKCA |

Ordering data

| |
|-------------|
| Note |
|-------------|

| Type | Qty. | Order No. |
|------------------|------|------------|
| IE-SW-IP67-5M12 | 1 | 1504410000 |
| IE-SW-IP67T-5M12 | 1 | 1504420000 |

6 and 8-Port unmanaged PoE+ Fast Ethernet Switches

- IEEE 802.3af/at compliant PoE ports
- Fiber optic ports for communication links over long distances
- Reliable operation due to redundant voltage inputs, fault relay and LED diagnostics

Technical data

| | |
|---|----------|
| Technology | Standard |
| Data switching | |
| Flow control | |
| Switch characteristics | |
| MAC table size | |
| Packet buffer size | |
| Interfaces | |
| RJ45 ports | |
| Number of ports | |
| Fibre-optic ports | |
| Signalling contact | |
| Function DIP switch | |
| Fibre optic transceiver characteristics | |
| Transmission rate | |
| Connector type | |
| Transceiver type | |
| Transmission distance, typ. | |
| Wavelength | |
| Receive power | |
| Transmission power | |
| Link-budget | |
| Power supply | |
| Connection type | |
| Voltage supply range | |
| Voltage supply | |
| Current consumption | |
| Overload current protection / Reverse polarity protection | |
| Power over Ethernet (PoE) | |
| PoE pin assignment | |
| Total PoE power budget | |
| Physical characteristics | |
| Housing main material | |
| Type of mounting | |
| Dimensions H x W x D | |
| Environmental conditions | |
| Operating temperature | |
| Humidity | |
| Operating altitude | |
| EMC conformity and approvals | |
| EMC standards | |
| Safety standard | |
| Shock | |
| Vibration | |
| MTBF | |
| Operating time (hours), min. / According to Standard | |
| Approvals | |
| Approvals | |
| Note | |

Ordering data

| | | |
|---------------------|-------------|------------------|
| Type | Qty. | Order No. |
| IE-SW-EL06-4POE-2SC | 1 | 2682390000 |
| Note | | |

IE-SW-EL06-4PoE-2SC



| |
|---|
| IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3x for flow control, IEEE 802.3at/af for Power-over-Ethernet |
| Store and Forward |
| IEEE 802.3x flow control |
| 1 K |
| 448 kBit |
| 10/100BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| 4x RJ45 10/100 BaseT(X) PoE+, 2x SC Multi-mode 100BaseFX ports (SC connector), Multimode |
| 1 relay output with a current capacity of 1 A at 24 V DC |
| 2x for enabling/disabling power fault alarm via relay |
| 100 Mbps |
| SC-Duplex |
| Multimode |
| 2 km |
| typ.: 1310nm |
| -31...0dBm |
| -23.5...-14dBm |
| 7.5 dB |
| 1 removable 6-pin terminal block |
| 24...57VDC |
| 24/48 V DC, 2 redundant inputs |
| 2.8A @ 24V; 2.2A @ 57V |
| Yes / Yes |
| Mode A: Pin 1, 2 (V+); Pin 3, 6 (V-); Alternative A; MDI |
| 60W @ 24...49.9V DC; 120W @ 50...57V DC |
| Metal |
| DIN rail |
| 144.3 / 41 / 94.9 mm (5.6811 / 1.6142 / 3.7362 inch) |
| -40 °C...75 °C |
| 5 to 95 % (non-condensing) |
| 2000m in acc. with UL |
| EN 55032, EN 55024, CISPR 32, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0.5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms |
| UL 61010-1, UL 61010-2-201 according to IEC 60068-2-27 |
| according to IEC 60068-2-6 |
| 538904h / Telcordia SR-332 |
| CE; CULUS; KOREANCERT; UKCA |

| | | |
|---------------------|-------------|------------------|
| Type | Qty. | Order No. |
| IE-SW-EL06-4POE-2SC | 1 | 2682390000 |
| Note | | |

IE-SW-EL08-8PoE



| |
|---|
| IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3x for flow control, IEEE 802.3at/af for Power-over-Ethernet |
| Store and Forward |
| IEEE 802.3x flow control |
| 1 K |
| 448 kBit |
| 10/100BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| 8x RJ45 10/100 BaseT(X) PoE+ |
| 1 relay output with a current capacity of 1 A at 24 V DC |
| 2x for enabling/disabling power fault alarm via relay |
| 1 removable 6-pin terminal block |
| 12...57VDC |
| 12/24/48 V DC, 2 redundant inputs |
| 6.3A @ 12V; 5.74A @ 24V |
| Yes / Yes |
| Mode A: Pin 1, 2 (V+); Pin 3, 6 (V-); Alternative A; MDI |
| 60W @ 12...23.9V DC; 120W @ 24...57V DC |
| Metal |
| DIN rail |
| 144.3 / 41 / 94.9 mm (5.6811 / 1.6142 / 3.7362 inch) |
| -40 °C...75 °C |
| 5 to 95 % (non-condensing) |
| 2000m in acc. with UL |
| EN 55032, EN 55024, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0.5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms |
| UL 61010-1, UL 61010-2-201 according to IEC 60068-2-27 |
| according to IEC 60068-2-6 |
| 744974h / Telcordia SR-332 |
| CE; CULUS; KOREANCERT; UKCA |

| | | |
|-----------------|-------------|------------------|
| Type | Qty. | Order No. |
| IE-SW-EL08-8POE | 1 | 2682380000 |
| Note | | |

6-Port unmanaged Fast Ethernet PoE+ Switches

- 4x IEEE 802.3af/at compliant PoE ports
- Up to 30 watts per PoE port
- 12/24/48 V DC redundant wide-range power supply
- Integrated DC/DC converter can supply 48 V-PoE devices across the entire input voltage range of 12...57 V DC
- Intelligent power consumption detection and classification
- Broadcast Storm Protection

IE-SW-BL06-2TX-4PoE



Technical data

| | |
|-------------------------------------|----------|
| Technology | Standard |
| Data switching | |
| Flow control | |
| Switch characteristics | |
| MAC table size | |
| Packet buffer size | |
| Interfaces | |
| RJ45 ports | |
| Number of ports | |
| Function DIP switch | |
| Power supply | |
| Voltage supply | |
| Voltage supply range | |
| Connection type | |
| Current consumption | |
| Overload current protection | |
| Reverse polarity protection | |
| Power over Ethernet (PoE) | |
| PoE pin assignment | |
| Total PoE power budget | |
| Physical characteristics | |
| Housing main material | |
| Protection degree | |
| Type of mounting | |
| Dimensions H x W x D | |
| Net weight | |
| Environmental conditions | |
| Operating temperature | |
| Humidity | |
| EMC conformity and approvals | |
| EMC standards | |
| Safety standard | |
| Shock | |
| Vibration | |
| MTBF | |
| Operating time (hours), min. | |
| According to Standard | |
| Approvals | |
| Approvals | |
| Note | |

| |
|---|
| IEEE 802.3af for Power-over-Ethernet, IEEE 802.3at for Power-over-Ethernet, IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3x for flow control |
| Store and Forward |
| IEEE 802.3x flow control, Back pressure flow control |
| 2 K |
| 768 kBit |
| 10/100BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| 2 * RJ45 10/100 BaseT(X), 4 * RJ45 10/100 BaseT(X) PoE+ |
| Broadcast storm protection enable/disable |
| 12/24/48 V DC, 2 redundant inputs |
| 12...57VDC |
| 1 removable 4-pin terminal block |
| 6.19A @ 12V; 5.55A @ 24V; 2.71A @ 48V |
| Yes |
| Yes |
| Mode A: Pin 1, 2 (V+); Pin 3, 6 (V-); Alternative A; MDI |
| 62W @ 12...17V DC; 120W @ 18...57V DC |
| Aluminium |
| IP30 |
| DIN rail |
| 114 / 50 / 70 mm (4.4882 / 1.9685 / 2.7559 inch) |
| 375 GRM |
| 1241380000: -10 °C...60 °C |
| 1286920000: -40 °C...75 °C |
| 5 to 95 % (non-condensing) |
| FCC Part 15 Subpart B Class A, EN 55032, EN 55024, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 GHz: 20 V/m, IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 V, EN 61000-4-8 |
| UL 508 |
| according to IEC 60068-2-27 |
| according to IEC 60068-2-6 |
| 1398743h |
| Telcordia (Bellcore), GB |
| CE; CULUS; KOREANCERT; UKCA |

Ordering data

| |
|-------------|
| Note |
|-------------|

| Type | Qty. | Order No. |
|----------------------|------|------------|
| IE-SW-BL06-2TX-4POE | 1 | 1241380000 |
| IE-SW-BL06T-2TX-4POE | 1 | 1286920000 |

18-Port unmanaged Fast/Gigabit Ethernet Switch

- Compact design
- Wide temperature range
- Redundant voltage inputs
- SFP-ports for fiber optic transmission over long distances

IE-SW-EL18-16TX-2GC



Technical data

| | |
|-------------------------------------|----------|
| Technology | Standard |
| Data switching | |
| Flow control | |
| Switch characteristics | |
| MAC table size | |
| Packet buffer size | |
| Interfaces | |
| RJ45 ports | |
| Number of ports | |
| Fibre-optic ports | |
| Signalling contact | |
| Power supply | |
| Connection type | |
| Voltage supply range | |
| Voltage supply | |
| Current consumption | |
| Overload current protection | |
| Reverse polarity protection | |
| Physical characteristics | |
| Housing main material | |
| Protection degree | |
| Type of mounting | |
| Dimensions H x W x D | |
| Net weight | |
| Environmental conditions | |
| Operating temperature | |
| Humidity | |
| Operating altitude | |
| EMC conformity and approvals | |
| EMC standards | |
| Safety standard | |
| Shock | |
| Vibration | |
| MTBF | |
| Operating time (hours), min. | |
| According to Standard | |
| Approvals | |
| Approvals | |
| Note | |

| |
|---|
| IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3z for 1000BASE-X, IEEE 802.3x for flow control |
| Store and Forward |
| IEEE 802.3x flow control |
| 8 K |
| 1 Mbit |
| 10/100BaseT(X) or 10/100/1000BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| 16x RJ45 10/100BaseT(X), 2x combo-ports (10/100/1000BaseT(X) or 1000BaseSFP) |
| 1000BaseSFP-Slot |
| 1 relay output with a current capacity of 1 A at 24 V DC |
| 1 removable 6-pin terminal block |
| 10.8...52.8VDC |
| 12/24/48 V DC, 2 redundant inputs |
| 0.35A @ 24V |
| Yes |
| Yes |
| Metal |
| IP30 |
| DIN rail |
| 154 / 96.4 / 108.5 mm (6.063 / 3.7953 / 4.2716 inch) |
| 1363 GRM |
| -40 °C...75 °C |
| 5 to 95 % (non-condensing) |
| 2000m in acc. with UL |
| EN 55032, EN 55024, CISPR 32, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0,5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms |
| UL 61010-1, UL 61010-2-201 |
| according to IEC 60068-2-27 |
| according to IEC 60068-2-6 |
| 748087h |
| Telcordia SR-332 |
| CE; CULUS; KOREANCERT; UKCA |

Ordering data

| |
|-------------|
| Note |
|-------------|

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-SW-EL18-16TX-2GC | 1 | 2682200000 |

18-Port unmanaged Fast/Gigabit Ethernet Switch

- Support for real-time communication using QoS and LLDP frame blocking functionality (PROFINET Conformance Class A)
- Broadcast Storm Protection functionality
- AC/DC power supply input
- Optimized DIN rail clip and PUSH IN connection
- Approvals for maritime and potentially explosive environments
- Energy-efficient Ethernet (EEE)

Technical data

| | |
|-------------------------------------|----------|
| Technology | Standard |
| Data switching | |
| Flow control | |
| Switch characteristics | |
| MAC table size | |
| Packet buffer size | |
| Management features | |
| Network traffic filter | |
| Industrial protocol support | |
| Interfaces | |
| RJ45 ports | |
| Number of ports | |
| Fibre-optic ports | |
| Alarm contact | |
| Power supply | |
| Connection type | |
| Voltage supply range | |
| Voltage supply | |
| Current consumption | |
| Overload current protection | |
| Reverse polarity protection | |
| Physical characteristics | |
| Housing main material | |
| Protection degree | |
| Type of mounting | |
| Dimensions H x W x D | |
| Net weight | |
| Environmental conditions | |
| Operating temperature | |
| Humidity | |
| Operating altitude | |
| EMC conformity and approvals | |
| EMC standards | |
| Explosive risk zone | |
| Ship use | |
| Safety standard | |
| Shock | |
| Vibration | |
| MTBF | |
| Operating time (hours), min. | |
| According to Standard | |
| Approvals | |
| Approvals | |
| Note | |

Ordering data

| | |
|-------------|--|
| Note | |
|-------------|--|

IE-SW-BLB-18-16TX-2GESFP



| |
|---|
| IEEE 802.3 for 10BASE-T, IEEE 802.3ab for 1000BASE-T, IEEE 802.3x for flow control, IEEE 802.3az Energy-Efficient Ethernet, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS), IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3z for 1000BaseX |
| Store and Forward |
| IEEE 802.3x flow control |
| 4 K |
| 4 Mbit |
| Quality of Service (QoS), MAC frame filtering (LLDP frame blocking) |
| PROFINET device acc. to conformance class A |
| 10/100BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| 16x RJ45, 2x 100/1000BaseSFP Slot |
| 100/1000Base SFP Slot |
| 1 relay output with a current capacity of 1 A at 24 V DC |
| 1 removable 6-pin terminal block |
| 9...60VDC / 18V...30VAC |
| 12/24/48 V DC, 24 V AC, 2 redundant inputs |
| 0.23A @ 24V |
| Yes |
| Yes |
| Metal |
| IP30 |
| DIN rail |
| 144 / 65 / 95 mm (5.6693 / 2.5591 / 3.7402 inch) |
| 636 GRM |
| -40 °C...75 °C |
| 5 to 95 % (non-condensing) |
| 2000m |
| EN IEC 61000-6-2, EN IEC 61000-6-4, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m, IEC 61000-4-3 RS: 1.4 GHz to 6 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 Vrms, IEC 61000-4-8 PFMF: 30 A/m |
| EN IEC 60079-0, EN IEC 60079-7, EN IEC 60079-15, UL/cUL, Class I, Division 2, Groups A, B, C and D, ATEX Zone 2 Ex ec nC IIC T4 Gc |
| DNV, BV, ABS, LR, RINA pending approval |
| UL 61010-1, UL 61010-2-201 |
| according to IEC 60068-2-27 |
| according to IEC 60068-2-6 |
| 759792h |
| Telcordia SR-332 |
| CE; CULUS; CULUSEX; DEMKOATEX; IECEXULD; KOREANCERT; UKCA; DETNORVER; BURVER; ABS; LLOYDSREG; RINA |

| Type | Qty. | Order No. |
|---|------|------------|
| IE-SW-BLB-18-16TX-2GESFP | 1 | 2908170000 |
| DNV, BV, ABS, LR, RINA pending approval | | |

5-Port unmanaged Gigabit Ethernet Switches

- Compact design
- Wide temperature range
- Redundant voltage inputs
- SFP-ports for fiber optic transmission over long distances

Technical data

| | |
|-------------------------------------|----------|
| Technology | Standard |
| Data switching | |
| Flow control | |
| Switch characteristics | |
| MAC table size | |
| Packet buffer size | |
| Jumbo frame support | |
| Interfaces | |
| RJ45 ports | |
| Number of ports | |
| Fibre-optic ports | |
| Signalling contact | |
| Function DIP switch | |
| Power supply | |
| Connection type | |
| Voltage supply range | |
| Voltage supply | |
| Current consumption | |
| Overload current protection | |
| Reverse polarity protection | |
| Physical characteristics | |
| Housing main material | |
| Protection degree | |
| Type of mounting | |
| Dimensions H x W x D | |
| Net weight | |
| Environmental conditions | |
| Operating temperature | |
| Humidity | |
| Operating altitude | |
| EMC conformity and approvals | |
| EMC standards | |
| Safety standard | |
| Shock | |
| Vibration | |
| MTBF | |
| Operating time (hours), min. | |
| According to Standard | |
| Approvals | |
| Approvals | |
| Note | |
| Ordering data | |
| Note | |

IE-SW-EL05-5GT



| | | |
|---|-------------|------------------|
| IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3x for flow control | | |
| Store and Forward | | |
| IEEE 802.3x flow control | | |
| 4 K | | |
| 1 Mbit | | |
| up to 9.72 KB | | |
| 10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port | | |
| 5x RJ45 | | |
| 1 removable 4-pin terminal block | | |
| 10.8...52.8VDC | | |
| 12/24/48 V DC, 2 redundant inputs | | |
| 0.14A @ 24V | | |
| Yes | | |
| Yes | | |
| Metal | | |
| IP30 | | |
| DIN rail | | |
| 95 / 26.1 / 70 mm (3.7402 / 1.0276 / 2.7559 inch) | | |
| 235 GRM | | |
| -40 °C...75 °C | | |
| 5 to 95 % (non-condensing) | | |
| 2000m in acc. with UL | | |
| EN 55032, EN 55024, CISPR 32, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0.5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms | | |
| UL 61010-1, UL 61010-2-201 | | |
| according to IEC 60068-2-27 | | |
| according to IEC 60068-2-6 | | |
| 2556319h | | |
| Telcordia SR-332 | | |
| CE; CULUS; KOREANCERT; UKCA | | |
| Type | Qty. | Order No. |
| IE-SW-EL05-5GT | 1 | 2682210000 |
| Note | | |

IE-SW-EL05-4GT-1GESFP



| | | |
|---|-------------|------------------|
| IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3z for 1000BASE-X, IEEE 802.3x for flow control | | |
| Store and Forward | | |
| IEEE 802.3x flow control | | |
| 1 K | | |
| 1 Mbit | | |
| up to 10 KB | | |
| 10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port | | |
| 4 x RJ45, 1x 1000BaseSFP Slot | | |
| 1000BaseSFP-Slot | | |
| 1 relay output with a current capacity of 1 A at 24 V DC | | |
| 2x for enabling/disabling power fault alarm via relay | | |
| 1 removable 6-pin terminal block | | |
| 10.8...52.8VDC | | |
| 12/24/48 V DC, 2 redundant inputs | | |
| 0.18A @ 24V | | |
| Yes | | |
| Yes | | |
| Metal | | |
| IP30 | | |
| DIN rail | | |
| 144.3 / 26.1 / 94.9 mm (5.6811 / 1.0276 / 3.7362 inch) | | |
| 420 GRM | | |
| -40 °C...75 °C | | |
| 5 to 95 % (non-condensing) | | |
| 2000m in acc. with UL | | |
| EN 55032, EN 55024, CISPR 32, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0.5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms | | |
| UL 61010-1, UL 61010-2-201 | | |
| according to IEC 60068-2-27 | | |
| according to IEC 60068-2-6 | | |
| 1861840h | | |
| Telcordia SR-332 | | |
| CE; CULUS; UKCA | | |
| Type | Qty. | Order No. |
| IE-SW-EL05-4GT-1GESFP | 1 | 2682220000 |
| Note | | |

8-Port unmanaged Gigabit Ethernet Switches

- Compact design
- Wide temperature range
- Redundant voltage inputs

Technical data

| | |
|-------------------------------------|----------|
| Technology | Standard |
| Data switching | |
| Flow control | |
| Switch characteristics | |
| MAC table size | |
| Packet buffer size | |
| Jumbo frame support | |
| Interfaces | |
| RJ45 ports | |
| Number of ports | |
| Fibre-optic ports | |
| Signalling contact | |
| Function DIP switch | |
| Power supply | |
| Connection type | |
| Voltage supply range | |
| Voltage supply | |
| Current consumption | |
| Overload current protection | |
| Reverse polarity protection | |
| Physical characteristics | |
| Housing main material | |
| Protection degree | |
| Type of mounting | |
| Dimensions H x W x D | |
| Net weight | |
| Environmental conditions | |
| Operating temperature | |
| Humidity | |
| Operating altitude | |
| EMC conformity and approvals | |
| EMC standards | |
| Safety standard | |
| Shock | |
| Vibration | |
| MTBF | |
| Operating time (hours), min. | |
| According to Standard | |
| Approvals | |
| Approvals | |
| Note | |

Ordering data

| |
|-------------|
| Note |
|-------------|

IE-SW-EL08-8GT-MINI



| |
|--|
| IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3x for flow control |
| Store and Forward |
| IEEE 802.3x flow control |
| 4 K |
| 1.5 Mbit |
| up to 9 KB |
| 10/100/1000BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| 8x RJ45 |
| 1 removable 4-pin terminal block |
| 10.8...52.8VDC |
| 12/24/48 V DC, 2 redundant inputs |
| 0.42A @ 12V |
| Yes |
| Yes |
| Metal |
| IP30 |
| DIN rail |
| 95 / 41 / 90 mm (3.7402 / 1.6142 / 3.5433 inch) |
| 365 GRM |
| -40 °C...75 °C |
| 5 to 95 % (non-condensing) |
| 2000m in acc. with UL |
| EN 55032, EN 55024, CISPR 32, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 10 kV, IEC 61000-4-3 RS: 80 MHz bis 1 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 1 kV; Signal: 4 kV, IEC 61000-4-6 CS: 3 Vrms |
| UL 61010-1, UL 61010-2-201 |
| according to IEC 60068-2-27 |
| according to IEC 60068-2-6 |
| 1742238h |
| Telcordia SR-332 |
| CE; KOREANCERT; UKCA |

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-SW-EL08-8GT-MINI | 1 | 2705000000 |

IE-SW-EL08-8GT



| |
|---|
| IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3x for flow control |
| Store and Forward |
| IEEE 802.3x flow control |
| 4 K |
| 1.5 Mbit |
| up to 9216 Bytes |
| 10/100/1000BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| 8x RJ45 |
| 1 relay output with a current capacity of 1 A at 24 V DC |
| 2x for enabling/disabling power fault alarm via relay |
| 1 removable 6-pin terminal block |
| 10.8...52.8VDC |
| 12/24/48 V DC, 2 redundant inputs |
| 0.2A @ 24V |
| Yes |
| Yes |
| Metal |
| IP30 |
| DIN rail |
| 144.3 / 26.1 / 94.9 mm (5.6811 / 1.0276 / 3.7362 inch) |
| 425 GRM |
| -40 °C...75 °C |
| 5 to 95 % (non-condensing) |
| 2000m in acc. with UL |
| EN 55032, EN 55024, CISPR 32, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0.5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms |
| UL 61010-1, UL 61010-2-201 |
| according to IEC 60068-2-27 |
| according to IEC 60068-2-6 |
| 926332h |
| Telcordia SR-332 |
| CE; CULUS; KOREANCERT; UKCA |

| Type | Qty. | Order No. |
|----------------|------|------------|
| IE-SW-EL08-8GT | 1 | 2682230000 |

10-Port unmanaged Gigabit Ethernet Switch

- Compact design
- Wide temperature range
- Redundant voltage inputs
- SFP-ports for fiber optic transmission over long distances

IE-SW-EL10-8GT-2GESFP



Technical data

| | |
|-------------------------------------|----------|
| Technology | Standard |
| Data switching | |
| Flow control | |
| Switch characteristics | |
| MAC table size | |
| Packet buffer size | |
| Jumbo frame support | |
| Interfaces | |
| RJ45 ports | |
| Number of ports | |
| Fibre-optic ports | |
| Signalling contact | |
| Function DIP switch | |
| Power supply | |
| Connection type | |
| Voltage supply range | |
| Voltage supply | |
| Current consumption | |
| Overload current protection | |
| Reverse polarity protection | |
| Physical characteristics | |
| Housing main material | |
| Protection degree | |
| Type of mounting | |
| Dimensions H x W x D | |
| Net weight | |
| Environmental conditions | |
| Operating temperature | |
| Humidity | |
| Operating altitude | |
| EMC conformity and approvals | |
| EMC standards | |
| Safety standard | |
| Shock | |
| Vibration | |
| MTBF | |
| Operating time (hours), min. | |
| According to Standard | |
| Approvals | |
| Approvals | |
| Note | |
| Ordering data | |
| Note | |

| | | |
|---|-------------|------------------|
| IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX and 100BASE-FX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3z for 1000BASE-X, IEEE 802.3x for flow control | | |
| Store and Forward | | |
| IEEE 802.3x flow control | | |
| 4 K | | |
| 1.5 Mbit | | |
| up to 9 KB | | |
| 10/100/1000BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port | | |
| 8x RJ45, 2x 100/1000BaseSFP Slot | | |
| 100/1000Base SFP Slot | | |
| 1 removable 4-pin terminal block | | |
| 10.8...52.8VDC | | |
| 12/24/48 V DC, 2 redundant inputs | | |
| 0.41A @ 12V | | |
| Yes | | |
| Yes | | |
| Metal | | |
| IP30 | | |
| DIN rail | | |
| 127 / 41 / 90 mm (5 / 1.6142 / 3.5433 inch) | | |
| 451 GRM | | |
| -40 °C...75 °C | | |
| 5 to 95 % (non-condensing) | | |
| 2000m in acc. with UL | | |
| EN 55032, EN 55024, CISPR 32, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 1 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms | | |
| UL 61010-1, UL 61010-2-201 | | |
| according to IEC 60068-2-27 | | |
| according to IEC 60068-2-6 | | |
| 1056516h | | |
| Telcordia SR-332 | | |
| CE; CULUS; UKCA | | |
| Type | Qty. | Order No. |
| IE-SW-EL10-8GT-2GESFP | 1 | 2682240000 |

Unmanaged Switches Gigabit Ethernet – EcoLine series B

5 and 8-Port unmanaged Fast Ethernet Switches

- Support of real-time communication with Quality of Service functionality (PROFINET Conformance Class A)
- Broadcast Storm Protection functionality
- AC/DC power supply input
- Rotatable locking foot for optimized use in applications with limited vertical installation height
- Very compact design for space-critical applications

Technical data

| | |
|-------------------------------------|----------|
| Technology | Standard |
| Data switching | |
| Flow control | |
| Switch characteristics | |
| MAC table size | |
| Packet buffer size | |
| Jumbo frame support | |
| Management features | |
| Network traffic filter | |
| Industrial protocol support | |
| Interfaces | |
| RJ45 ports | |
| Number of ports | |
| Fibre-optic ports | |
| Function DIP switch | |
| Power supply | |
| Connection type | |
| Voltage supply range | |
| Voltage supply | |
| Current consumption | |
| Overload current protection | |
| Reverse polarity protection | |
| Physical characteristics | |
| Housing main material | |
| Protection degree | |
| Type of mounting | |
| Dimensions H x W x D | |
| Net weight | |
| Environmental conditions | |
| Operating temperature | |
| Humidity | |
| Operating altitude | |
| EMC conformity and approvals | |
| EMC standards | |
| Safety standard | |
| Shock | |
| Vibration | |
| MTBF | |
| Operating time (hours), min. | |
| According to Standard | |
| Approvals | |
| Approvals | |
| Note | |

Ordering data

| | |
|------------------|--|
| Type | |
| Qty. | |
| Order No. | |
| Note | |

IE-SW-ELB-05-5GT



| |
|--|
| IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3x for flow control, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS) |
| Store and Forward |
| IEEE 802.3x flow control |
| 2 K |
| 1 Mbit |
| up to 9 KB |
| Quality of Service (QoS) |
| PROFINET device acc. to conformance class A, CC-Link IE Field, CC-Link IE TSN CC-A |
| 10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port |
| 5x RJ45 |
| 1x for enabling QoS (according to IEEE 802.1p), 1x for enabling/disabling the broadcast storm protection |
| 1 removable 2-pin terminal block |
| 9.6...60VDC / 18V...36VAC |
| 12/24/48 V DC, 24 V AC, 1 single input |
| 0.17A @ 24V |
| Yes |
| Yes |
| Metal |
| IP40 |
| DIN rail |
| 103 / 26 / 64 mm (4.0551 / 1.0236 / 2.5197 inch) |
| 135 GRM |
| -10 °C...60 °C |
| 5 to 95 % (non-condensing) |
| 2000m in acc. with UL |
| EN 55032, EN 55024, CISPR 32, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0.5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms, IEC 61000-4-8 |
| UL 61010-1, UL 61010-2-201 |
| according to IEC 60068-2-27 |
| according to IEC 60068-2-6 |
| 473568h |
| Telcordia SR-332 |
| CE; CULUS; KOREANCERT; UKCA |

| | | |
|------------------|-------------|------------------|
| Type | Qty. | Order No. |
| IE-SW-ELB-05-5GT | 1 | 2828560000 |
| Note | | |

IE-SW-ELB-08-8GT



| |
|--|
| IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3x for flow control, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS) |
| Store and Forward |
| IEEE 802.3x flow control |
| 4 K |
| 1.5 Mbit |
| up to 9 KB |
| Quality of Service (QoS) |
| PROFINET device acc. to conformance class A, CC-Link IE Field, CC-Link IE TSN CC-A |
| 10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port |
| 8x RJ45 |
| 1x for enabling QoS (according to IEEE 802.1p), 1x for enabling/disabling the broadcast storm protection |
| 1 removable 2-pin terminal block |
| 9.6...60VDC / 18V...36VAC |
| 12/24/48 V DC, 24 V AC, 1 single input |
| 0.21A @ 24V |
| Yes |
| Yes |
| Metal |
| IP40 |
| DIN rail |
| 103 / 43.5 / 64 mm (4.0551 / 1.7126 / 2.5197 inch) |
| 195 GRM |
| -10 °C...60 °C |
| 5 to 95 % (non-condensing) |
| 2000m in acc. with UL |
| EN 55032, EN 55024, CISPR 32, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0.5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms, IEC 61000-4-8 |
| UL 61010-1, UL 61010-2-201 |
| according to IEC 60068-2-27 |
| according to IEC 60068-2-6 |
| 443524h |
| Telcordia SR-332 |
| CE; CULUS; KOREANCERT; UKCA |

| | | |
|------------------|-------------|------------------|
| Type | Qty. | Order No. |
| IE-SW-ELB-08-8GT | 1 | 2828570000 |
| Note | | |

5-Port unmanaged Gigabit Ethernet Switches

- Gigabit Ethernet on all ports
- Variants with slots for SFP transceivers
- Redundant dual 12/24/48 V DC power inputs
- Relay output warning for power failure and port break alarm
- Broadcast storm protection
- Supports jumbo frame transmission

Technical data

| | |
|-------------------------------------|----------|
| Technology | Standard |
| Data switching | |
| Flow control | |
| Switch characteristics | |
| MAC table size | |
| Packet buffer size | |
| Jumbo frame support | |
| Interfaces | |
| RJ45 ports | |
| Number of ports | |
| Fibre-optic ports | |
| Alarm contact | |
| Function DIP switch | |
| Power supply | |
| Connection type | |
| Voltage supply | |
| Current consumption | |
| Reverse polarity protection | |
| Physical characteristics | |
| Housing main material | |
| Protection degree | |
| Type of mounting | |
| Dimensions H x W x D | |
| Net weight | |
| Environmental conditions | |
| Operating temperature | |
| Humidity | |
| EMC conformity and approvals | |
| Explosive risk zone | |
| Ship use | |
| EMC standards | |
| Safety standard | |
| Shock | |
| Vibration | |
| MTBF | |
| Operating time (hours), min. | |
| According to Standard | |
| Approvals | |
| Approvals | |
| Note | |

Ordering data

| |
|-------------|
| Note |
|-------------|

IE-SW-BL05-4GT-1GS



| |
|--|
| IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3ab for 1000BaseT(X), IEEE 802.3z for 1000BaseX, IEEE 802.3x for flow control, IEEE 802.3az Energy-Efficient Ethernet |
| Store and Forward |
| IEEE 802.3x flow control, Back pressure flow control |
| 8 K |
| 1024 kBit |
| up to 10 KB |
| 10/100/1000BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| 4 * RJ45 10/100/1000BaseT(X), 1 * combo-port (10/100/1000BaseT(X) or 100/1000BaseSFP) |
| 100/1000Base SFP Slot |
| 1 relay output with a current capacity of 1 A at 24 V DC |
| Port surveillance, Broadcast storm protection enable/disable, Enable/disable jumbo frame support, Activate/deactivate IEEE 802.3az energy-efficient Ethernet, Switching between 100BaseSFP and 1000BaseSFP on SFP port |
| 1 removable 6-pin terminal block |
| 12/24/48 V DC, 2 redundant inputs |
| 0.16 A at 24 V |
| Available |
| Metal |
| IP30 |
| DIN rail, Panel (with optional mounting kit) |
| 135 / 29 / 105 mm (5.315 / 1.1417 / 4.1338 inch) |
| 422 GRM |
| 2435400000: -10 °C..60 °C |
| 2435410000: -40 °C..75 °C |
| 5 to 95 % (non-condensing) |
| UL/cUL, Class I, Division 2, Groups A, B, C and D, ATEX Zone 2 Ex nA nC IIC T4 Gc |
| DNV |
| EN 55032, EN 55035, EN 61000-6-4, EN 61000-6-2, CISPR 32, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m, IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 V, IEC 61000-4-8 |
| UL508, EN 60950-1 |
| according to IEC 60068-2-27 |
| according to IEC 60068-2-6 |
| 2823446h |
| Telcordia (Bellcore), GB |
| CE; CULUS; CULUSEX; DEMKOATEX; DETNORVER; KOREANCERT; UKCA |

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-SW-BL05-4GT-1GS | 1 | 2435400000 |
| IE-SW-BL05T-4GT-1GS | 1 | 2435410000 |

8-Port unmanaged Gigabit Ethernet Switches

- Gigabit Ethernet on all ports
- Variants with slots for SFP transceivers
- Redundant dual 12/24/48 V DC power inputs
- Relay output warning for power failure and port break alarm
- Broadcast storm protection
- Supports jumbo frame transmission

Technical data

| | |
|-------------------------------------|--|
| Technology | |
| Standard | |
| Data switching | |
| Flow control | |
| Switch characteristics | |
| MAC table size | |
| Packet buffer size | |
| Jumbo frame support | |
| Interfaces | |
| RJ45 ports | |
| Number of ports | |
| Fibre-optic ports | |
| Alarm contact | |
| Function DIP switch | |
| Power supply | |
| Connection type | |
| Voltage supply | |
| Current consumption | |
| Reverse polarity protection | |
| Physical characteristics | |
| Housing main material | |
| Protection degree | |
| Type of mounting | |
| Dimensions H x W x D | |
| Net weight | |
| Environmental conditions | |
| Operating temperature | |
| Humidity | |
| EMC conformity and approvals | |
| Explosive risk zone | |
| Ship use | |
| EMC standards | |
| Safety standard | |
| Shock | |
| Vibration | |
| MTBF | |
| Operating time (hours), min. | |
| According to Standard | |
| Approvals | |
| Approvals | |
| Note | |

Ordering data

| | |
|-------------|--|
| Note | |
|-------------|--|

IE-SW-VL08-8GT



| | | |
|--|--------|----------------------|
| Technology | | |
| IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3ab for 1000BaseT(X), IEEE 802.3x for flow control, IEEE 802.3az Energy-Efficient Ethernet | | |
| Store and Forward | | |
| IEEE 802.3x flow control, Back pressure flow control | | |
| MAC | | |
| 8 K | | |
| 4000 kBit | | |
| up to 9.6 KB | | |
| Interfaces | | |
| 10/100/1000BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port | | |
| 8 * RJ45 10/100/1000BaseT(X) | | |
| Relay output | | |
| 1 relay output with a current capacity of 1 A at 24 V DC | | |
| Port surveillance, Broadcast storm protection enable/disable, Enable/disable jumbo frame support, Activate/deactivate IEEE 802.3az energy-efficient Ethernet | | |
| Power supply | | |
| 1 removable 6-pin terminal block | | |
| 12/24/48 V DC, 2 redundant inputs | | |
| 0.32 A at 24 V | | |
| Available | | |
| Physical characteristics | | |
| Metal | | |
| IP30 | | |
| DIN rail | | |
| 135 / 52.85 / 105 mm (5.315 / 2.0807 / 4.1338 inch) | | |
| 850 GRM | | |
| Environmental conditions | | |
| 1241270000: -10 °C...60 °C | | |
| 1286860000: -40 °C...75 °C | | |
| 5 to 95 % (non-condensing) | | |
| EMC conformity and approvals | | |
| UL/cUL, Class I, Division 2, Groups A, B, C and D, ATEX Zone 2 Ex ec nC IIC T4 Gc, EN IEC 60079-0, EN IEC 60079-15, EN IEC 60079-7 | | |
| DNV | | |
| EN 55032, EN 55035, EN 61000-6-4, EN 61000-6-2, CISPR 32, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m, IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 V, IEC 61000-4-8 | | |
| Safety standard | | |
| UL508, EN 62368-1 | | |
| according to IEC 60068-2-27 | | |
| according to IEC 60068-2-6 | | |
| MTBF | | |
| 2398736h | | |
| Telcordia (Bellcore), GB | | |
| Approvals | | |
| CE; CULUS; CULUSEX; DEMKOATEX; DETNORVER; KOREANCERT; UKCA | | |
| Type | | |
| IE-SW-VL08-8GT | Qty. 1 | Order No. 1241270000 |
| IE-SW-VL08T-8GT | Qty. 1 | Order No. 1286860000 |

IE-SW-VL08-6GT-2GS



| | | |
|--|--------|----------------------|
| Technology | | |
| IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3ab for 1000BaseT(X), IEEE 802.3z for 1000BaseX, IEEE 802.3x for flow control, IEEE 802.3az Energy-Efficient Ethernet | | |
| Store and Forward | | |
| IEEE 802.3x flow control, Back pressure flow control | | |
| MAC | | |
| 8 K | | |
| 4000 kBit | | |
| up to 9.6 KB | | |
| Interfaces | | |
| 10/100/1000BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port | | |
| 6 * RJ45 10/100/1000BaseT(X), 2 * combo-ports (10/100/1000BaseT(X) or 100/1000BaseSFP) | | |
| 100/1000Base SFP Slot | | |
| 1 relay output with a current capacity of 1 A at 24 V DC | | |
| Port surveillance, Broadcast storm protection enable/disable, Enable/disable jumbo frame support, Activate/deactivate IEEE 802.3az energy-efficient Ethernet | | |
| Power supply | | |
| 1 removable 6-pin terminal block | | |
| 12/24/48 V DC, 2 redundant inputs | | |
| 0.34 A at 24 V | | |
| Available | | |
| Physical characteristics | | |
| Metal | | |
| IP30 | | |
| DIN rail | | |
| 135 / 52.85 / 105 mm (5.315 / 2.0807 / 4.1338 inch) | | |
| 850 GRM | | |
| Environmental conditions | | |
| 1241280000: -10 °C...60 °C | | |
| 1286870000: -40 °C...75 °C | | |
| 5 to 95 % (non-condensing) | | |
| EMC conformity and approvals | | |
| UL/cUL, Class I, Division 2, Groups A, B, C and D, ATEX Zone 2 Ex ec nC IIC T4 Gc, EN IEC 60079-0, EN IEC 60079-15, EN IEC 60079-7 | | |
| DNV | | |
| EN 55032, EN 55035, EN 61000-6-4, EN 61000-6-2, CISPR 32, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m, IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 V, IEC 61000-4-8 | | |
| Safety standard | | |
| UL508, EN 60950-1 | | |
| according to IEC 60068-2-27 | | |
| according to IEC 60068-2-6 | | |
| MTBF | | |
| 2260195h | | |
| Telcordia (Bellcore), GB | | |
| Approvals | | |
| CE; CULUS; CULUSEX; DEMKOATEX; DETNORVER; UKCA | | |
| Type | | |
| IE-SW-VL08-6GT-2GS | Qty. 1 | Order No. 1241280000 |
| IE-SW-VL08T-6GT-2GS | Qty. 1 | Order No. 1286870000 |

5-Port unmanaged Gigabit Ethernet Switches

- Support for real-time communication using Quality of Service and LLDP frame blocking functionality (PROFINET Conformance Class A)
- Broadcast storm protection functionality
- AC/DC power supply input
- Optimized DIN rail clip and PUSH IN connection
- Approvals for maritime and potentially explosive environments)
- Energy-efficient Ethernet (EEE)

Technical data

| | |
|-------------------------------------|----------|
| Technology | Standard |
| Data switching | |
| Flow control | |
| Switch characteristics | |
| MAC table size | |
| Packet buffer size | |
| Jumbo frame support | |
| Management features | |
| Network traffic filter | |
| Industrial protocol support | |
| Interfaces | |
| RJ45 ports | |
| Number of ports | |
| Fibre-optic ports | |
| Function DIP switch | |
| Power supply | |
| Connection type | |
| Voltage supply | |
| Current consumption | |
| Reverse polarity protection | |
| Physical characteristics | |
| Housing main material | |
| Surface protection PCB | |
| Protection degree | |
| Type of mounting | |
| Dimensions H x W x D | |
| Net weight | |
| Environmental conditions | |
| Operating temperature | |
| Humidity | |
| EMC conformity and approvals | |
| EMC standards | |
| Explosive risk zone | |
| Ship use | |
| Safety standard | |
| Shock | |
| Vibration | |
| MTBF | |
| Operating time (hours), min. | |
| According to Standard | |
| Approvals | |
| Approvals | |
| Note | |

Ordering data

| | |
|-------------|--|
| Note | |
|-------------|--|

IE-SW-BLB-05-5GT



| |
|---|
| IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3x for flow control, IEEE 802.3az Energy-Efficient Ethernet, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS) |
| Store and Forward |
| IEEE 802.3x flow control |
| 4 K |
| 1 Mbit |
| up to 9 KB |
| Quality of Service (QoS), MAC frame filtering (LLDP frame blocking) PROFINET device acc. to conformance class A |
| 10/100/1000BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| 5x RJ45 |
| QoS (on/off), Broadcast storm protection enable/disable, MAC frame filtering (on/off), Activate/deactivate IEEE 802.3az energy-efficient Ethernet |
| 1 removable 4-pin terminal block |
| 12/24/48 V DC, 24 V AC, 2 redundant inputs |
| 0.1A @ 24V |
| Yes |
| Metal |
| IP30 |
| DIN rail |
| 114 / 26 / 70 mm (4.4882 / 1.0236 / 2.7559 inch) |
| 272 GRM |
| -40 °C...75 °C |
| 5 to 95 % (non-condensing) |
| EN IEC 61000-6-2, EN IEC 61000-6-4, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m, IEC 61000-4-3 RS: 1.4 GHz to 6 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 Vrms, IEC 61000-4-8 PFMF: 30 A/m |
| EN IEC 60079-0, EN IEC 60079-7, UL/cUL, Class I, Division 2, Groups A, B, C and D, ATEX Zone 2 Ex ec IIC T4 Gc |
| DNV, BV, ABS, LR, RINA pending approval |
| UL 61010-1, UL 61010-2-201 |
| according to IEC 60068-2-27 |
| according to IEC 60068-2-6 |
| 1404396h |
| Telcordia SR-332 |
| CE; CULUS; CULUSEX; DEMKOATEX; IECEXULD; KOREANCERT; UKCA; DETNORVER; BURVER; ABS; LLOYDSREG; RINA |

| Type | Qty. | Order No. |
|---|------|------------|
| IE-SW-BLB-05-5GT | 1 | 2908070000 |
| DNV, BV, ABS, LR, RINA pending approval | | |

IE-SW-BLB-05-5GT-C



| |
|---|
| IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3x for flow control, IEEE 802.3az Energy-Efficient Ethernet, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS) |
| Store and Forward |
| IEEE 802.3x flow control |
| 2 K |
| 1 Mbit |
| up to 9 KB |
| Quality of Service (QoS), MAC frame filtering (LLDP frame blocking) PROFINET device acc. to conformance class A |
| 10/100/1000BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| 5x RJ45 |
| QoS (on/off), Broadcast storm protection enable/disable, MAC frame filtering (on/off), Activate/deactivate IEEE 802.3az energy-efficient Ethernet |
| 1 removable 4-pin terminal block |
| 12/24/48 V DC, 24 V AC, 2 redundant inputs |
| 0.1A @ 24V |
| Yes |
| Metal |
| Conformal coating |
| IP30 |
| DIN rail |
| 114 / 26 / 70 mm (4.4882 / 1.0236 / 2.7559 inch) |
| 272 GRM |
| -40 °C...75 °C |
| 5 to 95 % (non-condensing) |
| EN IEC 61000-6-2, EN IEC 61000-6-4, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m, IEC 61000-4-3 RS: 1.4 GHz to 6 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 Vrms, IEC 61000-4-8 PFMF: 30 A/m |
| EN IEC 60079-0, EN IEC 60079-7, UL/cUL, Class I, Division 2, Groups A, B, C and D, ATEX Zone 2 Ex ec IIC T4 Gc |
| DNV, BV, ABS, LR, RINA pending approval |
| UL 61010-1, UL 61010-2-201 |
| according to IEC 60068-2-27 |
| according to IEC 60068-2-6 |
| 1404396h |
| Telcordia SR-332 |
| CE; CULUS; CULUSEX; DEMKOATEX; IECEXULD; KOREANCERT; UKCA; DETNORVER; BURVER; ABS; LLOYDSREG; RINA |

| Type | Qty. | Order No. |
|---|------|------------|
| IE-SW-BLB-05-5GT-C | 1 | 2908100000 |
| DNV, BV, ABS, LR, RINA pending approval | | |

5-Port unmanaged Gigabit Ethernet Switches

- Support for real-time communication using Quality of Service and LLDP frame blocking functionality (PROFINET Conformance Class A)
- Broadcast storm protection functionality
- AC/DC power supply input
- Optimized DIN rail clip and PUSH IN connection
- Approvals for maritime and potentially explosive environments)
- Energy-efficient Ethernet (EEE)

Technical data

| | |
|-------------------------------------|----------|
| Technology | Standard |
| Data switching | |
| Flow control | |
| Switch characteristics | |
| MAC table size | |
| Packet buffer size | |
| Jumbo frame support | |
| Management features | |
| Network traffic filter | |
| Industrial protocol support | |
| Interfaces | |
| RJ45 ports | |
| Number of ports | |
| Fibre-optic ports | |
| Function DIP switch | |
| Power supply | |
| Connection type | |
| Voltage supply | |
| Current consumption | |
| Reverse polarity protection | |
| Physical characteristics | |
| Housing main material | |
| Surface protection PCB | |
| Protection degree | |
| Type of mounting | |
| Dimensions H x W x D | |
| Net weight | |
| Environmental conditions | |
| Operating temperature | |
| Humidity | |
| EMC conformity and approvals | |
| EMC standards | |
| Explosive risk zone | |
| Ship use | |
| Safety standard | |
| Shock | |
| Vibration | |
| MTBF | |
| Operating time (hours), min. | |
| According to Standard | |
| Approvals | |
| Approvals | |
| Note | |

Ordering data

| | |
|-------------|--|
| Note | |
|-------------|--|

IE-SW-BLB-05-4GT-1GESFP



| |
|---|
| IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3x for flow control, IEEE 802.3az Energy-Efficient Ethernet, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS), IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3z for 1000BASE-X |
| Store and Forward |
| IEEE 802.3x flow control |
| 4 K |
| 1.5 Mbit |
| up to 9 KB |
| Quality of Service (QoS), MAC frame filtering (LLDP frame blocking) PROFINET device acc. to conformance class A |
| 10/100/1000BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| 4x RJ45, 1x 100/1000BaseSFP Slot |
| 100/1000Base SFP Slot |
| QoS (on/off), Broadcast storm protection enable/disable, MAC frame filtering (on/off), Activate/deactivate IEEE 802.3az energy-efficient Ethernet |
| 1 removable 4-pin terminal block |
| 12/24/48 V DC, 24 V AC, 2 redundant inputs |
| 0.13A @ 2V |
| Yes |
| Metal |
| IP30 |
| DIN rail |
| 114 / 26 / 85 mm (4.4882 / 1.0236 / 3.3465 inch) |
| 315 GRM |
| -40 °C...75 °C |
| 5 to 95 % (non-condensing) |
| EN IEC 61000-6-2, EN IEC 61000-6-4, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m, IEC 61000-4-3 RS: 1.4 GHz to 6 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 Vrms, IEC 61000-4-8 PFMF: 30 A/m |
| EN IEC 60079-0, EN IEC 60079-7, UL/cUL, Class I, Division 2, Groups A, B, C and D, ATEX Zone 2 Ex ec IIC T4 Gc |
| DNV, BV, ABS, LR, RINA pending approval |
| UL 61010-1, UL 61010-2-201 |
| according to IEC 60068-2-27 |
| according to IEC 60068-2-6 |
| 1266084h |
| Telcordia SR-332 |
| CE; KOREANCERT; UKCA; CULUS; CULUSEX; DETNORVER; BURVER; ABS; LLOYDSREG; RINA; DEMKOATEX; IECEXULD |

| Type | Qty. | Order No. |
|---|------|------------|
| IE-SW-BLB-05-4GT-1GESFP | | 2908180000 |
| DNV, BV, ABS, LR, RINA pending approval | | |

8-Port unmanaged Gigabit Ethernet Switches

- Support for real-time communication using Quality of Service and LLDP frame blocking functionality (PROFINET Conformance Class A)
- Broadcast storm protection functionality
- AC/DC power supply input
- Optimized DIN rail clip and PUSH IN connection
- Approvals for maritime and potentially explosive environments)
- Energy-efficient Ethernet (EEE)

Technical data

| | | |
|-------------------------------------|---|------------------|
| Technology | Standard | |
| Data switching | | |
| Flow control | | |
| Switch characteristics | | |
| MAC table size | 4 K | |
| Packet buffer size | 1.5 Mbit | |
| Jumbo frame support | up to 9 KB | |
| Management features | | |
| Network traffic filter | Quality of Service (QoS), MAC frame filtering (LLDP frame blocking) | |
| Industrial protocol support | PROFINET device acc. to conformance class A | |
| Interfaces | | |
| RJ45 ports | 8x RJ45 | |
| Number of ports | | |
| Fibre-optic ports | | |
| Function DIP switch | | |
| Power supply | | |
| Connection type | 1 removable 4-pin terminal block | |
| Voltage supply | 12/24/48 V DC, 24 V AC, 2 redundant inputs | |
| Current consumption | 0.15A @ 24V | |
| Reverse polarity protection | Yes | |
| Physical characteristics | | |
| Housing main material | Metal | |
| Surface protection PCB | Conformal coating | |
| Protection degree | IP30 | |
| Type of mounting | DIN rail | |
| Dimensions H x W x D | 114 / 44 / 85 mm (4.4882 / 1.7323 / 3.3465 inch) | |
| Net weight | 405 GRM | |
| Environmental conditions | | |
| Operating temperature | -40 °C...75 °C | |
| Humidity | 5 to 95 % (non-condensing) | |
| EMC conformity and approvals | | |
| EMC standards | EN IEC 61000-6-2, EN IEC 61000-6-4, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m, IEC 61000-4-3 RS: 1.4 GHz to 6 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 Vrms, IEC 61000-4-8 PFMF: 30 A/m | |
| Explosive risk zone | EN IEC 60079-0, EN IEC 60079-7, UL/cUL, Class I, Division 2, Groups A, B, C and D, ATEX Zone 2 Ex ec IIC T4 Gc | |
| Ship use | DNV, BV, ABS, LR, RINA pending approval | |
| Safety standard | UL 61010-1, UL 61010-2-201 | |
| Shock | according to IEC 60068-2-27 | |
| Vibration | according to IEC 60068-2-6 | |
| MTBF | | |
| Operating time (hours), min. | 1004373h | |
| According to Standard | Telcordia SR-332 | |
| Approvals | | |
| Approvals | CE; KOREANCERT; UKCA; CULUS; CULUSEX; DETNORVER; BURVER; ABS; LLOYDSREG; RINA; DEMKOATEX; IECEXULD | |
| Note | | |
| Ordering data | | |
| Type | Qty. | Order No. |
| IE-SW-BLB-08-8GT | | 2908080000 |
| Note | DNV, BV, ABS, LR, RINA pending approval | |

IE-SW-BLB-08-8GT



| | | |
|-------------------------------------|---|------------------|
| Technology | IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3x for flow control, IEEE 802.3az Energy-Efficient Ethernet, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS) | |
| Store and Forward | IEEE 802.3x flow control | |
| MAC table size | 4 K | |
| Packet buffer size | 1.5 Mbit | |
| Jumbo frame support | up to 9 KB | |
| Management features | | |
| Network traffic filter | Quality of Service (QoS), MAC frame filtering (LLDP frame blocking) | |
| Industrial protocol support | PROFINET device acc. to conformance class A | |
| Interfaces | | |
| RJ45 ports | 8x RJ45 | |
| Number of ports | | |
| Fibre-optic ports | | |
| Function DIP switch | | |
| Power supply | | |
| Connection type | 1 removable 4-pin terminal block | |
| Voltage supply | 12/24/48 V DC, 24 V AC, 2 redundant inputs | |
| Current consumption | 0.15A @ 24V | |
| Reverse polarity protection | Yes | |
| Physical characteristics | | |
| Housing main material | Metal | |
| Surface protection PCB | Conformal coating | |
| Protection degree | IP30 | |
| Type of mounting | DIN rail | |
| Dimensions H x W x D | 114 / 44 / 85 mm (4.4882 / 1.7323 / 3.3465 inch) | |
| Net weight | 405 GRM | |
| Environmental conditions | | |
| Operating temperature | -40 °C...75 °C | |
| Humidity | 5 to 95 % (non-condensing) | |
| EMC conformity and approvals | | |
| EMC standards | EN IEC 61000-6-2, EN IEC 61000-6-4, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m, IEC 61000-4-3 RS: 1.4 GHz to 6 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 Vrms, IEC 61000-4-8 PFMF: 30 A/m | |
| Explosive risk zone | EN IEC 60079-0, EN IEC 60079-7, UL/cUL, Class I, Division 2, Groups A, B, C and D, ATEX Zone 2 Ex ec IIC T4 Gc | |
| Ship use | DNV, BV, ABS, LR, RINA pending approval | |
| Safety standard | UL 61010-1, UL 61010-2-201 | |
| Shock | according to IEC 60068-2-27 | |
| Vibration | according to IEC 60068-2-6 | |
| MTBF | | |
| Operating time (hours), min. | 1004373h | |
| According to Standard | Telcordia SR-332 | |
| Approvals | | |
| Approvals | CE; KOREANCERT; UKCA; CULUS; CULUSEX; DETNORVER; BURVER; ABS; LLOYDSREG; RINA; DEMKOATEX; IECEXULD | |
| Note | | |
| Ordering data | | |
| Type | Qty. | Order No. |
| IE-SW-BLB-08-8GT | | 2908080000 |
| Note | DNV, BV, ABS, LR, RINA pending approval | |

IE-SW-BLB-08-8GT-C



| | | |
|-------------------------------------|---|------------------|
| Technology | IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3x for flow control, IEEE 802.3az Energy-Efficient Ethernet, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS) | |
| Store and Forward | IEEE 802.3x flow control | |
| MAC table size | 4 K | |
| Packet buffer size | 1.5 Mbit | |
| Jumbo frame support | up to 9 KB | |
| Management features | | |
| Network traffic filter | Quality of Service (QoS), MAC frame filtering (LLDP frame blocking) | |
| Industrial protocol support | PROFINET device acc. to conformance class A | |
| Interfaces | | |
| RJ45 ports | 8x RJ45 | |
| Number of ports | | |
| Fibre-optic ports | | |
| Function DIP switch | | |
| Power supply | | |
| Connection type | 1 removable 4-pin terminal block | |
| Voltage supply | 12/24/48 V DC, 24 V AC, 2 redundant inputs | |
| Current consumption | 0.15A @ 24V | |
| Reverse polarity protection | Yes | |
| Physical characteristics | | |
| Housing main material | Metal | |
| Surface protection PCB | Conformal coating | |
| Protection degree | IP30 | |
| Type of mounting | DIN rail | |
| Dimensions H x W x D | 114 / 44 / 85 mm (4.4882 / 1.7323 / 3.3465 inch) | |
| Net weight | 405 GRM | |
| Environmental conditions | | |
| Operating temperature | -40 °C...75 °C | |
| Humidity | 5 to 95 % (non-condensing) | |
| EMC conformity and approvals | | |
| EMC standards | EN IEC 61000-6-2, EN IEC 61000-6-4, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m, IEC 61000-4-3 RS: 1.4 GHz to 6 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 Vrms, IEC 61000-4-8 PFMF: 30 A/m | |
| Explosive risk zone | EN IEC 60079-0, EN IEC 60079-7, UL/cUL, Class I, Division 2, Groups A, B, C and D, ATEX Zone 2 Ex ec IIC T4 Gc | |
| Ship use | DNV, BV, ABS, LR, RINA pending approval | |
| Safety standard | UL 61010-1, UL 61010-2-201 | |
| Shock | according to IEC 60068-2-27 | |
| Vibration | according to IEC 60068-2-6 | |
| MTBF | | |
| Operating time (hours), min. | 1004373h | |
| According to Standard | Telcordia SR-332 | |
| Approvals | | |
| Approvals | CE; KOREANCERT; UKCA; CULUS; CULUSEX; DETNORVER; BURVER; ABS; LLOYDSREG; RINA; DEMKOATEX; IECEXULD | |
| Note | | |
| Ordering data | | |
| Type | Qty. | Order No. |
| IE-SW-BLB-08-8GT-C | | 2908110000 |
| Note | DNV, BV, ABS, LR, RINA pending approval | |

10-Port unmanaged Gigabit Ethernet Switches

- Support for real-time communication using Quality of Service and LLDP frame blocking functionality (PROFINET Conformance Class A)
- Broadcast storm protection functionality
- AC/DC power supply input
- Optimized DIN rail clip and PUSH IN connection
- Approvals for maritime and potentially explosive environments)
- Energy-efficient Ethernet (EEE)

Technical data

| | |
|-------------------------------------|----------|
| Technology | Standard |
| Data switching | |
| Flow control | |
| Switch characteristics | |
| MAC table size | |
| Packet buffer size | |
| Jumbo frame support | |
| Management features | |
| Network traffic filter | |
| Industrial protocol support | |
| Interfaces | |
| RJ45 ports | |
| Number of ports | |
| Fibre-optic ports | |
| Function DIP switch | |
| Power supply | |
| Connection type | |
| Voltage supply | |
| Current consumption | |
| Reverse polarity protection | |
| Physical characteristics | |
| Housing main material | |
| Protection degree | |
| Type of mounting | |
| Dimensions H x W x D | |
| Net weight | |
| Environmental conditions | |
| Operating temperature | |
| Humidity | |
| EMC conformity and approvals | |
| EMC standards | |
| Explosive risk zone | |
| Ship use | |
| Safety standard | |
| Shock | |
| Vibration | |
| MTBF | |
| Operating time (hours), min. | |
| According to Standard | |
| Approvals | |
| Approvals | |
| Note | |
| Ordering data | |
| Note | |

IE-SW-BLB-10-8GT-2GESFP



| | | |
|---|-------------|------------------|
| IEEE 802.3 for 10BASE-T, IEEE 802.3ab for 1000BASE-T, IEEE 802.3x for flow control, IEEE 802.3az Energy-Efficient Ethernet, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS), IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3z for 1000BASE-X | | |
| Store and Forward | | |
| IEEE 802.3x flow control | | |
| 4 K | | |
| 1.5 Mbit | | |
| up to 9 KB | | |
| Quality of Service (QoS), MAC frame filtering (LLDP frame blocking) PROFINET device acc. to conformance class A | | |
| 10/100/1000BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port | | |
| 8x RJ45, 2x 100/1000BaseSFP Slot | | |
| 100/1000Base SFP Slot | | |
| QoS (on/off), Broadcast storm protection enable/disable, MAC frame filtering (on/off), Activate/deactivate IEEE 802.3az energy-efficient Ethernet | | |
| 1 removable 4-pin terminal block | | |
| 12/24/48 V DC, 24 V AC, 2 redundant inputs | | |
| 0.29A @ 24V | | |
| Yes | | |
| Metal | | |
| IP30 | | |
| DIN rail | | |
| 114 / 44 / 85 mm (4.4882 / 1.7323 / 3.3465 inch) | | |
| 412 GRM | | |
| -40 °C...75 °C | | |
| 5 to 95 % (non-condensing) | | |
| EN IEC 61000-6-2, EN IEC 61000-6-4, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m, IEC 61000-4-3 RS: 1.4 GHz to 6 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 Vrms, IEC 61000-4-8 PFMF: 30 A/m | | |
| EN IEC 60079-0, EN IEC 60079-7, UL/cUL, Class I, Division 2, Groups A, B, C and D | | |
| DNV, BV, ABS, LR, RINA pending approval | | |
| UL 61010-1, UL 61010-2-201 | | |
| according to IEC 60068-2-27 | | |
| according to IEC 60068-2-6 | | |
| 952155h | | |
| Telcordia SR-332 | | |
| CE; CULUS; CULUSEX; DEMKOATEX; IECEXULD; KOREANCERT; UKCA; DETNORVER; BURVER; ABS; LLOYDSREG; RINA | | |
| Type | Qty. | Order No. |
| IE-SW-BLB-10-8GT-2GESFP | 1 | 2908190000 |
| DNV, BV, ABS, LR, RINA pending approval | | |

16-Port unmanaged Gigabit Ethernet Switches

- Support for real-time communication using Quality of Service and LLDP frame blocking functionality (PROFINET Conformance Class A)
- Broadcast storm protection functionality
- AC/DC power supply input
- Optimized DIN rail clip and PUSH IN connection
- Approvals for maritime and potentially explosive environments)
- Energy-efficient Ethernet (EEE)

Technical data

| | |
|-------------------------------------|----------|
| Technology | Standard |
| Data switching | |
| Flow control | |
| Switch characteristics | |
| MAC table size | |
| Packet buffer size | |
| Jumbo frame support | |
| Management features | |
| Network traffic filter | |
| Industrial protocol support | |
| Interfaces | |
| RJ45 ports | |
| Number of ports | |
| Fibre-optic ports | |
| Alarm contact | |
| Function DIP switch | |
| Power supply | |
| Connection type | |
| Voltage supply | |
| Current consumption | |
| Reverse polarity protection | |
| Physical characteristics | |
| Housing main material | |
| Surface protection PCB | |
| Protection degree | |
| Type of mounting | |
| Dimensions H x W x D | |
| Net weight | |
| Environmental conditions | |
| Operating temperature | |
| Humidity | |
| EMC conformity and approvals | |
| EMC standards | |
| Explosive risk zone | |
| Ship use | |
| Safety standard | |
| Shock | |
| Vibration | |
| MTBF | |
| Operating time (hours), min. | |
| According to Standard | |
| Approvals | |
| Approvals | |
| Note | |
| Ordering data | |
| Note | |

IE-SW-BLB-16-16GT



| | | |
|---|-------------|------------------|
| IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3x for flow control, IEEE 802.3az Energy-Efficient Ethernet, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS) | | |
| Store and Forward | | |
| IEEE 802.3x flow control | | |
| 8 K | | |
| 4.1 Mbit | | |
| up to 9 KB | | |
| Quality of Service (QoS), MAC frame filtering (LLDP frame blocking) PROFINET device acc. to conformance class A | | |
| 10/100/1000BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port | | |
| 16x RJ45 | | |
| 1 relay output with a current capacity of 1 A at 24 V DC | | |
| QoS (on/off), Broadcast storm protection enable/disable, MAC frame filtering (on/off), Activate/deactivate IEEE 802.3az energy-efficient Ethernet, 2x for enabling/disabling power fault alarm via relay | | |
| 1 removable 6-pin terminal block | | |
| 12/24/48 V DC, 24 V AC, 2 redundant inputs | | |
| 0.42A @ 24V | | |
| Yes | | |
| Metal | | |
| IP30 | | |
| DIN rail | | |
| 114 / 44 / 95 mm (4.4882 / 1.7323 / 3.7402 inch) | | |
| 626 GRM | | |
| -40 °C...75 °C | | |
| 5 to 95 % (non-condensing) | | |
| EN IEC 61000-6-2, EN IEC 61000-6-4, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m, IEC 61000-4-3 RS: 1.4 GHz to 6 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 Vrms, IEC 61000-4-8 PFMF: 30 A/m | | |
| EN IEC 60079-0, EN IEC 60079-7, UL/cUL, Class I, Division 2, Groups A, B, C and D, ATEX Zone 2 Ex ec nC IIC T4 Gc | | |
| DNV, BV, ABS, LR, RINA pending approval | | |
| UL 61010-1, UL 61010-2-201 | | |
| according to IEC 60068-2-27 | | |
| according to IEC 60068-2-6 | | |
| 541611h | | |
| Telcordia SR-332 | | |
| CE; KOREANCERT; UKCA; CULUS; CULUSEX; DETNORVER; BURVER; ABS; LLOYDSREG; RINA; DEMKOATEX; IECEXULD | | |
| Type | Qty. | Order No. |
| IE-SW-BLB-16-16GT | | 2908090000 |
| DNV, BV, ABS, LR, RINA pending approval | | |

IE-SW-BLB-16-16GT-C



| | | |
|---|-------------|------------------|
| IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3x for flow control, IEEE 802.3az Energy-Efficient Ethernet, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS) | | |
| Store and Forward | | |
| IEEE 802.3x flow control | | |
| 8 K | | |
| 4.1 Mbit | | |
| up to 9 KB | | |
| Quality of Service (QoS), MAC frame filtering (LLDP frame blocking) PROFINET device acc. to conformance class A | | |
| 10/100/1000BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port | | |
| 16x RJ45 | | |
| 1 relay output with a current capacity of 1 A at 24 V DC | | |
| QoS (on/off), Broadcast storm protection enable/disable, MAC frame filtering (on/off), Activate/deactivate IEEE 802.3az energy-efficient Ethernet, 2x for enabling/disabling power fault alarm via relay | | |
| 1 removable 6-pin terminal block | | |
| 12/24/48 V DC, 24 V AC, 2 redundant inputs | | |
| 0.42A @ 24V | | |
| Yes | | |
| Metal | | |
| Conformal coating | | |
| IP30 | | |
| DIN rail | | |
| 114 / 44 / 95 mm (4.4882 / 1.7323 / 3.7402 inch) | | |
| 631 GRM | | |
| -40 °C...75 °C | | |
| 5 to 95 % (non-condensing) | | |
| EN IEC 61000-6-2, EN IEC 61000-6-4, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m, IEC 61000-4-3 RS: 1.4 GHz to 6 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 Vrms, IEC 61000-4-8 PFMF: 30 A/m | | |
| EN IEC 60079-0, EN IEC 60079-7, UL/cUL, Class I, Division 2, Groups A, B, C and D, ATEX Zone 2 Ex ec nC IIC T4 Gc | | |
| DNV, BV, ABS, LR, RINA pending approval | | |
| UL 61010-1, UL 61010-2-201 | | |
| according to IEC 60068-2-27 | | |
| according to IEC 60068-2-6 | | |
| 541611h | | |
| Telcordia SR-332 | | |
| CE; KOREANCERT; UKCA; CULUS; CULUSEX; DETNORVER; BURVER; ABS; LLOYDSREG; RINA; DEMKOATEX; IECEXULD | | |
| Type | Qty. | Order No. |
| IE-SW-BLB-16-16GT-C | | 2908120000 |
| DNV, BV, ABS, LR, RINA pending approval | | |

16-Port unmanaged Gigabit Ethernet Switches

- Support for real-time communication using Quality of Service and LLDP frame blocking functionality (PROFINET Conformance Class A)
- Broadcast storm protection functionality
- AC/DC power supply input
- Optimized DIN rail clip and PUSH IN connection
- Approvals for maritime and potentially explosive environments)
- Energy-efficient Ethernet (EEE)

Technical data

| | |
|-------------------------------------|----------|
| Technology | Standard |
| Data switching | |
| Flow control | |
| Switch characteristics | |
| MAC table size | |
| Packet buffer size | |
| Jumbo frame support | |
| Management features | |
| Network traffic filter | |
| Industrial protocol support | |
| Interfaces | |
| RJ45 ports | |
| Number of ports | |
| Fibre-optic ports | |
| Alarm contact | |
| Function DIP switch | |
| Power supply | |
| Connection type | |
| Voltage supply | |
| Current consumption | |
| Reverse polarity protection | |
| Physical characteristics | |
| Housing main material | |
| Protection degree | |
| Type of mounting | |
| Dimensions H x W x D | |
| Net weight | |
| Environmental conditions | |
| Operating temperature | |
| Humidity | |
| EMC conformity and approvals | |
| EMC standards | |
| Explosive risk zone | |
| Ship use | |
| Safety standard | |
| Shock | |
| Vibration | |
| MTBF | |
| Operating time (hours), min. | |
| According to Standard | |
| Approvals | |
| Approvals | |
| Note | |
| Ordering data | |
| Note | |

IE-SW-BLB-16-14GT-2GESFP



| | | |
|---|-------------|------------------|
| IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3x for flow control, IEEE 802.3az Energy-Efficient Ethernet, IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS), IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3z for 1000BASE-X | | |
| Store and Forward | | |
| IEEE 802.3x flow control | | |
| 8 K | | |
| 4.1 Mbit | | |
| up to 9 KB | | |
| Quality of Service (QoS), MAC frame filtering (LLDP frame blocking) PROFINET device acc. to conformance class A | | |
| 10/100/1000BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port | | |
| 14x RJ45, 2x 100/1000BaseSFP Slot | | |
| 100/1000Base SFP Slot | | |
| 1 relay output with a current capacity of 1 A at 24 V DC | | |
| QoS (on/off), Broadcast storm protection enable/disable, MAC frame filtering (on/off), Activate/deactivate IEEE 802.3az energy-efficient Ethernet, 2x for enabling/disabling power fault alarm via relay | | |
| 1 removable 6-pin terminal block | | |
| 12/24/48 V DC, 24 V AC, 2 redundant inputs | | |
| 0.43A @ 24V | | |
| Yes | | |
| Metal | | |
| IP30 | | |
| DIN rail | | |
| 144 / 65 / 95 mm (5.6693 / 2.5591 / 3.7402 inch) | | |
| 735 GRM | | |
| -40 °C...75 °C | | |
| 5 to 95 % (non-condensing) | | |
| EN IEC 61000-6-2, EN IEC 61000-6-4, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m, IEC 61000-4-3 RS: 1.4 GHz to 6 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 Vrms, IEC 61000-4-8 PFMF: 30 A/m | | |
| EN IEC 60079-0, EN IEC 60079-7, UL/cUL, Class I, Division 2, Groups A, B, C and D, ATEX Zone 2 Ex ec nC IIC T4 Gc | | |
| DNV, BV, ABS, LR, RINA pending approval | | |
| UL 61010-1, UL 61010-2-201 | | |
| according to IEC 60068-2-27 | | |
| according to IEC 60068-2-6 | | |
| 532312h | | |
| Telcordia SR-332 | | |
| CE; KOREANCERT; UKCA; CULUS; CULUSEX; DETNORVER; BURVER; ABS; LLOYDSREG; RINA; DEMKOATEX; IECEXULD | | |
| Type | Qty. | Order No. |
| IE-SW-BLB-16-14GT-2GESFP | | 2908130000 |
| DNV, BV, ABS, LR, RINA pending approval | | |

8 and 10-Port unmanaged PoE+ Gigabit Ethernet Switches

- IEEE 802.3af/at compliant PoE ports
- Compact design
- Wide temperature range
- Redundant voltage inputs
- SFP-ports for fiber optic transmission over long distances

Technical data

| | |
|---|----------|
| Technology | Standard |
| Data switching | |
| Flow control | |
| Switch characteristics | |
| MAC table size | |
| Packet buffer size | |
| Jumbo frame support | |
| Interfaces | |
| RJ45 ports | |
| Number of ports | |
| Fibre-optic ports | |
| Signalling contact | |
| Function DIP switch | |
| Power supply | |
| Connection type | |
| Voltage supply | |
| Current consumption | |
| Overload current protection / Reverse polarity protection | |
| Power over Ethernet (PoE) | |
| PoE pin assignment | |
| Total PoE power budget | |
| Physical characteristics | |
| Housing main material | |
| Protection degree | |
| Type of mounting | |
| Dimensions H x W x D | |
| Net weight | |
| Environmental conditions | |
| Operating temperature | |
| Humidity | |
| Operating altitude | |
| EMC conformity and approvals | |
| EMC standards | |
| Safety standard | |
| Shock | |
| Vibration | |
| MTBF | |
| Operating time (hours), min. | |
| According to Standard | |
| Approvals | |
| Approvals | |
| Note | |

Ordering data

| | | |
|-------------------|-------------|------------------|
| Type | Qty. | Order No. |
| IE-SW-EL08-8GTPOE | 1 | 268240000 |
| Note | | |

IE-SW-EL08-8GTPoE



| |
|---|
| IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3ab for 1000Base-T, IEEE 802.3x for flow control, IEEE 802.3at/af for Power-over-Ethernet |
| Store and Forward |
| IEEE 802.3x flow control |
| 4 K |
| 1.5 Mbit |
| up to 9.72 KB |
| 10/100/1000BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| 8x RJ45 10/100/1000 BaseT(X) PoE+ |
| 1 relay output with a current capacity of 1 A at 24 V DC |
| 2x for enabling/disabling power fault alarm via relay |
| 1 removable 6-pin terminal block |
| 24/48 V DC, 2 redundant inputs |
| 3.06A @ 24V; 2.39A @ 57V; @ |
| Yes / Yes |
| Mode A: Pin 1, 2 (V+); Pin 3, 6 (V-); Alternative A; MDI |
| 60W @ 24...49.9V; 120W @ 50...57V |
| Metal |
| IP30 |
| DIN rail |
| 144.3 / 41 / 94.9 mm (5.6811 / 1.6142 / 3.7362 inch) |
| 700 GRM |
| -40 °C...70 °C |
| 5 to 95 % (non-condensing) |
| 2000m in acc. with UL |
| EN 55032, EN 55035, CISPR 32, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0.5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms |
| UL 61010-1, UL 61010-2:201 |
| according to IEC 60068-2-27 |
| according to IEC 60068-2-6 |
| 475806h |
| Telcordia SR-332 |
| CE; CULUS; UKCA |

| | | |
|-------------------|-------------|------------------|
| Type | Qty. | Order No. |
| IE-SW-EL08-8GTPOE | 1 | 268240000 |

IE-SW-EL10-8GTPoE-2GESFP



| |
|---|
| IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3ab for 1000Base-T, IEEE 802.3z for 1000BaseX, IEEE 802.3x for flow control, IEEE 802.3at/af for Power-over-Ethernet |
| Store and Forward |
| IEEE 802.3x flow control |
| 8 K |
| 4 Mbit |
| up to 9.6 KB |
| 10/100/1000BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| 8x RJ45 10/100/1000 BaseT(X) PoE+, 2x 100/1000BaseSFP Slot |
| 100/1000Base SFP Slot |
| 1 relay output with a current capacity of 1 A at 24 V DC |
| 2x for enabling/disabling power fault alarm via relay, 2x for switching between 100BaseSFP and 1000BaseSFP on SFP port |
| 1 removable 6-pin terminal block |
| 12/24/48 V DC, 2 redundant inputs |
| 5.43A @ 12V; 6.01A @ 24V; 2.88A @ 48V |
| Yes / Yes |
| Mode A: Pin 1, 2 (V+); Pin 3, 6 (V-); Alternative A; MDI |
| 60W @ 12...23.9V; 120W @ 24...57V |
| Metal |
| IP30 |
| DIN rail |
| 145.1 / 54.3 / 108.3 mm (5.7126 / 2.1378 / 4.2638 inch) |
| 969 GRM |
| -40 °C...75 °C |
| 5 to 95 % (non-condensing) |
| 2000m in acc. with UL |
| EN 55032, CISPR 32, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0.5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms, EN 55035 |
| UL 61010-1, UL 61010-2:201 |
| according to IEC 60068-2-27 |
| according to IEC 60068-2-6 |
| 537330h |
| Telcordia SR-332 |
| CE; CULUS; UKCA |

| | | |
|--------------------------|-------------|------------------|
| Type | Qty. | Order No. |
| IE-SW-EL10-8GTPOE-2GESFP | 1 | 268241000 |

5-Port unmanaged Gigabit Ethernet PoE+ Switches

- Gigabit Ethernet at all ports
- 4x IEEE 802.3af/at conform PoE ports
- Up to 36 Watt per PoE port
- 12/24/48 V DC redundant wide-range power supply
- Support for jumbo frames
- Intelligent power consumption detection and classification
- Intelligent PoE surge voltage and short-circuit protection

Technical data

| | |
|---|----------|
| Technology | Standard |
| Data switching | |
| Flow control | |
| Switch characteristics | |
| MAC table size | |
| Packet buffer size | |
| Jumbo frame support | |
| Interfaces | |
| RJ45 ports | |
| Number of ports | |
| Function DIP switch | |
| Power supply | |
| Voltage supply | |
| Voltage supply range | |
| Connection type | |
| Current consumption | |
| Overload current protection / Reverse polarity protection | |
| Power over Ethernet (PoE) | |
| PoE pin assignment | |
| Total PoE power budget | |
| Physical characteristics | |
| Housing main material | |
| Protection degree | |
| Type of mounting | |
| Dimensions H x W x D | |
| Net weight | |
| Environmental conditions | |
| Operating temperature | |
| Humidity | |
| EMC conformity and approvals | |
| EMC standards | |
| Safety standard | |
| Shock | |
| Vibration | |
| MTBF | |
| Operating time (hours), min. | |
| According to Standard | |
| Approvals | |
| Approvals | |
| Note | |

Ordering data

| |
|-------------|
| Note |
|-------------|

IE-SW-BL05-1GT-4GTPoE



| |
|---|
| IEEE 802.3af for Power-over-Ethernet, IEEE 802.3at for Power-over-Ethernet, IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3ab for 1000BaseT(X), IEEE 802.3x for flow control, IEEE 802.3az Energy-Efficient Ethernet |
| Store and Forward |
| IEEE 802.3x flow control, Back pressure flow control |
| 8 K |
| 1024 kBit |
| up to 10 KB |
| 10/100/1000BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| 4 * RJ45 10/100/1000BaseT(X) PoE+, 1 * RJ45 10/100/1000BaseT(X) |
| Broadcast storm protection enable/disable, Enable/disable jumbo frame support, Activate/deactivate IEEE 802.3az energy-efficient Ethernet, Switching between standard PoE (up to 30 W) and High Power PoE (up to 36 W) |
| 12/24/48 V DC, 2 redundant inputs |
| 12...57VDC |
| 2 removable 2-pole terminal blocks |
| 5.92A @ 12V; 5.65A @ 24V; 3.21A @ 48V |
| Yes / Yes |
| Mode A: Pin 1, 2 (V+); Pin 3, 6 (V-); Alternative A; MDI |
| 62W @ 12...17V DC; 120W @ 18...35V DC; 144W @ 36...57V DC |
| Aluminium |
| IP30 |
| DIN rail |
| 135 / 29 / 105 mm (5.315 / 1.1417 / 4.1338 inch) |
| 360 GRM |
| 1504320000: 0 °C...60 °C |
| 1504340000: -40 °C...75 °C |
| 5...95 %, no condensation |
| FCC Part 15 Subpart B Class A, EN 55032, EN 55024, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 GHz: 20 V/m, IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 V, EN 61000-4-8 |
| UL 508 |
| according to IEC 60068-2-27 |
| according to IEC 60068-2-6 |
| 1257910h |
| Telcordia (Bellcore), GB |
| CE; CULUS; KOREANCERT; UKCA |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-SW-BL05-1GT-4GTPOE | 1 | 1504320000 |
| IE-SW-BL05T-1GT-4GTPOE | 1 | 1504340000 |

PoE+ Gigabit Ethernet Injector

- IEEE 802.3af/at compliant PoE ports
- Compact design
- Wide temperature range

IE-INJ-EL02-2GTPoE



Technical data

| | |
|-------------------------------------|---|
| Technology | Standard |
| Interfaces | RJ45 ports |
| Number of ports | |
| Power supply | |
| Voltage supply | 12/24/48 V DC, 1 single input |
| Voltage supply range | 12...57VDC |
| Connection type | 1 removable 4-pin terminal block |
| Current consumption | 3.12A @ 12V; 2.81A @ 24V; 1.3A @ 48V |
| Overload current protection | Yes |
| Reverse polarity protection | Yes |
| Power over Ethernet (PoE) | |
| PoE pin assignment | Mode A: Pin 1, 2 (V+); Pin 3, 6 (V-); Alternative A; MDI-X |
| Total PoE power budget | 30W @ 12...23.9V DC; 60W @ 24...57V DC |
| Physical characteristics | |
| Housing main material | Metal |
| Protection degree | IP30 |
| Type of mounting | DIN rail |
| Dimensions H x W x D | 70 / 41 / 95 mm (2.7559 / 1.6142 / 3.7402 inch) |
| Net weight | 400 GRM |
| Environmental conditions | |
| Operating temperature | -40 °C...75 °C |
| Humidity | 5 to 95 % (non-condensing) |
| Operating altitude | 2000m in acc. with UL |
| EMC conformity and approvals | |
| EMC standards | EN 55032, EN 55024, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0.5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms |
| Safety standard | UL 61010-1, UL 61010-2-201 |
| Shock | according to IEC 60068-2-27 |
| Vibration | according to IEC 60068-2-6 |
| MTBF | |
| Operating time (hours), min. | 3165390h |
| According to Standard | Telcordia SR-332 |
| Approvals | |
| Approvals | CE; CULUS; UKCA |
| Note | |

| |
|---|
| IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3ab for 1000Base-T, IEEE 802.3at/af for Power-over-Ethernet |
| 10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, MDI-X |
| 2x RJ45 10/100/1000BaseT(X), 2x RJ45 10/100/1000 BaseT(X) PoE+ |
| 12/24/48 V DC, 1 single input |
| 12...57VDC |
| 1 removable 4-pin terminal block |
| 3.12A @ 12V; 2.81A @ 24V; 1.3A @ 48V |
| Yes |
| Yes |
| Mode A: Pin 1, 2 (V+); Pin 3, 6 (V-); Alternative A; MDI-X |
| 30W @ 12...23.9V DC; 60W @ 24...57V DC |
| Metal |
| IP30 |
| DIN rail |
| 70 / 41 / 95 mm (2.7559 / 1.6142 / 3.7402 inch) |
| 400 GRM |
| -40 °C...75 °C |
| 5 to 95 % (non-condensing) |
| 2000m in acc. with UL |
| EN 55032, EN 55024, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0.5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms |
| UL 61010-1, UL 61010-2-201 |
| according to IEC 60068-2-27 |
| according to IEC 60068-2-6 |
| 3165390h |
| Telcordia SR-332 |
| CE; CULUS; UKCA |

Ordering data

| |
|-------------|
| Note |
|-------------|

| Type | Qty. | Order No. |
|--------------------|------|------------|
| IE-INJ-EL02-2GTPoE | 1 | 2682440000 |

Unmanaged Single Pair Ethernet Switches

5-Port unmanaged SPE-Switch

- 1x 10/100Base-T(X) RJ45 port and 4x 10Base-T1L SPE port
- 4x IEEE 802.3cg-compliant PoDL ports with up to 50 watts output power per port
- SCCP support
- Up to 1 km transmission length via two-wire copper cable
- SPE interface in accordance with IEC 63171-2

Technical data

| | |
|-------------------------------------|----------|
| Technology | Standard |
| Data switching | |
| Flow control | |
| Switch characteristics | |
| MAC table size | |
| Packet buffer size | |
| Management features | |
| Network traffic filter | |
| Industrial protocol support | |
| Interfaces | |
| RJ45 ports | |
| Number of ports | |
| Power supply | |
| Connection type | |
| Voltage supply range | |
| Voltage supply | |
| Current consumption | |
| Overload current protection | |
| Reverse polarity protection | |
| Physical characteristics | |
| Housing main material | |
| Protection degree | |
| Type of mounting | |
| Dimensions H x W x D | |
| Net weight | |
| Environmental conditions | |
| Operating temperature | |
| Humidity | |
| Operating altitude | |
| EMC conformity and approvals | |
| EMC standards | |
| Shock | |
| Vibration | |
| MTBF | |
| Operating time (hours), min. | |
| According to Standard | |
| Approvals | |
| Approvals | |
| Note | |

Ordering data

| |
|-------------|
| Note |
|-------------|

IE-SW-SPE05-4T1LMPDDL-1TX



| |
|--|
| IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3x for flow control, IEEE 802.3cg for 10Base-T1L |
| Store and Forward |
| IEEE 802.3x flow control |
| 1 K |
| 128 kBit |
| Quality of Service (QoS) |
| PROFINET device acc. to conformance class A |
| 10/100BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| 1x RJ45, 4x SPE port acc. to IEC 63171-2 |
| 1 removable 2-pin terminal block |
| 20...30VDC |
| 1 single input |
| 3.47A @ 24V |
| Yes |
| Yes |
| Metal |
| IP30 |
| DIN rail |
| 145.1 / 28 / 108.3 mm (5.7126 / 1.1024 / 4.2638 inch) |
| 530 GRM |
| -40 °C...70 °C |
| 5 to 98% (non-condensing) |
| 2000m |
| EN 61000-6-2, EN 61000-6-4 |
| according to IEC 60068-2-27 |
| according to IEC 60068-2-6 |
| 692776h |
| Telcordia SR-332 |
| CE, UKCA |

| Type | Qty. | Order No. |
|---------------------------|------|------------|
| IE-SW-SPE05-4T1LMPDDL-1TX | 1 | 3012120000 |

Managed Switches

Overview

| | | |
|-------------------------|--|------|
| Managed Switches | Introduction - Managed Switches | C.2 |
| | Managed Switches Fast Ethernet | C.4 |
| | Managed Switches Fast / Gigabit Ethernet | C.16 |
| | Managed Switches Gigabit Ethernet | C.18 |
| | Managed Power over Ethernet Switches Gigabit Ethernet | C.23 |
| | Managed Switches, IEC 61850-3, DIN-rail mounting Fast/Gigabit Ethernet | C.25 |
| | Managed Switches, IEC 61850-3, DIN-rail mounting Gigabit Ethernet | C.27 |
| | Managed Switches, IEC 61850-3, 19" rack mounting Fast/Gigabit Ethernet | C.29 |
| | Managed Switches, IEC 61850-3, 19" rack mounting, modular, Fast/Gigabit/ 10-Gigabit Ethernet | C.31 |
| | Media interface modules for modular switch Fast/Gigabit Ethernet | C.35 |
| | Media interface modules for modular switch Gigabit/ 10-Gigabit Ethernet | C.39 |

Increased productivity through uninterrupted operation

Managed Switches – Secure communication with monitoring and redundancies

In order to coordinate the different requirements of communication participants within an industrial network, managed switches feature extensive control mechanisms for data distribution and bandwidth management. Different configuration options are supported, e.g. web-based configuration, SNMP, Telnet console, command-line interface (CLI) and serial console connection.

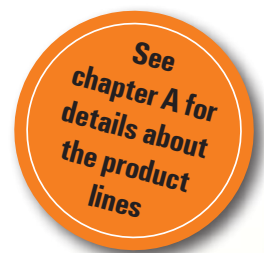
C

In the industrial Ethernet infrastructures of today, system availability must be ensured through network redundancy. This prevents machine downtimes and production losses due to connection errors in the highly integrated systems. Weidmüller managed switches feature high-performance redundancy mechanisms in order to increase the availability of managed Ethernet networks.

In order to satisfy all the requirements of industrial networks, our managed switches are available in four different lines: ValueLine, AdvancedLine, PremiumLine and SubstationLine. This selection ensures the availability of the right product regardless of application-specific and industrial requirements. The lines offer both DIN rail and 19" rack models, Fast, Gigabit and up to 10 Gigabit interfaces, a broad selection of port numbers and types, Power over Ethernet variants, support for the most important industrial automation protocols and the necessary approvals for use in such demanding sectors as the process industry, transmission and distribution, and shipbuilding.

Your special advantage:

- Wide variety of ports in terms of number and features to meet individual requirements
- Models available with Fast Ethernet, Gigabit and up to 10 Gigabit interfaces
- Lite- to full-managed models, including Power over Ethernet variants
- Support of industrial protocols for optimal integration into the most common automation networks



Variety of models
Lite- to full-managed models



Backup and restore function
External backup and restore (EBR) module available

Support of a variety of communication protocols
Industrial Ethernet protocols, such as PROFINET-RT, Ethernet/IP and Modbus/TCP



Configuration
Different configuration options supported

Increase network security
Functions such as Port Lock, MirrorPort, Access Control List and others increase the security of your network



Extensive approvals
Numerous international approvals, such as CE, FCC, cULus, Class 1 Div. 2, ATEX Zone 2, DNV, IEC 61850-3 and IEEE 1613

5-Port lite managed Fast Ethernet Switch

- Extensive set of management features enable the set-up of various redundancy, monitoring, traffic filter and security functions
- Suitable for use in harsh industrial environment thanks to rugged design and wide operating temperature range of -40 °C up to 75 °C



Technical data

| Technology | |
|---------------------------------|---|
| Standard | IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3x for flow control, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1AB for Link Layer Discovery protocol (LLDP) |
| Data switching | Store and Forward |
| Flow control | IEEE 802.3x flow control |
| Switch characteristics | |
| MAC table size | 2 K |
| Packet buffer size | 1 Mbit |
| Management features | |
| Device configuration | Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Upload of a configuration file via web-interface or TFTP-Server, Command Line Interface (Telnet/SSH) |
| Monitoring function | SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Syslog, Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap |
| Network redundancy | Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), O-Ring (recovery time <10 ms), O-Chain (recovery time <10 ms), Fast recovery |
| Network traffic filter | Port based VLAN |
| IP-address management | Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay |
| Security functions | VLAN segmentation, Enable/disable ports, Loop protection, TACACS+ Authentication, Management access security via secure IP-list and configuration of allowed access methods (web-interface, telnet, SSH) |
| Time synchronization management | NTP server, SNTP client |
| Industrial protocol support | Modbus/TCP slave |
| Interfaces | |
| RJ45 ports | 10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port |
| Number of ports | 5x RJ45 |
| Alarm contact | 1 relay output with a current capacity of 1 A at 24 V DC |
| Function DIP switch | 1x for enabling/disabling power fault alarm via relay, 3x for ring redundancy settings |
| Function reset button | <5 sec: System reboot, >5 sec: Factory default |
| Power supply | |
| Connection type | 1 removable 6-pin terminal block |
| Voltage supply range | 10.8...52.8VDC |
| Voltage supply | 12/24/48 V DC, 2 redundant inputs |
| Current consumption | 0.5A @ 12V; 0.25A @ 24V; 0.12A @ 48V |
| Overload current protection | Yes |
| Reverse polarity protection | Yes |
| Note | |

| Physical characteristics | |
|------------------------------|---|
| Housing main material | Metal |
| Protection degree | IP30 |
| Type of mounting | DIN rail |
| Dimensions H x W x D | 144.3 / 26.1 / 95 mm (5.6811 / 1.0276 / 3.7402 inch) |
| Net weight | 396 GRM |
| Environmental conditions | |
| Operating temperature | -40 °C...75 °C |
| Humidity | 5 to 95 % (non-condensing) |
| Operating altitude | 2000m in acc. with UL |
| EMC conformity and approvals | |
| EMC standards | EN 55032, EN 55024, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0.5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms |
| Safety standard | UL 61010-1, UL 61010-2-201 |
| Shock | according to IEC 60068-2-27 |
| Vibration | according to IEC 60068-2-6 |
| Free fall | According to IEC 60068-2-31 |
| MTBF | |
| Operating time (hours), min. | 1796601h |
| According to Standard | Telcordia SR-332 |
| Approvals | |
| Approvals | CE; CULUS; KOREANCERT; UKCA |

Ordering data

| Type | Qty. | Order No. |
|------------------|------|------------|
| IE-SW-AL05LM-5TX | 1 | 2682250000 |

6-Port lite managed Fast Ethernet Switch

- Extensive set of management features enable the set-up of various redundancy, monitoring, traffic filter and security functions
- Suitable for use in harsh industrial environment thanks to rugged design and wide operating temperature range of -40 °C up to 75 °C



ModbusTCP

Technical data

| Technology | |
|---|---|
| Standard | IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3x for flow control, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1AB for Link Layer Discovery protocol (LLDP) |
| Data switching | Store and Forward |
| Flow control | IEEE 802.3x flow control |
| Switch characteristics | |
| MAC table size | 2 K |
| Packet buffer size | 1 Mbit |
| Management features | |
| Device configuration | Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Upload of a configuration file via web-interface or TFTP-Server, Command Line Interface (Telnet/SSH) |
| Monitoring function | SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Syslog, Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap |
| Network redundancy | Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), O-Ring (recovery time <10 ms), O-Chain (recovery time <10 ms), Fast recovery |
| Network traffic filter | Port based VLAN |
| IP-address management | Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay |
| Security functions | VLAN segmentation, Enable/disable ports, Loop protection, TACACS+ Authentication, Management access security via secure IP-list and configuration of allowed access methods (web-interface, telnet, SSH) |
| Time synchronization management | NTP server, SNTP client |
| Industrial protocol support | Modbus/TCP slave |
| Interfaces | |
| RJ45 ports | 10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port |
| Number of ports | 4 x RJ45, 2 * SC Multi-mode |
| Fibre-optic ports | 100BaseFX ports (SC connector), Multimode |
| Alarm contact | 1 relay output with a current capacity of 1 A at 24 V DC |
| Function reset button | <5 sec: System reboot, >5 sec: Factory default |
| Fibre optic transceiver characteristics | |
| Transmission rate | 100 MBit/s |
| Connector type | SC-Duplex |
| Transceiver type | Multimode |
| Transmission distance, typ. | 2 km |
| Wavelength | 1310nm |
| Receive power | -31...0dBm |
| Transmission power | -23.5...-14dBm |
| Link-budget | 7.5 dB |
| Power supply | |
| Connection type | 1 removable 7-pin terminal block |
| Voltage supply range | 10.8...52.8VDC |
| Voltage supply | 12/24/48 V DC, 2 redundant inputs |
| Current consumption | 0.47A @ 12V; 0.24A @ 24V; 0.12A @ 48V |
| Overload current protection | Yes |
| Reverse polarity protection | Yes |
| Note | |

Physical characteristics

| | |
|-----------------------|---|
| Housing main material | Metal |
| Protection degree | IP30 |
| Type of mounting | DIN rail |
| Dimensions H x W x D | 145.4 / 54.2 / 107.1 mm (5.7244 / 2.1339 / 4.2165 inch) |
| Net weight | 799 GRM |

Environmental conditions

| | |
|-----------------------|----------------------------|
| Operating temperature | -40 °C...75 °C |
| Humidity | 5 to 95 % (non-condensing) |
| Operating altitude | 2000m in acc. with UL |

EMC conformity and approvals

| | |
|---------------|---|
| EMC standards | EN 55032, EN 55024, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 1 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms |
|---------------|---|

| | |
|-----------------|--|
| Safety standard | SELV according to EN 62368-1, UL 61010-1, UL 61010-2-201 |
|-----------------|--|

| | |
|-------|-----------------------------|
| Shock | according to IEC 60068-2-27 |
|-------|-----------------------------|

| | |
|-----------|----------------------------|
| Vibration | according to IEC 60068-2-6 |
|-----------|----------------------------|

| | |
|-----------|-----------------------------|
| Free fall | According to IEC 60068-2-31 |
|-----------|-----------------------------|

MTBF

| | |
|------------------------------|---------|
| Operating time (hours), min. | 595597h |
|------------------------------|---------|

| | |
|-----------------------|------------------|
| According to Standard | Telcordia SR-332 |
|-----------------------|------------------|

Approvals

| | |
|-----------|-----------------|
| Approvals | CE; CULUS; UKCA |
|-----------|-----------------|

Ordering data

| Type | Qty. | Order No. |
|----------------------|------|------------|
| IE-SW-AL06LM-4TX-2SC | 1 | 2682260000 |

6-Port lite managed Fast Ethernet Switch

- Extensive set of management features enable the set-up of various redundancy, monitoring, traffic filter and security functions
- Suitable for use in harsh industrial environment thanks to rugged design and wide operating temperature range of -40 °C up to 75 °C



Technical data

| Technology | |
|---|---|
| Standard | IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3x for flow control, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1AB for Link Layer Discovery protocol (LLDP) |
| Data switching | Store and Forward |
| Flow control | IEEE 802.3x flow control |
| Switch characteristics | |
| MAC table size | 2 K |
| Packet buffer size | 1 Mbit |
| Management features | |
| Device configuration | Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Upload of a configuration file via web-interface or TFTP-Server, Command Line Interface (Telnet/SSH) |
| Monitoring function | SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Syslog, Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap |
| Network redundancy | Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), O-Ring (recovery time <10 ms), O-Chain (recovery time <10 ms), Fast recovery |
| Network traffic filter | Port based VLAN |
| IP-address management | Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay |
| Security functions | VLAN segmentation, Enable/disable ports, Loop protection, TACACS+ Authentication, Management access security via secure IP-list and configuration of allowed access methods (web-interface, telnet, SSH) |
| Time synchronization management | NTP server, SNTP client |
| Industrial protocol support | Modbus/TCP slave |
| Interfaces | |
| RJ45 ports | 10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port |
| Number of ports | 4 x RJ45, 2 * SC Single-mode |
| Fibre-optic ports | 100BaseFX ports (SC connector), Singlemode |
| Alarm contact | 1 relay output with a current capacity of 1 A at 24 V DC |
| Function reset button | <5 sec: System reboot, >5 sec: Factory default |
| Fibre optic transceiver characteristics | |
| Transmission rate | 100 Mbit/s |
| Connector type | SC-Duplex |
| Transceiver type | Singlemode |
| Transmission distance, typ. | 30 km |
| Wavelength | 1310nm |
| Receive power | -34...0dBm |
| Transmission power | -15...-8dBm |
| Link-budget | 19 dB |
| Power supply | |
| Connection type | 1 removable 7-pin terminal block |
| Voltage supply range | 10.8...52.8VDC |
| Voltage supply | 12/24/48 V DC, 2 redundant inputs |
| Current consumption | 0.47A @ 12V; 0.24A @ 24V; 0.12A @ 48V |
| Overload current protection | Yes |
| Reverse polarity protection | Yes |
| Note | |

| Physical characteristics | |
|------------------------------|---|
| Housing main material | Metal |
| Protection degree | IP30 |
| Type of mounting | DIN rail |
| Dimensions H x W x D | 145.4 / 54.2 / 107.1 mm (5.7244 / 2.1339 / 4.2165 inch) |
| Net weight | 799 GRM |
| Environmental conditions | |
| Operating temperature | -40 °C...75 °C |
| Humidity | 5 to 95 % (non-condensing) |
| Operating altitude | 2000m in acc. with UL |
| EMC conformity and approvals | |
| EMC standards | EN 55032, EN 55024, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 1 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms |
| Safety standard | SELV according to EN 62368-1, UL 61010-1, UL 61010-2-201 |
| Shock | according to IEC 60068-2-27 |
| Vibration | according to IEC 60068-2-6 |
| Free fall | According to IEC 60068-2-31 |
| MTBF | |
| Operating time (hours), min. | 609551h |
| According to Standard | Telcordia SR-332 |
| Approvals | |
| Approvals | CE; CULUS; UKCA |

Ordering data

| Type | Qty. | Order No. |
|-----------------------|------|------------|
| IE-SW-AL06LM-4TX-2SCS | 1 | 2682270000 |

8-Port managed Fast Ethernet Switch

- Extensive set of management features enable the set-up of various redundancy, monitoring, traffic filter and security functions
- Suitable for use in harsh industrial environment thanks to rugged design and wide operating temperature range of -40 °C up to 75 °C



Technical data

| Technology | |
|---------------------------------|--|
| Standard | IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1s for the Multiple Spanning Tree Protocol (MSTP), IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging, IEEE 802.1X for authentication, IEEE 802.1AB for Link Layer Discovery protocol (LLDP) |
| Data switching | Store and Forward |
| Flow control | IEEE 802.3x flow control |
| Switch characteristics | |
| MAC table size | 8 K |
| Packet buffer size | 1 Mbit |
| Priority queues | 4 |
| Max. number of available VLANs | 4095 |
| IGMP Groups | 1024 |
| Management features | |
| Device configuration | Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Local serial console port (RS-232 via RJ-45 port), Upload of a configuration file via web-interface or TFTP-Server, Command Line Interface (Telnet/SSH) |
| Monitoring function | SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring, Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap |
| Network redundancy | Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), O-Ring (recovery time <10 ms), O-Chain (recovery time <10 ms), Link Aggregation Control Protocol (LACP), Fast recovery |
| Network traffic filter | Quality of Service (QoS), Class of Service (CoS), Type of Service (ToS), Differentiated Services Code Point (DSCP), Port based VLAN, Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Multicast VLAN Registration (MVR), Traffic Rate Limiting |
| IP-address management | Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay |
| Security functions | VLAN segmentation, Enable/disable ports, TACACS+ and IEEE 802.1X User Authentication, Access control (port based via IEEE 802.1X), Access control list (IP-based), Access control list (MAC-based), Management access security via secure IP-list and configuration of allowed access methods (web-interface, telnet, SSH), Loop protection |
| Time synchronization management | NTP server, SNTP client |
| Industrial protocol support | Modbus/TCP slave, PROFINET device acc. to conformance class A |
| Interfaces | |
| RJ45 ports | 10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port |
| Number of ports | 8x RJ45 |
| Console port interface | RS-232 (RJ45 connector) |
| Alarm contact | 1 relay output with a current capacity of 1 A at 24 V DC |
| Function reset button | <5 sec: System reboot, >5 sec: Factory default |
| Note | |

| Power supply | |
|------------------------------|---|
| Connection type | 1 removable 7-pin terminal block |
| Voltage supply range | 10.8...52.8VDC |
| Voltage supply | 12/24/48 V DC, 2 redundant inputs |
| Current consumption | 0.47A @ 12V; 0.24A @ 24V; 0.12A @ 48V |
| Overload current protection | Yes |
| Reverse polarity protection | Yes |
| Physical characteristics | |
| Housing main material | Metal |
| Protection degree | IP30 |
| Type of mounting | DIN rail |
| Dimensions H x W x D | 144.3 / 52 / 107.1 mm (5.6811 / 2.0472 / 4.2165 inch) |
| Net weight | 812 GRM |
| Environmental conditions | |
| Operating temperature | -40 °C...75 °C |
| Humidity | 5 to 95 % (non-condensing) |
| Operating altitude | 2000m in acc. with UL |
| EMC conformity and approvals | |
| EMC standards | EN 55032, EN 55024, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0.5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms |
| Safety standard | SELV according to EN 62368-1, UL 61010-1, UL 61010-2-201 |
| Shock | according to IEC 60068-2-27 |
| Vibration | according to IEC 60068-2-6 |
| Free fall | According to IEC 60068-2-31 |
| MTBF | |
| Operating time (hours), min. | 841599h |
| According to Standard | Telcordia SR-332 |
| Approvals | |
| Approvals | CE; CULUS; KOREANCERT; UKCA |

Ordering data

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-SW-AL08M-8TX | 1 | 2682280000 |

16-Port managed Fast Ethernet Switch

- Extensive set of management features enable the set-up of various redundancy, monitoring, traffic filter and security functions
- Suitable for use in harsh industrial environment thanks to rugged design and wide operating temperature range of -40 °C up to 75 °C



Technical data

| Technology | |
|---------------------------------|--|
| Standard | IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1s for the Multiple Spanning Tree Protocol (MSTP), IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging, IEEE 802.1X for authentication, IEEE 802.1AB for Link Layer Discovery protocol (LLDP) |
| Data switching | Store and Forward |
| Flow control | IEEE 802.3x flow control |
| Switch characteristics | |
| MAC table size | 8 K |
| Packet buffer size | 1 Mbit |
| Priority queues | 4 |
| Max. number of available VLANs | 4095 |
| Number of IGMP-Groups per VLAN | 256 |
| Management features | |
| Device configuration | Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Local serial console port (RS-232 via RJ-45 port), Upload of a configuration file via web-interface or TFTP-Server, Command Line Interface (Telnet/SSH) |
| Monitoring function | SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring, Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap |
| Network redundancy | Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), O-Ring (recovery time <10 ms), O-Chain (recovery time <10 ms), Link Aggregation Control Protocol (LACP), Fast recovery |
| Network traffic filter | Quality of Service (QoS), Class of Service (CoS), Type of Service (ToS), Differentiated Services Code Point (DSCP), Port based VLAN, Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Multicast VLAN Registration (MVR), Traffic Rate Limiting |
| IP-address management | Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay |
| Security functions | VLAN segmentation, Enable/disable ports, TACACS+ and IEEE 802.1X User Authentication, Access control (port based via IEEE 802.1X), Access control list (IP-based), Access control list (MAC-based), Management access security via secure IP-list and configuration of allowed access methods (web-interface, telnet, SSH), Loop protection |
| Time synchronization management | NTP server, SNTP client |
| Industrial protocol support | Modbus/TCP slave, PROFINET device acc. to conformance class A |
| Interfaces | |
| RJ45 ports | 10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port |
| Number of ports | 16x RJ45 |
| Console port interface | RS-232 (RJ45 connector) |
| Alarm contact | 1 relay output with a current capacity of 1 A at 24 V DC |
| Function reset button | <5 sec: System reboot, >5 sec: Factory default |
| Note | |

| Power supply | |
|------------------------------|---|
| Connection type | 1 removable 6-pin terminal block |
| Voltage supply range | 10.8...52.8VDC |
| Voltage supply | 12/24/48 V DC, 2 redundant inputs |
| Current consumption | 1.2A @ 12V; 0.6A @ 24V; 0.3A @ 48V |
| Overload current protection | Yes |
| Reverse polarity protection | Yes |
| Physical characteristics | |
| Housing main material | Metal |
| Protection degree | IP30 |
| Type of mounting | DIN rail |
| Dimensions H x W x D | 153.6 / 74.3 / 107.5 mm (6.0472 / 2.9252 / 4.2323 inch) |
| Net weight | 1188 GRM |
| Environmental conditions | |
| Operating temperature | -40 °C...75 °C |
| Humidity | 5 to 95 % (non-condensing) |
| Operating altitude | 2000m in acc. with UL |
| EMC conformity and approvals | |
| EMC standards | EN 55032, EN 55024, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0.5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms |
| Safety standard | SELV according to EN 62368-1, UL 61010-1, UL 61010-2-201 |
| Shock | according to IEC 60068-2-27 |
| Vibration | according to IEC 60068-2-6 |
| Free fall | According to IEC 60068-2-31 |
| MTBF | |
| Operating time (hours), min. | 886987h |
| According to Standard | Telcordia SR-332 |
| Approvals | |
| Approvals | CE; CULUS; KOREANCERT; UKCA |

Ordering data

| Type | Qty. | Order No. |
|------------------|------|------------|
| IE-SW-AL16M-16TX | 1 | 2682310000 |

24-Port managed Fast Ethernet Switch

- Extensive set of management features enable the set-up of various redundancy, monitoring, traffic filter and security functions
- Suitable for use in harsh industrial environment thanks to rugged design and wide operating temperature range of -40 °C up to 75 °C



Technical data

| Technology | |
|---------------------------------|--|
| Standard | IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1s for the Multiple Spanning Tree Protocol (MSTP), IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging, IEEE 802.1X for authentication, IEEE 802.1AB for Link Layer Discovery protocol (LLDP) |
| Data switching | Store and Forward |
| Flow control | IEEE 802.3x flow control |
| Switch characteristics | |
| MAC table size | 8 K |
| Packet buffer size | 1 Mbit |
| Priority queues | 4 |
| Max. number of available VLANs | 4095 |
| Number of IGMP-Groups per VLAN | 256 |
| Management features | |
| Device configuration | Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Local serial console port (RS-232 via RJ-45 port), Upload of a configuration file via web-interface or TFTP-Server, Command Line Interface (Telnet/SSH) |
| Monitoring function | SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring, Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap |
| Network redundancy | Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), O-Ring (recovery time <10 ms), O-Chain (recovery time <10 ms), Link Aggregation Control Protocol (LACP), Fast recovery |
| Network traffic filter | Quality of Service (QoS), Class of Service (CoS), Type of Service (ToS), Differentiated Services Code Point (DSCP), Port based VLAN, Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Multicast VLAN Registration (MVR), Traffic Rate Limiting |
| IP-address management | Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay |
| Security functions | VLAN segmentation, Enable/disable ports, TACACS+ and IEEE 802.1X User Authentication, Access control (port based via IEEE 802.1X), Access control list (IP-based), Access control list (MAC-based), Management access security via secure IP-list and configuration of allowed access methods (web-interface, telnet, SSH), Loop protection |
| Time synchronization management | NTP server, SNTP client |
| Industrial protocol support | Modbus/TCP slave, PROFINET device acc. to conformance class A |
| Interfaces | |
| RJ45 ports | 10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port |
| Number of ports | 24x RJ45 |
| Console port interface | RS-232 (RJ45 connector) |
| Alarm contact | 1 relay output with a current capacity of 1 A at 24 V DC |
| Function reset button | <5 sec: System reboot, >5 sec: Factory default |
| Note | |

| Power supply | |
|------------------------------|---|
| Connection type | 1 removable 6-pin terminal block |
| Voltage supply range | 10.8...52.8VDC |
| Voltage supply | 12/24/48 V DC; 2 redundant inputs |
| Current consumption | 1.2A @ 12V; 0.6A @ 24V; 0.3A @ 48V |
| Overload current protection | Yes |
| Reverse polarity protection | Yes |
| Physical characteristics | |
| Housing main material | Metal |
| Protection degree | IP30 |
| Type of mounting | DIN rail |
| Dimensions H x W x D | 154 / 96.4 / 108.5 mm (6.063 / 3.7953 / 4.2716 inch) |
| Net weight | 1369 GRM |
| Environmental conditions | |
| Operating temperature | -40 °C...75 °C |
| Humidity | 5 to 95 % (non-condensing) |
| Operating altitude | 2000m in acc. with UL |
| EMC conformity and approvals | |
| EMC standards | EN 55032, EN 55024, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0.5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms |
| Safety standard | SELV according to EN 62368-1, UL 61010-1, UL 61010-2-201 |
| Shock | according to IEC 60068-2-27 |
| Vibration | according to IEC 60068-2-6 |
| Free fall | According to IEC 60068-2-31 |
| MTBF | |
| Operating time (hours), min. | 731289h |
| According to Standard | Telcordia SR-332 |
| Approvals | |
| Approvals | CE; CULUS; UKCA |

Ordering data

| Type | Qty. | Order No. |
|------------------|------|------------|
| IE-SW-AL24M-24TX | 1 | 2682320000 |

5-Port managed Fast Ethernet Switches

- Supports the automation protocols Modbus/TCP, PROFINET RT and EtherNet/IP
- Turbo Ring and Turbo Chain with fast recovery time (<20 ms for up to 250 switches)
- IGMP snooping, QoS, port- and tag-based VLAN
- Configurable error messages via SNMP trap, e-mail or relay output
- User-friendly, web-based configuration and management



Technical data

| Technology | |
|---------------------------------|--|
| Standard | IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3x for flow control, IEEE 802.1D-2004 for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging |
| Data switching | Store and Forward |
| Flow control | IEEE 802.3x flow control, Back pressure flow control |
| MIB | MIB-II, Ethernet-Like MIB, P-BRIDGE MIB, Bridge MIB, RSTP MIB, RMON MIB Group 1, 2, 3, 9 |
| Switch characteristics | |
| MAC table size | 2 K |
| Packet buffer size | 1 Mbit |
| Priority queues | 4 |
| Max. number of available VLANs | 64 |
| IGMP-Groups | 256 |
| Management features | |
| Device configuration | Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Telnet console, Local serial console port (RS-232 via RJ-45 port), Windows tool |
| Monitoring function | SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring, Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap |
| Network redundancy | Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Turbo-Ring (recovery time <20 ms), Turbo-Chain (recovery time <20 ms) |
| Network traffic filter | Quality of Service (QoS), Tag based VLAN, Port based VLAN, IGMP v1/v2, GMRP, Traffic Rate Limiting |
| IP-address management | Static, BootP, RARP, DHCP-Client, DHCP-Server (port based), DHCP Option 82 (Relay Agent) |
| Security functions | VLAN segmentation, Enable/disable ports, Loop protection |
| Time synchronization management | SNTP client, NTP client |
| Industrial protocol support | PROFINET device acc. to conformance class B, EtherNet/IP, Modbus/TCP slave |
| Interfaces | |
| RJ45 ports | 10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port |
| Number of ports | 5x RJ45 |
| Console port interface | RS-232 |
| Alarm contact | 1 relay output with a current capacity of 1 A at 24 V DC |
| Function DIP switch | Turbo-Ring, Master, Coupler, Reserve |
| Power supply | |
| Connection type | 1 removable 6-pin terminal block |
| Voltage supply range | 9.6...60VDC |
| Voltage supply | 12/24/48 V DC, 2 redundant inputs |
| Current consumption | 0.29A @ 24V |
| Overload current protection | Yes |
| Reverse polarity protection | Yes |
| Note | |

| Physical characteristics | |
|------------------------------|--|
| Housing main material | metal |
| Protection degree | IP30 |
| Type of mounting | DIN rail, Panel (with optional mounting kit) |
| Dimensions H x W x D | 135 / 53.6 / 105 mm (5.315 / 2.1102 / 4.1338 inch) |
| Net weight | 650 GRM |
| Environmental conditions | |
| Operating temperature | IE-SW-VL05M-5TX: -10 °C...60 °C IE-SW-VL05MT-5TX: -40 °C...75 °C |
| Humidity | 5 to 95 % (non-condensing) |
| EMC conformity and approvals | |
| EMC standards | EN 55032, EN 55024, CISPR 32, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 GHz: 20 V/m, IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 V, IEC 61000-4-8 |
| Safety standard | UL508, UL 60950-1, EN 60950-1 |
| Shock | according to IEC 60068-2-27 |
| Vibration | according to IEC 60068-2-6 |
| Free fall | According to IEC 60068-2-32 |
| MTBF | |
| Operating time (hours), min. | 1547941h |
| According to Standard | Telcordia (Bellcore), GB |
| Approvals | |
| Approvals | CE; CULUS; CULUSEX; DETNORVER; KOREANCERT; UKCA |

Ordering data

| Type | Qty. | Order No. |
|------------------|------|------------|
| IE-SW-VL05M-5TX | 1 | 1504280000 |
| IE-SW-VL05MT-5TX | 1 | 1504310000 |

8-Port managed Fast Ethernet Switch

- Supports the automation protocols Modbus/TCP, PROFINET RT and EtherNet/IP
- Turbo Ring and Turbo Chain with fast recovery time (<20 ms for up to 250 switches)
- IGMP snooping, QoS, port- and tag-based VLAN
- Configurable error messages via SNMP trap, e-mail or relay output
- User-friendly, web-based configuration and management



ModbusTCP

EtherNet/IP

Technical data

| Technology | |
|---------------------------------|--|
| Standard | IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3x for flow control, IEEE 802.1D-2004 for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging |
| Data switching | Store and Forward |
| Flow control | IEEE 802.3x flow control, Back pressure flow control |
| MIB | MIB-II, Ethernet-Like MIB, P-BRIDGE MIB, Bridge MIB, RSTP MIB, RMON MIB Group 1, 2, 3, 9 |
| Switch characteristics | |
| MAC table size | 8 K |
| Packet buffer size | 1 Mbit |
| Priority queues | 4 |
| Max. number of available VLANs | 64 |
| IGMP-Groups | 256 |
| Management features | |
| Device configuration | Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Telnet console, Local serial console port (RS-232 via RJ-45 port), Windows tool |
| Monitoring function | SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring, Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap |
| Network redundancy | Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Turbo-Ring (recovery time <20 ms), Turbo-Chain (recovery time <20 ms) |
| Network traffic filter | Quality of Service (QoS), Tag based VLAN, Port based VLAN, IGMP v1/v2, GMRP, Traffic Rate Limiting |
| IP-address management | Static, BootP, RARP, DHCP-Client, DHCP-Server (port based), DHCP Option 82 (Relay Agent) |
| Security functions | VLAN segmentation, Enable/disable ports, Loop protection |
| Time synchronization management | SNTP client, NTP client |
| Industrial protocol support | PROFINET device acc. to conformance class B, EtherNet/IP, Modbus/TCP slave |
| Interfaces | |
| RJ45 ports | 10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port |
| Number of ports | 8x RJ45 |
| Console port interface | RS-232 |
| Alarm contact | 1 relay output with a current capacity of 1 A at 24 V DC |
| Function DIP switch | Turbo-Ring, Master, Coupler, Reserve |
| Power supply | |
| Connection type | 1 removable 6-pin terminal block |
| Voltage supply range | 9.6...60VDC |
| Voltage supply | 12/24/48 V DC, 2 redundant inputs |
| Current consumption | 0.26A @ 24V |
| Overload current protection | Yes |
| Reverse polarity protection | Yes |
| Note | |

| Physical characteristics | |
|------------------------------|--|
| Housing main material | metal |
| Protection degree | IP30 |
| Type of mounting | DIN rail, Panel (with optional mounting kit) |
| Dimensions H x W x D | 135 / 53.6 / 105 mm (5.315 / 2.1102 / 4.1338 inch) |
| Net weight | 890 GRM |
| Environmental conditions | |
| Operating temperature | -40 °C...75 °C |
| Humidity | 5 to 95 % (non-condensing) |
| EMC conformity and approvals | |
| EMC standards | EN 55032, EN 55024, CISPR 32, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 GHz: 20 V/m, IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 V, IEC 61000-4-8 |
| Safety standard | UL508, UL 60950-1, EN 60950-1 |
| Shock | according to IEC 60068-2-27 |
| Vibration | according to IEC 60068-2-6 |
| Free fall | According to IEC 60068-2-32 |
| MTBF | |
| Operating time (hours), min. | 1339439h |
| According to Standard | Telcordia (Bellcore), GB |
| Approvals | |
| Approvals | CE; CULUS; CULUSEX; DEMKOATEX; DETNORVER; KOREANCERT; UKCA |

Ordering data

| Type | Qty. | Order No. |
|------------------|------|------------|
| IE-SW-VL08MT-8TX | 1 | 1240940000 |

8-Port managed Fast Ethernet Switch

- Supports the automation protocols Modbus/TCP, PROFINET RT and EtherNet/IP
- Turbo Ring and Turbo Chain with fast recovery time (<20 ms for up to 250 switches)
- IGMP snooping, QoS, port- and tag-based VLAN
- Configurable error messages via SNMP trap, e-mail or relay output
- User-friendly, web-based configuration and management



Technical data

| Technology | |
|---|---|
| Standard | IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3x for flow control, IEEE 802.1D-2004 for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging |
| Data switching | Store and Forward |
| Flow control | IEEE 802.3x flow control, Back pressure flow control |
| Switch characteristics | |
| MAC table size | 8 K |
| Packet buffer size | 1 Mbit |
| Priority queues | 4 |
| Max. number of available VLANs | 64 |
| IGMP-Groups | 256 |
| Management features | |
| Device configuration | Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Telnet console, Local serial console port (RS-232 via RJ-45 port), Windows tool |
| Monitoring function | SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring, Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap |
| Network redundancy | Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Turbo-Ring (recovery time <20 ms), Turbo-Chain (recovery time <20 ms) |
| Network traffic filter | Quality of Service (QoS), Tag based VLAN, Port based VLAN, IGMP v1/v2, GMRP, Traffic Rate Limiting |
| IP-address management | Static, BootP, RARP, DHCP-Client, DHCP-Server (port based), DHCP Option 82 (Relay Agent) |
| Security functions | VLAN segmentation, Enable/disable ports, Loop protection |
| Time synchronization management | SNTP client, NTP client |
| Industrial protocol support | PROFINET device acc. to conformance class B, EtherNet/IP, Modbus/TCP slave |
| Interfaces | |
| RJ45 ports | 10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port |
| Number of ports | 6x RJ45, 2 * SC Multi-mode |
| Console port interface | RS-232 |
| Alarm contact | 1 relay output with a current capacity of 1 A at 24 V DC |
| Function DIP switch | Turbo-Ring, Master, Coupler, Reserve |
| Fibre optic transceiver characteristics | |
| Transmission rate | 100 Mbps |
| Connector type | SC-Duplex |
| Transceiver type | Multimode |
| Transmission distance, typ. | 5 km |
| Wavelength | 1300nm |
| Receive power | -32...-3dBm |
| Transmission power | -20...-10dBm |
| Power supply | |
| Connection type | 1 removable 6-pin terminal block |
| Voltage supply range | 9.6...60VDC |
| Voltage supply | 12/24/48 V DC, 2 redundant inputs |
| Current consumption | 0.35A @ 24V |
| Overload current protection | Yes |
| Reverse polarity protection | Yes |
| Note | |

| Physical characteristics | |
|------------------------------|--|
| Housing main material | Metal |
| Protection degree | IP30 |
| Type of mounting | DIN rail |
| Dimensions H x W x D | 135 / 53.6 / 105 mm (5.315 / 2.1102 / 4.1338 inch) |
| Net weight | 890 GRM |
| Environmental conditions | |
| Operating temperature | -40 °C...75 °C |
| Humidity | 5 to 95 % (non-condensing) |
| EMC conformity and approvals | |
| EMC standards | EN 55032, EN 55024, CISPR 32, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 GHz: 20 V/m, IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 V, IEC 61000-4-8 |
| Safety standard | UL508, UL 60950-1, EN 60950-1 |
| Shock | according to IEC 60068-2-27 |
| Vibration | according to IEC 60068-2-6 |
| Free fall | According to IEC 60068-2-32 |
| MTBF | |
| Operating time (hours), min. | 1277138h |
| According to Standard | Telcordia (Bellcore), GB |
| Approvals | |
| Approvals | CE; CULUS; CULUSEX; DEMKOATEX; UKCA |

Ordering data

| Type | Qty. | Order No. |
|----------------------|------|------------|
| IE-SW-VL08MT-6TX-2SC | 1 | 1344770000 |

8-Port managed Fast Ethernet Switch

- Supports the automation protocols Modbus/TCP, PROFINET RT and EtherNet/IP
- Turbo Ring and Turbo Chain with fast recovery time (<20 ms for up to 250 switches)
- IGMP snooping, QoS, port- and tag-based VLAN
- Configurable error messages via SNMP trap, e-mail or relay output
- User-friendly, web-based configuration and management



Technical data

| Technology | |
|---|---|
| Standard | IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3x for flow control, IEEE 802.1D-2004 for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging |
| Data switching | Store and Forward |
| Flow control | IEEE 802.3x flow control, Back pressure flow control |
| Switch characteristics | |
| MAC table size | 8 K |
| Packet buffer size | 1 Mbit |
| Priority queues | 4 |
| Max. number of available VLANs | 64 |
| IGMP-Groups | 256 |
| Management features | |
| Device configuration | Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Telnet console, Local serial console port (RS-232 via RJ-45 port), Windows tool |
| Monitoring function | SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring, Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap |
| Network redundancy | Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Turbo-Ring (recovery time <20 ms), Turbo-Chain (recovery time <20 ms) |
| Network traffic filter | Quality of Service (QoS), Tag based VLAN, Port based VLAN, IGMP v1/v2, GMRP, Traffic Rate Limiting |
| IP-address management | Static, BootP, RARP, DHCP-Client, DHCP-Server (port based), DHCP Option 82 (Relay Agent) |
| Security functions | VLAN segmentation, Enable/disable ports, Loop protection |
| Time synchronization management | SNTP client, NTP client |
| Industrial protocol support | PROFINET device acc. to conformance class B, EtherNet/IP, Modbus/TCP slave |
| Interfaces | |
| RJ45 ports | 10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port |
| Number of ports | 6x RJ45, 2 * ST Multi-mode |
| Console port interface | RS-232 |
| Alarm contact | 1 relay output with a current capacity of 1 A at 24 V DC |
| Function DIP switch | Turbo-Ring, Master, Coupler, Reserve |
| Fibre optic transceiver characteristics | |
| Transmission rate | 100 Mbps |
| Connector type | ST-Duplex |
| Transceiver type | Multimode |
| Transmission distance, typ. | 5 km |
| Wavelength | 1300nm |
| Receive power | -32...-3dBm |
| Transmission power | -20...-10dBm |
| Power supply | |
| Connection type | 1 removable 6-pin terminal block |
| Voltage supply range | 9.6...60VDC |
| Voltage supply | 12/24/48 V DC, 2 redundant inputs |
| Current consumption | 0.35A @ 24V |
| Overload current protection | Yes |
| Reverse polarity protection | Yes |
| Note | |

| Physical characteristics | |
|------------------------------|--|
| Housing main material | metal |
| Protection degree | IP30 |
| Type of mounting | DIN rail, Panel (with optional mounting kit) |
| Dimensions H x W x D | 135 / 53.6 / 105 mm (5.315 / 2.1102 / 4.1338 inch) |
| Net weight | 890 GRM |
| Environmental conditions | |
| Operating temperature | -40 °C...75 °C |
| Humidity | 5 to 95 % (non-condensing) |
| EMC conformity and approvals | |
| EMC standards | EN 55032, EN 55024, CISPR 32, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 GHz: 20 V/m, IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 V, IEC 61000-4-8 |
| Safety standard | UL508, UL 60950-1, EN 60950-1 |
| Shock | according to IEC 60068-2-27 |
| Vibration | according to IEC 60068-2-6 |
| Free fall | According to IEC 60068-2-32 |
| MTBF | |
| Operating time (hours), min. | 1277138h |
| According to Standard | Telcordia (Bellcore), GB |
| Approvals | |
| Approvals | CE; CULUS; CULUSEX; DEMKOATEX; DETNORVER; UKCA |

Ordering data

| Type | Qty. | Order No. |
|----------------------|------|------------|
| IE-SW-VL08MT-6TX-2ST | 1 | 1240990000 |

8-Port managed Fast Ethernet Switch

- Supports the automation protocols Modbus/TCP, PROFINET RT and EtherNet/IP
- Turbo Ring and Turbo Chain with fast recovery time (<20 ms for up to 250 switches)
- IGMP snooping, QoS, port- and tag-based VLAN
- Configurable error messages via SNMP trap, e-mail or relay output
- User-friendly, web-based configuration and management



Technical data

| Technology | |
|---|---|
| Standard | IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3x for flow control, IEEE 802.1D-2004 for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging |
| Data switching | Store and Forward |
| Flow control | IEEE 802.3x flow control, Back pressure flow control |
| Switch characteristics | |
| MAC table size | 8 K |
| Packet buffer size | 1 Mbit |
| Priority queues | 4 |
| Max. number of available VLANs | 64 |
| IGMP-Groups | 256 |
| Management features | |
| Device configuration | Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Telnet console, Local serial console port (RS-232 via RJ-45 port), Windows tool |
| Monitoring function | SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring, Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap |
| Network redundancy | Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Turbo-Ring (recovery time <20 ms), Turbo-Chain (recovery time <20 ms) |
| Network traffic filter | Quality of Service (QoS), Tag based VLAN, Port based VLAN, IGMP v1/v2, GMRP, Traffic Rate Limiting |
| IP-address management | Static, BootP, RARP, DHCP-Client, DHCP-Server (port based), DHCP Option 82 (Relay Agent) |
| Security functions | VLAN segmentation, Enable/disable ports, Loop protection |
| Time synchronization management | SNTP client, NTP client |
| Industrial protocol support | PROFINET device acc. to conformance class B, EtherNet/IP, Modbus/TCP slave |
| Interfaces | |
| RJ45 ports | 10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port |
| Number of ports | 6x RJ45, 2 * SC Single-mode |
| Console port interface | RS-232 |
| Alarm contact | 1 relay output with a current capacity of 1 A at 24 V DC |
| Function DIP switch | Turbo-Ring, Master, Coupler, Reserve |
| Fibre optic transceiver characteristics | |
| Transmission rate | 100 Mbps |
| Connector type | SC-Duplex |
| Transceiver type | Singlemode |
| Transmission distance, typ. | 40 km |
| Wavelength | 1310nm |
| Receive power | -34...-3dBm |
| Transmission power | -5...0dBm |
| Power supply | |
| Connection type | 1 removable 6-pin terminal block |
| Voltage supply range | 9.6...60VDC |
| Voltage supply | 12/24/48 V DC, 2 redundant inputs |
| Current consumption | 0.35A @ 24V |
| Overload current protection | Yes |
| Reverse polarity protection | Yes |
| Note | |

| Physical characteristics | |
|------------------------------|--|
| Housing main material | Metal |
| Protection degree | IP30 |
| Type of mounting | DIN rail |
| Dimensions H x W x D | 135 / 53.6 / 105 mm (5.315 / 2.1102 / 4.1338 inch) |
| Net weight | 890 GRM |
| Environmental conditions | |
| Operating temperature | -40 °C...75 °C |
| Humidity | 5 to 95 % (non-condensing) |
| EMC conformity and approvals | |
| EMC standards | EN 55032, EN 55024, CISPR 32, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 GHz: 20 V/m, IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 V, IEC 61000-4-8 |
| Safety standard | UL508, UL 60950-1, EN 60950-1 |
| Shock | according to IEC 60068-2-27 |
| Vibration | according to IEC 60068-2-6 |
| Free fall | According to IEC 60068-2-32 |
| MTBF | |
| Operating time (hours), min. | 1294561h |
| According to Standard | Telcordia (Bellcore), GB |
| Approvals | |
| Approvals | CE; CULUS; CULUSEX; DEMKOATEX; DETNORVER; UKCA |

Ordering data

| Type | Qty. | Order No. |
|-----------------------|------|------------|
| IE-SW-VL08MT-6TX-2SCS | 1 | 1241020000 |

8-Port managed Fast Ethernet Switch

- Supports the automation protocols Modbus/TCP, PROFINET RT and EtherNet/IP
- Turbo Ring and Turbo Chain with fast recovery time (<20 ms for up to 250 switches)
- IGMP snooping, QoS, port- and tag-based VLAN
- Configurable error messages via SNMP trap, e-mail or relay output
- User-friendly, web-based configuration and management



EtherNet/IP

ModbusTCP

Technical data

| Technology | |
|---|---|
| Standard | IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3x for flow control, IEEE 802.1D-2004 for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging |
| Data switching | Store and Forward |
| Flow control | IEEE 802.3x flow control, Back pressure flow control |
| Switch characteristics | |
| MAC table size | 8 K |
| Packet buffer size | 1 Mbit |
| Priority queues | 4 |
| Max. number of available VLANs | 64 |
| IGMP-Groups | 256 |
| Management features | |
| Device configuration | Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Telnet console, Local serial console port (RS-232 via RJ-45 port), Windows tool |
| Monitoring function | SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring, Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap |
| Network redundancy | Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Turbo-Ring (recovery time <20 ms), Turbo-Chain (recovery time <20 ms) |
| Network traffic filter | Quality of Service (QoS), Tag based VLAN, Port based VLAN, IGMP v1/v2, GMRP, Traffic Rate Limiting |
| IP-address management | Static, BootP, RARP, DHCP-Client, DHCP-Server (port based), DHCP Option 82 (Relay Agent) |
| Security functions | VLAN segmentation, Enable/disable ports, Loop protection |
| Time synchronization management | SNTP client, NTP client |
| Industrial protocol support | PROFINET device acc. to conformance class B, EtherNet/IP, Modbus/TCP slave |
| Interfaces | |
| RJ45 ports | 10/100BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| Number of ports | 5x RJ45, 1 * SC Multi-mode, 2 * SC Single-mode |
| Console port interface | RS-232 |
| Alarm contact | 1 relay output with a current capacity of 1 A at 24 V DC |
| Function DIP switch | Turbo-Ring, Master, Coupler, Reserve |
| Fibre optic transceiver characteristics | |
| Transmission rate | 100 Mbps |
| Connector type | SC-Duplex |
| Transceiver type | Multimode, Singlemode |
| Power supply | |
| Connection type | 1 removable 6-pin terminal block |
| Voltage supply range | 9.6...60VDC |
| Voltage supply | 12/24/48 V DC, 2 redundant inputs |
| Current consumption | 0.32A @ 24V |
| Overload current protection | Yes |
| Reverse polarity protection | Yes |
| Note | |

| Physical characteristics | |
|------------------------------|--|
| Housing main material | metal |
| Protection degree | IP30 |
| Type of mounting | DIN rail, Panel (with optional mounting kit) |
| Dimensions H x W x D | 135 / 53.6 / 105 mm (5.315 / 2.1102 / 4.1338 inch) |
| Net weight | 890 GRM |
| Environmental conditions | |
| Operating temperature | -40 °C...75 °C |
| Humidity | 5 to 95 % (non-condensing) |
| EMC conformity and approvals | |
| EMC standards | EN 55032, EN 55024, CISPR 32, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 1 GHz: 20 V/m, IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV, IEC 61000-4-5 Surge: Power: 2 kV; Signal: 2 kV, IEC 61000-4-6 CS: 10 V, IEC 61000-4-8 |
| Safety standard | UL508, UL 60950-1, EN 60950-1 |
| Shock | according to IEC 60068-2-27 |
| Vibration | according to IEC 60068-2-6 |
| Free fall | According to IEC 60068-2-32 |
| MTBF | |
| Operating time (hours), min. | 1253072h |
| According to Standard | Telcordia (Bellcore), GB |
| Approvals | |
| Approvals | CE; CULUS; UKCA |

Ordering data

| Type | Qty. | Order No. |
|---------------------------|------|------------|
| IE-SW-VL08MT-5TX-1SC-2SCS | 1 | 1345240000 |

8-Port managed Fast/Gigabit Ethernet Switch

- Extensive set of management features enable the set-up of various redundancy, monitoring, traffic filter and security functions
- Suitable for use in harsh industrial environment thanks to rugged design and wideoperating temperature range of -40°C up to 75°C



Technical data

| Technology | |
|---------------------------------|---|
| Standard | IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3ab for 1000BaseT(X), IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1s for the Multiple Spanning Tree Protocol (MSTP), IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging, IEEE 802.1X for authentication, IEEE 802.1AB for Link Layer Discovery protocol (LLDP) |
| Data switching | Store and Forward |
| Flow control | IEEE 802.3x flow control |
| Switch characteristics | |
| Priority queues | 4 |
| Max. number of available VLANs | 4095 |
| IGMP-Groups | 1024 |
| MAC table size | 8 K |
| Packet buffer size | 1 Mbit |
| Management features | |
| Device configuration | Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Local serial console port (RS-232 via RJ-45 port), Upload of a configuration file via web-interface or TFTP-Server, Command Line Interface (Telnet/SSH) |
| Monitoring function | SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring, Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap |
| Network redundancy | Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), O-Ring (recovery time <10/30 ms at Fast/Gigabit Ethernet interface), O-Chain (recovery time <10/30 ms at Fast/Gigabit Ethernet interface), Link Aggregation Control Protocol (LACP), Fast recovery |
| Network traffic filter | Quality of Service (QoS), Class of Service (CoS), Type of Service (ToS), Differentiated Services Code Point (DSCP), Port based VLAN, Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Multicast VLAN Registration (MVR), Traffic Rate Limiting |
| IP-address management | Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay |
| Security functions | VLAN segmentation, Enable/disable ports, TACACS+ and IEEE 802.1X User Authentication, Access control (port based via IEEE 802.1X), Access control list (IP-based), Access control list (MAC-based), Management access security via secure IP-list and configuration of allowed access methods (web-interface, telnet, SSH), Loop protection |
| Time synchronization management | NTP server, SNTP client |
| Industrial protocol support | Modbus/TCP slave, PROFINET device acc. to conformance class A |
| Interfaces | |
| RJ45 ports | 10/100BaseT(X) or 10/100/1000BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| Number of ports | 6x RJ45 10/100BaseT(X), 2x RJ45 10/100/1000BaseT(X) |
| Alarm contact | 1 relay output with a current capacity of 1 A at 24 V DC |
| Console port interface | RS-232 (RJ45 connector) |
| Function reset button | <5 sec: System reboot, >5 sec: Factory default |
| Note | |

| Power supply | |
|------------------------------|---|
| Connection type | 1 removable 7-pin terminal block |
| Voltage supply range | 10.8...52.8VDC |
| Voltage supply | 12/24/48 V DC, 2 redundant inputs |
| Current consumption | 0.83A @ 12V; 0.41A @ 24V; 0.19A @ 48V |
| Overload current protection | Yes |
| Reverse polarity protection | Yes |
| Physical characteristics | |
| Housing main material | Metal |
| Protection degree | IP30 |
| Type of mounting | DIN rail |
| Dimensions H x W x D | 144.3 / 52 / 107.1 mm (5.6811 / 2.0472 / 4.2165 inch) |
| Net weight | 817 GRM |
| Environmental conditions | |
| Operating temperature | -40 °C...75 °C |
| Humidity | 5 to 95 % (non-condensing) |
| Operating altitude | 2000m in acc. with UL |
| EMC conformity and approvals | |
| EMC standards | EN 55032, EN 55024, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0.5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms |
| Safety standard | SELV according to EN 62368-1, UL 61010-1, UL 61010-2-201 |
| Shock | according to IEC 60068-2-27 |
| Vibration | according to IEC 60068-2-6 |
| Free fall | According to IEC 60068-2-31 |
| MTBF | |
| Operating time (hours), min. | 798350h |
| According to Standard | Telcordia SR-332 |
| Approvals | |
| Approvals | CE; CULUS; KOREANCERT; UKCA |

Ordering data

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-SW-AL08M-6TX-2GT | 1 | 2682290000 |

10-Port managed Fast/Gigabit Ethernet Switch

- Extensive set of management features enable the set-up of various redundancy, monitoring, traffic filter and security functions
- Suitable for use in harsh industrial environment thanks to rugged design and wideoperating temperature range of -40°C up to 75°C
- SFP-ports for fiber optic transmission over long distances



Technical data

| Technology | |
|---------------------------------|--|
| Standard | IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX and 100BASE-FX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3z for 1000BASE-X, IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1s for the Multiple Spanning Tree Protocol (MSTP), IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging, IEEE 802.1X for authentication, IEEE 802.1AB for Link Layer Discovery protocol (LLDP) |
| Data switching | Store and Forward |
| Flow control | IEEE 802.3x flow control |
| Switch characteristics | |
| Priority queues | 4 |
| Max. number of available VLANs | 4095 |
| IGMP-Groups | 1024 |
| MAC table size | 8 K |
| Packet buffer size | 1 Mbit |
| Management features | |
| Device configuration | Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Local serial console port (RS-232 via RJ-45 port), Upload of a configuration file via web-interface or TFTP-Server, Command Line Interface (Telnet/SSH) |
| Monitoring function | SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring, Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap |
| Network redundancy | Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), O-Ring (recovery time <10/30 ms at Fast/Gigabit Ethernet interface), O-Chain (recovery time <10/30 ms at Fast/Gigabit Ethernet interface), Link Aggregation Control Protocol (LACP), Fast recovery |
| Network traffic filter | Quality of Service (QoS), Class of Service (CoS), Type of Service (ToS), Differentiated Services Code Point (DSCP), Port based VLAN, Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Multicast VLAN Registration (MVR), Traffic Rate Limiting |
| IP-address management | Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay |
| Security functions | VLAN segmentation, Enable/disable ports, TACACS+ and IEEE 802.1X User Authentication, Access control (port based via IEEE 802.1X), Access control list (IP-based), Access control list (MAC-based), Management access security via secure IP-list and configuration of allowed access methods (web-interface, telnet, SSH), Loop protection |
| Time synchronization management | NTP server, SNTP client |
| Industrial protocol support | Modbus/TCP slave, PROFINET device acc. to conformance class A |
| Interfaces | |
| RJ45 ports | 10/100BaseT(X) or 10/100/1000BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| Number of ports | 8x RJ45 10/100BaseT(X), 2x combo-ports (10/100/1000BaseT(X) or 100/1000BaseSFP) |
| Fibre-optic ports | 100/1000Base SFP Slot |
| Alarm contact | 1 relay output with a current capacity of 1 A at 24 V DC |
| Console port interface | RS-232 (RJ45 connector) |
| Function reset button | <5 sec: System reboot, >5 sec: Factory default |
| Note | |

| Power supply | |
|------------------------------|---|
| Connection type | 1 removable 6-pin terminal block |
| Voltage supply range | 10.8...52.8VDC |
| Voltage supply | 12/24/48 V DC, 2 redundant inputs |
| Current consumption | 0.9A @ 12V; 0.45A @ 24V; 0.2A @ 48V |
| Overload current protection | Yes |
| Reverse polarity protection | Yes |
| Physical characteristics | |
| Housing main material | Metal |
| Protection degree | IP30 |
| Type of mounting | DIN rail |
| Dimensions H x W x D | 153.6 / 74.3 / 107.5 mm (6.0472 / 2.9252 / 4.2323 inch) |
| Net weight | 1159 GRM |
| Environmental conditions | |
| Operating temperature | -40...75 °C |
| Humidity | 5 to 95 % (non-condensing) |
| Operating altitude | 2000m in acc. with UL |
| EMC conformity and approvals | |
| EMC standards | EN 55032, EN 55024, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0.5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms |
| Safety standard | UL 61010-1, UL 61010-2-201 |
| Shock | according to IEC 60068-2-27 |
| Vibration | according to IEC 60068-2-6 |
| Free fall | According to IEC 60068-2-31 |
| MTBF | |
| Operating time (hours), min. | 366529h |
| According to Standard | Telcordia SR-332 |
| Approvals | |
| Approvals | CE; CULUS; UKCA |

Ordering data

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-SW-AL10M-8TX-2GC | 1 | 2740420000 |

18-Port managed Fast/Gigabit Ethernet Switch

- Extensive set of management features enable the set-up of various redundancy, monitoring, traffic filter and security functions
- Suitable for use in harsh industrial environment thanks to rugged design and wideoperating temperature range of -40°C up to 75°C
- SFP-ports for fiber optic transmission over long distances



Technical data

| Technology | |
|---------------------------------|--|
| Standard | IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3ab for 1000BaseT(X), IEEE 802.3z for 1000BaseX, IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging, IEEE 802.1X for authentication, IEEE 802.1AB for Link Layer Discovery protocol (LLDP) |
| Data switching | Store and Forward |
| Flow control | IEEE 802.3x flow control |
| Switch characteristics | |
| Priority queues | 4 |
| Max. number of available VLANs | 4095 |
| IGMP-Groups | 1024 |
| MAC table size | 8 K |
| Packet buffer size | 1 Mbit |
| Management features | |
| Device configuration | Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Local serial console port (RS-232 via RJ-45 port), Upload of a configuration file via web-interface or TFTP-Server, Command Line Interface (Telnet/SSH) |
| Monitoring function | SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring, Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap |
| Network redundancy | Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), O-Ring (recovery time <10/30 ms at Fast/Gigabit Ethernet interface), O-Chain (recovery time <10/30 ms at Fast/Gigabit Ethernet interface), Link Aggregation Control Protocol (LACP), Fast recovery |
| Network traffic filter | Quality of Service (QoS), Class of Service (CoS), Type of Service (ToS), Differentiated Services Code Point (DSCP), Port based VLAN, Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Multicast VLAN Registration (MVR), Traffic Rate Limiting |
| IP-address management | Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay |
| Security functions | VLAN segmentation, Enable/disable ports, TACACS+ and IEEE 802.1X User Authentication, Access control (port based via IEEE 802.1X), Access control list (IP-based), Access control list (MAC-based), Management access security via secure IP-list and configuration of allowed access methods (web-interface, telnet, SSH), Loop protection |
| Time synchronization management | NTP server, SNTP client |
| Industrial protocol support | Modbus/TCP slave, PROFINET device acc. to conformance class A |
| Interfaces | |
| RJ45 ports | 10/100BaseT(X) or 10/100/1000BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| Number of ports | 16x RJ45 10/100BaseT(X), 2x combo-ports (10/100/1000BaseT(X) or 100/1000BaseSFP) |
| Fibre-optic ports | 100/1000Base SFP Slot |
| Alarm contact | 1 relay output with a current capacity of 1 A at 24 V DC |
| Console port interface | RS-232 (RJ45 connector) |
| Function reset button | <5 sec: System reboot, >5 sec: Factory default |
| Note | |

| Power supply | |
|------------------------------|---|
| Connection type | 1 removable 6-pin terminal block |
| Voltage supply range | 10.8...52.8VDC |
| Voltage supply | 12/24/48 V DC, 2 redundant inputs |
| Current consumption | 1.2A @ 12V; 0.6A @ 24V; 0.3A @ 48V |
| Overload current protection | Yes |
| Reverse polarity protection | Yes |
| Physical characteristics | |
| Housing main material | Metal |
| Protection degree | IP30 |
| Type of mounting | DIN rail |
| Dimensions H x W x D | 154 / 96.4 / 108.5 mm (6.063 / 3.7953 / 4.2716 inch) |
| Net weight | 1363 GRM |
| Environmental conditions | |
| Operating temperature | -40 °C...75 °C |
| Humidity | 5 to 95 % (non-condensing) |
| Operating altitude | 2000m in acc. with UL |
| EMC conformity and approvals | |
| EMC standards | EN 55032, EN 55024, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0.5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms |
| Safety standard | SELV according to EN 62368-1, UL 61010-1, UL 61010-2-201 |
| Shock | according to IEC 60068-2-27 |
| Vibration | according to IEC 60068-2-6 |
| Free fall | According to IEC 60068-2-31 |
| MTBF | |
| Operating time (hours), min. | 600504h |
| According to Standard | Telcordia SR-332 |
| Approvals | |
| Approvals | CE; CULUS; UKCA |

Ordering data

| Type | Qty. | Order No. |
|----------------------|------|------------|
| IE-SW-AL18M-16TX-2GC | 1 | 2682330000 |

8-Port managed Gigabit Ethernet Switch

- Extensive set of management features enable the set-up of various redundancy, monitoring, traffic filter and security functions
- Suitable for use in harsh industrial environment thanks to rugged design and wide operating temperature range of -40°C up to 75°C



Technical data

| Technology | |
|---------------------------------|---|
| Standard | IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X), IEEE 802.3ab for 1000BaseT(X), IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1s for the Multiple Spanning Tree Protocol (MSTP), IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging, IEEE 802.1X for authentication, IEEE 802.1AB for Link Layer Discovery protocol (LLDP) |
| Data switching | Store and Forward |
| Flow control | IEEE 802.3x flow control |
| Switch characteristics | |
| Priority queues | 8 |
| Max. number of available VLANs | 4096 |
| Number of IGMP-Groups per VLAN | 256 |
| MAC table size | 8 K |
| Packet buffer size | 4 Mbit |
| Jumbo frame support | up to 9.6 KB |
| Management features | |
| Device configuration | Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Command Line Interface (Telnet/SSH), Local serial console port (RS-232 via RJ-45 port), Upload of a configuration file via web-interface, TFTP-Server or external backup module |
| Monitoring function | SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring (local, remote), Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap, Ethernet cable diagnostics on RJ-45 ports |
| Network redundancy | Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), O-Ring (recovery time <30 ms), O-Chain (recovery time <30 ms), Link Aggregation Control Protocol (LACP), Fast recovery, Media Redundancy Protocol (MRP-client) |
| Network traffic filter | Quality of Service (QoS), Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Traffic Rate Limiting |
| IP-address management | Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay |
| Security functions | VLAN segmentation, Enable/disable ports, TACACS+ and IEEE 802.1X User Authentication, DoS/DDoS auto prevention, Access Control List, DHCP snooping, Loop protection, Management access security via privilege level configuration for different user roles |
| Time synchronization management | SNTP server, SNTP client |
| Industrial protocol support | PROFINET device acc. to conformance class B, EtherNet/IP, Modbus/TCP slave |
| Interfaces | |
| RJ45 ports | 10/100/1000BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| Number of ports | 8x RJ45 |
| Console port interface | RS-232 (RJ45 connector) |
| Alarm contact | 1 relay output with a current capacity of 1 A at 24 V DC |
| Function reset button | <5 sec: System reboot and set LAN IP to factory Default, >5 sec: Factory default, Note: behavior of reset button can be configured via web interface |
| Note | |

| Power supply | |
|------------------------------|---|
| Connection type | 1 removable 6-pin terminal block |
| Voltage supply range | 10.8...52.8VDC |
| Voltage supply | 12/24/48 V DC, 2 redundant inputs |
| Current consumption | 0.55A @ 24V |
| Overload current protection | Yes |
| Reverse polarity protection | Yes |
| Physical characteristics | |
| Housing main material | Metal |
| Protection degree | IP30 |
| Type of mounting | DIN rail |
| Dimensions H x W x D | 145.1 / 54.3 / 108.3 mm (5.7126 / 2.1378 / 4.2638 inch) |
| Net weight | 800 GRM |
| Environmental conditions | |
| Operating temperature | -40 °C...75 °C |
| Humidity | 5 to 95 % (non-condensing) |
| Operating altitude | 2000m in acc. with UL |
| EMC conformity and approvals | |
| EMC standards | EN 55032, EN 55024, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0.5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms |
| Safety standard | UL 61010-1, UL 61010-2-201 |
| Shock | according to IEC 60068-2-27 |
| Vibration | according to IEC 60068-2-6 |
| Free fall | According to IEC 60068-2-31 |
| MTBF | |
| Operating time (hours), min. | 508672h |
| According to Standard | Telcordia SR-332 |
| Approvals | |
| Approvals | CE; CULUS; KOREANCERT; UKCA |

Ordering data

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-SW-AL08M-8GT | 1 | 2682350000 |

12-Port managed Gigabit Ethernet Switch

- Extensive set of management features enable the set-up of various redundancy, monitoring, traffic filter and security functions
- Suitable for use in harsh industrial environment thanks to rugged design and wide operating temperature range of -40°C up to 75°C
- SFP-ports for fiber optic transmission over long distances



Technical data

| Technology | |
|---------------------------------|--|
| Standard | IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3ab for 1000BaseT(X), IEEE 802.3z for 1000BaseX, IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1s for the Multiple Spanning Tree Protocol (MSTP), IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging, IEEE 802.1X for authentication, IEEE 802.1AB for Link Layer Discovery protocol (LLDP) |
| Data switching | Store and Forward |
| Flow control | IEEE 802.3x flow control |
| Switch characteristics | |
| Priority queues | 8 |
| Max. number of available VLANs | 4096 |
| Number of IGMP-Groups per VLAN | 256 |
| MAC table size | 8 K |
| Packet buffer size | 4 Mbit |
| Jumbo frame support | up to 9.6 KB |
| Management features | |
| Device configuration | Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Command Line Interface (Telnet/SSH), Local serial console port (RS-232 via RJ-45 port), Upload of a configuration file via web-interface, TFTP-Server or external backup module |
| Monitoring function | SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring (local, remote), Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap, Ethernet cable diagnostics on RJ-45 ports |
| Network redundancy | Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), O-Ring (recovery time <30 ms), O-Chain (recovery time <30 ms), Link Aggregation Control Protocol (LACP), Fast recovery, Media Redundancy Protocol (MRP-client) |
| Network traffic filter | Quality of Service (QoS), Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Traffic Rate Limiting |
| IP-address management | Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay |
| Security functions | VLAN segmentation, Enable/disable ports, TACACS+ and IEEE 802.1X User Authentication, DoS/DDoS auto prevention, Access Control List, DHCP snooping, Loop protection, Management access security via privilege level configuration for different user roles |
| Time synchronization management | SNTP server, SNTP client |
| Industrial protocol support | PROFINET device acc. to conformance class B, EtherNet/IP, Modbus/TCP slave |

Note

| Interfaces | |
|------------------------------|---|
| RJ45 ports | 10/100/1000BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| Number of ports | 8x RJ45, 4x 100/1000BaseSFP Slot |
| Console port interface | RS-232 (RJ45 connector) |
| Fibre-optic ports | 100/1000Base SFP Slot |
| Alarm contact | 1 relay output with a current capacity of 1 A at 24 V DC |
| Function reset button | <5 sec: System reboot and set LAN IP to factory Default, >5 sec: Factory default, Note: behavior of reset button can be configured via web interface |
| Power supply | |
| Connection type | 1 removable 6-pin terminal block |
| Voltage supply range | 10.8...52.8VDC |
| Voltage supply | 12/24/48 V DC, 2 redundant inputs |
| Current consumption | 0.54A @ 24V |
| Overload current protection | Yes |
| Reverse polarity protection | Yes |
| Physical characteristics | |
| Housing main material | Metal |
| Protection degree | IP30 |
| Type of mounting | DIN rail |
| Dimensions H x W x D | 145.1 / 54.3 / 108.3 mm (5.7126 / 2.1378 / 4.2638 inch) |
| Net weight | 822 GRM |
| Environmental conditions | |
| Operating temperature | -40 °C...75 °C |
| Humidity | 5 to 95 % (non-condensing) |
| Operating altitude | 2000m in acc. with UL |
| EMC conformity and approvals | |
| EMC standards | EN 55032, EN 55024, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0.5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms |
| Safety standard | UL 61010-1, UL 61010-2-201 |
| Shock | according to IEC 60068-2-27 |
| Vibration | according to IEC 60068-2-6 |
| Free fall | According to IEC 60068-2-31 |
| MTBF | |
| Operating time (hours), min. | 551478h |
| According to Standard | Telcordia SR-332 |
| Approvals | |
| Approvals | CE; CULUS; KOREANCERT; UKCA |

Ordering data

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-SW-AL12M-8GT-4GESFP | 1 | 2682340000 |

14-Port managed Gigabit Ethernet Switch

- Extensive set of management features enable the set-up of various redundancy, monitoring, traffic filter and security functions
- Suitable for use in harsh industrial environment thanks to rugged design and wide operating temperature range of -40°C up to 75°C
- SFP-ports for fiber optic transmission over long distances



Technical data

| Technology | |
|---------------------------------|--|
| Standard | IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3ab for 1000BaseT(X), IEEE 802.3z for 1000BaseX, IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1s for the Multiple Spanning Tree Protocol (MSTP), IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging, IEEE 802.1X for authentication, IEEE 802.1AB for Link Layer Discovery protocol (LLDP), IEEE 1588 PTPv2 for time synchronization |
| Data switching | Store and Forward |
| Flow control | IEEE 802.3x flow control |
| Switch characteristics | |
| Priority queues | 8 |
| Max. number of available VLANs | 4096 |
| Number of IGMP-Groups per VLAN | 256 |
| MAC table size | 8 K |
| Packet buffer size | 4 Mbit |
| Jumbo frame support | up to 9.6 KB |
| Management features | |
| Device configuration | Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Command Line Interface (Telnet/SSH), Local serial console port (RS-232 via RJ-45 port), Upload of a configuration file via web-interface, TFTP-Server or external backup module |
| Monitoring function | SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring (local, remote), Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap, Ethernet cable diagnostics on RJ-45 ports |
| Network redundancy | Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), O-Ring (recovery time <30 ms), O-Chain (recovery time <30 ms), Link Aggregation Control Protocol (LACP), Fast recovery, Media Redundancy Protocol (MRP-client) |
| Network traffic filter | Quality of Service (QoS), Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Traffic Rate Limiting |
| IP-address management | Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay |
| Security functions | VLAN segmentation, Enable/disable ports, TACACS+ and IEEE 802.1X User Authentication, DoS/DDoS auto prevention, Access Control List, DHCP snooping, Loop protection, Management access security via privilege level configuration for different user roles |
| Time synchronization management | SNTP server, SNTP client, PTPv2 |
| Industrial protocol support | PROFINET device acc. to conformance class B, EtherNet/IP, Modbus/TCP slave |

Note

| Interfaces | |
|------------------------------|---|
| RJ45 ports | 10/100/1000BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| Number of ports | 12x RJ45, 2 * Slots 100/1000BaseSFP |
| Console port interface | RS-232 (RJ45 connector) |
| Fibre-optic ports | 100/1000Base SFP Slot |
| Alarm contact | 1 relay output with a current capacity of 1 A at 24 V DC |
| Function reset button | <5 sec: System reboot and set LAN IP to factory Default, >5 sec: Factory default, Note: behavior of reset button can be configured via web interface |
| Power supply | |
| Connection type | 1 removable 6-pin terminal block |
| Voltage supply range | 10.8...52.8VDC |
| Voltage supply | 12/24/48 V DC, 2 redundant inputs |
| Current consumption | 0.53A @ 24V |
| Overload current protection | Yes |
| Reverse polarity protection | Yes |
| Physical characteristics | |
| Housing main material | Metal |
| Protection degree | IP30 |
| Type of mounting | DIN rail |
| Dimensions H x W x D | 153.6 / 74.3 / 109.2 mm (6.0472 / 2.9252 / 4.2992 inch) |
| Net weight | 1090 GRM |
| Environmental conditions | |
| Operating temperature | -40 °C...75 °C |
| Humidity | 5 to 95 % (non-condensing) |
| Operating altitude | 2000m in acc. with UL |
| EMC conformity and approvals | |
| EMC standards | EN 55032, EN 55024, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0.5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms |
| Safety standard | UL 61010-1, UL 61010-2-201 |
| Shock | according to IEC 60068-2-27 |
| Vibration | according to IEC 60068-2-6 |
| Free fall | According to IEC 60068-2-31 |
| MTBF | |
| Operating time (hours), min. | 713154h |
| According to Standard | Telcordia SR-332 |
| Approvals | |
| Approvals | CE; CULUS; UKCA |

Ordering data

| Type | Qty. | Order No. |
|-------------------------|------|------------|
| IE-SW-AL14M-12GT-2GESFP | 1 | 2682360000 |

24-Port managed Gigabit Ethernet Switch

- Extensive set of management features enable the set-up of various redundancy, monitoring, traffic filter and security functions
- Suitable for use in harsh industrial environment thanks to rugged design and wide operating temperature range of -40°C up to 75°C
- SFP-ports for fiber optic transmission over long distances



Technical data

| Technology | |
|---------------------------------|--|
| Standard | IEEE 802.3 for 10BaseT, IEEE 802.3u for 100BaseT(X) and 100BaseFX, IEEE 802.3ab for 1000BaseT(X), IEEE 802.3z for 1000BaseX, IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1s for the Multiple Spanning Tree Protocol (MSTP), IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging, IEEE 802.1X for authentication, IEEE 802.1AB for Link Layer Discovery protocol (LLDP), IEEE 1588 PTPv2 for time synchronization |
| Data switching | Store and Forward |
| Flow control | IEEE 802.3x flow control |
| Switch characteristics | |
| Priority queues | 8 |
| Max. number of available VLANs | 4096 |
| Number of IGMP-Groups per VLAN | 256 |
| MAC table size | 8 K |
| Packet buffer size | 4 Mbit |
| Jumbo frame support | up to 9.6 KB |
| Management features | |
| Device configuration | Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Command Line Interface (Telnet/SSH), Local serial console port (RS-232 via RJ-45 port), Upload of a configuration file via web-interface, TFTP-Server or external backup module |
| Monitoring function | SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring (local, remote), Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap, Ethernet cable diagnostics on RJ-45 ports |
| Network redundancy | Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), O-Ring (recovery time <30 ms), O-Chain (recovery time <30 ms), Link Aggregation Control Protocol (LACP), Fast recovery, Media Redundancy Protocol (MRP-client) |
| Network traffic filter | Quality of Service (QoS), Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Traffic Rate Limiting |
| IP-address management | Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay |
| Security functions | VLAN segmentation, Enable/disable ports, TACACS+ and IEEE 802.1X User Authentication, DoS/DDoS auto prevention, Access Control List, DHCP snooping, Loop protection, Management access security via privilege level configuration for different user roles |
| Time synchronization management | SNTP server, SNTP client, PTPv2 |
| Industrial protocol support | PROFINET device acc. to conformance class B, EtherNet/IP, Modbus/TCP slave |

Note

| Interfaces | |
|------------------------------|---|
| RJ45 ports | 10/100/1000BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| Number of ports | 16x RJ45, 8x 100/1000BaseSFP Slot |
| Console port interface | RS-232 (RJ45 connector) |
| Fibre-optic ports | 100/1000Base SFP Slot |
| Alarm contact | 1 relay output with a current capacity of 1 A at 24 V DC |
| Function reset button | <5 sec: System reboot and set LAN IP to factory Default, >5 sec: Factory default, Note: behavior of reset button can be configured via web interface |
| Power supply | |
| Connection type | 1 removable 6-pin terminal block |
| Voltage supply range | 10.8...52.8VDC |
| Voltage supply | 12/24/48 V DC, 2 redundant inputs |
| Current consumption | 0.84A @ 24V |
| Overload current protection | Yes |
| Reverse polarity protection | Yes |
| Physical characteristics | |
| Housing main material | Metal |
| Protection degree | IP30 |
| Type of mounting | DIN rail |
| Dimensions H x W x D | 154 / 96.4 / 108.5 mm (6.063 / 3.7953 / 4.2716 inch) |
| Net weight | 1290 GRM |
| Environmental conditions | |
| Operating temperature | -40 °C...75 °C |
| Humidity | 5 to 95 % (non-condensing) |
| Operating altitude | 2000m in acc. with UL |
| EMC conformity and approvals | |
| EMC standards | EN 55032, EN 55024, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0.5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms |
| Safety standard | UL 61010-1, UL 61010-2-201 |
| Shock | according to IEC 60068-2-27 |
| Vibration | according to IEC 60068-2-6 |
| Free fall | According to IEC 60068-2-31 |
| MTBF | |
| Operating time (hours), min. | 507660h |
| According to Standard | Telcordia SR-332 |
| Approvals | |
| Approvals | CE; CULUS; UKCA |

Ordering data

| Type | Qty. | Order No. |
|-------------------------|------|------------|
| IE-SW-AL24M-16GT-8GESFP | 1 | 2682370000 |

6-Port managed PoE+ Gigabit Ethernet Switch

- IEEE 802.3af/at compliant PoE ports
- Integrated DC/DC converter for powering PoE devices over the entire PSE input voltage range of 12 to 57 V DC
- Advanced PoE management features, including PD Alive Check with auto reboot function and PoE scheduling
- SFP-ports for fiber optic transmission over long distances



Technical data

| Technology | |
|---------------------------------|--|
| Standard | IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX and 100BASE-FX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3z for 1000BASE-X, IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, IEEE 802.3at/af for Power-over-Ethernet, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1s for the Multiple Spanning Tree Protocol (MSTP), IEEE 802.1p for Class of Service / Quality of Service (CoS/QoS), IEEE 802.1Q for VLAN tagging, IEEE 802.1X for authentication, IEEE 802.1AB for Link Layer Discovery protocol (LLDP) |
| Data switching | Store and Forward |
| Flow control | IEEE 802.3x flow control |
| Switch characteristics | |
| Priority queues | 8 |
| Max. number of available VLANs | 4096 |
| Number of IGMP-Groups per VLAN | 256 |
| MAC table size | 8 K |
| Packet buffer size | 4 Mbit |
| Jumbo frame support | up to 9.6 KB |
| Management features | |
| Device configuration | Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Command Line Interface (Telnet/SSH), Local serial console port (RS-232 via RJ-45 port), Upload of a configuration file via web-interface, TFTP-Server or external backup module |
| Monitoring function | SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring (local, remote), Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap, Ethernet cable diagnostics on RJ-45 ports |
| Network redundancy | Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), O-Ring (recovery time <30 ms), O-Chain (recovery time <30 ms), Link Aggregation Control Protocol (LACP), Fast recovery, Media Redundancy Protocol (MRP-client) |
| Network traffic filter | Quality of Service (QoS), Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Traffic Rate Limiting |
| IP-address management | Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay |
| Security functions | VLAN segmentation, Enable/disable ports, TACACS+ and IEEE 802.1X User Authentication, DoS/DDoS auto prevention, Access Control List, DHCP snooping, Loop protection, Management access security via privilege level configuration for different user roles |
| Time synchronization management | SNTP server, SNTP client |
| Industrial protocol support | PROFINET device acc. to conformance class B, EtherNet/IP, Modbus/TCP slave |

Note

| Interfaces | |
|------------------------------|--|
| RJ45 ports | 10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port |
| Number of ports | 4 * RJ45 10/100/1000BaseT(X) PoE+, 2x 100/1000BaseSFP Slot |
| Console port interface | RS-232 (RJ45 connector) |
| Fibre-optic ports | 100/1000Base SFP Slot |
| Alarm contact | 1 relay output with a current capacity of 1 A at 24 V DC |
| Function reset button | <5 sec: System reboot and set LAN IP to factory Default, >5 sec: Factory default, Note: behavior of reset button can be configured via web interface |
| Power supply | |
| Connection type | 1 removable 6-pin terminal block |
| Voltage supply range | 12...57VDC |
| Voltage supply | 12/24/48 V DC, 2 redundant inputs |
| Current consumption | 6.6A @ 12V |
| Overload current protection | Yes |
| Reverse polarity protection | Yes |
| Power over Ethernet (PoE) | |
| PoE pin assignment | Mode A: Pin 1, 2 (V+); Pin 3, 6 (V-); Alternative A; MDI |
| Total PoE power budget | 60W @ 12...23.9V DC; 120W @ 24...57V DC |
| Physical characteristics | |
| Housing main material | Metal |
| Protection degree | IP30 |
| Type of mounting | DIN rail |
| Dimensions H x W x D | 145.1 / 54.3 / 108.5 mm (5.7126 / 2.1378 / 4.2716 inch) |
| Net weight | 910 GRM |
| Environmental conditions | |
| Operating temperature | -40 °C...75 °C |
| Humidity | 5 to 95 % (non-condensing) |
| Operating altitude | 2000m in acc. with UL |
| EMC conformity and approvals | |
| EMC standards | EN 55032, EN 55024, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 Ghz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0.5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 V |
| Safety standard | UL 61010-1, UL 61010-2-201 |
| Shock | according to IEC 60068-2-27 |
| Vibration | according to IEC 60068-2-6 |
| Free fall | According to IEC 60068-2-31 |
| MTBF | |
| Operating time (hours), min. | 495624h |
| According to Standard | Telcordia SR-332 |
| Approvals | |
| Approvals | CE; CULUS; UKCA |

Ordering data

| Type | Qty. | Order No. |
|---------------------------|------|------------|
| IE-SW-AL06M-4GTPOE-2GESFP | 1 | 2682430000 |

8-Port managed PoE+ Gigabit Ethernet Switch

- IEEE 802.3af/at compliant PoE ports
- Integrated DC/DC converter for powering PoE devices over the entire PSE input voltage range of 12 to 57 V DC
- Advanced PoE management features, including PD Alive Check with auto reboot function and PoE scheduling



Technical data

| Technology | |
|---------------------------------|---|
| Standard | IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1s for the Multiple Spanning Tree Protocol (MSTP), IEEE 802.1p for Class of Service / Quality of Service (CoS/DoS), IEEE 802.1Q for VLAN tagging, IEEE 802.1X for authentication, IEEE 802.1AB for Link Layer Discovery protocol (LLDP), IEEE 802.3at/af for Power-over-Ethernet |
| Data switching | Store and Forward |
| Flow control | IEEE 802.3x flow control |
| Switch characteristics | |
| Priority queues | 8 |
| Max. number of available VLANs | 4096 |
| Number of IGMP-Groups per VLAN | 256 |
| MAC table size | 8 K |
| Packet buffer size | 4 Mbit |
| Jumbo frame support | up to 9.6 KB |
| Management features | |
| Device configuration | Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Command Line Interface (Telnet/SSH), Local serial console port (RS-232 via RJ-45 port), Upload of a configuration file via web-interface, TFTP-Server or external backup module |
| Monitoring function | SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring (local, remote), Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap, Ethernet cable diagnostics on RJ-45 ports |
| Network redundancy | Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), R-Ring (recovery time <30 ms), O-Chain (recovery time <30 ms), Link Aggregation Control Protocol (LACP), Fast recovery, Media Redundancy Protocol (MRP-client) |
| Network traffic filter | Quality of Service (QoS), Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Traffic Rate Limiting |
| IP-address management | Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay |
| Security functions | VLAN segmentation, Enable/disable ports, TACACS+ and IEEE 802.1X User Authentication, DoS/DDoS auto prevention, Access Control List, DHCP snooping, Loop protection, Management access security via privilege level configuration for different user roles |
| Time synchronization management | SNTP server, SNTP client |
| Industrial protocol support | PROFINET device acc. to conformance class B, EtherNet/IP, Modbus/TCP slave |

Note

| Interfaces | |
|------------------------------|--|
| RJ45 ports | 10/100/1000BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| Number of ports | 8x RJ45 10/100/1000 BaseT(X) PoE+ |
| Console port interface | RS-232 (RJ45 connector) |
| Alarm contact | 1 relay output with a current capacity of 1 A at 24 V DC |
| Function reset button | <5 sec: System reboot and set LAN IP to factory Default, >5 sec: Factory default, Note: behavior of reset button can be configured via web interface |
| Power supply | |
| Connection type | 1 removable 6-pin terminal block |
| Voltage supply range | 12...57VDC |
| Voltage supply | 12/24/48 V DC, 2 redundant inputs |
| Current consumption | 6.53A @ 12V |
| Overload current protection | Yes |
| Reverse polarity protection | Yes |
| Power over Ethernet (PoE) | |
| PoE pin assignment | Mode A: Pin 1, 2 (V+); Pin 3, 6 (V-); Alternative A; MDI |
| Total PoE power budget | 60W @ 12...23.9V DC; 120W @ 24...57V DC |
| Physical characteristics | |
| Housing main material | Metal |
| Protection degree | IP30 |
| Type of mounting | DIN rail |
| Dimensions H x W x D | 145.1 / 54.3 / 108.5 mm (5.7126 / 2.1378 / 4.2716 inch) |
| Net weight | 915 GRM |
| Environmental conditions | |
| Operating temperature | -40 °C...75 °C |
| Humidity | 5 to 95 % (non-condensing) |
| Operating altitude | 2000m in acc. with UL |
| EMC conformity and approvals | |
| EMC standards | EN 55032, EN 55024, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0.5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 V |
| Safety standard | UL 61010-1, UL 61010-2-201 |
| Shock | according to IEC 60068-2-27 |
| Vibration | according to IEC 60068-2-6 |
| Free fall | According to IEC 60068-2-31 |
| MTBF | |
| Operating time (hours), min. | 495670h |
| According to Standard | Telcordia SR-332 |
| Approvals | |
| Approvals | CE; CULUS; KOREANCERT; UKCA |

Ordering data

| Type | Qty. | Order No. |
|--------------------|------|------------|
| IE-SW-AL08M-8GTPOE | 1 | 2682420000 |

10-Port managed Fast/Gigabit Ethernet Switch

- Meets IEC 61850-3 / IEEE 1613 standards
- Redundant power supply modules
- Extensive set of management features enable the set-up of various redundancy, monitoring, traffic filter and security functions
- Suitable for use in harsh industrial environment thanks to rugged design and wide operating temperature range of -40°C up to 85°C
- SFP-ports for fiber optic transmission over long distances



Technical data

| Technology | |
|---------------------------------|--|
| Standard | IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX and 100BASE-FX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3z for 1000BASE-X, IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1D-2004 for RSTP:2004 (Rapid Spanning Tree Protocol 2004), IEEE 802.1s for the Multiple Spanning Tree Protocol (MSTP), IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging, IEEE 802.1X for authentication, IEEE 802.1AB for Link Layer Discovery protocol (LLDP) |
| Data switching | Store and Forward |
| Flow control | IEEE 802.3x flow control |
| Switch characteristics | |
| Priority queues | 4 |
| Max. number of available VLANs | 4095 |
| IGMP-Groups | 1024 |
| MAC table size | 8 K |
| Packet buffer size | 1 Mbit |
| Management features | |
| Device configuration | Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Local serial console port (RS-232 via RJ-45 port), Upload of a configuration file via web-interface or TFTP-Server, Command Line Interface (Telnet/SSH) |
| Monitoring function | SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring, Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap |
| Network redundancy | Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), O-Ring (recovery time <10/30 ms at Fast/Gigabit Ethernet interface), O-Chain (recovery time <10/30 ms at Fast/Gigabit Ethernet interface), Link Aggregation Control Protocol (LACP), Fast recovery |
| Network traffic filter | Quality of Service (QoS), Class of Service (CoS), Type of Service (ToS), Differentiated Services Code Point (DSCP), Port based VLAN, Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Multicast VLAN Registration (MVR), Traffic Rate Limiting |
| IP-address management | Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay |
| Security functions | VLAN segmentation, Enable/disable ports, TACACS+ and IEEE 802.1X User Authentication, Access control (port based via IEEE 802.1X), Access control list (IP-based), Access control list (MAC-based), Management access security via secure IP-list and configuration of allowed access methods (web-interface, telnet, SSH), Loop protection |
| Time synchronization management | NTP server, SNTP client |
| Industrial protocol support | Modbus/TCP slave, PROFINET device acc. to conformance class A |
| Note | |

| Interfaces | | |
|--|--|------------|
| RJ45 ports | 10/100BaseT(X) or 10/100/1000BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port | |
| Number of ports | 7x RJ45 10/100Base-T(X), 3x combo-ports (10/100/1000Base-T(X) or 100/1000BaseSFP) | |
| Console port interface | RS-232 (RJ45 connector) | |
| Alarm contact | 1 relay output with a current capacity of 1 A at 24 V DC | |
| Function reset button | <5 sec: System reboot, >5 sec: Factory default | |
| Fibre-optic ports | 100/1000Base SFP Slot | |
| Power supply | | |
| Connection type | 2x 3-pin fork/ring lug connection | |
| Voltage supply range | 88...373VDC / 85V...264VAC | |
| Voltage supply | 110/220 V DC, 110/220 V AC, 2 redundant isolated inputs | |
| Current consumption | 0.18A @ 110V | |
| Overload current protection | Yes | |
| Reverse polarity protection | Yes | |
| Physical characteristics | | |
| Housing main material | Metal | |
| Protection degree | IP30 | |
| Type of mounting | DIN rail | |
| Dimensions H x W x D | 154 / 96.4 / 148.5 mm (6.063 / 3.7953 / 5.8464 inch) | |
| Net weight | 2000 GRM | |
| Environmental conditions | | |
| Operating temperature | -40 °C...85 °C | |
| Humidity | 5 to 95 % (non-condensing) | |
| Operating altitude | 2000m in acc. with UL | |
| EMC conformity and approvals | | |
| EMC standards | EN 55032, CISPR 22, EN 61000-3-2, EN 61000-3-3, FCC Part 15 Subpart B Class A, EN 55035, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 3 GHz: 10 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 4 kV, IEC 61000-4-6 CS: 10 V, IEC 61000-4-8, IEC 61000-4-11 | |
| Power Transmission & Distribution Systems acc. to standard | IEEE 1613, IEC 61850-3 | |
| Safety standard | SELV according to EN 62368-1 | |
| Shock | IEC 60870-2-2 class Cm | |
| Vibration | IEC 60870-2-2 class Cm and class Bm | |
| Free fall | IEC 60870-2-2 class Cm | |
| MTBF | | |
| Operating time (hours), min. | 599113h | |
| According to Standard | Telcordia SR-332 | |
| Approvals | | |
| Approvals | CE; UKCA | |
| Ordering data | | |
| Type | Qty. | Order No. |
| IE-SW-SL10M-7TX-3GC-HV | 1 | 2778950000 |

10-Port managed Fast/Gigabit Ethernet Switch

- Meets IEC 61850-3 / IEEE 1613 standards
- Redundant power supply modules
- Extensive set of management features enable the set-up of various redundancy, monitoring, traffic filter and security functions
- Suitable for use in harsh industrial environment thanks to rugged design and wide operating temperature range of -40°C up to 85°C
- SFP-ports for fiber optic transmission over long distances



Technical data

| Technology | |
|---------------------------------|--|
| Standard | IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX and 100BASE-FX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3z for 1000BASE-X, IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1D-2004 for RSTP:2004 (Rapid Spanning Tree Protocol 2004), IEEE 802.1s for the Multiple Spanning Tree Protocol (MSTP), IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging, IEEE 802.1X for authentication, IEEE 802.1AB for Link Layer Discovery protocol (LLDP) |
| Data switching | Store and Forward |
| Flow control | IEEE 802.3x flow control |
| Switch characteristics | |
| Priority queues | 4 |
| Max. number of available VLANs | 4095 |
| IGMP-Groups | 1024 |
| MAC table size | 8 K |
| Packet buffer size | 1 Mbit |
| Management features | |
| Device configuration | Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Local serial console port (RS-232 via RJ-45 port), Upload of a configuration file via web-interface or TFTP-Server, Command Line Interface (Telnet/SSH) |
| Monitoring function | SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring, Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap |
| Network redundancy | Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), O-Ring (recovery time <10/30 ms at Fast/Gigabit Ethernet interface), O-Chain (recovery time <10/30 ms at Fast/Gigabit Ethernet interface), Link Aggregation Control Protocol (LACP), Fast recovery |
| Network traffic filter | Quality of Service (QoS), Class of Service (CoS), Type of Service (ToS), Differentiated Services Code Point (DSCP), Port based VLAN, Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Multicast VLAN Registration (MVR), Traffic Rate Limiting |
| IP-address management | Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay |
| Security functions | VLAN segmentation, Enable/disable ports, TACACS+ and IEEE 802.1X User Authentication, Access control (port based via IEEE 802.1X), Access control list (IP-based), Access control list (MAC-based), Management access security via secure IP-list and configuration of allowed access methods (web-interface, telnet, SSH), Loop protection |
| Time synchronization management | NTP server, SNTP client |
| Industrial protocol support | Modbus/TCP slave, PROFIBUS device acc. to conformance class A |
| Note | |

| Interfaces | |
|--|---|
| RJ45 ports | 10/100BaseT(X) or 10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port |
| Number of ports | 7x RJ45 10/100Base-T(X), 3x combo-ports (10/100/1000Base-T(X) or 100/1000BaseSFP) |
| Console port interface | RS-232 (RJ45 connector) |
| Alarm contact | 1 relay output with a current capacity of 1 A at 24 V DC |
| Function reset button | <5 sec: System reboot, >5 sec: Factory default |
| Fibre-optic ports | 100/1000Base SFP Slot |
| Power supply | |
| Connection type | 2 removable 2-pin terminal blocks |
| Voltage supply range | 12...52VDC |
| Voltage supply | 48 V DC, 2 redundant inputs |
| Current consumption | 0.8A @ 12V |
| Overload current protection | Yes |
| Reverse polarity protection | Yes |
| Physical characteristics | |
| Housing main material | Metal |
| Protection degree | IP30 |
| Type of mounting | DIN rail |
| Dimensions H x W x D | 154 / 96.4 / 148.5 mm (6.063 / 3.7953 / 5.8464 inch) |
| Net weight | 1450 GRM |
| Environmental conditions | |
| Operating temperature | -40 °C...85 °C |
| Humidity | 5 to 95 % (non-condensing) |
| Operating altitude | 2000m in acc. with UL |
| EMC conformity and approvals | |
| EMC standards | EN 55032, CISPR 22, FCC Part 15 Subpart B Class A, EN 55035, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 3 GHz: 10 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 4 kV, IEC 61000-4-6 CS: 10 V |
| Power Transmission & Distribution Systems acc. to standard | IEEE 1613, IEC 61850-3 |
| Safety standard | SELV according to EN 62368-1 |
| Shock | IEC 60870-2-2 class Cm |
| Vibration | IEC 60870-2-2 class Cm and class Bm |
| Free fall | IEC 60870-2-2 class Cm |
| MTBF | |
| Operating time (hours), min. | 528570h |
| According to Standard | Telcordia SR-332 |
| Approvals | |
| Approvals | CE, UKCA |

Ordering data

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-SW-SL10M-7TX-3GC-LV | 1 | 2778960000 |

20-Port managed Gigabit Ethernet Switch

- Meets IEC 61850-3 / IEEE 1613 standards
- Redundant power supply modules
- Extensive set of management features enable the set-up of various redundancy, monitoring, traffic filter and security functions
- Suitable for use in harsh industrial environment thanks to rugged design and wide operating temperature range of -40°C up to 85°C
- SFP-ports for fiber optic transmission over long distances



Technical data

| Technology | |
|---------------------------------|--|
| Standard | IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX and 100BASE-FX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3z for 1000BASE-X, IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1s for the Multiple Spanning Tree Protocol (MSTP), IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging, IEEE 802.1X for authentication, IEEE 802.1AB for Link Layer Discovery protocol (LLDP), IEEE 1588 PTPv2 for time synchronization |
| Data switching | Store and Forward |
| Flow control | IEEE 802.3x flow control |
| Switch characteristics | |
| Priority queues | 8 |
| Max. number of available VLANs | 4095 |
| Number of IGMP-Groups per VLAN | 256 |
| MAC table size | 8 K |
| Packet buffer size | 4 Mbit |
| Management features | |
| Device configuration | Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Local serial console port (RS-232 via RJ-45 port), Upload of a configuration file via web-interface, TFTP-Server or external backup module, Command Line Interface (Telnet/SSH) |
| Monitoring function | SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring (local, remote), Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap, Ethernet cable diagnostics on RJ-45 ports |
| Network redundancy | Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), O-Ring (recovery time <30 ms), O-Chain (recovery time <30 ms), Link Aggregation Control Protocol (LACP), Fast recovery, Media Redundancy Protocol (MRP-client) |
| Network traffic filter | Quality of Service (QoS), Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Traffic Rate Limiting, Differentiated Services Code Point (DSCP), Specific prioritization of GOOSE and Sampled Value messages |
| IP-address management | Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay |
| Security functions | VLAN segmentation, Enable/disable ports, TACACS+ and IEEE 802.1X User Authentication, DoS/DDoS auto prevention, Access Control List, DHCP snooping, Loop protection, Management access security via privilege level configuration for different user roles |
| Time synchronization management | SNTP server, SNTP client, PTPv2 |
| Industrial protocol support | PROFINET device acc. to conformance class B, Modbus/TCP slave, MMS server |
| Interfaces | |
| RJ45 ports | 10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port |
| Number of ports | 8x RJ45, 12x 100/1000BaseSFP Slot |
| Console port interface | RS-232 (RJ45 connector) |
| Alarm contact | 1 relay output with a current capacity of 1 A at 24 V DC |
| Function reset button | <5 sec: System reboot and set LAN IP to factory Default, >5 sec: Factory default |
| Fibre-optic ports | 100/1000Base SFP Slot |
| Note | |



| Power supply | |
|--|--|
| Connection type | 2x 3-pin fork/ring lug connection |
| Voltage supply range | 88...373VDC / 85V...264VAC |
| Voltage supply | 110/220 V DC, 110/220 V AC, 2 redundant isolated inputs |
| Current consumption | 0.37A @ 110V |
| Overload current protection | Yes |
| Reverse polarity protection | Yes |
| Physical characteristics | |
| Housing main material | Metal |
| Protection degree | IP30 |
| Type of mounting | DIN rail |
| Dimensions H x W x D | 154 / 115 / 159 mm (6.063 / 4.5276 / 6.2598 inch) |
| Net weight | 1900 GRM |
| Environmental conditions | |
| Operating temperature | -40 °C...85 °C |
| Humidity | 5 to 95 % (non-condensing) |
| Operating altitude | 2000m in acc. with UL |
| EMC conformity and approvals | |
| EMC standards | EN 55032, CISPR 22, EN 61000-3-2, EN 61000-3-3, FCC Part 15 Subpart B Class A, EN 55035, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 3 GHz: 10 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 4 kV, IEC 61000-4-6 CS: 10 V, IEC 61000-4-8, IEC 61000-4-11 |
| Power Transmission & Distribution Systems acc. to standard | IEEE 1613, IEC 61850-3 |
| Safety standard | SELV according to EN 62368-1 |
| Shock | IEC 60870-2-2 class Cm |
| Vibration | IEC 60870-2-2 class Cm and class Bm |
| Free fall | IEC 60870-2-2 class Cm |
| MTBF | |
| Operating time (hours), min. | 421961h |
| According to Standard | Telcordia SR-332 |
| Approvals | |
| Approvals | CE; UKCA |

Ordering data

| Type | Qty. | Order No. |
|----------------------------|------|------------|
| IE-SW-SL20M-8GT-12GESFP-HV | 1 | 2778970000 |

20-Port managed Gigabit Ethernet Switch

- Meets IEC 61850-3 / IEEE 1613 standards
- Redundant power supply modules
- Extensive set of management features enable the set-up of various redundancy, monitoring, traffic filter and security functions
- Suitable for use in harsh industrial environment thanks to rugged design and wide operating temperature range of -40°C up to 85°C
- SFP-ports for fiber optic transmission over long distances



Technical data

| Technology | |
|---------------------------------|--|
| Standard | IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX and 100BASE-FX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3z for 1000BASE-X, IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1s for the Multiple Spanning Tree Protocol (MSTP), IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging, IEEE 802.1X for authentication, IEEE 802.1AB for Link Layer Discovery protocol (LLDP), IEEE 1588 PTPv2 for time synchronization |
| Data switching | Store and Forward |
| Flow control | IEEE 802.3x flow control |
| Switch characteristics | |
| Priority queues | 8 |
| Max. number of available VLANs | 4095 |
| Number of IGMP-Groups per VLAN | 256 |
| MAC table size | 8 K |
| Packet buffer size | 4 Mbit |
| Management features | |
| Device configuration | Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Local serial console port (RS-232 via RJ-45 port), Upload of a configuration file via web-interface, TFTP-Server or external backup module, Command Line Interface (Telnet/SSH) |
| Monitoring function | SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring (local, remote), Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap, Ethernet cable diagnostics on RJ-45 ports |
| Network redundancy | Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), O-Ring (recovery time <30 ms), O-Chain (recovery time <30 ms), Link Aggregation Control Protocol (LACP), Fast recovery, Media Redundancy Protocol (MRP-client) |
| Network traffic filter | Quality of Service (QoS), Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Traffic Rate Limiting, Differentiated Services Code Point (DSCP), Specific prioritization of GOOSE and Sampled Value messages |
| IP-address management | Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay |
| Security functions | VLAN segmentation, Enable/disable ports, TACACS+ and IEEE 802.1X User Authentication, DoS/DDoS auto prevention, Access Control List, DHCP snooping, Loop protection, Management access security via privilege level configuration for different user roles |
| Time synchronization management | SNTP server, SNTP client, PTPv2 |
| Industrial protocol support | PROFINET device acc. to conformance class B, Modbus/TCP slave, MMS server |
| Interfaces | |
| RJ45 ports | 10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port |
| Number of ports | 8x RJ45, 12x 100/1000BaseSFP Slot |
| Console port interface | RS-232 (RJ45 connector) |
| Alarm contact | 1 relay output with a current capacity of 1 A at 24 V DC |
| Function reset button | <5 sec: System reboot and set LAN IP to factory Default, >5 sec: Factory default |
| Fibre-optic ports | 100/1000Base SFP Slot |
| Note | |

| Power supply | |
|--|---|
| Connection type | 2x 3-pin fork/ring lug connection |
| Voltage supply range | 12...52VDC |
| Voltage supply | 24 V DC, 48 V DC, 2 redundant isolated inputs |
| Current consumption | 1.88A @ 12V |
| Overload current protection | Yes |
| Reverse polarity protection | Yes |
| Physical characteristics | |
| Housing main material | Metal |
| Protection degree | IP30 |
| Type of mounting | DIN rail |
| Dimensions H x W x D | 154 / 115 / 159 mm (6.063 / 4.5276 / 6.2598 inch) |
| Net weight | 1550 GRM |
| Environmental conditions | |
| Operating temperature | -40 °C...85 °C |
| Humidity | 5 to 95 % (non-condensing) |
| Operating altitude | 2000m in acc. with UL |
| EMC conformity and approvals | |
| EMC standards | EN 55032, CISPR 22, FCC Part 15 Subpart B Class A, EN 55035, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 3 GHz: 10 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 4 kV, IEC 61000-4-6 CS: 10 V |
| Power Transmission & Distribution Systems acc. to standard | IEEE 1613, IEC 61850-3 |
| Safety standard | SELV according to EN 62368-1 |
| Shock | IEC 60870-2-2 class Cm |
| Vibration | IEC 60870-2-2 class Cm and class Bm |
| Free fall | IEC 60870-2-2 class Cm |
| MTBF | |
| Operating time (hours), min. | 273551h |
| According to Standard | Telcordia SR-332 |
| Approvals | |
| Approvals | CE; UKCA |

Ordering data

| Type | Qty. | Order No. |
|----------------------------|------|------------|
| IE-SW-SL20M-8GT-12GESFP-LV | 1 | 2778980000 |

26-Port 19" managed Fast/Gigabit Ethernet Switch

- Meets IEC 61850-3 / IEEE 1613 standards
- Redundant power supply modules
- Extensive set of management features enable the set-up of various redundancy, monitoring, traffic filter and security functions
- Suitable for use in harsh industrial environment thanks to rugged design and wide operating temperature range of -40°C up to 85°C
- SFP-ports for fiber optic transmission over long distances



Technical data

| Technology | |
|---------------------------------|--|
| Standard | IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX and 100BASE-FX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3z for 1000BASE-X, IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1s for the Multiple Spanning Tree Protocol (MSTP), IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging, IEEE 802.1X for authentication, IEEE 802.1AB for Link Layer Discovery protocol (LLDP), IEEE 1588 PTPv2 for time synchronization |
| Data switching | Store and Forward |
| Flow control | IEEE 802.3x flow control |
| Switch characteristics | |
| Priority queues | 8 |
| Max. number of available VLANs | 4095 |
| Number of IGMP-Groups per VLAN | 256 |
| MAC table size | 8 K |
| Packet buffer size | 4 Mbit |
| Management features | |
| Device configuration | Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Local serial console port (RS-232 via RJ-45 port), Upload of a configuration file via web-interface or TFTP-Server, Command Line Interface (Telnet/SSH) |
| Monitoring function | SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring (local, remote), Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap, Ethernet cable diagnostics on RJ-45 ports |
| Network redundancy | Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), O-Ring (recovery time <10/30 ms at Fast/Gigabit Ethernet interface), O-Chain (recovery time <10/30 ms at Fast/Gigabit Ethernet interface), Link Aggregation Control Protocol (LACP), Fast recovery, Media Redundancy Protocol (MRP-client) |
| Network traffic filter | Quality of Service (QoS), Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Traffic Rate Limiting, Differentiated Services Code Point (DSCP), Specific prioritization of GOOSE and Sampled Value messages |
| IP-address management | Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay |
| Security functions | VLAN segmentation, Enable/disable ports, TACACS+ and IEEE 802.1X User Authentication, DoS/DDoS auto prevention, Access Control List, DHCP snooping, Loop protection, Management access security via privilege level configuration for different user roles |
| Time synchronization management | SNTP server, SNTP client, PTPv2 |
| Industrial protocol support | PROFINET device acc. to conformance class B, Modbus/TCP slave, MMS server |

Note



| Interfaces | |
|--|--|
| RJ45 ports | 10/100BaseT(X) or 10/100/1000BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| Number of ports | 24x RJ45 10/100BASE-T(X), 2x combo-ports (10/100/1000BaseT(X) or 100/1000BaseSFP) |
| Console port interface | RS-232 (RJ45 connector) |
| Alarm contact | 1 relay output with a current capacity of 1 A at 24 V DC |
| Function reset button | <5 sec: System reboot and set LAN IP to factory Default, >5 sec: Factory default |
| Fibre-optic ports | 100/1000Base SFP Slot |
| Power supply | |
| Connection type | 1x 10-pin fork/ring lug connection |
| Voltage supply range | 100...370VDC / 100V...240VAC |
| Voltage supply | 110/220 V DC, 110/220 V AC, 2 redundant isolated inputs |
| Current consumption | 0.17A @ 110V |
| Overload current protection | Yes |
| Reverse polarity protection | Yes |
| Physical characteristics | |
| Housing main material | Metal |
| Protection degree | IP30 |
| Type of mounting | 19" rack mounting |
| Dimensions H x W x D | 44 / 443.7 / 262.5 mm (1.7323 / 17.4685 / 10.3346 inch) |
| Net weight | 4070 GRM |
| Environmental conditions | |
| Operating temperature | -40 °C...85 °C |
| Humidity | 5 to 95 % (non-condensing) |
| Operating altitude | 2000m in acc. with UL |
| EMC conformity and approvals | |
| EMC standards | EN 55032, CISPR 22, EN 61000-3-2, EN 61000-3-3, FCC Part 15 Subpart B Class A, EN 55035, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 3 GHz: 10 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 4 kV, IEC 61000-4-6 CS: 10 V, IEC 61000-4-8, IEC 61000-4-11 |
| Power Transmission & Distribution Systems acc. to standard | IEEE 1613, IEC 61850-3 |
| Safety standard | SELV according to EN 62368-1 |
| Shock | IEC 60870-2-2 class Cm |
| Vibration | IEC 60870-2-2 class Cm and class Bm |
| Free fall | IEC 60870-2-2 class Cm |
| MTBF | |
| Operating time (hours), min. | 262968h |
| According to Standard | Telcordia SR-332 |
| Approvals | |
| Approvals | CE, UKCA |

Ordering data

| Type | Qty. | Order No. |
|-------------------------|------|------------|
| IE-SW-SL26M-24TX-2GC-HV | 1 | 2778990000 |

26-Port 19" managed Fast/Gigabit Ethernet Switch

- Meets IEC 61850-3 / IEEE 1613 standards
- Redundant power supply modules
- Extensive set of management features enable the set-up of various redundancy, monitoring, traffic filter and security functions
- Suitable for use in harsh industrial environment thanks to rugged design and wide operating temperature range of -40°C up to 85°C
- SFP-ports for fiber optic transmission over long distances



Technical data

| Technology | |
|---------------------------------|--|
| Standard | IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX and 100BASE-FX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3z for 1000BASE-X, IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1s for the Multiple Spanning Tree Protocol (MSTP), IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging, IEEE 802.1X for authentication, IEEE 802.1AB for Link Layer Discovery protocol (LLDP), IEEE 1588 PTPv2 for time synchronization |
| Data switching | Store and Forward |
| Flow control | IEEE 802.3x flow control |
| Switch characteristics | |
| Priority queues | 8 |
| Max. number of available VLANs | 4095 |
| Number of IGMP-Groups per VLAN | 256 |
| MAC table size | 8 K |
| Packet buffer size | 4 Mbit |
| Management features | |
| Device configuration | Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Local serial console port (RS-232 via RJ-45 port), Upload of a configuration file via web-interface or TFTP-Server, Command Line Interface (Telnet/SSH) |
| Monitoring function | SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring (local, remote), Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap, Ethernet cable diagnostics on RJ-45 ports |
| Network redundancy | Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), O-Ring (recovery time <10/30 ms at Fast/Gigabit Ethernet interface), O-Chain (recovery time <10/30 ms at Fast/Gigabit Ethernet interface), Link Aggregation Control Protocol (LACP), Fast recovery, Media Redundancy Protocol (MRP-client) |
| Network traffic filter | Quality of Service (QoS), Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Traffic Rate Limiting, Differentiated Services Code Point (DSCP), Specific prioritization of GOOSE and Sampled Value messages |
| IP-address management | Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay |
| Security functions | VLAN segmentation, Enable/disable ports, TACACS+ and IEEE 802.1X User Authentication, DoS/DDoS auto prevention, Access Control List, DHCP snooping, Loop protection, Management access security via privilege level configuration for different user roles |
| Time synchronization management | SNTP server, SNTP client, PTPv2 |
| Industrial protocol support | PROFINET device acc. to conformance class B, Modbus/TCP slave, MMS server |
| Note | |

| Interfaces | |
|--|---|
| RJ45 ports | 10/100BaseT(X) or 10/100/1000BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| Number of ports | 24x RJ45 10/100BASE-T(X), 2x combo-ports (10/100/1000BaseT(X) or 100/1000BaseSFP) |
| Console port interface | RS-232 (RJ45 connector) |
| Alarm contact | 1 relay output with a current capacity of 1 A at 24 V DC |
| Function reset button | <5 sec: System reboot and set LAN IP to factory Default, >5 sec: Factory default |
| Fibre-optic ports | 100/1000Base SFP Slot |
| Power supply | |
| Connection type | 1x 10-pin fork/ring lug connection |
| Voltage supply range | 20...72VDC |
| Voltage supply | 24 V DC, 48 V DC, 2 redundant isolated inputs |
| Current consumption | 0.96A @ 24V |
| Overload current protection | Yes |
| Reverse polarity protection | Yes |
| Physical characteristics | |
| Housing main material | Metal |
| Protection degree | IP30 |
| Type of mounting | 19" rack mounting |
| Dimensions H x W x D | 44 / 443.7 / 262.5 mm (1.7323 / 17.4685 / 10.3346 inch) |
| Net weight | 3600 GRM |
| Environmental conditions | |
| Operating temperature | -40 °C...85 °C |
| Humidity | 5 to 95 % (non-condensing) |
| Operating altitude | 2000m in acc. with UL |
| EMC conformity and approvals | |
| EMC standards | EN 55032, CISPR 22, FCC Part 15 Subpart B Class A, EN 55035, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 3 GHz: 10 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 4 kV, IEC 61000-4-6 CS: 10 V |
| Power Transmission & Distribution Systems acc. to standard | IEEE 1613, IEC 61850-3 |
| Safety standard | SELV according to EN 62368-1 |
| Shock | IEC 60870-2-2 class Cm |
| Vibration | IEC 60870-2-2 class Cm and class Bm |
| Free fall | IEC 60870-2-2 class Cm |
| MTBF | |
| Operating time (hours), min. | 297924h |
| According to Standard | Telcordia SR-332 |
| Approvals | |
| Approvals | CE; UKCA |

Ordering data

| Type | Qty. | Order No. |
|-------------------------|------|------------|
| IE-SW-SL26M-24TX-2GC-LV | 1 | 2779000000 |

Modular 28-port 19" managed Fast/Gigabit/10-Gigabit Ethernet switch

- Meets IEC 61850-3 / IEEE 1613 standards
- Modular design to allocate up to 28 ports with up to 10-GbE speed
- Extensive set of management features enable the set-up of various redundancy, monitoring, traffic filter and security functions
- Suitable for use in harsh industrial environment thanks to rugged design and wide operating temperature range of -40°C up to 85°C
- SFP-ports for fiber optic transmission over long distances



Technical data

| Technology | |
|---------------------------------|--|
| Standard | IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX and 100BASE-FX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3z for 1000BASE-X, IEEE 802.3ae for 10-Gigabit Ethernet, IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1s for the Multiple Spanning Tree Protocol (MSTP), IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging, IEEE 802.1X for authentication, IEEE 802.1AB for Link Layer Discovery protocol (LLDP), IEEE 1588 PTPv2 for time synchronization |
| Data switching | Store and Forward |
| Flow control | IEEE 802.3x flow control |
| Switch characteristics | |
| MAC table size | 8 K |
| Packet buffer size | 32 Mbit |
| Memory (Flash) | 16 MB |
| Memory (RAM) | 128 MB |
| Jumbo frame support | up to 10 KB |
| Priority queues | 8 |
| Max. number of available VLANs | 4095 |
| Number of IGMP-Groups per VLAN | 128 |
| Management features | |
| Device configuration | Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Local serial console port (RS-232 via RJ-45 port), Upload of a configuration file via web-interface, TFTP-Server or external backup module, Command Line Interface (Telnet/SSH) |
| Monitoring function | SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring (local, remote), Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap, Ethernet cable diagnostics on RJ-45 ports |
| Network redundancy | Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), O-Ring (recovery time <10/30 ms at Fast/Gigabit Ethernet interface), O-Chain (recovery time <10/30 ms at Fast/Gigabit Ethernet interface), Link Aggregation Control Protocol (LACP), Fast recovery, Media Redundancy Protocol (MRP-client), Parallel Redundancy Protocol (PRP) / High-availability Seamless Redundancy (HSR) RedBox function (specific media interface module required) |
| Network traffic filter | Quality of Service (QoS), Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Traffic Rate Limiting, Differentiated Services Code Point (DSCP), Specific prioritization of GOOSE and Sampled Value messages |
| IP-address management | Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay |
| Security functions | VLAN segmentation, Enable/disable ports, TACACS+ and IEEE 802.1X User Authentication, DoS/DDoS auto prevention, Access Control List, DHCP snooping, Loop protection, Management access security via privilege level configuration for different user roles |
| Time synchronization management | SNTP server, SNTP client, PTPv2 |
| Industrial protocol support | PROFINET device acc. to conformance class B, Modbus/TCP slave, MMS server |
| Note | |



| Interfaces | | |
|--|--|------------|
| Supported media interface modules | M1, M2, M3: IE-SWM-SL04-4SC, IE-SWM-SL04-4SCS, IE-SWM-SL04-4ST, IE-SWM-SL04-4STS, IE-SWM-SL08-8GT, IE-SWM-SL08-8GESFP, IE-SWM-SL02-2GC-PRP/HSR, M4: IE-SWM-SL04-4GESFP, IE-SWM-SL02-2GESFP+, IE-SWM-SL04-4GESFP+, | |
| Number of ports | up to 28 (depending on used media interface modules) | |
| Console port interface | RS-232 (RJ45 connector) | |
| Function reset button | <5 sec: System reboot and set LAN IP to factory Default, >5 sec: Factory default | |
| Power supply | | |
| Connection type | 1x 10-pin fork/ring lug connection | |
| Voltage supply range | 100...370VDC; 100V...240VAC | |
| Voltage supply | 110/220 V DC, 110/220 V AC, 2 redundant isolated inputs | |
| Current consumption | 0.36A @ 110V; 0.18A @ 220V; 0.67A @ 110V; 0.43A @ 220V | |
| Overload current protection | Yes | |
| Reverse polarity protection | Yes | |
| Physical characteristics | | |
| Housing main material | Metal | |
| Protection degree | IP30 | |
| Type of mounting | 19" rack mounting | |
| Dimensions H x W x D | 44 / 440 / 325 mm (1.7323 / 17.3228 / 12.7953 inch) | |
| Net weight | 6450 GRM | |
| Environmental conditions | | |
| Operating temperature | -40 °C...85 °C | |
| Humidity | 5 to 95 % (non-condensing) | |
| Operating altitude | 2000m in acc. with UL | |
| EMC conformity and approvals | | |
| EMC standards | EN 55032, CISPR 22, EN 61000-3-2, EN 61000-3-3, FCC Part 15 Subpart B Class A, EN 55035, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 3 GHz: 10 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 4 kV, IEC 61000-4-6 CS: 10 V, IEC 61000-4-8, IEC 61000-4-11 | |
| Power Transmission & Distribution Systems acc. to standard | IEEE 1613, IEC 61850-3 | |
| Safety standard | SELV according to EN 62368-1, UL 61010-1, UL 61010-2-201 | |
| Shock | IEC 60870-2-2 class Cm | |
| Vibration | IEC 60870-2-2 class Cm and class Bm | |
| Free fall | IEC 60870-2-2 class Cm | |
| MTBF | | |
| Operating time (hours), min. | 647420h | |
| According to Standard | Telcordia SR-332 | |
| Approvals | | |
| Approvals | CE; CULUS; UKCA | |
| Ordering data | | |
| Type | Qty. | Order No. |
| IE-SW-SL28M-HV | 1 | 2779010000 |

Modular 28-port 19" managed Fast/Gigabit/10-Gigabit Ethernet switch

- Meets IEC 61850-3 / IEEE 1613 standards
- Modular design to allocate up to 28 ports with up to 10-GbE speed
- Extensive set of management features enable the set-up of various redundancy, monitoring, traffic filter and security functions
- Suitable for use in harsh industrial environment thanks to rugged design and wide operating temperature range of -40°C up to 85°C
- SFP-ports for fiber optic transmission over long distances



Technical data

| Technology | |
|---------------------------------|--|
| Standard | IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX and 100BASE-FX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3z for 1000BASE-X, IEEE 802.3ae for 10-Gigabit Ethernet, IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1s for the Multiple Spanning Tree Protocol (MSTP), IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging, IEEE 802.1X for authentication, IEEE 802.1AB for Link Layer Discovery protocol (LLDP), IEEE 1588 PTPv2 for time synchronization |
| Data switching | Store and Forward |
| Flow control | IEEE 802.3x flow control |
| Switch characteristics | |
| MAC table size | 8 K |
| Packet buffer size | 32 Mbit |
| Memory (Flash) | 16 MB |
| Memory (RAM) | 128 MB |
| Jumbo frame support | up to 10 KB |
| Priority queues | 8 |
| Max. number of available VLANs | 4095 |
| Number of IGMP-Groups per VLAN | 128 |
| Management features | |
| Device configuration | Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Local serial console port (RS-232 via RJ-45 port), Upload of a configuration file via web-interface, TFTP-Server or external backup module, Command Line Interface (Telnet/SSH) |
| Monitoring function | SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring (local, remote), Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap, Ethernet cable diagnostics on RJ-45 ports |
| Network redundancy | Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), O-Ring (recovery time <10/30 ms at Fast/Gigabit Ethernet interface), O-Chain (recovery time <10/30 ms at Fast/Gigabit Ethernet interface), Link Aggregation Control Protocol (LACP), Fast recovery, Media Redundancy Protocol (MRP-client), Parallel Redundancy Protocol (PRP) / High-availability Seamless Redundancy (HSR) RedBox function (specific media interface module required) |
| Network traffic filter | Quality of Service (QoS), Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Traffic Rate Limiting, Differentiated Services Code Point (DSCP), Specific prioritization of GOOSE and Sampled Value messages |
| IP-address management | Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay |
| Security functions | VLAN segmentation, Enable/disable ports, TACACS+ and IEEE 802.1X User Authentication, DoS/DDoS auto prevention, Access Control List, DHCP snooping, Loop protection, Management access security via privilege level configuration for different user roles |
| Time synchronization management | SNTP server, SNTP client, PTPv2 |
| Industrial protocol support | PROFINET device acc. to conformance class B, Modbus/TCP slave, MMS server |
| Note | |



| Interfaces | |
|--|---|
| Supported media interface modules | M1, M2, M3: IE-SWM-SL04-4SC, IE-SWM-SL04-4SCS, IE-SWM-SL04-4ST, IE-SWM-SL04-4STS, IE-SWM-SL08-8GT, IE-SWM-SL08-8GESFP, IE-SWM-SL02-2GC-PRP/HSR, M4: IE-SWM-SL04-4GESFP, IE-SWM-SL02-2GESFP+, IE-SWM-SL04-4GESFP+, |
| Number of ports | up to 28 (depending on used media interface modules) |
| Console port interface | RS-232 (RJ45 connector) |
| Function reset button | <5 sec: System reboot and set LAN IP to factory Default, >5 sec: Factory default |
| Power supply | |
| Connection type | 1x 10-pin fork/ring lug connection |
| Voltage supply range | 20...72VDC |
| Voltage supply | 24 V DC, 48 V DC, 2 redundant isolated inputs |
| Current consumption | 1.64A @ 24V; 0.82A @ 48V |
| Overload current protection | Yes |
| Reverse polarity protection | Yes |
| Physical characteristics | |
| Housing main material | Metal |
| Protection degree | IP30 |
| Type of mounting | 19" rack mounting |
| Dimensions H x W x D | 44 / 440 / 325 mm (1.7323 / 17.3228 / 12.7953 inch) |
| Net weight | 6105 GRM |
| Environmental conditions | |
| Operating temperature | -40 °C...85 °C |
| Humidity | 5 to 95 % (non-condensing) |
| Operating altitude | 2000m in acc. with UL |
| EMC conformity and approvals | |
| EMC standards | EN 55032, CISPR 22, FCC Part 15 Subpart B Class A, EN 55035, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 3 GHz: 10 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 4 kV, IEC 61000-4-6 CS: 10 V |
| Power Transmission & Distribution Systems acc. to standard | IEEE 1613, IEC 61850-3 |
| Safety standard | SELV according to EN 62368-1 |
| Shock | IEC 60870-2-2 class Cm |
| Vibration | IEC 60870-2-2 class Cm and class Bm |
| Free fall | IEC 60870-2-2 class Cm |
| MTBF | |
| Operating time (hours), min. | 608907h |
| According to Standard | Telcordia SR-332 |
| Approvals | |
| Approvals | CE, UKCA |

Ordering data

| Type | Qty. | Order No. |
|----------------|------|------------|
| IE-SW-SL28M-LV | 1 | 2779020000 |

Modular Layer 3 28-port 19" managed Fast/Gigabit/10-Gigabit Ethernet Switch

- Meets IEC 61850-3 / IEEE 1613 standards
- Modular design to allocate up to 28 ports with up to 10-GbE speed
- Extensive set of management features enable the set-up of various redundancy, monitoring, traffic filter and security functions
- Suitable for use in harsh industrial environment thanks to rugged design and wide operating temperature range of -40°C up to 85°C
- SFP-ports for fiber optic transmission over long distances
- Routing between up to 28 IP subnets



Technical data

| Technology | |
|---------------------------------|--|
| Standard | IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX and 100BASE-FX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3z for 1000BASE-X, IEEE 802.3ae for 10-Gigabit Ethernet, IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1s for the Multiple Spanning Tree Protocol (MSTP), IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging, IEEE 802.1X for authentication, IEEE 802.1AB for Link Layer Discovery protocol (LLDP), IEEE 1588 PTPv2 for time synchronization |
| Data switching | Store and Forward |
| Flow control | IEEE 802.3x flow control |
| Switch characteristics | |
| MAC table size | 8 K |
| Packet buffer size | 32 Mbit |
| Memory (Flash) | 16 MB |
| Memory (RAM) | 128 MB |
| Jumbo frame support | up to 10 KB |
| Priority queues | 8 |
| Max. number of available VLANs | 4095 |
| Number of IGMP-Groups per VLAN | 128 |
| Management features | |
| Device configuration | Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Local serial console port (RS-232 via RJ-45 port), Upload of a configuration file via web-interface, TFTP-Server or external backup module, Command Line Interface (Telnet/SSH) |
| Monitoring function | SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring (local, remote), Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap, Ethernet cable diagnostics on RJ-45 ports |
| Network redundancy | Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), D-Ring (recovery time <10/30 ms at Fast/Gigabit Ethernet interface), O-Chain (recovery time <10/30 ms at Fast/Gigabit Ethernet interface), Link Aggregation Control Protocol (LACP), Fast recovery, Media Redundancy Protocol (MRP-client), Parallel Redundancy Protocol (PRP) / High-availability Seamless Redundancy (HSR) RedBox function (specific media interface module required) |
| Network traffic filter | Quality of Service (QoS), Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Traffic Rate Limiting, Differentiated Services Code Point (DSCP), Specific prioritization of GOOSE and Sampled Value messages |
| IP-address management | Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay |
| Security functions | VLAN segmentation, Enable/disable ports, TACACS+ and IEEE 802.1X User Authentication, DoS/DDoS auto prevention, Access Control List, DHCP snooping, Loop protection, Management access security via privilege level configuration for different user roles |
| Time synchronization management | SNTP server, SNTP client, PTPv2 |
| Industrial protocol support | PROFINET device acc. to conformance class B, Modbus/TCP slave, MMS server |
| Layer 3 support | Static or dynamic routing according to RIP v2, VRRP (Virtual Router Redundancy Protocol) |
| Note | |



| Interfaces | |
|--|--|
| Supported media interface modules | M1, M2, M3: IE-SWM-SL04-4SC, IE-SWM-SL04-4SCS, IE-SWM-SL04-4ST, IE-SWM-SL04-4STS, IE-SWM-SL08-8GT, IE-SWM-SL08-8GESFP, IE-SWM-SL02-2GC-PRP/HSR, M4: IE-SWM-SL04-4GESFP, IE-SWM-SL02-2GESFP+, IE-SWM-SL04-4GESFP+ |
| Number of ports | up to 28 (depending on used media interface modules) |
| Console port interface | RS-232 (RJ45 connector) |
| Function reset button | <5 sec: System reboot and set LAN IP to factory Default, >5 sec: Factory default |
| Power supply | |
| Connection type | 1x 10-pin fork/ring lug connection |
| Voltage supply range | 100...370VDC; 100V...240VAC |
| Voltage supply | 110/220 V DC, 110/220 V AC, 2 redundant isolated inputs |
| Current consumption | 0.36A @ 110V; 0.18A @ 220V; 0.67A @ 110V; 0.43A @ 220V |
| Overload current protection | Yes |
| Reverse polarity protection | Yes |
| Physical characteristics | |
| Housing main material | Metal |
| Protection degree | IP30 |
| Type of mounting | 19" rack mounting |
| Dimensions H x W x D | 44 / 440 / 325 mm (1.7323 / 17.3228 / 12.7953 inch) |
| Net weight | 6450 GRM |
| Environmental conditions | |
| Operating temperature | -40 °C...85 °C |
| Humidity | 5 to 95 % (non-condensing) |
| Operating altitude | 2000m in acc. with UL |
| EMC conformity and approvals | |
| EMC standards | EN 55032, CISPR 22, EN 61000-3-2, EN 61000-3-3, FCC Part 15 Subpart B Class A, EN 55035, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 3 GHz: 10 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 4 kV, IEC 61000-4-6 CS: 10 V, IEC 61000-4-8, IEC 61000-4-11 |
| Power Transmission & Distribution Systems acc. to standard | IEEE 1613, IEC 61850-3 |
| Safety standard | SELV according to EN 62368-1 |
| Shock | IEC 60870-2-2 class Cm |
| Vibration | IEC 60870-2-2 class Cm and class Bm |
| Free fall | IEC 60870-2-2 class Cm |
| MTBF | |
| Operating time (hours), min. | 647420h |
| According to Standard | Telcordia SR-332 |
| Approvals | |
| Approvals | CE; CULUS; UKCA |

Ordering data

| Type | Qty. | Order No. |
|-------------------|------|------------|
| IE-SW-L3-SL28M-HV | 1 | 2875580000 |

Modular Layer 3 28-port 19" managed Fast/Gigabit/10-Gigabit Ethernet Switch

- Meets IEC 61850-3 / IEEE 1613 standards
- Modular design to allocate up to 28 ports with up to 10-GbE speed
- Extensive set of management features enable the set-up of various redundancy, monitoring, traffic filter and security functions
- Suitable for use in harsh industrial environment thanks to rugged design and wide operating temperature range of -40°C up to 85°C
- SFP-ports for fiber optic transmission over long distances
- Routing between up to 28 IP subnets



Technical data

| Technology | |
|---------------------------------|--|
| Standard | IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX and 100BASE-FX, IEEE 802.3ab for 1000BASE-T, IEEE 802.3z for 1000BASE-X, IEEE 802.3ae for 10-Gigabit Ethernet, IEEE 802.3x for flow control, IEEE 802.3ad for port trunk with LACP, IEEE 802.1D for the Spanning Tree protocol, IEEE 802.1w for Rapid STP, IEEE 802.1s for the Multiple Spanning Tree Protocol (MSTP), IEEE 802.1p for Class of Service, IEEE 802.1Q for VLAN tagging, IEEE 802.1X for authentication, IEEE 802.1AB for Link Layer Discovery protocol (LLDP), IEEE 1588 PTPv2 for time synchronization |
| Data switching | Store and Forward |
| Flow control | IEEE 802.3x flow control |
| Switch characteristics | |
| MAC table size | 8 K |
| Packet buffer size | 32 Mbit |
| Memory (Flash) | 16 MB |
| Memory (RAM) | 128 MB |
| Jumbo frame support | up to 10 KB |
| Priority queues | 8 |
| Max. number of available VLANs | 4095 |
| Number of IGMP-Groups per VLAN | 128 |
| Management features | |
| Device configuration | Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Local serial console port (RS-232 via RJ-45 port), Upload of a configuration file via web-interface, TFTP-Server or external backup module, Command Line Interface (Telnet/SSH) |
| Monitoring function | SNMP v1/v2c/v3, Link Layer Discovery Protocol (LLDP), Port mirroring (local, remote), Port statistics, Port monitoring, Syslog, RMON (Remote monitoring), Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap, Ethernet cable diagnostics on RJ-45 ports |
| Network redundancy | Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), O-Ring (recovery time <10/30 ms at Fast/Gigabit Ethernet interface), O-Chain (recovery time <10/30 ms at Fast/Gigabit Ethernet interface), Link Aggregation Control Protocol (LACP), Fast recovery, Media Redundancy Protocol (MRP-client), Parallel Redundancy Protocol (PRP) / High-availability Seamless Redundancy (HSR) RedBox function (specific media interface module required) |
| Network traffic filter | Quality of Service (QoS), Tag based VLAN, GVRP (GARP VLAN Registration Protocol), IGMP v2/v3, Traffic Rate Limiting, Differentiated Services Code Point (DSCP), Specific prioritization of GOOSE and Sampled Value messages |
| IP-address management | Static, DHCP-Client, DHCP-Server (port based, pool-based), DHCP Option 82, DHCP-Relay |
| Security functions | VLAN segmentation, Enable/disable ports, TACACS+ and IEEE 802.1X User Authentication, DoS/DDoS auto prevention, Access Control List, DHCP snooping, Loop protection, Management access security via privilege level configuration for different user roles |
| Time synchronization management | SNTP server, SNTP client, PTPv2 |
| Industrial protocol support | PROFINET device acc. to conformance class B, Modbus/TCP slave, MMS server |
| Layer 3 support | Static or dynamic routing according to RIP v2, VRRP (Virtual Router Redundancy Protocol) |
| Note | |



| Interfaces | | |
|--|--|------------|
| Supported media interface modules | M1, M2, M3: IE-SWM-SL04-4SC, IE-SWM-SL04-4SCS, IE-SWM-SL04-4ST, IE-SWM-SL04-4STS, IE-SWM-SL08-8GT, IE-SWM-SL08-8GESFP, IE-SWM-SL02-2GC-PRP/HSR, M4: IE-SWM-SL04-4GESFP, IE-SWM-SL02-2GESFP+, IE-SWM-SL04-4GESFP+, | |
| Number of ports | up to 28 (depending on used media interface modules) | |
| Console port interface | RS-232 (RJ45 connector) | |
| Function reset button | <5 sec: System reboot and set LAN IP to factory Default, >5 sec: Factory default | |
| Power supply | | |
| Connection type | 1x 10-pin fork/ring lug connection | |
| Voltage supply range | 20...72VDC | |
| Voltage supply | 24 V DC, 48 V DC, 2 redundant isolated inputs | |
| Current consumption | 1.64A @ 24V; 0.82A @ 48V | |
| Overload current protection | Yes | |
| Reverse polarity protection | Yes | |
| Physical characteristics | | |
| Housing main material | Metal | |
| Protection degree | IP30 | |
| Type of mounting | 19" rack mounting | |
| Dimensions H x W x D | 44 / 440 / 325 mm (1.7323 / 17.3228 / 12.7953 inch) | |
| Net weight | 6161 GRM | |
| Environmental conditions | | |
| Operating temperature | -40 °C...85 °C | |
| Humidity | 5 to 95 % (non-condensing) | |
| Operating altitude | 2000m in acc. with UL | |
| EMC conformity and approvals | | |
| EMC standards | EN 55032, CISPR 22, EN 61000-3-2, EN 61000-3-3, FCC Part 15 Subpart B Class A, EN 55035, IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz to 3 GHz: 10 V/m, IEC 61000-4-4 EFT: Power: 4 kV; Signal: 4 kV, IEC 61000-4-6 CS: 10 V, IEC 61000-4-8, IEC 61000-4-11 | |
| Power Transmission & Distribution Systems acc. to standard | IEEE 1613, IEC 61850-3 | |
| Safety standard | SELV according to EN 62368-1 | |
| Shock | IEC 60870-2-2 class Cm | |
| Vibration | IEC 60870-2-2 class Cm and class Bm | |
| Free fall | IEC 60870-2-2 class Cm | |
| MTBF | | |
| Operating time (hours), min. | 608907h | |
| According to Standard | Telcordia SR-332 | |
| Approvals | | |
| Approvals | CE; UKCA | |
| Ordering data | | |
| Type | Qty. | Order No. |
| IE-SW-L3-SL28M-LV | 1 | 2875590000 |

Media interface modules for modular switch – Fast Ethernet

- Modular design provides wide variety of media interface types (RJ-45, SFP, SC/ST-Duplex)

Technical data

Interfaces

Number of ports
Fibre-optic ports

Fibre optic transceiver characteristics

Transmission rate
Connector type
Transceiver type
Transmission distance, typ.
Wavelength
Receive power
Transmission power
Link-budget

Power supply

Voltage supply

Physical characteristics

Housing main material
Type of mounting
Dimensions H x W x D
Net weight

Environmental conditions

Operating temperature
Humidity
Operating altitude

MTBF

Operating time (hours), min.
According to Standard

Approvals

Approvals

Note

Ordering data

Note

IE-SWM-SL04-4SC



4x SC Multi-mode
100BaseFX ports (SC connector), Multimode

100 MBit/s
SC-Duplex
Multimode
2 km
1310nm
-31...0dBm
-23.5...-14dBm
7.5 dB

via Ethernet switch

Metal
Insert in module slot M1,M2,M3
40.7 / 99 / 107 mm (1.6024 / 3.8976 / 4.2126 inch)
348 GRM

-40 °C...85 °C
5 to 95 % (non-condensing)
2000m in acc. with UL

315658h
Telcordia SR-332

CE; UKCA

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-SWM-SL04-4SC | 1 | 2779170000 |

IE-SWM-SL04-4SCS



4x SC Single-mode
100BaseFX ports (SC connector), Singlemode

100 MBit/s
SC-Duplex
Singlemode
30 km
1310nm
-34...0dBm
-15...-8dBm
19 dB

via Ethernet switch

Metal
Insert in module slot M1,M2,M3
40.7 / 99 / 107 mm (1.6024 / 3.8976 / 4.2126 inch)
348 GRM

-40 °C...85 °C
5 to 95 % (non-condensing)
2000m in acc. with UL

401287h
Telcordia SR-332

CE; UKCA

| Type | Qty. | Order No. |
|------------------|------|------------|
| IE-SWM-SL04-4SCS | 1 | 2779160000 |

Media interface modules for modular switch Fast/Gigabit Ethernet – SubstationLine

Media interface modules for modular switch – Fast Ethernet

- Modular design provides wide variety of media interface types (RJ-45, SFP, SC/ST-Duplex)

Technical data

| |
|--|
| Interfaces |
| Number of ports |
| Fibre-optic ports |
| Fibre optic transceiver characteristics |
| Transmission rate |
| Connector type |
| Transceiver type |
| Transmission distance, typ. |
| Wavelength |
| Receive power |
| Transmission power |
| Link-budget |
| Power supply |
| Voltage supply |
| Physical characteristics |
| Housing main material |
| Type of mounting |
| Dimensions H x W x D |
| Net weight |
| Environmental conditions |
| Operating temperature |
| Humidity |
| Operating altitude |
| MTBF |
| Operating time (hours), min. |
| According to Standard |
| Approvals |
| Approvals |
| Note |

Ordering data

| | | |
|-----------------|-------------|------------------|
| Type | Qty. | Order No. |
| IE-SWM-SL04-4ST | 1 | 2779190000 |
| Note | | |

IE-SWM-SL04-4ST



| |
|--|
| Interfaces |
| Number of ports |
| Fibre-optic ports |
| Fibre optic transceiver characteristics |
| Transmission rate |
| Connector type |
| Transceiver type |
| Transmission distance, typ. |
| Wavelength |
| Receive power |
| Transmission power |
| Link-budget |
| Power supply |
| Voltage supply |
| Physical characteristics |
| Housing main material |
| Type of mounting |
| Dimensions H x W x D |
| Net weight |
| Environmental conditions |
| Operating temperature |
| Humidity |
| Operating altitude |
| MTBF |
| Operating time (hours), min. |
| According to Standard |
| Approvals |
| Approvals |
| Note |

| | | |
|-----------------|-------------|------------------|
| Type | Qty. | Order No. |
| IE-SWM-SL04-4ST | 1 | 2779190000 |
| Note | | |

IE-SWM-SL04-4STS



| |
|--|
| Interfaces |
| Number of ports |
| Fibre-optic ports |
| Fibre optic transceiver characteristics |
| Transmission rate |
| Connector type |
| Transceiver type |
| Transmission distance, typ. |
| Wavelength |
| Receive power |
| Transmission power |
| Link-budget |
| Power supply |
| Voltage supply |
| Physical characteristics |
| Housing main material |
| Type of mounting |
| Dimensions H x W x D |
| Net weight |
| Environmental conditions |
| Operating temperature |
| Humidity |
| Operating altitude |
| MTBF |
| Operating time (hours), min. |
| According to Standard |
| Approvals |
| Approvals |
| Note |

| | | |
|------------------|-------------|------------------|
| Type | Qty. | Order No. |
| IE-SWM-SL04-4STS | 1 | 2779180000 |
| Note | | |

Media interface modules for modular switch – Fast/Gigabit Ethernet

- Shock-free redundancy thanks to PRP/HSR RedBox functionality

IE-SWM-SL02-2GC-PRP/HSR



Technical data

Interfaces

Number of ports

Fibre-optic ports

Power supply

Voltage supply

Physical characteristics

Housing main material

Type of mounting

Dimensions H x W x D

Net weight

Environmental conditions

Operating temperature

Humidity

Operating altitude

MTBF

Operating time (hours), min.

According to Standard

Approvals

Approvals

Note

2x combo-ports (10/100/1000BaseT(X) or 100/1000BaseSFP)

100/1000Base SFP Slot

via Ethernet switch

Metal

Insert in module slot M1,M2,M3

40.7 / 99 / 107 mm (1.6024 / 3.8976 / 4.2126 inch)

380 GRM

-40 °C...85 °C

5 to 95 % (non-condensing)

2000m in acc. with UL

577067h

Telcordia SR-332

CE; UKCA

Ordering data

Note

| Type | Qty. | Order No. |
|-------------------------|------|------------|
| IE-SWM-SL02-2GC-PRP/HSR | 1 | 2985050000 |

Media interface modules for modular switch – Fast/Gigabit Ethernet

- Modular design provides wide variety of media interface types (RJ45, SFP, SC/ST-Duplex)

IE-SWM-SL08-8GT



Technical data

| | |
|---------------------------------|------------|
| Interfaces | RJ45 ports |
| Number of ports | |
| Power supply | |
| Voltage supply | |
| Physical characteristics | |
| Housing main material | |
| Type of mounting | |
| Dimensions H x W x D | |
| Net weight | |
| Environmental conditions | |
| Operating temperature | |
| Humidity | |
| Operating altitude | |
| MTBF | |
| Operating time (hours), min. | |
| According to Standard | |
| Approvals | |
| Approvals | |
| Note | |

Ordering data

| | |
|-------------|--|
| Note | |
|-------------|--|

| | |
|--|--|
| | 10/100/1000BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port |
| | 8x RJ45 |
| | via Ethernet switch |
| | Metal |
| | Insert in module slot M1,M2,M3 |
| | 40.7 / 99 / 107 mm (1.6024 / 3.8976 / 4.2126 inch) |
| | 348 GRM |
| | -40 °C...85 °C |
| | 5 to 95 % (non-condensing) |
| | 2000m in acc. with UL |
| | 1303990h |
| | Telcordia SR-332 |
| | CE; UKCA |

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-SWM-SL08-8GT | 1 | 2779140000 |

IE-SWM-SL08-8GESFP



| | |
|--|--|
| | 8x 100/1000BaseSFP Slot |
| | via Ethernet switch |
| | Metal |
| | Insert in module slot M1,M2,M3 |
| | 40.7 / 99 / 107 mm (1.6024 / 3.8976 / 4.2126 inch) |
| | 348 GRM |
| | -40 °C...85 °C |
| | 5 to 95 % (non-condensing) |
| | 2000m in acc. with UL |
| | 3712062h |
| | Telcordia SR-332 |
| | CE; UKCA |

| Type | Qty. | Order No. |
|--------------------|------|------------|
| IE-SWM-SL08-8GESFP | 1 | 2779150000 |

Media interface modules for modular switch – Gigabit Ethernet

IE-SWM-SL04-4GESFP



Technical data

| |
|---------------------------------|
| Interfaces |
| Fibre-optic ports |
| Number of ports |
| Power supply |
| Voltage supply |
| Physical characteristics |
| Housing main material |
| Type of mounting |
| Dimensions H x W x D |
| Net weight |
| Environmental conditions |
| Operating temperature |
| Humidity |
| Operating altitude |
| MTBF |
| Operating time (hours), min. |
| According to Standard |
| Approvals |
| Approvals |
| Note |

| |
|--|
| 1000BaseSFP-Slot |
| 4x 1000BaseSFP slot |
| via Ethernet switch |
| Metal |
| Insert in module slot M4 |
| 40.7 / 99 / 136 mm (1.6024 / 3.8976 / 5.3543 inch) |
| 348 GRM |
| -40 °C...85 °C |
| 5 to 95 % (non-condensing) |
| 2000m in acc. with UL |
| 4419625h |
| Telcordia SR-332 |
| CE; UKCA |

Ordering data

| |
|-------------|
| Note |
|-------------|

| Type | Qty. | Order No. |
|--------------------|------|------------|
| IE-SWM-SL04-4GESFP | 1 | 2779200000 |

Media interface modules for modular switch – 10-Gigabit Ethernet

IE-SWM-SL02-2GESFP+

IE-SWM-SL04-4GESFP+



Technical data

| |
|---------------------------------|
| Interfaces |
| Fibre-optic ports |
| Number of ports |
| Power supply |
| Voltage supply |
| Physical characteristics |
| Housing main material |
| Type of mounting |
| Dimensions H x W x D |
| Net weight |
| Environmental conditions |
| Operating temperature |
| Humidity |
| Operating altitude |
| MTBF |
| Operating time (hours), min. |
| According to Standard |
| Approvals |
| Approvals |
| Note |

| |
|--|
| 10GBaseSFP+ slot |
| 2x 10GBaseSFP+ slot |
| via Ethernet switch |
| Metal |
| Insert in module slot M4 |
| 40.7 / 99 / 136 mm (1.6024 / 3.8976 / 5.3543 inch) |
| 348 GRM |
| -40 °C...60 °C |
| 5 to 95 % (non-condensing) |
| 2000m in acc. with UL |
| 3814097h |
| Telcordia SR-332 |
| CE; UKCA |

| |
|--|
| 10GBaseSFP+ slot |
| 4x 10GBaseSFP+ slot |
| via Ethernet switch |
| Metal |
| Insert in module slot M4 |
| 40.7 / 99 / 136 mm (1.6024 / 3.8976 / 5.3543 inch) |
| 348 GRM |
| -40 °C...60 °C |
| 5 to 95 % (non-condensing) |
| 2000m in acc. with UL |
| 1871812h |
| Telcordia SR-332 |
| CE; UKCA |

Ordering data

| |
|-------------|
| Note |
|-------------|

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-SWM-SL02-2GESFP+ | 1 | 2779210000 |

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-SWM-SL04-4GESFP+ | 1 | 2779220000 |

Industrial Security Router Overview

| | | |
|-----------------------------------|---|-----|
| Industrial Security Router | Introduction - Industrial Security Router | D.2 |
| | Industrial Security Router | D.4 |

Secure data communication with integrated VPN technology

Industrial security routers – versatile, reliable and flexible

The advantages of Ethernet-based communication have also made Ethernet the standard in industrial applications. Due to the number of network participants and the importance of communication, the requirements are increasing. Today, networks must be secure against cyber attacks, flexible and modularly expandable, and easy to connect to higher-level production networks.

In order to provide optimal support for meeting the many different requirements, we offer different versions of industrial security routers. These routers enable secure, reliable and location-independent communication between machines and systems, as well as reliable user authentication to protect the network.

Our routers with powerful stateful packet inspection firewall on layers 2, 3 and 4 and integrated VPN technology are ideally suited for secure remote access to components and systems in remote networks. They are available with either wired or mobile Internet connectivity and support the u-link Remote Access Service. This allows remote access systems to be set up quickly and easily, with no special IT knowledge required.

Your special advantage:

- Increased network security thanks to stateful inspection firewall, IP/port forwarding and network segmentation
- Easy integration of subnets with identical IP address ranges through 1:1 NAT
- Secure and easy remote maintenance via Weidmüller u-link Remote Access Service
- Future-proof network connection with static and dynamic routing
- Full flexibility thanks to Fast Ethernet and Gigabit Ethernet interfaces with up to 4 separate subnets and ports

Compatible
with u-link
Remote Access
Service



Reliable Internet connection

Reliable Internet connection thanks to integrated 4G/LTE mobile modem

WLAN interface

Also for use as a service access point

Stateful Packet Inspection

Integrated layer 2, 3 and 4 firewall with extensive filter rules

Configuration

Extensive configuration options for IP address mapping

Internet communication

Secure Internet communication thanks to IPsec and OpenVPN



2-Port Fast Ethernet Industrial Security Router

- Firewall for secure protection of machinery and equipment
- Extensive IP address management for the integration of series machines
- WLAN interface – also for use as a service access point



Technical data

| Management features | |
|---------------------------------|--|
| Device configuration | Webbrowser (HTTP/HTTPS), SNMP v2c, Command Line Interface (Telnet/SSH), Upload of a configuration file via web-interface |
| Monitoring function | SNMP v2c, Syslog, Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap |
| IP-address management | Static, DHCP-Client, DHCP-Server (pool-based), DHCP-Relay, DNS-Relay |
| Security functions | Access Control List (MAC-based) for WLAN Access Point mode |
| Time synchronization management | NTP server, NTP client |
| Operating modes | WLAN Access Point, WLAN Client, Virtual COM mode, TCP Server mode, TCP Client mode, UDP Server/Client mode |
| Routing Features | |
| Firewall functions | Stateful Packet Inspection Firewall (Layer-3) |
| NAT functions | Source / Destination NAT (Port / Host / Network) |
| Routing functions | IPv4 routing, Static and dynamic IP Routing |
| VPN functions | u-link client, OpenVPN (Server or Client), IPSec (Initiator or Responder) |
| Interfaces | |
| Number of ports | 2x RJ45 10/100BASE-T(X), 1x DB9 male for RS-232/422/485 |
| Digital outputs | 1x, with a current capacity of 0.2 A at 30 V DC |
| Digital inputs | 1x, 5 to 30 V for logic "1", 0 to 2 V for logic "0" |
| Function reset button | <5 sec: System reboot and set LAN IP to factory Default, >5 sec: Factory default |
| Connector for external antennas | 1x RP-SMA female |
| Serial communication parameters | |
| Baud rate | 110 bit/s to 460800 bit/s |
| Data bits | 7, 8 |
| Parity | none, odd, even, Mark, Space |
| Stop bits | 1, 2 |
| WLAN interface | |
| Data security | 64-bit and 128-bit WEP encryption, WPA/WPA2 Personal and Enterprise (IEEE 802.1X/RADIUS, TKIP and AES) |
| Transmission rate WLAN | IEEE 802.11b: 1...11Mbit/s IEEE 802.11g: 6...54Mbit/s IEEE 802.11n: 6.5...150Mbit/s |

Note

| Power supply | |
|------------------------------|---|
| Connection type | 1 removable 4-pin terminal block |
| Voltage supply range | 10.8...52.8VDC |
| Voltage supply | 12/24/48 V DC, 2 redundant inputs, or 48 V DC Power-over-Ethernet (IEEE 802.3af) |
| Current consumption | 0.22A @ 12V; 0.11A @ 24V; 0.07A @ 48V |
| Reverse polarity protection | Yes |
| Overload current protection | Yes |
| Physical characteristics | |
| Housing main material | Metal |
| Protection degree | IP30 |
| Type of mounting | DIN rail, Wall mounting |
| Dimensions H x W x D | 95 / 45 / 81 mm (3.7402 / 1.7717 / 3.189 inch) |
| Net weight | 411 GRM |
| Environmental conditions | |
| Operating temperature | -25 °C...70 °C |
| Humidity | 5 to 95 % (non-condensing) |
| Operating altitude | 2000m in acc. with UL |
| EMC conformity and approvals | |
| EMC standards | EN 55032, EN 55024, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0.5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms |
| Safety standard | SELV according to EN 62368-1, UL 61010-1, UL 61010-2:201 |
| Shock | according to IEC 60068-2-27 |
| Vibration | according to IEC 60068-2-6 |
| Free fall | According to IEC 60068-2-31 |
| MTBF | |
| Operating time (hours), min. | 381084h |
| According to Standard | Telcordia SR-332 |
| Approvals | |
| Approvals | CE; CULUS; UKCA |

Ordering data

| Type | Qty. | Order No. |
|--------------|------|------------|
| IE-SR-2TX-WL | 1 | 2682590000 |

2-Port Fast Ethernet Industrial Security Router

- Firewall for secure protection of machinery and equipment
- Extensive IP address management for the integration of series machines
- Integrated 4G/LTE modem with dual SIM option
- WLAN interface – also for use as a service access point



Technical data

| Management features | |
|---------------------------------|---|
| Device configuration | Webbrowser (HTTP/HTTPS), SNMP v2c, Command Line Interface (Telnet/SSH), Upload of a configuration file via web-interface, SMS control commands |
| Monitoring function | SNMP v2c, Syslog, Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap, Event based warning via SMS, Device information and mobile radio status via SMS request |
| IP-address management | Static, DHCP-Client, DHCP-Server (pool-based), DHCP-Relay, DNS-Relay |
| Security functions | Access Control List (MAC-based) for WLAN Access Point mode |
| Time synchronization management | NTP server, NTP client |
| Operating modes | WLAN Access Point, WLAN Client, Virtual COM mode, TCP Server mode, TCP Client mode, UDP Server/Client mode |
| Routing Features | |
| Firewall functions | Stateful Packet Inspection Firewall (Layer-3) |
| NAT functions | Source / Destination NAT (Port / Host / Network) |
| Routing functions | IPv4 routing, Static and dynamic IP Routing |
| VPN functions | u-link client, OpenVPN (Server or Client), IPSec (Initiator or Responder) |
| Interfaces | |
| Number of ports | 2x RJ45 10/100BASE-T(X), 1x DB9 male for RS-232/422/485 |
| Digital outputs | 1x, with a current capacity of 0.2 A at 30 V DC |
| Digital inputs | 1x, 5 to 30 V for logic "1", 0 to 2 V for logic "0" |
| Function reset button | <5 sec: System reboot and set LAN IP to factory Default, >5 sec: Factory default |
| Number of SIM-Card slots | 2 |
| SIM-Card slot type | Mini-SIM (ID-000 format) |
| Connector for external antennas | 2x SMA female, 1x RP-SMA female |
| Serial communication parameters | |
| Baud rate | 110 bit/s to 460800 bit/s |
| Data bits | 7, 8 |
| Parity | none, odd, even, Mark, Space |
| Stop bits | 1, 2 |
| WLAN interface | |
| Data security | 64-bit and 128-bit WEP encryption, WPA/WPA2 Personal and Enterprise (IEEE 802.1X/RADIUS, TKIP and AES) |
| Transmission rate WLAN | IEEE 802.11b: 1...11Mbit/s IEEE 802.11g: 6...54Mbit/s IEEE 802.11n: 6.5...150Mbit/s |

Note

| Mobile radio interface | |
|--------------------------------|---|
| Wireless module | multi-band modem (4G/3G/2G), Region: EMEA |
| Transmission rate mobile radio | LTE category: CAT 4 Download rate, max.: 150Mbit/s Upload rate, max.: 50Mbit/s |
| Frequency band | LTE-FDD: B1, B3, B7, B8, B20, B28A, LTE-TDD: B38, B40, B41, WCDMA: B1,B8, GSM: B3,B8 |
| Power supply | |
| Connection type | 1 removable 4-pin terminal block |
| Voltage supply range | 10.8...52.8VDC |
| Voltage supply | 12/24/48 V DC, 2 redundant inputs, or 48 V DC Power-over-Ethernet (IEEE 802.3af) |
| Current consumption | 0.46A @ 12V; 0.22A @ 24V; 0.11A @ 48V |
| Reverse polarity protection | Yes |
| Overload current protection | Yes |
| Physical characteristics | |
| Housing main material | Metal |
| Protection degree | IP30 |
| Type of mounting | DIN rail, Wall mounting |
| Dimensions H x W x D | 95 / 45 / 81 mm (3.7402 / 1.7717 / 3.189 inch) |
| Net weight | 437 GRM |
| Environmental conditions | |
| Operating temperature | -25 °C...70 °C |
| Humidity | 5 to 95 % (non-condensing) |
| Operating altitude | 2000m in acc. with UL |
| EMC conformity and approvals | |
| EMC standards | EN 55032, EN 55024, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0.5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms |
| Safety standard | SELV according to EN 62368-1, UL 61010-1, UL 61010-2-201 |
| Shock | according to IEC 60068-2-27 |
| Vibration | according to IEC 60068-2-6 |
| Free fall | According to IEC 60068-2-31 |
| MTBF | |
| Operating time (hours), min. | 355921h |
| According to Standard | Telcordia SR-332 |
| Approvals | |
| Approvals | CE; CULUS; UKCA |

Ordering data

| Type | Qty. | Order No. |
|--------------------|------|------------|
| IE-SR-2TX-WL-4G-EU | 1 | 2682560000 |

2-Port Fast Ethernet Industrial Security Router

- Firewall for secure protection of machinery and equipment
- Extensive IP address management for the integration of series machines
- Integrated 4G/LTE modem with dual SIM option
- WLAN interface – also for use as a service access point



Technical data

| Management features | |
|---------------------------------|---|
| Device configuration | Webbrowser (HTTP/HTTPS), SNMP v2c, Command Line Interface (Telnet/SSH), Upload of a configuration file via web-interface, SMS control commands |
| Monitoring function | SNMP v2c, Syslog, Event based warning via E-Mail, Event based warning via relay, Event based warning via SNMP trap, Event based warning via SMS, Device information and mobile radio status via SMS request |
| IP-address management | Static, DHCP-Client, DHCP-Server (pool-based), DHCP-Relay, DNS-Relay |
| Security functions | Access Control List (MAC-based) for WLAN Access Point mode |
| Time synchronization management | NTP server, NTP client |
| Operating modes | WLAN Access Point, WLAN Client, Virtual COM mode, TCP Server mode, TCP Client mode, UDP Server/Client mode |
| Routing Features | |
| Firewall functions | Stateful Packet Inspection Firewall (Layer-3) |
| NAT functions | Source / Destination NAT (Port / Host / Network) |
| Routing functions | IPv4 routing, Static and dynamic IP Routing |
| VPN functions | u-link client, OpenVPN (Server or Client), IPSec (Initiator or Responder) |
| Interfaces | |
| Number of ports | 2x RJ45 10/100BASE-T(X), 1x DB9 male for RS-232/422/485 |
| Digital outputs | 1x, with a current capacity of 0.2 A at 30 V DC |
| Digital inputs | 1x, 5 to 30 V for logic "1", 0 to 2 V for logic "0" |
| Function reset button | <5 sec: System reboot and set LAN IP to factory Default, >5 sec: Factory default |
| Number of SIM-Card slots | 2 |
| SIM-Card slot type | Mini-SIM (ID-000 format) |
| Connector for external antennas | 2x SMA female, 1x RP-SMA female |
| Serial communication parameters | |
| Baud rate | 110 bit/s to 460800 bit/s |
| Data bits | 7, 8 |
| Parity | none, odd, even, Mark, Space |
| Stop bits | 1, 2 |
| WLAN interface | |
| Data security | 64-bit and 128-bit WEP encryption, WPA/WPA2 Personal and Enterprise (IEEE 802.1X/RADIUS, TKIP and AES) |
| Transmission rate WLAN | IEEE 802.11b: 1...11Mbit/s IEEE 802.11g: 6...54Mbit/s IEEE 802.11n: 6.5...150Mbit/s |

Note

| Mobile radio interface | |
|--------------------------------|---|
| Wireless module | multi-band modem (4G/3G), Region:, North America |
| Transmission rate mobile radio | LTE category: CAT 4 Download rate, max.: 150Mbit/s Upload rate, max.: 50Mbit/s |
| Frequency band | LTE-FDD: B2, B4, B5, B12, B13, B14, B66, B71, WCDMA: B2, B4, B5 |
| Power supply | |
| Connection type | 1 removable 4-pin terminal block |
| Voltage supply range | 10.8...52.8VDC |
| Voltage supply | 12/24/48 V DC, 2 redundant inputs, or 48 V DC Power-over-Ethernet (IEEE 802.3af) |
| Current consumption | 0.46A @ 12V; 0.22A @ 24V; 0.11A @ 48V |
| Reverse polarity protection | Yes |
| Overload current protection | Yes |
| Physical characteristics | |
| Housing main material | Metal |
| Protection degree | IP30 |
| Type of mounting | DIN rail, Wall mounting |
| Dimensions H x W x D | 95 / 45 / 81 mm (3.7402 / 1.7717 / 3.189 inch) |
| Net weight | 437 GRM |
| Environmental conditions | |
| Operating temperature | -25 °C...70 °C |
| Humidity | 5 to 95 % (non-condensing) |
| Operating altitude | 2000m in acc. with UL |
| EMC conformity and approvals | |
| EMC standards | EN 55032, EN 55024, FCC Part 15 Subpart B Class A, IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 GHz: 3 V/m, IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV, IEC 61000-4-5 Surge: Power: 0.5 kV; Signal: 1 kV, IEC 61000-4-6 CS: 3 Vrms |
| Safety standard | SELV according to EN 62368-1, UL 61010-1, UL 61010-2-201 |
| Shock | according to IEC 60068-2-27 |
| Vibration | according to IEC 60068-2-6 |
| Free fall | According to IEC 60068-2-31 |
| MTBF | |
| Operating time (hours), min. | 353679h |
| According to Standard | Telcordia SR-332 |
| Approvals | |
| Approvals | CE; CULUS; UKCA |

Ordering data

| Type | Qty. | Order No. |
|----------------------|------|------------|
| IE-SR-2TX-WL-4G-US-V | 1 | 2682580000 |

4-Port Fast Ethernet Industrial Security Router

- Easy integration of subnets with identical IP address ranges through 1:1 NAT
- Secure and easy remote maintenance with Weidmüller u-link remote access service
- Future-proof network connection with static and dynamic routing
- Increased network security through stateful inspection firewall, IP/Port- forwarding and network segmentation



Technical data

| Management features | |
|---------------------------------|--|
| Device configuration | Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Windows tool |
| Monitoring function | SNMP v1/v2c/v3, Syslog, Event based warning via SNMP trap |
| IP-address management | Static, DHCP-Client, DHCP-Server (pool-based), DNS-Relay |
| Time synchronization management | NTP client, NTP server |
| Industrial protocol support | Modbus/TCP slave |
| Routing Features | |
| Firewall functions | Stateful Packet Inspection Firewall (Layer-3), Transparent bridge mode (4-port switch with additional Layer-2 filter) |
| NAT functions | Source / Destination NAT (Port / Host / Network) |
| Routing functions | IPv4 routing, Static and dynamic IP Routing, RIPv2 / OSPF |
| VPN functions | u-link client, OpenVPN (Server or Client), IPsec (Initiator or Responder) |
| Interfaces | |
| RJ45 ports | 10/100BaseT(X), auto negotiation, Full-/half-duplex mode, Auto MDI/MDI-X port |
| Number of ports | 4x RJ45 10/100BaseT(X) |
| Number of SCM-Card slots | 1 |
| Digital inputs | 1x, galvanically isolated, VPN-initiate: establishes a pre-configured VPN connection (24 V in), Cut: physically disconnects (Link Down) the WAN port (24 V in), Trigger pre-configured packet filter rules (24 V in) |
| Serial port | 1x RS-485, 2-wire, galvanically isolated, 1 removable 3-pole terminal block |
| Function reset button | Restoration of factory settings |
| SCM-Card slot type | Smart Card (ID-000 format), Save and restore the configuration using smart card (memory chip) |
| LED indicator | Power: indicates power supply status, boot-up process, firmware update process, Status: indicates system status, VPN: indicates VPN tunnel status, Port LED: Link/ACT, Speed (RJ45 port) |
| Note | |

| Power supply | |
|------------------------------|--|
| Connection type | 1 removable 4-pin terminal block |
| Voltage supply range | 19.2...28.8VDC |
| Voltage supply | 24 V DC, 1 single input |
| Current consumption | 0.8A @ 24V |
| Reverse polarity protection | Yes |
| Overload current protection | Yes |
| Physical characteristics | |
| Housing main material | Plastic |
| Protection degree | IP30 |
| Type of mounting | DIN rail |
| Dimensions H x W x D | 134.5 / 29.9 / 94.8 mm (5.2953 / 1.1772 / 3.7323 inch) |
| Net weight | 175 GRM |
| Environmental conditions | |
| Operating temperature | -30 °C...70 °C |
| Humidity | 5 - 90 %, no condensation |
| Operating altitude | 2000m in acc. with UL |
| EMC conformity and approvals | |
| EMC standards | EN 55032, EN 55024, EN 61000-6-2, EN 61000-6-4 |
| Shock | according to IEC 60068-2-27 |
| Vibration | according to IEC 60068-2-6 |
| Approvals | |
| Approvals | CE; CULUS; UKCA |

Ordering data

| Type | Qty. | Order No. |
|-----------|------|------------|
| IE-SR-4TX | 1 | 2751270000 |

4-Port Fast Ethernet Industrial Security Router

- Easy integration of subnets with identical IP address ranges through 1: 1 NAT
- Secure and easy remote maintenance with Weidmüller u-link remote access service
- Future-proof network connection with static and dynamic routing
- Increased network security through stateful inspection firewall, IP/Port- forwarding and network segmentation
- Reliable internet connection, even without on-site internet access, thanks to integrated 4G/LTE cellular modem



Technical data

| Management features | |
|---------------------------------|--|
| Device configuration | Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Windows tool |
| Monitoring function | SNMP v1/v2c/v3, Syslog, Event based warning via SNMP trap |
| IP-address management | Static, DHCP-Client, DHCP-Server (pool-based), DNS-Relay |
| Time synchronization management | NTP client, NTP server |
| Industrial protocol support | Modbus/TCP slave |
| Routing Features | |
| Firewall functions | Stateful Packet Inspection Firewall (Layer-3), Transparent bridge mode (4-port switch with additional Layer-2 filter) |
| NAT functions | Source / Destination NAT (Port / Host / Network) |
| Routing functions | IPv4 routing, Static and dynamic IP Routing, RIPv2 / OSPF |
| VPN functions | u-link client, OpenVPN (Server or Client), IPsec (Initiator or Responder) |
| Interfaces | |
| RJ45 ports | 10/100BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| Number of ports | 4x RJ45 10/100BaseT(X) |
| Number of SCM-Card slots | 1 |
| Number of SIM-Card slots | 1 |
| Digital inputs | 1x, galvanically isolated, VPN-initiate: establishes a pre-configured VPN connection (24 V in), Cut: physically disconnects (Link Down) the WAN port (24 V in), Trigger pre-configured packet filter rules (24 V in) |
| Serial port | 1x RS-485, 2-wire, galvanically isolated, 1 removable 3-pole terminal block |
| Function reset button | Restoration of factory settings |
| SCM-Card slot type | Smart Card (ID-000 format), Save and restore the configuration using smart card (memory chip) |
| SIM-Card slot type | Mini-SIM (ID-000 format) |
| LED indicator | Power: indicates power supply status, boot-up process, firmware update process, Status: indicates system status, VPN: indicates VPN tunnel status, LTE/4G: indicates mobile radio connection status, Port LED: Link/ACT, Speed (RJ45 port) |
| Connector for external antennas | 1x SMA female |
| Mobile radio interface | |
| Mode of operation | Permanent connection, Manual connection control via web interface, Fallback |
| Wireless module | multi-band modem (4G/3G/2G) |
| Transmission rate mobile radio | LTE category: CAT 4 Download rate, max.: 150Mbit/s Upload rate, max.: 50Mbit/s |
| Frequency band | LTE-FDD: B1, B3, B7, B8, B20, B28, LTE-TDD: B38, B40, B41, WCDMA: B1, B5, B8, GSM/GPRS/EDGE: 850, 900, 1800 MHz |
| Note | |

| Power supply | |
|------------------------------|--|
| Connection type | 1 removable 4-pin terminal block |
| Voltage supply range | 19.2...28.8VDC |
| Voltage supply | 24 V DC, 1 single input |
| Current consumption | 0.8A @ 24V |
| Reverse polarity protection | Yes |
| Overload current protection | Yes |
| Physical characteristics | |
| Housing main material | Plastic |
| Protection degree | IP30 |
| Type of mounting | DIN rail |
| Dimensions H x W x D | 134.5 / 29.9 / 94.8 mm (5.2953 / 1.1772 / 3.7323 inch) |
| Net weight | 213 GRM |
| Environmental conditions | |
| Operating temperature | -30 °C...70 °C |
| Humidity | 5 - 90 %, no condensation |
| Operating altitude | 2000m in acc. with UL |
| EMC conformity and approvals | |
| EMC standards | EN 55032, EN 55024, EN 61000-6-2, EN 61000-6-4 |
| Safety standard | UL 61010-1, UL 61010-2-201, EN 62368-1, EN 62311 |
| Shock | according to IEC 60068-2-27 |
| Vibration | according to IEC 60068-2-6 |
| Approvals | |
| Approvals | CE; CULUS; UKCA |

Ordering data

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-SR-4TX-LTE/4G-EU | 1 | 2751280000 |

4-Port Fast Ethernet Industrial Security Router

- Easy integration of subnets with identical IP address ranges through 1: 1 NAT
- Secure and easy remote maintenance with Weidmüller u-link remote access service
- Future-proof network connection with static and dynamic routing
- Increased network security through stateful inspection firewall, IP/Port- forwarding and network segmentation
- Reliable internet connection, even without on-site internet access, thanks to integrated 4G/LTE cellular modem



Technical data

| Management features | |
|---------------------------------|---|
| Device configuration | Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Windows tool |
| Monitoring function | SNMP v1/v2c/v3, Syslog, Event based warning via SNMP trap, Event based warning via SMS |
| IP-address management | Static, DHCP-Client, DHCP-Server (pool-based), DNS-Relay |
| Time synchronization management | NTP client, NTP server |
| Industrial protocol support | Modbus/TCP slave |
| Routing Features | |
| Firewall functions | Stateful Packet Inspection Firewall (Layer-3), Transparent bridge mode (4-port switch with additional Layer-2 filter) |
| NAT functions | Source / Destination NAT (Port / Host / Network) |
| Routing functions | IPv4 routing, Static and dynamic IP Routing, RIPv2 / OSPF |
| VPN functions | u-link client, OpenVPN (Server or Client), IPSec (Initiator or Responder) |
| Interfaces | |
| RJ45 ports | 10/100BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| Number of ports | 4x RJ45 10/100BaseT(X) |
| Number of SCM-Card slots | 1 |
| Number of SIM-Card slots | 1 |
| Digital inputs | 1x, galvanically isolated, VPN-initiate: establishes a pre-configured VPN connection (24 V in), Cut: physically disconnects (Link Down) the WAN port (24 V in), Trigger pre-configured packet filter rules (24 V in) |
| Serial port | 1x RS-485, 2-wire, galvanically isolated, 1 removable 3-pole terminal block |
| Function reset button | Restoration of factory settings |
| SCM-Card slot type | Smart Card (ID-000 format), Save and restore the configuration using smart card (memory chip) |
| SIM-Card slot type | Mini-SIM (ID-000 format) |
| LED indicator | Power: indicates power supply status, boot-up process, firmware update process, Status: indicates system status, VPN: indicates VPN tunnel status, LTE/4G: indicates mobile radio connection status, Port LED: Link/ACT, Speed (RJ45 port) |
| Connector for external antennas | 1x SMA female |
| Mobile radio interface | |
| Mode of operation | Permanent connection, Manual connection control via web interface, Manual connection control via API or SMS, Fallback multi-band modem (4G/3G) |
| Wireless module | |
| Transmission rate mobile radio | LTE category: CAT 6 Download rate, max.: 300Mbit/s Upload rate, max.: 50Mbit/s |
| Frequency band | EMEA / Americas, LTE: B1 (2100), B2 (1900), B3 (1800), B4 (AWS), B5 (850), B7 (2600), B12 (700ac), B13 (700c), B20 (800DD), B25 (1900), B26 (US 850 Ext), B29 (US 700de Lower), B30 (2300 WCS), B41 (TDD 2500), UMTS: B1 (2100), B2 (1900), B3 (1800), B4 (AWS), B5 (850), B8 (900) |
| Note | |

| Power supply | |
|------------------------------|--|
| Connection type | 1 removable 4-pin terminal block |
| Voltage supply range | 19.2...28.8VDC |
| Voltage supply | 24 V DC, 1 single input |
| Current consumption | 0.8A @ 24V |
| Reverse polarity protection | Yes |
| Overload current protection | Yes |
| Physical characteristics | |
| Housing main material | Plastic |
| Protection degree | IP30 |
| Type of mounting | DIN rail |
| Dimensions H x W x D | 134.5 / 29.9 / 94.8 mm (5.2953 / 1.1772 / 3.7323 inch) |
| Net weight | 213 GRM |
| Environmental conditions | |
| Operating temperature | -30 °C...70 °C |
| Humidity | 5 - 90 %, no condensation |
| Operating altitude | 2000m in acc. with UL |
| EMC conformity and approvals | |
| EMC standards | EN 55032, EN 55024, EN 61000-6-2, EN 61000-6-4, FCC Part 15B Class B |
| Safety standard | UL 61010-1, UL 61010-2-201, EN 62368-1, EN 62311 |
| Shock | according to IEC 60068-2-27 |
| Vibration | according to IEC 60068-2-6 |
| Approvals | |
| Approvals | CE; CULUS; UKCA |

Ordering data

| Type | Qty. | Order No. |
|-------------------------|------|------------|
| IE-SR-4TX-LTE/4G-USEMEA | 1 | 2739630000 |

4-Port Gigabit Ethernet Industrial Security Router

- Highly functional router and firewall
- Integrated u-link remote access service
- Up to 4 independent and individually secured networks



Technical data

| Technology | |
|---------------------------------|--|
| Standard | IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3ab for 1000BASE-T |
| Management features | |
| Device configuration | Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Windows tool |
| Monitoring function | SNMP v1/v2c/v3, Syslog, Event based warning via E-Mail, Event based warning via relay |
| IP-address management | Static, DHCP-Client, DHCP-Server (pool-based), DNS-Relay |
| Time synchronization management | NTP server, NTP client |
| Routing Features | |
| Firewall functions | Stateful Packet Inspection Firewall (Layer-3), Transparent bridge mode (4-port switch with additional Layer-2 filter) |
| NAT functions | Source / Destination NAT (Port / Host / Network) |
| Routing functions | IPv4 routing, IPv4 routing extended (each interface (LAN, WAN, optional cellular) can be configured as separate IP network), Static and dynamic IP Routing, RIPv2 / OSPF |
| VPN functions | u-link client, OpenVPN (Server or Client), IPSec (Initiator or Responder) |
| Interfaces | |
| RJ45 ports | 10/100/1000BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| Number of ports | 4x RJ45 10/100/1000BaseT(X) |
| Number of SCM-Card slots | 1 |
| Digital inputs | 2x, galvanically isolated, VPN-initiate: establishes a pre-configured VPN connection (24 V in), Cut: physically disconnects (Link Down) the WAN port (24 V in), Trigger pre-configured packet filter rules (24 V in) |
| Digital outputs | Alarm: indicates a configurable network state or fault (24 V out), VPN-active: indicates an active VPN connection (24 V out), 1x |
| Serial port | 1x RS-485, 2-wire, galvanically isolated, 1 removable 3-pole terminal block |
| Function reset button | Restoration of factory settings |
| SCM-Card slot type | Smart Card (ID-000 format), Save and restore the configuration using smart card (memory chip) |
| LED indicator | Power: indicates power supply status, boot-up process, firmware update process, Status: indicates system status, VPN: indicates VPN tunnel status, Port LED: Link/ACT, Speed (RJ45 port) |
| USB port | USB 2.0 interface for firmware update or restoration of the device configuration via USB flash drive |
| Note | |

| Power supply | |
|------------------------------|--|
| Connection type | 1 removable 4-pin terminal block |
| Voltage supply range | 19.2...28.8VDC |
| Voltage supply | 24 V DC, 1 single input |
| Current consumption | 1.3A @ 24V |
| Reverse polarity protection | Yes |
| Overload current protection | Yes |
| Physical characteristics | |
| Housing main material | Aluminium |
| Speed | Gigabit Ethernet |
| Protection degree | IP20 |
| Type of mounting | DIN rail |
| Dimensions H x W x D | 150 / 35 / 115 mm (5.9055 / 1.378 / 4.5276 inch) |
| Net weight | 560 GRM |
| Environmental conditions | |
| Operating temperature | -25 °C...70 °C |
| Humidity | 5 - 90 %, no condensation |
| Operating altitude | 2000m in acc. with UL |
| EMC conformity and approvals | |
| EMC standards | EN 61000-6-4, EN 61000-6-2 |
| Shock | according to IEC 60068-2-27 |
| Vibration | according to IEC 60068-2-6 |
| Approvals | |
| Approvals | CE; CULUS; UKCA |

Ordering data

| Type | Qty. | Order No. |
|-----------|------|------------|
| IE-SR-4GT | 1 | 2873910000 |

4-Port Gigabit Ethernet Industrial Security Router

- Highly functional router and firewall
- Integrated u-link remote access service
- Up to 4 independent and individually secured networks
- Reliable internet connection thanks to integrated 4G/LTE mobile modem



Technical data

| Technology | |
|---------------------------------|--|
| Standard | IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3ab for 1000BASE-T |
| Management features | |
| Device configuration | Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Windows tool |
| Monitoring function | SNMP v1/v2c/v3, Syslog, Event based warning via E-Mail, Event based warning via relay, Event based warning via SMS |
| IP-address management | Static, DHCP-Client, DHCP-Server (pool-based), DNS-Relay |
| Time synchronization management | NTP server, NTP client |
| Routing Features | |
| Firewall functions | Stateful Packet Inspection Firewall (Layer-3), Transparent bridge mode (4-port switch with additional Layer-2 filter) |
| NAT functions | Source / Destination NAT (Port / Host / Network) |
| Routing functions | IPv4 routing, IPv4 routing extended (each interface (LAN, WAN, optional cellular) can be configured as separate IP network), Static and dynamic IP Routing, RIPv2 / OSPF |
| VPN functions | u-link client, OpenVPN (Server or Client), IPsec (Initiator or Responder) |
| Interfaces | |
| Connector for external antennas | 2x SMA female |
| RJ45 ports | 10/100/1000BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| Number of ports | 4x RJ45 10/100/1000BaseT(X) |
| Number of SCM-Card slots | 1 |
| Number of SIM-Card slots | 1 |
| Digital inputs | 2x, galvanically isolated, VPN-initiate: establishes a pre-configured VPN connection (24 V in), Cut: physically disconnects (Link Down) the WAN port (24 V in), Trigger pre-configured packet filter rules (24 V in) |
| Digital outputs | Alarm: indicates a configurable network state or fault (24 V out), VPN-active: indicates an active VPN connection (24 V out), 1x |
| Serial port | 1x RS-485, 2-wire, galvanically isolated, 1 removable 3-pole terminal block |
| Function reset button | Restoration of factory settings |
| SCM-Card slot type | Smart Card (ID-000 format), Save and restore the configuration using smart card (memory chip) |
| SIM-Card slot type | Mini-SIM (ID-000 format) |
| LED indicator | Power: indicates power supply status, boot-up process, firmware update process, Status: indicates system status, VPN: indicates VPN tunnel status, LTE/4G: indicates mobile radio connection status, Port LED: Link/ACT, Speed (RJ45 port) |
| USB port | USB 2.0 interface for firmware update or restoration of the device configuration via USB flash drive |
| Mobile radio interface | |
| Mode of operation | Permanent connection, Manual connection control via web interface, Fallback |
| Wireless module | multi-band modem (4G/3G/2G) |
| Transmission rate mobile radio | LTE category: CAT 4 Download rate, max.: 150Mbit/s Upload rate, max.: 50Mbit/s |
| Frequency band | LTE-FDD: B1, B3, B7, B8, B20, B28, LTE-TDD: B38, B40, B41, WCDMA: B1, B5, B8, GSM/GPRS/EDGE: 850, 900, 1800 MHz |
| Note | |

| Power supply | |
|------------------------------|--|
| Connection type | 1 removable 4-pin terminal block |
| Voltage supply range | 19.2...28.8VDC |
| Voltage supply | 24 V DC, 1 single input |
| Current consumption | 1.5A @ 24V |
| Reverse polarity protection | Yes |
| Overload current protection | Yes |
| Physical characteristics | |
| Housing main material | Aluminium |
| Speed | Gigabit Ethernet |
| Protection degree | IP20 |
| Type of mounting | DIN rail |
| Dimensions H x W x D | 150 / 35 / 115 mm (5.9055 / 1.378 / 4.5276 inch) |
| Net weight | 632 GRM |
| Environmental conditions | |
| Operating temperature | -25 °C...70 °C |
| Humidity | 5 - 90 %, no condensation |
| Operating altitude | 2000m in acc. with UL |
| EMC conformity and approvals | |
| EMC standards | EN 61000-6-4, EN 61000-6-2 |
| Safety standard | EN 62368-1, EN 62311, UL 61010-1, UL 61010-2-201 |
| Shock | according to IEC 60068-2-27 |
| Vibration | according to IEC 60068-2-6 |
| Approvals | |
| Approvals | CE; CULUS; UKCA |

Ordering data

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-SR-4GT-LTE/4G-EU | 1 | 2873920000 |

4-Port Gigabit Ethernet Industrial Security Router

- Highly functional router and firewall
- Integrated u-link remote access service
- Up to 4 independent and individually secured networks
- Reliable internet connection thanks to integrated 4G/LTE mobile modem



Technical data

| Technology | |
|---------------------------------|---|
| Standard | IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3ab for 1000BASE-T |
| Management features | |
| Device configuration | Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Windows tool |
| Monitoring function | SNMP v1/v2c/v3, Syslog, Event based warning via E-Mail, Event based warning via relay, Event based warning via SMS |
| IP-address management | Static, DHCP-Client, DHCP-Server (pool-based), DNS-Relay |
| Time synchronization management | NTP server, NTP client |
| Routing Features | |
| Firewall functions | Stateful Packet Inspection Firewall (Layer-3), Transparent bridge mode (4-port switch with additional Layer-2 filter) |
| NAT functions | Source / Destination NAT (Port / Host / Network) |
| Routing functions | IPv4 routing, IPv4 routing extended (each interface (LAN, WAN, optional cellular) can be configured as separate IP network), Static and dynamic IP Routing, RIPv2 / OSPF |
| VPN functions | u-link client, OpenVPN (Server or Client), IPsec (Initiator or Responder) |
| Interfaces | |
| Connector for external antennas | 2x SMA female |
| RJ45 ports | 10/100/1000BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| Number of ports | 4x RJ45 10/100/1000BaseT(X) |
| Number of SCM-Card slots | 1 |
| Number of SIM-Card slots | 1 |
| Digital inputs | 2x, galvanically isolated, VPN-initiate: establishes a pre-configured VPN connection (24 V in), Cut: physically disconnects (Link Down) the WAN port (24 V in), Trigger pre-configured packet filter rules (24 V in) |
| Digital outputs | Alarm: indicates a configurable network state or fault (24 V out), VPN-active: indicates an active VPN connection (24 V out), 1x |
| Serial port | 1x RS-485, 2-wire, galvanically isolated, 1 removable 3-pole terminal block |
| Function reset button | Restoration of factory settings |
| SCM-Card slot type | Smart Card (ID-000 format), Save and restore the configuration using smart card (memory chip) |
| SIM-Card slot type | Mini-SIM (ID-000 format) |
| LED indicator | Power: indicates power supply status, boot-up process, firmware update process, Status: indicates system status, VPN: indicates VPN tunnel status, LTE/4G: indicates mobile radio connection status, Port LED: Link/ACT, Speed (RJ45 port) |
| USB port | USB 2.0 interface for firmware update or restoration of the device configuration via USB flash drive |
| Mobile radio interface | |
| Mode of operation | Permanent connection, Manual connection control via web interface, Manual connection control via API or SMS, Fallback |
| Wireless module | multi-band modem (4G/3G) |
| Transmission rate mobile radio | LTE category: CAT 6 Download rate, max.: 300Mbit/s Upload rate, max.: 50Mbit/s |
| Frequency band | EMEA / Americas, LTE: B1 (2100), B2 (1900), B3 (1800), B4 (AWS), B5 (850), B7 (2600), B12 (700ac), B13 (700c), B20 (800DD), B25 (1900), B26 (US 850 Ext), B29 (US 700de Lower), B30 (2300 WCS), B41 (TDD 2500), UMTS: B1 (2100), B2 (1900), B3 (1800), B4 (AWS), B5 (850), B8 (900) |
| Note | |

| Power supply | |
|------------------------------|--|
| Connection type | 1 removable 4-pin terminal block |
| Voltage supply range | 19.2...28.8VDC |
| Voltage supply | 24 V DC, 1 single input |
| Current consumption | 1.5A @ 24V |
| Reverse polarity protection | Yes |
| Overload current protection | Yes |
| Physical characteristics | |
| Housing main material | Aluminium |
| Speed | Gigabit Ethernet |
| Protection degree | IP20 |
| Type of mounting | DIN rail |
| Dimensions H x W x D | 150 / 35 / 115 mm (5.9055 / 1.378 / 4.5276 inch) |
| Net weight | 632 GRM |
| Environmental conditions | |
| Operating temperature | -25 °C...70 °C |
| Humidity | 5 - 90 %, no condensation |
| Operating altitude | 2000m in acc. with UL |
| EMC conformity and approvals | |
| EMC standards | EN 61000-6-4, EN 61000-6-2, FCC Part 15B Class B |
| Safety standard | EN 62368-1, EN 62311, UL 61010-1, UL 61010-2-201 |
| Shock | according to IEC 60068-2-27 |
| Vibration | according to IEC 60068-2-6 |
| Approvals | |
| Approvals | CE; CULUS; UKCA |

Ordering data

| Type | Qty. | Order No. |
|-------------------------|------|------------|
| IE-SR-4GT-LTE/4G-USEMEA | 1 | 2873930000 |

4-Port Gigabit Ethernet Industrial Security Router

- Highly functional router and firewall
- Integrated u-link remote access service
- Up to 4 independent and individually secured networks
- DNV approval for use in a maritime environment



Technical data

| Technology | |
|---------------------------------|--|
| Standard | IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3ab for 1000BASE-T |
| Management features | |
| Device configuration | Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Windows tool |
| Monitoring function | SNMP v1/v2c/v3, Syslog, Event based warning via E-Mail, Event based warning via relay |
| IP-address management | Static, DHCP-Client, DHCP-Server (pool-based), DNS-Relay |
| Time synchronization management | NTP server, NTP client |
| Routing Features | |
| Firewall functions | Stateful Packet Inspection Firewall (Layer-3), Transparent bridge mode (4-port switch with additional Layer-2 filter) |
| NAT functions | Source / Destination NAT (Port / Host / Network) |
| Routing functions | IPv4 routing, IPv4 routing extended (each interface (LAN, WAN, optional cellular) can be configured as separate IP network), Static and dynamic IP Routing, RIPv2 / OSPF |
| VPN functions | u-link client, OpenVPN (Server or Client), IPsec (Initiator or Responder) |
| Interfaces | |
| Connector for external antennas | |
| RJ45 ports | 10/100/1000BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| Number of ports | 4x RJ45 10/100/1000BaseT(X) |
| Number of SCM-Card slots | 1 |
| Digital inputs | VPN-initiate: establishes a pre-configured VPN connection (24 V in), Cut: physically disconnects (Link Down) the WAN port (24 V in), Trigger pre-configured packet filter rules (24 V in), galvanically isolated |
| Digital outputs | VPN-active: indicates an active VPN connection (24 V out), Alarm: indicates a configurable network state or fault (24 V out) |
| Serial port | 1x RS-485, 2-wire, galvanically isolated, 1 removable 3-pin terminal block |
| Function reset button | Restoration of factory settings |
| SCM-Card slot type | Smart Card (ID-000 format), Save and restore the configuration using smart card (memory chip) |
| LED indicator | Power: indicates power supply status, boot-up process, firmware update process, Status: indicates system status, VPN: indicates VPN tunnel status, Port LED: Link/ACT, Speed (RJ45 port) |
| USB port | USB 2.0 interface for firmware update or restoration of the device configuration via USB flash drive |
| Note | |

| Power supply | |
|------------------------------|---|
| Connection type | 1 removable 3-pin terminal block |
| Voltage supply range | 19.2...28.8VDC |
| Voltage supply | Galvanically isolated, 24 V DC |
| Current consumption | 1.3A @ 24V |
| Reverse polarity protection | Yes |
| Overload current protection | Yes |
| Physical characteristics | |
| Housing main material | Aluminium |
| Speed | Gigabit Ethernet |
| Protection degree | IP20 |
| Type of mounting | DIN rail |
| Dimensions H x W x D | 150 / 55 / 115 mm (5.9055 / 2.1654 / 4.5276 inch) |
| Net weight | 560 GRM |
| Environmental conditions | |
| Operating temperature | -25 °C...70 °C |
| Humidity | 5 - 90 %, no condensation |
| EMC conformity and approvals | |
| EMC standards | EN 61000-6-4, EN 61000-6-2 |
| Ship use | DNV |
| Shock | according to IEC 60068-2-27 |
| Vibration | according to IEC 60068-2-6 |
| Approvals | |
| Approvals | CE; DETNORVER; UKCA |

Ordering data

| Type | Qty. | Order No. |
|-------------|------|------------|
| IE-SR-4GT-M | 1 | 2990450000 |

4-Port Gigabit Ethernet Industrial Security Router

- Highly functional router and firewall
- Integrated u-link remote access service
- Up to 4 independent and individually secured networks
- Reliable internet connection thanks to integrated 4G/LTE mobile modem
- DNV approval for use in a maritime environment



Technical data

| Technology | |
|---------------------------------|--|
| Standard | IEEE 802.3 for 10BASE-T, IEEE 802.3u for 100BASE-TX, IEEE 802.3ab for 1000BASE-T |
| Management features | |
| Device configuration | Webbrowser (HTTP/HTTPS), SNMP v1/v2c/v3, Windows tool |
| Monitoring function | SNMP v1/v2c/v3, Syslog, Event based warning via E-Mail, Event based warning via relay, Event based warning via SMS |
| IP-address management | Static, DHCP-Client, DHCP-Server (pool-based), DNS-Relay |
| Time synchronization management | NTP server, NTP client |
| Routing Features | |
| Firewall functions | Stateful Packet Inspection Firewall (Layer-3), Transparent bridge mode (4-port switch with additional Layer-2 filter) |
| NAT functions | Source / Destination NAT (Port / Host / Network) |
| Routing functions | IPv4 routing, IPv4 routing extended (each interface (LAN, WAN, optional cellular) can be configured as separate IP network), Static and dynamic IP Routing, RIPv2 / OSPF |
| VPN functions | u-link client, OpenVPN (Server or Client), IPsec (Initiator or Responder) |
| Interfaces | |
| Connector for external antennas | 2x SMA female |
| RJ45 ports | 10/100/1000BaseT(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| Number of ports | 4x RJ45 10/100/1000BaseT(X) |
| Number of SCM-Card slots | 1 |
| Number of SIM-Card slots | 1 |
| Digital inputs | galvanically isolated, Cut: physically disconnects (Link Down) the WAN port (24 V in), Trigger pre-configured packet filter rules (24 V in), VPN-initiate: establishes a pre-configured VPN connection (24 V in) |
| Digital outputs | VPN-active: indicates an active VPN connection (24 V out), Alarm: indicates a configurable network state or fault (24 V out) |
| Serial port | 1x RS-485, 2-wire, galvanically isolated, 1 removable 3-pin terminal block |
| Function reset button | Restoration of factory settings |
| SCM-Card slot type | Smart Card (ID-000 format), Save and restore the configuration using smart card (memory chip) |
| SIM-Card slot type | Mini-SIM (ID-000 format) |
| LED indicator | Power: indicates power supply status, boot-up process, firmware update process, Status: indicates system status, VPN: indicates VPN tunnel status, Port LED: Link/ACT, Speed (RJ45 port) |
| USB port | USB 2.0 interface for firmware update or restoration of the device configuration via USB flash drive |
| Mobile radio interface | |
| Mode of operation | Permanent connection, Manual connection control via web interface, Manual connection control via API or SMS, fallback |
| Wireless module | multi-band modem (4G/3G) |
| Transmission rate mobile radio | LTE category: CAT 6 Download rate, max.: 300Mbit/s Upload rate, max.: 50Mbit/s |
| Frequency band | EMEA / Americas, LTE: 2100MHz (B1), 1800MHz (B3), 850MHz (B5), 2600MHz (B7), 900MHz (B8), 800MHz (B20), 2600MHz (B38), 2300MHz (B40), 2600MHz (B41), UMTS: B1 (2100), B2 (1900), B3 (1800), B4 (AWS), B5 (850), B8 (900) |
| Note | |

| Power supply | |
|------------------------------|---|
| Connection type | 1 removable 3-pin terminal block |
| Voltage supply range | 19.2...28.8VDC |
| Voltage supply | Galvanically isolated, 24 V DC |
| Current consumption | 1.5A @ 24V |
| Reverse polarity protection | Yes |
| Overload current protection | Yes |
| Physical characteristics | |
| Housing main material | Aluminium |
| Speed | Gigabit Ethernet |
| Protection degree | IP20 |
| Type of mounting | DIN rail |
| Dimensions H x W x D | 150 / 55 / 115 mm (5.9055 / 2.1654 / 4.5276 inch) |
| Net weight | 660 GRM |
| Environmental conditions | |
| Operating temperature | -25 °C...70 °C |
| Humidity | 5 - 90 %, no condensation |
| EMC conformity and approvals | |
| EMC standards | EN 61000-6-4, EN 61000-6-2, FCC Part 15 Class B |
| Safety standard | EN 62368-1, EN 62311 |
| Ship use | DNV pending approval |
| Shock | according to IEC 60068-2-27 |
| Vibration | according to IEC 60068-2-6 |
| Approvals | |
| Approvals | CE, UKCA, DETNORVER |

Ordering data

| Type | Qty. | Order No. |
|---------------------------|------|------------|
| IE-SR-4GT-LTE/4G-USEMEA-M | 1 | 2990440000 |

DNV pending approval

u-link Remote Access Service Overview

| | | |
|-------------------------------------|---|-----|
| u-link Remote Access Service | Introduction - u-link Remote Access Service | E.2 |
| | u-link Remote Access Service | E.6 |

u-link Remote Access Service – A tool for all purposes

Advanced features for convenient remote access management

The remote maintenance of machines and systems is often a complex and time-consuming task. On top of that is the demand for a targeted and secure functional connection to the associated IT systems. For many users, these two challenges constitute a major obstacle to the global connection of systems.

u-link guarantees a quick and secure access to machines and plants and, at the same time, allows the efficient management of production plants, user clients, access rights and firmware versions. The intuitive u-link web portal are quick and easy to configure without expert knowledge and can be adapted to specific processes. Secure servers in Europe provide an online platform that ensures conformity between different IT systems when carrying out remote maintenance.



Individual system management

u-link can manage users and groups as well as their access rights according to individual specifications. This includes group assignments and access rights to production systems.



Little configuration effort

Thanks to the intuitive user interface, the devices and clients can be connected easily and without detailed IT knowledge. Thus u-link allows you to quickly network multiple systems.



Secure remote access and remote diagnostics

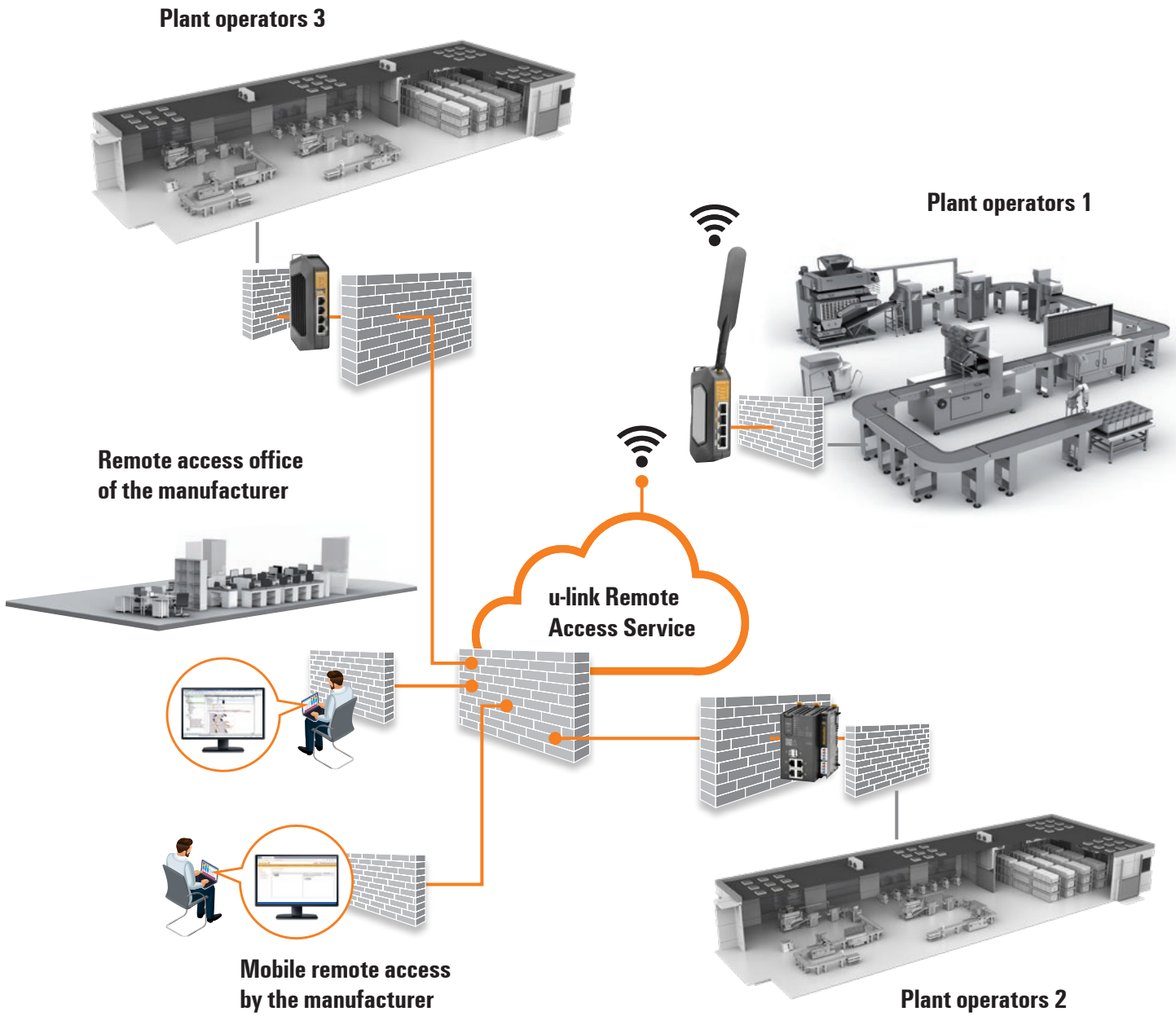
Remote access to machines and systems takes place via a secure VPN connection – worldwide and regardless of location. You have secure access to your systems at all times via the highly available servers.



Condition monitoring and status reporting

Weidmüller Heartbeat can be used to report the availability of a router to u-link. This makes condition monitoring easier and enables status messages of the installed router.

u-link.weidmueller.com



Simple – secure – u-link

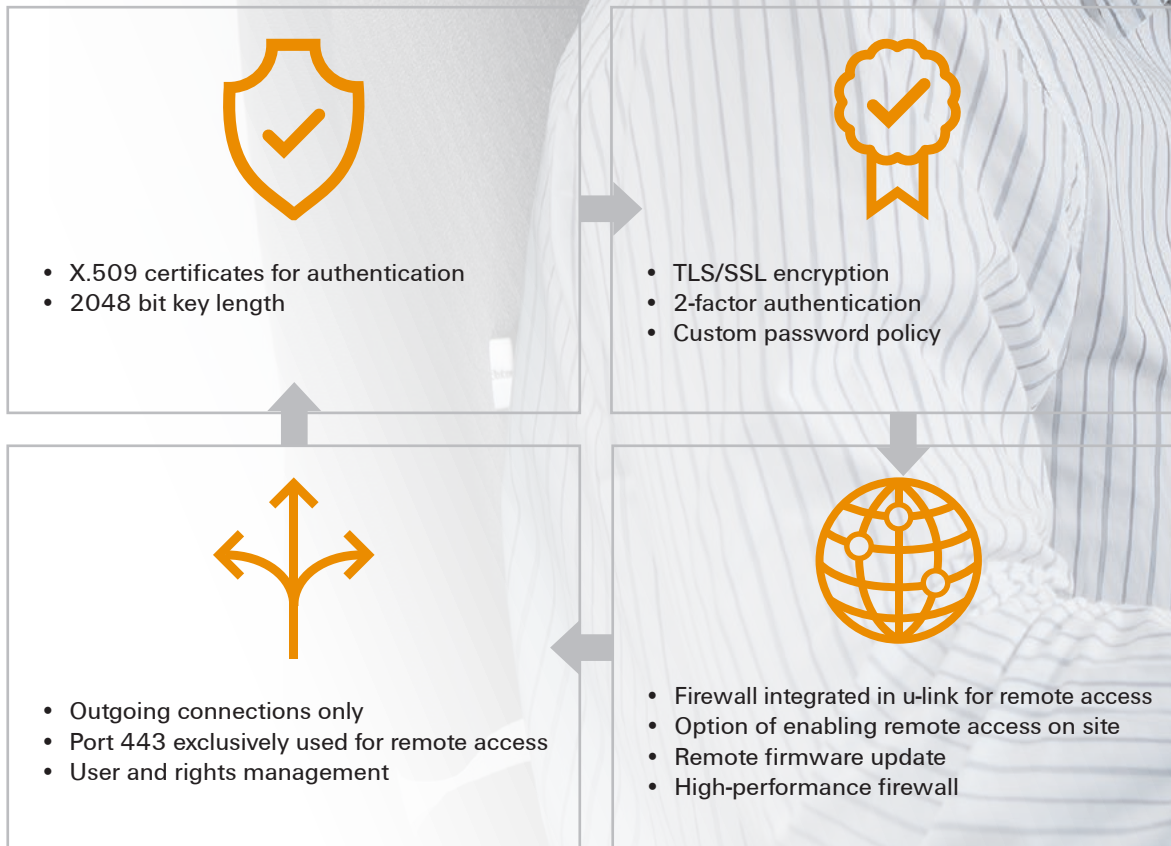
The integrated security concept for your networks

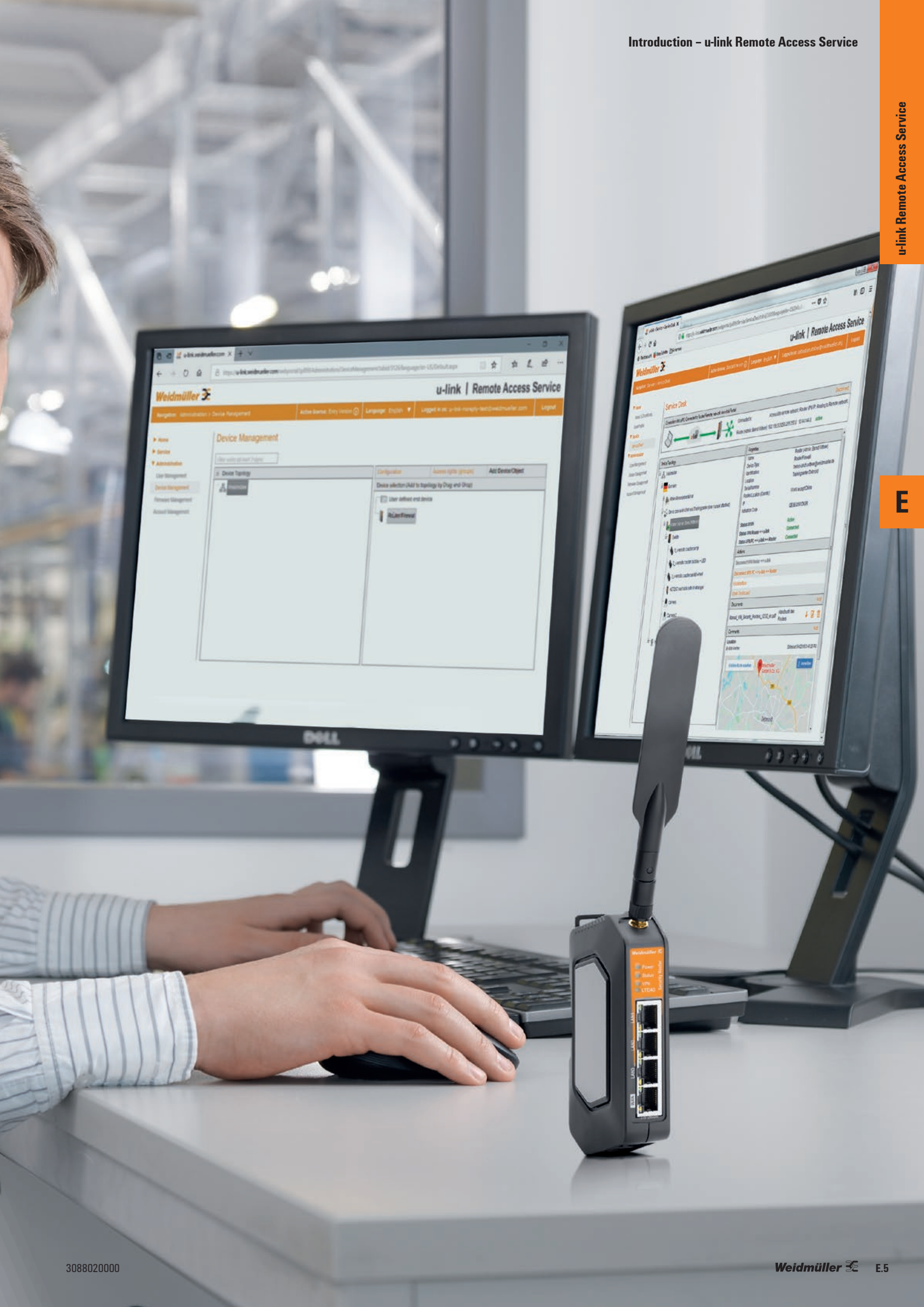
The growing number of network-capable devices together with the increasing networking of manufacturing through the Internet provides ample opportunities for cyber attacks. To protect your systems, u-link offers state-of-the-art functions without increasing complexity.



The development and operation of u-link are ISO 27001 certified. ISO 27001 specifies the requirements for establishing, implementing, maintaining and continually improving a documented information security management system

Your security features:





u-link Remote Access Service

u-link device licenses

- 1-click VPN remote access for service PC's
- easyAccess: web, vnc, rdp or ssh-connections to remote hosts fully browser based for use with tablet or smartphone
- Organization and Group Management
- Topologies including 3rd party end-devices
- Firmware management: Display of firmware status of all routers and the option of a time-controlled, automated firmware update
- Individual access rights: granular configuration of access rights to devices in the target network
- Extensive event log: Presentation of all activities in the u-link portal with extensive filter and export functions
- Password policy: Increased security through configurable specification of minimum requirements for password quality and validity period
- Development and operation ISO27001 certified



Technical data

| Version | |
|---|--|
| Version | License code for u-link Remote Access Service., Extends the period of the basic license by 1 year. |
| Function and performance features | |
| Number of configurable user objects (service PC) | Unrestricted |
| Number of configurable u-link clients on Weidmüller hardware (access points remote network) | U-LINK-BASIC-EXTENSION-1Y: 51 U-LINK-50-DEVICES-1Y: 100 U-LINK-100-DEVICES-1Y: 150 U-LINK-250-DEVICES-1Y: 300 U-LINK-500-DEVICES-1Y: 550 U-LINK-1000-DEVICES-1Y: 1050 |
| Type of 2-factor authentication | E-mail, Google-Authenticator APP, Microsoft Authenticator APP |
| Type of web-based access (easyAccess) | Local web-server |
| VPN channel bandwidth | 100 Mbit/s |
| User organisation | Organisation of service users in groups, assignment of selective access rights to device topology, group-dependent assignment of rights re. device configuration and user administration, Self-management of organizations within the framework of organizational rights |
| Firmware management | Display of the firmware version of all u-link clients and optional, time-controlled, automatic firmware updates (for selected device classes) |
| Functionality of integrated cloud firewall | Group-based rules for accessing remote networks based on IP, port and protocol |
| Device management | Illustration of the device infrastructure (remote access objects) in a clearly defined tree structure via location, group and device objects |
| Simultaneously usable pass-through VPN connections | 1 (expandable by booking further pass-through VPN connections) |
| Period | 1 year from activation of the license key or expiry of the existing license. The individual license term is visible during activation. |
| Monthly data volume and bandwidth | Unlimited (subject to normal market usage) |
| Usage information | Extended reporting and statistical information (connection reports, usage duration, data volume) |
| Password guideline | Increased security through configurable specification of minimum requirements for the password quality and validity period |
| System availability | ≥ 99.6% |
| Note | |

| System requirements | |
|---|--|
| Hardware (service PC) | PC with operating system Windows 7, 8, 10 or 11 |
| Hardware, remote target network | Weidmüller hardware with u-link VPN client |
| Portal administration (user/device configuration) | via Webbrowser (HTTPS), login via username and password |
| VPN software (service PC) | u-link VPN-client (installation on PC) |
| Miscellaneous | |
| Activation | Client account administrator enters the licence key in the u-link portal (functions immediately available) |
| Included in delivery | Email with license key |

Ordering data

| Type | Order No. |
|---------------------------|------------|
| U-LINK-BASIC-EXTENSION-1Y | 3024610000 |
| U-LINK-50-DEVICES-1Y | 2870090000 |
| U-LINK-100-DEVICES-1Y | 2870100000 |
| U-LINK-250-DEVICES-1Y | 2870110000 |
| U-LINK-500-DEVICES-1Y | 2870120000 |
| U-LINK-1000-DEVICES-1Y | 2924220000 |

u-link VPN license extension

- Additional simultaneous VPN connections



Technical data

| Version | |
|---|---|
| Version | "VPN connection" licence code for u-link Remote Access Service. Can be used as an additional VPN connection or to extend the period of a VPN connection that has already been activated |
| Function and performance features | |
| Number of additional VPN connections (per licence code) | 1 (pass-through VPN connection for service PC <> u-link <> router/target network or easyAccess connection) |
| VPN channel bandwidth | 100 Mbit/s |
| Period | 1 year from activation of the license key or expiry of the existing license. The individual license term is visible during activation. |
| Usage | Use as additional VPN channel or to extend period of a VPN channel |
| System requirements | |
| Hardware (service PC) | PC with operating system Windows 7, 8, 10 or 11 |
| Hardware, remote target network | Weidmüller hardware with u-link VPN client |
| Portal administration (user/device configuration) | via Webbrowser (HTTPS), login via username and password |
| VPN software (service PC) | u-link VPN-client (installation on PC) |
| Note | |

| Miscellaneous | |
|----------------------|--|
| Activation | Client account administrator enters the licence key in the u-link portal (functions immediately available) |
| Included in delivery | Email with license key |

Ordering data

| Type | Order No. |
|------------------------|------------|
| U-LINK-1-CONNECTION-1Y | 2870130000 |

u-link feature extension

- Secure and reliable VPN connection to and from China



Technical data

| Version | |
|---|---|
| Version | License code for u-link Remote Access Service., Allows the use of the server in China for a secure and reliable VPN connection to and from China. |
| Function and performance features | |
| China-VPN | Reliable VPN connection to and from China |
| Period | 1 year from activation of the license key or expiry of the existing license. The individual license term is visible during activation. |
| System requirements | |
| Hardware (service PC) | PC with operating system Windows 7, 8, 10 or 11 |
| Hardware, remote target network | Weidmüller hardware with u-link VPN client |
| Portal administration (user/device configuration) | via Webbrowser (HTTPS), login via username and password |
| VPN software (service PC) | u-link VPN-client (installation on PC) |
| Note | |

| Miscellaneous | |
|----------------------|--|
| Activation | Client account administrator enters the licence key in the u-link portal (functions immediately available) |
| Included in delivery | Email with license key |

Ordering data

| Type | Order No. |
|--------------------|------------|
| U-LINK-CNSERVER-1Y | 2870140000 |

Media converter and protocol gateways

Overview

| | | |
|--|--|-----|
| Media converter and protocol gateways | Introduction - Media converter and protocol gateways | F.2 |
| | Ethernet media converter (copper/fiber optic) | F.4 |
| | Serial/Ethernet converter | F.5 |
| | Serial/Ethernet converter and Modbus TCP/RTU gateway | F.6 |

Transmit data without interference

Media converters and protocol gateways – convenient and economical

A goal of industrial automation is to achieve the continuous networking of all system components. This also requires the interconnection of devices and network segments that use different transmission technologies or are very far away from each other. Our media converters and protocol gateways ensure smooth communication between all network participants and are also especially convenient and economical.

Serial/Ethernet converters for integrating existing devices

In many systems, serial devices with RS232, RS422 or RS485 interfaces are still widely used. These may include control systems, sensors, measuring instruments, motors, drives, barcode readers and operating displays. Our serial/Ethernet converters allow you to integrate such serial components quickly and easily into your existing Ethernet network structure. For this purpose, the converters support a variety of operating modes, such as TCP server, TCP client, UDP, Real COM, RFC2217, reverse Telnet, pair connection and Ethernet modem.

F

Media converters for easy and economical glass fibre utilisation

In case of high requirements on interference immunity or long transmission distances, optical fibres are an expedient solution – in the process industry, for example. With fibre optics, transmission distances ranging between 5 km (multi-mode fibres) and 40 km (single-mode fibres) can be achieved without the use of intermediate generators. Our media converters convert Ethernet signals on an RJ45 port to fibre optic signals for SC or ST cables. In the process, the collision domain of both participants is retained so as to ensure the greatest possible port transparency.

Seamless integration of Ethernet and serial Modbus devices

Modbus is one of the most popular automation protocols in the world and supports traditional RS-232/422/485 devices and Ethernet devices. However, the Ethernet-based Modbus protocol is different from the original serial-based protocols. In order to integrate Modbus networks, the Modbus TCP/RTU Gateway includes two Ethernet interfaces and one serial interface that supports RS-232, RS-422 and RS-485 communication. It automatically and intelligently translates between Modbus TCP (Ethernet) and Modbus ASCII/RTU (serial) protocols.



Simple warning system
Warning in case of power failure and port errors

Surge protection
Improved surge protection for serial ports, LAN and power supply connections

Power supply
Redundant power supply inputs



Extensive approvals
Developed and approved for EX areas (Class 1 Div. 2/ Atex Zone 2)



Ethernet media converter (copper/fiber optic)

Industrial Media Converter (10/100BaseT (X) to 100BaseFX)

- 10/100BaseT(X) auto-negotiation and auto-MDI/MDI-X
- Link Fault Pass-Through (LFP)
- Power failure, port break alarm by relay output
- Redundant power inputs
- Designed for hazardous locations (Zone 2)



Technical data

| Technology | | | |
|-----------------------------|--|--|-------------|
| Standards | | IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT (X) and 100BaseFX | |
| Interfaces | | | |
| Fibre Ports | | 100BaseFX (SC/ST-duplex connection) | |
| RJ45 ports | | 10/100BaseT(X) | |
| DIP Switches | | 100BaseFX Full/Half duplex selection, Port fault alarm | |
| Alarm Contact | | One relay output with current carrying capacity of 1 A at 24 V DC | |
| Specification optical fiber | | | |
| Transceiver Type | | 100Base FX | |
| | | Multi-Mode | Single-Mode |
| Fiber Cable Type | | OM1 | 6.652 |
| | | 50/125 µm 800 MHz*km | |
| Typical Distance | | 4 km | 5 km |
| Wave-length | | 1300 | |
| | | 1260 to 1360 | |
| | | 1100 to 1600 | |
| | | 1280 to 1340 | |
| | | 1100 to 1600 | |
| | | 0 to -5 | |
| | | -3 to -34 | |
| | | -3 to -32 | |
| | | -3 to -34 | |
| Optical Power | | 12 | |
| | | 29 | |
| | | 3 | |
| | | 1 | |

Note: When connecting a single-mode fiber transceiver over a short distance, we recommend using an attenuator to prevent the transceiver from being damaged by excessive optical power.

| Power Requirements | |
|-----------------------------|---|
| Input Voltage | 24 V DC (12 to 48 V DC), two redundant inputs |
| Current consumption | 0.16 A at 24 V |
| Connection | 1 removable 6-pole terminal block |
| Overload Current Protection | 1.1 A |
| Reverse Polarity Protection | Present |
| Technical data | |
| Housing | Metal, IP30 protection |
| Dimensions (W x H x D) | 53.6 x 135 x 105 mm (2.11 x 5.31 x 4.13 in) |
| Weight | 630 g |
| Installation | DIN-Rail |
| Environmental Limits | |
| Operating temperature | Standard Models: 0 to 60 °C (32 to 140 °F) Wide Temp. Models: -40 to 75 °C (-40 to 167 °F) |
| Operating Humidity | 5 to 95 % (non-condensing) |
| Storage Temperature | -40 to 85 °C (-40 to 185 °F) |

| Approvals | |
|-----------------------------------|--|
| Security | UL 508 |
| EMC | EN 55032/24 CISPR 32, FCC Part 15B Class A IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 3 V/m IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV IEC 61000-4-5 Surge: Power: 1 kV; Signal: 1 kV IEC 61000-4-6 CS: 3 V IEC 61000-4-8 |
| Hazardous Location | UL/cUL Class1, Division 2, Groups A, B, C, and D, ATEX Zone 2 Ex nA nC IIC T4 Gc |
| Maritime | DNV |
| Freefall | IEC60068-2-32 |
| Shock | IEC60068-2-27 |
| Vibration | IEC60068-2-6 |
| MTBF (mean time between failures) | |
| Time | 401,000 hrs |
| Database | MIL-HDBK-217F: GB 25 °C |
| Warranty | |
| Warranty Period | 5 years |

| Ordering data | | | |
|-----------------------------|--------------------|-----------------------|------------|
| Version | Type | Operating Temperature | Order No. |
| 1 * RJ45, 1 * SC-Multimode | IE-MC-VL-1TX-1SC | 0 to +60 °C | 1241400000 |
| | IE-MC-VLT-1TX-1SC | -40 to +75 °C | 1286880000 |
| 1 * RJ45, 1 * ST-Multimode | IE-MC-VL-1TX-1ST | 0 to +60 °C | 1241410000 |
| | IE-MC-VLT-1TX-1ST | -40 to +75 °C | 1286890000 |
| 1 * RJ45, 1 * SC-Singlemode | IE-MC-VL-1TX-1SCS | 0 to +60 °C | 1241420000 |
| | IE-MC-VLT-1TX-1SCS | -40 to +75 °C | 1286900000 |

| Accessories | | |
|-----------------------|--------|------------|
| | Type | Order No. |
| 19" Rack Mounting Kit | RM-KIT | 1241440000 |

1 and 2-port Serial/Ethernet Converter for industrial automation

- High surge protection for the serial ports, LAN ports and power supply connection
- Rugged screw-type terminal blocks for power and serial connectors
- Cascading Ethernet ports for easy wiring
- Redundant DC power inputs
- Warning by relay output and email
- Low power consumption

**Technical data**

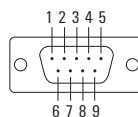
| Ethernet Interface | |
|---|---|
| Number of Ports | 2 |
| Speed | 10/100 MBit/s, auto MDI/MDIX |
| Connection | 8-pin RJ45 |
| Magnetic Isolation Protection | 1.5 KV built-in |
| Ethernet Line Protection | 1 KV (level 2) surge protection |
| Serial Interface | |
| Number of ports that can be used simultaneously | IE-CS-2TX-1RS232/485: 1 IE-CS-2TX-2RS232/485: 2 |
| Serial Standards | RS 232/422/485 |
| Connection | IE-CS-2TX-1RS232/485: DB9 for RS 232, terminal block for RS 422/485 IE-CS-2TX-2RS232/485: DB9 for RS 232/422/485 |
| Serial Line Protection | <ul style="list-style-type: none"> • 15 KV ESD protection for all signals • 1 KV (level 2) surge protection |
| RS 485 Data Direction Control | ADDC® (automatic data direction control) |
| Serial Communication Parameters | |
| Data Bits | 5, 6, 7, 8 |
| Stop Bits | 1, 1.5, 2 |
| Parity | None, Even, Odd, Space, Mark |
| Flow Control | RTS/CTS and DTR/DSR (RS 232 only), XON/XOFF |
| Baud rate | 50 bit/s to 921.6 kbit/s |
| Serial Signals | |
| RS 232 | TxD, RxD, RTS, CTS, DTR, DSR, DCD, GND |
| RS 422 | Tx+, Tx-, Rx+, Rx-, GND |
| RS 485 4w | Tx+, Tx-, Rx+, Rx-, GND |
| RS 485 2w | Data+, Data-, GND |
| Software | |
| Network Protocols | ICMP, IP, TCP, UDP, DHCP, BOOTP, Telnet, Rtelnet, DNS, SNMP, HTTP, SMTP, SNTP, IGMP |
| Configuration Options | Web Console, Serial Console, Telnet Console, Windows Utility |
| Windows Real COM Drivers | Windows 95/98/ME/NT/2000, Windows XP/2003/Vista/2008/7/8 x86/x64, 2012 x64 |
| Technical data | |
| Housing | Metal, IP30 protection |
| Weight | IE-CS-2TX-1RS232/485: 475 g IE-CS-2TX-2RS232/485: 485 g |
| Dimensions (W x H x D) | 36 x 105 x 140 mm (1.42 x 4.13 x 5.51 in) |
| Environmental Limits | |
| Operating temperature | Standard Models: 0 to 60 °C (32 to 140 °F) Wide Temp. Models: -40 to 75 °C (-40 to 167 °F) |
| Ambient Relative Humidity | 5 to 95 % RH |
| Storage Temperature | -40 to 85 °C (-40 to 185 °F) |
| Power Requirements | |
| Input Voltage | 12 to 48 V DC |
| Current consumption | IE-CS(T)-2TX-1RS232/485: 0.22 A at 12 V IE-CS(T)-2TX-2RS232/485: 0.25 A at 12 V |

Approvals

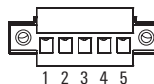
| EMC | EN 55032/24 CISPR 32, FCC Part 15B Class A IEC 61000-4-2 ESD: Contact: 6 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m IEC 61000-4-4 EFT: Power: 4 kV; Signal: 2 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 1 kV IEC 61000-4-6 CS: 10 V IEC 61000-4-8 |
|-----------------------------------|--|
| Security | UL 508 |
| Hazardous Location | UL/cUL Class 1 Division 2 Groups A, B, C and D ATEX Zone 2 Ex nA nC IIC T3 Gc |
| Shock | IEC60068-2-27 |
| Freefall | IEC60068-2-32 |
| Vibration | IEC60068-2-6 |
| Reliability | |
| Alert Tools | Built-in buzzer and RTC (real-time clock) |
| Automatic Reboot Trigger | Built-in WDT (watchdog timer) |
| MTBF (mean time between failures) | |
| Time | 262,805 hrs |
| Database | Telcordia (Bellcore), GB |
| Warranty | |
| Warranty Period | 5 years |

Pin assignment

| RS 232/422/485 (Male DB9) | PIN | RS 232 | RS 422/RS 485-4w | RS 485-2W |
|---------------------------|-----|---------|------------------|-----------|
| 1 | DCD | TxD | TxD-(A) | - |
| 2 | RxD | TxD+(B) | - | - |
| 3 | TxD | RxD+(B) | Data+(B) | - |
| 4 | DTR | RxD-(A) | Data-(A) | - |
| 5 | GND | GND | GND | - |
| 6 | DSR | - | - | - |
| 7 | RTS | - | - | - |
| 8 | CTS | - | - | - |

**Pin Assignment**

| RS 422/485 Terminal block | PIN | RS 422/RS 485-4w | RS 485-2w |
|---------------------------|---------|------------------|-----------|
| 1 | TxD+(B) | - | - |
| 2 | TxD-(A) | - | - |
| 3 | RxD+(B) | Data+(B) | - |
| 4 | RxD-(A) | Data-(A) | - |
| 5 | GND | GND | - |

**Ordering data**

| Version | Type | Operating Temperature | Order No. |
|--|----------------------|-----------------------|------------|
| 2 * RJ45; 1 * serial (RS232: Sub-DB9, RS422/485: terminal block) | IE-CS-2TX-1RS232/485 | 0 to +60 °C | 1242080000 |
| 2 * RJ45; 2 * serial (RS232/422/485: 2 * SubDB9) | IE-CS-2TX-2RS232/485 | -40 to +75 °C | 1285830000 |
| | IE-CS-2TX-1RS232/485 | 0 to +60 °C | 1242090000 |
| | IE-CS-2TX-2RS232/485 | -40 to +75 °C | 1285840000 |

Accessories

| Type | Order No. |
|-----------------------|------------|
| 19" Rack Mounting Kit | 1241440000 |

Serial/Ethernet converter and Modbus TCP/RTU gateway

Serial/Ethernet converter and Modbus TCP/RTU protocol gateway

- Integrated 2-port switch for line topology without need for additional switch
- Device server and modbus protocol gateway in one device
- Suitable for use in harsh industrial environment thanks to rugged design and wide operating temperature range of -40°C up to 70°C



Technical data

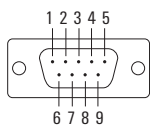
| Technology | |
|---------------------------------|--|
| Standards | IEEE 802.3 for 10BASE-T IEEE 802.3u for 100BASE-TX |
| Processing type | Store and Forward |
| Management features | |
| Device configuration | Webbrowser (HTTP/HTTPS) SSH Upload of a configuration file via web-interface |
| Monitoring function | Modbus traffic monitor Syslog Event based warning via E-Mail Event based warning via SNMP trap |
| IP-address management | Static DHCP-Client BootP |
| Security functions | Enable/disable ports Management access security via secure IP-list and configuration of allowed access methods (web-interface, SSH) |
| Time synchronization management | SNTP client |
| Operating modes | Virtual COM mode TCP Server mode TCP Client mode UDP Server/Client mode Modbus RTU/ASCII Master to Modbus TCP Slave Gateway Modbus TCP Master to Modbus RTU/ASCII Slave Gateway |
| Interfaces | |
| RJ45 ports | 2x 10/100BASE-T(X), auto negotiation, Full/half-duplex mode, Auto MDI/MDI-X port |
| DB9 | 1x DB9 male for RS-232/422/485 |
| DIP switches | 1x for pull low resistor setting (1 k Ω , 150 k Ω) 1x for pull high resistor setting (1 k Ω , 150 k Ω) 1x for termination resistor setting (120 Ω) |
| Reset button | < 5 sec: System reboot ; > 5 sec: Factory default |

Serial interface characteristics

| | |
|--------------|------------------------------|
| Standard | RS-232/422/485 |
| Baud rate | 50 bit/s to 460.8 kbit/s |
| Data Bits | 7, 8 |
| Stop Bits | 1, 2 |
| Parity | odd, even, none, mark, space |
| Flow Control | XON/XOFF, RTS/CTS, DTR/DSR |

Pin assignment

RS 232/422/485
(Male DB9)



| Pin # | RS-232 (DTE Device) | RS-422 | RS-485 (4-wire) | RS-485 (2-wire) |
|-------|---------------------|--------|-----------------|-----------------|
| 1 | DCD | RX- | RX- | DATA- |
| 2 | RXD | RX+ | RX+ | DATA+ |
| 3 | TXD | TX+ | TX+ | - |
| 4 | DTR | TX- | TX- | - |
| 5 | GND | GND | GND | GND |
| 6 | DSR | - | - | - |
| 7 | RTS | - | - | - |
| 8 | CTS | - | - | - |
| 9 | RI | - | - | - |

| Power supply | |
|------------------------------|---|
| Connection type | 1 removable 4-pin terminal block |
| Input voltage | 24 V DC (12 - 48 V), 2 redundant inputs |
| Current consumption at 24 V | 0.20 A |
| Overload current protection | yes |
| Reverse polarity protection | yes |
| Physical characteristics | |
| Housing main material | Metal |
| Protection degree | IP30 |
| Type of mounting | DIN rail |
| Dimensions (W x H x D) | 26.1 x 110 x 75.2 mm (1.02 x 4.33 x 2.95 in) |
| Weight | 251 g |
| Environmental conditions | |
| Operating temperature | -40 to 70°C (-40 to 158°F) |
| Storage temperature | -40 to 85°C (-40 to 185°F) |
| Humidity | 5 to 95 % (non-condensing) |
| Operating altitude | ≤ 2000 m |
| EMC conformity and approvals | |
| EMC | EN 55032, EN 55024, CISPR 32, FCC Part 15 Subpart B Class A IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz bis 1 GHz: 3 V/m IEC 61000-4-4 EFT: Power: 0.5 kV; Signal: 0.5 kV IEC 61000-4-5 Surge: Power: 0.5 kV; Signal: 1 kV IEC 61000-4-6 CS: 3 Vrms |
| Safety | UL 61010-1, UL 61010-2-201 |
| Shock | IEC 60068-2-27 |
| Vibration | IEC 60068-2-6 |
| Free fall | IEC 60068-2-31 |
| MTBF | |
| Time | 1,479,078 hrs |
| Database | Telcordia SR332 |
| Guarantee | |
| Time interval | 5 years |

Ordering Information

| Version | Model Type | Order No. |
|--|--------------------|-------------------|
| 2x RJ45 10/100 Mbit/s, 1x DB9 for RS-232/422/485 | IECS-MBGW-2TX-1COM | 2682600000 |

Accessories

| | Model Type | Order No. |
|-----------------------|------------|-------------------|
| 19" Rack Mounting Kit | RM-KIT | 1241440000 |

Industrial WLAN Overview

| | | |
|------------------------|--------------------------------|-----|
| Industrial WLAN | Introduction - Industrial WLAN | G.2 |
| | Industrial WLAN | G.4 |

Industrial WLAN

Wireless communication solutions

In many mobile applications and industrial environments that are difficult to access, cabling does not usually make sense. Instead, WLAN-based wireless communication solutions are employed. In logistics, for example, WLAN is used to connect AGVs (Automatic Guided Vehicles). Roaming between several radio cells is important in this case in order to enable individually configurable radio coverage.

Our WLAN module can be used flexibly as an access point (AP), bridge or client. The alternative Power over Ethernet supply makes integration into an existing infrastructure especially easy. Maximum data integrity is guaranteed through integration into a RADIUS service and secure encryption with WPA2 in the radio field. Several radio fields can be flexibly spread out. Within these fields, the clients can move between the radio cells thanks to fast roaming. Several areas can be assigned for each radio cell (Multi-SSID) and allocated to different VLANs. This way, the wired infrastructure is continued 1:1 in the radio range.

Your special advantage:

- Compliant access point / client according to IEEE 802.11a/b/g/n
- MIMO technology for data rates up to 300 Mbit/s
- Fast roaming for interruption-free connection changes between access points
- DFS support in 5 GHz band
- Power supply with PoE according to IEEE 802.3af possible
- Integrated DI/DOs for monitoring and alarms



Turbo roaming for interruption-free connections
Roaming technology ensures a seamless wireless connection and allows you to switch quickly between different wireless access points without the risk of discontinued data communication.



Various wireless modes of operation

The most important modes of operation for wireless networks are AP Client mode and Bridge mode. AP mode can be used to create a new WLAN or to connect an existing WLAN to a wired network. Bridge mode allows two Ethernet devices to be connected wirelessly using a point-to-point connection.

Integrated digital inputs/outputs

Weidmüller WLAN access points have integrated digital inputs/outputs that can be used to send alarm notifications in real time via the network to the responsible maintenance personnel.

BasicLine WLAN Access Point/Client

- IEEE 802.11a/b/g/n conform access point/client
- MIMO technology for data rates up to 300Mbit/s
- Fast roaming for interruption-free connection change between access points
- DFS support in 5GHz bandwidth



Technical data

| WLAN Interface | |
|---|---|
| Standards | IEEE 802.11a/b/g/n for Wireless LAN IEEE 802.11i for Wireless Security IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) IEEE 802.3ab for 1000BaseT |
| Spread Spectrum and Modulation (typically) | <ul style="list-style-type: none"> • DSSS with DBPSK, DQPSK, CCK • OFDM with BPSK, QPSK, 16QAM, 64QAM • 802.11b: CCK at 11/5.5 Mbps, DQPSK at 2 Mbps, DBPSK at 1 Mbps • 802.11a/g: 64QAM at 54/48 Mbps, 16QAM at 36/24 Mbps, QPSK at 18/12 Mbps, BPSK at 9/6 Mbps • 802.11n: 64QAM at 300 Mbps to BPSK at 6.5 Mbps |
| Operating Channels (central frequency) | US model: 2.412 to 2.462 GHz (11 channels) / 5.180 to 5.240 GHz (4 channels) 5.260 to 5.320 GHz (4 channels)* / 5.500 to 5.700 GHz (8 channels, excluding 5.600 to 5.640 GHz)* / 5.745 to 5.825 GHz (5 channels) EU model: 2.412 to 2.472 GHz (13 channels) / 5.180 to 5.240 GHz (4 channels) 5.260 to 5.320 GHz (4 channels)* / 5.500 to 5.700 GHz (11 channels)* |
| *DFS (Dynamic Frequency Selection): If the device is operated in access point mode on these channels, the device automatically switches to another channel once a radar signal is detected. After switching to another channel, a 60-second availability check is carried out in accordance with the specification, before communication can take place on the channel. | |
| Security | <ul style="list-style-type: none"> • SSID Broadcast enable/disable • Firewall for MAC/IP/protocol/port-based filtering • 64-bit and 128-bit WEP encryption, WPA/WPA2 personnel and enterprise (IEEE 802.1X/RADIUS, TKIP and AES) |
| Transmission Rates | 802.11b: 1, 2, 5.5, 11 Mbps 802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11n: 6.5 to 300 Mbps |
| Transmit Power | 802.11b: Type 26±1.5 dBm at 1 Mbps, Type 26±1.5 dBm at 2 Mbps Type 26±1.5 dBm at 5.5 Mbps, Type 25±1.5 dBm at 11 Mbps 802.11g: Type 23±1.5 dBm at 6 to 24 Mbps, Type 21±1.5 dBm at 36 Mbps Type 19±1.5 dBm at 48 Mbps, Type 18±1.5 dBm at 54 Mbps 802.11n: Type 23±1.5 dBm at MCS0/8 20 MHz, (2.4 GHz) Type 18±1.5 dBm at MCS7/15 20 MHz Type 23±1.5 dBm at MCS0/8 40 MHz Type 17±1.5 dBm at MCS7/15 40 MHz 802.11a: Type 23±1.5 dBm at 6 to 24 Mbps, Type 21±1.5 dBm at 36 Mbps Type 20±1.5 dBm at 48 Mbps, Type 18±1.5 dBm at 54 Mbps 802.11n: Type 23±1.5 dBm at MCS0/8 20 MHz (5 GHz) Type 18±1.5 dBm at MCS7/15 20 MHz Type 23±1.5 dBm at MCS0/8 40 MHz Type 17±1.5 dBm at MCS7/15 40 MHz |

Note: In accordance with regional regulations, the maximum permissible transmit power is limited on the UNII bandwidths via the device firmware. The corresponding values are contained in the following tables:

| | US model | EU model |
|-----------------|----------|----------|
| 2.4 GHz | 26 dBm | 18 dBm |
| 5 GHz (UNII-1) | 23 dBm | 21 dBm |
| 5 GHz (UNII-2) | 23 dBm | 21 dBm |
| 5 GHz (UNII-2e) | 23 dBm | 23 dBm |
| 5 GHz (UNII-3) | 23 dBm | - |

| Receive Sensitivity | 802.11b: | 802.11g: | 802.11n: |
|---------------------|--|---|--|
| | • 93 dBm at 1 Mbps, -93 dBm at 2 Mbps | • 88 dBm at 6 Mbps, -86 dBm at 9 Mbps | • 70 dBm at MCS7 20 MHz, -69 dBm at MCS15 20 MHz (2.4 GHz) |
| | • 93 dBm at 5.5 Mbps, -88 dBm at 11 Mbps | • 85 dBm at 12 Mbps, -85 dBm at 18 Mbps | • 67 dBm at MCS7 40 MHz, -67 dBm at MCS15 40 MHz |
| | • 85 dBm at 24 Mbps, -82 dBm at 36 Mbps | • 85 dBm at 24 Mbps, -82 dBm at 36 Mbps | • 69 dBm at MCS7 20 MHz, -71 dBm at MCS15 20 MHz (5 GHz) |
| | • 78 dBm at 48 Mbps, -74 dBm at 54 Mbps | • 78 dBm at 48 Mbps, -74 dBm at 54 Mbps | • 63 dBm at MCS7 40 MHz, -68 dBm at MCS15 40 MHz |

| Protocol Support | |
|---------------------------------|---|
| General Protocols | Proxy ARP, DNS, HTTP, HTTPS, IP, ICMP, SNMP, TCP, UDP, RADIUS, SNMP, DHCP, LLDP |
| Interfaces | |
| Supplied antenna | 2x omni-directional dual-band antenna, 2 dBi, RP-SMA (male) |
| Connector for External Antennas | RP-SMA (female), 500 V insulation |
| RJ45 port | 1x 10/100/1000BaseT (X) auto negotiation, full/half duplex mode and auto MDI/MDI-X connection |
| Console Port | RS 232 (RJ45-type) |

Technical data

| Technical data | |
|-----------------------------------|---|
| Housing | Metal, IP30 protection |
| Weight | 307 g |
| Dimensions (W x H x D) | 58 x 115 x 70 mm (2.29 x 4.53 x 2.76 in) |
| Installation | DIN-Rail |
| Environmental Limits | |
| Operating temperature | Standard Models: 0 to 60 °C (32 to 140 °F) Wide Temp. Models: -40 to 75 °C (-40 to 167 °F) |
| Storage Temperature | -40 to 85 °C (-40 to 185 °F) |
| Ambient Relative Humidity | 5 % to 95 % (non-condensing) |
| Power Requirements | |
| Input Voltage | 24 V DC (12 to 48 V DC), two redundant inputs |
| Connection | 1 removable 4-pin terminal block, 500 V insulation |
| Power Consumption | 0.56 A at 12 VDC 0.14 A at 48 VDC |
| Power consumption | 6.96 W |
| Reverse Polarity Protection | Present |
| Approvals | |
| Safety | EN62368-1, UL 60950-1 |
| Radio | EN 301 489-1/17, EN 300 328, EN 301 893, TELEC, FCC ID: SLE-WAPN008, KC |
| EMC | EN 55032/24 CISPR 32, FCC Part 15B Class B IEC 61000-4-2 ESD: Contact: 4 kV; Air: 8 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 10 V/m IEC 61000-4-4 EFT: Power: 2 kV; Signal: 1 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 1 kV IEC 61000-4-6 CS: 3 V IEC 61000-4-8 |
| MTBF (mean time between failures) | |
| Time | 749,476 hrs |
| Database | Telcordia (Bellcore), GB |
| Warranty | |
| Warranty Period | 5 years |

Ordering data

| Version | Type | Operating Temperature | Order No. |
|--|---|------------------------------|--|
| WLAN Access Point/Client, IEEE 802.11 a/b/g/n, EU-Modell | IE-WL-BL-AP-CL-EU IE-WLT-BL-AP-CL-EU | 0 to +60 °C -40 to +75 °C | 2536600000 2536650000 |
| WLAN Access Point/Client, IEEE 802.11 a/b/g/n, US-Modell | IE-WL-BL-AP-CL-US IE-WLT-BL-AP-CL-US | 0 to +60 °C -40 to +75 °C | 2536660000 2536670000 |

Accessories

| | Type | Order No. |
|------------------------------------|-----------------|-------------------|
| External Backup and Restore Module | EBR-Modul RS232 | 1241430000 |
| 19" Rack Mounting Kit | RM-KIT | 1241440000 |

WLAN antennas and connection cables, see chapter H.

ValueLine WLAN Access Point/Bridge/Client

- IEEE 802.11a/b/g/n conform Access Point/Client/Bridge
- MIMO technology for data rates up to 300Mbit/s
- Fast roaming for interruption-free connection change between access points
- DFS support in 5GHz bandwidth
- Power can be supplied via PoE in accordance with IEEE 802.3af
- Integrated DI/DOs for monitoring and alarms



Technical data

| WLAN-Interface | |
|---|---|
| Standards | IEEE 802.11a/b/g/n for wireless LAN IEEE 802.11i for wireless security IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseT(X) IEEE 802.3ab for 1000BaseT IEEE 802.3af for Power-over-Ethernet IEEE 802.1D for Spanning Tree Protocol IEEE 802.1w for Rapid STP IEEE 802.1Q for VLAN |
| Spreading code process and modulation (typical) | <ul style="list-style-type: none"> • DSSS with DBPSK, DQPSK, CCK • OFDM with BPSK, QPSK, 16QAM, 64QAM • 802.11b: CCK at 11/5.5 Mbps, DQPSK at 2 Mbps, DBPSK at 1 Mbps • 802.11a/g: 64QAM at 54/48 Mbps, 16QAM at 36/24 Mbps, QPSK at 18/12 Mbps, BPSK at 9/6 Mbps • 802.11n: 64QAM at 300 Mbps to BPSK at 6.5 Mbps |
| Operating Channels (central frequency) | US model: 2.412 to 2.462 GHz (11 channels) / 5.180 to 5.240 GHz (4 channels) 5.260 to 5.320 GHz (4 channels)* / 5.500 to 5.700 GHz (8 channels, excluding 5.600 to 5.640 GHz)* / 5.745 to 5.825 GHz (5 channels) EU model: 2.412 to 2.472 GHz (13 channels) / 5.180 to 5.240 GHz (4 channels) 5.260 to 5.320 GHz (4 channels)* / 5.500 to 5.700 GHz (11 channels)* |
| *DFS (Dynamic Frequency Selection): If the device is operated in access point mode on these channels, the device automatically switches to another channel once a radar signal is detected. After switching to another channel, a 60-second availability check is first carried out in accordance with the specification, before communication can take place on the channel. | |
| Security | <ul style="list-style-type: none"> • SSID Broadcast enable/disable • Firewall for MAC/IP/protocol/port-based filtering • 64-bit and 128-bit WEP encryption, WPA/WPA2 personal and enterprise (IEEE 802.1X/RADIUS, TKIP and AES) |
| Transmission Rates | 802.11b: 1, 2, 5.5, 11 Mbps 802.11a/g: 6, 9, 12, 18, 24, 36, 48, 54 Mbps 802.11n: 6.5 to 300 Mbps |
| Transmit power | 802.11b: Type 26±1.5 dBm at 1 Mbps, Type 26±1.5 dBm at 2 Mbps Type 26±1.5 dBm at 5.5 Mbps, Type 25±1.5 dBm at 11 Mbps 802.11g: Type 23±1.5 dBm at 6 to 24 Mbps, Type 21±1.5 dBm at 36 Mbps Type 19±1.5 dBm at 48 Mbps, Type 18±1.5 dBm at 54 Mbps 802.11n: Type 23±1.5 dBm at MCS0/8 20 MHz, (2.4 GHz) Type 18±1.5 dBm at MCS7/15 20 MHz Type 23±1.5 dBm at MCS0/8 40 MHz Type 17±1.5 dBm at MCS7/15 40 MHz 802.11a: Type 23±1.5 dBm at 6 to 24 Mbps, Type 21±1.5 dBm at 36 Mbps Type 20±1.5 dBm at 48 Mbps, Type 18±1.5 dBm at 54 Mbps 802.11n: Type 23±1.5 dBm at MCS0/8 20 MHz (5 GHz) Type 18±1.5 dBm at MCS7/15 20 MHz Type 23±1.5 dBm at MCS0/8 40 MHz Type 17±1.5 dBm at MCS7/15 40 MHz |

Note: In accordance with regional regulations, the maximum permissible transmit power is limited on the UNII bandwidths via the device firmware. The corresponding values are contained in the following tables:

| | US model | EU model |
|-----------------|----------|----------|
| 2.4 GHz | 26 dBm | 18 dBm |
| 5 GHz (UNII-1) | 23 dBm | 21 dBm |
| 5 GHz (UNII-2) | 23 dBm | 21 dBm |
| 5 GHz (UNII-2e) | 23 dBm | 23 dBm |
| 5 GHz (UNII-3) | 23 dBm | - |

Receive sensitivity

802.11b: • 93 dBm at 1 Mbps, -93 dBm at 2 Mbps
 • 93 dBm at 5.5 Mbps, -88 dBm at 11 Mbps

802.11g: • 88 dBm at 6 Mbps, -86 dBm at 9 Mbps
 • 85 dBm at 12 Mbps, -85 dBm at 18 Mbps
 • 85 dBm at 24 Mbps, -82 dBm at 36 Mbps
 • 78 dBm at 48 Mbps, -74 dBm at 54 Mbps

802.11n: • 70 dBm at MCS7 20 MHz, -69 dBm at MCS15 20 MHz (2.4 GHz)
 • 67 dBm at MCS7 40 MHz, -67 dBm at MCS15 40 MHz

802.11a: • 90 dBm at 6 Mbps, -88 dBm at 9 Mbps
 • 88 dBm at 12 Mbps, -85 dBm at 18 Mbps
 • 81 dBm at 24 Mbps, -78 dBm at 36 Mbps
 • 74 dBm at 48 Mbps, -72 dBm at 54 Mbps

802.11n: • 69 dBm at MCS7 20 MHz, -71 dBm at MCS15 20 MHz (5 GHz)
 • 63 dBm at MCS7 40 MHz, -68 dBm at MCS15 40 MHz

Supported protocols

General protocols: Proxy ARP, DNS, HTTP, HTTPS, IP, ICMP, SNMP, TCP, UDP, RADIUS, SNMP, DHCP, LLDP, VLAN, STP/RSTP

Interfaces

Supplied antenna: 2x omni-directional dual-band antenna, 2 dBi, RP-SMA (male)

Connection for external antennas: RP-SMA (female), 500 V insulation

RJ45 port: 1x 10/100/1000BaseT (X) auto negotiation, full/half duplex mode and auto MDI/MDI-X connection

Console port: RS 232 (RJ45 connection)

Alarm contact: 1 relay output with a current capacity of 1 A at 24 V DC

Digital inputs: 2 galvanically separated inputs
 • +13 to +30 V for the state "1"
 • +3 to -30 V for the state "0"
 • max. Current consumption: 8 mA

Technical data

| Technical data | |
|-----------------------------------|--|
| Housing | Metal, IP30 protection class |
| Weight | 860 g |
| Dimensions (W x H x D) | 52.7 x 135 x 105 mm (2.08 x 5.32 x 4.13 in) |
| Installation | DIN-Rail |
| Environmental conditions | |
| Operating temperature | Standard models: -25 to 60°C (-13 to 140°F) Models with extended temperature range: -40 to 75 °C (-40 to 167 °F) |
| Storage temperature | -40 to 85 °C (-40 to 185 °F) |
| Relative ambient air humidity | 5% to 95% (non-condensing) |
| Power supply | |
| Input voltage | 24 V DC (12 to 48 V DC), two redundant inputs or 48 V DC PoE (IEEE802.3af) |
| Connection | 1 removable 10-pin terminal block, 500 V insulation |
| Current consumption | 0.6 A at 12 VDC 0.15 A at 48 VDC |
| Power consumption | 7.2 W |
| Reverse polarity protection | Present |
| Approvals | |
| Safety | EN62368-1, UL 60950-1 |
| Wireless | EN 301 489-1/17, EN 300 328, EN 301 893, TELEC, FCC ID: SLE-WAPN008, KC |
| EMC | EN 61000-6-2/6-4 CISPR 32, FCC Part 15B Class B IEC 61000-4-2 ESD: Contact: 8 kV; Air: 15 kV IEC 61000-4-3 RS: 80 MHz to 1 GHz: 3 V/m IEC 61000-4-4 EFT: Power: 2 kV; Signal: 2 kV IEC 61000-4-5 Surge: Power: 2 kV; Signal: 1 kV IEC 61000-4-6 CS: 3 V/m IEC 61000-4-8 PFMF: 1 A/m |
| Explosive risk zones | UL / cUL Class I, Division 2; ATEX Zone 2 Ex nA IIC T4 Gc |
| MTBF (mean time between failures) | |
| Time | 570,854 hrs |
| Database | Telcordia (Bellcore), GB |
| Warranty | |
| Period | 5 Years |

Ordering data

| Version | Type | Operating Temperature | Order No. |
|---|-----------------------|-----------------------|-------------------|
| WLAN Access Point/Bridge/Client, IEEE 802.11 a/b/g/n, EU-Modell | IE-WL-VL-AP-BR-CL-EU | -25 to +60 °C | 2536680000 |
| WLAN Access Point/Bridge/Client, IEEE 802.11 a/b/g/n, US-Modell | IE-WLT-VL-AP-BR-CL-EU | -40 to +75 °C | 2536690000 |
| WLAN Access Point/Bridge/Client, IEEE 802.11 a/b/g/n, US-Modell | IE-WL-VL-AP-BR-CL-US | -25 to +60 °C | 2536700000 |
| WLAN Access Point/Bridge/Client, IEEE 802.11 a/b/g/n, US-Modell | IE-WLT-VL-AP-BR-CL-US | -40 to +75 °C | 2536710000 |

Accessories

| | Type | Order No. |
|------------------------------------|-----------------|-------------------|
| External backup and restore module | EBR-Modul RS232 | 1241430000 |
| 19" Rack Mounting Kit | RM-KIT | 1241440000 |

WLAN antennas and connection cables, see chapter H.

Active components

Overview of accessories

| | | |
|--|--|------|
| Accessories – Active components | Introduction – Accessories – Active components | H.2 |
| | SFP transceiver (for use with switches of Eco-, Advanced-, Substation and BasicLine series B) | H.4 |
| | 10 Gigabit Ethernet SFP+ transceiver (for use with switches of SubstationLine) | H.7 |
| | SFP transceiver (for use with switches of Basic- Value- and PremiumLine) | H.8 |
| | Configuration backup and restore module (for use with switches of Value- and PremiumLine such as Basic- and ValueLine WLAN devices) | H.9 |
| | Configuration backup and restore module (for use with switches of Advanced- and SubstationLine) | H.10 |
| | WLAN antennas and connection cables | H.11 |
| | Mobile radio antennas and connection cables | H.15 |
| | Combined antenna (mobile radio/WLAN) | H.18 |
| | Antenna mounting | H.19 |
| | Mounting kit for 19" rack | H.20 |

Easy assembly, configuration and operation

Our accessories for active Industrial Ethernet solutions

Industrial Ethernet connection solutions from Weidmüller are versatile and can be precisely matched to the infrastructure of your machine, system or factory. In order to guarantee optimum functionality, we provide you with all the connection technology from a single source. We also offer a wide range of accessories for your active Industrial Ethernet components.

Configuration module

To quickly back up, restore and load configurations, we recommend our configuration module. It supports you in performing reconfigurations for replacement devices, thereby minimising your downtimes.

SFP transceivers

Our SFP transceivers give you more flexibility in your choice of transmission media. We offer you a broad selection – for transmission speeds up to 10 Gbit/s and distances up to 60 km. The modules support digital diagnostic monitoring (DDM) for the easy monitoring of the transceiver status.

Antennas and antenna accessories

In order to use radio products in different environments, external antennas and antenna cables are often required. The various antennas are optimised for the respective applications and can be quickly attached with the appropriate mounting material.

19" mounting kit

For our Industrial Ethernet components, we also offer a mounting kit as an alternative for the installation of DIN rail-based components in 19" racks.

Individual solutions

In addition to our line of accessories, we provide you with a wide range of products and services for custom connection solutions. This also includes our assembly service, which supports you in mastering even the most complex cabling tasks.



Fast Ethernet SFP transceiver (for use with switches of Eco-, Advanced-, Substation and BasicLine series B)

Fast Ethernet SFP transceiver

- IEEE 802.3u compliant
- Class 1 laser product; EN 60825-1 compliant
- Pluggable during operation (hot pluggable)
- Supports DDM (Digital Diagnostic Monitoring)



Technical data

| Fibre optic transceiver characteristics | | | |
|---|-----------------|------------------|------------------|
| | IE-SFP-1FE-MM-2 | IE-SFP-1FE-SM-30 | IE-SFP-1FE-SM-60 |
| | 2682450000 | 2682460000 | 2682470000 |
| Transmission speed | 100 Mbit/s | 100 Mbit/s | 100 Mbit/s |
| Digital Diagnostic Monitor function (DDM) | Supported | Supported | Supported |
| Transceiver Type | Multimode | Singlemode | Singlemode |
| Connector type | LC-Duplex | LC-Duplex | LC-Duplex |
| Fiber Cable Type | OM1, OM2 | G.652 | G.652 |
| Typical Distance | 2 km, 4 km | 30 km | 60 km |
| Wavelength typ (nm) | 1310 | 1310 | 1310 |
| Wavelength (TX) range (nm) | 1270 to 1380 | 1280 to 1340 | 1280 to 1340 |
| Wavelength (RX) range (nm) | 1260 to 1620 | 1260 to 1620 | 1260 to 1620 |
| Optical Power (TX) range (dBm) | -14 to -20 | -8 to -15 | 0 to -5 |
| Optical Power (RX) range (dBm) | -3 to -32 | -3 to -34 | -3 to -34 |
| Link-Budget (dB) | 12 | 19 | 29 |

Note: When connecting a single-mode fiber transceiver over a short distance, we recommend using an attenuator to prevent the transceiver from being damaged by excessive optical power.

| Power supply | |
|------------------------------|------------------------------|
| Voltage supply | 3.3 V (via Ethernet switch) |
| Physical characteristics | |
| Type of mounting | Insert in SFP slot |
| Weight | 17.5 g |
| Environmental conditions | |
| Operating temperature | -40 to 85 °C (-40 to 185 °F) |
| Storage temperature | -40 to 85 °C (-40 to 185 °F) |
| Humidity | 5 to 95 % (non-condensing) |
| EMC conformity and approvals | |
| EMC standards | EN 55032, EN 55035 |
| Safety standard | UL 62368-1 |
| Guarantee | |
| Time interval | 3 years |

| Ordering Information | | |
|---|------------------|------------|
| Version | Model Type | Order No. |
| SFP Transceiver, 100 Mbit/s, Multimode, LC-Duplex, 4 km, -40 °C...85 °C | IE-SFP-1FE-MM-2 | 2682450000 |
| SFP Transceiver, 100 Mbit/s, Singlemode, LC-Duplex, 30 km, -40 °C...85 °C | IE-SFP-1FE-SM-30 | 2682450000 |
| SFP Transceiver, 100 Mbit/s, Singlemode, LC-Duplex, 60 km, -40 °C...85 °C | IE-SFP-1FE-SM-60 | 2682470000 |

Gigabit Ethernet SFP transceiver

- IEEE 802.3z compliant
- Class 1 laser product; EN 60825-1 compliant
- Pluggable during operation (hot pluggable)
- Supports DDM (Digital Diagnostic Monitoring)



Technical data

Fibre optic transceiver characteristics

| | IE-SFP-1GE-MM-05 | IE-SFP-1GE-MM-2 | IE-SFP-1GE-SM-10 | IE-SFP-1GE-SM-40 | IE-SFP-1GE-SM-10-BiDi-TX1310 | IE-SFP-1GE-SM-10-BiDi-TX1550 | IE-SFP-1GE-SM-20-BiDi-TX1310 | IE-SFP-1GE-SM-20-BiDi-TX1550 |
|---|------------------|-----------------|------------------|------------------|------------------------------|------------------------------|------------------------------|------------------------------|
| Transmission speed | 1000 Mbit/s | 1000 Mbit/s | 1000 Mbit/s | 1000 Mbit/s | 1000 Mbit/s | 1000 Mbit/s | 1000 Mbit/s | 1000 Mbit/s |
| Digital Diagnostic Monitor function (DDM) | Supported | Supported | Supported | Supported | Supported | Supported | Supported | Supported |
| Transceiver Type | Multimode | Multimode | Singlemode | Singlemode | Singlemode BiDi | Singlemode BiDi | Singlemode BiDi | Singlemode BiDi |
| Connector type | LC-Duplex | LC-Duplex | LC-Duplex | LC-Duplex | LC-Simplex | LC-Simplex | LC-Simplex | LC-Simplex |
| Fiber Cable Type | OM1, OM2 | OM1, OM2 | G.652 | G.652 | G.652 | G.652 | G.652 | G.652 |
| Typical Distance | 275 m, 550 m | 2 km | 10 km | 40 km | 10 km | 10 km | 20 km | 20 km |
| Wavelength typ (nm) | 850 | 1310 | 1310 | 1310 | RX 1550 / TX 1310 | RX 1310 / TX 1550 | RX 1550 / TX 1310 | RX 1310 / TX 1550 |
| Wavelength (TX) range (nm) | 830 to 870 | 1270 to 1355 | 1280 to 1365 | 1280 to 1350 | 1270 to 1355 | 1510 to 1570 | 1270 to 1355 | 1510 to 1570 |
| Wavelength (RX) range (nm) | 770 to 870 | 1260 to 1620 | 1260 to 1620 | 1260 to 1610 | 1470 to 1600 | 1250 to 1380 | 1470 to 1600 | 1250 to 1380 |
| Optical Power (TX) range (dBm) | -3 to -9 | -1 to -9 | -3 to -9 | +3 to -3 | -3 to -9 | -3 to -9 | -2 to -8 | -2 to -8 |
| Optical Power (RX) range (dBm) | -3 to -18 | -1 to -19 | -3 to -20 | -3 to -24 | -3 to -20 | -3 to -20 | -3 to -23 | -3 to -23 |
| Link-Budget (dB) | 9 | 10 | 11 | 21 | 11 | 11 | 15 | 15 |

Power supply

Voltage supply 3.3 V (via Ethernet switch)

Physical characteristics

Type of mounting Insert in SFP slot

Weight 17.5 g

Environmental condition

Operating temperature -40 to 85 °C (-40 to 185 °F)

Storage temperature -40 to 85 °C (-40 to 185 °F)

Humidity 5 to 95 % (non-condensing)

EMC conformity and approvals

EMC standards EN 55032, EN 55035

Safety standard UL 62368-1

Guarantee

Time interval 3 years

Note 1: When connecting a single-mode fiber transceiver over a short distance, we recommend using an attenuator to prevent the transceiver from being damaged by excessive optical power.

Note 2: BiDi-SFP transceivers must be used in pairs' (e.g. IE-SFP-1GE-SM-10-BiDi-TX1310 and IE-SFP-1GE-SM-10-BiDi-TX1550 or IE-SFP-1GE-SM-20-BiDi-TX1310 and IE-SFP-1GE-SM-20-BiDi-TX1550).

Ordering Information

| Version | Model Type | Order No. |
|--|------------------------------|------------|
| SFP Transceiver, 1000 Mbit/s, Multimode, LC-Duplex, 0.5 km, -40 °C...85 °C | IE-SFP-1GE-MM-05 | 2682480000 |
| SFP Transceiver, 1000 Mbit/s, Multimode, LC-Duplex, 2 km, -40 °C...85 °C | IE-SFP-1GE-MM-2 | 2682490000 |
| SFP Transceiver, 1000 Mbit/s, Singlemode, LC-Duplex, 10 km, -40 °C...85 °C | IE-SFP-1GE-SM-10 | 2682500000 |
| SFP Transceiver, 1000 Mbit/s, Singlemode, LC-Duplex, 40 km, -40 °C...85 °C | IE-SFP-1GE-SM-40 | 2682510000 |
| SFP Transceiver, 1000 Mbit/s, Singlemode BiDi, LC-Simplex, 10 km, -40 °C...85 °C | IE-SFP-1GE-SM-10-BiDi-TX1310 | 2682520000 |
| SFP Transceiver, 1000 Mbit/s, Singlemode BiDi, LC-Simplex, 10 km, -40 °C...85 °C | IE-SFP-1GE-SM-10-BiDi-TX1550 | 2682530000 |
| SFP Transceiver, 1000 Mbit/s, Singlemode BiDi, LC-Simplex, 20 km, -40 °C...85 °C | IE-SFP-1GE-SM-20-BiDi-TX1310 | 2682540000 |
| SFP Transceiver, 1000 Mbit/s, Singlemode BiDi, LC-Simplex, 20 km, -40 °C...85 °C | IE-SFP-1GE-SM-20-BiDi-TX1550 | 2682550000 |

Gigabit Ethernet RJ45 SFP transceiver (for use with switches of Eco-, Advanced-, Substation and BasicLine series B)**RJ45 Gigabit Ethernet SFP transceiver**

- IEEE 802.3-2002 and IEEE 802.3ab compliant
- 10/100/1000BASE-T operation in host system with SGMII interface
- RJ-45 connector
- Pluggable during operation (hot pluggable)

**Technical data**

| Transceiver characteristics | |
|---|--|
| Transmission rate | 10/100/1000 MBit/s |
| Digital Diagnostic Monitor function (DDM) | Not supported |
| Connector type | RJ45 |
| Typical Distance | 100 m |
| Note: 10/100/1000BASE T operation requires the host system to have an SGMII interface with no clocks, and the SFP copper module PHY Interface to be configured by the host system. With a SERDES interface that does not support SGMII, the module will operate at 1000BASE T only. | |
| Power supply | |
| Voltage supply | 3.3 V (via Ethernet switch) |
| Interfaces | |
| RJ45 ports | 10/100/1000BaseT(X), auto negotiation, Full-duplex mode, Auto MDI/MDI-X port |
| Physical characteristics | |
| Type of mounting | Insert in SFP slot |
| Weight | 18 g |
| Environmental conditions | |
| Operating temperature | -40 to 85 °C (-40 to 185 °F) |
| Storage temperature | -40 to 85 °C (-40 to 185 °F) |
| Humidity | 5 to 95 % (non-condensing) |
| EMC conformity and approvals | |
| EMC standards | EN 55032, EN 55035 |
| Safety standard | UL 62368-1 |
| Guarantee | |
| Time interval | 3 years |

Ordering Information

| Version | Model Type | Order No. |
|---|-----------------|-------------------|
| SFP Transceiver, 10/100/1000 MBit/s, RJ45, 0.1 km, -40 °C...85 °C | IE-SFP-1GE-RJ45 | 2766120000 |

10 Gigabit Ethernet SFP+ transceiver

- IEEE 802.3ae compliant
- Class 1 laser product; EN 60825-1 compliant
- Pluggable during operation (hot pluggable)
- Supports DDM (Digital Diagnostic Monitoring)

**Technical data**

| Fibre optic transceiver characteristics | | | |
|---|---------------------------------|---------------------------------|---------------------------------|
| | IE-SFP-10GE-MM-03 2779110000 | IE-SFP-10GE-SM-20 2779120000 | IE-SFP-10GE-SM-40 2779130000 |
| Transmission speed | 10 Gbit/s | 10 Gbit/s | 10 Gbit/s |
| Digital Diagnostic Monitor function (DDM) | Supported | Supported | Supported |
| Transceiver Type | Multimode | Singlemode | Singlemode |
| Connector type | LC-Duplex | LC-Duplex | LC-Duplex |
| Fiber Cable Type | OM1, OM2, OM3 | G.652 | G.652 |
| Typical Distance | 33 m, 82 m, 300 m | 20 km | 40 km |
| Wavelength typ (nm) | 850 | 1310 | 1550 |
| Wavelength (TX) range (nm) | 840 to 860 | 1260 to 1355 | 1530 to 1565 |
| Wavelength (RX) range (nm) | 840 to 860 | 1260 to 1600 | 1250 to 1600 |
| Optical Power (TX) range (dBm) | -1 to -6.5 | 0.5 to -4 | 4 to -4.7 |
| Optical Power (RX) range (dBm) | -1 to -9.9 | 0.5 to -15 | -1 to -15.8 |
| Link-Budget (dB) | 3.4 | 11 | 11.1 |

Note: When connecting a single-mode fiber transceiver over a short distance, we recommend using an attenuator to prevent the transceiver from being damaged by excessive optical power.

| Power supply | |
|------------------------------|------------------------------|
| Voltage supply | 3.3 V (via Ethernet switch) |
| Physical characteristics | |
| Type of mounting | Insert in SFP slot |
| Weight | 17.5 g |
| Environmental conditions | |
| Operating temperature | -40 to 85 °C (-40 to 185 °F) |
| Storage temperature | -40 to 85 °C (-40 to 185 °F) |
| Humidity | 5 to 95 % (non-condensing) |
| EMC conformity and approvals | |
| EMC standards | EN 55032, EN 55035 |
| Safety standard | UL 62368-1 |
| Guarantee | |
| Time interval | 3 years |

Ordering Information

| Version | Model Type | Order No. |
|--|-------------------|------------|
| SFP+ Transceiver, 10 Gbit/s, Multimode, LC-Duplex, 0.3 km, -40 °C..85 °C | IE-SFP-10GE-MM-03 | 2779110000 |
| SFP+ Transceiver, 10 Gbit/s, Singlemode, LC-Duplex, 20 km, -40 °C..85 °C | IE-SFP-10GE-SM-20 | 2779120000 |
| SFP+ Transceiver, 10 Gbit/s, Singlemode, LC-Duplex, 40 km, -40 °C..85 °C | IE-SFP-10GE-SM-40 | 2779130000 |

SFP transceiver (for use with switches of Basic- Value- and PremiumLine)

Gigabit Ethernet SFP-Transceiver

- Supports DDM (Digital Diagnostic Monitoring)
- IEEE 802.3z-conform
- Symmetric LVPECL inputs and outputs
- TTL signal detection indicator
- Pluggable during operation (hot pluggable)
- Class 1 laser product; EN 60825-1-conform



Fast Ethernet SFP-Transceiver

- Supports DDM (Digital Diagnostic Monitoring)
- IEEE 802.3u-conform
- Symmetric PECL inputs and outputs
- TTL signal detection indicator
- Pluggable during operation (hot pluggable)
- Class 1 laser product; EN 60825-1-conform



Technical data

| Interfaces | | | | | | |
|-----------------------------|------------------|-----------------------------------|-------|--------------|------|--------------|
| Fibre-optic ports | | 100BaseSFP (LC-duplex connection) | | | | |
| Specification optical fiber | | | | | | |
| | | 1000BaseSFP | | | | |
| | | SFP-SX | | SFP-LX | | SFP-LHX |
| Transceiver Type | | Multi-Mode | | Multi-Mode | | Single-Mode |
| Fiber Cable Type | | OM1 | OM2 | OM1 | OM2 | G.652 |
| Typical Distance | | 300 m | 550 m | 1 km | 2 km | 10 km |
| Wave-length | Typical (nm) | 850 | | | | |
| | TX Range (nm) | 830 to 860 | | 1270 to 1355 | | 1280 to 1355 |
| | RX Range (nm) | 770 to 860 | | 1260 to 1610 | | 1260 to 1610 |
| Optical Power | TX Range (dBm) | -4 to -9.6 | | -1 to -9 | | -3 to -9 |
| | RX Range (dBm) | 0 to -18 | | -1 to -19 | | -3 to -21 |
| | Link-Budget (dB) | 8.5 | | 10 | | 12 |
| Dispersion Penalty (dB) | | 4.3 | 3.6 | 5 | 5 | 1 |

Note: When connecting a single-mode fiber transceiver over a short distance, we recommend using an attenuator to prevent the transceiver from being damaged by excessive optical power.

| Power consumption | max. 1 Watt |
|------------------------------|---|
| Environmental Limits | |
| Operating temperature | Standard Models: 0 to 60 °C (32 to 140 °F) Wide Temp. Models: -40 to 75 °C (-40 to 167 °F) |
| Storage Temperature | -40 to 85 °C (-40 to 185 °F) |
| Ambient Relative Humidity | 5 to 95 % (non-condensing) |
| EMC conformity and approvals | |
| Safety standard | UL 62368-1, EN 62368-1, EN 60825-1 |
| EMC standards | EN 55032, EN 55035 |
| Maritime | DNV |
| Warranty | |
| Warranty Period | 5 years |

| Ordering data | | | |
|---|-----------------|-----------------------|------------|
| SFP Variants | Type | Operating Temperature | Order No. |
| Gigabit-Ethernet, Multimode, LC-duplex connection, 500 m | IE-SFP-1GSXLC | 0 to +60 °C | 1241490000 |
| Gigabit-Ethernet, Multimode, LC-duplex connection, 2 km | IE-SFP-1GLSXLCT | -40 to 85 °C | 1286700000 |
| Gigabit-Ethernet, Singlemode, LC-duplex connection, 10 km | IE-SFP-1GLXLC | 0 to +60 °C | 1241510000 |
| Gigabit-Ethernet, Singlemode, LC-duplex connection, 40 km | IE-SFP-1GLHXLCT | -40 to 85 °C | 1286720000 |
| Gigabit-Ethernet, Multimode, LC-duplex connection, 500 m | IE-SFP-1GLSXLCT | -40 to 85 °C | 1241500000 |
| Gigabit-Ethernet, Singlemode, LC-duplex connection, 40 km | IE-SFP-1GLHXLCT | -40 to 85 °C | 1286730000 |

Technical data

| Interfaces | | | |
|-----------------------------|------------------|-----------------------------------|-------|
| Fibre-optic ports | | 100BaseSFP (LC-duplex connection) | |
| Specification optical fiber | | | |
| | | 100BaseSFP | |
| | | SFP-M | SFP-S |
| Transceiver Type | | Multi-Mode | |
| Fiber Cable Type | | OM1/OM2 | G.652 |
| Typical Distance | | 2 km | 40 km |
| Wave-length | Typical (nm) | 1300 | |
| | TX Range (nm) | 1280 to 1340 | |
| | RX Range (nm) | 1100 to 1600 | |
| Optical Power | TX Range (dBm) | -8 to -18 | |
| | RX Range (dBm) | -3 to -32 | |
| | Link-Budget (dB) | 14 | |
| Dispersion Penalty (dB) | | 2 | 1 |

Note: When connecting a single-mode fiber transceiver over a short distance, we recommend using an attenuator to prevent the transceiver from being damaged by excessive optical power.

| Power consumption | max. 1 Watt |
|------------------------------|------------------------------------|
| Environmental Limits | |
| Operating temperature | -40 to 85 °C (-40 to 185 °F) |
| Storage Temperature | -40 to 85 °C (-40 to 185 °F) |
| Ambient Relative Humidity | 5 to 95 % (non-condensing) |
| EMC conformity and approvals | |
| Safety standard | UL 62368-1, EN 62368-1, EN 60825-1 |
| EMC standards | EN 55032, EN 55035 |
| Maritime | DNV |
| Warranty | |
| Warranty Period | 5 years |

| Ordering data | | | |
|--|-----------------|-----------------------|------------|
| Port Variants | Type | Operating Temperature | Order No. |
| Fast Ethernet, Multimode, LC-duplex connection, 4 km | IE-SFP-1FEMLC-T | -40 to +85 °C | 1241450000 |
| Fast Ethernet, Singlemode, LC-duplex connection, 40 km | IE-SFP-1FESLC-T | -40 to +85 °C | 1241470000 |

Module for saving and loading a device configuration

- Reduce system downtime by simple reconfiguration in case of replacing devices
- Automatic loading of the saved configuration possible after device restart
- Compact, rugged, reliable design
- For use with switches of Value- and PremiumLine such as Basic- and ValueLine WLAN devices

Technical data

| | |
|-------------------------------------|--|
| Basic Operation | |
| Connection type | |
| Physical characteristics | |
| Housing main material | |
| Type of fixing | |
| Cable length | |
| Protection degree | |
| Dimensions H x W x D | |
| Environmental conditions | |
| Operating temperature | |
| Humidity | |
| EMC conformity and approvals | |
| EMC standards | |
| Approvals | |
| Note | |

Ordering data

| | |
|-------------|--|
| Note | |
|-------------|--|

EBR-MODULE RS232



| | |
|-------------------------------------|---|
| Basic Operation | |
| Connection type | RJ45-Port, RS232 |
| Physical characteristics | |
| Housing main material | PVC casting |
| Type of fixing | M4 screw (< 4 mm) |
| Cable length | 0.35 m |
| Protection degree | IP40 |
| Dimensions H x W x D | 12 / 32.5 / 97 mm |
| Environmental conditions | |
| Operating temperature | 0 °C...60 °C |
| Humidity | 5 to 95 % (non-condensing) |
| EMC conformity and approvals | |
| EMC standards | FCC Part 15, CISPR (EN55022) Class A, EN 61000-4-2 (ESD), Stage 2, EN 61000-4-3 (RS), Stage 3, EN 61000-4-4 (EFT), Stage 3, EN 61000-4-5 (surge voltage), Stage 3, EN 61000-4-6 (CS), Stage 3 |
| Approvals | CE, UKCA |
| Note | |

| Type | Qty. | Order No. |
|------------------|------|------------|
| EBR-MODULE RS232 | 1 | 1241430000 |
| Note | | |

Configuration backup and restore module (for use with switches of Advanced- and SubstationLine)

Module for saving and loading a device configuration

- Reduce system downtime by simple reconfiguration in case of replacing devices
- 2 storage spaces selectable via DIP switch
- Compact, rugged, reliable design
- For use with switches of Advanced- and SubstationLine

IE-EBR-MODULE-RS232-ALM



Technical data

Interfaces

Function DIP switch

Function start button

LED indicator

Power supply

Connection type

Current consumption

Voltage supply

Physical characteristics

Housing main material

Cable length

Protection degree

Dimensions H x W x D

Environmental conditions

Operating temperature

Humidity

Operating altitude

EMC conformity and approvals

EMC standards

Free fall

Shock

Safety standard

Vibration

Approvals

MTBF

Operating time (hours), min.

According to Standard

Note

Ordering data

Note

1x for selection of the configuration storage space (A or B), 1x for selection between upload or download of a configuration

Starts the upload or download of a configuration

power, data transmitting, transmission status

RJ45

0.14A @ 5V

5 V DC (via RS-232 RTS signal of serial console port)

PC molding

210 mm

IP40

14.5 / 32 / 90.25 mm

-10 °C...60 °C

5 to 95 % (non-condensing)

≤ 2000 m

EN 55032, EN 55024, FCC Part 15 Subpart B Class A, IEC 61000-4-2

ESD: Contact: 4 kV; Air: 8 kV, IEC 61000-4-3 RS: 80 MHz bis 1 GHz:

3 V/m

According to IEC 60068-2-31

according to IEC 60068-2-27

UL 61010-1, UL 61010-2-201

according to IEC 60068-2-6

CE; CULUS; UKCA

6645051h

Telcordia SR-332

| Type | Qty. | Order No. |
|-------------------------|------|------------|
| IE-EBR-MODULE-RS232-ALM | 1 | 2682610000 |

WLAN antennas

IE-ANT-P-ABG-75-9-NF



Technical data

| |
|---------------------------------|
| Version |
| Product type |
| 3dB beamwidth (horizontal) |
| 3dB beamwidth (vertical) |
| Radiation |
| Type of connection |
| Antenna gain |
| Frequency range |
| Impedance |
| Composite power max. |
| Vertical electrical tilt |
| Polarisation |
| Standing wave ratio |
| front-to-back ratio |
| Physical characteristics |
| Colour |
| Housing main material |
| Operating temperature |
| Dimensions H x W x D |
| Applications |
| Wind load |
| Included in delivery |
| Included in delivery |
| Note |

| |
|--|
| Dual Band (2.4 GHz / 5 GHz), Gain 9 dBi |
| WLAN antenna, Directional antenna |
| Band 1: 75°, Band 2: 55° |
| Band 1: 55°, Band 2: 55° |
| Directional |
| 1x N-type female, bottom |
| Band 1: 9 dBi, Band 2: 9 dBi |
| Band 1: 2400 - 2500 (MHz), Band 2: 5150 - 5875 (MHz) |
| 50 Ω |
| 10 W |
| Band 1: 0°, Band 2: 0° |
| Vertical |
| < 2 |
| Band 1: 15 dB, Band 2: 15 dB |
| grey |
| PC |
| -40 °C...80 |
| 80 / 101 / 35 mm |
| for indoor and outdoor use |
| Frontal, Lateral, 7 N, @ 160 Km/h |
| 1 x antenna, 1 x wall mounting |

Ordering data

| |
|-------------|
| Note |
|-------------|

| Type | Qty. | Order No. |
|----------------------|------|------------|
| IE-ANT-P-ABG-75-9-NF | 1 | 1367140000 |



WLAN antennas and connection cables

WLAN antennas

IE-ANT-WL-DB-MIMO-DO-RPSMAM

IE-ANT-WL-DB-SISO-LO-NF



Technical data

| | |
|---|--|
| Technical data | |
| Version | |
| Product type | |
| Type of connection | |
| Antenna gain | |
| Amount of antenna elements (MIMO) | |
| Frequency range | |
| Impedance | |
| Composite power max. | |
| Polarisation | |
| Standing wave ratio | |
| Mechanical characteristics cable | |
| Min. bending radius, repetitive | |
| Cable length | |
| Physical characteristics | |
| Colour | |
| Material for base plate | |
| Operating temperature | |
| Height | |
| Diameter | |
| Included in delivery | |
| Included in delivery | |
| Note | |

| | | |
|---|--|--|
| Technical data | | |
| Version | | Wi-Fi antenna, Up to Wi-Fi 6 & 6E (IEEE802.11ax) |
| Product type | | Omni-directional antenna |
| Type of connection | | 2x RP-SMA male |
| Antenna gain | | 1.5 dBi, 0.5 dBi |
| Amount of antenna elements (MIMO) | | 2 |
| Frequency range | | 2.3-2.8 GHz, 4.9-7.125 GHz |
| Impedance | | 50 Ω |
| Composite power max. | | 25 W |
| Polarisation | | Linear, Vertical |
| Standing wave ratio | | < 2.0 typical, 2.5 max. |
| Mechanical characteristics cable | | |
| Min. bending radius, repetitive | | 25 mm |
| Cable length | | 1 m |
| Physical characteristics | | |
| Colour | | white |
| Material for base plate | | UV-stable rugged thermoplastics |
| Operating temperature | | -40 °C...80 °C |
| Height | | 67 mm |
| Diameter | | 137 mm |
| Included in delivery | | |
| Included in delivery | | 1 x antenna |
| Note | | |

| | | |
|---|--|--|
| Technical data | | |
| Version | | Wi-Fi antenna, Up to Wi-Fi 6 & 6E (IEEE802.11ax) |
| Product type | | Omni-directional antenna |
| Type of connection | | N female |
| Antenna gain | | 3 dBi, 4 dBi |
| Amount of antenna elements (MIMO) | | |
| Frequency range | | 2.4-2.5 GHz, 4.9-6.425 GHz |
| Impedance | | 50 Ω |
| Composite power max. | | 100 W |
| Polarisation | | Vertical |
| Standing wave ratio | | <2.0 typical, 3.5 max. |
| Mechanical characteristics cable | | |
| Min. bending radius, repetitive | | |
| Cable length | | |
| Physical characteristics | | |
| Colour | | black |
| Material for base plate | | |
| Operating temperature | | -40 °C...85 °C |
| Height | | 45.7 mm |
| Diameter | | 36.2 mm |
| Included in delivery | | |
| Included in delivery | | 1 x antenna |
| Note | | |

Ordering data

| | |
|----------------------|--|
| Ordering data | |
| Note | |

| Type | Qty. | Order No. |
|-----------------------------|------|------------|
| IE-ANT-WL-DB-MIMO-DO-RPSMAM | 1 | 2788070000 |

| Type | Qty. | Order No. |
|-------------------------|------|------------|
| IE-ANT-WL-DB-SISO-LO-NF | 1 | 2788110000 |

WLAN antennas

IE-ANT-WL-DB-MIMO-PD-RPSMAM



Technical data

| | |
|---|--|
| Version | Wi-Fi antenna, Up to Wi-Fi 6 & 6E (IEEE802.11ax) |
| Product type | Semi-directional antenna |
| Type of connection | 4x RP-SMA male |
| Antenna gain | 6 dBi, 5 dBi |
| Amount of antenna elements (MIMO) | 4 |
| Frequency range | 2.3-2.8 GHz, 4.9-7.125 GHz |
| Impedance | 50 Ω |
| Composite power max. | 20 W |
| Polarisation | +/- 45° linear |
| Standing wave ratio | <2.0 typical, 2.5 max. |
| Mechanical characteristics cable | |
| Cable length | 0.78 m |
| Physical characteristics | |
| Colour | white |
| Operating temperature | -40 °C...70 °C |
| Height | 34 mm |
| Width | 198 mm |
| Wind load | 200 km/h |
| Included in delivery | |
| Included in delivery | 1 x antenna |
| Note | |

Ordering data

| Type | Qty. | Order No. |
|-----------------------------|------|------------|
| IE-ANT-WL-DB-MIMO-PD-RPSMAM | 1 | 2788080000 |
| Note | | |



WLAN antennas and connection cables

Connection cable WLAN antennas

IE-CC-NM-RPSMAM



IE-CC-RPSMAM-RPSMAF



Technical data

| |
|---|
| Type of connection |
| Electrical characteristics cable |
| Attenuation at 2.4 GHz |
| Attenuation at 2000 MHz |
| Attenuation at 5 GHz |
| Attenuation at 800 MHz |
| Mechanical characteristics cable |
| Min. bending radius, repetitive |
| Sheathing colour |
| UV-resistant |
| Material sheath |
| Physical characteristics |
| Operating temperature |
| Note |

| |
|---|
| Connection 1:, N male, Connection 2:, RP-SMA male |
| 0.62 dB/m |
| 0.56 dB/m |
| 0.94 dB/m |
| 0.34 dB/m |
| 25 mm |
| black |
| Yes |
| PVC |
| -40 °C...85 °C |
| Note |

| |
|--|
| Connection 1:, RP-SMA male, Connection 2:, RP-SMA female |
| 0.62 dB/m |
| 0.56 dB/m |
| 0.94 dB/m |
| 0.34 dB/m |
| 25 mm |
| black |
| Yes |
| PVC |
| -40 °C...85 °C |
| Note |

Ordering data

| | |
|-------------|--|
| | |
| 1.0 m | |
| 2.0 m | |
| 3.0 m | |
| 4.0 m | |
| 5.0 m | |
| Note | |

| Type | Qty. | Order No. |
|--------------------|------|------------|
| IE-CC-NM-RPSMAM-1M | 1 | 2788040000 |
| IE-CC-NM-RPSMAM-2M | 1 | 1367110000 |
| IE-CC-NM-RPSMAM-3M | 1 | 2788050000 |
| IE-CC-NM-RPSMAM-4M | 1 | 1367100000 |
| IE-CC-NM-RPSMAM-5M | 1 | 2788060000 |
| Note | | |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-CC-RPSMAM-RPSMAF-1M | 1 | 2787950000 |
| IE-CC-RPSMAM-RPSMAF-3M | 1 | 2787960000 |
| IE-CC-RPSMAM-RPSMAF-5M | 1 | 2787970000 |
| Note | | |

Mobile radio antenna

IE-ANT-CELL-MIMO-DO-SMAM



Technical data

| | |
|---|---------------------------------|
| Version | Cellular antenna, Up to 5G (NR) |
| Product type | Omni-directional antenna |
| Type of connection | 2x SMA male |
| Antenna gain | 2.5 dBi |
| Amount of antenna elements (MIMO) | 2 |
| Frequency range | 690-950 MHz, 1.7-3.8 GHz |
| Impedance | 50 Ω |
| Composite power max. | 50 W |
| Polarisation | Linear, Vertical |
| Standing wave ratio | < 2.0 typical, 3.0 max. |
| Mechanical characteristics cable | |
| Min. bending radius, repetitive | 25 mm |
| Cable length | 1 m |
| Physical characteristics | |
| Colour | black |
| Operating temperature | -40 °C...85 °C |
| Height | 100 mm |
| Included in delivery | |
| Included in delivery | 1 x antenna |
| Note | |

Ordering data

| Type | Qty. | Order No. |
|--------------------------|------|------------|
| IE-ANT-CELL-MIMO-DO-SMAM | 1 | 2788120000 |
| Note | | |

Mobile radio antennas and connection cables

Mobile radio antenna

IE-ANT-CELL-SISO-E0-SMAM

IE-ANT-CELL-SISO-LO-NF



Technical data

| | |
|---------------------------------|--|
| Version | |
| Product type | |
| Type of connection | |
| Antenna gain | |
| Frequency range | |
| Impedance | |
| Composite power max. | |
| Polarisation | |
| Standing wave ratio | |
| Physical characteristics | |
| Colour | |
| Operating temperature | |
| Height | |
| Included in delivery | |
| Included in delivery | |
| Note | |

| |
|---|
| Cellular antenna, Up to 5G (support for frequencies below 2.7 GHz, e.g., bands n1, n2, n28) |
| Omni-directional antenna |
| SMA male |
| 2 dBi |
| 690-950 MHz, 1.7-3.8 GHz |
| 50 Ω |
| 10 W |
| Vertical |
| 1.5 typical / 2.0 max |
| black |
| -40 °C...75 °C |
| 208 mm |
| 1 x antenna |

| |
|---------------------------------|
| Cellular antenna, Up to 5G (NR) |
| Omni-directional antenna |
| N female |
| 3 dBi |
| 690-950 MHz, 1.7-3.8 GHz |
| 50 Ω |
| 150 W |
| Vertical |
| < 2.0 typical, 2.5 max. |
| black |
| -40 °C...70 °C |
| 89 mm |
| 1 x antenna |

Ordering data

| |
|-------------|
| Note |
|-------------|

| Type | Qty. | Order No. |
|--------------------------|------|------------|
| IE-ANT-CELL-SISO-E0-SMAM | 1 | 2788130000 |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-ANT-CELL-SISO-LO-NF | 1 | 2788150000 |

Connection cable mobile radio antenna

IE-CC-NM-SMAM

IE-CC-SMAM-SMAF



Technical data

| |
|---|
| Type of connection |
| Electrical characteristics cable |
| Attenuation at 2.4 GHz |
| Attenuation at 2000 MHz |
| Attenuation at 5 GHz |
| Attenuation at 800 MHz |
| Mechanical characteristics cable |
| Min. bending radius, repetitive |
| Sheathing colour |
| UV-resistant |
| Material sheath |
| Physical characteristics |
| Operating temperature |
| Note |

| |
|--|
| Connection 1.; N male, Connection 2.; SMA male |
| 0.62 dB/m |
| 0.56 dB/m |
| 0.94 dB/m |
| 0.34 dB/m |
| 25 mm |
| black |
| Yes |
| PVC |
| -40 °C...85 °C |

| |
|--|
| Connection 1.; SMA male, Connection 2.; SMA female |
| 0.62 dB/m |
| 0.56 dB/m |
| 0.94 dB/m |
| 0.34 dB/m |
| 25 mm |
| black |
| Yes |
| PVC |
| -40 °C...85 °C |

Ordering data

| | |
|-------------|-------|
| | 1.0 m |
| | 2.0 m |
| | 3.0 m |
| | 4.0 m |
| | 5.0 m |
| | 6.0 m |
| Note | |

| Type | Qty. | Order No. |
|------------------|------|------------|
| IE-CC-NM-SMAM-1M | 1 | 2788010000 |
| IE-CC-NM-SMAM-2M | 1 | 1491180000 |
| IE-CC-NM-SMAM-3M | 1 | 2788020000 |
| IE-CC-NM-SMAM-4M | 1 | 1491190000 |
| IE-CC-NM-SMAM-5M | 1 | 2788030000 |
| IE-CC-NM-SMAM-6M | 1 | 1491210000 |

| Type | Qty. | Order No. |
|--------------------|------|------------|
| IE-CC-SMAM-SMAF-1M | 1 | 2787920000 |
| IE-CC-SMAM-SMAF-3M | 1 | 2787930000 |
| IE-CC-SMAM-SMAF-5M | 1 | 2787940000 |

Combined antenna (mobile radio / WLAN)

Combined antenna (mobile radio / WLAN)

IE-ANT-CELL/WL-MB-MIMO-DO



Technical data

| | |
|--|---|
| Version | Cellular antenna, Wi-Fi antenna, Up to 5G (NR), Up to Wi-Fi 6 & 6E (IEEE802.11ax) |
| Product type | Omni-directional antenna |
| Type of connection | 2x SMA male, 2x RP-SMA male |
| Antenna gain | 2.5 dBi, 3-4 dBi |
| Amount of antenna elements (MIMO) | 2 |
| Frequency range | 690-950 MHz, 1.7-3.8 GHz, 2.4-2.5 GHz, 4.9-7.125 GHz |
| Impedance | 50 Ω |
| Composite power max. | 50 W |
| Polarisation | Linear, Vertical |
| Standing wave ratio | < 2.0 typical, 3.5 max. |
| Mechanical characteristics cable | |
| Min. bending radius, repetitive | 25 mm |
| Cable length | 1 m |
| Physical characteristics | |
| Colour | white |
| Operating temperature | -40 °C...85 °C |
| Height | 90 mm |
| Diameter | 132 mm |
| Included in delivery | |
| Included in delivery | 1 x antenna |
| Note | |

Ordering data

| Type | Qty. | Order No. |
|---------------------------|------|------------|
| IE-ANT-CELL/WL-MB-MIMO-DO | 1 | 2788090000 |
| Note | | |

Antenna mounting

IE-ANT-MOUNT-PANEL

IE-ANT-MOUNT-POLE-NF



Technical data

| Physical characteristics |
|--------------------------|
| Colour |
| Housing main material |
| Height |
| Note |

| |
|-----------|
| silver |
| Aluminium |
| 138 mm |
| |

| |
|-----------|
| silver |
| Aluminium |
| 108 mm |
| |

Ordering data

| |
|------|
| |
| Note |

| Type | Qty. | Order No. |
|--------------------|------|------------|
| IE-ANT-MOUNT-PANEL | 1 | 2789830000 |
| | | |

| Type | Qty. | Order No. |
|----------------------|------|------------|
| IE-ANT-MOUNT-POLE-NF | 1 | 2788470000 |
| | | |



Mounting kit for 19" rack

Kit for 19" rack-mounting

- For mounting DIN-rail based devices in 19" racks

RM-KIT



Technical data

Dimensions H x W x D

177.8 / 481 / 202.4 mm

Note

Ordering data

Note

| Type | Qty. | Order No. |
|--------|------|------------|
| RM-KIT | 1 | 1241440000 |

Passive components

Introduction

| | | |
|--|--|------|
| Introduction – Passive components | IE-line connectors | 1.2 |
| | Differences between industrial and office Ethernet | 1.4 |
| | PROFINET and SERCOS III cabling solutions | 1.6 |
| | EtherNet/IP cabling solutions | 1.10 |

IE-LINE plug-in connectors

Clever and flexible with **STEADYTEC**[®] technology



STEADYTEC[®] – this name stands for the future of connection technology in the field of data and signal transmissions. Established market leaders in the industry, **STEADYTEC**[®] forms the foundation for reliable, application-orientated, standards-compliant solutions - for offices through to areas with harsh industrial conditions.

The objective: The development of reliable plug-in connector technologies for industrial applications. Technologies that satisfy the highest customer demands and hence enable new, specialised and dependable solutions.

The result: An extremely reliable, extraordinarily practical, flexible and especially efficient plug-in connector system for office and industrial applications. And using products whose characteristics accurately reflect the values originally laid out:

- fast
- reliable
- solution-based
- simple

The Ethernet connector system: clever – flexible

Connectors for modern industrial applications need to be designed in such a way that they simplify processes and cope with faster data transmission. Weidmüller's Ethernet connectors keep you a step ahead. These products are not only ready for 10 gigabit, they are also standardised for IEC 61076-3-106 and IEC 61076-3-117. In addition, the connector variants 4 (Ethernet TCP/IP), variants 5 and 1 (Ethernet IP) and variant 14 (PROFINET/AIDA) which are named in these standards are all specified as mandatory in the standards covering generic cabling systems for industrial premises: ISO/IEC 24702, IEC 61918 (Automation Island), as well as for Fieldbus installations IEC 61784-5. What's more, you have a unique choice of versions made of plastic or metal as well as inserts for copper and fibre-optic cabling. All of the connectors are designed for ease of use and for quick on-site assembly. They are also modular and can be tailored to suit your application.





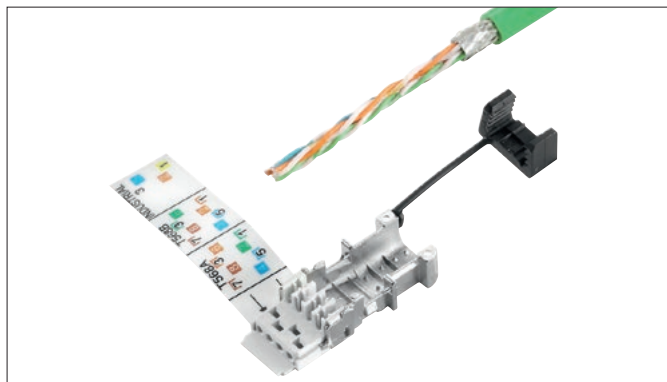
Tool-free assembly and powerful connections: the RJ45 gigabit connector!

You can now securely plug the connector you need directly into your machinery with very little effort – and without a single tool! The 10-gigabit connector, with IDC-connection, was developed to provide quick, simple, secure and, most importantly, tool-free wiring.

In addition, zinc die-casting makes the connector more robust and therefore suitable for industrial applications and as it is fitted with a protected locking clip means it is suitable for meeting the requirements of harsh industrial environments. Weidmüller's IE product line fulfils the requirements for 10 GBit Ethernet, according to IEEE 802.3an, up to 500 MHz.

STEADYTEC®: Systematic benefits

- **Cat. 6A 10 GBit System Class E_A**
- **Assembly without tools in the field**
- **Countless variations thanks to highly diverse combinations of inserts**
- **Unrestricted compatibility because standardised to IEC 61076-3-106**
- **Reliable and long-lasting thanks to use of diecast zinc**
- **Suitable for industry thanks to IP67 class of protection**
- **Simple ordering procedure and low storage costs thanks to Weidmüller's modular system**



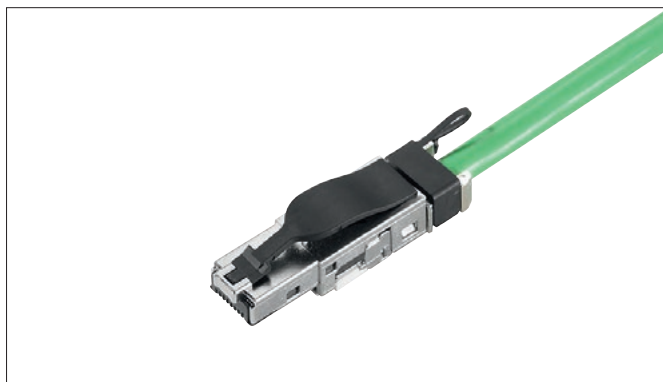
1. Strip sheath cladding and shorten shield to 5 mm



2. Prepare wires and shorten



3. Snap together the two pluggable elements

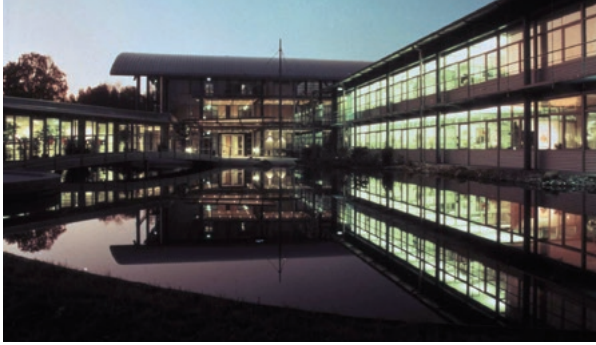


4. Finished

From office communication to Industrial Ethernet

An overview of the differences

Office Ethernet



Industrial Ethernet



Cabling

- Fixed building installation
- Variable connection options
- Pre-assembled connection cables
- Star topology most widely in use

- Individual plant-influenced networks
- Robust component characteristics
- On-site, user assembly connections
- Redundant network topologies (ring)

Transmission

- Large volume of data
- Mid-level network availability
- Mostly only acyclical transmission
- No real-time characteristics required for standard applications

- Small data packets (measurement values)
- Very high network availability
- Extremely high real-time requirement
- Mostly cyclical transmission

Surroundings

- No extreme conditions

- Extreme temperatures
- Dust, dirt, splashing water, oils gases,
- Vibration, electromagnetic fields
- Risks of danger and damage from mechanical or chemical influences

Customised cabling solutions for PROFINET and SERCOS III

Weidmüller’s cabling products enable you to create a specific infrastructure that meets all the requirements of PROFINET and SERCOS III.

The cabling components for copper and fibre-optic cables are designed and tested for use in harsh industrial conditions. Interoperability in the system is assured by the PROFINET and SERCOS cabling guidelines that specifically prescribe the interfaces to be used. For PROFINET this is guaranteed through the manufacturer’s declaration.

Comprehensive protection against disturbance by electromagnetic fields is achieved through the use of high quality shielding of the cables and the related connection components. Significant system reserves are offered through the star quad design of the cables and their wire cross-section of AWG 22. Stable real-time transmission is guaranteed, for applications such as PROFINET IRT or SERCOS III typical hardware synchronisation, by the low signal transmission time differences resulting from the cable construction. At the same time the cables offer high crush resistance for reliable installation in industrial applications.

The cabling components are also remarkably easy to handle when out in the field. The plug-in connectors for copper and fibre-optic can all be assembled on-site. This reduces installation time, reduces errors and simplifies maintenance.



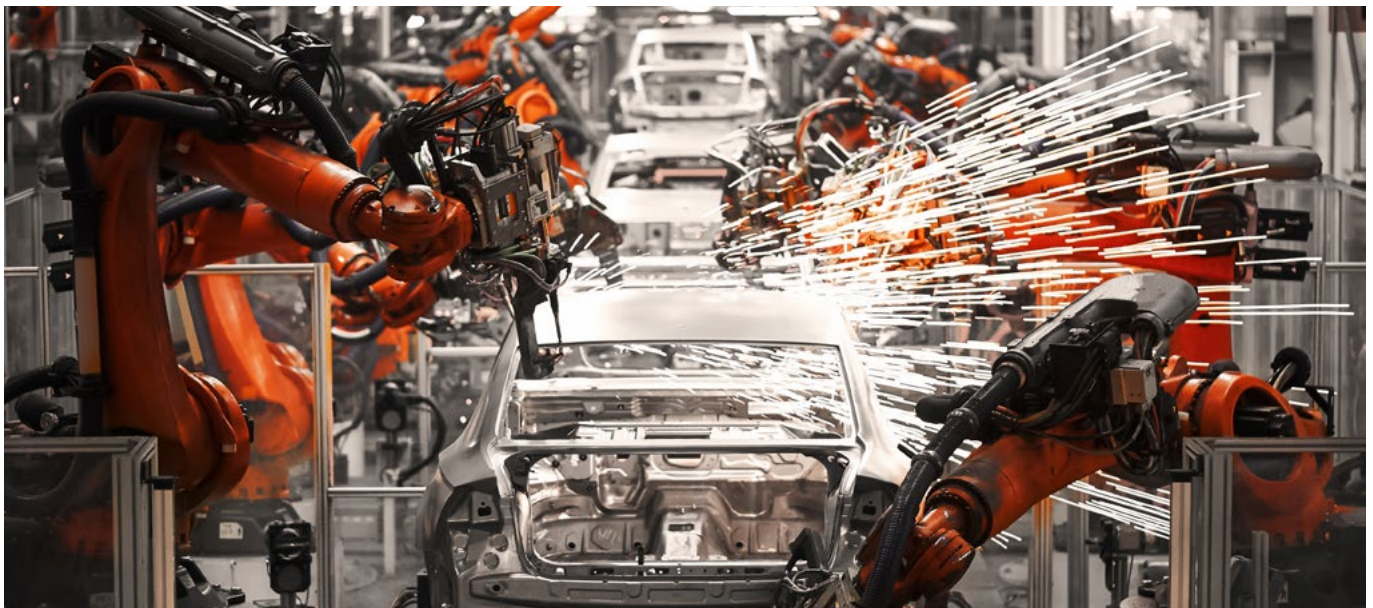
Profile specific guidelines for the connection components

Cable:

- Quad-star design of AWG 22

Connector:

- IP20 RJ45
- IP20 SC-RJ
- IP67 PushPull RJ45
- IP67 PushPull Power
- IP67 PushPull SC-RJ
- IP67 M12 D-coding



Weidmüller offers you a wide range of cabling solutions for PROFINET and SERCOS III applications. IP20 plug-in connectors for copper and fibre-optic cables are also included as well as IP67 plug-in connectors and junction

boxes for the toughest requirements. The components are designed to be used together from the floor distributors down to the machines.

IP20
plug-in connector



IP67
plug-in connectors data / power



IP67
connection components



IP20
assembled cables



IP20
mounting rail outlets



IP67
flanges data / power



IP67
assembled RJ45 cables



IP65
service interfaces



IP67
plug-in M12 connectors



IP67
assembled M12 cables



Raw cable
copper and fibre-optic



Selection table

Ideal combinations



sercos
the automation bus

IP20 plug-in connector



| Description | Type | Order No. |
|---|------------------------|------------|
| RJ45 tool-free PROFINET printing | IE-PS-RJ45-FH-BK-P | 1132060000 |
| RJ45 tool-free angled Profinet printing | IE-PS-RJ45-FH-90-P-1.6 | 1518100000 |
| SC-RJ for POF fibres 1 mm | IE-PS-SCRJ1-POF | 1206720000 |
| SC-RJ for POF fibres 1 mm reconnectable | IE-PS-SCRJ1-POF-QA | 2564950000 |

IP20 assembled data cables



| Description | Type | Order No. |
|--|-------------------------|------------|
| RJ45 patch cable PVC type B - 1 m | IE-C5DS4VG0010A60A60-E | 1522100010 |
| RJ45 patch cable PVC type B - 3 m | IE-C5DS4VG0030A60A60-E | 1522100030 |
| RJ45 patch cable PVC type B - 5 m | IE-C5DS4VG0050A60A60-E | 1522100050 |
| RJ45 patch cable PVC type B - 10 m | IE-C5DS4VG0100A60A60-E | 1522100100 |
| SC-RJ zipcord patch cable - POF - 1 m | IE-FPOZ2EE0001MSJOSJO-X | 1273430010 |
| SC-RJ zipcord patch cable - POF - 3 m | IE-FPOZ2EE0003MSJOSJO-X | 1273430030 |
| SC-RJ zipcord patch cable - POF - 5 m | IE-FPOZ2EE0005MSJOSJO-X | 1273430050 |
| SC-RJ zipcord patch cable - POF - 10 m | IE-FPOZ2EE0010MSJOSJO-X | 1273430100 |

Further PROFINET cables - SERCOS III cables can be found in Chapter L

IP20 mounting rail outlets



| Description | Type | Order No. |
|--------------------------------|-----------------|------------|
| RJ45 coupling | IE-TO-RJ45-C | 8946920000 |
| RJ45 coupling low profile | IE-TO-RJ45-C-LP | 2812440000 |
| RJ45 module PROFINET printing | IE-TO-RJ45-FJ-P | 8946950000 |
| SC-RJ POF coupling / multimode | IE-TO-SCRJ-MMM | 8946990000 |
| SC-RJ singlemode coupling | IE-TO-SCRJ-SM | 8947000000 |

IP65 service interface



| Beschreibung | Type | Order No. |
|---|------------------|------------|
| FrontCom® Micro RJ45 coupling | IE-FCM-RJ45-C | 1018790000 |
| FrontCom® Micro RJ45 module PROFINET printing | IE-FCM-RJ45-FJ-P | 1018830000 |

IP67 flange data



| Description | Type | Order No. |
|---|------------------------|------------|
| PushPull standard flange RJ45 coupling | IE-BSS-V14M-RJ45-C | 1012310000 |
| PushPull central cable gland RJ45 coupling | IE-BSC-V14M-RJ45-C | 1058250000 |
| PushPull standardised flange RJ45 module PROFINET printing | IE-BSS-V14M-RJ45-FJ-P | 1085260000 |
| PushPull standardised flange hybrid (Q10) 10-pole module without contacts | IE-BSS-V14M-HYB-10P-FJ | 1072900000 |
| Contacts for Hybrid (Q10) module 0.5 mm ² - 0.75 mm ² VPE 300 | IE-BIC-HYB-P-0,75-300 | 1068970000 |
| Contacts for Hybrid (Q10) module 0.2 mm ² - 0.5 mm ² VPE 300 | IE-BIC-HYB-P-0,5-300 | 1096150000 |
| PushPull standardised flange SC-RJ coupling POF / multimode | IE-BSS-V14M-SCRJ-MM-C | 1058120000 |
| PushPull standardised flange SC-RJ coupling singlemode | IE-BSS-V14M-SCRJ-SM-C | 1058140000 |
| PushPull central cable gland SC-RJ coupling POF / multimode | IE-BSC-V14M-SCRJ-MM-C | 1062590000 |
| PushPull central cable gland SC-RJ coupling singlemode | IE-BSC-V14M-SCRJ-SM-C | 1062600000 |
| PushPull device flange | IE-BHD-V14M | 1047940000 |

other inserts can be found in Chapter J

IP67 Power connectors




| Description | Type | Order No. |
|---|----------------------|------------|
| PushPull Power with 24 V / 16 A use | IE-PS-VAPM-5P-2.5 | 2465440000 |
| PushPull Power with 24 V / 16 A use with SNAP IN connection | IE-PS-VAPM-5P-2.5-QT | 2912590000 |

IP67 flange power




| Description | Type | Order No. |
|---|-----------------|------------|
| PushPull Power standardised flange with 24 V / 16 A use | IE-BSS-VAPM-24V | 2493480000 |
| PushPull Power device flange | IE-BHD-VAPM | 2493490000 |

IP67 data connectors

| | Description | Type | Order No. |
|---|--|-----------------------|------------|
|  | PushPull RJ45 tool-free module PROFINET printing | IE-PS-V14M-RJ45-FH-P | 1012170000 |
| | PushPull RJ45 Crimp PROFINET | IE-PS-V14M-RJ45-TH-P | 2768740000 |
| | PushPull Hybrid (Q10) 10-pole without contacts | IE-PS-V14M-HYB-10P | 1072910000 |
| | PushPull SC-RJ POF 1 mm | IE-PS-V14M-2SC-POF | 1191550000 |
| | PushPull SC-RJ POF 1 mm reconnectable | IE-PS-V14M-2SC-POF-QA | 2568260000 |


IP67 assembled data cables

| | Description | Type | Order No. |
|---|---|------------------------|------------|
|  | PushPull RJ45 patch cable PUR - Type C - 1 m | IE-C5DD4UG0010A2EA2E-X | 1119730010 |
| | PushPull RJ45 patch cable PUR - Type C - 3 m | IE-C5DD4UG0030A2EA2E-X | 1119730030 |
| | PushPull RJ45 patch cable PUR - Type C - 5 m | IE-C5DD4UG0050A2EA2E-X | 1119730050 |
| | PushPull RJ45 patch cable PUR - Type C - 10 m | IE-C5DD4UG0100A2EA2E-X | 1119730100 |
| Further PROFINET cables - SERCOS III cables can be found in Chapter L | | | |


IP67 plug connector M12 D-coded and X-Type

M 12 components can be found in Chapter J


IP65 connection components

| | Description | Type | Order No. |
|---|---|---------------------------|------------|
|  | FreeCon passive double junction box RJ45/Power | IE-CD-V14MRJ/VAPM24V-FJ | 1068830000 |
| | FreeCon passive single junction box RJ45 | IE-CD-V14MRJ-FJ | 1068880000 |
| | FreeCon passive single junction box Hybrid (Q10) without contacts | IE-CD-V14MHYB-10P-FJ | 1068850000 |
| | FreeCon passive double coupling RJ45/Power | IE-CD-V14MRJ/VAPM24V-C-MA | 1068820000 |
| | FreeCon passive single coupling RJ45 | IE-CD-V14MRJ-C-MA | 1068870000 |
| | FreeCon passive single coupling hybrid (Q10) | IE-CD-V14MHYB-10P-C-MA | 1068840000 |
| | FreeCon PushPull Power Y-distributor | IE-CD-VAPM24V-Y-MA | 1297010000 |
| | FreeCon PushPull Power single coupling | IE-CD-VAPM24V-C-MA | 1397690000 |
| | FreeCon passive single coupling SCRJ | IE-CD-V14MSCRJ-MM-C-MA | 1318150000 |


Media converter / repeater (only for PROFINET)

| | Description | Type | Order No. |
|---|---|----------------------------|------------|
|  | FreeCon active FO PROFINET repeater II | IE-CDR-V14MSCPOF/VAPM-C II | 2456360000 |
| | FreeCon active FO PROFINET media converter II | IE-CDM-V14MRJSCP/VAPM-C II | 2588270000 |
| | FreeCon active PROFINET copper repeater | IE-CDR-V14MRJ/VAPM-C | 2581810000 |

Raw cable copper cable

| | Description | Type | Order No. |
|---|--|----------------|------------|
|  | 100 m ring installation cable PVC type A | IE-C5AS4VG-100 | 8899000000 |
| | 500 m ring installation cable PVC type A | IE-C5AS4VG-500 | 2763430000 |
| | 100 m ring connection cable PVC type B | IE-C5DS4VG-100 | 8898990000 |
| | 500 m ring connection cable PVC type B | IE-C5DS4VG-500 | 2763470000 |
| | 100 m ring dragline cable PUR type C | IE-C5DD4UG-100 | 8899010000 |
| | 500 m ring dragline cable PUR type C | IE-C5DD4UG-500 | 2763450000 |
| | 500 m ring Torsion cable PUR type C | IE-C5IT4UG-500 | 2763520000 |
| | 500 m ring hybrid cable PVC | IE-C5DHAG-500 | 2763460000 |

Raw cable fibre-optic cable

| | Description | Type | Order No. |
|---|---|----------------|------------|
|  | 500 m ring POF breakout cable 2X980/1000 µm TPE | IE-FPOD2UG-500 | 2763640000 |
| | 500 m ring POF mini breakout cable 2X980/1000 µm PE | IE-FPOB2EG-500 | 2781950000 |

Customised cabling solutions for Ethernet/IP

The wiring guidelines for EtherNet/IP clearly define the interfaces to be used to ensure interoperability in EtherNet/IP systems.

Weidmüller offers all the cabling products needed to build a requirement specific infrastructure which is tailored to the needs of EtherNet/IP.

The wiring components for copper and fibre-optic cables are designed and tested for use in harsh industrial environments. The user is provided with clear guidelines about the requirements of the components for use in industrial environments with the introduction of the MICE classification (EtherNet/IP Media Planning and Installation Manual).

The high-quality shielding of the cables and connection components offers comprehensive protection against electromagnetic interference.

The cables are 8-wire twisted-pair cables for RJ45 or star quad for use in M12.

The cabling components are also easy to handle in the field. The plug-in connectors for copper and fibre optic cables can all be assembled on-site. This reduces installation time, reduces errors and simplifies maintenance.

The connectors wire/pin assignment is either according to TIA568-A or TIA568-B as required. The connectors and modules are marked accordingly, making them easier to connect.



Profile specific guidelines for the connection components

Cable:

- 8-wire twisted-pair shielded cables

Connector:

- IP20 RJ45
- IP20 SC-RJ
- IP67 bayonet RJ45
- IP67 M12 D-coding



Weidmüller offers you a wide range of cabling solutions for EtherNet/IP applications. IP20 plug-in connectors for copper and fibre-optic cables are available, as well as IP67 connectors and junction boxes for the most exacting

requirements. The components are designed to be used together from the floor distributors down to the machines.

IP20
plug-in connector



IP67
plug-in connectors data



IP67
connection components



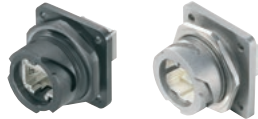
IP20
assembled cables



IP20
mounting rail outlets



IP67
flanges data / power



IP67
assembled RJ45 cables



IP65
service interfaces



IP67
plug-in M12 connectors



IP67
assembled M12 cables



Raw cable
copper and fibre-optic



Selection table

Ideal combinations for a perfect fit



IP20 plug-in connector



| Description | Type | Order No. |
|-------------------------------|--------------------|------------|
| RJ45 crimp | IE-PS-RJ45-TH-BK | 1963590000 |
| RJ45 tool-free TIA-A printing | IE-PS-RJ45-FH-BK-A | 1132040000 |
| RJ45 tool-free TIA-B printing | IE-PS-RJ45-FH-BK-B | 1132050000 |
| SC-RJ for 1 mm POF fibres | IE-PS-SCRJ1-POF | 1206720000 |

IP20 assembled data cables



| Description | Type | Order No. |
|---|-------------------------|------------|
| RJ45 patch cables - see CabinetLine | | |
| SC-RJ zipcord patch cable - POF - 1 m | IE-FPOZ2EE0001MSJOSJO-X | 1273430010 |
| SC-RJ zipcord patch cable - POF - 3 m | IE-FPOZ2EE0003MSJOSJO-X | 1273430030 |
| SC-RJ zipcord patch cable - POF - 5 m | IE-FPOZ2EE0005MSJOSJO-X | 1273430050 |
| SC-RJ zipcord patch cable - POF - 10 m | IE-FPOZ2EE0010MSJOSJO-X | 1273430100 |
| Other EtherNet/IP cables available on request | | |

IP20 mounting rail outlets



| Description | Type | Order No. |
|--------------------------------|----------------|------------|
| RJ45 coupling | IE-TO-RJ45-C | 8946920000 |
| RJ45 Module TIA-A printing | IE-TO-RJ45-FJA | 8946930000 |
| RJ45 Module TIA-B printing | IE-TO-RJ45-FJB | 8946940000 |
| SC-RJ POF coupling / multimode | IE-TO-SCRJ-MMM | 8946990000 |
| SC-RJ singlemode coupling | IE-TO-SCRJ-SM | 8947000000 |

IP65 service interface



| Description | Type | Order No. |
|--|-----------------|------------|
| FrontCom® Micro RJ45 coupling | IE-FCM-RJ45-C | 1018790000 |
| FrontCom® Micro RJ45 module TIA-A printing | IE-FCM-RJ45-FJA | 1018810000 |
| FrontCom® Micro RJ45 module TIA-B printing | IE-FCM-RJ45-FJB | 1018820000 |

IP67 flange data



| Description | Type | Order No. |
|---|---------------------|------------|
| Bayonet flange metal RJ45 coupling | IE-BS-V01M-RJ45-C | 1963470000 |
| Bayonet flange metal RJ45 module TIA-A printing | IE-BS-V01M-RJ45-FJA | 1963480000 |
| Bayonet flange plastic RJ45 coupling | IE-BS-V01P-RJ45-C | 1012370000 |
| Bayonet flange metal RJ45 module TIA-A printing | IE-BS-V01P-RJ45-FJA | 1012380000 |
| Bayonet flange metal SC-RJ POF / multimode | IE-BS-V01M-SCRJ-MM | 1221010000 |
| Bayonet flange metal SC-RJ singlemode | IE-BS-V01M-SCRJ-SM | 1221020000 |
| Other inserts can be found in Chapter J | | |

IP67 data connectors



| Description | Type | Order No. |
|-------------------------------------|--------------------|------------|
| Bayonet plug metal RJ45 crimped | IE-PS-V01M-RJ45-TH | 1963140000 |
| Bayonet plug metal RJ45 tool-free | IE-PS-V01M-RJ45-FH | 1963120000 |
| Bayonet plug plastic RJ45 crimped | IE-PS-V01P-RJ45-TH | 1012470000 |
| Bayonet plug plastic RJ45 tool-free | IE-PS-V01P-RJ45-FH | 1012490000 |
| Bayonet plug metal SC-RJ use POF | IE-PS-V01M-2SC-POF | 1963280000 |

IP67 assembled data cables



| Description | Type | Order No. |
|---|------------------------|------------|
| Bayonet metal RJ45 patch cable PUR 1 m | IE-C5ES8UG0010B41B41-E | 1066850000 |
| Bayonet metal RJ45 patch cable PUR 2 m | IE-C5ES8UG0020B41B41-E | 1066860000 |
| Bayonet metal RJ45 patch cable PUR 5 m | IE-C5ES8UG0050B41B41-E | 1066870000 |
| Bayonet metal RJ45 patch cable PUR 10 m | IE-C5ES8UG0100B41B41-E | 1066880000 |
| Bayonet plastic RJ45 patch cable PUR 1 m | IE-C5ES8UG0010P41P41-E | 1106010000 |
| Bayonet plastic RJ45 patch cable PUR 2 m | IE-C5ES8UG0020P41P41-E | 1106020000 |
| Bayonet plastic RJ45 patch cable PUR 5 m | IE-C5ES8UG0050P41P41-E | 1106030000 |
| Bayonet plastic RJ45 patch cable PUR 10 m | IE-C5ES8UG0100P41P41-E | 1106040000 |

Other EtherNet/IP cables available on request

IP67 plug-in M12 connectors

M 12 components can be found in Chapter J

IP65 connection components



| Description | Type | Order No. |
|------------------------------|----------------|------------|
| Single junction box, plastic | IE-OP-V01P-1S | 1061830000 |
| Plastic cable coupling | IE-CC-V01P | 1061820000 |
| RJ45 module TIA-A printing | IE-BI-RJ45-FJA | 1962850000 |
| RJ45 module TIA-B printing | IE-BI-RJ45-FJB | 1963840000 |

Raw cable copper cable



| Description | Type | Order No. |
|---|----------------|------------|
| 100 m ring installation cable PVC Cat. 5 SF/UTP | IE-C5CS8VG-100 | 8813150000 |
| 500 m ring installation cable PVC Cat. 5 SF/UTP | IE-C5CS8VG-500 | 2763440000 |
| 100 m ring installation cable PUR Cat. 5 SF/UTP | IE-C5CS8UG-100 | 8813160000 |
| 500 m ring installation cable PUR Cat. 5 SF/UTP | IE-C5CS8UG-500 | 2762870000 |
| 100 m ring connection cable PVC Cat. 5 SF/UTP | IE-C5ES8VG-100 | 8813190000 |
| 500 m ring connection cable PVC Cat. 5 SF/UTP | IE-C5ES8VG-500 | 2763510000 |
| 100 m ring connection cable PUR Cat. 5 SF/UTP | IE-C5ES8UG-100 | 8813200000 |
| 500 m ring connection cable PUR Cat. 5 SF/UTP | IE-C5ES8UG-500 | 2763500000 |

Other EtherNet/IP cables available on request

Raw cable fibre-optic cable



| Description | Type | Order No. |
|---|----------------|------------|
| 500 m ring POF breakout cable 2X980/1000 µm TPE | IE-FPOD2UG-500 | 2763640000 |
| 500 m ring POF mini breakout cable 2X980/1000 µm PE | IE-FPOB2EG-500 | 2781950000 |



Single Pair Ethernet (SPE)

| | | |
|----------------------------|-----------------------|------|
| Single Pair Ethernet (SPE) | Overview | J.2 |
| | Assembled cables IP20 | J.8 |
| | Assembled cables IP67 | J.9 |
| | Raw cable | J.11 |
| | Connection components | J.13 |

Single Pair Ethernet

The network infrastructure for Industrial IIoT

J

In the factory of the future, machines and systems will be connected to each other consistently via a data infrastructure. These cyber-physical systems can act independently in the Industrial Internet of Things (IIoT), communicate in real time, and control production processes. In order to enable this, a continuous network with high-performance data connections from the sensor to the cloud is required. This pushes conventional Ethernet systems to their limits.

Single Pair Ethernet (SPE) facilitates the extension of the Ethernet to the sensor. It is compact, flexible, and enables high ranges. This means that data connections are achievable in situations where conventional Ethernet systems have reached their limits. SPE provides for the extension of existing installations and supports consistent communication based on the Ethernet protocol. Indeed, SPE is considered by Weidmüller as the missing component needed to close the current gap in the supply of standard Ethernet at field level.

SPE runs at the same transmission speeds as conventional Ethernet but with simplified 2-wire cabling technology and data lines up to 1,000 m in length. Together with other new technologies such as TSN, OPC-UA, or 5G, SPE enables both continuous IP communication between the server and the cloud, as well as supplying up to 60 Watts of power in complex IIoT solutions through PoDL (Power over Data Line).



Single Pair Ethernet
System Alliance

SPElink®

The Single Pair Ethernet System Alliance (SPESA) represents the future-oriented Single Pair Ethernet technology. Weidmüller is a founding member of this alliance and, together with its partners, is implementing its goals in the market in a common and holistic manner.

A new connector family has been developed for this new technology. This complies with the international IEC63171-2/-5 standard and bears the name **SPElink**® at Weidmüller.



The new standard for high demands

Single Pair Ethernet connectors for the industry

Single Pair Ethernet (SPE) connections can transfer data and power using only one twin wire. This enables both end-to-end IP communication between server and cloud, as well as power supply in complex IIoT solutions. SPE connectors therefore are particularly efficient and future-oriented.

The market requirements for data connectors in the field level are:

- Smallest, most compact design possible for implementing IIoT devices
- High robustness for use in industrial environments
- Easy to connect for safe, fast installation
- Future-proof design through international standards

Advantages of SPE connectors at a glance:

Miniaturisation

Industrial suitability

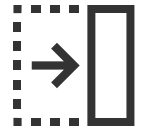


Simplicity

Future-proof

Particularly compact

Miniaturisation of Single Pair Ethernet connectors according to IEC 63171-2



J

Weidmüller has been developing user-friendly connectors for industrial use, according to IEC63171-2. With a pitch of 7.62mm the compact connector system saves up to 50% space in comparison to RJ45 interfaces. The vertical arrangement of the two contacts allows a very high packing density. This enables device manufacturers to save valuable space on the PCB and to build smaller devices. This reduces port costs in device construction and effectively saves space in the control cabinet.

Small mating face

- Currently the smallest mating face according to IEC 63171 on the market

High packing density

- Double the packing density compared to RJ45 connectors
- Doubling of the interfaces with the same housing contour
- Only 20% of the volume of an RJ45 jack
- Minimum space requirement in the device

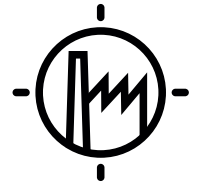
Easy IP67-integration

- Can be integrated into standard M8 housings and connectors as with I/O-Link or PROFINET
- M8 connectors with male and female contacts available
- Front and rear panel mounting with male and female contacts supported
- Simple integration in M8 sensors
- Inverse M8 system possible



Made for highest demands

The industrial suitability of Single Pair Ethernet connectors



Originally developed for automotive applications, the aim of single pair ethernet technology was to realise the most efficient infrastructure capable of delivering high performance with as little cabling as possible. There are similar expectations within industry applications and building automation where the number of intelligent end devices in the plant is increasing but the amount of available space is not. Weidmuller Single Pair Ethernet (SPE) connector solutions deliver long cable lengths, a compact design that is simple, robust and vibration-proof, as well as being insensitive to electromagnetic influences.

Mechanical robustness

- Robust metal housing with metal snap-in hooks
- Safe industrial double contacting compared to single-sided contacting RJ45
- Shock resistant and vibration resistant according to IEC 60068
- Stable latching with lateral forces

EMC Compatibility

- Coupling attenuation at 600 MHz according to IEEE 802.3
- Additional burst test according to IEC 61000-6-2
- Optimum shield connection on the PCB due to four symmetrical legs

Industrial suitability

- PCB connectors for environments up to pollution degree 2
- Impulse voltage strength of 2.25 kV according to IEEE 802.3
- Optimum contact distance for 100 Ohm systems



Easy to use

The simplicity of Single Pair Ethernet connectors



J

Ethernet technology is too complex for many industrial applications. Single Pair Ethernet (SPE) components are clearly superior due to their simplicity. Compared to four-pair Ethernet, installation is less difficult and allows a significant reduction in space and weight. SPE connectors also enable robust cabling in a short time. At the same time, they offer extended cable lengths in an extremely compact design.

Proven locking mechanism

- Industry standard plugs and sockets with metal Snap-in hooks locking
- Known locking and unlocking mechanism as for RJ45 connectors
- High holding force (> 50 N)

Tool-free installation

- Well proven IDC connection technology
- Simple assembly due to a two-part connector
- Clear colour coding to prevent miswiring
- Suitable for all commercially available SPE cables

Easy integration

- Trouble-free integration into M8 housings and connectors
- Compatibility of IP20 and IP67 variants
- Optional use of the IP20 connector as service connector for devices with M8IP67 interfaces



Ready for the challenges of tomorrow

Future-proof Single Pair Ethernet connectors



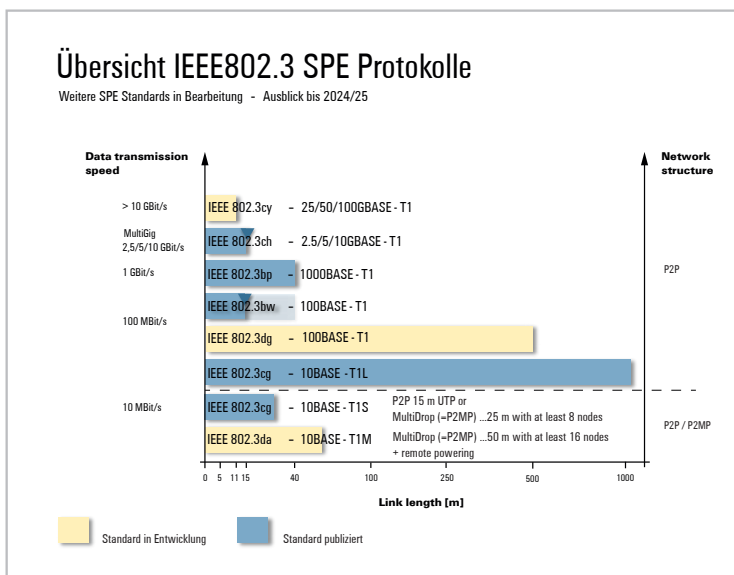
Single Pair Ethernet (SPE) is the next milestone in network technology, as it enables continuous intelligent networking across all levels. SPE is scalable, deterministic, and fully compatible, allowing all components to communicate with each other. As a comprehensive key technology for applications in the field of Industry 4.0 and IIoT, it will form the core of a wide range of industrial applications in the future.

Extensive support

The SPE product family is already supported by several well-known connector manufacturers, which have joined together to form the Single Pair Ethernet System Alliance. This collaboration, with leading technology companies from a wide range of markets and application areas, means that the level of combined technological competence will result in unprecedented and lasting benefits for all users.

Suitable for low to high transmission rates

The compact SPE interface is suitable for various Ethernet applications with transfer rates from 10 MBit/s to 1 GBit/s. Simulations confirm a bandwidth of up to 2.5 GHz – this corresponds to the new Ethernet transmission standard IEEE 802.3ch, which is currently under development for up to 10 GBit/s.



Assembled cables

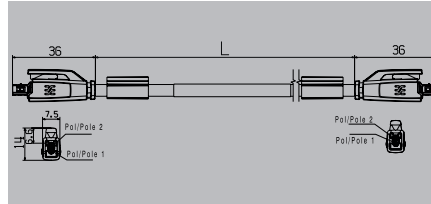
IP20

Plug - Plug

Socket contact / Socket contact



SPElink®



Technical data

| |
|---|
| Product type |
| Category |
| Shielding |
| Ambient temperature (operational) |
| Rated voltage (DC) |
| Rated current |
| PoE / PoE+ |
| Transmission rate |
| Dielectric strength, contact / contact |
| Dielectric strength, contact / shield |
| Characteristic impedance |
| Capacity at 800 Hz |
| Coupling attenuation 1 to 600 MHz |
| Coupling attenuation up to 1000 MHz |
| Test voltage: wire-wire-shield |
| Resistance differential |
| Plug left |
| Plug right |
| Number of wires |
| Colour coding |
| Complete shielding / Overlap of shielding braid |
| Insulation |
| Insulation diameter |
| Sheath diameter, min. / max. |
| Cross-section / Strands |
| Shielding |
| Material sheath |
| Colour |
| Halogen |
| UV-resistant |
| Connector standard |
| Approvals |

Note

| |
|---|
| Patch cable |
| T1-B |
| STP |
| -40...80 °C |
| 60 V |
| 3.5 A |
| PoDL acc. to IEEE 802.3bu / cg |
| 10/100 MBit/s, 1000 MBit/s |
| 1000 V DC |
| 2250 V DC |
| 100 ± 15 Ω at 20 MHz |
| 1.6 nF/km |
| Type I |
| 1 kV DC, 1 min |
| 2 % |
| SPE, IP20, female contact, straight, plug, Plastic, IEC 63171-2, shielded |
| SPE, IP20, female contact, straight, plug, Plastic, IEC 63171-2, shielded |
| 2 |
| white / blue |
| Shielding braid made from copper wiring / 80 % |
| PE |
| 1.65 mm |
| 4.9 / 5.3 mm |
| 2*AWG 22 / 7 |
| STP |
| PVC |
| black |
| Yes |
| Complies with UL 1581 Sec. 1200 |
| IEC 63171-2 |
| CE, CULUS, UKCA |

Ordering data

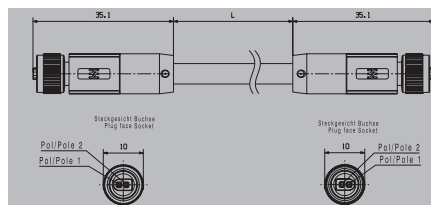
| |
|--------|
| 1.0 m |
| 2.0 m |
| 3.0 m |
| 5.0 m |
| 10.0 m |
| 15.0 m |
| 40.0 m |

Note

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-S1DS2VE0010T01T01-E | 1 | 2725850010 |
| IE-S1DS2VE0020T01T01-E | 1 | 2725850020 |
| IE-S1DS2VE0030T01T01-E | 1 | 2725850030 |
| IE-S1DS2VE0050T01T01-E | 1 | 2725850050 |
| IE-S1DS2VE0100T01T01-E | 1 | 2725850100 |
| IE-S1DS2VE0150T01T01-E | 1 | 2725850150 |
| IE-S1DS2VE0400T01T01-E | 1 | 2725850400 |

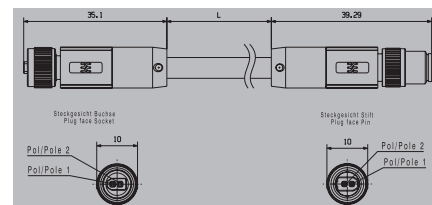
M8 plug Male / Male

Socket contact / Socket contact



M8 plug Male / Female

Socket contact / Pin contact



Technical data

| | |
|---|--|
| Product type | Patch cable |
| Category | T1-B |
| Shielding | STP |
| Ambient temperature (operational) | -40...85 °C |
| Rated voltage (DC) | 60 V |
| Rated current | 3.5 A |
| PoE / PoE+ | PoDL acc. to IEEE 802.3bu / cg |
| Transmission rate | 10/100 MBit/s, 1000 MBit/s |
| Dielectric strength, contact / contact | 1000 V DC |
| Dielectric strength, contact / shield | 2250 V DC |
| Current-carrying capacity | 3.5A @ 0°C |
| Characteristic impedance | 100 ± 15 Ω at 20 MHz |
| Capacity at 800 Hz | 1.6 nF/km |
| Coupling attenuation 1 to 600 MHz | Type I |
| Coupling attenuation up to 1000 MHz | |
| Test voltage: wire-wire-shield | 1 kV DC, 1 min |
| Resistance differential | 2 % |
| Plug left | M8, Number of poles: 2, IP67, female contact, straight, Plastic, IEC 63171-5, shielded |
| Plug right | M8, Number of poles: 2, IP67, female contact, straight, Plastic, IEC 63171-5, shielded |
| Number of wires | 2 |
| Colour coding | white / blue |
| Complete shielding / Overlap of shielding braid | Shielding braid made from copper wiring / 80 % |
| Insulation | PE |
| Insulation diameter | 1.65 mm |
| Sheath diameter, min. / max. | 4.9 / 5.3 mm |
| Cross-section / Strands | 2*AWG 22 / 7 |
| Shielding | STP |
| Material sheath | PVC |
| Colour | black |
| Halogen | Yes |
| UV-resistant | Complies with UL 1581 Sec. 1200 |
| Connector standard | IEC 63171-5 |
| Approvals | CE |
| Note | |

Ordering data

| | | |
|-------------|--------|--|
| | 2.0 m | |
| | 5.0 m | |
| | 10.0 m | |
| | 15.0 m | |
| | 20.0 m | |
| | 40.0 m | |
| Note | | |

| | |
|---|--|
| Product type | Patch cable |
| Category | T1-B |
| Shielding | STP |
| Ambient temperature (operational) | -40...85 °C |
| Rated voltage (DC) | 60 V |
| Rated current | 3.5 A |
| PoE / PoE+ | PoDL acc. to IEEE 802.3bu / cg |
| Transmission rate | 10/100 MBit/s, 1000 MBit/s |
| Dielectric strength, contact / contact | 1000 V DC |
| Dielectric strength, contact / shield | 2250 V DC |
| Current-carrying capacity | 3.5A @ 0°C |
| Characteristic impedance | 100 ± 15 Ω at 20 MHz |
| Capacity at 800 Hz | 1.6 nF/km |
| Coupling attenuation 1 to 600 MHz | Type I |
| Coupling attenuation up to 1000 MHz | |
| Test voltage: wire-wire-shield | 1 kV DC, 1 min |
| Resistance differential | 2 % |
| Plug left | M8, Number of poles: 2, IP67, female contact, straight, Plastic, IEC 63171-5, shielded |
| Plug right | M8, Number of poles: 2, IP67, male contact, straight, Plastic, IEC 63171-5, shielded |
| Number of wires | 2 |
| Colour coding | white / blue |
| Complete shielding / Overlap of shielding braid | Shielding braid made from copper wiring / 80 % |
| Insulation | PE |
| Insulation diameter | 1.65 mm |
| Sheath diameter, min. / max. | 4.9 / 5.3 mm |
| Cross-section / Strands | 2*AWG 22 / 7 |
| Shielding | STP |
| Material sheath | PVC |
| Colour | black |
| Halogen | Yes |
| UV-resistant | Complies with UL 1581 Sec. 1200 |
| Connector standard | IEC 63171-5 |
| Approvals | CE |
| Note | |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-S1DS2VE0020TM1TM1-E | 1 | 2726050020 |
| IE-S1DS2VE0050TM1TM1-E | 1 | 2726050050 |
| IE-S1DS2VE0100TM1TM1-E | 1 | 2726050100 |
| IE-S1DS2VE0150TM1TM1-E | 1 | 2726050150 |
| IE-S1DS2VE0200TM1TM1-E | 1 | 2726050200 |
| IE-S1DS2VE0400TM1TM1-E | 1 | 2726050400 |
| Note | | |

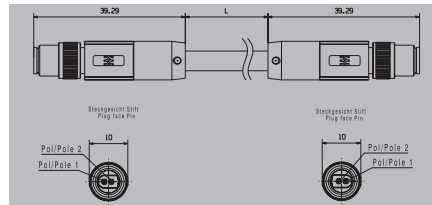
| | |
|---|--|
| Product type | Patch cable |
| Category | T1-B |
| Shielding | STP |
| Ambient temperature (operational) | -40...85 °C |
| Rated voltage (DC) | 60 V |
| Rated current | 3.5 A |
| PoE / PoE+ | PoDL acc. to IEEE 802.3bu / cg |
| Transmission rate | 10/100 MBit/s, 1000 MBit/s |
| Dielectric strength, contact / contact | 1000 V DC |
| Dielectric strength, contact / shield | 2250 V DC |
| Current-carrying capacity | 3.5A @ 0°C |
| Characteristic impedance | 100 ± 15 Ω at 20 MHz |
| Capacity at 800 Hz | 1.6 nF/km |
| Coupling attenuation 1 to 600 MHz | Type I |
| Coupling attenuation up to 1000 MHz | |
| Test voltage: wire-wire-shield | 1 kV DC, 1 min |
| Resistance differential | 2 % |
| Plug left | M8, Number of poles: 2, IP67, female contact, straight, Plastic, IEC 63171-5, shielded |
| Plug right | M8, Number of poles: 2, IP67, male contact, straight, Plastic, IEC 63171-5, shielded |
| Number of wires | 2 |
| Colour coding | white / blue |
| Complete shielding / Overlap of shielding braid | Shielding braid made from copper wiring / 80 % |
| Insulation | PE |
| Insulation diameter | 1.65 mm |
| Sheath diameter, min. / max. | 4.9 / 5.3 mm |
| Cross-section / Strands | 2*AWG 22 / 7 |
| Shielding | STP |
| Material sheath | PVC |
| Colour | black |
| Halogen | Yes |
| UV-resistant | Complies with UL 1581 Sec. 1200 |
| Connector standard | IEC 63171-5 |
| Approvals | CE |
| Note | |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-S1DS2VE0020TM1TM2-E | 1 | 2726060020 |
| Note | | |

**Assembled cables
IP67**

M8 plug Female / Female

Pin contact / Pin contact



Technical data

| |
|---|
| Product type |
| Category |
| Shielding |
| Ambient temperature (operational) |
| Rated voltage (DC) |
| Rated current |
| PoE / PoE+ |
| Transmission rate |
| Dielectric strength, contact / contact |
| Dielectric strength, contact / shield |
| Current-carrying capacity |
| Characteristic impedance |
| Capacity at 800 Hz |
| Coupling attenuation 1 to 600 MHz |
| Coupling attenuation up to 1000 MHz |
| Test voltage: wire-wire-shield |
| Resistance differential |
| Plug left |
| Plug right |
| Number of wires |
| Colour coding |
| Complete shielding / Overlap of shielding braid |
| Insulation |
| Insulation diameter |
| Sheath diameter, min. / max. |
| Cross-section / Strands |
| Shielding |
| Material sheath |
| Colour |
| Halogen |
| UV-resistant |
| Connector standard |
| Approvals |
| Note |

| |
|--|
| Patch cable |
| T1-B |
| STP |
| -40...85 °C |
| 60 V |
| 3.5 A |
| PoDL acc. to IEEE 802.3bu / cg |
| 10/100 MBit/s, 1000 MBit/s |
| 1000 V DC |
| 2250 V DC |
| 3.5A @ 0°C |
| 100 ± 15 Ω at 20 MHz |
| 1.6 nF/km |
| Type I |
| 1 kV DC, 1 min |
| 2 % |
| M8, Number of poles: 2, IP67, male contact, straight, Plastic, IEC 63171-5, shielded |
| M8, Number of poles: 2, IP67, male contact, straight, Plastic, IEC 63171-5, shielded |
| 2 |
| white / blue |
| Shielding braid made from copper wiring / 80 % |
| PE |
| 1.65 mm |
| 4.9 / 5.3 mm |
| 2*AWG 22 / 7 |
| STP |
| PVC |
| black |
| Yes |
| Complies with UL 1581 Sec. 1200 |
| IEC 63171-5 |
| CE |

Ordering data

| |
|-------------|
| 2.0 m |
| 5.0 m |
| 10.0 m |
| 15.0 m |
| 20.0 m |
| 40.0 m |
| Note |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-S1DS2VE0020TM2TM2-E | 1 | 2726070020 |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

Raw cables

- AWG 22

PUR

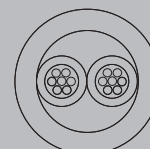
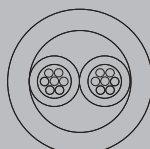
LSZH



SPElink®



SPElink®



Technical data

| |
|-----------------------------------|
| Product type |
| Category |
| Shielding |
| Cross-section |
| Sheath diameter, max. |
| Material sheath |
| Sheathing colour |
| Insulation diameter |
| Min. bending radius, repetitive |
| Min. bending radius, once only |
| Ambient temperature (operational) |
| Installation temperature |
| Storage temperature |
| Halogen |
| Resistance to spread of flame |
| Approvals |

| |
|--|
| System cable |
| T1-B |
| S/FTP |
| 1 x 2 x AWG 22/7 - 0.35 mm ² |
| 5.3 mm |
| PUR |
| black |
| 1.7 mm |
| 22 mm |
| -40 °C...80 °C |
| ... |
| halogen-free, acc. to IEC 60754-1, halogen-free, acc. to IEC 60754-2 |
| in accordance with IEC 60332-1-2 |

| |
|--|
| System cable |
| T1-B |
| S/FTP |
| 1 x 2 x AWG 22/7 - 0.35 mm ² |
| 5.1 mm |
| LSZH |
| black |
| 1.7 mm |
| 22 mm |
| -20 °C...60 °C |
| ... |
| halogen-free, acc. to IEC 60754-2, halogen-free, acc. to IEC 60754-1 |
| in accordance with IEC 60332-1-2 |

Note

Ordering data

| |
|---------|
| 100.0 m |
| 500.0 m |

| Type | Qty. | Order No. |
|----------------|------|------------|
| IE-S1DS2UE-100 | 1 | 2926110000 |
| IE-S1DS2UE-500 | 1 | 2924340000 |

| Type | Qty. | Order No. |
|----------------|------|------------|
| IE-S1DS2LE-100 | 1 | 2926120000 |
| IE-S1DS2LE-500 | 1 | 2924350000 |

Note

Accessories

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

Note

Raw cable

Raw cables

- AWG 26

PUR

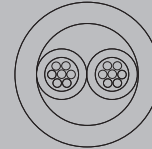
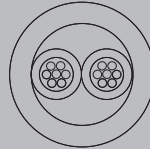
LSZH



SPElink®



SPElink®



Technical data

| |
|-----------------------------------|
| Product type |
| Category |
| Shielding |
| Cross-section |
| Sheath diameter, max. |
| Material sheath |
| Sheathing colour |
| Insulation diameter |
| Min. bending radius, repetitive |
| Min. bending radius, once only |
| Ambient temperature (operational) |
| Installation temperature |
| Storage temperature |
| Halogen |
| Resistance to spread of flame |
| Approvals |

| |
|---|
| System cable |
| T1-B |
| S/FTP |
| 1 x 2 x AWG 26/7 - 0.132 mm ² |
| 3.7 mm |
| LSZH |
| black |
| 1.15 mm |
| 56 mm |
| 28 mm |
| -20 °C...60 °C |
| ... |
| halogen-free, acc. to IEC 60754-2, halogen-free, acc. to IEC 60754-1 in accordance with IEC 60332-1-2 |

| |
|---|
| System cable |
| T1-B |
| S/FTP |
| 1 x 2 x AWG 26/7 - 0.132 mm ² |
| 4.3 mm |
| PUR |
| black |
| 1.15 mm |
| 56 mm |
| 28 mm |
| -40 °C...80 °C |
| ... |
| halogen-free, acc. to IEC 60754-1, halogen-free, acc. to IEC 60754-2 in accordance with IEC 60332-1-2 |

Note

Ordering data

| |
|-------------|
| 100.0 m |
| 500.0 m |
| Note |

| Type | Qty. | Order No. |
|----------------|------|------------|
| IE-S1ES2LE-100 | 1 | 2926140000 |
| IE-S1ES2UE-500 | 1 | 2924360000 |

| Type | Qty. | Order No. |
|----------------|------|------------|
| IE-S1ES2UE-100 | 1 | 2926130000 |
| IE-S1ES2LE-500 | 1 | 2924370000 |

Accessories

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

Note

Plug

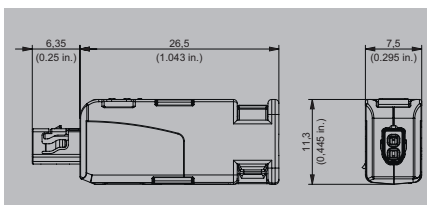
- Only one pair of wires for data and power
- Multi-port support
- IP20

Field-terminated plug IP20

Socket contact



SPElink®



Technical data

| | |
|---|--------------------------------|
| Category | T1-B |
| Protection degree | IP20 |
| Transmission rate | 10/100 MBit/s, 100 MBit/s |
| Ambient temperature (operational) | -40...85 °C |
| Plugging cycles | 750 |
| Housing main material | zinc diecast nickel-plated |
| Contact material | Bronze tin-plated |
| Contact surface | Gold-plated |
| Rated current | 4 A |
| Connection diameter, flexible, min. / max. | 0.48...0.76 mm |
| Connection cross-section, flexible, min. / max. | AWG 26...AWG 22 |
| Connection diameter, solid, min. / max. | 0.41...0.64 mm |
| Connection cross-section, solid, min. / max. | AWG 24...AWG 22 |
| Sheath diameter, min. / max. | 3.6...5.7 mm |
| Insulation cross-section, min. | 0.85 mm |
| Insulation cross-section, max. | 1.6 mm |
| Insulation strength | ≥ 500 MΩ |
| PoE / PoE+ | PoDL acc. to IEEE 802.3bu / cg |
| Dielectric strength, contact / contact | ≥ 1000 V DC |
| Dielectric strength, contact / shield | ≥ 1500 V DC |
| Connector standard | IEC 63171-2 |
| UL 94 flammability rating | V-0 |

| | |
|---|--------------------------------|
| Category | T1-B |
| Protection degree | IP20 |
| Transmission rate | 10/100 MBit/s, 100 MBit/s |
| Ambient temperature (operational) | -40...85 °C |
| Plugging cycles | 750 |
| Housing main material | zinc diecast nickel-plated |
| Contact material | Bronze tin-plated |
| Contact surface | Gold-plated |
| Rated current | 4 A |
| Connection diameter, flexible, min. / max. | 0.48...0.76 mm |
| Connection cross-section, flexible, min. / max. | AWG 26...AWG 22 |
| Connection diameter, solid, min. / max. | 0.41...0.64 mm |
| Connection cross-section, solid, min. / max. | AWG 24...AWG 22 |
| Sheath diameter, min. / max. | 3.6...5.7 mm |
| Insulation cross-section, min. | 0.85 mm |
| Insulation cross-section, max. | 1.6 mm |
| Insulation strength | ≥ 500 MΩ |
| PoE / PoE+ | PoDL acc. to IEEE 802.3bu / cg |
| Dielectric strength, contact / contact | ≥ 1000 V DC |
| Dielectric strength, contact / shield | ≥ 1500 V DC |
| Connector standard | IEC 63171-2 |
| UL 94 flammability rating | V-0 |

Note

Ordering data

| Plug | field-terminated plug |
|------|-----------------------|
|------|-----------------------|

Note

| Type | Qty. | Order No. |
|--------------------|------|------------|
| IE-PS-SPO-S-FH-180 | 1 | 2726040000 |

Accessories

| Type | Qty. | Order No. |
|------|------|-----------|
|------|------|-----------|

Note

Note

Connection components

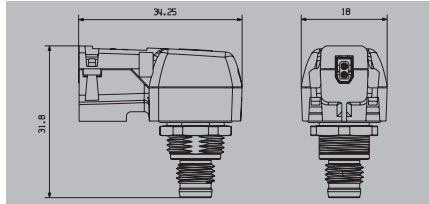
Adapter IP20 / IP65 (M8)

- Only one pair of wires for data and power

Adapter / Wall bushing



SPElink®



Technical data

| | |
|--|---|
| Category | T1-B |
| Ambient temperature (operational) | -40...85 °C |
| Protection degree | IP65 (in plugged condition) |
| Connection 1 / 2 / Connection | SPE socket acc. to IEC 63171-2 / M8 socket male contact |
| Number of poles | 2 |
| Outlet direction | Angled |
| Contact material | Cu |
| Contact surface | Ni/Au |
| Contact carrier material | |
| Operational voltage range | ≤ 50 V AC, ≤ 60 V DC |
| Rated current | 3.5 A at 0°C |
| Insulation strength | ≥ 500 MΩ |
| Dielectric strength, contact / contact | ≥ 1000 V DC |
| Dielectric strength, contact / shield | 2250 V DC |
| Connector standard | IEC 63171-2, IEC 63171-5 |
| UL 94 flammability rating | V-0 |

Note

Ordering data

Note

Accessories

| Type | Qty. | Order No. |
|----------------------|------|------------|
| IE-AD-SP0-P-SPM-P-90 | 10 | 2814400000 |

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

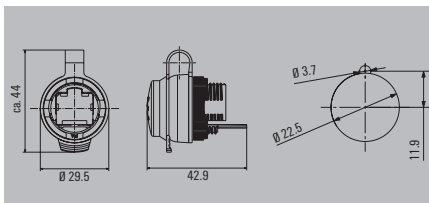
Note

FrontCom® Micro Service Interface

- Only one pair of wires for data and power

Coupling

Pin contacts



Technical data

Category
 Protection degree
 Ambient temperature (operational)
 Plugging cycles
 Housing main material
 Contact material
 Contact surface
 Rated voltage
 Rated current
 Insulation cross-section, min.
 Insulation cross-section, max.
 Insulation strength
 PoE / PoE+
 Dielectric strength, contact / contact
 Dielectric strength, contact / shield
 Connector standard
 UL 94 flammability rating

T1-B
 IP65, in closed state
 -40...70 °C
 750
 PA UL 94 V0

 Gold over nickel

 3.5 A at 0°C

 PoDL acc. to IEEE 802.3bu / cg
 ≥ 1000 V DC
 2250 V DC
 IEC 63171-2

Note

Ordering data

Coupling

Note

| Type | Qty. | Order No. |
|--------------|------|------------|
| IE-FCM-SPO-C | 10 | 2870820000 |

Accessories

Fixing tool

Marking tags

SwitchMark markers white

Holder

| Type | Qty. | Order No. |
|-------------------|------|------------|
| IE-FISP-V4 | 2 | 9204370000 |
| SM 27/18 MC NE WS | 80 | 1699860000 |
| SM-H 27/18 SW | 25 | 1716630000 |

Note

Connection components

Mounting rail outlets

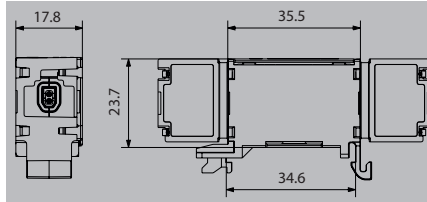
- Only one pair of wires for data and power
- IP20
- TS35

Coupling, straight outlet

Pin contacts



SPElink®



Technical data

| | |
|--|--------------------------------|
| Category | T1-B |
| Protection degree | IP30, in closed state |
| Ambient temperature (operational) | -40...70 °C |
| Plugging cycles | 750 |
| Housing main material | |
| Contact material | |
| Contact surface | Gold over nickel |
| Rated voltage | |
| Rated current | 3.5 A at 0°C |
| Insulation cross-section, min. | |
| Insulation cross-section, max. | |
| Insulation strength | ≥ 500 MΩ |
| PoE / PoE+ | PoDL acc. to IEEE 802.3bu / cg |
| Dielectric strength, contact / contact | ≥ 1000 V DC |
| Dielectric strength, contact / shield | 2250 V DC |
| Connector standard | IEC 63171-2 |
| UL 94 flammability rating | V-0 |

Note

Ordering data

| Type | Qty. | Order No. |
|---------------|------|------------|
| IE-TO-SP0-CLP | 10 | 2870790000 |

Note

Accessories

| Marking tags | Type | Qty. | Order No. |
|------------------|---------------------|------|------------|
| MultiCard, white | ESG 9/11 K MC NE WS | 200 | 1857440000 |

Note

Coupling

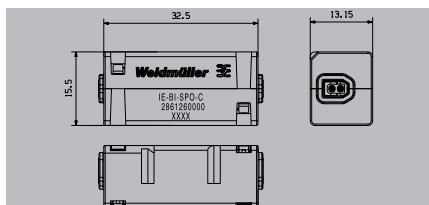
- IP20
- For housing variants 1, 4, 5, 14 and for FrontCom®
- SPE coupling for FrontCom® only

Coupling IP20 / IP20

Pin contacts



SPElink®



Technical data

Category
 Protection degree
 Ambient temperature (operational)
 Plugging cycles
 Housing main material
 Contact material
 Contact surface
 Rated voltage
 Rated current
 Insulation cross-section, min.
 Insulation cross-section, max.
 Insulation strength
 PoE / PoE+
 Dielectric strength, contact / contact
 Dielectric strength, contact / shield
 Connector standard
 UL 94 flammability rating

T1-B
 IP67 with housing
 -40...85 °C
 750
 PA 66
 Cu
 Gold over nickel

 3.5 A at 0°C

 ≥ 500 MΩ
 PoDL acc. to IEEE 802.3bu / cg
 ≥ 1000 V DC
 2250 V DC
 IEC 63171-2
 V-0

Note

Ordering data

tool-free
 Coupling
 Note

| Type | Qty. | Order No. |
|-------------|------|------------|
| IE-BI-SPO-C | 10 | 2861260000 |

Accessories

| Type | Qty. | Order No. |
|------|------|-----------|
|------|------|-----------|

Note

Connection components

PCB connector IP20

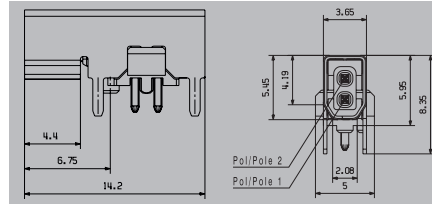
- Only one pair of wires for data and power
- Multi-port support
- Robust locking mechanism
- Shock and vibration proof
- Most compact design

PCB connector, 90°

Pin contact



SPElink®

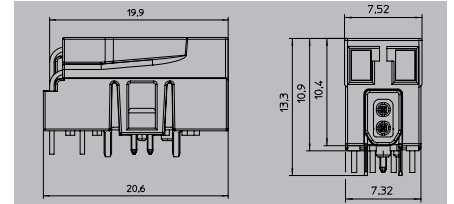


PCB connector, 90°, incl. LED

Pin contact



SPElink®



Technical data

| | |
|--|---------------------------------|
| Category | T1-B |
| Protection degree | IP20 |
| Ambient temperature (operational) | -40...85 °C |
| Transmission rate | 10/100 MBit/s, 1000 MBit/s |
| Type of connection | Solder connection, Male contact |
| Outgoing elbow | 90° |
| Number of poles | 2 |
| Mounting onto the PCB | THT/THR solder connection |
| Plugging cycles | 750 |
| Contact material | Cu-alloy |
| Contact surface | Ni/Au |
| Rated voltage | 72 V |
| Rated current | 4 A |
| Insulation strength | ≥ 500 MΩ |
| PoE / PoE+ | PoDL acc. to IEEE 802.3bu / cg |
| Dielectric strength, contact / contact | 1000 V DC |
| Dielectric strength, contact / shield | 2250 V DC |
| Connector standard | IEC 63171-2 |
| UL 94 flammability rating | V-0 |
| Note | |

| | |
|--|---------------------------------|
| Category | T1-B |
| Protection degree | IP20 |
| Ambient temperature (operational) | -40...85 °C |
| Transmission rate | 10/100 MBit/s, 1000 MBit/s |
| Type of connection | Solder connection, Male contact |
| Outgoing elbow | 90° |
| Number of poles | 2 |
| Mounting onto the PCB | THT/THR solder connection |
| Plugging cycles | 750 |
| Contact material | Cu-alloy |
| Contact surface | Ni/Au |
| Rated voltage | 72 V |
| Rated current | 4 A |
| Insulation strength | ≥ 500 MΩ |
| PoE / PoE+ | PoDL acc. to IEEE 802.3bu / cg |
| Dielectric strength, contact / contact | 1000 V DC |
| Dielectric strength, contact / shield | 2250 V DC |
| Connector standard | IEC 63171-2 |
| UL 94 flammability rating | V-0 |
| Note | |

| | |
|--|---------------------------------|
| Category | T1-B |
| Protection degree | IP20 |
| Ambient temperature (operational) | -40...85 °C |
| Transmission rate | 10/100 MBit/s, 1000 MBit/s |
| Type of connection | Solder connection, Male contact |
| Outgoing elbow | 90° |
| Number of poles | 2 |
| Mounting onto the PCB | THT/THR solder connection |
| Plugging cycles | 750 |
| Contact material | Cu-alloy |
| Contact surface | Ni/Au |
| Rated voltage | 72 V |
| Rated current | 4 A |
| Insulation strength | ≥ 500 MΩ |
| PoE / PoE+ | PoDL acc. to IEEE 802.3bu / cg |
| Dielectric strength, contact / contact | 1000 V DC |
| Dielectric strength, contact / shield | 2250 V DC |
| Connector standard | IEC 63171-2 |
| UL 94 flammability rating | V-0 |
| Note | |

Ordering data

| Type | Qty. | Order No. |
|---|------|------------|
| PCB connector, IP20, pin contact | 100 | 2726010000 |
| PCB connector, IP20, pin contact incl. LEDs | 100 | 2795120000 |
| Note | | |

| Type | Qty. | Order No. |
|--|------|------------|
| IE-PCB-SPE-P-90V2.1-THR RL | 100 | 2726010000 |
| IE-PCB-SPE-P-90V2.1-THR-YG/YG RL | 100 | 2795120000 |
| Bi-colour LED: yellow/green yellow/green | | |
| Note | | |

| Type | Qty. | Order No. |
|--|------|------------|
| IE-PCB-SPE-P-90V2.1-THR-YG/YG RL | 100 | 2795120000 |
| Bi-colour LED: yellow/green yellow/green | | |
| Note | | |

Accessories

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |
| Note | | |

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |
| Note | | |

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |
| Note | | |

| |
|------|
| Note |
|------|

| |
|------|
| Note |
|------|

| |
|------|
| Note |
|------|

PCB connector IP20

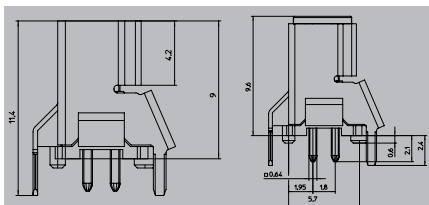
- Only one pair of wires for data and power
- Multi-port support
- Robust locking mechanism
- Shock and vibration proof
- Most compact design

PCB connector, 180°

Pin contact



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Technical data

Category
 Protection degree
 Ambient temperature (operational)
 Transmission rate
 Type of connection
 Outgoing elbow
 Number of poles
 Mounting onto the PCB
 Plugging cycles
 Contact material
 Contact surface
 Rated voltage
 Rated current
 Insulation strength
 PoE / PoE+
 Dielectric strength, contact / contact
 Dielectric strength, contact / shield
 Connector standard
 UL 94 flammability rating

T1-B
 IP20
 -40...85 °C
 10/100 MBit/s, 1000 MBit/s
 Solder connection, Male contact
 180°
 2
 THT/THR solder connection
 750
 Cu-alloy
 Ni/Au
 72 V
 4 A
 ≥ 500 MΩ
 PoDL acc. to IEEE 802.3bu / cg
 1000 V DC
 2250 V DC
 IEC 63171-2
 V-0

Note

Ordering data

PCB connector, IP20, pin contact
 PCB connector, IP20, pin contact incl. LEDs

| Type | Qty. | Order No. |
|-----------------------------|------|------------|
| IE-PCB-SPE-P-180V2.1-THR RL | 100 | 2795170000 |

Note

Accessories

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

Note

Connection components

Empty housing

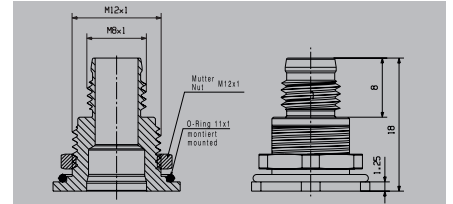
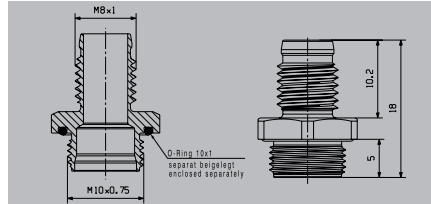
M8 front wall mounting

M8 rear wall mounting



SPElink®

SPElink®



Technical data

Category
Ambient temperature (operational)
Protection degree
Housing main material
Seal material
Configuration
Type of mounting
Connection thread
Connector standard
Tightening torque fixing nut

-40...85 °C
IP67
Brass, nickel-plated
FKM
Frontpanel mounting
Screw mounting
M10 x 0.75
IEC 61076-2-104, IEC 63171-5
2.5 Nm

40...85 °C
IP67
Brass, nickel-plated
FKM
Backpanel mounting
Screw mounting
M10 x 0.75
IEC 61076-2-104, IEC 63171-5
2.5 Nm

Note

Ordering data

| Type | Qty. | Order No. |
|--|------|------------|
| IE-BHD-SPE-M8-OT-FP | 10 | 2726020000 |
| Inserts and fixing nut must be ordered separately. | | |

| Type | Qty. | Order No. |
|--|------|------------|
| IE-BHD-SPE-M8-OT-BP | 20 | 2726030000 |
| Inserts to be ordered separately, fixing nut included. | | |

Note

Accessories

Fastening nut

| Type | Qty. | Order No. |
|---------------------------|------|------------|
| IE-BHD-SPE-FP-CN-M10X0.75 | 10 | 2739640000 |

| Type | Qty. | Order No. |
|---------------------------|------|------------|
| IE-BHD-SPE-FP-CN-M10X0.75 | 10 | 2739640000 |

Note

PCB insert

M8 insert 180° pin contacts

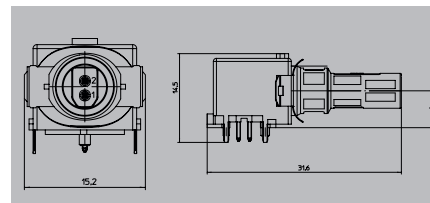
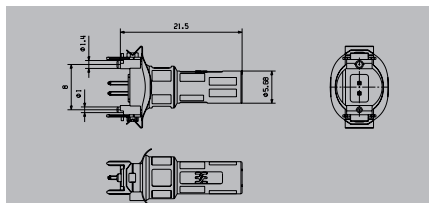
M8 insert 90° pin contacts



SPElink®



SPElink®



Technical data

| | |
|--|---------------------------------|
| Category | T1-B |
| Ambient temperature (operational) | -40...85 °C |
| Protection degree | IP67 with housing |
| Pollution severity | 2 |
| Connection thread | M8 |
| Number of poles | 2 |
| Type of connection | Solder connection, Male contact |
| Outgoing elbow | 180° |
| Contact material | Cu-alloy |
| Contact surface | Ni/Au |
| Contact carrier material | LCP |
| Operational voltage range | ≤ 50 V AC, ≤ 60 V DC |
| Rated current | 4 A |
| Insulation strength | ≥ 500 MΩ |
| Dielectric strength, contact / contact | 1000 V DC |
| Dielectric strength, contact / shield | 2250 V DC |
| Connector standard | IEC 63171-5 |
| UL 94 flammability rating | V-0 |
| Note | |

| | |
|--|---------------------------------|
| Category | T1-B |
| Ambient temperature (operational) | -40...85 °C |
| Protection degree | IP67 with housing |
| Pollution severity | 2 |
| Connection thread | M8 |
| Number of poles | 2 |
| Type of connection | Solder connection, Male contact |
| Outgoing elbow | 90° |
| Contact material | Cu-alloy |
| Contact surface | Ni/Au |
| Contact carrier material | LCP |
| Operational voltage range | ≤ 50 V AC, ≤ 60 V DC |
| Rated current | 4 A |
| Insulation strength | ≥ 500 MΩ |
| Dielectric strength, contact / contact | 1000 V DC |
| Dielectric strength, contact / shield | 2250 V DC |
| Connector standard | IEC 63171-5 |
| UL 94 flammability rating | V-0 |
| Note | |

| | |
|--|---------------------------------|
| Category | T1-B |
| Ambient temperature (operational) | -40...85 °C |
| Protection degree | IP67 with housing |
| Pollution severity | 2 |
| Connection thread | M8 |
| Number of poles | 2 |
| Type of connection | Solder connection, Male contact |
| Outgoing elbow | 90° |
| Contact material | Cu-alloy |
| Contact surface | Ni/Au |
| Contact carrier material | LCP |
| Operational voltage range | ≤ 50 V AC, ≤ 60 V DC |
| Rated current | 4 A |
| Insulation strength | ≥ 500 MΩ |
| Dielectric strength, contact / contact | 1000 V DC |
| Dielectric strength, contact / shield | 2250 V DC |
| Connector standard | IEC 63171-5 |
| UL 94 flammability rating | V-0 |
| Note | |

Ordering data

| Type | Qty. | Order No. |
|------|------|------------|
| THR | 100 | 2735920000 |
| SMD | 100 | 2795110000 |
| Note | | |

| Type | Qty. | Order No. |
|----------------------|------|------------|
| IE-PCB-SPM-P-180-THR | 100 | 2735920000 |
| IE-PCB-SPM-P-180-SMD | 100 | 2795110000 |
| Note | | |

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-PCB-SPM-P-90-THR | 100 | 2795100000 |
| Note | | |

Accessories

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |
| Note | | |

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |
| Note | | |

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |
| Note | | |

| | | |
|------|--|--|
| Note | | |
|------|--|--|

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|------|--|--|
| Note | | |
|------|--|--|

| | | |
|------|--|--|
| Note | | |
|------|--|--|



IP20 plug-in connectors and mounting rail outlets

Overview

| | | | |
|--|----------------------------|---|------|
| IP20 plug-in connectors and mounting rail outlets | IP20 plug-in connectors | Single Pair Ethernet (SPE) plug | K.2 |
| | | RJ45 plug | K.4 |
| | | FD Connector | K.10 |
| | | RJ45 keystone | K.11 |
| | | <hr/> | |
| | IP20 mounting rail outlets | Coupling Single Pair Ethernet (SPE) | K.13 |
| | | RJ45 | K.14 |
| | | RJ45 and RJ12 Counter installation (Smart Metering) | K.17 |
| | | USB | K.19 |
| | | FD | K.20 |
| <hr/> | | Socket adapter | K.22 |

Single Pair Ethernet (SPE) plug

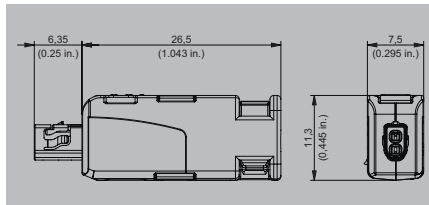
- Only one pair of wires for data and power
- Multi-port support
- IP20

Field-terminated plug IP20

Socket contact



SPElink®



Technical data

| | |
|---|--------------------------------|
| Category | T1-B |
| Protection degree | IP20 |
| Transmission rate | 10/100 MBit/s, 100 MBit/s |
| Ambient temperature (operational) | -40...85 °C |
| Plugging cycles | 750 |
| Housing main material | zinc diecast nickel-plated |
| Contact material | Bronze tin-plated |
| Contact surface | Gold-plated |
| Rated voltage | |
| Connection diameter, flexible, min. / max. | 0.48...0.76 mm |
| Connection cross-section, flexible, min. / max. | AWG 26...AWG 22 |
| Connection diameter, solid, min. / max. | 0.41...0.64 mm |
| Connection cross-section, solid, min. / max. | AWG 24...AWG 22 |
| Sheath diameter, min. / max. | 3.6...5.7 mm |
| Insulation cross-section, min. | 0.85 mm |
| Insulation cross-section, max. | 1.6 mm |
| Insulation strength | ≥ 500 MΩ |
| PoE / PoE+ | PoDL acc. to IEEE 802.3bu / cg |
| Dielectric strength, contact / contact | ≥ 1000 V DC |
| Dielectric strength, contact / shield | ≥ 1500 V DC |
| Connector standard | IEC 63171-2 |
| UL 94 flammability rating | V-0 |

Note

Ordering data

| Plug | |
|------|-----------------------|
| | field-terminated plug |

Note

Accessories

| Type | Qty. | Order No. |
|--------------------|------|------------|
| IE-PS-SPO-S-FH-180 | 1 | 2726040000 |

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

Note

Single Pair Ethernet (SPE) plug

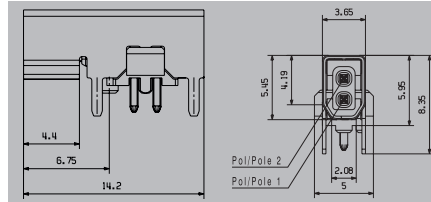
- Only one pair of wires for data and power
- Multi-port support
- Robust locking mechanism
- Shock and vibration proof
- Most compact design

PCB connector, 90°

Pin contact



SPElink®

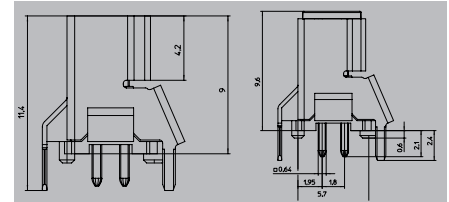


PCB connector, 180°

Pin contact



SPElink®



Technical data

| |
|--|
| Category |
| Protection degree |
| Ambient temperature (operational) |
| Transmission rate |
| Type of connection |
| Outgoing elbow |
| Number of poles |
| Mounting onto the PCB |
| Plugging cycles |
| Contact material |
| Contact surface |
| Rated voltage |
| Insulation strength |
| PoE / PoE+ |
| Dielectric strength, contact / contact |
| Dielectric strength, contact / shield |
| Connector standard |
| UL 94 flammability rating |

| |
|---------------------------------|
| T1-B |
| IP20 |
| -40...85 °C |
| 10/100 MBit/s, 1000 MBit/s |
| Solder connection, Male contact |
| 90° |
| 2 |
| THT/THR solder connection |
| 750 |
| Cu-alloy |
| Ni/Au |
| 72 V |
| ≥ 500 MΩ |
| PoDL acc. to IEEE 802.3bu / cg |
| 1000 V DC |
| 2250 V DC |
| IEC 63171-2 |
| V-0 |

| |
|---------------------------------|
| T1-B |
| IP20 |
| -40...85 °C |
| 10/100 MBit/s, 1000 MBit/s |
| Solder connection, Male contact |
| 180° |
| 2 |
| THT/THR solder connection |
| 750 |
| Cu-alloy |
| Ni/Au |
| 72 V |
| ≥ 500 MΩ |
| PoDL acc. to IEEE 802.3bu / cg |
| 1000 V DC |
| 2250 V DC |
| IEC 63171-2 |
| V-0 |

Note

Ordering data

| | |
|----------------------------------|---|
| PCB connector, IP20, pin contact | PCB connector, IP20, pin contact incl. LEDs |
|----------------------------------|---|

Note

| Type | Qty. | Order No. |
|----------------------------------|------|------------|
| IE-PCB-SPE-P-90V2.1-THR RL | 100 | 2726010000 |
| IE-PCB-SPE-P-90V2.1-THR-YG/YG RL | 100 | 2795120000 |

| Type | Qty. | Order No. |
|-----------------------------|------|------------|
| IE-PCB-SPE-P-180V2.1-THR RL | 100 | 2795170000 |

Accessories

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

Note

IP20 plug-in connectors

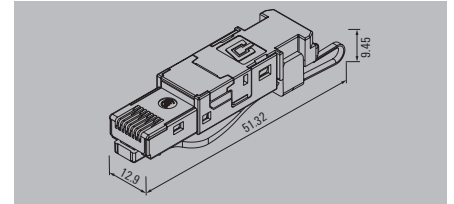
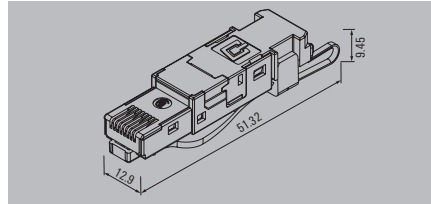
RJ45 plug, tool free

- Cat. 6_A(8 wires)/cat. 5 (4 wires) for PROFINET
- Multi-port support
- IP20

8-wire



4-wire for PROFINET



Technical data

| |
|---|
| Category |
| Protection degree |
| Housing main material |
| Connection diameter, flexible, min. / max. |
| Connection cross-section, flexible, min. / max. |
| Connection diameter, solid, min. / max. |
| Connection cross-section, solid, min. / max. |
| Wire connection cross-section, finely stranded |
| Insulation diameter, min. / max. |
| Sheath diameter, min. / max. |
| Contact surface |
| Shielding |
| Plugging cycles |
| Ambient temperature (operational) |
| Contact resistance |
| Insulation strength |
| Dielectric strength, contact / contact |
| Dielectric strength, contact / shield |
| Connector standard |
| Current-carrying capacity at 50 °C |
| Transmission rate |
| PoE / PoE+ |
| Approvals |

| |
|--|
| Cat.6 _A / Class E _A (ISO/IEC 11801 2010) |
| IP20 |
| Zinc diecast |
| 0.48 mm / 0.76 mm |
| AWG 26/7 / AWG 22/7 |
| 0.41 mm / 0.64 mm |
| AWG 24/1 / AWG 22/1 |
| Approval of the cable by Weidmüller necessary |
| 0.85 mm / 1.6 mm |
| 5.5 mm / 8.5 mm |
| Gold over nickel |
| 360° all-round enclosure |
| 750 |
| -40 °C...70 °C |
| ≤ 20 mΩ |
| ≥ 500 MΩ |
| ≥ 1000 V AC/DC |
| ≥ 1500 V AC/DC |
| IEC 60603-7-51 |
| 1 A |
| 10 Gbit/s |
| conforming to IEEE 802.3at |
| CCLINK; CULUS |

| |
|---|
| Cat.5 (ISO/IEC 11801) |
| IP20 |
| Zinc diecast |
| 0.48 mm / 0.76 mm |
| AWG 26/7 / AWG 22/7 |
| 0.41 mm / 0.64 mm |
| AWG 26/1 / AWG 22/1 |
| Approval of the cable by Weidmüller necessary |
| 0.85 mm / 1.6 mm |
| 5.5 mm / 8.5 mm |
| Gold over nickel |
| 360° all-round enclosure |
| 750 |
| -40 °C...70 °C |
| ≤ 20 mΩ |
| ≥ 500 MΩ |
| ≥ 1000 V AC/DC |
| ≥ 1500 V AC/DC |
| IEC 60603-7-51 |
| 1 A |
| 100 MBit/s |
| conforming to IEEE 802.3at |
| CCLINK; CULUS |

Note

Approvals available on request. Weidmüller connection cat. 7 AWG 27/7 LSZH cable possible

Note

Ordering data

| Plug | |
|------|--|
| | with tear-off flags: EIA/TIA T568-A/B / PROFINET |
| | with printing: PROFINET |
| | with printing: EIA/TIA T568-A |
| | with printing: EIA / TIA T568-B |

Note

| Type | Qty. | Order No. |
|--------------------|------|------------|
| IE-PS-RJ45-FH-BK | 10 | 1963600000 |
| IE-PS-RJ45-FH-BK-A | 10 | 1132040000 |
| IE-PS-RJ45-FH-BK-B | 10 | 1132050000 |

| Type | Qty. | Order No. |
|--------------------|------|------------|
| IE-PS-RJ45-FH-BK-P | 10 | 1132060000 |

Accessories

| Strain relief | |
|---------------|--|
| green | |
| grey | |
| blue | |
| orange | |
| yellow | |
| white | |

| Tools | |
|-------|------------------------|
| | Optional pressing tool |

| Type | Qty. | Order No. |
|-----------------------|------|------------|
| IE-CR-IP20-RJ45-FH-GN | 10 | 1963100000 |
| IE-CR-IP20-RJ45-FH-GY | 10 | 1963060000 |
| IE-CR-IP20-RJ45-FH-BU | 10 | 1963080000 |
| IE-CR-IP20-RJ45-FH-OG | 10 | 1963070000 |
| IE-CR-IP20-RJ45-FH-YE | 10 | 1963090000 |
| IE-CR-IP20-RJ45-FH-WH | 10 | 1963050000 |
| PWZ RJ45 | 1 | 1118040000 |

| Type | Qty. | Order No. |
|-----------------------|------|------------|
| IE-CR-IP20-RJ45-FH-GN | 10 | 1963100000 |
| IE-CR-IP20-RJ45-FH-GY | 10 | 1963060000 |
| IE-CR-IP20-RJ45-FH-BU | 10 | 1963080000 |
| IE-CR-IP20-RJ45-FH-OG | 10 | 1963070000 |
| IE-CR-IP20-RJ45-FH-YE | 10 | 1963090000 |
| IE-CR-IP20-RJ45-FH-WH | 10 | 1963050000 |
| PWZ RJ45 | 1 | 1118040000 |

Note

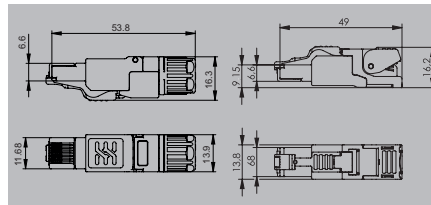
Note

Note

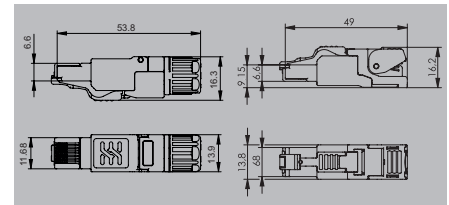
RJ45 plug, straight, tool free

- Fieldattachable
- Cat. 6_A (8-wire)
- Multi-port-compatible
- IP 20

8-wire, insulation diameter 1.1 - 1.6 mm



8-wire, insulation diameter 0.85 - 1.1 mm



Technical data

| | |
|---|---|
| Category | Cat.6 _A / Class E _A (ISO/IEC 11801 2010) |
| Protection degree | IP20 |
| Housing main material | Zinc diecast, nickel-plated |
| Connection diameter, flexible, min. / max. | 0.46 mm / 0.76 mm |
| Connection cross-section, flexible, min. / max. | AWG 27 / AWG 22 |
| Connection diameter, solid, min. / max. | 0.51 mm / 0.64 mm |
| Connection cross-section, solid, min. / max. | AWG 24 / AWG 22 |
| Connection diameter, very finely stranded, min./max. | 0.61 mm / 0.78 mm / Approval of the cable by Weidmüller necessary |
| Connection cross-section, very finely stranded, min./max. | AWG 24 / AWG 22 / Approval of the cable by Weidmüller necessary |
| Insulation diameter, min. / max. | 1.1 mm / 1.6 mm |
| Sheath diameter, min. / max. | 5 mm / 9 mm |
| Contact surface | Gold over nickel |
| Shielding | 360° all-round enclosure |
| Plugging cycles | 750 |
| Ambient temperature (operational) | -40 °C...85 °C |
| Contact resistance | ≤ 20 mΩ |
| Insulation strength | ≥ 500 MΩ |
| Dielectric strength, contact / contact | ≥ 1000 V AC/DC |
| Dielectric strength, contact / shield | ≥ 1500 V AC/DC |
| Connector standard | IEC 60603-7-51 |
| Current-carrying capacity at 50 °C | 1 A |
| Transmission rate | 10 Gbit/s |
| PoE / PoE+ | conforming to IEEE 802.3at |
| Approvals | CULUS; DETNORVER |

Note

| | |
|---|--|
| Category | Cat.6 _A / Class E _A (ISO/IEC 11801 2010) |
| Protection degree | IP20 |
| Housing main material | Zinc diecast, nickel-plated |
| Connection diameter, flexible, min. / max. | 0.46 mm / 0.61 mm |
| Connection cross-section, flexible, min. / max. | AWG 27 / AWG 24 |
| Connection diameter, solid, min. / max. | 0.41 mm / 0.51 mm |
| Connection cross-section, solid, min. / max. | AWG 26 / AWG 24 |
| Connection diameter, very finely stranded, min./max. | 0.51 mm / / Approval of the cable by Weidmüller necessary |
| Connection cross-section, very finely stranded, min./max. | AWG 26 / / Approval of the cable by Weidmüller necessary |
| Insulation diameter, min. / max. | 0.85 mm / 1.1 mm |
| Sheath diameter, min. / max. | 5 mm / 9 mm |
| Contact surface | Gold over nickel |
| Shielding | 360° all-round enclosure |
| Plugging cycles | 750 |
| Ambient temperature (operational) | -40 °C...85 °C |
| Contact resistance | ≤ 20 mΩ |
| Insulation strength | ≥ 500 MΩ |
| Dielectric strength, contact / contact | ≥ 1000 V AC/DC |
| Dielectric strength, contact / shield | ≥ 1500 V AC/DC |
| Connector standard | IEC 60603-7-51 |
| Current-carrying capacity at 50 °C | 1 A |
| Transmission rate | 10 Gbit/s |
| PoE / PoE+ | conforming to IEEE 802.3at |
| Approvals | CULUS; DETNORVER |

| | |
|---|--|
| Category | Cat.6 _A / Class E _A (ISO/IEC 11801 2010) |
| Protection degree | IP20 |
| Housing main material | Zinc diecast, nickel-plated |
| Connection diameter, flexible, min. / max. | 0.46 mm / 0.61 mm |
| Connection cross-section, flexible, min. / max. | AWG 27 / AWG 24 |
| Connection diameter, solid, min. / max. | 0.41 mm / 0.51 mm |
| Connection cross-section, solid, min. / max. | AWG 26 / AWG 24 |
| Connection diameter, very finely stranded, min./max. | 0.51 mm / / Approval of the cable by Weidmüller necessary |
| Connection cross-section, very finely stranded, min./max. | AWG 26 / / Approval of the cable by Weidmüller necessary |
| Insulation diameter, min. / max. | 0.85 mm / 1.1 mm |
| Sheath diameter, min. / max. | 5 mm / 9 mm |
| Contact surface | Gold over nickel |
| Shielding | 360° all-round enclosure |
| Plugging cycles | 750 |
| Ambient temperature (operational) | -40 °C...85 °C |
| Contact resistance | ≤ 20 mΩ |
| Insulation strength | ≥ 500 MΩ |
| Dielectric strength, contact / contact | ≥ 1000 V AC/DC |
| Dielectric strength, contact / shield | ≥ 1500 V AC/DC |
| Connector standard | IEC 60603-7-51 |
| Current-carrying capacity at 50 °C | 1 A |
| Transmission rate | 10 Gbit/s |
| PoE / PoE+ | conforming to IEEE 802.3at |
| Approvals | CULUS; DETNORVER |

Note

Ordering data

| | |
|---|--|
| Plug with latching strain relief | |
| with printing: EIA/TIA T568-A | |
| with printing: EIA / TIA T568-B | |
| Plug with cable gland | |
| with printing: EIA/TIA T568-A | |
| with printing: EIA / TIA T568-B | |

Note

| Type | Qty. | Order No. |
|----------------------------|------|------------|
| IE-PS-RJ45-FH-180-A-1.6 | 1 | 1992820000 |
| IE-PS-RJ45-FH-180-B-1.6 | 1 | 1992830000 |
| IE-PS-RJ45-FH-180-A-1.6-CG | 1 | 2703390000 |
| IE-PS-RJ45-FH-180-B-1.6-CG | 1 | 2703410000 |

| Type | Qty. | Order No. |
|----------------------------|------|------------|
| IE-PS-RJ45-FH-180-A-1.1 | 1 | 1992850000 |
| IE-PS-RJ45-FH-180-B-1.1 | 1 | 1992860000 |
| IE-PS-RJ45-FH-180-A-1.1-CG | 1 | 2703440000 |
| IE-PS-RJ45-FH-180-B-1.1-CG | 1 | 2703460000 |

Note

Accessories

| | |
|---|--|
| Substitute wire manager | |
| TIA-A, insulation diameter 1.1...1.6 mm | |
| TIA-B, insulation diameter 1.1...1.6 mm | |
| TIA-A, insulation diameter 0.85...1 mm | |
| TIA-B, insulation diameter 0.85...1 mm | |
| Tools | |
| Optional pressing tool | |

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-PI-RJ45-FH-A-1.6 | 30 | 1992880000 |
| IE-PI-RJ45-FH-B-1.6 | 30 | 1992900000 |
| PWZ RJ45 | 1 | 1118040000 |

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-PI-RJ45-FH-A-1.1 | 30 | 1992920000 |
| IE-PI-RJ45-FH-B-1.1 | 30 | 1992930000 |
| PWZ RJ45 | 1 | 1118040000 |

Note

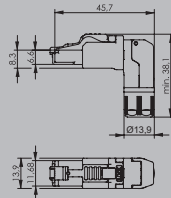
Note

IP20 plug-in connectors

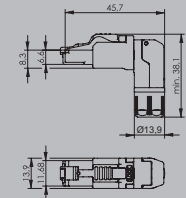
RJ45 plug, angled, tool free

- Assembled
- Cat. 6_A (8-wire)
- Compatible with multiple ports
- IP20

8-wire, insulation diameter 1.1 - 1.6 mm



8-wire, insulation diameter 0.85 - 1.1 mm



Technical data

Category
Protection degree
Housing main material
Connection diameter, flexible, min. / max.
Connection cross-section, flexible, min. / max.
Connection diameter, solid, min. / max.
Connection cross-section, solid, min. / max.
Connection diameter, very finely stranded, min./max.

Connection cross-section, very finely stranded, min./max.

Insulation diameter, min. / max.
Sheath diameter, min. / max.
Contact surface
Shielding
Plugging cycles
Ambient temperature (operational)
Contact resistance
Insulation strength
Dielectric strength, contact / contact
Dielectric strength, contact / shield
Connector standard
Current-carrying capacity at 50 °C
Transmission rate
PoE / PoE+
Approvals

Note

Cat.6_A / Class E_A (ISO/IEC 11801 2010)
IP20
Zinc diecast, nickel-plated
0.46 mm / 0.76 mm
AWG 27 / AWG 22
0.51 mm / 0.64 mm
AWG 24 / AWG 22
0.61 mm / 0.78 mm / Approval of the cable by Weidmüller necessary

AWG 24 / AWG 22 / Approval of the cable by Weidmüller necessary

1.1 mm / 1.6 mm
5 mm / 9 mm
Gold over nickel
360° all-round enclosure
750
-40 °C...85 °C
≤ 20 mΩ
≥ 500 MΩ
≥ 1000 V AC/DC
≥ 1500 V AC/DC
IEC 60603-7-51
1 A
10 Gbit/s
conforming to IEEE 802.3at
CULUS; DETNORVER

Cat.6_A / Class E_A (ISO/IEC 11801 2010)
IP20
Zinc diecast, nickel-plated
0.46 mm / 0.61 mm
AWG 27 / AWG 24
0.41 mm / 0.51 mm
AWG 26 / AWG 24
0.51 mm / / Approval of the cable by Weidmüller necessary

AWG 26 / / Approval of the cable by Weidmüller necessary

0.85 mm / 1.1 mm
5 mm / 9 mm
Gold over nickel
360° all-round enclosure
750
-40 °C...85 °C
≤ 20 mΩ
≥ 500 MΩ
≥ 1000 V AC/DC
≥ 1500 V AC/DC
IEC 60603-7-51
1 A
10 Gbit/s
conforming to IEEE 802.3at
CULUS; DETNORVER

Ordering data

| Plug | |
|------|---------------------------------|
| | with printing: EIA/TIA T568-A |
| | with printing: EIA / TIA T568-B |

Note

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-PS-RJ45-FH-90-A-1.6 | 10 | 1992870000 |
| IE-PS-RJ45-FH-90-B-1.6 | 1 | 1992890000 |

With pre-installed dust cap

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-PS-RJ45-FH-90-A-1.1 | 1 | 1518080000 |
| IE-PS-RJ45-FH-90-B-1.1 | 1 | 1518090000 |

With pre-installed dust cap

Accessories

| Substitute wire manager | |
|---|--|
| TIA-A, insulation diameter 1.1...1.6 mm | |
| TIA-B, insulation diameter 1.1...1.6 mm | |
| TIA-A, insulation diameter 0.85...1 mm | |
| TIA-B, insulation diameter 0.85...1 mm | |

| Tools | |
|-------|------------------------|
| | Optional pressing tool |

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-PI-RJ45-FH-A-1.6 | 30 | 1992880000 |
| IE-PI-RJ45-FH-B-1.6 | 30 | 1992900000 |

| Type | Qty. | Order No. |
|----------|------|------------|
| PWZ RJ45 | 1 | 1118040000 |

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-PI-RJ45-FH-A-1.1 | 30 | 1992920000 |
| IE-PI-RJ45-FH-B-1.1 | 30 | 1992930000 |

| Type | Qty. | Order No. |
|----------|------|------------|
| PWZ RJ45 | 1 | 1118040000 |

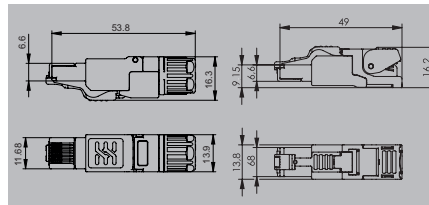
Note

RJ45 plug, straight and angled, tool free

- Fieldattachable
- Cat. 5 (4-wire) for PROFINET
- Multi-port-compatible
- IP20

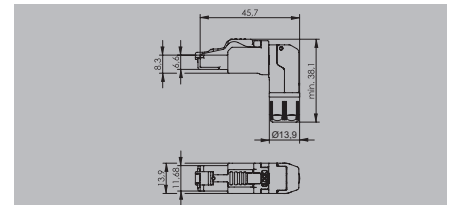
4-wire for PROFINET

straight



4-wire for PROFINET

angled



Technical data

Category
 Protection degree
 Housing main material
 Connection diameter, flexible, min. / max.
 Connection cross-section, flexible, min. / max.
 Connection diameter, solid, min. / max.
 Connection cross-section, solid, min. / max.
 Connection diameter, very finely stranded, min./max.

 Connection cross-section, very finely stranded, min./max.

 Insulation diameter, min. / max.
 Sheath diameter, min. / max.
 Contact surface
 Shielding
 Plugging cycles
 Ambient temperature (operational)
 Contact resistance
 Insulation strength
 Dielectric strength, contact / contact
 Dielectric strength, contact / shield
 Connector standard
 Current-carrying capacity at 50 °C
 Transmission rate
 PoE / PoE+
 Approvals

Cat.5 (ISO/IEC 11801)
 IP20
 Zinc diecast, nickel-plated
 0.46 mm / 0.76 mm
 AWG 27 / AWG 22
 0.51 mm / 0.64 mm
 AWG 24 / AWG 22
 0.61 mm / 0.78 mm / Approval of the cable by Weidmüller necessary

 AWG 24 / AWG 22 / Approval of the cable by Weidmüller necessary

 1.1 mm / 1.6 mm
 5 mm / 9 mm
 Gold over nickel
 360° all-round enclosure
 750
 -40 °C...85 °C
 ≤ 20 mΩ
 ≥ 500 MΩ
 ≥ 1000 V AC/DC
 ≥ 1500 V AC/DC
 IEC 60603-7-51
 1 A
 100 MBit/s
 conforming to IEEE 802.3at
 CULUS; DETNORVER

Cat.5 (ISO/IEC 11801)
 IP20
 Zinc diecast, nickel-plated
 0.46 mm / 0.76 mm
 AWG 27 / AWG 22
 0.51 mm / 0.64 mm
 AWG 24 / AWG 22
 0.61 mm / 0.78 mm / Approval of the cable by Weidmüller necessary

 AWG 24 / AWG 22 / Approval of the cable by Weidmüller necessary

 1.1 mm / 1.6 mm
 5 mm / 9 mm
 Gold over nickel
 360° all-round enclosure
 750
 -40 °C...85 °C
 ≤ 20 mΩ
 ≥ 500 MΩ
 ≥ 1000 V AC/DC
 ≥ 1500 V AC/DC
 IEC 60603-7-51
 1 A
 100 MBit/s
 conforming to IEEE 802.3at
 CULUS; DETNORVER

Note

Ordering data

| Plug with latching strain relief | |
|----------------------------------|-------------------------|
| | with printing: PROFINET |
| Plug with cable gland | |
| | with printing: PROFINET |
| Note | |

| Type | Qty. | Order No. |
|-----------------------------|------|------------|
| IE-PS-RJ45-FH-180-P-1.6 | 1 | 1992840000 |
| IE-PS-RJ45-FH-180-P-1.6-CG | 1 | 2703420000 |
| With pre-installed dust cap | | |

| Type | Qty. | Order No. |
|-----------------------------|------|------------|
| IE-PS-RJ45-FH-90-P-1.6 | 1 | 1518100000 |
| With pre-installed dust cap | | |

Accessories

| Substitute wire manager | |
|-------------------------|--|
| | PROFINET, insulation diameter 1.1...1.6 mm |
| Tools | |
| | Optional pressing tool |

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-PI-RJ45-FH-P-1.6 | 30 | 1992910000 |
| PWZ RJ45 | 1 | 1118040000 |

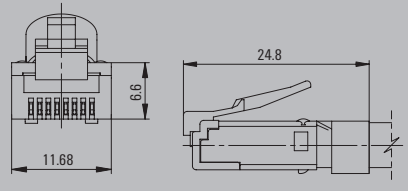
| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-PI-RJ45-FH-P-1.6 | 30 | 1992910000 |
| PWZ RJ45 | 1 | 1118040000 |

Note

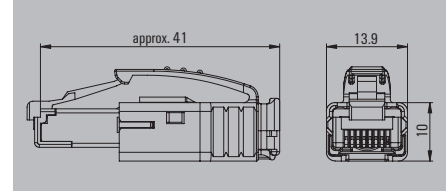
RJ45 crimp plug

- Cat. 6
- With anti-folding protection
- With anti-crash lever protection

8-wire, housing 1-part



8-wire, housing 2-part



Technical data

| | |
|---|--|
| Category | Cat.6 _x / Class E _x (ISO/IEC 11801 2010) |
| Protection degree | IP20 |
| Connection diameter, flexible, min. / max. | 0.46 mm / 0.61 mm |
| Connection cross-section, flexible, min. / max. | AWG 27 / AWG 24 |
| Connection diameter, solid, min. / max. | 0.36 mm / 0.51 mm |
| Connection cross-section, solid, min. / max. | AWG 27 / AWG 24 |
| Insulation cross-section, max. | 1.05 mm |
| Sheath diameter, min. / max. | 5.5 mm / 6.2 mm |
| Shielding | 360° all-round enclosure |
| Plugging cycles | 750 |
| Ambient temperature (operational) | -40 °C...70 °C |
| Connector standard | IEC 60603-7-51 |
| Bending protection sleeve material | PVC, UL 94-V0 |
| Material insulator | Polycarbonate PC, UL 94 V-0 |
| Contact material / Contact surface | Phosphorus bronze / Gold-plated |
| Shielding material | 0.5 mm brass, 2 µm nickel |
| Cable pull-out force, min. | 89 N |
| Contact resistance | ≤ 20 mΩ |
| Insulation strength | 500 MΩ |
| Dielectric strength, contact / contact | ≥ 1000 V AC/DC |
| Dielectric strength, contact / shield | ≥ 1500 V AC/DC |
| Current-carrying capacity at 50 °C | 1 A |
| PoE / PoE+ | conforming to IEEE 802.3af |
| Approvals | |

| | |
|---|--|
| Category | Cat.6 _x / Class E _x (ISO/IEC 11801 2010) |
| Protection degree | IP20 |
| Connection diameter, flexible, min. / max. | 0.46 mm / 0.61 mm |
| Connection cross-section, flexible, min. / max. | AWG 27 / AWG 24 |
| Connection diameter, solid, min. / max. | 0.36 mm / 0.51 mm |
| Connection cross-section, solid, min. / max. | AWG 27 / AWG 24 |
| Insulation cross-section, max. | 1.05 mm |
| Sheath diameter, min. / max. | 5.5 mm / 6.2 mm |
| Shielding | 360° all-round enclosure |
| Plugging cycles | 750 |
| Ambient temperature (operational) | -40 °C...70 °C |
| Connector standard | IEC 60603-7-51 |
| Bending protection sleeve material | PVC, UL 94-V0 |
| Material insulator | Polycarbonate PC, UL 94 V-0 |
| Contact material / Contact surface | Phosphorus bronze / Gold-plated |
| Shielding material | 0.5 mm brass, 2 µm nickel |
| Cable pull-out force, min. | 89 N |
| Contact resistance | ≤ 20 mΩ |
| Insulation strength | 500 MΩ |
| Dielectric strength, contact / contact | ≥ 1000 V AC/DC |
| Dielectric strength, contact / shield | ≥ 1500 V AC/DC |
| Current-carrying capacity at 50 °C | 1 A |
| PoE / PoE+ | conforming to IEEE 802.3af |
| Approvals | |

| | |
|---|--|
| Category | Cat.6 _x / Class E _x (ISO/IEC 11801 2010) |
| Protection degree | IP20 |
| Connection diameter, flexible, min. / max. | 0.46 mm / 0.61 mm |
| Connection cross-section, flexible, min. / max. | AWG 27 / AWG 24 |
| Connection diameter, solid, min. / max. | 0.36 mm / 0.51 mm |
| Connection cross-section, solid, min. / max. | AWG 27 / AWG 24 |
| Insulation cross-section, max. | 1.05 mm |
| Sheath diameter, min. / max. | 5 mm / 7.3 mm |
| Shielding | 360° all-round enclosure |
| Plugging cycles | 750 |
| Ambient temperature (operational) | -40 °C...70 °C |
| Connector standard | IEC 60603-7-51 |
| Bending protection sleeve material | Polycarbonate PC, UL 94 V-0 |
| Material insulator | Polycarbonate PC, UL 94 V-0 |
| Contact material / Contact surface | Phosphorus bronze / Gold-plated |
| Shielding material | 0.5 mm brass, 2 µm nickel |
| Cable pull-out force, min. | 89 N |
| Contact resistance | ≤ 20 mΩ |
| Insulation strength | 500 MΩ |
| Dielectric strength, contact / contact | ≥ 1000 V AC/DC |
| Dielectric strength, contact / shield | ≥ 1500 V AC/DC |
| Current-carrying capacity at 50 °C | 1 A |
| PoE / PoE+ | conforming to IEEE 802.3af |
| Approvals | CCLINK; CURUS |

Note

Ordering data

| Plug | |
|------|---|
| | with kink protection; 5.5 - 6.2 mm |
| | with anti-kink protection; 6.2 - 7.1 mm |
| | with anti-kink sleeve, black |
| | without anti-kink sleeve |

Note

| Type | Qty. | Order No. |
|--------|------|------------|
| IE-P63 | 10 | 8813110000 |
| IE-P70 | 10 | 8813120000 |
| IE-P | 100 | 8813100000 |

| Type | Qty. | Order No. |
|------------------|------|------------|
| IE-PS-RJ45-TH-BK | 10 | 1963590000 |
| IE-PM-RJ45-TH | 100 | 1963580000 |

Accessories

| Kink prevention sleeve | |
|------------------------|--------|
| | white |
| | green |
| | grey |
| | yellow |
| | orange |
| | black |
| | blue |

Tools

Pressing tool

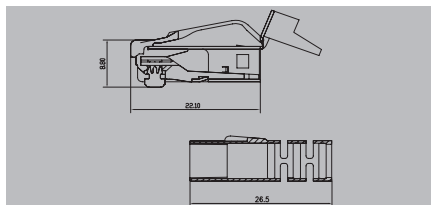
| Type | Qty. | Order No. |
|--------------|------|------------|
| TT 8 RS MP 8 | 1 | 9202800000 |

| Type | Qty. | Order No. |
|------------------|------|------------|
| IE-PH-RJ45-TH-WH | 10 | 1962430000 |
| IE-PH-RJ45-TH-GN | 10 | 1962490000 |
| IE-PH-RJ45-TH-GY | 10 | 1962440000 |
| IE-PH-RJ45-TH-YE | 10 | 1962480000 |
| IE-PH-RJ45-TH-OG | 10 | 1962450000 |
| IE-PH-RJ45-TH-BK | 10 | 1962500000 |
| IE-PH-RJ45-TH-BU | 10 | 1962470000 |
| TT 8 RS MP 8 | 1 | 9202800000 |

Note

RJ45 PROFINET crimp plug

4-wire for PROFINET, 1-part enclosure



Technical data

| | |
|---|--|
| Category | |
| Protection degree | |
| Connection diameter, flexible, min. / max. | |
| Connection cross-section, flexible, min. / max. | |
| Connection diameter, solid, min. / max. | |
| Connection cross-section, solid, min. / max. | |
| Insulation cross-section, max. | |
| Sheath diameter, min. / max. | |
| Shielding | |
| Plugging cycles | |
| Ambient temperature (operational) | |
| Connector standard | |
| Bending protection sleeve material | |
| Material insulator | |
| Contact material / Contact surface | |
| Shielding material | |
| Cable pull-out force, min. | |
| Contact resistance | |
| Insulation strength | |
| Dielectric strength, contact / contact | |
| Dielectric strength, contact / shield | |
| Current-carrying capacity at 50 °C | |
| PoE / PoE+ | |
| Approvals | |
| Note | |

| | |
|----------------------------|--|
| Cat.5 (ISO/IEC 11801) | |
| IP20 | |
| 0.57 mm / 0.64 mm | |
| AWG 23 / AWG 22 | |
| 0.57 mm / 0.64 mm | |
| AWG 23 / AWG 22 | |
| 1.6 mm | |
| / 7.5 mm | |
| 360° all-round enclosure | |
| 750 | |
| -40 °C...70 °C | |
| IEC 60603-7 | |
| Polyamide PA6, UL 94-V0 | |
| Copper alloy | |
| ≤ 10 mΩ | |
| 500 MΩ | |
| ≥ 1000 V AC/DC | |
| ≥ 1500 V AC/DC | |
| conforming to IEEE 802.3af | |
| Note | |

Ordering data

| |
|-------------|
| Plug |
| Note |

| Type | Qty. | Order No. |
|--------------------|------|------------|
| IE-PS-RJ45-TH-BK-P | 10 | 2584980000 |

Accessories

| |
|---------------|
| Tools |
| Pressing tool |

| Type | Qty. | Order No. |
|------------------|------|------------|
| IE-CWZ-RJ45-TH-P | 1 | 2614210000 |

| |
|-------------|
| Note |
|-------------|

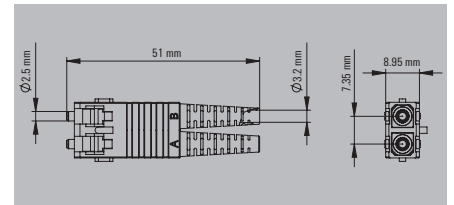
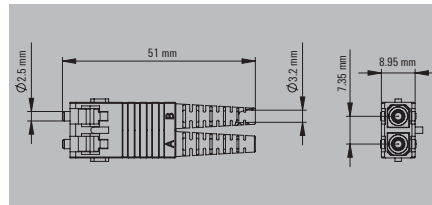
| |
|-------------|
| Note |
|-------------|

FO connector

- IP 20

SCRJ, POF, Crimp

SCRJ, POF, reconnectable



Technical data

| |
|---------------------------------------|
| Protection degree |
| Plugging cycles |
| Ambient temperature (operational) |
| Connector standard |
| Individual wire diameter, min. / max. |
| Crimp barrel material |
| Pressure spring material |
| Ferrule material |
| Dust protection cap material |
| Bending protection sleeve material |
| Cable pull-out force, min. |
| Housing main material |
| Housing material, insert |
| Humidity |
| Approvals |

| |
|-----------------------------|
| IP20 |
| 1000 |
| -20 °C...80 °C |
| IEC 61754-24 |
| 2.1 mm...2.3 mm |
| Copper, nickel-plated |
| Stainless steel, rust-proof |
| Nickel silver |
| TPE |
| TPE |
| 100 N |
| PC UL 94 V0 |
| Zinc diecast, nickel-plated |
| 0...93 % rel. humidity |
| UL |

| |
|-----------------------------|
| IP20 |
| 1000 |
| -20 °C...80 °C |
| IEC 61754-24 |
| 2.1 mm...2.3 mm |
| Copper, nickel-plated |
| Stainless steel, rust-proof |
| Nickel silver |
| TPE |
| TPE |
| 100 N |
| PC UL 94 V0 |
| Zinc diecast, nickel-plated |
| 0...93 % rel. humidity |

Note

Ordering data

| |
|------|
| POF |
| Note |

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-PS-SCRJ1-POF | 10 | 1206720000 |

| Type | Qty. | Order No. |
|--------------------|------|------------|
| IE-PS-SCRJ1-POF-QA | 10 | 2564950000 |

Accessories

| Tools | |
|----------------------|--|
| Mounting tool, POF | |
| Replacement ferrule | |
| Contact Removal Tool | |

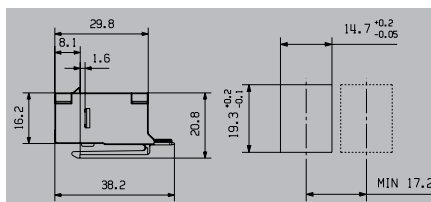
| Type | Qty. | Order No. |
|-----------------------|------|------------|
| HTX-IE-POF | 1 | 1208870000 |
| IE-SCRJ1-IP20-POF-100 | 100 | 1278420000 |
| REMOVAL TOOL HD | 1 | 1866730000 |

| Type | Qty. | Order No. |
|---------------|------|------------|
| HTX-IE-POF-QA | 1 | 2602860000 |

Note

RJ45 keystone

RJ45 Coupling



Technical data

| |
|-----------------------|
| Housing main material |
| Category |
| Protection degree |
| Plugging cycles |
| PoE / PoE+ |
| Connector standard |
| Approvals |
| Note |

| |
|--|
| Zinc diecast |
| Cat.6 _A / Class E _A (ISO/IEC 11801 2010) |
| IP20 |
| 750 |
| conforming to IEEE 802.3at |
| IEC 60603-7-5 |
| Note |

Ordering data

| |
|-------------|
| Note |
|-------------|

| Type | Qty. | Order No. |
|-------------------|------|------------|
| IE-XR-RJ45/RJ45-2 | 24 | 8952950000 |

Accessories

| |
|-------------|
| Note |
|-------------|

| Type | Qty. | Order No. |
|------|------|-----------|
|------|------|-----------|

| |
|-------------|
| Note |
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| |
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| Note |
|-------------|

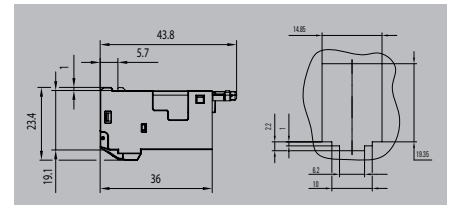
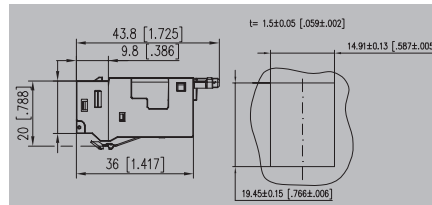
RJ45 keystone

RJ45 module

RJ45 module

Mounting cut-out Rectangular

Mounting cut-out special shape



Technical data

| | |
|--|--|
| Category | |
| Wiring | |
| Protection degree | |
| Housing main material | |
| Connection diameter, flexible | |
| Conductor connection cross-section, flexible (AWG) | |
| Connection diameter, solid | |
| Conductor connection cross-section, solid (AWG) | |
| Insulation cross-section, max. | |
| Plugging cycles | |
| Ambient temperature (operational) | |
| Connector standard | |
| Contact surface | |
| Contact resistance | |
| Insulation strength | |
| PoE / PoE+ | |
| Dielectric strength, contact / contact | |
| Dielectric strength, contact / shield | |
| Approvals | |
| Note | |

| | |
|--|--|
| Cat.6 _n / Class E _n (ISO/IEC 11801 2010) | |
| TIA-568A, TIA-568B, PROFINET | |
| IP20 | |
| Zinc diecast | |
| 0.48...0.76 mm | |
| AWG 26...AWG 22 | |
| 0.41...0.64 mm | |
| AWG 26...AWG 22 | |
| 1.8 mm | |
| 750 | |
| -40...70 °C | |
| IEC 60603-7-51 | |
| Gold over nickel | |
| ≤ 20 mΩ | |
| 500 MΩ | |
| conforming to IEEE 802.3at | |
| ≥ 1000 V DC | |
| Note | |

| | |
|--|--|
| Cat.6A / Class EA (ISO/IEC 11801 2010) | |
| TIA-568A, TIA-568B, PROFINET | |
| IP20 | |
| Zinc diecast | |
| 0.48...0.76 mm | |
| AWG 26...AWG 22 | |
| 0.41...0.64 mm | |
| AWG 26...AWG 22 | |
| 1.8 mm | |
| 750 | |
| -40...70 °C | |
| IEC 60603-7-51 | |
| Gold over nickel | |
| ≤ 20 mΩ | |
| 500 MΩ | |
| conforming to IEEE 802.3at | |
| ≥ 1000 V DC | |
| DETNRVER | |
| Note | |

Ordering data

| | |
|-------------|--|
| Note | |
|-------------|--|

| Type | Qty. | Order No. |
|------------------|------|------------|
| IE-KEY-RJ45/DC-1 | 1 | 2782300000 |

| Type | Qty. | Order No. |
|-------------|------|------------|
| IE-XRJ45/DC | 1 | 8808330000 |

Accessories

| | | |
|--|--|--|
| | | |
|--|--|--|

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

| | |
|-------------|--|
| Note | |
|-------------|--|

| | | |
|--|--|--|
| | | |
|--|--|--|

| | | |
|--|--|--|
| | | |
|--|--|--|

Coupling Single Pair Ethernet (SPE)

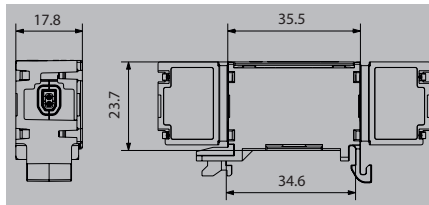
- Only one pair of wires for data and power
- IP20
- TS35

Outlet direction straight

Pin contacts



SPElink®



Technical data

Category
 Protection degree
 Ambient temperature (operational)
 Plugging cycles
 Housing main material
 Contact material
 Contact surface
 Rated voltage
 Rated current
 Insulation cross-section, min.
 Insulation cross-section, max.
 Insulation strength
 PoE / PoE+
 Dielectric strength, contact / contact
 Dielectric strength, contact / shield
 Connector standard
 UL 94 flammability rating

T1-B
 IP30, in closed state
 -40...70 °C
 750

 Gold over nickel

 3.5 A at 0°C

 ≥ 500 MΩ
 PoDL acc. to IEEE 802.3bu / cg
 ≥ 1000 V DC
 2250 V DC
 IEC 63171-2
 V-0

Note

Ordering data

Note

| Type | Qty. | Order No. |
|---------------|------|------------|
| IE-TO-SPO-CLP | 10 | 2870790000 |

Accessories

Marking tags
 MultiCard, white

| Type | Qty. | Order No. |
|---------------------|------|------------|
| ESG 9/11 K MC NE WS | 200 | 1857440000 |

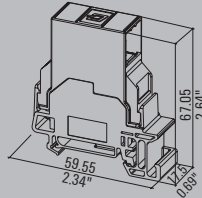
Note

Module RJ45

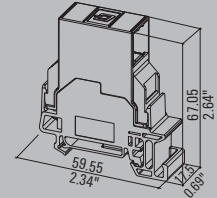
Outlet direction straight

- Cat. 6_A
- IP20
- TS 35

8-wire



4-wire



Technical data

| |
|---|
| Category |
| Protection degree |
| Housing main material |
| Contact surface |
| Colour |
| Type of mounting |
| Plugging cycles |
| Configuration |
| Ambient temperature (operational) |
| Temperature range, assembly, min. / max. |
| Connector standard |
| Connection diameter, flexible, min. / max. |
| Connection cross-section, flexible, min. / max. |
| Connection diameter, solid, min. / max. |
| Connection cross-section, solid, min. / max. |
| Electrical properties* |
| PoE / PoE+ |
| Contact resistance |
| Current-carrying capacity at 50 °C |
| Dielectric strength, contact / contact |
| Dielectric strength, contact / shield |
| Insulation strength |
| Approvals |
| Note |

| |
|---|
| Cat.6A / Class EA (ISO/IEC 11801 2010) |
| IP20 |
| PA UL 94 V0, PA 66 UL V0 E63957 |
| Au ≥ 0.8 µm |
| Light Grey |
| TS 35 |
| 750 (RJ45) |
| Switchable volt. connection from module/coupling to mounting rail |
| -40 °C...70 °C |
| -25 °C...70 °C |
| IEC 60603-7-51 |
| 0.48 mm / 0.76 mm |
| AWG 26 / AWG 22 |
| 0.4 mm / 0.64 mm |
| AWG 24 / AWG 22 |
| conforming to IEEE 802.3bt |
| ≤ 20 mΩ |
| 1 A |
| ≥ 1000 V AC/DC |
| ≥ 1500 V AC/DC |
| 500 MΩ |
| CULUS |
| Weidmüller connection cat. 7 AWG 27/7 LSZH cable possible |

| |
|---|
| Cat.5 (ISO/IEC 11801) |
| IP20 |
| PA UL 94 V0, PA 66 UL V0 E63957 |
| Au ≥ 0.8 µm |
| Light Grey |
| TS 35 |
| 750 (RJ45) |
| Switchable volt. connection from module/coupling to mounting rail |
| -40 °C...70 °C |
| -25 °C...70 °C |
| IEC 60603-7-51 |
| 0.48 mm / 0.76 mm |
| AWG 26 / AWG 22 |
| 0.4 mm / 0.64 mm |
| AWG 24 / AWG 22 |
| conforming to IEEE 802.3bt |
| ≤ 20 mΩ |
| 1 A |
| ≥ 1000 V AC/DC |
| ≥ 1500 V AC/DC |
| 500 MΩ |

Ordering data

| |
|----------------|
| A-coded |
| B-coded |
| PROFINET-coded |
| Note |

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-TO-RJ45-FJ-A | 10 | 8946930000 |
| IE-TO-RJ45-FJ-B | 10 | 8946940000 |

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-TO-RJ45-FJ-P | 10 | 8946950000 |

Accessories

| |
|------------------|
| Marking tags |
| MultiCard, white |

| Type | Qty. | Order No. |
|---------------------|------|------------|
| ESG 9/11 K MC NE WS | 200 | 1857440000 |

| Type | Qty. | Order No. |
|---------------------|------|------------|
| ESG 9/11 K MC NE WS | 200 | 1857440000 |

| |
|-------------|
| Note |
|-------------|

| |
|-------------|
| Note |
|-------------|

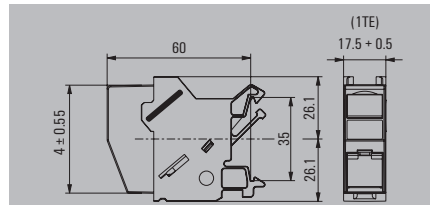
| |
|-------------|
| Note |
|-------------|

Module RJ45

Outlet direction diagonal

- Cat. 6
- IP20
- TS 35

8-wire



Technical data

| | |
|---|---|
| Category | Cat.6A / Class EA (ISO/IEC 11801 2010) |
| Protection degree | IP20 |
| Housing main material | PA 66, UL 94: V-0 |
| Contact surface | |
| Colour | Light Grey |
| Type of mounting | TS 35 |
| Plugging cycles | 750 (RJ45) |
| Configuration | 1 TE pitch dimension acc. to DIN 43880. insta-compatible Installation flange with mounting frame |
| Ambient temperature (operational) | -25 °C...70 °C |
| Temperature range, assembly, min. / max. | ... |
| Connector standard | IEC 60603-7-5 |
| Connection diameter, flexible, min. / max. | 0.48 mm / 0.64 mm |
| Connection cross-section, flexible, min. / max. | AWG 26 / AWG 22 |
| Connection diameter, solid, min. / max. | 0.4 mm / 0.64 mm |
| Connection cross-section, solid, min. / max. | AWG 24 / AWG 22 |
| Electrical properties* | |
| PoE / PoE+ | conforming to IEEE 802.3at |
| Contact resistance | ≤ 20 mΩ |
| Current-carrying capacity at 50 °C | 1 A |
| Dielectric strength, contact / contact | ≥ 1000 V AC/DC |
| Dielectric strength, contact / shield | ≥ 1500 V AC/DC |
| Insulation strength | 500 MΩ |
| Approvals | CULUS; DETNORVER |
| Note | |

Ordering data

| | | |
|----------------|-------------|------------------|
| | A/B-coded | |
| Note | | |
| Type | Qty. | Order No. |
| IE-XM-RJ45/IDC | 1 | 8808360000 |

Accessories

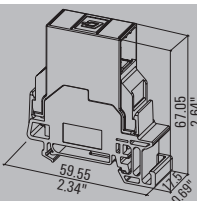
| | | |
|---------------------|-------------|------------------|
| Marking tags | Marking tag | |
| Type | Qty. | Order No. |
| IE-DM | 50 | 8813500000 |

Note

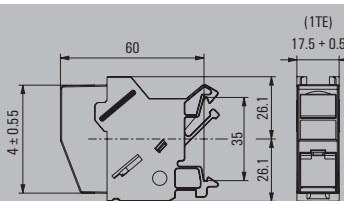
Coupling RJ45, 8-wire

- Cat. 6_A
- IP20
- TS35

Outlet direction straight



Outlet direction diagonal



Technical data

| |
|--|
| Category |
| Protection degree |
| Housing main material |
| Contact material / Contact surface |
| Colour |
| Type of mounting |
| Plugging cycles |
| Configuration |
| Ambient temperature (operational) |
| Temperature range, assembly, min. / max. |
| Humidity |
| Shock resistance acc. to IEC 60512-6-3 |
| Vibration resistance acc. to IEC 60512-6-4 |
| Housing material, insert |
| Connector standard |
| Electrical properties* |
| PoE / PoE+ |
| Contact resistance |
| Current-carrying capacity at 50 °C |
| Dielectric strength, contact / contact |
| Dielectric strength, contact / shield |
| Insulation strength |
| Approvals |
| Note |

| |
|---|
| Cat.6A / Class EA (ISO/IEC 11801 2010) |
| IP20 |
| PA UL 94 V0, PA 66 UL V0 E63957 |
| Spring steel, Ni 1.2 µm / Au ≥ 0.8 µm |
| Light Grey |
| TS 35 |
| 750 (RJ45) |
| Switchable volt. connection from module/coupling to mounting rail |
| -40 °C...70 °C |
| -25 °C...70 °C |
| 0...93 % rel. humidity |
| 250 ms ² |
| 50 ms ² sinusoidal (9...500 Hz) |
| Zinc diecast |
| IEC 60603-7-51 |
| conforming to IEEE 802.3af |
| ≤ 20 mΩ |
| 1 A |
| ≥ 1000 V AC/DC |
| ≥ 1500 V AC/DC |
| 500 MΩ |
| CULUS |

| |
|--|
| Cat.6A / Class EA (ISO/IEC 11801 2010) |
| IP20 |
| PA 66, UL 94: V-0 |
| Light Grey |
| TS 35 |
| 750 |
| 1 TE pitch dimension acc. to DIN 43880. insta-compatible |
| Installation flange with mounting frame |
| -25 °C...70 °C |
| IEC 60603-7-5 |
| conforming to IEEE 802.3at |
| ≤ 20 mΩ |
| 1 A |
| ≥ 1000 V AC/DC |
| ≥ 1500 V AC/DC |
| 500 MΩ |
| CULUS; DETNORVER |

Ordering data

| |
|-------------|
| Note |
|-------------|

| Type | Qty. | Order No. |
|--------------|------|------------|
| IE-TO-RJ45-C | 1 | 8946920000 |

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-XM-RJ45/RJ45 | 1 | 8879050000 |

Accessories

| | |
|--------------|---------------------------------|
| Marking tags | MultiCard, white Marking tag |
|--------------|---------------------------------|

| Type | Qty. | Order No. |
|---------------------|------|------------|
| ESG 9/11 K MC NE WS | 200 | 1857440000 |

| Type | Qty. | Order No. |
|-------|------|------------|
| IE-DM | 50 | 8813500000 |

| |
|-------------|
| Note |
|-------------|

| |
|-------------|
| Note |
|-------------|

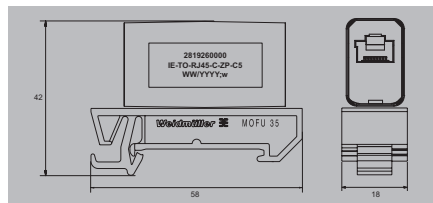
| |
|-------------|
| Note |
|-------------|

Coupling RJ45, Counter installation (Smart Metering)

- Cat. 5
- IP20

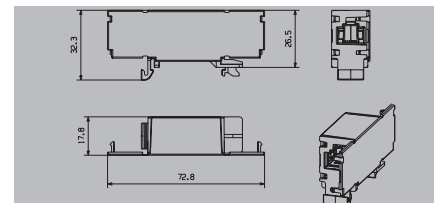
TS35

unshielded



TS35 + mounting in the meter cross

shielded



Technical data

| |
|--|
| Category |
| Protection degree |
| Housing main material |
| Contact material / Contact surface |
| Colour |
| Type of mounting |
| Plugging cycles |
| Configuration |
| Ambient temperature (operational) |
| Temperature range, assembly, min. / max. |
| Humidity |
| Shock resistance acc. to IEC 60512-6-3 |
| Vibration resistance acc. to IEC 60512-6-4 |
| Housing material, insert |
| Connector standard |
| Electrical properties* |
| PoE / PoE+ |
| Contact resistance |
| Current-carrying capacity at 50 °C |
| Dielectric strength, contact / contact |
| Dielectric strength, contact / shield |
| Insulation strength |
| Approvals |
| Note |

| |
|-----------------------------|
| Cat. 5 |
| IP20 |
| Plastic, PA 66 UL V0 E63957 |
| / Gold over nickel |
| beige, black |
| TS 35 |
| 750 (RJ45) |
| -40 °C...80 °C |
| |
| |
| Plastic |
| IEC 60603-7-51 |
| |
| |
| 1 A |
| ≥ 1000 V AC/DC |
| ≥ 1500 V AC/DC |
| |
| |

| |
|---|
| Cat.6A / Class EA (ISO/IEC 11801 2010) |
| IP20 |
| PA 66 UL V0 E63957 |
| Spring steel, Ni 1.2 µm / Au ≥ 0.8 µm |
| Light Grey |
| TS 35 |
| 750 (RJ45) |
| -40 °C...70 °C |
| |
| 0...93 % rel. humidity |
| 500 ms ² |
| 50 ms ² sinusoidal (10...500 Hz) |
| Zinc diecast |
| IEC 60603-7-51 |
| |
| conforming to IEEE 802.3af |
| ≤ 20 mΩ |
| 1 A |
| ≥ 1000 V AC/DC |
| ≥ 1500 V AC/DC |
| 500 MΩ |
| |

Ordering data

| |
|-------------|
| Note |
|-------------|

| Type | Qty. | Order No. |
|--------------------|------|------------|
| IE-T0-RJ45-C-ZP-C5 | 10 | 2819260000 |

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-T0-RJ45-C-LP | 10 | 2812440000 |

Accessories

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

| |
|-------------|
| Note |
|-------------|

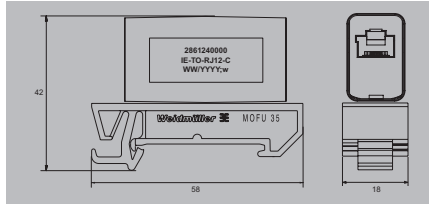
| |
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| |
|--|
| |
|--|

**Coupling RJ12, Counter installation
(Smart Metering)**

- IP20
- unshielded

TS35



Technical data

Protection degree
 Housing main material
 Contact material / Contact surface
 Colour
 Type of mounting
 Plugging cycles
 Ambient temperature (operational)
 Housing material, insert
 Connector standard
 Approvals

IP20
 Plastic
 / Gold over nickel
 beige, black
 TS 35
 ≥ 200
 -40 °C...80 °C
 Plastic
 TIA-1096-A

Note

Ordering data

Note

Accessories

| Type | Qty. | Order No. |
|--------------|------|------------|
| IE-T0-RJ12-C | 10 | 2861240000 |

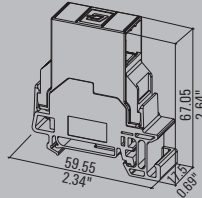
| Type | Qty. | Order No. |
|------|------|-----------|
|------|------|-----------|

Note

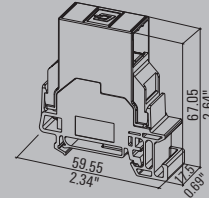
USB connection

- IP20
- TS 35

USB A



USB AB



Technical data

Protection degree
 Housing main material
 Colour
 Type of mounting
 Ambient temperature (operational)
 Temperature range, assembly, min. / max.
 Connector standard
 Connection 1 / 2
 Approvals

IP20
 PA UL 94 V0
 Light Grey
 TS 35
 -40 °C...70 °C
 -25 °C...70 °C
 IEC 61076-3-107
 USB A / USB A

IP20
 PA UL 94 V0
 Light Grey
 TS 35
 -40 °C...70 °C
 -25 °C...70 °C
 IEC 61076-3-107
 USB A / USB B

Note

Ordering data

USB

| Type | Qty. | Order No. |
|-----------|------|-------------------|
| IE-T0-USB | 1 | 8946960000 |

| Type | Qty. | Order No. |
|--------------|------|-------------------|
| IE-T0-USB-AB | 1 | 1438180000 |

Note

Accessories

Marking tags

MultiCard, white

| Type | Qty. | Order No. |
|---------------------|------|-------------------|
| ESG 9/11 K MC NE WS | 200 | 1857440000 |

| Type | Qty. | Order No. |
|---------------------|------|-------------------|
| ESG 9/11 K MC NE WS | 200 | 1857440000 |

Note

IP20 mounting rail outlets

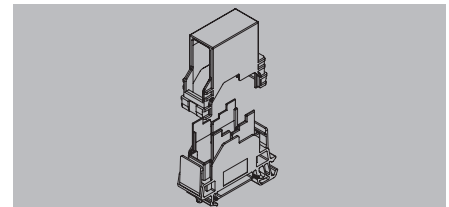
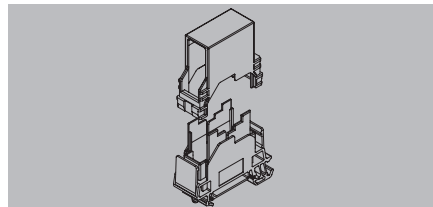
Coupling fibre-optic

- IP20
- TS 35

SC duplex



SC-RJ



Technical data

| |
|--|
| Protection degree |
| Housing main material |
| Colour |
| Type of mounting |
| Plugging cycles |
| Ambient temperature (operational) |
| Temperature range, assembly, min. / max. |
| Connector standard |
| Approvals |

| |
|----------------|
| IP20 |
| PA UL 94 V0 |
| Light Grey |
| TS 35 |
| 1000 |
| -40 °C...70 °C |
| -25 °C...70 °C |
| IEC 61754-4 |
| UL |

| |
|----------------|
| IP20 |
| PA UL 94 V0 |
| Light Grey |
| TS 35 |
| 1000 |
| -40 °C...70 °C |
| -25 °C...70 °C |
| IEC 61754-24 |
| UL |

Note

Ordering data

| Fibre-optic | |
|-------------|---------------|
| | Singlemode |
| | Multimode/POF |

Note

| Type | Qty. | Order No. |
|--------------|------|------------|
| IE-TO-SCD-SM | 1 | 8946980000 |
| IE-TO-SCD-MM | 10 | 8946970000 |

| Type | Qty. | Order No. |
|---------------|------|------------|
| IE-TO-SCRJ-SM | 10 | 8947000000 |
| IE-TO-SCRJ-MM | 10 | 8946990000 |

Accessories

| Marking tags | |
|--------------|------------------|
| | MultiCard, white |

| Type | Qty. | Order No. |
|---------------------|------|------------|
| ESG 9/11 K MC NE WS | 200 | 1857440000 |

| Type | Qty. | Order No. |
|---------------------|------|------------|
| ESG 9/11 K MC NE WS | 200 | 1857440000 |

Note

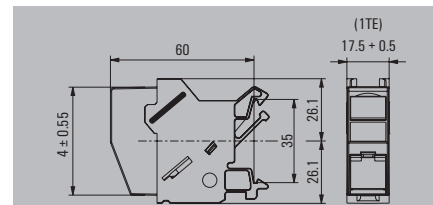
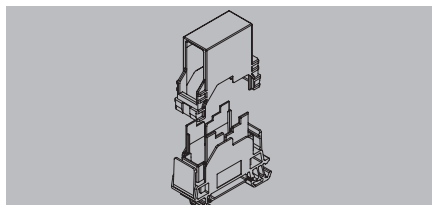
Coupling fibre-optic

- IP20
- TS 35

LC Duplex



ST



Technical data

Protection degree
 Housing main material
 Colour
 Type of mounting
 Configuration

Plugging cycles
 Ambient temperature (operational)
 Temperature range, assembly, min. / max.
 Connector standard
 Approvals

IP20
 PA UL 94 V0
 Light Grey
 TS 35

1000
 -40 °C...70 °C
 -25 °C...70 °C
 IEC 61754-20

IP20
 PA 66, UL 94: V-0
 Light Grey
 TS 35
 1 TE pitch dimension acc. to DIN 43880. insta-compatible
 Installation flange with mounting frame

750
 -25 °C...70 °C
 ...
 IEC 61754-2

Note

Ordering data

Singlemode
 Multimode

| Type | Qty. | Order No. |
|--------------|------|------------|
| IE-TO-LCD-SM | 10 | 8947020000 |
| IE-TO-LCD-MM | 10 | 8947010000 |

| Type | Qty. | Order No. |
|-------------|------|------------|
| IE-XM-ST/ST | 1 | 8808340000 |

Note

Accessories

Marking tags
 MultiCard, white
 Marking tag

| Type | Qty. | Order No. |
|---------------------|------|------------|
| ESG 9/11 K MC NE WS | 200 | 1857440000 |

| Type | Qty. | Order No. |
|-------|------|------------|
| IE-DM | 50 | 8813500000 |

Note

Socket adapter

- IP 20
- TS 35

Socket adapter



Technical data

Protection degree
 Housing main material
 Ambient temperature (operational)
 Approvals

IP20
 Polycarbonate PC, Acrylnitril-Butadien-Styrol (ABS)
 -25 °C...70

Note

Ordering data

Note

Accessories

Inserts, Power

- Socket AU 15 A
- Socket AU 10 A
- Socket CH
- Socket CN
- Socket GB
- Socket DE
- Socket DE orange
- Socket DK
- Socket FR orange
- Socket IT/EU
- Socket FR/B/CZ
- Socket IND
- RCBO
- ISR socket

| Type | Qty. | Order No. |
|-------------------|------|------------|
| IE-DINRAIL-AD-PWB | 1 | 2534680000 |

| Type | Qty. | Order No. |
|--------------------|------|------------|
| IE-FCI-PWB-AU | 1 | 1450830000 |
| IE-FCI-PWB-AU-10A | 1 | 1546590000 |
| IE-FCI-PWB-CH | 1 | 1450780000 |
| IE-FCI-PWB-CN | 1 | 1450790000 |
| IE-FCI-PWB-GB | 1 | 1450770000 |
| IE-FCI-PWB-DE | 1 | 1450730000 |
| IE-FCI-PWB-DE-OR | 1 | 1554000000 |
| IE-FCI-PWB-DK | 1 | 2661340000 |
| IE-FCI-PWB-FR-OR | 1 | 2007230000 |
| IE-FCI-PWB-IT | 1 | 1450810000 |
| IE-FCI-PWB-FR/B/CZ | 1 | 2426700000 |
| IE-FCI-PWB-IND | 1 | 2500710000 |
| IE-FCI-PWB-RCBO | 1 | 1534250000 |
| IE-FCI-PWB-ISR | 1 | 2531060000 |

Note

FrontCom® IP65 service interfaces

Overview

FrontCom® IP65 service interfaces

FrontCom® Vario IP65 service interface

| | |
|---------------|------|
| Frames | L.2 |
| Insert plates | L.6 |
| Inserts | L.15 |
| Accessories | L.32 |
| Sets | L.33 |

FrontCom® Micro IP65 service interface

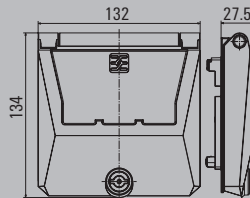
| | |
|----------------------------|------|
| RJ45 | L.35 |
| Single Pair Ethernet (SPE) | L.36 |
| USB | L.37 |

FrontCom® Vario IP65 service interface

FrontCom® Vario Metal double frame

- IP65
- Possibility of using single and double insertion plates

Metal cover



Technical data

Protection degree / Protection class (UL)
Material cover
Material frame
Ambient temperature (operational)
Approvals

IP65, in closed state / Type 12
Zinc diecast, powder-coated
Zinc diecast
-40 °C...70 °C
CSA; CURUS

Note

Ordering data

- Rotary button operation
- Lockable with key
- Lockable with electrical cabinet key
- Lockable with electrical cabinet key (Daimler lock)

| Type | Qty. | Order No. |
|------------------|------|------------|
| IE-FC-DFM-KNOB | 1 | 2003170000 |
| IE-FC-DFM-KEY | 1 | 2003180000 |
| IE-FC-DFM-CAB | 1 | 2003190000 |
| IE-FC-DFM-CAB-DB | 1 | 2003150000 |

Note

Accessories

spare key

| Type | Qty. | Order No. |
|------------|------|------------|
| IE-FC-KEY2 | 1 | 2066650000 |

Marking tags

- silver
- light grey
- white

| | | |
|---------------------|----|------------|
| SM 27/18 K MC NE SI | 80 | 1713760000 |
| SM 27/18 K MC NE GR | 80 | 1073340000 |
| SM 27/18 K MC NE WS | 80 | 1707270000 |

MultiCard

| | | |
|--------------------------|-----|------------|
| ESG 7/20 SIRIUS MC NE WS | 200 | 1736181044 |
|--------------------------|-----|------------|

Touch-safe protection

- Touch-safe protection

| | | |
|------------|---|------------|
| IE-FC-PWPC | 1 | 1450820000 |
|------------|---|------------|

Bar (for mounting single insert plates)

- Partition

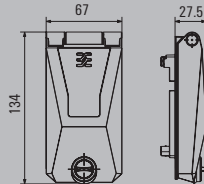
| | | |
|--------------|---|------------|
| IE-FC-DF-IPH | 1 | 2003340000 |
|--------------|---|------------|

Note

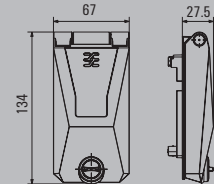
FrontCom® Vario
Metal single frame

- IP65

Metal cover



Plastic cover



Technical data

Protection degree / Protection class (UL)
Material cover
Material frame
Ambient temperature (operational)
Approvals

Note

IP65, in closed state / Type 12
Zinc diecast, powder-coated
Zinc diecast
-40 °C...70 °C
CSA; CURUS; DETNORVER

IP65, in closed state
Polycarbonate PC
Zinc diecast
-40 °C...70 °C
DETNORVER

Ordering data

Rotary button operation
Lockable with key
Control cabinet key (double bit)
Control cabinet key (Daimler)

Note

| Type | Qty. | Order No. |
|------------------|------|------------|
| IE-FC-SFM-KNOB | 1 | 1450530000 |
| IE-FC-SFM-KEY2 | 1 | 1450540000 |
| IE-FC-SFM-CAB | 1 | 2003160000 |
| IE-FC-SFM-CAB-DB | 1 | 2663200000 |

| Type | Qty. | Order No. |
|------------------|------|------------|
| IE-FC-SFP-KNOB | 1 | 1450510000 |
| IE-FC-SFP-KEY2 | 1 | 1450520000 |
| IE-FC-SFP-CAB | 1 | 2003140000 |
| IE-FC-SFP-CAB-DB | 1 | 2663190000 |

Accessories

spare key

Marking tags

silver
light grey
white

MultiCard

Touch-safe protection

Touch-safe protection

Accessories for mounting cut-out

Punch for hole punching tool
Punching tool

| Type | Qty. | Order No. |
|--------------------------|------|------------|
| IE-FC-KEY2 | 1 | 2066650000 |
| SM 27/18 K MC NE SI | 80 | 1713760000 |
| SM 27/18 K MC NE GR | 80 | 1073340000 |
| SM 27/18 K MC NE WS | 80 | 1707270000 |
| ESG 7/20 SIRIUS MC NE WS | 200 | 1736181044 |
| IE-FC-PWPC | 1 | 1450820000 |
| KDK 52 X 91 | 1 | 2008410000 |
| IE-KO-HAT | 1 | 1966810000 |

| Type | Qty. | Order No. |
|--------------------------|------|------------|
| IE-FC-KEY2 | 1 | 2066650000 |
| SM 27/18 K MC NE SI | 80 | 1713760000 |
| SM 27/18 K MC NE GR | 80 | 1073340000 |
| SM 27/18 K MC NE WS | 80 | 1707270000 |
| ESG 7/20 SIRIUS MC NE WS | 200 | 1736181044 |
| IE-FC-PWPC | 1 | 1450820000 |
| KDK 52 X 91 | 1 | 2008410000 |
| IE-KO-HAT | 1 | 1966810000 |

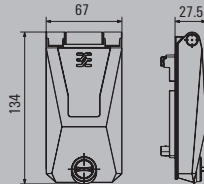
Note

FrontCom® Vario IP65 service interface

**FrontCom® Vario
Plastic single frame**

- IP65

Plastic cover



Technical data

Protection degree / Protection class (UL)
Material cover
Material frame
Ambient temperature (operational)
Approvals

IP65, in closed state
Polycarbonate PC
Polycarbonate glass fiber reinforced
-40 °C...70 °C

Note

Ordering data

Note

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-FC-SFPP-KNOB | 1 | 3041950000 |

Accessories

Marking tags

- silver
- light grey
- white

MultiCard

Touch-safe protection

Touch-safe protection

Accessories for mounting cut-out

- Punch for hole punching tool
- Punching tool

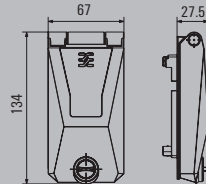
| Type | Qty. | Order No. |
|--------------------------|------|------------|
| SM 27/18 K MC NE SI | 80 | 1713760000 |
| SM 27/18 K MC NE GR | 80 | 1073340000 |
| SM 27/18 K MC NE WS | 80 | 1707270000 |
| ESG 7/20 SIRIUS MC NE WS | 200 | 1736181044 |
| IE-FC-PWPC | 1 | 1450820000 |
| KOK 52 X 91 | 1 | 2008410000 |
| IE-KO-HAT | 1 | 1966810000 |

Note

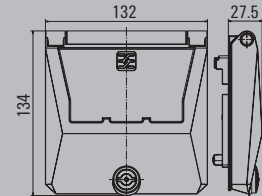
FrontCom® Vario
Frame UL Type 4X

- For particularly harsh environmental conditions (outdoor) with UL Type 4X approval

Single frame, metal lid



Double frame, metal lid



Technical data

Protection degree / Protection class (UL)
Material cover
Material frame
Ambient temperature (operational)
Approvals

Note

IP65, in closed state / Type 4X
Zinc diecast, powder-coated
Zinc diecast, powder-coated
-40 °C...70 °C
CSA; CURUS; DETNORVER

IP65, in closed state / Type 4X
Zinc diecast, powder-coated
Zinc diecast, powder-coated
-40 °C...70 °C
CSA; CURUS; DETNORVER

Ordering data

Rotary button operation

Note

| Type | Qty. | Order No. |
|-------------------|------|------------|
| IE-FC-SFM-KNOB-4X | 1 | 2669630000 |

| Type | Qty. | Order No. |
|-------------------|------|------------|
| IE-FC-DFM-KNOB-4X | 1 | 2669640000 |

Accessories

Marking tags

silver
light grey
white

MultiCard

Touch-safe protection

Touch-safe protection

Accessories for mounting cut-out

Punch for hole punching tool
Punching tool

Bar (for mounting single insert plates)

Partition

| Type | Qty. | Order No. |
|--------------------------|------|------------|
| SM 27/18 K MC NE SI | 80 | 1713760000 |
| SM 27/18 K MC NE GR | 80 | 1073340000 |
| SM 27/18 K MC NE WS | 80 | 1707270000 |
| ESG 7/20 SIRIUS MC NE WS | 200 | 1736181044 |
| IE-FC-PWPC | 1 | 1450820000 |
| KOK 52 X 91 | 1 | 2008410000 |
| IE-KO-HAT | 1 | 1966810000 |

| Type | Qty. | Order No. |
|--------------------------|------|------------|
| SM 27/18 K MC NE SI | 80 | 1713760000 |
| SM 27/18 K MC NE GR | 80 | 1073340000 |
| SM 27/18 K MC NE WS | 80 | 1707270000 |
| ESG 7/20 SIRIUS MC NE WS | 200 | 1736181044 |
| IE-FC-PWPC | 1 | 1450820000 |

| | | |
|--------------|---|------------|
| IE-FC-DF-IPH | 1 | 2003340000 |
|--------------|---|------------|

Note

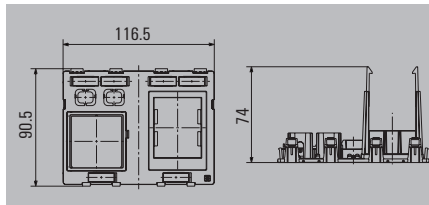
FrontCom® Vario IP65 service interface

FrontCom® Vario

Insert plates for double frames

- IP20

1 x power, 2 x data, 1 x RCBO



Technical data

| |
|--|
| Material |
| Insert, data |
| Insert Power large |
| Insert RCBO (2 modular width units) |
| Insert suitable for RCBO according to standard |
| Insert GFCl /2 x Power US pre-assembled |
| Ambient temperature (operational) |
| Approvals |
| Note |

| |
|------------------|
| Polycarbonate PC |
| 2 |
| 1 |
| 1 |
| DIN43880 |
| -40 °C...70 |
| CSA; CURUS |

Ordering data

| |
|-------------|
| shielded |
| unshielded |
| Note |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-FC-DSP-PWB/2ST/FILS | 1 | 2067080000 |
| IE-FC-DIP-PWB/2ST/FILS | 1 | 2067070000 |

Accessories

| | |
|------------------------------|--|
| Inserts, Data | |
| SPE Coupling | |
| RJ45 coupling | |
| RJ45 module EIA/TIA T568 B | |
| RJ45 module PROFINET | |
| RJ45 module EIA/TIA T568 A | |
| USB 2.0 A / A | |
| USB 3.0 A / A | |
| USB 2.0 A / B | |
| MultiCard | |
| Touch-safe protection | |
| Touch-safe protection | |

| Type | Qty. | Order No. |
|--------------------------|------|------------|
| IE-BI-SPO-C | 10 | 2861260000 |
| IE-BI-RJ45-C | 1 | 1962840000 |
| IE-BI-RJ45-FJ-B | 10 | 1963840000 |
| IE-BI-RJ45-FJ-P | 10 | 1963830000 |
| IE-BI-RJ45-FJ-A | 10 | 1962850000 |
| IE-BI-USB-A | 10 | 1019570000 |
| IE-BI-USB-3.0-A | 1 | 1487920000 |
| IE-BI-USB-AB | 10 | 1131380000 |
| <hr/> | | |
| ESG 7/20 SIRIUS MC NE WS | 200 | 1736181044 |
| <hr/> | | |
| IE-FC-PWPC | 1 | 1450820000 |

Note

An overview of the power inserts can be found in this chapter under power insert sockets.

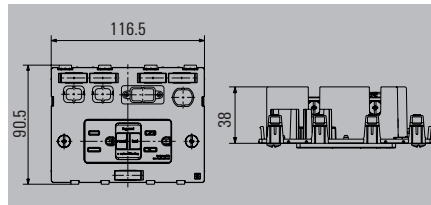
FrontCom® Vario

Insert plates for double frames

- IP20

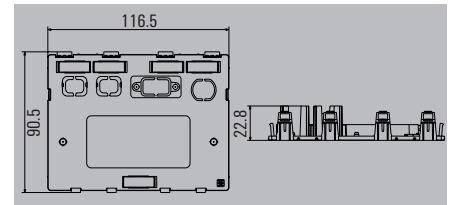
1x GFCI, 2x data, 1x signal, 1x fuse

GFCI pre-assembled



1x GFCI, 2x data, 1x signal, 1x fuse

without GFCI



Technical data

Material
 Insert, data
 Insert Power large
 Insert fuse
 Signal insert D-Sub 9-pole / VGA / HDMI
 Insert RCBO (2 modular width units)
 Insert GFCI / 2 x Power US pre-assembled
 Ambient temperature (operational)
 Approvals

Technical data GFCI insert

Operating voltage / Rated current
 GFCI protected US outlet
 Self-test
 Status indication
 Type of connection
 Line connection cross-section
 finely stranded with wire-end ferrule
 finely stranded with wire-end ferrule
 Conductor connection cross-section, rigid

Note

Polycarbonate PC
 2
 1
 1
 1
 -35 °C...66 °C
 CSA; CURUS

125 V / 20 A
 2 pieces
 automatically every 3 seconds
 red LED
 Screw connection
 1.5 ... 2.5 mm²
 1.5 ... 2.5 mm²
 1.5 ... 4 mm²

Polycarbonate PC
 2
 1
 1
 -40 °C...70 °C

Ordering data

shielded
 unshielded

Note

| Type | Qty. | Order No. |
|-------------------------|------|------------|
| IE-FC-DSP-CI/3A/2ST/1D9 | 1 | 2004810000 |
| IE-FC-DIP-CI/3A/2ST/1D9 | 1 | 2003370000 |

incl. pre-mounted GFCI

| Type | Qty. | Order No. |
|--------------------------|------|------------|
| IE-FC-DIP-PWC-3A/2ST/1D9 | 1 | 2897320000 |

Accessories

Inserts, Signal

D-Sub, 9-pole, female/female
 D-Sub, 9-pole, female / male
 D-Sub, 9-pole, female / solder connection
 VGA coupling
 HDMI coupling

Fuse inserts

3 A

Inserts, Data

SPE Coupling
 RJ45 coupling
 RJ45 module EIA/TIA T568 A
 RJ45 module EIA/TIA T568 B
 RJ45 module PROFINET
 USB 2.0 A / A
 USB 3.0 A / A
 USB 2.0 A / B

MultiCard

Note

| Type | Qty. | Order No. |
|--------------------------|------|------------|
| IE-FCI-D9-FF | 1 | 1450840000 |
| IE-FCI-D9-FM | 1 | 1450850000 |
| IE-FCI-D9-FS | 1 | 1450870000 |
| IE-FCI-HD15-FF | 1 | 1556290000 |
| IE-FCI-HDMI-FF | 1 | 2003390000 |
| IE-FCI-PWCB-3A | 1 | 1543690000 |
| IE-BI-SP0-C | 10 | 2861260000 |
| IE-BI-RJ45-C | 1 | 1962840000 |
| IE-BI-RJ45-FJ-A | 10 | 1962850000 |
| IE-BI-RJ45-FJ-B | 10 | 1963840000 |
| IE-BI-RJ45-FJ-P | 10 | 1963830000 |
| IE-BI-USB-A | 10 | 1019570000 |
| IE-BI-USB-3.0-A | 1 | 1487920000 |
| IE-BI-USB-AB | 10 | 1131380000 |
| ESG 7/20 SIRIUS MC NE WS | 200 | 1736181044 |

| Type | Qty. | Order No. |
|--------------------------|------|------------|
| IE-FCI-D9-FF | 1 | 1450840000 |
| IE-FCI-D9-FM | 1 | 1450850000 |
| IE-FCI-D9-FS | 1 | 1450870000 |
| IE-FCI-HD15-FF | 1 | 1556290000 |
| IE-FCI-HDMI-FF | 1 | 2003390000 |
| IE-FCI-PWCB-3A | 1 | 1543690000 |
| IE-BI-SP0-C | 10 | 2861260000 |
| IE-BI-RJ45-C | 1 | 1962840000 |
| IE-BI-RJ45-FJ-A | 10 | 1962850000 |
| IE-BI-RJ45-FJ-B | 10 | 1963840000 |
| IE-BI-RJ45-FJ-P | 10 | 1963830000 |
| IE-BI-USB-A | 10 | 1019570000 |
| IE-BI-USB-3.0-A | 1 | 1487920000 |
| IE-BI-USB-AB | 10 | 1131380000 |
| ESG 7/20 SIRIUS MC NE WS | 200 | 1736181044 |

FrontCom® Vario

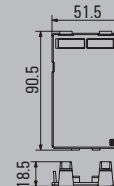
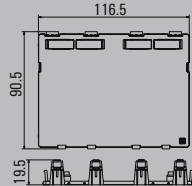
Insert plates

- IP20

blank double plate



blank single plate



Technical data

Material
Ambient temperature (operational)
Approvals
Note

Polycarbonate PC
-40 °C...70
CSA; CURUS

Polycarbonate PC
-40 °C...70
CSA; CURUS; DETNORVER

Ordering data

Note unshielded

| Type | Qty. | Order No. |
|--------------|------|------------|
| IE-FC-DIP-BP | 1 | 2004890000 |

| Type | Qty. | Order No. |
|-------------|------|------------|
| IE-FC-IP-BP | 1 | 1450710000 |

Accessories

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

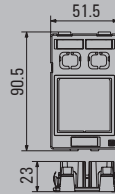
Note

FrontCom® Vario

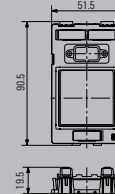
Insert plates

- IP20

1 x power, 2 x data



1x Power, 1x Signal



Technical data

Material
 Insert, data
 Signal insert DisplayPort
 Signal insert D-Sub 9-pole / VGA / HDMI
 Insert, signal, D-Sub, 25-pole
 Insert Power large
 Insert Power small
 Insert Power US
 Ambient temperature (operational)
 Approvals

Note

Polycarbonate PC
 2
 1
 -40 °C...70
 CSA; CURUS; DETNORVER

Polycarbonate PC
 1
 1
 -40 °C...70
 CSA; CURUS

Ordering data

shielded
 unshielded

Note

| Type | Qty. | Order No. |
|------------------|------|------------|
| IE-FC-SP-PWB/2ST | 1 | 1450550000 |
| IE-FC-IP-PWB/2ST | 1 | 1450630000 |

| Type | Qty. | Order No. |
|------------------|------|------------|
| IE-FC-IP-PWB/1D9 | 1 | 2003350000 |

Accessories

Inserts, Data

SPE Coupling
 RJ45 coupling
 RJ45 module EIA/TIA T568 A
 RJ45 module EIA/TIA T568 B
 RJ45 module PROFINET
 USB 2.0 A / A
 USB 3.0 A / A
 USB 2.0 A / B

MultiCard

Touch-safe protection

Touch-safe protection

Inserts, Signal

D-Sub, 9-pole, female/female
 D-Sub, 9-pole, female / male
 D-Sub, 9-pole, female / solder connection
 VGA coupling
 HDMI coupling
 DisplayPort (DP)

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-BI-SP0-C | 10 | 2861260000 |
| IE-BI-RJ45-C | 1 | 1962840000 |
| IE-BI-RJ45-FJA | 10 | 1962850000 |
| IE-BI-RJ45-FJB | 10 | 1963840000 |
| IE-BI-RJ45-FJP | 10 | 1963830000 |
| IE-BI-USB-A | 10 | 1019570000 |
| IE-BI-USB-3.0-A | 1 | 1487920000 |
| IE-BI-USB-AB | 10 | 1131380000 |

| | | |
|--------------------------|-----|------------|
| ESG 7/20 SIRIUS MC NE WS | 200 | 1736181044 |
|--------------------------|-----|------------|

| | | |
|------------|---|------------|
| IE-FC-PWPC | 1 | 1450820000 |
|------------|---|------------|

| Type | Qty. | Order No. |
|---------------|------|------------|
| IE-FC-D9-FF | 1 | 1450840000 |
| IE-FC-D9-FM | 1 | 1450850000 |
| IE-FC-D9-FS | 1 | 1450870000 |
| IE-FC-HD15-FF | 1 | 1556290000 |
| IE-FC-HDMI-FF | 1 | 2003390000 |

| | | |
|--------------------------|-----|------------|
| ESG 7/20 SIRIUS MC NE WS | 200 | 1736181044 |
|--------------------------|-----|------------|

| | | |
|------------|---|------------|
| IE-FC-PWPC | 1 | 1450820000 |
|------------|---|------------|

Note

You will find an overview of the power inserts in this chapter under Power inserts-sockets.

You will find an overview of the power inserts in this chapter under Power inserts-sockets.

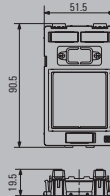
FrontCom® Vario IP65 service interface

FrontCom® Vario

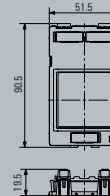
Insert plates

- IP20

1x Power, 1x Signal



1x Power



Technical data

Material
 Insert, data
 Signal insert DisplayPort
 Signal insert D-Sub 9-pole / VGA / HDMI
 Insert, signal, D-Sub, 25-pole
 Insert Power large
 Insert Power small
 Insert Power US
 Ambient temperature (operational)
 Approvals

Note

Polycarbonate PC
 1
 1
 -40 °C...70 °C

Polycarbonate PC
 1
 -40 °C...70
 CSA; CURUS

Ordering data

shielded
 unshielded

Note

| Type | Qty. | Order No. |
|------------------|------|------------|
| IE-FC-IP-PWB/1DP | 1 | 3042060000 |

| Type | Qty. | Order No. |
|--------------|------|------------|
| IE-FC-IP-PWB | 1 | 2548060000 |

Accessories

Inserts, Data

- SPE Coupling
- RJ45 coupling
- RJ45 module EIA/TIA T568 A
- RJ45 module EIA/TIA T568 B
- RJ45 module PROFINET
- USB 2.0 A / A
- USB 3.0 A / A
- USB 2.0 A / B

MultiCard

Touch-safe protection

Touch-safe protection

Inserts, Signal

- D-Sub, 9-pole, female/female
- D-Sub, 9-pole, female / male
- D-Sub, 9-pole, female / solder connection
- VGA coupling
- HDMI coupling
- DisplayPort (DP)

| Type | Qty. | Order No. |
|--------------------------|------|------------|
| ESG 7/20 SIRIUS MC NE WS | 200 | 1736181044 |
| IE-FC-PWPC | 1 | 1450820000 |
| IE-FC-DP-FF | 1 | 3042050000 |

| Type | Qty. | Order No. |
|--------------------------|------|------------|
| ESG 7/20 SIRIUS MC NE WS | 200 | 1736181044 |
| IE-FC-PWPC | 1 | 1450820000 |

Note

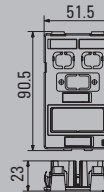
You will find an overview of the power inserts in this chapter under Power inserts-sockets.

FrontCom® Vario

Insert plates

- IP20

1x Power, 2x Data, 1x Signal



Technical data

Material
 Insert, data
 Signal insert DisplayPort
 Signal insert D-Sub 9-pole / VGA / HDMI
 Insert, signal, D-Sub, 25-pole
 Insert Power large
 Insert Power small
 Insert Power US
 Ambient temperature (operational)
 Approvals

Polycarbonate PC
 2
 1
 1
 -40 °C...70
 CSA; CURUS; DETNORVER

Note

Ordering data

shielded
 unshielded

Note

| Type | Qty. | Order No. |
|----------------------|------|------------|
| IE-FC-SP-PWS/2ST/1D9 | 1 | 1450600000 |
| IE-FC-IP-PWS/2ST/1D9 | 1 | 1450690000 |

Accessories

Inserts, Data

SPE Coupling
 RJ45 coupling
 RJ45 module EIA/TIA T568 A
 RJ45 module EIA/TIA T568 B
 RJ45 module PROFINET
 USB 2.0 A / A
 USB 3.0 A / A
 USB 2.0 A / B

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-BI-SPO-C | 10 | 2861260000 |
| IE-BI-RJ45-C | 1 | 1962840000 |
| IE-BI-RJ45-FJ-A | 10 | 1962850000 |
| IE-BI-RJ45-FJ-B | 10 | 1963840000 |
| IE-BI-RJ45-FJ-P | 10 | 1963830000 |
| IE-BI-USB-A | 10 | 1019570000 |
| IE-BI-USB-3.0-A | 1 | 1487920000 |
| IE-BI-USB-AB | 10 | 1131380000 |

MultiCard

| | | |
|--------------------------|-----|------------|
| ESG 7/20 SIRIUS MC NE WS | 200 | 1736181044 |
|--------------------------|-----|------------|

Touch-safe protection

Touch-safe protection

| | | |
|------------|---|------------|
| IE-FC-PWPC | 1 | 1450820000 |
|------------|---|------------|

Inserts, Signal

D-Sub, 9-pole, female/female
 D-Sub, 9-pole, female / male
 D-Sub, 9-pole, female / solder connection
 VGA coupling
 HDMI coupling
 DisplayPort (DP)

| | | |
|----------------|---|------------|
| IE-FCI-D9-FF | 1 | 1450840000 |
| IE-FCI-D9-FM | 1 | 1450850000 |
| IE-FCI-D9-FS | 1 | 1450870000 |
| IE-FCI-HD15-FF | 1 | 1556290000 |
| IE-FCI-HDMI-FF | 1 | 2003390000 |

Note

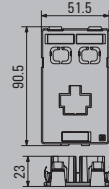
You will find an overview of the power inserts in this chapter under Power inserts-sockets.

FrontCom® Vario

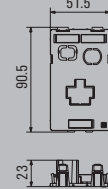
Insert plates

- IP20

1 x power, 2 x data



1 x power, 1 x 3A fuse, 1 x data



Technical data

| | |
|---|-----------------------|
| Material | Polycarbonate PC |
| Insert, data | 2 |
| Signal insert D-Sub 9-pole / VGA / HDMI | |
| Insert, signal, D-Sub, 25-pole | |
| Insert Power large | |
| Insert Power small | |
| Insert Power US | 1 |
| Insert fuse | |
| Ambient temperature (operational) | -40 °C...70 |
| Approvals | CSA; CURUS; DETNORVER |
| Note | |

| | |
|---|-----------------------|
| Material | Polycarbonate PC |
| Insert, data | 2 |
| Signal insert D-Sub 9-pole / VGA / HDMI | |
| Insert, signal, D-Sub, 25-pole | |
| Insert Power large | |
| Insert Power small | |
| Insert Power US | 1 |
| Insert fuse | |
| Ambient temperature (operational) | -40 °C...70 |
| Approvals | CSA; CURUS; DETNORVER |
| Note | |

| | |
|---|------------------|
| Material | Polycarbonate PC |
| Insert, data | 1 |
| Signal insert D-Sub 9-pole / VGA / HDMI | |
| Insert, signal, D-Sub, 25-pole | |
| Insert Power large | |
| Insert Power small | |
| Insert Power US | 1 |
| Insert fuse | 1 |
| Ambient temperature (operational) | -40 °C...70 |
| Approvals | CSA; CURUS |
| Note | |

Ordering data

| | |
|-------------|--|
| shielded | |
| unshielded | |
| Note | |

| Type | Qty. | Order No. |
|--|------|------------|
| IE-FC-SP-PWU/2ST | 1 | 1450620000 |
| IE-FC-IP-PWU/2ST | 1 | 1450700000 |
| For US socket the touch-safe protection is mandatory | | |

| Type | Qty. | Order No. |
|--|------|------------|
| IE-FC-IP-PWU/1ST/CB | 1 | 1543710000 |
| For US socket the touch-safe protection is mandatory | | |

Accessories

| Inserts, Signal | |
|--|--|
| D-Sub, 9-pole, female/female | |
| D-Sub, 9-pole, female / male | |
| D-Sub, 9-pole, female / solder connection | |
| D-Sub, 25-pole, female/female | |
| D-Sub, 25-pole, female/male | |
| D-Sub, 25-pole, female / solder connection | |
| HDMI coupling | |
| VGA coupling | |
| Inserts, Data | |
| SPE Coupling | |
| RJ45 coupling | |
| RJ45 module EIA/TIA T568 A | |
| RJ45 module EIA/TIA T568 B | |
| RJ45 module PROFINET | |
| USB 2.0 A / A | |
| USB 3.0 A / A | |
| USB 2.0 A / B | |
| MultiCard | |
| ESG 7/20 SIRIUS MC NE WS | |
| Touch-safe protection | |
| Touch-safe protection | |
| Inserts, Power | |
| US socket | |
| Fuse inserts | |
| 3 A | |
| Note | |

| Type | Qty. | Order No. |
|--------------------------|------|------------|
| IE-BI-SP0-C | 10 | 2861260000 |
| IE-BI-RJ45-C | 1 | 1962840000 |
| IE-BI-RJ45-FJ-A | 10 | 1962850000 |
| IE-BI-RJ45-FJ-B | 10 | 1963840000 |
| IE-BI-RJ45-FJ-P | 10 | 1963830000 |
| IE-BI-USB-A | 10 | 1019570000 |
| IE-BI-USB-3.0-A | 1 | 1487920000 |
| IE-BI-USB-AB | 10 | 1131380000 |
| ESG 7/20 SIRIUS MC NE WS | 200 | 1736181044 |
| IE-FC-PWPC | 1 | 1450820000 |
| IE-FC-PWS-US | 1 | 1450800000 |
| Note | | |

| Type | Qty. | Order No. |
|--------------------------|------|------------|
| IE-BI-SP0-C | 10 | 2861260000 |
| IE-BI-RJ45-C | 1 | 1962840000 |
| IE-BI-RJ45-FJ-A | 10 | 1962850000 |
| IE-BI-RJ45-FJ-B | 10 | 1963840000 |
| IE-BI-RJ45-FJ-P | 10 | 1963830000 |
| IE-BI-USB-A | 10 | 1019570000 |
| IE-BI-USB-3.0-A | 1 | 1487920000 |
| IE-BI-USB-AB | 10 | 1131380000 |
| ESG 7/20 SIRIUS MC NE WS | 200 | 1736181044 |
| IE-FC-PWPC | 1 | 1450820000 |
| IE-FC-I-PWS-US | 1 | 1450800000 |
| IE-FC-I-PWCB-3A | 1 | 1543690000 |
| Note | | |

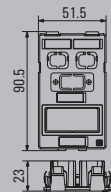


FrontCom® Vario

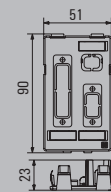
Insert plates

- IP20

2 x data, 2 x signal



1 x data, 2 x signal



Technical data

Material
 Insert, data
 Signal insert D-Sub 9-pole / VGA / HDMI
 Insert, signal, D-Sub, 25-pole
 Insert Power large
 Insert Power small
 Insert Power US
 Insert fuse
 Ambient temperature (operational)
 Approvals

Note

Polycarbonate PC
 2
 2
 -40 °C...70
 CSA; CURUS; DETNORVER

Polycarbonate PC
 1
 1
 1
 -40 °C...70
 CSA; CURUS; DETNORVER

Ordering data

shielded
 unshielded

Note

| Type | Qty. | Order No. |
|------------------|------|------------|
| IE-FC-SP-2ST/2D9 | 1 | 1450590000 |
| IE-FC-IP-2ST/2D9 | 1 | 1450670000 |

| Type | Qty. | Order No. |
|-----------------------|------|------------|
| IE-FC-SP-1ST/1D9/1D25 | 1 | 1450580000 |
| IE-FC-IP-1ST/1D9/1D25 | 1 | 1450650000 |

Accessories

Inserts, Signal

D-Sub, 9-pole, female/female
 D-Sub, 9-pole, female / male
 D-Sub, 9-pole, female / solder connection
 D-Sub, 25-pole, female/female
 D-Sub, 25-pole, female/male
 D-Sub, 25-pole, female / solder connection
 HDMI coupling
 VGA coupling

| Type | Qty. | Order No. |
|----------------|------|------------|
| IE-FCI-D9-FF | 1 | 1450840000 |
| IE-FCI-D9-FM | 1 | 1450850000 |
| IE-FCI-D9-FS | 1 | 1450870000 |
| IE-FCI-HDMI-FF | 1 | 2003390000 |
| IE-FCI-HD15-FF | 1 | 1556290000 |

| Type | Qty. | Order No. |
|----------------|------|------------|
| IE-FCI-D9-FF | 1 | 1450840000 |
| IE-FCI-D9-FM | 1 | 1450850000 |
| IE-FCI-D9-FS | 1 | 1450870000 |
| IE-FCI-D25-FM | 1 | 1450890000 |
| IE-FCI-D25-FS | 1 | 1450900000 |
| IE-FCI-D25-FF | 1 | 1450880000 |
| IE-FCI-HDMI-FF | 1 | 2003390000 |
| IE-FCI-HD15-FF | 1 | 1556290000 |

Inserts, Data

SPE Coupling
 RJ45 coupling
 RJ45 module EIA/TIA T568 A
 RJ45 module EIA/TIA T568 B
 RJ45 module PROFINET
 USB 2.0 A / A
 USB 3.0 A / A
 USB 2.0 A / B

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-BI-SP0-C | 10 | 2861260000 |
| IE-BI-RJ45-C | 1 | 1962840000 |
| IE-BI-RJ45-FJ-A | 10 | 1962850000 |
| IE-BI-RJ45-FJ-B | 10 | 1963840000 |
| IE-BI-RJ45-FJ-P | 10 | 1963830000 |
| IE-BI-USB-A | 10 | 1019570000 |
| IE-BI-USB-3.0-A | 1 | 1487920000 |
| IE-BI-USB-AB | 10 | 1131380000 |

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-BI-SP0-C | 10 | 2861260000 |
| IE-BI-RJ45-C | 1 | 1962840000 |
| IE-BI-RJ45-FJ-A | 10 | 1962850000 |
| IE-BI-RJ45-FJ-B | 10 | 1963840000 |
| IE-BI-RJ45-FJ-P | 10 | 1963830000 |
| IE-BI-USB-A | 10 | 1019570000 |
| IE-BI-USB-3.0-A | 1 | 1487920000 |
| IE-BI-USB-AB | 10 | 1131380000 |

MultiCard

| | | |
|--------------------------|-----|------------|
| ESG 7/20 SIRIUS MC NE WS | 200 | 1736181044 |
|--------------------------|-----|------------|

| | | |
|--------------------------|-----|------------|
| ESG 7/20 SIRIUS MC NE WS | 200 | 1736181044 |
|--------------------------|-----|------------|

Touch-safe protection

Touch-safe protection

| | | |
|------------|---|------------|
| IE-FC-PWPC | 1 | 1450820000 |
|------------|---|------------|

| | | |
|------------|---|------------|
| IE-FC-PWPC | 1 | 1450820000 |
|------------|---|------------|

Inserts, Power

US socket

Fuse inserts

3 A

Note

Data inserts

RJ45 Single Pair Ethernet (SPE)

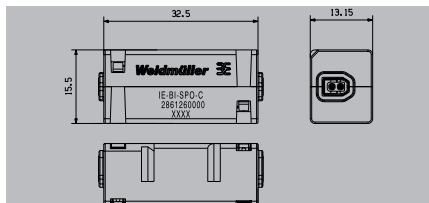
- IP20
- For housing variants 1, 4, 5, 14 and for FrontCom®
- SPE coupling for FrontCom® only

Coupling

Pin contacts



SPElink®



Technical data

| |
|---|
| Protection degree |
| Plugging cycles |
| Shielding |
| Housing main material |
| Contact surface |
| Connection cross-section, flexible, min. / max. |
| Connection cross-section, solid, min. / max. |
| Insulation diameter, min. / max. |
| Connector standard |
| Ambient temperature (operational) |
| PoE / PoE+ |
| Approvals |
| Note |

| |
|--------------------------------|
| IP67 with housing |
| 750 |
| PA 66 |
| Gold over nickel |
| ... |
| IEC 63171-2 |
| -40 °C...85 °C |
| PoDL acc. to IEEE 802.3bu / cg |
| Note |

Ordering data

| |
|------------------|
| tool-free |
| Coupling |
| Note |

| Type | Qty. | Order No. |
|-------------|------|------------|
| IE-BI-SPO-C | 10 | 2861260000 |
| Note | | |

Accessories

| |
|------------------|
| Type |
| Qty. |
| Order No. |

| |
|------------------|
| Type |
| Qty. |
| Order No. |

| |
|-------------|
| Note |
|-------------|

| |
|-------------|
| Note |
|-------------|



FrontCom® Vario IP65 service interface

Data inserts

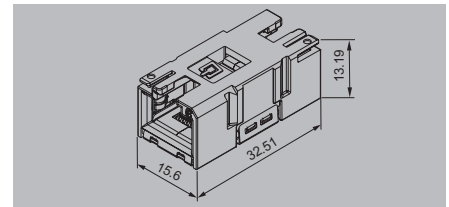
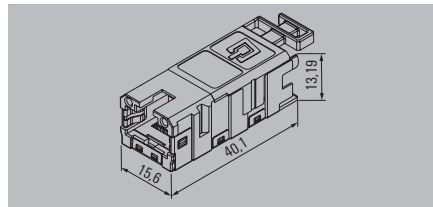
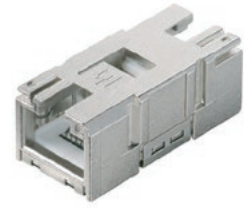
RJ45

- Completely in Cat. 6_A
- IP20
- For housing variants 1, 4, 5, 14 and for FrontCom®

Module



Coupling



Technical data

| |
|---|
| Protection degree |
| Plugging cycles |
| Shielding |
| Housing main material |
| Contact surface |
| Connection cross-section, flexible, min. / max. |
| Connection cross-section, solid, min. / max. |
| Insulation diameter, min. / max. |
| Connector standard |
| Ambient temperature (operational) |
| PoE / PoE+ |
| Approvals |
| Note |

| |
|--|
| IP67 with housing |
| 750 |
| 360° all-round enclosure, FS 2.8 Ground connection for equipotential bonding |
| Zinc diecast |
| Gold over Nickel, Au ≥ 0.8 µm |
| AWG 26 / AWG 22 |
| AWG 24 / AWG 22 |
| 0.85 mm...1.6 mm |
| IEC 60603-7-51 |
| -40 °C...70 °C |
| conforming to IEEE 802.3bt |
| CULUS |
| Connection of WM Cat. 7 AWG 27/7 LSZH possible |

| |
|--|
| IP67 with housing |
| 750 |
| 360° all-round enclosure, FS 2.8 Ground connection for equipotential bonding |
| Zinc diecast |
| Gold over Nickel, Au ≥ 0.8 µm |
| ... |
| IEC 60603-7-51 |
| -40 °C...70 °C |
| conforming to IEEE 802.3af |
| CULUS; DETNORVER |

Ordering data

| tool-free | |
|----------------------------|--|
| TIA-A. Cat. 6 _A | |
| TIA-B. Cat. 6 _A | |
| PROFINET Cat. 5 | |
| Coupling | |
| Note | |

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-BI-RJ45-FJ-A | 10 | 1962850000 |
| IE-BI-RJ45-FJ-B | 10 | 1963840000 |
| IE-BI-RJ45-FJ-P | 10 | 1963830000 |
| Note | | |

| Type | Qty. | Order No. |
|--------------|------|------------|
| IE-BI-RJ45-C | 10 | 1962840000 |
| Note | | |

Accessories

| Tools | |
|------------------------|--|
| Optional pressing tool | |
| Note | |

| Type | Qty. | Order No. |
|-------------|------|------------|
| PWZ RJ45 | 1 | 1118040000 |
| Note | | |

| Type | Qty. | Order No. |
|-------------|------|-----------|
| Note | | |

| |
|-------------|
| Note |
|-------------|

| |
|-------------|
| Note |
|-------------|

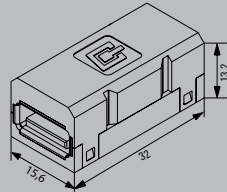
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|-------------|
| Note |
|-------------|

Data inserts

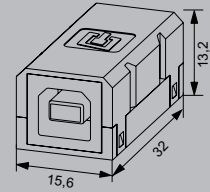
USB

- IP20
- For housing variants 1, 4, 5, 14 and for FrontCom®

Coupling USB A/A



Coupling USB A/B



Technical data

| |
|-----------------------------------|
| Protection degree |
| Shielding |
| Ambient temperature (operational) |
| Connection 1 / 2 |
| Connector standard |
| Approvals |
| Note |

| |
|--------------------------|
| IP67 with housing |
| 360° all-round enclosure |
| -40 °C...70 °C |
| USB A / USB A |
| IEC 61076-3-107 |
| CULUS; DETNORVER |
| Note |

| |
|--------------------------|
| IP67 with housing |
| 360° all-round enclosure |
| -40 °C...70 °C |
| USB A / USB B |
| IEC 61076-3-107 |
| CULUS; DETNORVER |
| Note |

Ordering data

| |
|-------------|
| USB 2.0 |
| USB 3.0 |
| Note |

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-BI-USB-A | 10 | 1019570000 |
| IE-BI-USB-3.0-A | 10 | 1487920000 |

| Type | Qty. | Order No. |
|--------------|------|------------|
| IE-BI-USB-AB | 10 | 1131380000 |

Accessories

| USB cable 2.0 | |
|---------------|--|
| 0.5 m | |
| 1.0 m | |
| 1.5 m | |
| 1.8 m | |
| 3.0 m | |
| USB cable 3.0 | |
| 0.5 m | |
| 1.8 m | |
| 3.0 m | |
| 5.0 m | |

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-USB-A-A-0.5M | 1 | 1993550005 |
| IE-USB-A-A-1.0M | 1 | 1993550010 |
| IE-USB-A-A-1.5M | 1 | 1993550015 |
| IE-USB-A-A-1.8M | 1 | 1993550018 |
| IE-USB-A-A-3.0M | 1 | 1993550030 |
| IE-USB-3.0-A-A-0.5M | 1 | 2581730005 |
| IE-USB-3.0-A-A-1.8M | 1 | 2581730018 |
| IE-USB-3.0-A-A-3M | 1 | 2581730030 |
| IE-USB-3.0-A-A-5M | 1 | 2581730050 |

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

| |
|-------------|
| Note |
|-------------|

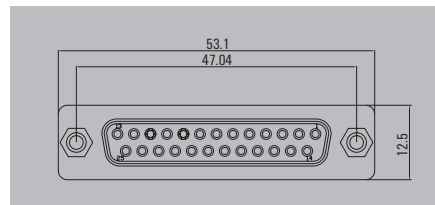
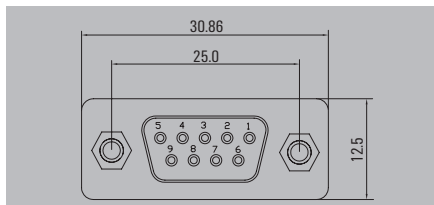
| |
|-------------|
| Note |
|-------------|

| |
|-------------|
| Note |
|-------------|

Signal inserts
D-sub

9-pole

25-pole



Technical data

| | |
|--|--|
| Protection degree | |
| Housing main material | |
| Number of poles | |
| Housing surface | |
| Material insulator | |
| Contact surface | |
| Contact resistance | |
| Insulation strength | |
| Dielectric strength, contact / contact | |
| Ambient temperature (operational) | |
| Approvals | |
| Note | |

| |
|--------------------------------------|
| IP20 |
| SPCC |
| 9 |
| tin-plated |
| PBT glass fibre reinforced UL 94 V-0 |
| Gold-plated |
| ≤ 20 mΩ |
| 1000 MΩ at 500 V DC |
| 1 kV _{eff} / 1 min. |
| -55 °C...105 |
| DET NORVER; UR |

| |
|--------------------------------------|
| IP20 |
| SPCC |
| 25 |
| tin-plated |
| PBT glass fibre reinforced UL 94 V-0 |
| Gold-plated |
| ≤ 20 mΩ |
| 1000 MΩ at 500 V DC |
| 1 kV _{eff} / 1 min. |
| -55 °C...105 |
| DET NORVER; UR |

Ordering data

| |
|----------------------------|
| Socket / socket |
| Socket / plug |
| Socket / solder connection |
| Note |

| Type | Qty. | Order No. |
|--------------|------|------------|
| IE-FCI-D9-FF | 1 | 1450840000 |
| IE-FCI-D9-FM | 1 | 1450850000 |
| IE-FCI-D9-FS | 1 | 1450870000 |

| Type | Qty. | Order No. |
|---------------|------|------------|
| IE-FCI-D25-FF | 1 | 1450880000 |
| IE-FCI-D25-FM | 1 | 1450890000 |
| IE-FCI-D25-FS | 1 | 1450900000 |

Accessories

| Type | Qty. | Order No. |
|------|------|-----------|
|------|------|-----------|

| Type | Qty. | Order No. |
|------|------|-----------|
|------|------|-----------|

| Type | Qty. | Order No. |
|------|------|-----------|
|------|------|-----------|

| |
|-------------|
| Note |
|-------------|

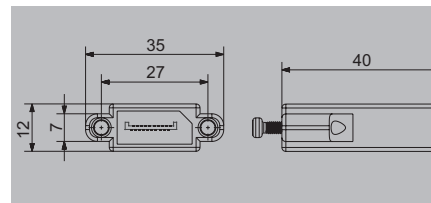
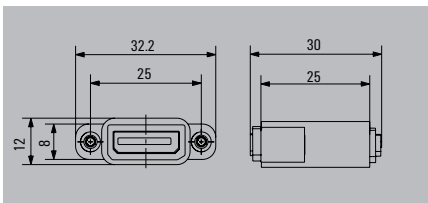
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| |
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Signal inserts

HDMI

DisplayPort (DP)



Technical data

| |
|--|
| Protection degree |
| Housing main material |
| Number of poles |
| Housing surface |
| Contact surface |
| Contact resistance |
| Insulation strength |
| Dielectric strength, contact / contact |
| Ambient temperature (operational) |
| Approvals |
| Note |

| |
|-------------|
| IP20 |
| PVC casting |
| 9 |
| Gold-plated |
| |
| |
| -15 °C...50 |
| |
| |
| Note |

| |
|----------------|
| IP20 |
| PVC casting |
| 20 |
| Gold-plated |
| |
| |
| -20 °C...45 °C |
| |
| |
| Note |

Ordering data

| |
|-------------|
| Note |
|-------------|

| Type | Qty. | Order No. |
|--------------|------|------------|
| IE-FCHDMI-FF | 1 | 2003390000 |

| Type | Qty. | Order No. |
|--------------|------|------------|
| IE-FCI-DP-FF | 1 | 3042050000 |

Accessories

| |
|--|
| |
|--|

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

| |
|-------------|
| Note |
|-------------|

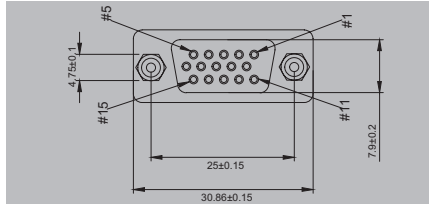
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|--|
| |
|--|



Signal inserts

HD15 / VGA



Technical data

Protection degree
 Housing main material
 Number of poles
 Housing surface
 Contact surface
 Contact resistance
 Insulation strength
 Dielectric strength, contact / contact
 Ambient temperature (operational)
 Approvals

IP20
 25
 Gold over nickel
 1000 MΩ at 500 V DC
 1000 V_{eff} / 1 min
 -55 °C...105
 DETNORVER; UR

Note

Ordering data

| Type | Qty. | Order No. |
|--------------|------|------------|
| IE-FCHD15-FF | 1 | 1556290000 |

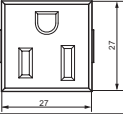
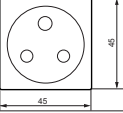
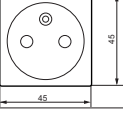
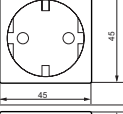
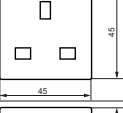
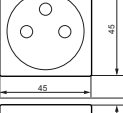
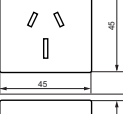
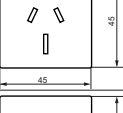
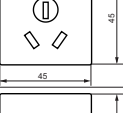
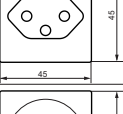
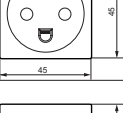
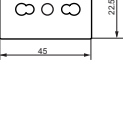
Note

Accessories

| Type | Qty. | Order No. |
|------|------|-----------|
|------|------|-----------|

Note

Type overview: Power inserts/sockets

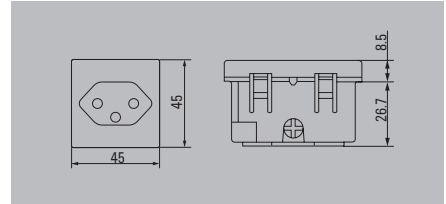
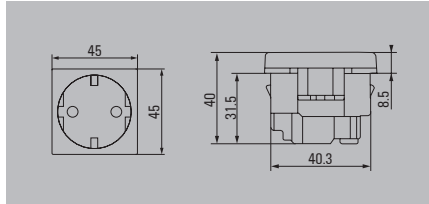
| Type | Region | Plug-Type | | Qty. | Order No. |
|---|--------------------------|-----------|---|------|------------|
| IE-FCI-PWS-US | USA | Type B |  | 1 | 1450800000 |
| <p>Power socket type B isn't compatible with mounting rail adaptor, but it's applicable with following insert plates: 1450620000, 1450700000, 1543710000.</p> | | | | | |
| IE-FCI-PWB-IND | India, South Africa | Type D |  | 1 | 2500710000 |
| IE-FCI-PWB-FR/B/CZ | France, Belgium, Czechia | Type E |  | 1 | 2426700000 |
| IE-FCI-PWB-DE | Germany | Type F |  | 1 | 1450730000 |
| IE-FCI-PWB-GB | Great Britain | Type G |  | 1 | 1450770000 |
| IE-FCI-PWS-ISR | Israel | Typ H |  | 1 | 2531060000 |
| IE-FCI-PWB-AU-15A | Australia | Type I |  | 1 | 1450830000 |
| <p>The difference to IE-FCI-PWB-AU-10A and IE-FCI-PWB-CN is rated current: 15A 240V and the protective contact is higher and wider. Furthermore the difference to IE-FCI-PWB-CN is the connection on the backside.</p> | | | | | |
| IE-FCI-PWB-AU-10A | Australia | Type I |  | 1 | 1546590000 |
| <p>The difference to IE-FCI-PWB-CN is the connection on the backside. Connector face is the same. The difference to IE-FCI-PWB-AU is rated current: 10A 240V and the protective contact is smaller and thinner.</p> | | | | | |
| IE-FCI-PWB-CN | China | Type I |  | 1 | 1450790000 |
| <p>The difference to IE-FCI-PWB-AU is rated current: 10A 240V and the protective contact is smaller and thinner. Furthermore the difference to IE-FCI-PWB-AU-10A and IE-FCI-PWB-AU is the connection on the backside.</p> | | | | | |
| IE-FCI-PWB-CH | Schwitzerland | Type J |  | 1 | 1450780000 |
| IE-FCI-PWB-DK | Denmark | Type K |  | 1 | 2661340000 |
| IE-FCI-PWS-IT | Italy, Europe | Type L |  | 1 | 1450810000 |



Power inserts
Power sockets

Germany

Switzerland



Technical data

| | |
|---|-----------------------------|
| Protection degree | IP20 |
| Housing main material | Polycarbonate PC |
| Type of connection | PUSH IN |
| Connector face | Type F |
| Connector standard | |
| Line connection cross-section | |
| finely stranded with wire-end ferrule | 1.5 ... 1.5 mm ² |
| finely stranded without wire-end ferrule | 1.5 ... 2.5 mm ² |
| finely stranded with wire-end ferrule | 1.5 ... 1.5 mm ² |
| finely stranded without wire-end ferrule | 1.5 ... 2.5 mm ² |
| Conductor connection cross-section, rigid | 1.5 ... 2.5 mm ² |
| Stripping length | 10 mm |
| Rated voltage (AC) | 250 V |
| Rated current | 16 A |
| Ambient temperature (operational) | -5 °C...40 °C |
| Approvals | DETNORVER |
| Note | |

| | |
|---|-----------------------------|
| Protection degree | IP20 |
| Housing main material | Polycarbonate PC |
| Type of connection | PUSH IN |
| Connector face | Type J |
| Connector standard | |
| Line connection cross-section | |
| finely stranded with wire-end ferrule | 1.5 ... 1.5 mm ² |
| finely stranded without wire-end ferrule | 1.5 ... 2.5 mm ² |
| finely stranded with wire-end ferrule | 1.5 ... 1.5 mm ² |
| finely stranded without wire-end ferrule | 1.5 ... 2.5 mm ² |
| Conductor connection cross-section, rigid | 1.5 ... 2.5 mm ² |
| Stripping length | 10 mm |
| Rated voltage (AC) | 250 V |
| Rated current | 10 A |
| Ambient temperature (operational) | -5 °C...40 °C |
| Approvals | DETNORVER |
| Note | |

| | |
|---|-----------------------------|
| Protection degree | IP20 |
| Housing main material | Polycarbonate PC |
| Type of connection | PUSH IN |
| Connector face | Type J |
| Connector standard | |
| Line connection cross-section | |
| finely stranded with wire-end ferrule | 1.5 ... 1.5 mm ² |
| finely stranded without wire-end ferrule | 1.5 ... 2.5 mm ² |
| finely stranded with wire-end ferrule | 1.5 ... 1.5 mm ² |
| finely stranded without wire-end ferrule | 1.5 ... 2.5 mm ² |
| Conductor connection cross-section, rigid | 1.5 ... 2.5 mm ² |
| Stripping length | 10 mm |
| Rated voltage (AC) | 250 V |
| Rated current | 10 A |
| Ambient temperature (operational) | -5 °C...40 °C |
| Approvals | DETNORVER |
| Note | |

Ordering data

| | |
|-------------|--------|
| | white |
| | orange |
| | black |
| Note | |

| Type | Qty. | Order No. |
|------------------|------|------------|
| IE-FCI-PWB-DE | 1 | 1450730000 |
| IE-FCI-PWB-DE-OR | 1 | 1554000000 |
| IE-FCI-PWB-DE-BK | 1 | 3088740000 |

| Type | Qty. | Order No. |
|---------------|------|------------|
| IE-FCI-PWB-CH | 1 | 1450780000 |

Accessories

| | |
|-------------------------------------|--|
| FrontCom | Adapter for mounting rail installation |
| Flat blade connector, 6.5 mm | straight, 4.8 mm, fully insulated |

| Type | Qty. | Order No. |
|-------------------|------|------------|
| IE-DINRAIL-AD-PWB | 1 | 2534680000 |

| Type | Qty. | Order No. |
|-------------------|------|------------|
| IE-DINRAIL-AD-PWB | 1 | 2534680000 |

Note

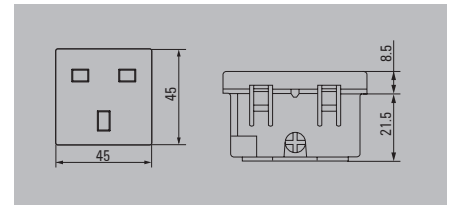
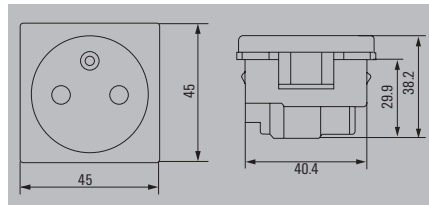
Note

Note

Power inserts
Power sockets

France / Belgium / Czech Republic

UK



Technical data

| |
|---|
| Protection degree |
| Housing main material |
| Type of connection |
| Connector face |
| Connector standard |
| Line connection cross-section |
| finely stranded with wire-end ferrule |
| finely stranded without wire-end ferrule |
| finely stranded with wire-end ferrule |
| finely stranded without wire-end ferrule |
| Conductor connection cross-section, rigid |
| Stripping length |
| Rated voltage (AC) |
| Rated current |
| Ambient temperature (operational) |
| Approvals |

| |
|-----------------------------|
| IP20 |
| Polycarbonate PC |
| PUSH IN |
| Type E |
| |
| 1.5 ... 1.5 mm ² |
| 1.5 ... 2.5 mm ² |
| 1.5 ... 1.5 mm ² |
| 1.5 ... 2.5 mm ² |
| 1.5 ... 2.5 mm ² |
| 12 mm |
| 250 V |
| 16 A |
| -5 °C...35 °C |

| |
|-----------------------------|
| IP20 |
| Polycarbonate PC |
| Screw connection |
| Type G |
| |
| 1.5 ... 2.5 mm ² |
| 1.5 ... 4 mm ² |
| 1.5 ... 2.5 mm ² |
| 1.5 ... 4 mm ² |
| 1.5 ... 4 mm ² |
| 9 mm |
| 250 V |
| 13 A |
| -5 °C...40 °C |
| DETNRVER |

Note

Ordering data

| | |
|--|--------|
| | white |
| | orange |
| | black |

| Type | Qty. | Order No. |
|--------------------|------|------------|
| IE-FCI-PWB-FR/B/CZ | 1 | 2426700000 |
| IE-FCI-PWB-FR-OR | 1 | 2007230000 |

| Type | Qty. | Order No. |
|---------------|------|------------|
| IE-FCI-PWB-GB | 1 | 1450770000 |

Note

Accessories

| | |
|-------------------------------------|--|
| FrontCom | Adapter for mounting rail installation |
| Flat blade connector, 6.5 mm | straight, 4.8 mm, fully insulated |

| Type | Qty. | Order No. |
|-------------------|------|------------|
| IE-DINRAIL-AD-PWB | 1 | 2534680000 |

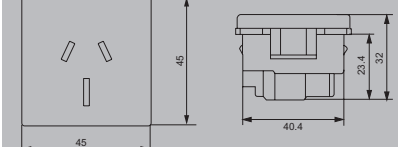
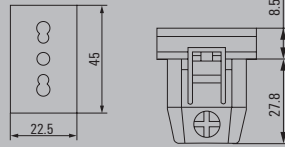
| Type | Qty. | Order No. |
|-------------------|------|------------|
| IE-DINRAIL-AD-PWB | 1 | 2534680000 |

Note

Power inserts
Power sockets

Italy / Europe

Australia, 15 A



Technical data

| |
|---|
| Protection degree |
| Housing main material |
| Type of connection |
| Connector face |
| Connector standard |
| Line connection cross-section |
| finely stranded with wire-end ferrule |
| finely stranded without wire-end ferrule |
| finely stranded with wire-end ferrule |
| finely stranded without wire-end ferrule |
| Conductor connection cross-section, rigid |
| Stripping length |
| Rated voltage (AC) |
| Rated current |
| Ambient temperature (operational) |
| Approvals |

| |
|------------------|
| IP20 |
| Polycarbonate PC |
| Screw connection |
| Type L |

| |
|-----------------------------|
| 1.5 ... 2.5 mm ² |
| 1.5 ... 4 mm ² |
| 1.5 ... 2.5 mm ² |
| 1.5 ... 4 mm ² |
| 1.5 ... 4 mm ² |
| 9 mm |
| 250 V |
| 16 A |
| -5 °C...40 °C |
| DETNORVER |

| |
|------------------|
| IP20 |
| Polycarbonate PC |
| Screw connection |
| Type I |

| |
|-----------------------------|
| 1.5 ... 2.5 mm ² |
| 1.5 ... 4 mm ² |
| 1.5 ... 2.5 mm ² |
| 1.5 ... 4 mm ² |
| 1.5 ... 4 mm ² |
| 9 mm |
| 240 V |
| 15 A |
| -5 °C...40 °C |
| DETNORVER |

Note

Ordering data

- white
- orange
- black

Note

| Type | Qty. | Order No. |
|---------------|------|------------|
| IE-FCI-PWS-IT | 1 | 1450810000 |

| Type | Qty. | Order No. |
|---------------|------|------------|
| IE-FCI-PWB-AU | 1 | 1450830000 |

Accessories

| | |
|-------------------------------------|--|
| FrontCom | Adapter for mounting rail installation |
| Flat blade connector, 6.5 mm | straight, 4.8 mm, fully insulated |

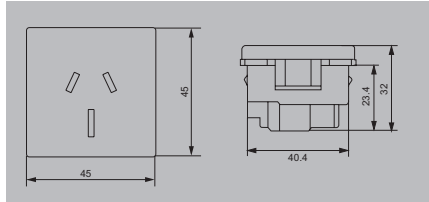
| Type | Qty. | Order No. |
|-------------------|------|------------|
| IE-DINRAIL-AD-PWB | 1 | 2534680000 |

| Type | Qty. | Order No. |
|-------------------|------|------------|
| IE-DINRAIL-AD-PWB | 1 | 2534680000 |

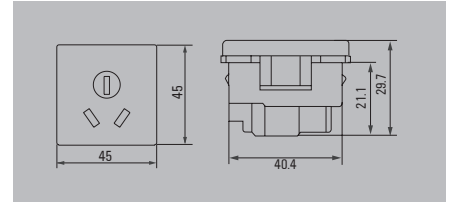
Note

Power inserts
Power sockets

Australia, 10 A



China



Technical data

| |
|---|
| Protection degree |
| Housing main material |
| Type of connection |
| Connector face |
| Connector standard |
| Line connection cross-section |
| finely stranded with wire-end ferrule |
| finely stranded without wire-end ferrule |
| finely stranded with wire-end ferrule |
| finely stranded without wire-end ferrule |
| Conductor connection cross-section, rigid |
| Stripping length |
| Rated voltage (AC) |
| Rated current |
| Ambient temperature (operational) |
| Approvals |

| |
|-----------------------------|
| IP20 |
| Polycarbonate PC |
| Screw connection |
| Type I |
| |
| 1.5 ... 2.5 mm ² |
| 1.5 ... 4 mm ² |
| 1.5 ... 2.5 mm ² |
| 1.5 ... 4 mm ² |
| 1.5 ... 4 mm ² |
| 9 mm |
| 240 V |
| 10 A |
| -5 °C...40 °C |
| DETNRVER |

| |
|-----------------------------|
| IP20 |
| Polycarbonate PC |
| Screw connection |
| Type I |
| |
| 1.5 ... 2.5 mm ² |
| 1.5 ... 4 mm ² |
| 1.5 ... 2.5 mm ² |
| 1.5 ... 4 mm ² |
| 1.5 ... 4 mm ² |
| 9 mm |
| 250 V |
| 10 A |
| -5 °C...40 °C |
| DETNRVER |

Note

Ordering data

| | |
|--|--------|
| | white |
| | orange |
| | black |

| Type | Qty. | Order No. |
|-------------------|------|------------|
| IE-FCI-PWB-AU-10A | 1 | 1546590000 |
| | | |
| | | |

| Type | Qty. | Order No. |
|---------------|------|------------|
| IE-FCI-PWB-CN | 1 | 1450790000 |
| | | |
| | | |

Note

Accessories

| | |
|-------------------------------------|--|
| FrontCom | Adapter for mounting rail installation |
| Flat blade connector, 6.5 mm | straight, 4.8 mm, fully insulated |

| Type | Qty. | Order No. |
|-------------------|------|------------|
| IE-DINRAIL-AD-PWB | 1 | 2534680000 |
| | | |
| | | |

| Type | Qty. | Order No. |
|-------------------|------|------------|
| IE-DINRAIL-AD-PWB | 1 | 2534680000 |
| | | |
| | | |

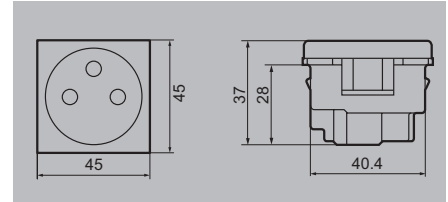
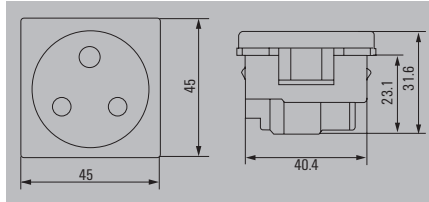
Note

Power inserts
Power sockets

India



Israel



Technical data

Protection degree
 Housing main material
 Type of connection
 Connector face
 Connector standard
 Line connection cross-section
 finely stranded with wire-end ferrule
 finely stranded without wire-end ferrule
 finely stranded with wire-end ferrule
 finely stranded without wire-end ferrule
 Conductor connection cross-section, rigid
 Stripping length
 Rated voltage (AC)
 Rated current
 Ambient temperature (operational)
 Approvals

IP20
 Polycarbonate PC
 Screw connection
 Type D

1.5 ... 2.5 mm²
 ...
 1.5 ... 2.5 mm²
 ...
 1.5 ... 4 mm²
 9 mm
 250 V
 5 A
 -5 °C...40 °C

IP20
 PP
 Screw connection
 Type H

1.5 ... 1.5 mm²
 ...
 1.5 ... 1.5 mm²
 ...
 1.5 ... 2.5 mm²
 11 mm
 250 V
 16 A
 -5 °C...40 °C

Note

Ordering data

white
 orange
 black

| Type | Qty. | Order No. |
|----------------|------|------------|
| IE-FCI-PWB-IND | 1 | 2500710000 |

| Type | Qty. | Order No. |
|----------------|------|------------|
| IE-FCI-PWB-ISR | 1 | 2531060000 |

Note

Accessories

| FrontCom | |
|--|--|
| Adapter for mounting rail installation | |
| Flat blade connector, 6.5 mm | |
| straight, 4.8 mm, fully insulated | |

| Type | Qty. | Order No. |
|-------------------|------|------------|
| IE-DINRAIL-AD-PWB | 1 | 2534680000 |

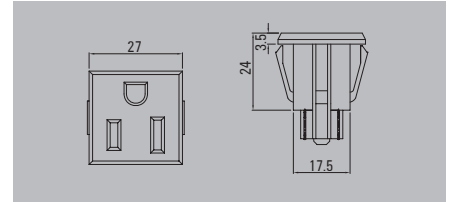
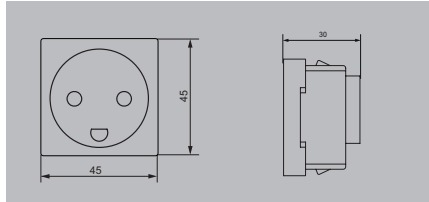
| Type | Qty. | Order No. |
|-------------------|------|------------|
| IE-DINRAIL-AD-PWB | 1 | 2534680000 |

Note

Power inserts
Power sockets

Denmark

USA



Technical data

Protection degree
 Housing main material
 Type of connection
 Connector face
 Connector standard
 Line connection cross-section
 finely stranded with wire-end ferrule
 finely stranded without wire-end ferrule
 finely stranded with wire-end ferrule
 finely stranded without wire-end ferrule
 Conductor connection cross-section, rigid
 Stripping length
 Rated voltage (AC)
 Rated current
 Ambient temperature (operational)
 Approvals

IP20
 Polycarbonate PC
 PUSH IN
 Type K

1.5 ... 1.5 mm²
 1.5 ... 2.5 mm²
 1.5 ... 1.5 mm²
 1.5 ... 2.5 mm²
 1.5 ... 2.5 mm²
 13 mm
 250 V
 13 A
 -5 °C...40

IP20 (front side)
 PA 66
 Solder connection, FS 4.8 x 0.8
 Type B

...
 ...
 ...
 ...
 ...
 125 V
 15 A
 -20 °C...85 °C
 CURUS; DETNORVER; UR

Note

Ordering data

white
 orange
 black

| Type | Qty. | Order No. |
|---------------|------|------------|
| IE-FCI-PWB-DK | 1 | 2661340000 |

| Type | Qty. | Order No. |
|---------------|------|------------|
| IE-FCI-PWS-US | 1 | 1450800000 |

For US socket the touch-safe protection is mandatory

Note

Accessories

| FrontCom | |
|--|-----------------------------------|
| Adapter for mounting rail installation | |
| Flat blade connector, 6.5 mm | straight, 4.8 mm, fully insulated |

| Type | Qty. | Order No. |
|-------------------|------|------------|
| IE-DINRAIL-AD-PWB | 1 | 2534680000 |

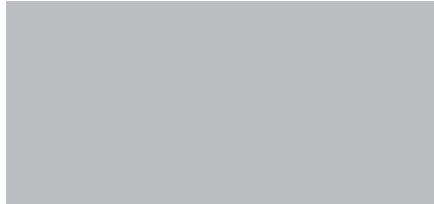
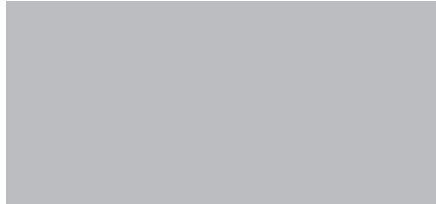
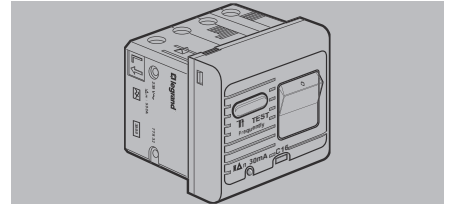
| Type | Qty. | Order No. |
|--------------------|------|------------|
| VFSKHV/1,5-2,5/485 | 100 | 1491920000 |

Note

Power inserts

RCBO

RCBO



Technical data

Ambient temperature (operational)
 Operating voltage
 Rated current
 $I_{\Delta n}$
 $I_{\Delta n}$
 Triggering characteristic
 Type of connection
 Line connection cross-section
 finely stranded with wire-end ferrule
 finely stranded with wire-end ferrule
 Conductor connection cross-section, rigid

-5 °C...40
 230 V AC
 16 A
 500 A
 30 mA
 Typ C
 Screw connection
 1.5 ... 2.5 mm²
 1.5 ... 2.5 mm²
 1.5 ... 2.5 mm²

Note

Ordering data

Note

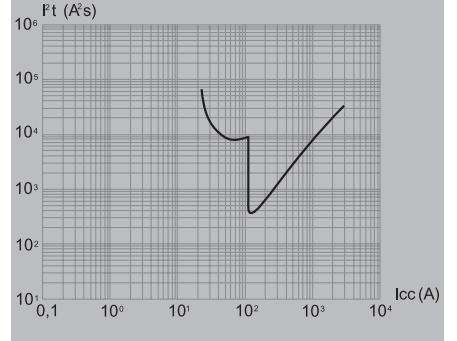
Accessories

FrontCom

Adapter for mounting rail installation

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-FCI-PWB-RCBO | 1 | 1534250000 |

| Type | Qty. | Order No. |
|-------------------|------|------------|
| IE-DINRAIL-AD-PWB | 1 | 2534680000 |



Note

Power inserts

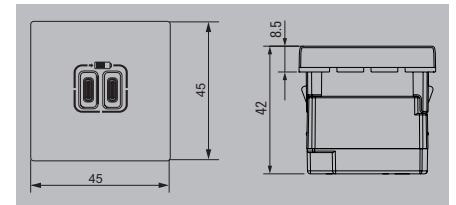
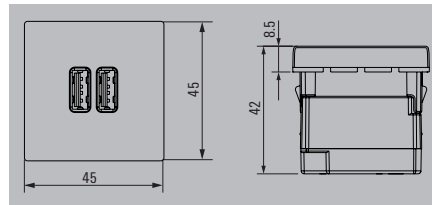
USB charge insert

- IP20
- USB Charger 5 V / 3 A

2 x USB A



2 x USB C



Technical data

| | |
|---|-----------------------------|
| Ambient temperature (operational) | 0 °C...45 °C |
| Input voltage | 100...240 V |
| Frequency range | 50...60 Hz |
| Input current | ≤ 300 mA |
| Output voltage | 5 V DC |
| Output current | 3 A |
| Degree of efficiency | 80% |
| Power consumption in standby mode | max. 0.1 W |
| Standards | EN 60950-1, EN 62684 |
| Protection class | II |
| Housing main material | Polycarbonate PC |
| Type of connection | Screw connection |
| Line connection cross-section | 1.5 ... 2.5 mm ² |
| finely stranded with wire-end ferrule | 1.5 ... 2.5 mm ² |
| finely stranded with wire-end ferrule | 1.5 ... 2.5 mm ² |
| Conductor connection cross-section, rigid | 1.5 ... 2.5 mm ² |
| Stripping length | 6 mm |
| Note | |

| | |
|---|-----------------------------|
| Ambient temperature (operational) | 0 °C...45 °C |
| Input voltage | 100...240 V |
| Frequency range | 50...60 Hz |
| Input current | ≤ 300 mA |
| Output voltage | 5 V DC |
| Output current | 3 A |
| Degree of efficiency | 80% |
| Power consumption in standby mode | max. 0.1 W |
| Standards | EN 60950-1, EN 62684 |
| Protection class | II |
| Housing main material | Polycarbonate PC |
| Type of connection | Screw connection |
| Line connection cross-section | 1.5 ... 2.5 mm ² |
| finely stranded with wire-end ferrule | 1.5 ... 2.5 mm ² |
| finely stranded with wire-end ferrule | 1.5 ... 2.5 mm ² |
| Conductor connection cross-section, rigid | 1.5 ... 2.5 mm ² |
| Stripping length | 6 mm |
| Note | |

| | |
|---|-----------------------------|
| Ambient temperature (operational) | 0 °C...45 °C |
| Input voltage | 100...240 V |
| Frequency range | 50...60 Hz |
| Input current | ≤ 300 mA |
| Output voltage | 5 V DC |
| Output current | 3 A |
| Degree of efficiency | 80% |
| Power consumption in standby mode | max. 0.1 W |
| Standards | EN 60950-1, EN 62684 |
| Protection class | II |
| Housing main material | Polycarbonate PC |
| Type of connection | Screw connection |
| Line connection cross-section | 1.5 ... 2.5 mm ² |
| finely stranded with wire-end ferrule | 1.5 ... 2.5 mm ² |
| finely stranded with wire-end ferrule | 1.5 ... 2.5 mm ² |
| Conductor connection cross-section, rigid | 1.5 ... 2.5 mm ² |
| Stripping length | 6 mm |
| Note | |

Ordering data

| Type | Qty. | Order No. |
|----------------------|------|------------|
| IE-FCI-PWB-2USB-A-5V | 1 | 2505070000 |
| Note | | |

| Type | Qty. | Order No. |
|----------------------|------|------------|
| IE-FCI-PWB-2USB-A-5V | 1 | 2505070000 |
| Note | | |

| Type | Qty. | Order No. |
|----------------------|------|------------|
| IE-FCI-PWB-2USB-C-5V | 1 | 2902350000 |
| Note | | |

Accessories

| FrontCom | Adapter for mounting rail installation |
|-------------------|--|
| IE-DINRAIL-AD-PWB | 2534680000 |

| Type | Qty. | Order No. |
|-------------------|------|------------|
| IE-DINRAIL-AD-PWB | 1 | 2534680000 |

| Type | Qty. | Order No. |
|-------------------|------|------------|
| IE-DINRAIL-AD-PWB | 1 | 2534680000 |

| |
|------|
| Note |
|------|

| |
|------|
| Note |
|------|

| |
|------|
| Note |
|------|

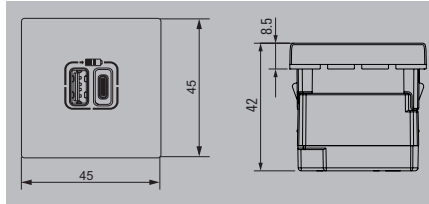
FrontCom® Vario IP65 service interface

Power inserts

USB charge insert

- IP20
- USB Charger 5 V / 3 A

USB A / USB C



Technical data

| | |
|---|-----------------------------|
| Ambient temperature (operational) | 0 °C...45 °C |
| Input voltage | 100...240 V |
| Frequency range | 50...60 Hz |
| Input current | ≤ 300 mA |
| Output voltage | 5 V DC |
| Output current | 3 A |
| Degree of efficiency | 80% |
| Power consumption in standby mode | max. 0.1 W |
| Standards | EN 60950-1, EN 62684 |
| Protection class | II |
| Housing main material | Polycarbonate PC |
| Type of connection | Screw connection |
| Line connection cross-section | |
| finely stranded with wire-end ferrule | 1.5 ... 2.5 mm ² |
| finely stranded with wire-end ferrule | 1.5 ... 2.5 mm ² |
| Conductor connection cross-section, rigid | 1.5 ... 2.5 mm ² |
| Stripping length | 6 mm |

Note

Ordering data

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-FCI-PWB-2USB-A/C-5V | 1 | 2902340000 |

Note

Accessories

| | |
|-----------------|--|
| FrontCom | Adapter for mounting rail installation |
|-----------------|--|

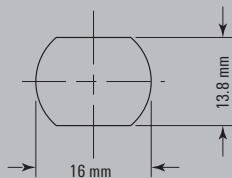
| Type | Qty. | Order No. |
|-------------------|------|------------|
| IE-DINRAIL-AD-PWB | 1 | 2534680000 |

Note

Note

3A fuse

3A fuse



Technical data

| | |
|--------------------|-------------------------------|
| Operating voltage | 32 V DC, 250 V AC |
| Rated current | 3 A |
| Type of connection | Flat-blade receptacles 6.5 mm |
| Note | |

| | |
|--------------------|-------------------------------|
| Operating voltage | 32 V DC, 250 V AC |
| Rated current | 3 A |
| Type of connection | Flat-blade receptacles 6.5 mm |
| Note | |

Ordering data

| | |
|------|--|
| Note | |
|------|--|

| Type | Qty. | Order No. |
|----------------|------|------------|
| IE-FCI-PWCB-3A | 1 | 1543690000 |

Accessories

| | |
|------------------------------|----------|
| Flat blade connector, 6.5 mm | angled |
| | straight |

| Type | Qty. | Order No. |
|--------------------|------|------------|
| WFSKHV/1,5-2,5 | 100 | 1491970000 |
| VFSKHV/1,5-2,5/638 | 100 | 1491940000 |

| | |
|------|--|
| Note | |
|------|--|

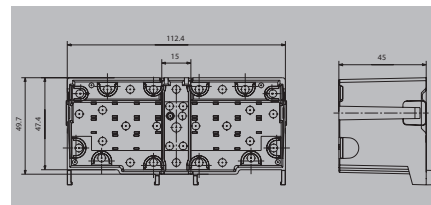
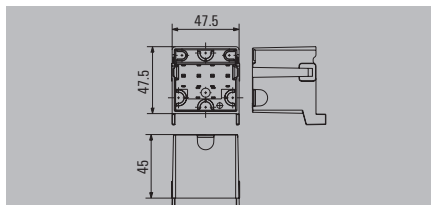
| | |
|------|--|
| Note | |
|------|--|

Accessories

Touch-safe protection

Touch-safe protection socket outlet single frame

Touch-safe protection double frame



Technical data

| | |
|-------------------------|--|
| Length x width x height | |
| Material | |
| Note | |

| | |
|-------------------------|---------------------|
| Length x width x height | 47.5 / 47.5 / 45 mm |
| Material | PC |
| Note | |

| | |
|-------------------------|----------------------|
| Length x width x height | 112.4 / 47.4 / 45 mm |
| Material | PC |
| Note | |

Ordering data

| | |
|------|--|
| Type | |
| Note | |

| Type | Qty. | Order No. |
|------------|------|------------|
| IE-FC-PWPC | 1 | 1450820000 |

| Type | Qty. | Order No. |
|----------------|------|------------|
| IE-FC-DFM-PWPC | 1 | 2971460000 |

Accessories

| | |
|------|--|
| Type | |
|------|--|

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

| | |
|------|--|
| Note | |
|------|--|

| | |
|------|--|
| Note | |
|------|--|

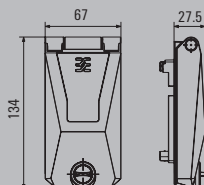
| | |
|------|--|
| Note | |
|------|--|

Sets

- shielded

2x Data 1x Power DE

Plastic cover



Technical data

Frame
 Insert plate
 Data inserts
 Power inserts
 Rated voltage for socket
 Rated current for socket
 Protection degree
 products included in the set

Plastic cover
 2x data, 1x power, Shielded
 USB 2.0 A/A, RJ45 coupling Cat.6_A
 Socket DE
 250 V
 16 A
 IP65, in closed state
 1450510000;1450550000;1450730000;1019570000;1962840000

Note

Ordering data

shielded
 unshielded

| Type | Qty. | Order No. |
|-------------------------|------|------------|
| IE-FC-SET-SPDED001-KN-P | 1 | 1529580000 |

Note

Accessories

| Type | Qty. | Order No. |
|------|------|-----------|
|------|------|-----------|

Note



Sets

Incl. fixed label: "Service only!", "USB", "Ethernet", "230 V AC"

2x Data, 1x Power



2x Data, 1x Power



Technical data

| |
|------------------------------|
| Frame |
| Insert plate |
| Data inserts |
| Power inserts |
| Rated voltage for socket |
| Rated current for socket |
| Protection degree |
| products included in the set |
| Note |

| |
|---|
| Plastic cover, Lockable with key |
| 2x data, 1x power, Shielded |
| USB 2.0 A/A, RJ45 coupling Cat.6 _A |
| Socket DE |
| 250 V |
| 16 A |
| IP65, in closed state |
| 1450520000;1450550000;1450730000;1019570000;1962840000;1450820000 |
| Note |

| |
|---|
| Plastic cover, Lockable with key |
| 2x data, 1x power, Unshielded |
| USB 2.0 A/A, RJ45 coupling Cat.6 _A |
| Socket DE |
| 250 V |
| 16 A |
| IP65, in closed state |
| 1450520000;1450630000;1450730000;1019570000;1962840000;1450820000 |
| Note |

Ordering data

| |
|-------------|
| shielded |
| unshielded |
| Note |

| Type | Qty. | Order No. |
|-------------------------|------|------------|
| IE-FC-SET-SPDEK001-KY-P | 1 | 1989020000 |
| Note | | |

| Type | Qty. | Order No. |
|-------------------------|------|------------|
| IE-FC-SET-IPDEK001-KY-P | 1 | 1543680000 |
| Note | | |

Accessories

| Type | Qty. | Order No. |
|-------------|------|-----------|
| Note | | |

| Type | Qty. | Order No. |
|-------------|------|-----------|
| Note | | |

| Type | Qty. | Order No. |
|-------------|------|-----------|
| Note | | |

| |
|-------------|
| Note |
|-------------|

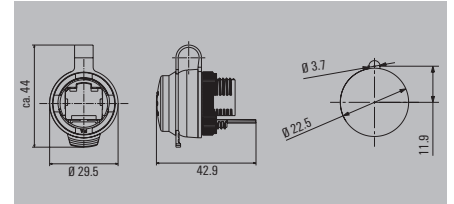
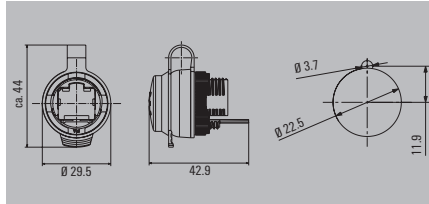
| |
|-------------|
| Note |
|-------------|

| |
|-------------|
| Note |
|-------------|

FrontCom® Micro RJ45
Module

8-wire

4-wire



Technical data

| |
|-----------------------------------|
| Category |
| Protection degree |
| Housing main material |
| Contact surface |
| Colour |
| Shielding |
| Type of mounting |
| Plugging cycles |
| Connector standard |
| Connection 1 / 2 |
| Wall thickness, min. / max. |
| Dust protection cap material |
| PoE / PoE+ |
| Ambient temperature (operational) |
| Approvals |
| Note |

| |
|--|
| Cat.6 _n / Class E _n (ISO/IEC 11801 2010) |
| IP65, in closed state |
| PA UL 94 V0 |
| Gold over nickel |
| black |
| 360° shield contact |
| Cabinet, Distribution box |
| 750 |
| IEC 60603-7-51 |
| RJ45 / IDC |
| 1 mm / 5 mm |
| EPDM |
| conforming to IEEE 802.3bt |
| -40 °C...70 °C |
| CULUS |

| |
|----------------------------|
| Cat.5 (ISO/IEC 11801) |
| IP65, in closed state |
| PA UL 94 V0 |
| Gold over nickel |
| black |
| 360° shield contact |
| Cabinet, Distribution box |
| 750 |
| IEC 60603-7-51 |
| RJ45 / IDC |
| 1 mm / 5 mm |
| EPDM |
| conforming to IEEE 802.3bt |
| -40 °C...70 °C |
| CULUS |

Ordering data

| |
|-----------------|
| PROFINET module |
| TIA-A module |
| TIA-B module |
| Note |

| Type | Qty. | Order No. |
|------------------|------|------------|
| IE-FCM-RJ45-FJ-A | 10 | 1018810000 |
| IE-FCM-RJ45-FJ-B | 10 | 1018820000 |

| Type | Qty. | Order No. |
|------------------|------|------------|
| IE-FCM-RJ45-FJ-P | 10 | 1018830000 |

Accessories

| |
|--------------|
| Fixing tool |
| Marking tags |
| Holder |

SwitchMark markers white
MultiCard, white

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-FISP-V4 | 2 | 9204370000 |
| SM 27/18 MC NE WS | 80 | 1699860000 |
| ESG 9/11 K MC NE WS | 200 | 1857440000 |
| SM-H 27/18 SW | 25 | 1716630000 |

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-FISP-V4 | 2 | 9204370000 |
| SM 27/18 MC NE WS | 80 | 1699860000 |
| ESG 9/11 K MC NE WS | 200 | 1857440000 |
| SM-H 27/18 SW | 25 | 1716630000 |

| |
|-------------|
| Note |
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| Note |
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| Note |
|-------------|

FrontCom® Micro Coupling

RJ45

8-wire

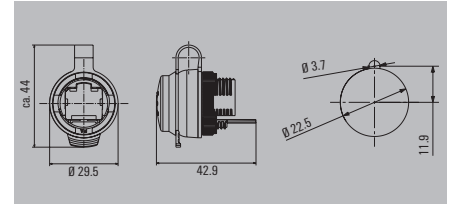
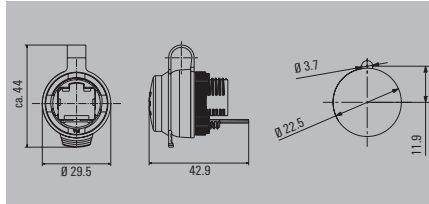


Single Pair Ethernet (SPE)

Pin contacts



SPElink®



Technical data

Category
 Protection degree
 Housing main material
 Contact surface
 Colour
 Shielding
 Type of mounting
 Plugging cycles
 Connector standard
 Connection 1 / 2
 Wall thickness, min. / max.
 Dust protection cap material
 PoE / PoE+
 Ambient temperature (operational)
 Approvals

Cat.6_n / Class E_n (ISO/IEC 11801 2010)
 IP65, in closed state
 PA UL 94 V0
 Gold over nickel
 black
 360° shield contact
 Cabinet, Distribution box
 750 (RJ45)
 IEC 60603-7-51
 RJ45 / RJ45
 1 mm / 5 mm
 EPDM
 conforming to IEEE 802.3af
 -40 °C...70 °C
 CULUS

T1-B
 IP65, in closed state
 PA UL 94 V0
 Gold over nickel
 black
 360° shield contact
 Cabinet, Distribution box
 750
 IEC 63171-2
 SPE socket acc. to IEC 63171-2 / SPE socket acc. to IEC 63171-2
 1 mm / 5 mm
 EPDM
 PoDL acc. to IEEE 802.3bu / cg
 -40 °C...70 °C

Note

Ordering data

Coupling

Note

| Type | Qty. | Order No. |
|---------------|------|------------|
| IE-FCM-RJ45-C | 10 | 1018790000 |

| Type | Qty. | Order No. |
|--------------|------|------------|
| IE-FCM-SPO-C | 10 | 2870820000 |

Accessories

Fixing tool

Marking tags

SwitchMark markers white

Holder

| Type | Qty. | Order No. |
|-------------------|------|------------|
| IE-FISP-V4 | 2 | 9204370000 |
| SM 27/18 MC NE WS | 80 | 1699860000 |
| SM-H 27/18 SW | 25 | 1716630000 |

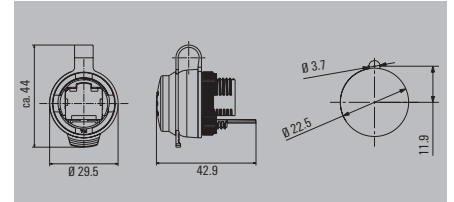
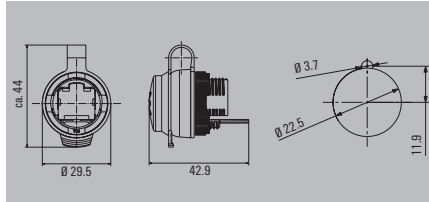
| Type | Qty. | Order No. |
|-------------------|------|------------|
| IE-FISP-V4 | 2 | 9204370000 |
| SM 27/18 MC NE WS | 80 | 1699860000 |
| SM-H 27/18 SW | 25 | 1716630000 |

Note

FrontCom® Micro USB

Coupling AA

Coupling AB



Technical data

| |
|-----------------------------------|
| Ambient temperature (operational) |
| Protection degree |
| Housing main material |
| Colour |
| Shielding |
| Type of mounting |
| Connector standard |
| Connection 1 / 2 |
| Dust protection cap material |
| Wall thickness, min. / max. |
| Approvals |
| Note |

| |
|--------------------------------|
| -40 °C...70 °C |
| IP65, in closed state |
| PA UL 94 V0 |
| black |
| 360° shield contact |
| Cabinet, Distribution box |
| IEC 61076-3-107 |
| USB A / USB A |
| EPDM |
| 1 mm / 5 mm |
| CULUS |
| Approvals available on request |

| |
|---------------------------|
| -40 °C...70 °C |
| IP65, in closed state |
| PA UL 94 V0 |
| black |
| 360° shield contact |
| Cabinet, Distribution box |
| IEC 61076-3-107 |
| USB A / USB B |
| EPDM |
| 1 mm / 5 mm |
| CULUS |

Ordering data

| |
|-------------|
| USB 2.0 |
| USB 3.0 |
| Note |

| Type | Qty. | Order No. |
|------------------|------|------------|
| IE-FCM-USB-A | 10 | 1018840000 |
| IE-FCM-USB-3.0-A | 10 | 1427960000 |

| Type | Qty. | Order No. |
|---------------|------|------------|
| IE-FCM-USB-AB | 10 | 1222550000 |

Accessories

| |
|-------------|
| Fixing tool |
|-------------|

| |
|--------------------------|
| Marking tags |
| SwitchMark markers white |
| MultiCard, white |

| |
|--------|
| Holder |
|--------|

USB cable 2.0

| |
|-------|
| 0.5 m |
| 1.0 m |
| 1.5 m |
| 1.8 m |
| 3.0 m |

USB cable 3.0

| |
|-------|
| 0.5 m |
| 1.8 m |
| 3.0 m |
| 5.0 m |

| Type | Qty. | Order No. |
|------------|------|------------|
| IE-FISP-V4 | 2 | 9204370000 |

| | | |
|---------------------|-----|------------|
| SM 27/18 MC NE WS | 80 | 1699860000 |
| ESG 9/11 K MC NE WS | 200 | 1857440000 |

| | | |
|---------------|----|------------|
| SM-H 27/18 SW | 25 | 1716630000 |
|---------------|----|------------|

| | | |
|-----------------|---|------------|
| IE-USB-A-A-0.5M | 1 | 1993550005 |
| IE-USB-A-A-1.0M | 1 | 1993550010 |
| IE-USB-A-A-1.5M | 1 | 1993550015 |
| IE-USB-A-A-1.8M | 1 | 1993550018 |
| IE-USB-A-A-3.0M | 1 | 1993550030 |

| | | |
|---------------------|---|------------|
| IE-USB-3.0-A-A-0.5M | 1 | 2581730005 |
| IE-USB-3.0-A-A-1.8M | 1 | 2581730018 |
| IE-USB-3.0-A-A-3M | 1 | 2581730030 |
| IE-USB-3.0-A-A-5M | 1 | 2581730050 |

| Type | Qty. | Order No. |
|------------|------|------------|
| IE-FISP-V4 | 2 | 9204370000 |

| | | |
|---------------------|-----|------------|
| SM 27/18 MC NE WS | 80 | 1699860000 |
| ESG 9/11 K MC NE WS | 200 | 1857440000 |

| | | |
|---------------|----|------------|
| SM-H 27/18 SW | 25 | 1716630000 |
|---------------|----|------------|

| |
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| Note |
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| Note |
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| Note |
|-------------|



IP67 plug-in connectors

Overview

| | | |
|--------------------------------|--|------|
| IP67 plug-in connectors | PushPull V14 - RJ45 | M.2 |
| | PushPull V14 - Hybrid | M.7 |
| | PushPull V14 - FO | M.10 |
| | Bayonet V1 Metal-RJ45 | M.12 |
| | Bayonet V1 Metal-FO | M.14 |
| | Bayonet V1 Plastic-RJ45 | M.16 |
| | PushPull V4 - RJ45 | M.19 |
| | PushPull V4 - FO | M.23 |
| | RockStar® V5 - RJ45 | M.25 |
| | SnapIn V6 - RJ45 | M.27 |
| | M8 Single Pair Ethernet (SPE) | M.30 |
| | Connection components Single Pair Ethernet (SPE) | M.32 |
| | M12 D-coded | M.33 |
| | M12 X-Type | M.42 |
| | Inserts | M.50 |
| | PushPull Power | M.60 |

Plug PushPull V14 - RJ45 PROFINET

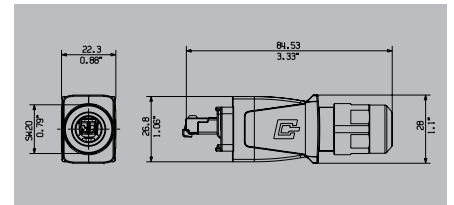
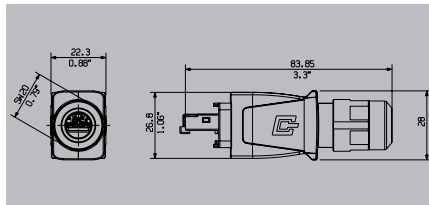
- 4-wire, RJ45 plug field attachable with colour coding on the plug

4-wire, field-attachable

PROFINET printing



4-wire, crimp



Technical data

| |
|---|
| Category |
| Protection degree |
| Housing main material |
| Contact surface |
| Sheath diameter, min. / max. |
| Plugging cycles |
| Ambient temperature (operational) |
| Connector standard |
| Connection diameter, flexible, min. / max. |
| Connection cross-section, flexible, min. / max. |
| Connection diameter, solid, min. / max. |
| Connection cross-section, solid, min. / max. |
| Approvals |

| |
|---|
| Cat.5 (ISO/IEC 11801) |
| IP67 |
| Zinc diecast |
| Gold over nickel |
| 5 mm / 10 mm |
| 750 |
| -40 °C...70 °C |
| IEC 61076-3-117 Var. 14, IEC 60603-7-51 |
| 0.48 mm / 0.76 mm |
| AWG 26 / AWG 22 |
| 0.4 mm / 0.64 mm |
| AWG 24 / AWG 22 |
| CULUS |

| |
|--------------------------------------|
| Cat.5 (ISO/IEC 11801) |
| IP67 |
| Zinc diecast |
| Gold over nickel |
| 5.5 mm / 7.5 mm |
| 750 |
| -40 °C...70 °C |
| IEC 60603-7, IEC 61076-3-117 Var. 14 |
| 0.57 mm / 0.64 mm |
| AWG 23 / AWG 22 |
| 0.57 mm / 0.64 mm |
| AWG 23 / AWG 22 |
| CULUS |

Other approvals for individual parts of the set available

Ordering data - Sets

| |
|------|
| RJ45 |
| Note |

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-PS-V14M-RJ45-FHP | 10 | 1012170000 |

| Type | Qty. | Order No. |
|----------------------|------|------------|
| IE-PS-V14M-RJ45-TH-P | 10 | 2768740000 |

Ordering data - Empty housings

| |
|------|
| Note |
|------|

| Type | Qty. | Order No. |
|---------------|------|------------|
| IE-PH-V14M-RJ | 10 | 1011560000 |

| Type | Qty. | Order No. |
|---------------|------|------------|
| IE-PH-V14M-RJ | 10 | 1011560000 |

Accessories

| | |
|------------------------------------|---------------------------|
| Dust protection cap | Protective cap |
| Marking tags | MultiCard, white |
| Plug insert for V14 PROFINET crimp | Replacement crimp inserts |
| Tools | Pressing tool |

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-PP-V14P | 10 | 1058280000 |
| ESG 9/11 K MC NE WS | 200 | 1857440000 |

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-PP-V14P | 10 | 1058280000 |
| ESG 9/11 K MC NE WS | 200 | 1857440000 |
| IE-PI-RJ45-TH-P | 10 | 2768720000 |
| IE-CWZ-RJ45-TH-P | 1 | 2614210000 |

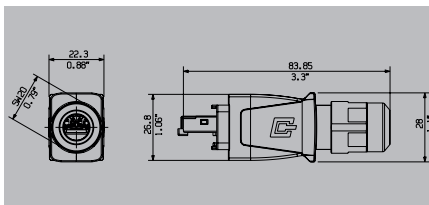
Note

Plug inserts can also be ordered separately. Refer to Inserts.

Plug PushPull V14 - RJ45

- 8-wire, RJ45 plug field attachable with colour coding on the plug

8-wire, crimp



Technical data

| |
|---|
| Category |
| Protection degree |
| Housing main material |
| Contact surface |
| Sheath diameter, min. / max. |
| Plugging cycles |
| Ambient temperature (operational) |
| Connector standard |
| Connection diameter, flexible, min. / max. |
| Connection cross-section, flexible, min. / max. |
| Connection diameter, solid, min. / max. |
| Connection cross-section, solid, min. / max. |
| Approvals |

| |
|---|
| Cat.6A / Class EA (ISO/IEC 11801 2010) |
| IP67 |
| Zinc diecast |
| Gold over nickel |
| 5 mm / 10 mm |
| 750 |
| -40 °C...70 °C |
| IEC 61076-3-117 Var. 14, IEC 60603-7-51 |
| 0.46 mm / 0.61 mm |
| AWG 27/7 / AWG 24/7 |
| 0.36 mm / 0.51 mm |
| AWG 26/1 / AWG 24/1 |
| CULUS |

Note

Ordering data - Sets

| |
|-------------|
| RJ45 |
| Note |

| Type | Qty. | Order No. |
|--------------------|------|------------|
| IE-PS-V14M-RJ45-TH | 10 | 1012160000 |

Ordering data - Empty housings

| |
|-------------|
| Note |
|-------------|

| Type | Qty. | Order No. |
|---------------|------|------------|
| IE-PH-V14M-RJ | 10 | 1011560000 |

Accessories

| | |
|----------------------------|------------------|
| Dust protection cap | Protective cap |
| Marking tags | MultiCard, white |
| Tools | Pressing tool |

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-PP-V14P | 10 | 1058280000 |
| ESG 9/11 K MC NE WS | 200 | 1857440000 |
| TT 8 RS MP 8 | 1 | 9202800000 |

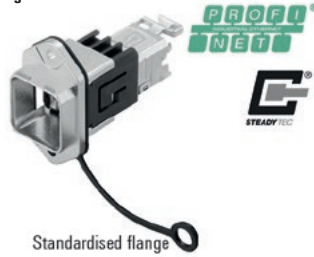
Note

Plug inserts can also be ordered separately. Refer to Inserts.

PushPull V14 - RJ45 flange
Module

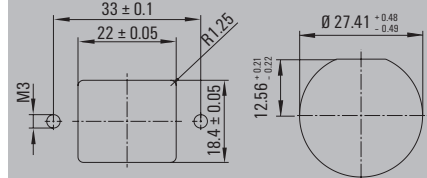
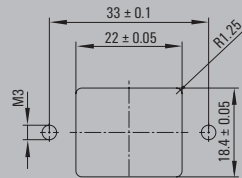
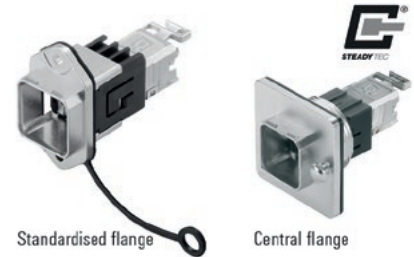
4-wire

PROFINET printing



8-wire

TIA-A



Technical data

| | |
|---|---|
| Category | |
| Protection degree | IP67 |
| Housing main material | Zinc diecast |
| Contact surface | Gold over nickel |
| Sheath diameter, min. / max. | 5 mm / 10 mm |
| Plugging cycles | 750 |
| Ambient temperature (operational) | -40 °C...70 °C |
| Connector standard | IEC 61076-3-117 Var. 14, IEC 60603-7-51 |
| Connection diameter, flexible, min. / max. | 0.48 mm / 0.76 mm |
| Connection cross-section, flexible, min. / max. | AWG 26 / AWG 22 |
| Connection diameter, solid, min. / max. | 0.4 mm / 0.64 mm |
| Connection cross-section, solid, min. / max. | AWG 24 / AWG 22 |
| Approvals | CULUS |
| Note | Other approvals for individual parts of the set available |

| | |
|---|---|
| Category | Cat.5 (ISO/IEC 11801) |
| Protection degree | IP67 |
| Housing main material | Zinc diecast |
| Contact surface | Gold over nickel |
| Sheath diameter, min. / max. | 5 mm / 10 mm |
| Plugging cycles | 750 |
| Ambient temperature (operational) | -40 °C...70 °C |
| Connector standard | IEC 61076-3-117 Var. 14, IEC 60603-7-51 |
| Connection diameter, flexible, min. / max. | 0.48 mm / 0.76 mm |
| Connection cross-section, flexible, min. / max. | AWG 26 / AWG 22 |
| Connection diameter, solid, min. / max. | 0.4 mm / 0.64 mm |
| Connection cross-section, solid, min. / max. | AWG 24 / AWG 22 |
| Approvals | CULUS |
| Note | Other approvals for individual parts of the set available |

| | |
|---|---|
| Category | Cat.6A / Class EA (ISO/IEC 11801 2010) |
| Protection degree | IP67 |
| Housing main material | Zinc diecast |
| Contact surface | Gold over nickel |
| Sheath diameter, min. / max. | 5 mm / 10 mm |
| Plugging cycles | 750 |
| Ambient temperature (operational) | -40 °C...70 °C |
| Connector standard | IEC 61076-3-117 Var. 14, IEC 60603-7-51 |
| Connection diameter, flexible, min. / max. | 0.48 mm / 0.76 mm |
| Connection cross-section, flexible, min. / max. | AWG 26 / AWG 22 |
| Connection diameter, solid, min. / max. | 0.4 mm / 0.64 mm |
| Connection cross-section, solid, min. / max. | AWG 24 / AWG 22 |
| Approvals | CULUS |
| Note | Other approvals for individual parts of the set available |

Ordering data - Sets

| | |
|---------------------|--|
| Standardised flange | |
| Central flange | |
| Note | |

| Type | Qty. | Order No. |
|-----------------------|------|------------|
| IE-BSS-V14M-RJ45-FJ-P | 10 | 1085260000 |

| Type | Qty. | Order No. |
|-----------------------|------|------------|
| IE-BSS-V14M-RJ45-FJ-A | 10 | 1012320000 |
| IE-BSC-V14M-RJ45-FJ-A | 10 | 1058270000 |

Ordering data - Empty housings

| | |
|---------------------|--|
| Standardised flange | |
| Central flange | |
| Device flange | |
| Note | |

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-BHS-V14M-RJA | 10 | 1011540000 |
| IE-BHC-V14M-RJA | 1 | 1047950000 |
| IE-BHD-V14M | 10 | 1047940000 |

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-BHS-V14M-RJA | 10 | 1011540000 |
| IE-BHC-V14M-RJA | 1 | 1047950000 |
| IE-BHD-V14M | 10 | 1047940000 |

Accessories

| | |
|---------------------|----------------|
| Dust protection cap | Protective cap |
|---------------------|----------------|

| Type | Qty. | Order No. |
|------------|------|------------|
| IE-BP-V14P | 10 | 1058310000 |

| Type | Qty. | Order No. |
|------------|------|------------|
| IE-BP-V14P | 10 | 1058310000 |

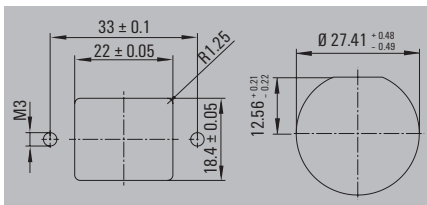
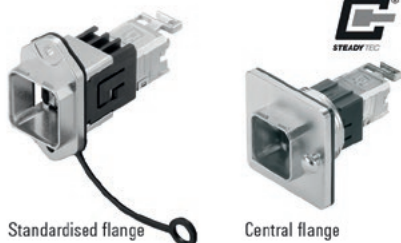
Note

Plug inserts can also be ordered separately. Refer to Inserts.

Plug inserts can also be ordered separately, see Inserts

PushPull V14 - RJ45 flange Coupling

8-wire



Technical data

| | |
|---|--|
| Category | |
| Protection degree | |
| Housing main material | |
| Contact surface | |
| Sheath diameter, min. / max. | |
| Plugging cycles | |
| Ambient temperature (operational) | |
| Connector standard | |
| Connection diameter, flexible, min. / max. | |
| Connection cross-section, flexible, min. / max. | |
| Connection diameter, solid, min. / max. | |
| Connection cross-section, solid, min. / max. | |
| Approvals | |
| Note | |

| |
|---|
| Cat.6A / Class EA (ISO/IEC 11801 2010) |
| IP67 |
| Zinc diecast |
| Gold over nickel |
| 5 mm / 10 mm |
| 750 |
| -40 °C...70 °C |
| IEC 61076-3-117 Var. 14, IEC 60603-7-51 |
| CULUS |
| Other approvals for individual parts of the set available |

Ordering data - Sets

| |
|---------------------|
| Standardised flange |
| Central flange |
| Note |

| Type | Qty. | Order No. |
|--------------------|------|------------|
| IE-BSS-V14M-RJ45-C | 10 | 1012310000 |
| IE-BSC-V14M-RJ45-C | 10 | 1058250000 |

Ordering data - Empty housings

| |
|---------------------|
| Standardised flange |
| Central flange |
| Device flange |
| Note |

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-BHS-V14M-RJA | 10 | 1011540000 |
| IE-BHC-V14M-RJA | 1 | 1047950000 |
| IE-BHD-V14M | 10 | 1047940000 |

Accessories

| | |
|---------------------|----------------|
| Dust protection cap | Protective cap |
|---------------------|----------------|

| Type | Qty. | Order No. |
|------------|------|------------|
| IE-BP-V14P | 10 | 1058310000 |

Note

Plug inserts can also be ordered separately. Refer to Inserts.

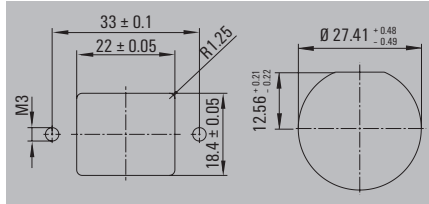
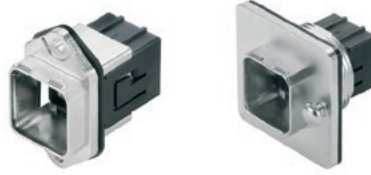


PushPull V14 - RJ45

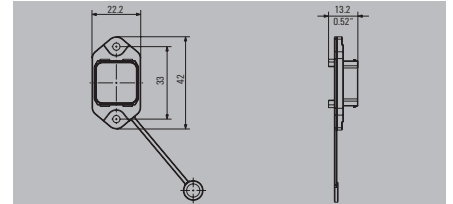
Flange-mounted empty housing / PushPull device flange V14

- IP 67

Empty housing



Device flange



Technical data

- Category
- Protection degree
- Housing main material
- Contact surface
- Sheath diameter, min. / max.
- Plugging cycles
- Ambient temperature (operational)
- Connector standard
- Connection diameter, flexible, min. / max.
- Connection cross-section, flexible, min. / max.
- Connection diameter, solid, min. / max.
- Connection cross-section, solid, min. / max.
- Approvals

IP67
Zinc diecast

750
-40 °C...70 °C
IEC 61076-3-117 Var. 14

IP67
Zinc diecast

750
-40 °C...70 °C
IEC 61076-3-117 Var. 14

CULUS

CULUS

Note

Ordering data

- Standardised flange
- Central flange
- Device flange

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-BHS-V14M-RJA | 10 | 1011540000 |
| IE-BHC-V14M-RJA | 1 | 1047950000 |

| Type | Qty. | Order No. |
|-------------|------|------------|
| IE-BHD-V14M | 10 | 1047940000 |

Note

Accessories

| Dust protection cap | |
|---------------------|--|
| Protective cap | |

| Type | Qty. | Order No. |
|------------|------|------------|
| IE-BP-V14P | 10 | 1058310000 |

| Type | Qty. | Order No. |
|------------|------|------------|
| IE-BP-V14P | 10 | 1058310000 |

Note

Plug inserts can also be ordered separately. Refer to Inserts.

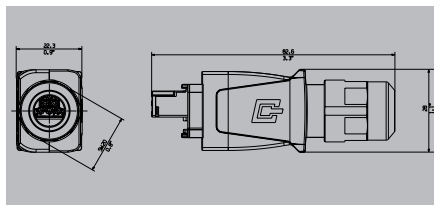
Plug inserts can also be ordered separately. Refer to Inserts.

Plug PushPull V14 - Hybrid

Hybrid



sercos
the automation bus



Technical data

| |
|---|
| Category |
| Protection degree |
| Housing main material |
| Contact surface |
| Sheath diameter, min. / max. |
| Plugging cycles |
| Ambient temperature (operational) |
| Connection 1 / 2 |
| Connector standard |
| Connection cross-section, flexible, min. / max. |
| Connection diameter, flexible, min. / max. |
| Rated current (hybrid connector) |
| Volume resistance |
| Approvals |
| Note |

| |
|---|
| Cat.5 (ISO/IEC 11801) |
| IP67 |
| Zinc diecast |
| Gold over nickel |
| 5 mm / 10 mm |
| 500 |
| -40 °C...70 °C |
| Hybrid (Q10) / Crimp |
| IEC 61076-3-119 CDV, IEC 61076-3-117 Var. 14 |
| AWG 27 / AWG 20 |
| 0.08 mm ² / 0.75 mm ² |
| 3 A per contact |
| <10 mΩ |
| CULUS |
| Other approvals for individual parts of the set available |

Ordering data - Sets

| |
|-------------|
| Note |
|-------------|

| Type | Qty. | Order No. |
|---------------------------|------|------------|
| IE-PS-V14M-HYB-10P | 10 | 1072910000 |
| Order contacts separately | | |

Ordering data - Empty housings

| |
|-------------|
| Note |
|-------------|

| Type | Qty. | Order No. |
|---------------|------|------------|
| IE-PH-V14M-RJ | 10 | 1011560000 |

Accessories

| | |
|-----------------------------------|--|
| Crimping contact (sockets) | |
| | 0.08...0.2 mm ² |
| | 0.2...0.5 mm ² |
| | 0.75 mm ² |
| Tools | Pressing tool |
| Cable | Hybrid cable, 100 m Hybrid cable, 500 m |
| Dust protection cap | Protective cap |
| Marking tags | MultiCard, white |

| Type | Qty. | Order No. |
|-----------------------|------|------------|
| IE-PIC-HYB-S-0,2-300 | 300 | 1135150000 |
| IE-PIC-HYB-S-0,5-300 | 300 | 1096180000 |
| IE-PIC-HYB-S-0,75-300 | 300 | 1068950000 |
| HTF HYB | 1 | 1119580000 |
| IE-C5DHAG-100 | 1 | 2763660000 |
| IE-C5DHAG-500 | 1 | 2763460000 |
| IE-PP-V14P | 10 | 1058280000 |
| ESG 9/11 K MC NEWS | 200 | 1857440000 |

| |
|-------------|
| Note |
|-------------|

| |
|--|
| Plug inserts can also be ordered separately. Refer to Inserts. |
|--|

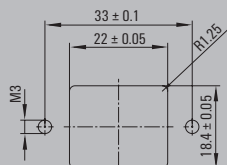
Flange PushPull V14 - Hybrid

Standardised flange

Pin contacts



sercos
the automation bus



Technical data

| |
|---|
| Category |
| Protection degree |
| Housing main material |
| Seal material |
| Contact surface |
| Sheath diameter, min. / max. |
| Plugging cycles |
| Ambient temperature (operational) |
| Connection 1 / 2 |
| Connector standard |
| Connection cross-section, flexible, min. / max. |
| Connection diameter, flexible, min. / max. |
| Rated current (hybrid connector) |
| Volume resistance |
| Approvals |
| Note |

| |
|---|
| Cat.5 (ISO/IEC 11801) |
| IP67 |
| Zinc diecast |
| EPDM |
| Gold over nickel |
| 5 mm / 10 mm |
| 500 |
| -40 °C...70 °C |
| Hybrid (Q10) / Crimp |
| IEC 61076-3-119 CDV, IEC 61076-3-117 Var. 14 |
| AWG 27 / AWG 20 |
| 0.08 mm ² / 0.75 mm ² |
| 3 A per contact |
| <10 mΩ |
| CULUS |
| Other approvals for individual parts of the set available |

Ordering data - Sets

| |
|-------------|
| Note |
|-------------|

| Type | Qty. | Order No. |
|---------------------------|------|------------|
| IE-BSS-V14M-HYB-10P-FJ | 10 | 1072900000 |
| Order contacts separately | | |

Ordering data - Empty housings

| |
|---------------------|
| Standardised flange |
| Note |

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-BHS-V14M-RJA | 10 | 1011540000 |

Accessories

| | |
|--------------------------------|--|
| Crimping contact (pins) | |
| | 0.08...0.2 mm ² |
| | 0.2...0.5 mm ² |
| | 0.75 mm ² |
| Tools | Pressing tool |
| Cable | Hybrid cable, 100 m Hybrid cable, 500 m |
| Dust protection cap | Protective cap |

| Type | Qty. | Order No. |
|-----------------------|------|------------|
| IE-BIC-HYB-P-0,2-300 | 300 | 1135160000 |
| IE-BIC-HYB-P-0,5-300 | 300 | 1096150000 |
| IE-BIC-HYB-P-0,75-300 | 300 | 1068970000 |
| HTF HYB | 1 | 1119580000 |
| IE-C5DHAG-100 | 1 | 2763660000 |
| IE-C5DHAG-500 | 1 | 2763460000 |
| IE-BP-V14P | 10 | 1058310000 |

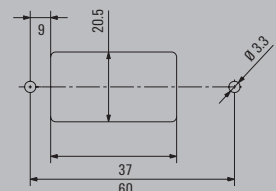
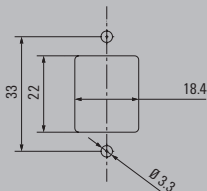
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|-------------|
| Note |
|-------------|

| |
|--|
| Plug inserts can also be ordered separately. Refer to Inserts. |
|--|

V14 flange adapter

Straight

Angled



Technical data

| |
|-----------------------------------|
| Protection degree |
| Housing main material |
| Seal material |
| Type of mounting |
| Ambient temperature (operational) |
| Note |

| |
|-----------------------------|
| IP67 |
| Zinc diecast |
| EPDM |
| 2 screws, M3 (not included) |
| -40...70 °C |
| |

| |
|-----------------------------|
| IP67 |
| Zinc diecast |
| EPDM |
| 2 screws, M3 (not included) |
| -40...70 °C |
| |

Ordering data

| |
|------|
| Note |
|------|

| Type | Qty. | Order No. |
|---|------|------------|
| IE-AD-BHS-V14M-RJA | 1 | 1302000000 |
| Flange and plug inserts must be ordered separately, see Inserts/Flanges | | |

| Type | Qty. | Order No. |
|--|------|------------|
| IE-BHS-V14M-RJA-45 | 10 | 1296710000 |
| Flange inserts must be ordered separately, see Inserts | | |

Accessories

| |
|--|
| |
|--|

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

| |
|------|
| Note |
|------|

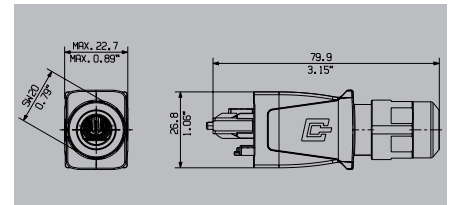
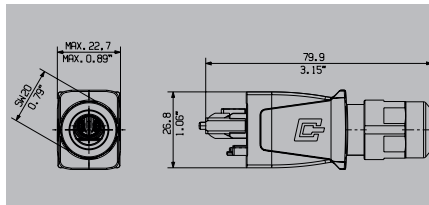
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| |
|--|

PushPull V14 plug - fibre-optic

Without kink prevention, crimp

Without kink prevention, reconnectable



Technical data

| |
|-----------------------------------|
| Protection degree |
| Housing main material |
| Sheath diameter, min. / max. |
| Plugging cycles |
| Ambient temperature (operational) |
| Connector standard |
| Approvals |
| Note |

| |
|---------------------------------------|
| IP67 |
| Zinc diecast |
| 5 mm / 10 mm |
| 750 |
| -40...70 °C |
| IEC 61076-3-117 Var. 14, IEC 61754-24 |
| CULUS |

| |
|---------------------------------------|
| IP67 |
| Zinc diecast |
| 5 mm / 10 mm |
| 750 |
| -40...70 °C |
| IEC 61076-3-117 Var. 14, IEC 61754-24 |

Ordering data - Sets

| |
|------|
| POF |
| Note |

| Type | Qty. | Order No. |
|--------------------|------|------------|
| IE-PS-V14M-2SC-POF | 10 | 1191550000 |

| Type | Qty. | Order No. |
|-----------------------|------|------------|
| IE-PS-V14M-2SC-POF-QA | 10 | 2568260000 |

Ordering data - Empty housings

| |
|------|
| Note |
|------|

| Type | Qty. | Order No. |
|---------------|------|------------|
| IE-PH-V14M-FO | 10 | 1058100000 |

| Type | Qty. | Order No. |
|---------------|------|------------|
| IE-PH-V14M-FO | 10 | 1058100000 |

Accessories

| | |
|---------------------|--|
| Inserts | POF |
| Dust protection cap | Protective cap |
| Tools | Tool set POF, crimp Mounting tool, POF MULTI-STRIPAX IE-POF Cevlar scissors |
| Replacement ferrule | |
| Marking tags | MultiCard, white |

| Type | Qty. | Order No. |
|----------------------|------|------------|
| IE-PI-SCRJ-POF | 10 | 1067410000 |
| IE-PP-V14P | 10 | 1058280000 |
| TOOL SET IE-POF | 1 | 1208930000 |
| HTX-IE-POF | 1 | 1208870000 |
| MULTI-STRIPAX IE-POF | 1 | 1208880000 |
| SCISSORS KEVLAR | 1 | 1208910000 |
| IE-SCRJ-IP67-POF-100 | 100 | 1278430000 |
| ESG 9/11 K MC NE WS | 200 | 1857440000 |

| Type | Qty. | Order No. |
|----------------------|------|------------|
| IE-PI-SCRJ-POF-QA | 10 | 2564960000 |
| IE-PP-V14P | 10 | 1058280000 |
| HTX-IE-POF-QA | 1 | 2602860000 |
| MULTI-STRIPAX IE-POF | 1 | 1208880000 |
| SCISSORS KEVLAR | 1 | 1208910000 |
| ESG 9/11 K MC NE WS | 200 | 1857440000 |

| |
|------|
| Note |
|------|

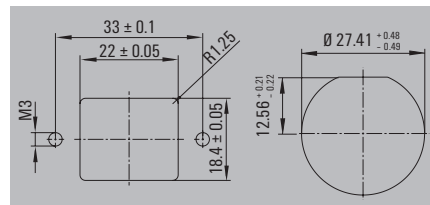
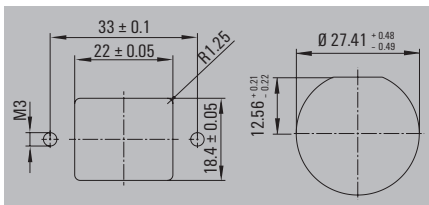
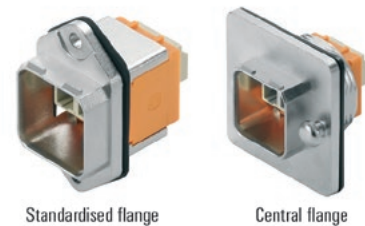
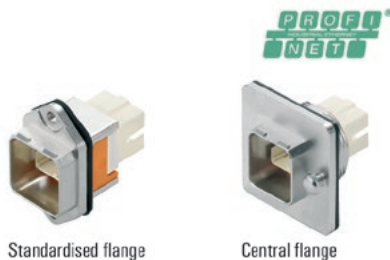
| |
|--|
| Plug inserts can also be ordered separately, see Inserts |
|--|

| |
|--|
| Plug inserts can also be ordered separately, see Inserts |
|--|

Flange PushPull V14 - fibre-optic

SCRJ

LC Duplex coupling



Technical data

| | |
|-----------------------------------|---------------------------------------|
| Protection degree | IP67 |
| Housing main material | Zinc diecast |
| Plugging cycles | 500 |
| Ambient temperature (operational) | -40 °C...70 °C |
| Insertion loss | ≤ 0.5 dB |
| Connector standard | IEC 61076-3-117 Var. 14, IEC 61754-24 |
| Approvals | CULUS |
| Note | |

| | |
|-----------------------------------|---------------------------------------|
| Protection degree | IP67 |
| Housing main material | Zinc diecast |
| Plugging cycles | 500 |
| Ambient temperature (operational) | -40 °C...70 °C |
| Insertion loss | ≤ 0.4 dB |
| Connector standard | IEC 61076-3-117 Var. 14, IEC 61754-20 |
| Note | |

Ordering data - Sets

| | |
|-----------------------------------|--|
| Central flange Singlemode | |
| Standardised flange Singlemode | |
| Central flange Multimode/POF | |
| Standardised flange Multimode/POF | |
| Note | |

| Type | Qty. | Order No. |
|-----------------------|------|------------|
| IE-BSC-V14M-SCRJ-SM-C | 10 | 1062600000 |
| IE-BSS-V14M-SCRJ-SM-C | 10 | 1058140000 |
| IE-BSC-V14M-SCRJ-MM-C | 10 | 1062590000 |
| IE-BSS-V14M-SCRJ-MM-C | 10 | 1058120000 |

| Type | Qty. | Order No. |
|----------------------|------|------------|
| IE-BSC-V14M-LCD-SM-C | 10 | 1062620000 |
| IE-BSS-V14M-LCD-SM-C | 10 | 1058150000 |
| IE-BSC-V14M-LCD-MM-C | 10 | 1062610000 |
| IE-BSS-V14M-LCD-MM-C | 10 | 1058130000 |

Ordering data - Empty housings

| | |
|---------------|--|
| Device flange | |
| Note | |

| Type | Qty. | Order No. |
|-------------|------|------------|
| IE-BHD-V14M | 10 | 1047940000 |

| Type | Qty. | Order No. |
|-------------|------|------------|
| IE-BHD-V14M | 10 | 1047940000 |

Accessories

| | |
|---------------------|----------------|
| Dust protection cap | Protective cap |
|---------------------|----------------|

| Type | Qty. | Order No. |
|------------|------|------------|
| IE-BP-V14P | 10 | 1058310000 |

| Type | Qty. | Order No. |
|------------|------|------------|
| IE-BP-V14P | 10 | 1058310000 |

Note

Plug inserts can also be ordered separately. Refer to Inserts.

Plug inserts can also be ordered separately. Refer to Inserts.

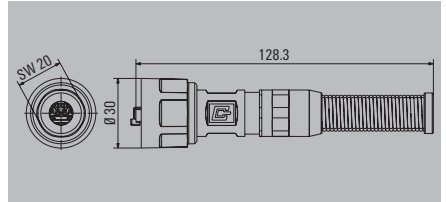
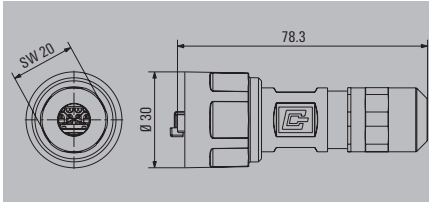


Bayonet V1 Metal-RJ45

Plug bayonet V1 Metal - RJ45

Without kink prevention

With kink prevention



Technical data

| | |
|---|--|
| Category | |
| Protection degree | IP67 |
| Housing main material | Zinc diecast |
| Contact surface | Gold over nickel |
| Sheath diameter, min. / max. | 5 mm / 10 mm |
| Plugging cycles | 750 |
| Ambient temperature (operational) | -40 °C...70 °C |
| Connection cross-section, flexible, min. / max. | AWG 26 / AWG 22 |
| Connection diameter, flexible, min. / max. | 0.48 mm / 0.76 mm |
| Connection cross-section, solid, min. / max. | AWG 24 / AWG 22 |
| Connection diameter, solid, min. / max. | 0.4 mm / 0.64 mm |
| Connector standard | IEC 61076-3-106 Var. 1, IEC 60603-7-51 |
| Approvals | CULUS |
| Note | |

| | |
|--|--|
| Cat.6A / Class EA (ISO/IEC 11801 2010) | |
| IP67 | |
| Zinc diecast | |
| Gold over nickel | |
| 5 mm / 10 mm | |
| 750 | |
| -40 °C...70 °C | |
| AWG 26 / AWG 22 | |
| 0.48 mm / 0.76 mm | |
| AWG 24 / AWG 22 | |
| 0.4 mm / 0.64 mm | |
| IEC 61076-3-106 Var. 1, IEC 60603-7-51 | |
| CULUS | |
| | |

| | |
|--|--|
| Cat.6A / Class EA (ISO/IEC 11801 2010) | |
| IP67 | |
| Zinc diecast | |
| Gold over nickel | |
| 5 mm / 10 mm | |
| 750 | |
| -40 °C...70 °C | |
| AWG 26 / AWG 22 | |
| 0.48 mm / 0.76 mm | |
| AWG 24 / AWG 22 | |
| 0.4 mm / 0.64 mm | |
| IEC 61076-3-106 Var. 1, IEC 60603-7-51 | |
| CULUS | |
| | |

Ordering data - Sets

| | |
|---|--|
| RJ45 without tools. AWG 26-22. TIA-A/B-PROFINET | |
| RJ45 Crimp. AWG 27-24 | |
| Note | |

| Type | Qty. | Order No. |
|--------------------|------|------------|
| IE-PS-V01M-RJ45-FH | 10 | 1963120000 |
| IE-PS-V01M-RJ45-TH | 1 | 1963140000 |
| | | |

| Type | Qty. | Order No. |
|-----------------------|------|------------|
| IE-PS-V01M-RJ45-FH-BP | 10 | 1963130000 |
| IE-PS-V01M-RJ45-TH-BP | 10 | 1963150000 |
| | | |

Ordering data - Empty housings

| | |
|------|--|
| Note | |
|------|--|

| Type | Qty. | Order No. |
|------------|------|------------|
| IE-PH-V01M | 10 | 1962550000 |
| | | |

| Type | Qty. | Order No. |
|---------------|------|------------|
| IE-PH-V01M-BP | 10 | 1962560000 |
| | | |

Accessories

| | |
|---------------------|-----------------------------|
| Dust protection cap | Plug housing protective cap |
| Marking tags | MultiCard, white |

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-PP-V01P | 10 | 1965690000 |
| ESG 9/11 K MC NE WS | 200 | 1857440000 |

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-PP-V01P | 10 | 1965690000 |
| ESG 9/11 K MC NE WS | 200 | 1857440000 |

Note

Plug inserts can also be ordered separately. Refer to Inserts.

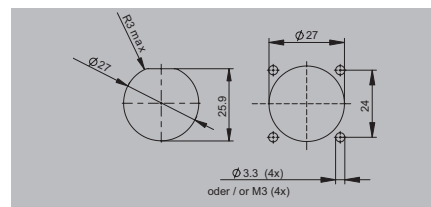
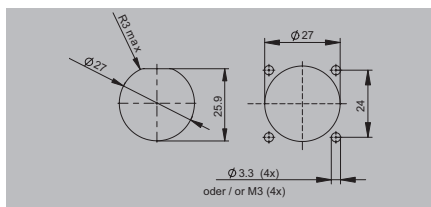
Plug inserts can also be ordered separately. Refer to Inserts.

Flange bayonet V1 Metal - RJ45

Module

Coupling

TIA-A



Technical data

| |
|---|
| Category |
| Protection degree |
| Housing main material |
| Contact surface |
| Plugging cycles |
| Ambient temperature (operational) |
| Connector standard |
| Connection cross-section, flexible, min. / max. |
| Connection diameter, flexible, min. / max. |
| Connection cross-section, solid, min. / max. |
| Connection diameter, solid, min. / max. |
| Approvals |
| Note |

| |
|--|
| Cat.6A / Class EA (ISO/IEC 11801 2010) |
| IP67 |
| Zinc diecast |
| Gold over nickel |
| 750 |
| -40 °C...70 °C |
| IEC 61076-3-106 Var. 1, IEC 60603-7-51 |
| AWG 26 / AWG 22 |
| 0.48 mm / 0.76 mm |
| AWG 24 / AWG 22 |
| 0.4 mm / 0.64 mm |
| CULUS |
| Note |

| |
|--|
| Cat.6A / Class EA (ISO/IEC 11801 2010) |
| IP67 |
| Zinc diecast |
| Gold over nickel |
| 750 |
| -40 °C...70 °C |
| IEC 61076-3-106 Var. 1, IEC 60603-7-51 |
| CULUS |
| Note |

Ordering data - Sets

| |
|-------------|
| Note |
|-------------|

| Type | Qty. | Order No. |
|----------------------|------|------------|
| IE-BS-V01M-RJ45-FJ-A | 10 | 1963480000 |

| Type | Qty. | Order No. |
|-------------------|------|------------|
| IE-BS-V01M-RJ45-C | 10 | 1963470000 |

Ordering data - Empty housings

| |
|-------------|
| Note |
|-------------|

| Type | Qty. | Order No. |
|------------|------|------------|
| IE-BH-V01M | 10 | 1963540000 |

| Type | Qty. | Order No. |
|------------|------|------------|
| IE-BH-V01M | 10 | 1963540000 |

Accessories

| | |
|---------------------|---------------------------------------|
| Dust protection cap | Flange-mounted housing protective cap |
|---------------------|---------------------------------------|

| Type | Qty. | Order No. |
|------------|------|------------|
| IE-BP-V01P | 10 | 1965700000 |

| Type | Qty. | Order No. |
|------------|------|------------|
| IE-BP-V01P | 10 | 1965700000 |

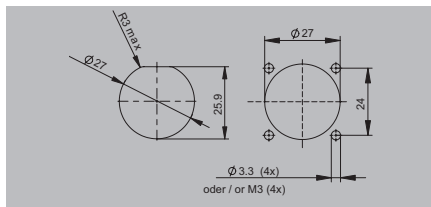
| |
|-------------|
| Note |
|-------------|

| |
|--|
| Plug inserts can also be ordered separately. Refer to Inserts. |
|--|

| |
|--|
| Plug inserts can also be ordered separately. Refer to Inserts. |
|--|

Flange bayonet V1 metal - fibre-optic-SC

Standardised flange



Technical data

| |
|-----------------------------------|
| Protection degree |
| Housing main material |
| Plugging cycles |
| Ambient temperature (operational) |
| Connector standard |
| Approvals |
| Note |

| |
|--------------------------------------|
| IP67 |
| Zinc diecast |
| 500 |
| -40 °C...70 °C |
| IEC 61076-3-106 Var. 1, IEC 61754-24 |
| Note |

Ordering data - Sets

| |
|---------------|
| Singlemode |
| Multimode/POF |
| Note |

| Type | Qty. | Order No. |
|--------------------|------|------------|
| IE-BS-V01M-SCRJ-SM | 10 | 1221020000 |
| IE-BS-V01M-SCRJ-MM | 1 | 1221010000 |
| Note | | |

Ordering data - Empty housings

| |
|-------------|
| Note |
|-------------|

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-BHD-V01M-SCA | 10 | 1221030000 |
| Note | | |

Accessories

| |
|---------------------------------------|
| Dust protection cap |
| Flange-mounted housing protective cap |

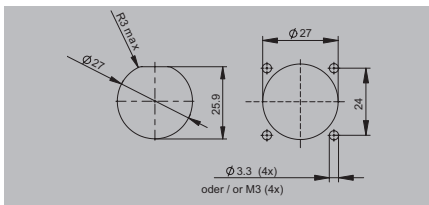
| Type | Qty. | Order No. |
|-------------|------|------------|
| IE-BP-V01P | 10 | 1965700000 |
| Note | | |

Note

Plug inserts can also be ordered separately. Refer to Inserts.

Flange bayonet V1 metal - fibre-optic-LC

Standardised flange



Technical data

| |
|-----------------------------------|
| Protection degree |
| Housing main material |
| Plugging cycles |
| Ambient temperature (operational) |
| Connector standard |
| Approvals |
| Note |

| |
|--------------------------------------|
| IP67 |
| Zinc diecast |
| 500 |
| -40 °C...70 °C |
| IEC 61076-3-106 Var. 1, IEC 61754-20 |
| Note |

Ordering data - Sets

| |
|-------------|
| Singlemode |
| Multimode |
| Note |

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-BS-V01M-LCD-SM-C | 10 | 1963430000 |
| IE-BS-V01M-LCD-MM-C | 10 | 1964440000 |
| Note | | |

Ordering data - Empty housings

| |
|-------------|
| Note |
|-------------|

| Type | Qty. | Order No. |
|-------------|------|------------|
| IE-BH-V01M | 10 | 1963540000 |
| Note | | |

Accessories

| |
|---------------------------------------|
| Dust protection cap |
| Flange-mounted housing protective cap |

| Type | Qty. | Order No. |
|-------------|------|------------|
| IE-BP-V01P | 10 | 1965700000 |
| Note | | |

Note

Plug inserts can also be ordered separately. Refer to Inserts.

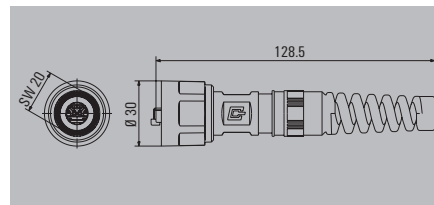
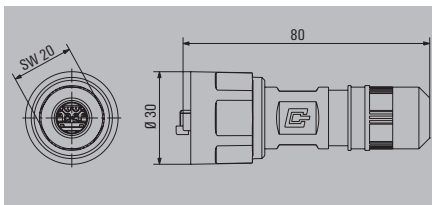


Bayonet V1 Plastic-RJ45

Plug bayonet V1 Plastic - RJ45

Without kink prevention

With kink prevention



Technical data

| | |
|---|--|
| Category | |
| Protection degree | IP67 |
| Housing main material | PA UL 94 V0 |
| Contact surface | Gold over nickel |
| Sheath diameter, min. / max. | 5 mm / 10 mm |
| Plugging cycles | 750 |
| Ambient temperature (operational) | -40 °C...70 °C |
| Connection cross-section, flexible, min. / max. | AWG 26 / AWG 22 |
| Connection diameter, flexible, min. / max. | 0.48 mm / 0.76 mm |
| Connection cross-section, solid, min. / max. | AWG 24 / AWG 22 |
| Connection diameter, solid, min. / max. | 0.4 mm / 0.64 mm |
| Connector standard | IEC 61076-3-106 Var. 1, IEC 60603-7-51 |
| Approvals | CULUS |
| Note | |

| | |
|--|--|
| Cat.6A / Class EA (ISO/IEC 11801 2010) | |
| IP67 | |
| PA UL 94 V0 | |
| Gold over nickel | |
| 5 mm / 10 mm | |
| 750 | |
| -40 °C...70 °C | |
| AWG 26 / AWG 22 | |
| 0.48 mm / 0.76 mm | |
| AWG 24 / AWG 22 | |
| 0.4 mm / 0.64 mm | |
| IEC 61076-3-106 Var. 1, IEC 60603-7-51 | |
| CULUS | |
| | |

| | |
|--|--|
| Cat.6A / Class EA (ISO/IEC 11801 2010) | |
| IP67 | |
| PA UL 94 V0 | |
| Gold over nickel | |
| 5 mm / 10 mm | |
| 750 | |
| -40 °C...70 °C | |
| AWG 26 / AWG 22 | |
| 0.48 mm / 0.76 mm | |
| AWG 24 / AWG 22 | |
| 0.4 mm / 0.64 mm | |
| IEC 61076-3-106 Var. 1, IEC 60603-7-51 | |
| CULUS | |
| | |

Ordering data - Sets

| | |
|---|--|
| RJ45 without tools. AWG 26-22. TIA-A/B-PROFINET | |
| RJ45 Crimp. AWG 27-24 | |
| Note | |

| Type | Qty. | Order No. |
|--------------------|------|------------|
| IE-PS-V01P-RJ45-FH | 10 | 1012490000 |
| IE-PS-V01P-RJ45-TH | 10 | 1012470000 |
| | | |

| Type | Qty. | Order No. |
|-----------------------|------|------------|
| IE-PS-V01P-RJ45-FH-BP | 10 | 1012570000 |
| IE-PS-V01P-RJ45-TH-BP | 10 | 1012560000 |
| | | |

Ordering data - Empty housings

| | |
|------|--|
| Note | |
|------|--|

| Type | Qty. | Order No. |
|------------|------|------------|
| IE-PH-V01P | 10 | 1012440000 |
| | | |

| Type | Qty. | Order No. |
|---------------|------|------------|
| IE-PH-V01P-BP | 10 | 1012460000 |
| | | |

Accessories

| | |
|---------------------|-----------------------------|
| Dust protection cap | Plug housing protective cap |
| Marking tags | MultiCard, white |

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-PP-V01P | 10 | 1965690000 |
| ESG 9/11 K MC NE WS | 200 | 1857440000 |

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-PP-V01P | 10 | 1965690000 |
| ESG 9/11 K MC NE WS | 200 | 1857440000 |

Note

Plug inserts can also be ordered separately. Refer to Inserts.

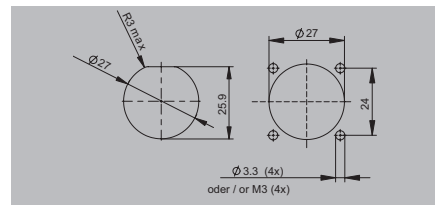
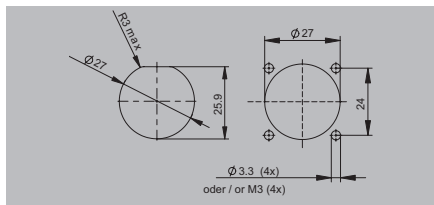
Plug inserts can also be ordered separately. Refer to Inserts.

Flange bayonet V1 Plastic - RJ45

Module

Coupling

TIA-A



Technical data

| |
|---|
| Category |
| Protection degree |
| Housing main material |
| Contact surface |
| Plugging cycles |
| Ambient temperature (operational) |
| Connector standard |
| Connection cross-section, flexible, min. / max. |
| Connection diameter, flexible, min. / max. |
| Connection cross-section, solid, min. / max. |
| Connection diameter, solid, min. / max. |
| Approvals |
| Note |

| |
|--|
| Cat.6A / Class EA (ISO/IEC 11801 2010) |
| IP67 |
| PA UL 94 V0 |
| Gold over nickel |
| 750 |
| -40 °C...70 °C |
| IEC 61076-3-106 Var. 1, IEC 60603-7-51 |
| AWG 26 / AWG 22 |
| 0.48 mm / 0.76 mm |
| AWG 24 / AWG 22 |
| 0.4 mm / 0.64 mm |
| CULUS |
| Note |

| |
|--|
| Cat.6A / Class EA (ISO/IEC 11801 2010) |
| IP67 |
| PA UL 94 V0 |
| Gold over nickel |
| 750 |
| -40 °C...70 °C |
| IEC 61076-3-106 Var. 1, IEC 60603-7-51 |
| CULUS |
| Note |

Ordering data - Sets

| |
|-------------|
| Note |
|-------------|

| Type | Qty. | Order No. |
|----------------------|------|------------|
| IE-BS-V01P-RJ45-FJ-A | 10 | 1012380000 |

| Type | Qty. | Order No. |
|-------------------|------|------------|
| IE-BS-V01P-RJ45-C | 10 | 1012370000 |

Ordering data - Empty housings

| |
|-------------|
| Note |
|-------------|

| Type | Qty. | Order No. |
|------------|------|------------|
| IE-BH-V01P | 10 | 1016960000 |

| Type | Qty. | Order No. |
|------------|------|------------|
| IE-BH-V01P | 10 | 1016960000 |

Accessories

| | |
|---------------------|---------------------------------------|
| Dust protection cap | Flange-mounted housing protective cap |
|---------------------|---------------------------------------|

| Type | Qty. | Order No. |
|------------|------|------------|
| IE-BP-V01P | 10 | 1965700000 |

| Type | Qty. | Order No. |
|------------|------|------------|
| IE-BP-V01P | 10 | 1965700000 |

| |
|-------------|
| Note |
|-------------|

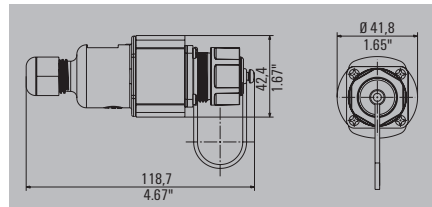
| |
|--|
| Plug inserts can also be ordered separately. Refer to Inserts. |
|--|

| |
|--|
| Plug inserts can also be ordered separately. Refer to Inserts. |
|--|

Bayonet V1 Plastic-RJ45

**Cable coupling bayonet V1
Plastic - RJ45**

Cable coupling



Technical data

| |
|-----------------------------------|
| Protection degree |
| Housing main material |
| Plugging cycles |
| Ambient temperature (operational) |
| Connector standard |
| Sheath diameter, min. / max. |
| Approvals |
| Note |

| |
|------------------------|
| IP67 |
| PA UL 94 V0 |
| 750 |
| -40 °C...70 °C |
| IEC 61076-3-106 Var. 1 |
| 6 mm / 9.5 mm |
| Note |

Ordering data

| | |
|------------------|----------------|
| Variant 1 | Cable coupling |
| Note | |

| Type | Qty. | Order No. |
|--|------|-------------------|
| IE-CC-V01P | 10 | 1061820000 |
| RJ45 modules can be ordered separately | | |

Accessories

| Inserts, Data |
|----------------------------|
| RJ45 module EIA/TIA T568 B |
| RJ45 module PROFINET |
| RJ45 module EIA/TIA T568 A |

| Type | Qty. | Order No. |
|-----------------|------|-------------------|
| IE-BI-RJ45-FJ-B | 10 | 1963840000 |
| IE-BI-RJ45-FJ-P | 10 | 1963830000 |
| IE-BI-RJ45-FJ-A | 10 | 1962850000 |

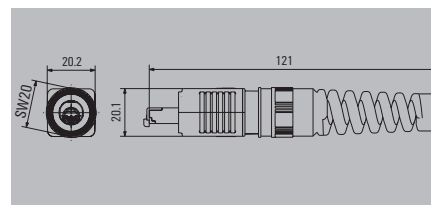
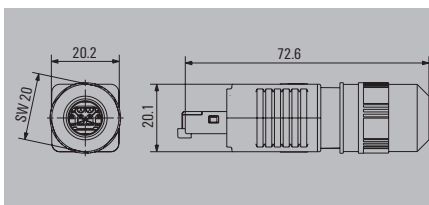
| |
|-------------|
| Note |
|-------------|

| |
|-------------|
| Note |
|-------------|

Plug PushPull V4 - RJ45

Without kink prevention

With kink prevention



Technical data

| |
|---|
| Category |
| Protection degree |
| Housing main material |
| Contact surface |
| Sheath diameter, min. / max. |
| Plugging cycles |
| Ambient temperature (operational) |
| Connection cross-section, flexible, min. / max. |
| Connection diameter, flexible, min. / max. |
| Connection cross-section, solid, min. / max. |
| Connection diameter, solid, min. / max. |
| Connector standard |
| Approvals |
| Note |

| |
|--|
| Cat.6A / Class EA (ISO/IEC 11801 2010) |
| IP67 |
| PA UL 94 V0 |
| Gold over nickel |
| 5 mm / 10 mm |
| 750 |
| -40 °C...70 °C |
| AWG 27/7 / AWG 24/7 |
| 0.46 mm / 0.61 mm |
| AWG 26/1 / AWG 24/1 |
| 0.36 mm / 0.51 mm |
| IEC 61076-3-106 Var. 4, IEC 60603-7-51 |
| CULUS |

| |
|--|
| Cat.6A / Class EA (ISO/IEC 11801 2010) |
| IP67 |
| PA UL 94 V0 |
| Gold over nickel |
| 5 mm / 10 mm |
| 750 |
| -40 °C...70 °C |
| AWG 27/7 / AWG 24/7 |
| 0.46 mm / 0.61 mm |
| AWG 26/1 / AWG 24/1 |
| 0.36 mm / 0.51 mm |
| IEC 61076-3-106 Var. 4, IEC 60603-7-51 |
| CULUS |

Ordering data - Sets

| |
|---|
| RJ45 without tools. AWG 26-22. TIA-A/B-PROFINET |
| RJ45 without tools. AWG 26-22. TIA-B |
| RJ45 Crimp. AWG 27-24 |
| Note |

| Type | Qty. | Order No. |
|----------------------|------|------------|
| IE-PS-V04P-RJ45-FH | 10 | 1963160000 |
| IE-PS-V04P-RJ45-FH-B | 10 | 1271240000 |
| IE-PS-V04P-RJ45-TH | 10 | 1963180000 |

| Type | Qty. | Order No. |
|-----------------------|------|------------|
| IE-PS-V04P-RJ45-FH-BP | 10 | 1963170000 |
| IE-PS-V04P-RJ45-TH-BP | 1 | 1963190000 |

Ordering data - Empty housings

| |
|------|
| Note |
|------|

| Type | Qty. | Order No. |
|------------|------|------------|
| IE-PH-V04P | 10 | 1962520000 |

| Type | Qty. | Order No. |
|---------------|------|------------|
| IE-PH-V04P-BP | 10 | 1962530000 |

Accessories

| | |
|---------------------|-----------------------------|
| Dust protection cap | Plug housing protective cap |
| Marking tags | MultiCard, white |

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-PP-V04P | 10 | 1963890000 |
| ESG 9/11 K MC NE WS | 200 | 1857440000 |

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-PP-V04P | 10 | 1963890000 |
| ESG 9/11 K MC NE WS | 200 | 1857440000 |

Note

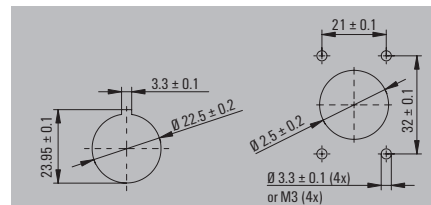
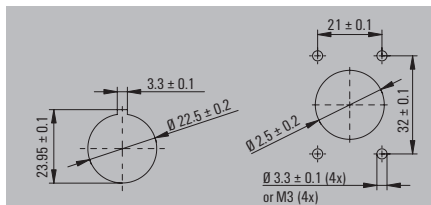
Plug inserts can also be ordered separately. Refer to Inserts.

Plug inserts can also be ordered separately. Refer to Inserts.

Flange PushPull V4 - RJ45

Module

Coupling



Technical data

| |
|---|
| Category |
| Protection degree |
| Housing main material |
| Contact surface |
| Plugging cycles |
| Ambient temperature (operational) |
| Connector standard |
| Connection cross-section, flexible, min. / max. |
| Connection diameter, flexible, min. / max. |
| Connection cross-section, solid, min. / max. |
| Connection diameter, solid, min. / max. |
| Approvals |
| Note |

| |
|---|
| Cat.6A / Class EA (ISO/IEC 11801 2010) |
| IP67 |
| PA UL 94 V0 |
| Gold over nickel |
| 750 |
| -40 °C...70 °C |
| IEC 61076-3-106 Var. 4, IEC 60603-7-51 |
| AWG 26 / AWG 22 |
| 0.48 mm / 0.76 mm |
| AWG 24 / AWG 22 |
| 0.4 mm / 0.64 mm |
| CULUS |
| Other approvals for individual parts of the set available |

| |
|--|
| Cat.6A / Class EA (ISO/IEC 11801 2010) |
| IP67 |
| PA UL 94 V0 |
| Gold over nickel |
| 750 |
| -40 °C...70 °C |
| IEC 61076-3-106 Var. 4, IEC 60603-7-51 |
| |
| |
| |
| |
| |
| CULUS |
| |

Ordering data - Sets

| |
|-------------------|
| RJ45 module TIA-A |
| RJ45 module TIA-B |
| Coupling |
| Note |

| Type | Qty. | Order No. |
|----------------------|------|------------|
| IE-BS-V04P-RJ45-FJ-A | 10 | 1963500000 |
| IE-BS-V04P-RJ45-FJ-B | 1 | 1963730000 |

| Type | Qty. | Order No. |
|-------------------|------|------------|
| IE-BS-V04P-RJ45-C | 10 | 1963490000 |

Ordering data - Empty housings

| |
|-----------------|
| Empty enclosure |
| Device flange |
| Note |

| Type | Qty. | Order No. |
|-------------|------|------------|
| IE-BH-V04P | 10 | 1963520000 |
| IE-BHD-V04P | 200 | 2027660000 |

| Type | Qty. | Order No. |
|-------------|------|------------|
| IE-BH-V04P | 10 | 1963520000 |
| IE-BHD-V04P | 200 | 2027660000 |

Accessories

| |
|---------------------------------------|
| Dust protection cap |
| Flange-mounted housing protective cap |
| Marking tags |
| MultiCard, white |
| Fixing tool |
| Note |

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-BP-V04P | 10 | 1963900000 |
| ESG 9/11 K MC NE WS | 200 | 1857440000 |
| IE-FISP-V4 | 2 | 9204370000 |

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-BP-V04P | 10 | 1963900000 |
| ESG 9/11 K MC NE WS | 200 | 1857440000 |
| IE-FISP-V4 | 2 | 9204370000 |

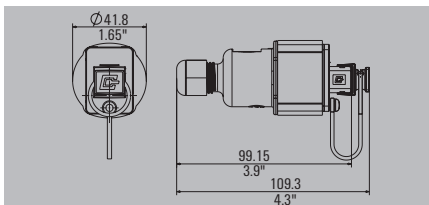
Note

Plug inserts can also be ordered separately. Refer to Inserts.

Plug inserts can also be ordered separately. Refer to Inserts.

Cable coupling PushPull V4 - RJ45

Cable coupling



Technical data

| |
|-----------------------------------|
| Protection degree |
| Housing main material |
| Plugging cycles |
| Ambient temperature (operational) |
| Connector standard |
| Sheath diameter, min. / max. |
| Approvals |
| Note |

| |
|------------------------|
| IP67 |
| PA UL 94 V0 |
| 750 |
| -40 °C...70 °C |
| IEC 61076-3-106 Var. 4 |
| 6 mm / 9.5 mm |
| |

Ordering data

| |
|----------------|
| Cable coupling |
| Note |

| Type | Qty. | Order No. |
|--|------|------------|
| IE-CC-V04P | 10 | 1045960000 |
| RJ45 modules can be ordered separately | | |

Accessories

| Inserts, Data | |
|----------------------------|--|
| RJ45 module EIA/TIA T568 B | |
| RJ45 module PROFINET | |
| RJ45 module EIA/TIA T568 A | |
| Marking tags | |
| MultiCard, white | |

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-BI-RJ45-FJ-B | 10 | 1963840000 |
| IE-BI-RJ45-FJ-P | 10 | 1963830000 |
| IE-BI-RJ45-FJ-A | 10 | 1962850000 |
| Marking tags | | |
| ESG 9/11 K MC NE WS | 200 | 1857440000 |

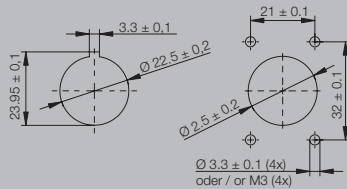
Note

Plug inserts can also be ordered separately. Refer to Inserts.

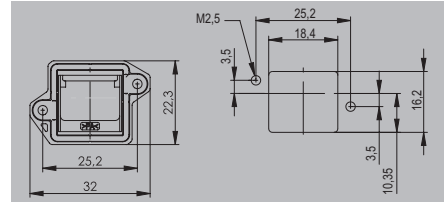
Flange-mounted empty housing / PushPull V4 device flange

- IP 67

Empty housing



Device flange



Technical data

| |
|-----------------------------------|
| Protection degree |
| Housing main material |
| Plugging cycles |
| Ambient temperature (operational) |
| Connector standard |
| Sheath diameter, min. / max. |
| Approvals |
| Note |

| |
|------------------------|
| IP67 |
| PA UL 94 V0 |
| 750 |
| -40 °C...70 °C |
| IEC 61076-3-106 Var. 4 |
| 5 mm / 10 mm |
| CULUS |

| |
|------------------------|
| IP67 |
| PA UL 94 V0 |
| -40 °C...70 °C |
| IEC 61076-3-106 Var. 4 |
| CULUS |

Ordering data

| |
|-----------------|
| Empty enclosure |
| Device flange |
| Note |

| Type | Qty. | Order No. |
|------------|------|------------|
| IE-BH-V04P | 10 | 1963520000 |

| Type | Qty. | Order No. |
|-------------|------|------------|
| IE-BHD-V04P | 200 | 2027660000 |

Accessories

| |
|---------------------------------------|
| Dust protection cap |
| Flange-mounted housing protective cap |
| Marking tags |
| MultiCard, white |
| Fixing tool |

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-BP-V04P | 10 | 1963900000 |
| ESG 9/11 K MC NE WS | 200 | 1857440000 |
| IE-FISP-V4 | 2 | 9204370000 |

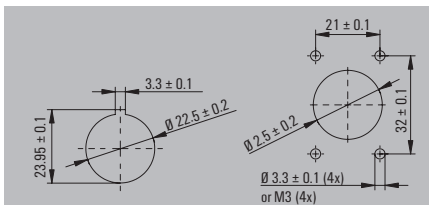
| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-BP-V04P | 10 | 1963900000 |
| ESG 9/11 K MC NE WS | 200 | 1857440000 |
| IE-FISP-V4 | 2 | 9204370000 |

Note

Plug inserts can also be ordered separately. Refer to Inserts.

Flange PushPull V4 - fibre-optic-SC

Standardised flange



Technical data

| |
|-----------------------------------|
| Protection degree |
| Housing main material |
| Plugging cycles |
| Ambient temperature (operational) |
| Connector standard |
| Approvals |
| Note |

| |
|---|
| IP67 |
| PA UL 94 V0 |
| 500 |
| -40 °C...70 °C |
| IEC 61076-3-106 Var. 4, IEC 61754-4, IEC 61754-24 |
| Note |

Ordering data - Sets

| |
|-------------|
| Singlemode |
| Multimode |
| Note |

| Type | Qty. | Order No. |
|-------------------------|------|------------|
| IE-BS-V04P-SCRJ2SC-SM-C | 10 | 1963420000 |
| IE-BS-V04P-SCRJ2SC-MM-C | 10 | 1964470000 |
| Note | | |

Ordering data - Empty housings

| |
|-----------------|
| Empty enclosure |
| Note |

| Type | Qty. | Order No. |
|-------------|------|------------|
| IE-BH-V04P | 10 | 1963520000 |
| Note | | |

Accessories

| | |
|---------------------|---------------------------------------|
| Dust protection cap | Flange-mounted housing protective cap |
| Marking tags | MultiCard, white |
| Fixing tool | |

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-BP-V04P | 10 | 1963900000 |
| ESG 9/11 K MC NE WS | 200 | 1857440000 |
| IE-FISP-V4 | 2 | 9204370000 |
| Note | | |

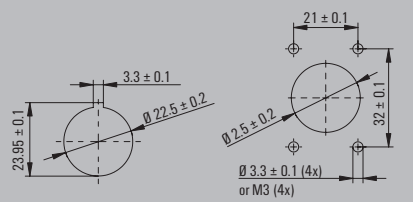
Note

Plug inserts can also be ordered separately. Refer to Inserts.



Flange PushPull V4 - fibre-optic-LC

Standardised flange



Technical data

| |
|-----------------------------------|
| Protection degree |
| Housing main material |
| Plugging cycles |
| Ambient temperature (operational) |
| Connector standard |
| Approvals |
| Note |

| |
|--------------------------------------|
| IP67 |
| PA UL 94 V0 |
| 500 |
| -40 °C...70 °C |
| IEC 61076-3-106 Var. 4, IEC 61754-20 |
| Note |

Ordering data - Sets

| |
|-------------|
| Singlemode |
| Multimode |
| Note |

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-BS-V04P-LCD-SM-C | 10 | 1963450000 |
| IE-BS-V04P-LCD-MM-C | 10 | 1964460000 |
| Note | | |

Ordering data - Empty housings

| |
|-----------------|
| Empty enclosure |
| Note |

| Type | Qty. | Order No. |
|-------------|------|------------|
| IE-BH-V04P | 10 | 1963520000 |
| Note | | |

Accessories

| | |
|---------------------|---------------------------------------|
| Dust protection cap | Flange-mounted housing protective cap |
| Marking tags | MultiCard, white |
| Fixing tool | |

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-BP-V04P | 10 | 1963900000 |
| ESG 9/11 K MC NE WS | 200 | 1857440000 |
| IE-FISP-V4 | 2 | 9204370000 |

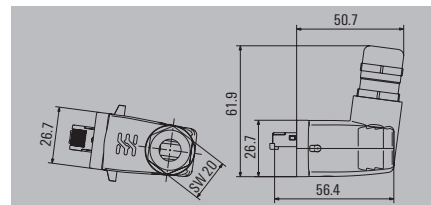
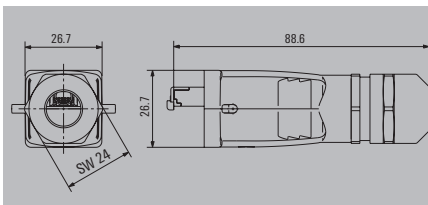
Note

Plug inserts can also be ordered separately. Refer to Inserts.

RockStar® heavy-duty connector plug
V5 - RJ45

Straight V5 - RJ45 plug

V5 - RJ45 plug, angled



Technical data

| |
|-----------------------------------|
| Category |
| Protection degree |
| Housing main material |
| Contact surface |
| Sheath diameter, min. / max. |
| Plugging cycles |
| Ambient temperature (operational) |
| Connector standard |
| Approvals |
| Note |

| |
|--|
| Cat.6A / Class EA (ISO/IEC 11801 2010) |
| IP67 |
| diecast aluminium |
| Gold over nickel |
| 5 mm / 12 mm |
| 750 |
| -40 °C...70 °C |
| IEC 61076-3-106 Var. 5, IEC 60603-7-51 |
| CULUS |

| |
|---|
| Cat.6A / Class EA (ISO/IEC 11801 2010) |
| IP67 |
| diecast aluminium |
| Gold over nickel |
| 5 mm / 10 mm |
| 750 |
| -40 °C...70 °C |
| IEC 61076-3-106 Var. 5, IEC 60603-7-51 |
| Other approvals for individual parts of the set available |

Ordering data - Sets

| |
|---|
| RJ45 without tools. AWG 26-22. TIA-A/B-PROFINET |
| RJ45 without tools. AWG 26-22 . TIA-B |
| RJ45 Crimp. AWG 27-24 |
| Note |

| Type | Qty. | Order No. |
|----------------------|------|------------|
| IE-PS-V05M-RJ45-FH | 10 | 1963200000 |
| IE-PS-V05M-RJ45-FH-B | 10 | 1271250000 |
| IE-PS-V05M-RJ45-TH | 10 | 1963110000 |

| Type | Qty. | Order No. |
|----------------------|------|------------|
| IE-PS-V05M-A-RJ45-FH | 10 | 1077300000 |

Ordering data - Empty housings

| |
|------|
| Note |
|------|

| Type | Qty. | Order No. |
|------------|------|------------|
| IE-PH-V05M | 10 | 1962540000 |

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

Accessories

| |
|-----------------------------|
| Dust protection cap |
| Plug housing protective cap |
| Spare insert holder |

| Type | Qty. | Order No. |
|--------------------|------|------------|
| IE-PP-V05M | 1 | 1968920000 |
| IE-PH-AD-V05M-RJ45 | 1 | 1993540000 |

| Type | Qty. | Order No. |
|------------|------|------------|
| IE-PP-V05M | 1 | 1968920000 |

Note

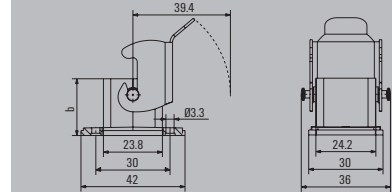
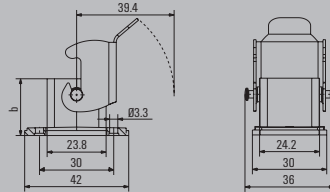
Plug inserts can also be ordered separately. Refer to Inserts.

Plug inserts can also be ordered separately. Refer to Inserts.

RockStar® heavy-duty connector flange
V5 - RJ45

Module

Coupling



Technical data

Protection degree
Housing main material
Contact surface
Plugging cycles
Ambient temperature (operational)
Connector standard
Connection cross-section, flexible, min. / max.
Connection diameter, flexible, min. / max.
Connection cross-section, solid, min. / max.
Connection diameter, solid, min. / max.
Approvals

IP67
diecast aluminium
Gold over nickel
750
-40 °C...70 °C
IEC 61076-3-106 Var. 5, IEC 60603-7-51
AWG 26 / AWG 22
0.48 mm / 0.76 mm
AWG 24 / AWG 22
0.4 mm / 0.64 mm
CULUS

IP67
diecast aluminium
Gold over nickel
750
-40 °C...70 °C
IEC 61076-3-106 Var. 5, IEC 60603-7-51

CULUS

Note

Ordering data - Sets

TIA-A Cat. 6_A
PROFINET Cat. 5
Coupling

| Type | Qty. | Order No. |
|----------------------|------|------------|
| IE-BS-V05M-RJ45-FJ-A | 10 | 1963460000 |
| IE-BS-V05M-RJ45-FJ-P | 10 | 1963700000 |

| Type | Qty. | Order No. |
|-------------------|------|------------|
| IE-BS-V05M-RJ45-C | 10 | 1963510000 |

Note

Ordering data - Empty housings

| Type | Qty. | Order No. |
|------------|------|------------|
| IE-BH-V05M | 10 | 1963530000 |

| Type | Qty. | Order No. |
|------------|------|------------|
| IE-BH-V05M | 10 | 1963530000 |

Note

Accessories

| Dust protection cap |
|---------------------------------------|
| Flange-mounted housing protective cap |

| Type | Qty. | Order No. |
|------------|------|------------|
| IE-BP-V05M | 10 | 1968930000 |

| Type | Qty. | Order No. |
|------------|------|------------|
| IE-BP-V05M | 10 | 1968930000 |

Note

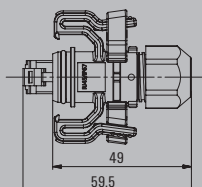
Plug inserts can also be ordered separately. Refer to Inserts.

Plug inserts can also be ordered separately. Refer to Inserts.

Plug SnapIn V6 - RJ45

- Cat. 6
- IP 67

Without kink prevention



Technical data

| | |
|-----------------------------------|---|
| Category | Cat.6A / Class EA (ISO/IEC 11801 2010) |
| Protection degree | IP67 |
| Shielding | 360° shield contact |
| Housing main material | PA 66, UL 94: V-0 |
| Contact surface | Gold over nickel |
| Colour | Light Grey |
| Plugging cycles | 750 |
| Wiring | EIA/TIA T568 A |
| Type of mounting | Floor-mounted, for exposed connections, Wall mounting |
| Ambient temperature (operational) | -40 °C...70 °C |
| Connector standard | IEC 61076-3-106 Var. 6, IEC 60603-7-5 |
| Approvals | DET/NOR/VER |

| | | |
|-------------|--|--|
| Note | | |
|-------------|--|--|

Ordering data

Note

| Type | Qty. | Order No. |
|-----------|------|------------|
| IE-P-IP67 | 1 | 8808380000 |

Accessories

Plug-in connector

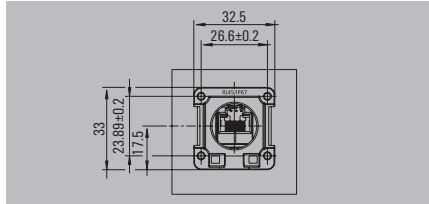
| Type | Qty. | Order No. |
|---------------|------|------------|
| IE-PM-RJ45-TH | 100 | 1963580000 |

Note

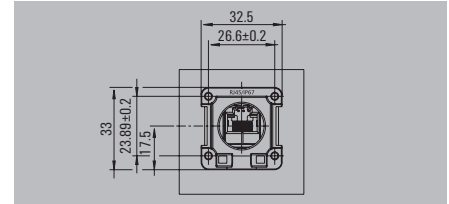
Flange SnapIn V6 - RJ45

- Cat. 6
- IP 67

Module



Coupling



Technical data

| |
|-----------------------------------|
| Category |
| Protection degree |
| Shielding |
| Housing main material |
| Contact surface |
| Colour |
| Plugging cycles |
| Type of mounting |
| Wiring |
| Ambient temperature (operational) |
| Connector standard |
| Approvals |

| |
|--|
| Cat.6A / Class EA (ISO/IEC 11801 2010) |
| IP67 |
| 360° shield contact |
| PA 66, UL 94: V-0 |
| Gold over nickel |
| Light Grey |
| 750 |
| Cabinet, Distribution box |
| Colour-coded pin assignment according to EIA/TIA T568 A., EIA/TIA T568 B |
| -40 °C...70 °C |
| IEC 61076-3-106 Var. 6, IEC 60603-7-5 |
| DETNORVER |

| |
|---------------------------------------|
| Cat.6 (ISO/IEC 11801) |
| IP67 |
| 360° shield contact |
| PA 66, UL 94: V-0 |
| Gold over nickel |
| Light Grey |
| 750 |
| Cabinet, Distribution box |
| -40 °C...70 °C |
| IEC 61076-3-106 Var. 6, IEC 60603-7-5 |
| DETNORVER |

Note

Note

Note

Ordering data

| |
|-------------------|
| straight |
| angled, upwards |
| angled, downwards |
| Note |

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-XM-RJ45/IDC-IP67 | 1 | 8808440000 |

| Type | Qty. | Order No. |
|-------------------------|------|------------|
| IE-XM-RJ45/RJ45-IP67 | 1 | 8808450000 |
| IE-XM-6U-RJ45/RJ45-IP67 | 1 | 8829440000 |
| IE-XM-6D-RJ45/RJ45-IP67 | 1 | 8829450000 |

Accessories

| Flange insert |
|-------------------------|
| RJ45 module A, straight |
| RJ45 coupling, straight |

| Type | Qty. | Order No. |
|----------------|------|------------|
| IE-XR-RJ45/IDC | 1 | 8808330000 |

| Type | Qty. | Order No. |
|-------------------|------|------------|
| IE-XR-RJ45/RJ45-2 | 24 | 8952950000 |

Note

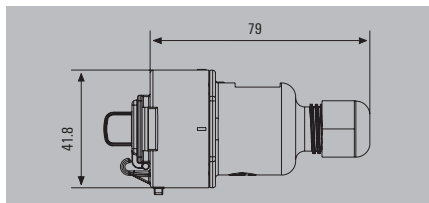
Note

Note

Cable coupling SnapIn V6 - RJ45

- Cat. 6
- IP 67

Cable coupling



Technical data

Category
 Protection degree
 Shielding
 Housing main material
 Contact surface
 Colour
 Plugging cycles
 Type of mounting
 Wiring

 Ambient temperature (operational)
 Connector standard
 Sheath diameter, min. / max.
 Approvals

Cat.6A / Class EA (ISO/IEC 11801 2010)
 IP67
 360° shield contact
 PA 66, UL 94: V-0
 Gold over nickel
 Light Grey
 750
 Floor-mounted, for exposed connections, Wall mounting
 Colour-coded pin assignment according to
 EIA/TIA T568 A., EIA/TIA T568 B
 -40 °C...70 °C
 IEC 61076-3-106 Var. 6, IEC 60603-7-5
 6 mm / 9.5 mm
 DETNORVER

Note

Ordering data

Cable coupling

Note

| Type | Qty. | Order No. |
|-----------|------|------------|
| IE-C-IP67 | 1 | 8813090000 |

Accessories

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

Note



M8 Single Pair Ethernet (SPE)

Single Pair Ethernet, M8 empty housing

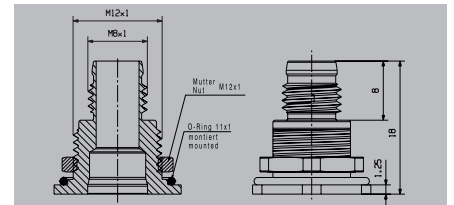
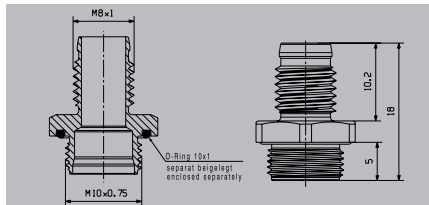
M8 front wall mounting

M8 rear wall mounting



SPElink®

SPElink®



Technical data

Category
Ambient temperature (operational)
Protection degree
Housing main material
Seal material
Configuration
Type of mounting
Connection thread
Connector standard
Tightening torque fixing nut

-40...85 °C
IP67
Brass, nickel-plated
FKM
Frontpanel mounting
Screw mounting
M10 x 0.75
IEC 61076-2-104, IEC 63171-5
2.5 Nm

40...85 °C
IP67
Brass, nickel-plated
FKM
Backpanel mounting
Screw mounting
M10 x 0.75
IEC 61076-2-104, IEC 63171-5
2.5 Nm

Note

Ordering data

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-BHD-SPE-M8-OT-FP | 10 | 2726020000 |

Inserts and fixing nut must be ordered separately.

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-BHD-SPE-M8-OT-BP | 20 | 2726030000 |

Inserts to be ordered separately, fixing nut included.

Note

Accessories

Fastening nut

| Type | Qty. | Order No. |
|---------------------------|------|------------|
| IE-BHD-SPE-FP-CN-M10X0.75 | 10 | 2739640000 |

| Type | Qty. | Order No. |
|---------------------------|------|------------|
| IE-BHD-SPE-FP-CN-M10X0.75 | 10 | 2739640000 |

Note

PCB insert

M8 insert 180° pin contacts

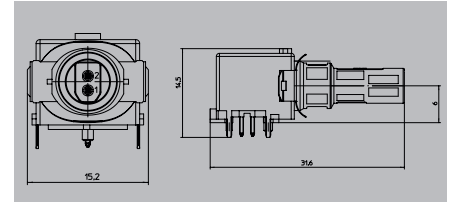
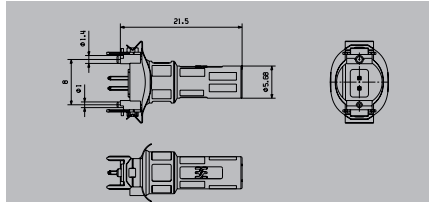
M8 insert 90° pin contacts



SPElink®



SPElink®



Technical data

| | |
|--|--|
| Category | |
| Ambient temperature (operational) | |
| Protection degree | |
| Pollution severity | |
| Connection thread | |
| Number of poles | |
| Type of connection | |
| Outgoing elbow | |
| Contact material | |
| Contact surface | |
| Contact carrier material | |
| Operational voltage range | |
| Insulation strength | |
| Dielectric strength, contact / contact | |
| Dielectric strength, contact / shield | |
| Connector standard | |
| UL 94 flammability rating | |
| Note | |

| | |
|---------------------------------|--|
| T1-B | |
| -40...85 °C | |
| IP67 with housing | |
| 2 | |
| M8 | |
| 2 | |
| Solder connection, Male contact | |
| 180° | |
| Cu-alloy | |
| Ni/Au | |
| LCP | |
| ≤ 50 V AC, ≤ 60 V DC | |
| ≥ 500 MΩ | |
| 1000 V DC | |
| 2250 V DC | |
| IEC 63171-5 | |
| V-0 | |
| Note | |

| | |
|---------------------------------|--|
| T1-B | |
| -40...85 °C | |
| IP67 with housing | |
| 2 | |
| M8 | |
| 2 | |
| Solder connection, Male contact | |
| 90° | |
| Cu-alloy | |
| Ni/Au | |
| LCP | |
| ≤ 50 V AC, ≤ 60 V DC | |
| ≥ 500 MΩ | |
| 1000 V DC | |
| 2250 V DC | |
| IEC 63171-5 | |
| V-0 | |
| Note | |

Ordering data

| | |
|------|-----|
| | THR |
| | SMD |
| Note | |

| Type | Qty. | Order No. |
|----------------------|------|------------|
| IE-PCB-SPM-P-180-THR | 100 | 2735920000 |
| IE-PCB-SPM-P-180-SMD | 100 | 2795110000 |
| Note | | |

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-PCB-SPM-P-90-THR | 100 | 2795100000 |
| Note | | |

Accessories

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |
| Note | | |

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |
| Note | | |

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |
| Note | | |

| |
|------|
| Note |
|------|

| |
|------|
| Note |
|------|

| |
|------|
| Note |
|------|

Connection components Single Pair Ethernet (SPE)

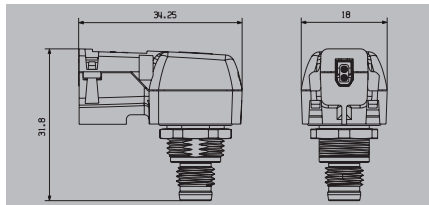
Adapter IP20 / IP65 (M8)

- Only one pair of wires for data and power

Adapter / Wall bushing



SPElink®



Technical data

| | |
|--|---|
| Category | T1-B |
| Ambient temperature (operational) | -40...85 °C |
| Protection degree | IP65 (in plugged condition) |
| Connection 1 / 2 / Connection | SPE socket acc. to IEC 63171-2 / M8 socket male contact |
| Number of poles | 2 |
| Outlet direction | Angled |
| Contact material | Cu |
| Contact surface | Ni/Au |
| Contact carrier material | |
| Operational voltage range | ≤ 50 V AC, ≤ 60 V DC |
| Rated current | 3.5 A at 0°C |
| Insulation strength | ≥ 500 MΩ |
| Dielectric strength, contact / contact | ≥ 1000 V DC |
| Dielectric strength, contact / shield | 2250 V DC |
| Connector standard | IEC 63171-2, IEC 63171-5 |
| UL 94 flammability rating | V-0 |

Note

Ordering data

| Type | Qty. | Order No. |
|----------------------|------|------------|
| IE-AD-SP0-P-SPM-P-90 | 10 | 2814400000 |

Note

Accessories

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

Note

M

**M12 plug,
Tension-clamp connection,
D-coded**



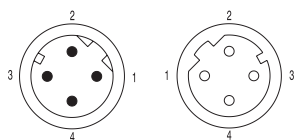
SAISM / SAIBM

Straight



SAISW / SAIBW

Straight



Male

Male

Ordering data

| | |
|--------|--------------|
| Male | 4-pole, PG 9 |
| Female | 4-pole, PG 9 |
| Note | |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| SAISM-4/8S-M12 4P D-ZF | 1 | 1892120001 |
| SAIBM-4/8S-M12 4P D-ZF | 1 | 1892130001 |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| SAISW-4/8S-M12 4P D-ZF | 1 | 1803930001 |
| SAIBW-4/8S-M12 4P D-ZF | 1 | 1139330000 |

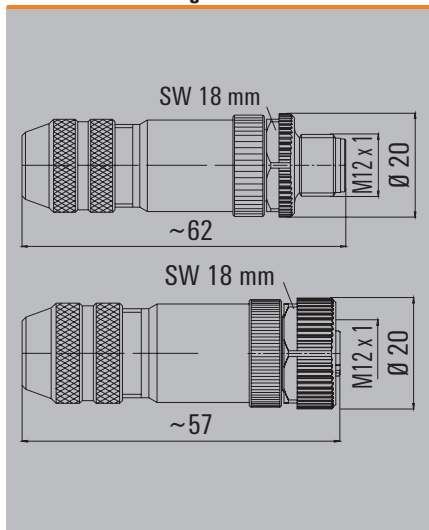
Technical data

| | |
|-------------------------------------|--|
| Type of connection | Tension-clamp connection |
| Housing main material | CuZn |
| Ambient temperature (operational) | -40 °C... |
| Connector standard | IEC 61076-2-101 |
| Connection thread | M12 |
| Cable diameter | 6...8 mm (PG9) |
| Conductor cross-section min. / max. | 0.25 mm ² / 0.5 mm ² |
| Rated current | 4 A |
| Rated voltage | 250 V |
| Temperature range of housing | -40 ... +85 °C |
| Protection degree | IP67 |
| Contact surface | Gold-plated |
| Note | |

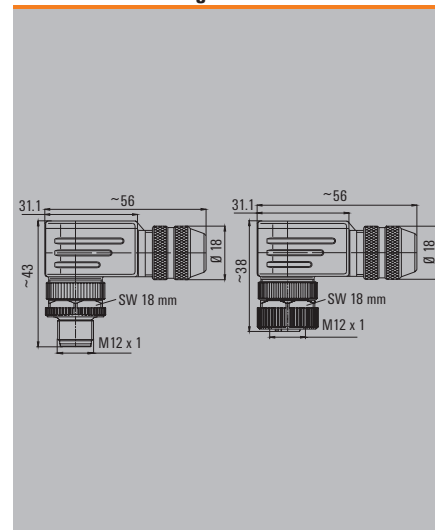
| | |
|-------------------------------------|--|
| Type of connection | Tension-clamp connection |
| Housing main material | CuZn |
| Ambient temperature (operational) | -40 °C... |
| Connector standard | IEC 61076-2-101 |
| Connection thread | M12 |
| Cable diameter | 6...8 mm (PG9) |
| Conductor cross-section min. / max. | 0.25 mm ² / 0.5 mm ² |
| Rated current | 4 A |
| Rated voltage | 250 V |
| Temperature range of housing | -40 ... +85 °C |
| Protection degree | IP67 |
| Contact surface | Gold-plated |
| Note | |

| | |
|-------------------------------------|--|
| Type of connection | Tension-clamp connection |
| Housing main material | CuZn |
| Ambient temperature (operational) | -40 °C... |
| Connector standard | IEC 61076-2-101 |
| Connection thread | M12 |
| Cable diameter | 6...8 mm (PG9) |
| Conductor cross-section min. / max. | 0.25 mm ² / 0.5 mm ² |
| Rated current | 4 A |
| Rated voltage | 250 V |
| Temperature range of housing | -40 ... +85 °C |
| Protection degree | IP67 |
| Contact surface | Gold-plated |
| Note | |

Dimensioned drawing



Dimensioned drawing



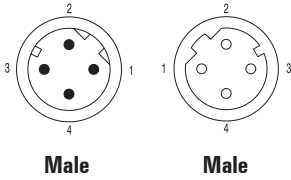
M12 D-coded

**M12 plug,
Screw connection,
D-coded**



SAISM / SAIBM

Straight



Ordering data

| | |
|---------------|--------------|
| Male | 4-pole. PG 9 |
| Female | 4-pole. PG 9 |
| Note | |

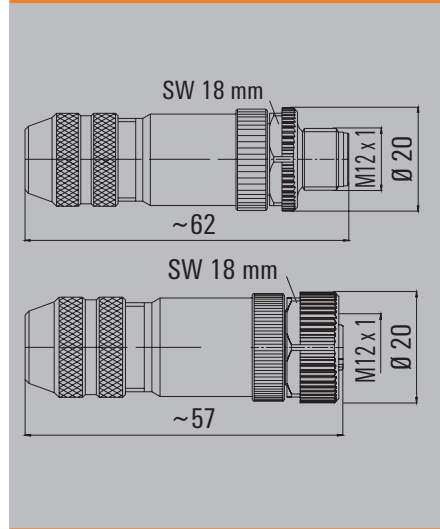
| Type | Qty. | Order No. |
|-------------------------|------|------------|
| SAISM-4/8S-M12-4P D-COD | 1 | 1892120000 |
| SAIBM-4/8S-M12-4P D-COD | 1 | 1892130000 |

Technical data

| | |
|-------------------------------------|---|
| Type of connection | Screw connection |
| Housing main material | CuZn |
| Ambient temperature (operational) | -40 °C...85 °C |
| Connector standard | IEC 61076-2-101 |
| Connection thread | M12 |
| Cable diameter | 6...8 mm (PG9) |
| Conductor cross-section min. / max. | 0.14 mm ² / 0.75 mm ² |
| Rated current | 4 A |
| Rated voltage | 250 V |
| Temperature range of housing | -40 ... +85 °C |
| Protection degree | IP67 |
| Contact surface | Gold-plated |
| Note | |

| | |
|-------------------------------------|---|
| Type of connection | Screw connection |
| Housing main material | CuZn |
| Ambient temperature (operational) | -40 °C...85 °C |
| Connector standard | IEC 61076-2-101 |
| Connection thread | M12 |
| Cable diameter | 6...8 mm (PG9) |
| Conductor cross-section min. / max. | 0.14 mm ² / 0.75 mm ² |
| Rated current | 4 A |
| Rated voltage | 250 V |
| Temperature range of housing | -40 ... +85 °C |
| Protection degree | IP67 |
| Contact surface | Gold-plated |
| Note | |

Dimensioned drawing



PUSH IN M12
with shield connection
D coded

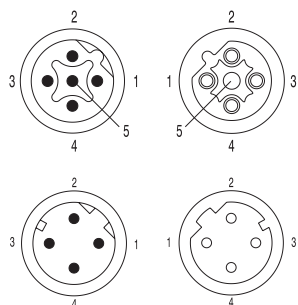


SAISP / SAIBP

Straight

SAISWP / SAIBWP

Angled



Male

Female



Ordering data

| | |
|---------------|-----------------|
| Male | D-coded, 4-pole |
| Female | D-coded, 4-pole |
| Note | |

| Type | Qty. | Order No. |
|---------------------------|------|------------|
| SAISP-M-4D-4/8-M12 | 1 | 2681680000 |
| SAIBP-M-4D-4/8-M12 | 1 | 2681700000 |
| Other versions on request | | |

| Type | Qty. | Order No. |
|---------------------------|------|------------|
| SAISWP-M-4D-4/8-M12 | 1 | 2681690000 |
| SAIBWP-M-4D-4/8-M12 | 1 | 2681710000 |
| Other versions on request | | |

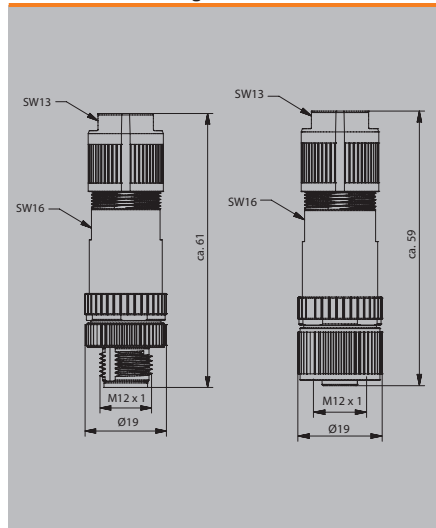
Technical data

| | |
|-------------------------------------|-----------------------------|
| Type of connection | PUSH IN |
| Housing main material | PA 66 |
| Connection thread | M12 |
| Cable diameter | 4...8 mm |
| Conductor cross-section min. / max. | 0.14...0.75 mm ² |
| Rated current | 4 A |
| Rated voltage | 60 V |
| Temperature range of housing | -40 ... +85 °C |
| Protection degree | IP67 |
| Contact surface | Ni/Au |
| Note | |

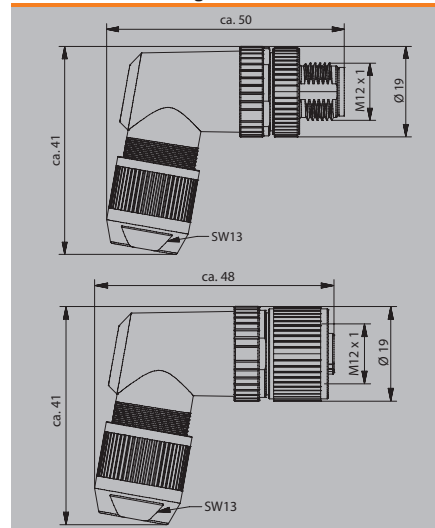
| | |
|-------------------------------------|-----------------------------|
| Type of connection | PUSH IN |
| Housing main material | PA 66 |
| Connection thread | M12 |
| Cable diameter | 4...8 mm |
| Conductor cross-section min. / max. | 0.14...0.75 mm ² |
| Rated current | 4 A |
| Rated voltage | 60 V |
| Temperature range of housing | -40 ... +85 °C |
| Protection degree | IP67 |
| Contact surface | Ni/Au |
| Note | |

| | |
|-------------------------------------|-----------------------------|
| Type of connection | PUSH IN |
| Housing main material | PA 66 |
| Connection thread | M12 |
| Cable diameter | 4...8 mm |
| Conductor cross-section min. / max. | 0.14...0.75 mm ² |
| Rated current | 4 A |
| Rated voltage | 60 V |
| Temperature range of housing | -40 ... +85 °C |
| Protection degree | IP67 |
| Contact surface | Ni/Au |
| Note | |

Dimensioned drawing



Dimensioned drawing



M12 D-coded

Crimp connection M12 with shield connection D-coded



SAISC / SAIBC

Straight



SAISC / SAIBC

Panel feed-through



Ordering data

| | |
|---------------|--------|
| Male | 4-pole |
| Female | 4-pole |
| Note | |

| Type | Qty. | Order No. |
|-------------------------------------|------|-------------------|
| SAISC-D-18/28-4/9CG | 1 | 2664810000 |
| SAIBC-D-18/28-4/9CG | 1 | 2672420000 |
| Contacts must be ordered separately | | |

| Type | Qty. | Order No. |
|-------------------------------------|------|-------------------|
| SAISC-WDF-D-18/28-4/9CG | 1 | 2664790000 |
| SAIBC-WDF-D-18/28-4/9CG | 1 | 2664780000 |
| Contacts must be ordered separately | | |

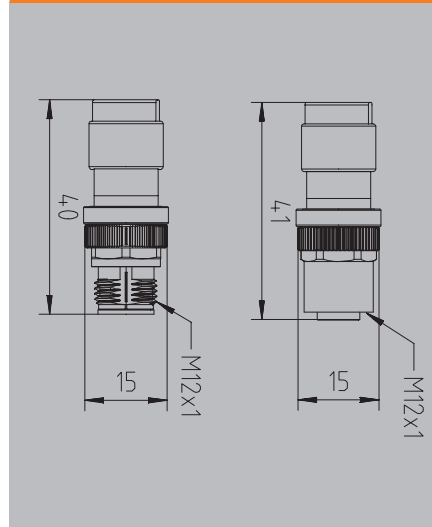
Technical data

| | |
|-------------------------------------|---|
| Type of connection | Crimp connection |
| Housing main material | CuZn |
| Connection thread | M12 |
| Cable diameter | 4...9 mm |
| Conductor cross-section min. / max. | 0.08...0.75 mm ² |
| Rated current | 4 A |
| Rated voltage | 50 V |
| Temperature range of housing | -40 ... +85 °C |
| Protection degree | IP67 |
| Contact surface | Gold-plated |
| Note | Crimping tool: SA-TMCSK - 1381690000; Locator: SA-TMC-PD - 1381700000 |

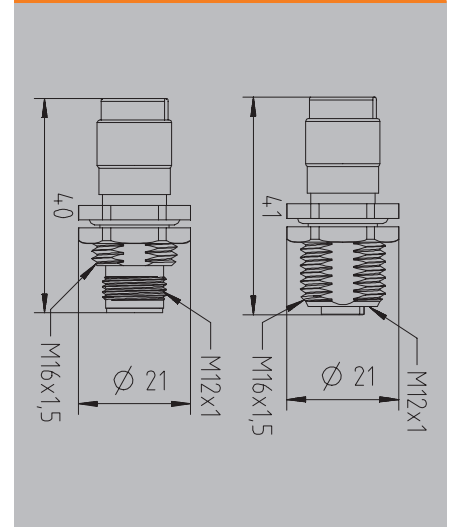
| | |
|-------------------------------------|---|
| Type of connection | Crimp connection |
| Housing main material | CuZn |
| Connection thread | M12 |
| Cable diameter | 4...9 mm |
| Conductor cross-section min. / max. | 0.08...0.75 mm ² |
| Rated current | 4 A |
| Rated voltage | 50 V |
| Temperature range of housing | -40 ... +85 °C |
| Protection degree | IP67 |
| Contact surface | Gold-plated |
| Note | Crimping tool: SA-TMCSK - 1381690000; Locator: SA-TMC-PD - 1381700000 |

| | |
|-------------------------------------|---|
| Type of connection | Crimp connection |
| Housing main material | CuZn |
| Connection thread | M12 |
| Cable diameter | 4...9 mm |
| Conductor cross-section min. / max. | 0.08...0.75 mm ² |
| Rated current | 4 A |
| Rated voltage | 50 V |
| Temperature range of housing | -40 ... +85 °C |
| Protection degree | IP67 |
| Contact surface | Gold-plated |
| Note | Crimping tool: SA-TMCSK - 1381690000; Locator: SA-TMC-PD - 1381700000 |

Dimensioned drawing



Dimensioned drawing



Crimp connection M12 with shield connection D-coded



SAISC / SAIBC

Angled



Ordering data

| | |
|---------------|--------|
| Male | 4-pole |
| Female | 4-pole |
| Note | |

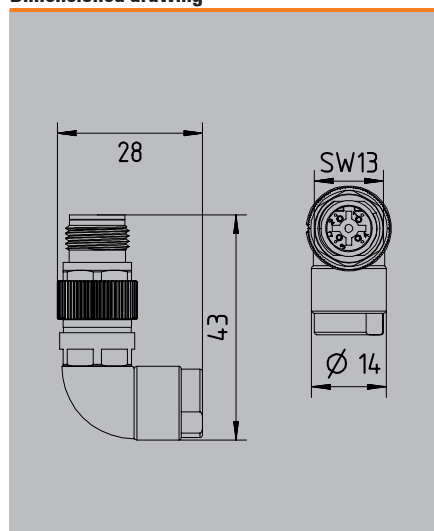
| Type | Qty. | Order No. |
|-------------------------------------|------|------------|
| SAISWC-D-18/28-4/9CG | 1 | 2702690000 |
| SAIBWC-D-18/28-4/9CG | 1 | 2702700000 |
| Contacts must be ordered separately | | |

Technical data

| | |
|-------------------------------------|---|
| Type of connection | Crimp connection |
| Housing main material | CuZn |
| Connection thread | M12 |
| Cable diameter | 4...9 mm |
| Conductor cross-section min. / max. | 0.08...0.75 mm ² |
| Rated current | 4 A |
| Rated voltage | 50 V |
| Temperature range of housing | -40 ... +85 °C |
| Protection degree | IP67 |
| Contact surface | Gold-plated |
| Note | Crimping tool: SA-TMCSK - 1381690000; Locator: SA-TMC-PD - 1381700000 |

| | |
|-------------------------------------|---|
| Type of connection | Crimp connection |
| Housing main material | CuZn |
| Connection thread | M12 |
| Cable diameter | 4...9 mm |
| Conductor cross-section min. / max. | 0.08...0.75 mm ² |
| Rated current | 4 A |
| Rated voltage | 50 V |
| Temperature range of housing | -40 ... +85 °C |
| Protection degree | IP67 |
| Contact surface | Gold-plated |
| Note | Crimping tool: SA-TMCSK - 1381690000; Locator: SA-TMC-PD - 1381700000 |

Dimensioned drawing



Crimp contact M12



SAI - KSC / KBC

Straight



Ordering data

| Male | |
|--------|-----------|
| | AWG 18-20 |
| | AWG 20-22 |
| | AWG 22-24 |
| | AWG 26-28 |
| Female | |
| | AWG 18-20 |
| | AWG 20-22 |
| | AWG 22-24 |
| | AWG 26-28 |
| Note | |

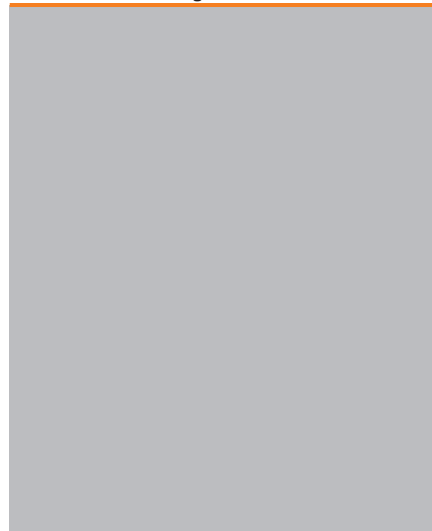
| Type | Qty. | Order No. |
|------------------|------|------------|
| SAHM12-KSC-18/20 | 100 | 2664840000 |
| SAHM12-KSC-20/22 | 100 | 2664850000 |
| SAHM12-KSC-22/24 | 100 | 2673710000 |
| SAHM12-KSC-26/28 | 100 | 2673720000 |
| | | |
| SAHM12-KBC-18/20 | 100 | 2664860000 |
| SAHM12-KBC-20/22 | 100 | 2664870000 |
| SAHM12-KBC-22/24 | 100 | 2673730000 |
| SAHM12-KBC-26/28 | 100 | 2673740000 |
| Note | | |

Technical data

| Type of connection | Crimp connection |
|-------------------------------------|------------------|
| Contact material | Copper alloy |
| Connection thread | |
| Cable diameter | |
| Conductor cross-section min. / max. | |
| Rated current | 7 A |
| Rated voltage | |
| Temperature range of housing | |
| Protection degree | |
| Contact surface | Gold-plated |
| Note | |

| Type of connection | Crimp connection |
|-------------------------------------|------------------|
| Contact material | Copper alloy |
| Connection thread | |
| Cable diameter | |
| Conductor cross-section min. / max. | |
| Rated current | 7 A |
| Rated voltage | |
| Temperature range of housing | |
| Protection degree | |
| Contact surface | Gold-plated |
| Note | |

Dimensioned drawing



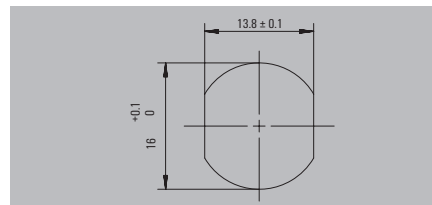
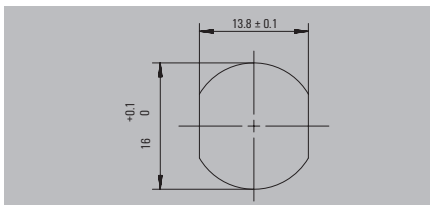
Adapter, wall bushing / coupling M12

- Cat. 5
- IP67
- D-coding

Adapter M12-RJ45, female



Adapter M12-RJ45, male



Technical data

| |
|-----------------------------------|
| Category |
| Protection degree |
| Housing main material |
| Shielding |
| Ambient temperature (operational) |
| Connector standard |
| Approvals |
| Note |

| |
|--------------------------------|
| Cat.5 (ISO/IEC 11801) |
| IP67 |
| PA 66 |
| Yes |
| -25 °C...80 °C |
| IEC 60603-7-5, IEC 61076-2-101 |
| CULUS |

| |
|--------------------------------|
| Cat.5 (ISO/IEC 11801) |
| IP67 |
| PA 66 |
| Yes |
| -25 °C...80 °C |
| IEC 60603-7-5, IEC 61076-2-101 |
| CULUS |

Ordering data

| | |
|-----------------|----------|
| Adaptor | straight |
| | angled |
| Coupling | |
| Note | |

| Type | Qty. | Order No. |
|---------------|------|------------|
| IE-M12-ADAP S | 1 | 8901620000 |
| IE-M12-ADAP A | 1 | 8901630000 |

| Type | Qty. | Order No. |
|-----------------------|------|------------|
| IE-AD-M12DRJ45-MF-180 | 1 | 1514970000 |
| IE-AD-M12DRJ45-MF-90 | 1 | 1514940000 |

Accessories

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

| |
|-------------|
| Note |
|-------------|

| |
|-------------|
| Note |
|-------------|

| |
|-------------|
| Note |
|-------------|

M12 D-coded

Adapter, wall bushing / coupling M12

- Cat. 5
- IP67
- D-coding

Coupling M12-M12



Technical data

Category
 Protection degree
 Housing main material
 Shielding
 Ambient temperature (operational)
 Connector standard
 Approvals

Cat.5 (ISO/IEC 11801)
 IP67
 Fiberglass-reinforced polyamide, Brass, nickel-plated
 360° shield contact
 -40 °C...105 °C
 IEC 61076-2-101

Note

Ordering data

| Adaptor | |
|---------|----------|
| | straight |
| | angled |

Coupling

Note

| Type | Qty. | Order No. |
|-------------|------|------------|
| IE-M12-COUP | 1 | 8901640000 |

Accessories

| Type | Qty. | Order No. |
|------|------|-----------|
|------|------|-----------|

Note



M12 PCB connection element

- Cat. 5
- For installation into the end device
- D-coded

Standard assembly



Additional fastening mechanism



Technical data

| |
|-----------------------------------|
| Category |
| Protection degree |
| Configuration |
| Housing main material |
| Shielding |
| Ambient temperature (operational) |
| Connector standard |
| Approvals |
| Note |

| |
|--------------------------------|
| Cat.5 (ISO/IEC 11801) |
| IP65 in acc. with DIN EN 60529 |
| Reflow compatible |
| CuZn, Polyamide, nickel-plated |
| 360° shield contact |
| -25...85 °C |
| IEC 61076-2-101 |
| Note |

| |
|--------------------------------|
| Cat.5 (ISO/IEC 11801) |
| IP65 in acc. with DIN EN 60529 |
| Reflow compatible |
| CuZn, Polyamide, nickel-plated |
| 360° shield contact |
| -25...85 °C |
| IEC 61076-2-101 |
| Note |

Ordering data

| Connection element | |
|--------------------|--|
| straight | |
| angled | |
| Note | |

| Type | Qty. | Order No. |
|--------------|------|------------|
| IE-M12-PCBCE | 60 | 8902810000 |
| Note | | |

| Type | Qty. | Order No. |
|----------------------|------|------------|
| IE-M12-PCBCE-PANEL | 10 | 8902820000 |
| IE-M12-PCBCE-PANEL-A | 10 | 1393470000 |
| Note | | |

Accessories

| Type | Qty. | Order No. |
|-------------|------|-----------|
| Note | | |

| Type | Qty. | Order No. |
|-------------|------|-----------|
| Note | | |

| Type | Qty. | Order No. |
|-------------|------|-----------|
| Note | | |

| |
|-------------|
| Note |
|-------------|

| |
|-------------|
| Note |
|-------------|

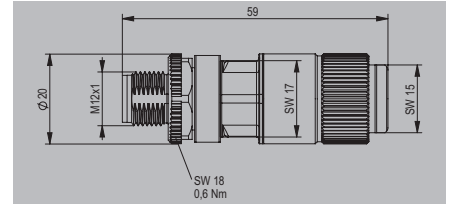
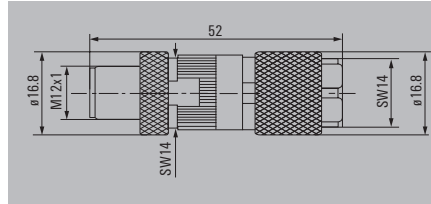
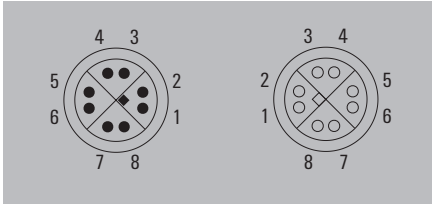
| |
|-------------|
| Note |
|-------------|

M12 X-Type

M12 plug M12 X-type Cat. 6_A

Plug, AWG 26-22

Plug, AWG 27-22



Technical data

| | |
|---|--|
| Category | Cat.6A / Class EA (ISO/IEC 11801 2010) |
| Protection degree | IP67 plugged |
| Connection 1 / 2 | M12 / IDC |
| Housing main material | Zinc diecast |
| Connection thread | M12 |
| Contact material / Contact surface | Brass / Gold-plated |
| Ambient temperature (operational) | -40 °C...85 °C |
| Connector standard | IEC 61076-2-109 |
| Current-carrying capacity at 50 °C | |
| Rated voltage | 48 V |
| Insulation strength | 100 MΩ |
| Plugging cycles | ≥ 100 |
| Configuration | |
| Wall thickness, min. / max. | |
| Shielding | 360° all-round enclosure |
| Connection diameter, flexible, min. / max. | 0.48 mm / 0.76 mm |
| Connection cross-section, flexible, min. / max. | AWG 26/7 / AWG 22/7 |
| Connection diameter, solid, min. / max. | 0.41 mm / 0.64 mm |
| Connection cross-section, solid, min. / max. | AWG 26/1 / AWG 22/1 |
| Insulation cross-section, max. | 1.6 mm |
| Sheath diameter min. / max. | 5 mm / 9.7 mm |
| Approvals | CCLINK; CULUS |

Note

Ordering data

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-PS-M12X-P-FH | 10 | 1324020000 |

Note

Accessories

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

Note

| | |
|---|--|
| Category | Cat.6A / Class EA (ISO/IEC 11801 2010) |
| Protection degree | IP67 plugged |
| Connection 1 / 2 | M12 / IDC |
| Housing main material | Zinc diecast |
| Connection thread | M12 |
| Contact material / Contact surface | Brass, tinned / Gold-plated |
| Ambient temperature (operational) | -40 °C...85 °C |
| Connector standard | IEC 61076-2-109 |
| Current-carrying capacity at 50 °C | |
| Rated voltage | 50 V |
| Insulation strength | 100 MΩ |
| Plugging cycles | ≥ 100 |
| Configuration | |
| Wall thickness, min. / max. | |
| Shielding | 360° all-round enclosure |
| Connection diameter, flexible, min. / max. | 0.46 mm / 0.76 mm |
| Connection cross-section, flexible, min. / max. | AWG 27/7 / AWG 22/7 |
| Connection diameter, solid, min. / max. | 0.51 mm / 0.64 mm |
| Connection cross-section, solid, min. / max. | AWG 24/1 / AWG 22/1 |
| Insulation cross-section, max. | 1.6 mm |
| Sheath diameter min. / max. | 5.5 mm / 9 mm |
| Approvals | CCLINK; CULUS |

Note

| Type | Qty. | Order No. |
|-------------------------|------|------------|
| IE-PS-M12X-P-AWG22/27FH | 1 | 2007500000 |

Note

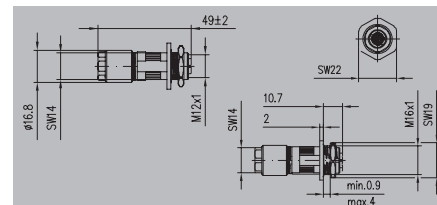
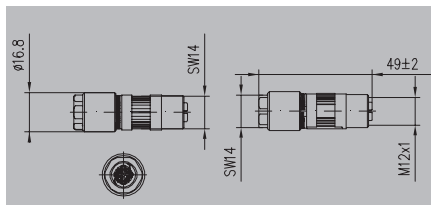
| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

Note

M12 plug / flange
M12 X-type Cat. 6A

Plug, female

Flange



Technical data

| | |
|---|--|
| Category | Cat.6A / Class EA (ISO/IEC 11801 2010) |
| Protection degree | IP67 plugged |
| Connection 1 / 2 | M12 / IDC |
| Housing main material | Zinc diecast |
| Connection thread | M12 |
| Contact material / Contact surface | Brass / Gold-plated |
| Ambient temperature (operational) | -40 °C...85 °C |
| Connector standard | IEC 61076-2-109 |
| Current-carrying capacity at 50 °C | |
| Rated voltage | 48 V |
| Insulation strength | 100 MΩ |
| Plugging cycles | ≥ 100 |
| Configuration | |
| Wall thickness, min. / max. | |
| Shielding | 360° all-round enclosure |
| Connection diameter, flexible, min. / max. | 0.48 mm / 0.76 mm |
| Connection cross-section, flexible, min. / max. | AWG 26 / AWG 22 |
| Connection diameter, solid, min. / max. | 0.4 mm / 0.64 mm |
| Connection cross-section, solid, min. / max. | AWG 24 / AWG 22 |
| Insulation cross-section, max. | 1.6 mm |
| Sheath diameter min. / max. | 5 mm / 9.7 mm |
| Approvals | CCLINK; CULUS |
| Note | |

| | |
|---|--|
| Category | Cat.6A / Class EA (ISO/IEC 11801 2010) |
| Protection degree | IP67 plugged |
| Connection 1 / 2 | M12 / IDC |
| Housing main material | Zinc diecast |
| Connection thread | M12 |
| Contact material / Contact surface | Brass / Gold-plated |
| Ambient temperature (operational) | -40 °C...85 °C |
| Connector standard | IEC 61076-2-109 |
| Current-carrying capacity at 50 °C | |
| Rated voltage | 48 V |
| Insulation strength | 100 MΩ |
| Plugging cycles | ≥ 100 |
| Configuration | |
| Wall thickness, min. / max. | 0.9 mm / 4 mm |
| Shielding | 360° all-round enclosure |
| Connection diameter, flexible, min. / max. | 0.48 mm / 0.76 mm |
| Connection cross-section, flexible, min. / max. | AWG 26 / AWG 22 |
| Connection diameter, solid, min. / max. | 0.4 mm / 0.64 mm |
| Connection cross-section, solid, min. / max. | AWG 24 / AWG 22 |
| Insulation cross-section, max. | 1.6 mm |
| Sheath diameter min. / max. | 5 mm / 9.7 mm |
| Approvals | CCLINK; CULUS |
| Note | |

| | |
|---|--|
| Category | Cat.6A / Class EA (ISO/IEC 11801 2010) |
| Protection degree | IP67 plugged |
| Connection 1 / 2 | M12 / IDC |
| Housing main material | Zinc diecast |
| Connection thread | M12 |
| Contact material / Contact surface | CuZn / Gold-plated |
| Ambient temperature (operational) | -40 °C...85 °C |
| Connector standard | IEC 61076-2-109 |
| Current-carrying capacity at 50 °C | |
| Rated voltage | 48 V |
| Insulation strength | 100 MΩ |
| Plugging cycles | ≥ 100 |
| Configuration | |
| Wall thickness, min. / max. | 0.9 mm / 4 mm |
| Shielding | 360° all-round enclosure |
| Connection diameter, flexible, min. / max. | 0.48 mm / 0.76 mm |
| Connection cross-section, flexible, min. / max. | AWG 26 / AWG 22 |
| Connection diameter, solid, min. / max. | 0.4 mm / 0.64 mm |
| Connection cross-section, solid, min. / max. | AWG 24 / AWG 22 |
| Insulation cross-section, max. | 1.6 mm |
| Sheath diameter min. / max. | 5 mm / 9.7 mm |
| Approvals | CCLINK; CULUS |
| Note | |

Ordering data

| | |
|-------------|-------|
| | Plugs |
| Note | |

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-PS-M12X-S-FH | 1 | 1516330000 |

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-BS-M12X-S-FH | 1 | 1516340000 |

Accessories

| Tools |
|---|
| Tool set |
| Tool set with torque function |
| Cable gland tool, M 12 |
| Cable gland tool with torque function, M 12 |

| Type | Qty. | Order No. |
|------------------|------|------------|
| SCREWTY SET | 1 | 1910000000 |
| SCREWTY SET-DM | 1 | 1920000000 |
| SCREWTY-M12 F | 1 | 1900020000 |
| SCREWTY-M12 F-DM | 1 | 1900021000 |

| Type | Qty. | Order No. |
|------------------|------|------------|
| SCREWTY SET | 1 | 1910000000 |
| SCREWTY SET-DM | 1 | 1920000000 |
| SCREWTY-M12 F | 1 | 1900020000 |
| SCREWTY-M12 F-DM | 1 | 1900021000 |

| |
|-------------|
| Note |
|-------------|

| |
|-------------|
| Note |
|-------------|

| |
|-------------|
| Note |
|-------------|

M12 X-Type

Crimp connection M12 with shield connection X-Type



IE-PS-M12X-180

straight



IE-PS-M12X-90

angled



Ordering data

| | |
|--------|--------|
| Male | 8-pole |
| Female | 8-pole |
| Note | |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-PS-M12X-180-P-TH-CG | 1 | 2664820000 |
| IE-PS-M12X-180-S-TH-CG | 1 | 2672440000 |

| Type | Qty. | Order No. |
|-----------------------|------|------------|
| IE-PS-M12X-90-P-TH-CG | 1 | 2702710000 |
| IE-PS-M12X-90-S-TH-CG | 1 | 2702720000 |

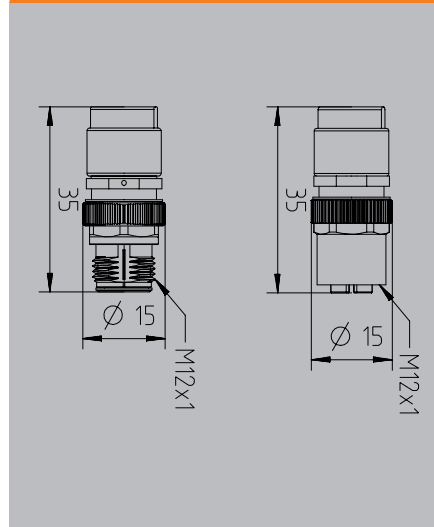
Technical data

| | |
|-------------------------------------|--|
| Type of connection | |
| Housing main material | |
| Connection thread | |
| Cable diameter | |
| Conductor cross-section min. / max. | |
| Rated current | |
| Rated voltage | |
| Temperature range of housing | |
| Protection degree | |
| Contact surface | |
| Note | |

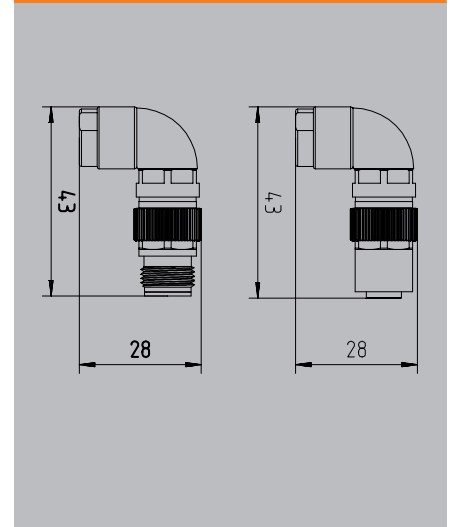
| |
|-----------------------------|
| Cu alloy Ni plated |
| M12 |
| 0.14...0.34 mm ² |
| 0.5 A |
| 50 V |
| IP67 plugged |
| Gold-plated |

| |
|-----------------------------|
| Crimp connection |
| Cu alloy Ni plated |
| M12 |
| 4...9 mm |
| 0.14...0.34 mm ² |
| 2 A |
| 30 V |
| -40 ... +85 °C |
| IP67 plugged |
| Gold-plated |

Dimensioned drawing



Dimensioned drawing



Crimp connection M12 with shield connection X-Type

IE-BS-M12X-180

Panel feed-through, straight



IE-BS-M12X-90

Panel feed-through, angled



Ordering data

| | |
|---------------|-----------------------------|
| Male | 8-pole, Back panel mounting |
| Female | 8-pole, Back panel mounting |
| Note | |

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-BS-M12X-180-P-TH | 1 | 2747880000 |
| IE-BS-M12X-180-S-TH | 1 | 2747900000 |

| Type | Qty. | Order No. |
|--------------------|------|------------|
| IE-BS-M12X-90-P-TH | 1 | 2747910000 |
| IE-BS-M12X-90-S-TH | 1 | 2747920000 |

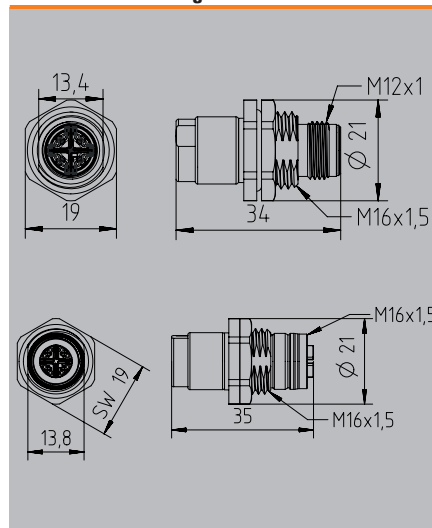
Technical data

| | |
|-------------------------------------|-----------------------------|
| Type of connection | Crimp connection |
| Housing main material | CuZn |
| Connection thread | M12 |
| Cable diameter | 4...9 mm |
| Conductor cross-section min. / max. | 0.14...0.34 mm ² |
| Rated current | 4 A |
| Rated voltage | 50 V |
| Temperature range of housing | -40 ... +85 °C |
| Protection degree | IP67 |
| Contact surface | Gold-plated |
| Note | |

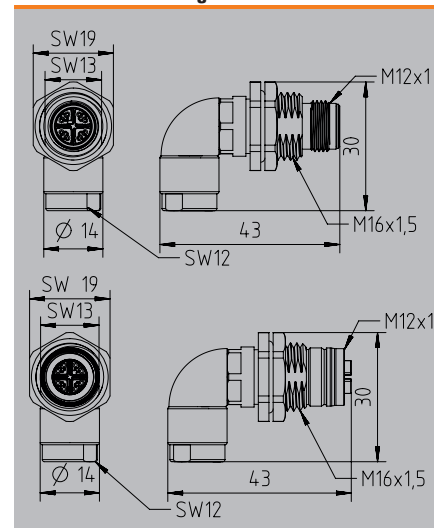
| | |
|-------------------------------------|-----------------------------|
| Type of connection | Crimp connection |
| Housing main material | CuZn |
| Connection thread | M12 |
| Cable diameter | 4...9 mm |
| Conductor cross-section min. / max. | 0.14...0.34 mm ² |
| Rated current | 4 A |
| Rated voltage | 50 V |
| Temperature range of housing | -40 ... +85 °C |
| Protection degree | IP67 |
| Contact surface | Gold-plated |
| Note | |

| | |
|-------------------------------------|-----------------------------|
| Type of connection | Crimp connection |
| Housing main material | CuZn |
| Connection thread | M12 |
| Cable diameter | 4...9 mm |
| Conductor cross-section min. / max. | 0.14...0.34 mm ² |
| Rated current | 4 A |
| Rated voltage | 50 V |
| Temperature range of housing | -40 ... +85 °C |
| Protection degree | IP67 |
| Contact surface | Gold-plated |
| Note | |

Dimensioned drawing



Dimensioned drawing



M12 X-Type

Crimp contact M12 X-Type



Contacts



Ordering data

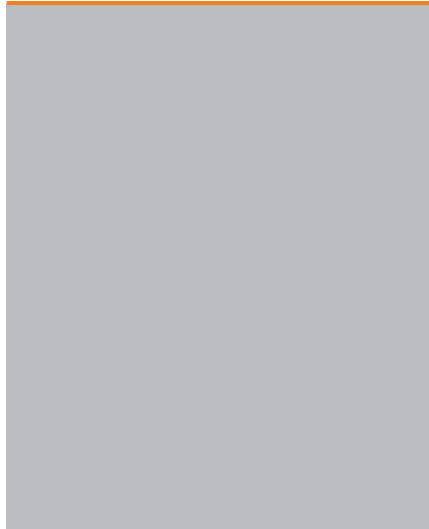
| | |
|--------|-----------|
| Male | AWG 22-26 |
| Female | AWG 22-26 |
| Note | |

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-PIC-M12X-P-22/26 | 100 | 2664880000 |
| IE-PIC-M12X-S-22/26 | 100 | 2673440000 |

Technical data

| | |
|-------------------------------------|-----------------------------|
| Type of connection | |
| Housing main material | |
| Connection thread | |
| Cable diameter | |
| Conductor cross-section min. / max. | 0.34...0.14 mm ² |
| Rated current | 1 A |
| Rated voltage | |
| Temperature range of housing | |
| Protection degree | |
| Contact material | Copper alloy, Gold-plated |
| Note | |

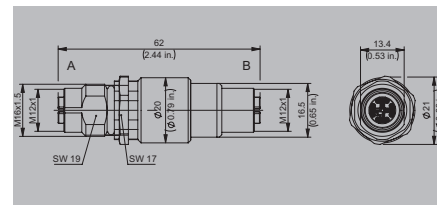
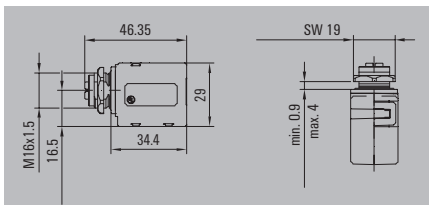
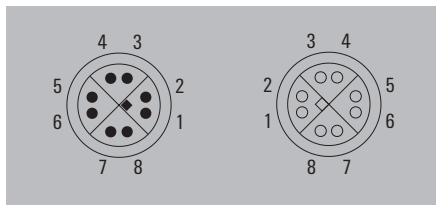
Dimensioned drawing



Adapter / Coupling M12
M12 X-type Cat. 6_A

Adapter M12 X-Type-RJ45

Coupling M12 X-Type



Technical data

| | |
|---|--|
| Category | Cat.6A / Class EA (ISO/IEC 11801 2010) |
| Protection degree | IP67 |
| Connection 1 / 2 | RJ45 / M12 |
| Housing main material | Zinc diecast |
| Connection thread | M12 |
| Contact material / Contact surface | Copper alloy / Gold-plated |
| Ambient temperature (operational) | -25 °C...85 °C |
| Connector standard | IEC 61076-2-109, IEC 60603-7-51 |
| Current-carrying capacity | @ |
| Rated voltage | 50 V |
| Insulation strength | 100 MΩ |
| Plugging cycles | ≥ 100 (M12), 750 (RJ45) |
| Configuration | M12 socket to RJ45 socket |
| Wall thickness, min. / max. | 0.9 mm / 3 mm |
| Shielding | 360° shield contact |
| Connection diameter, flexible, min. / max. | |
| Connection cross-section, flexible, min. / max. | |
| Connection diameter, solid, min. / max. | |
| Connection cross-section, solid, min. / max. | |
| Insulation cross-section, max. | |
| Sheath diameter min. / max. | |
| Approvals | CULUS |
| Note | |

| | |
|---|--|
| Category | Cat.6A / Class EA (ISO/IEC 11801 2010) |
| Protection degree | IP67 plugged |
| Connection 1 / 2 | M12 / M12 |
| Housing main material | Brass, Copper-tin-zinc alloy |
| Connection thread | M12 / M12 |
| Contact material / Contact surface | CuSn / Au (Gold), ≥ 100 MΩ |
| Ambient temperature (operational) | -40 °C...85 °C |
| Connector standard | IEC 61076-2-109 |
| Current-carrying capacity | 0.5A @ 40°C |
| Rated voltage | |
| Insulation strength | |
| Plugging cycles | ≥ 100 |
| Configuration | M12 socket to M12 socket |
| Wall thickness, min. / max. | / 4.5 mm |
| Shielding | 360° shield contact |
| Connection diameter, flexible, min. / max. | |
| Connection cross-section, flexible, min. / max. | |
| Connection diameter, solid, min. / max. | |
| Connection cross-section, solid, min. / max. | |
| Insulation cross-section, max. | |
| Sheath diameter min. / max. | |
| Approvals | |
| Note | |

| | |
|---|--|
| Category | Cat.6A / Class EA (ISO/IEC 11801 2010) |
| Protection degree | IP67 |
| Connection 1 / 2 | M12 / M12 |
| Housing main material | Brass, Copper-tin-zinc alloy |
| Connection thread | M12 / M12 |
| Contact material / Contact surface | CuSn / Au (Gold), ≥ 100 MΩ |
| Ambient temperature (operational) | -40 °C...85 °C |
| Connector standard | IEC 61076-2-109 |
| Current-carrying capacity | 0.5A @ 40°C |
| Rated voltage | |
| Insulation strength | |
| Plugging cycles | ≥ 100 |
| Configuration | M12 socket to M12 socket |
| Wall thickness, min. / max. | / 4.5 mm |
| Shielding | 360° shield contact |
| Connection diameter, flexible, min. / max. | |
| Connection cross-section, flexible, min. / max. | |
| Connection diameter, solid, min. / max. | |
| Connection cross-section, solid, min. / max. | |
| Insulation cross-section, max. | |
| Sheath diameter min. / max. | |
| Approvals | |
| Note | |

Ordering data

| | |
|--------------|--|
| Adapter 90° | |
| Adapter 180° | |
| Coupling | |
| Note | |

| Type | Qty. | Order No. |
|--------------------|------|------------|
| IE-AD-M12XRJ45-90 | 1 | 1400610000 |
| IE-AD-M12XRJ45-180 | 1 | 1400620000 |
| Note | | |

| Type | Qty. | Order No. |
|----------------|------|------------|
| IE-BS-M12X-S-C | 1 | 2731010000 |
| Note | | |

Accessories

| Type | Qty. | Order No. |
|-------------|------|-----------|
| Note | | |

| Type | Qty. | Order No. |
|-------------|------|-----------|
| Note | | |

| Type | Qty. | Order No. |
|-------------|------|-----------|
| Note | | |

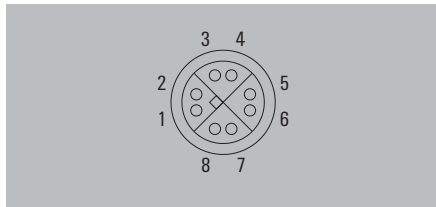
| |
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| Note |
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| Note |
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| Note |
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M12 X-Type

PCB socket M12 X-type Cat. 6A



Technical data

| | |
|------------------------------------|--|
| Category | Cat.6A / Class EA (ISO/IEC 11801 2010) |
| Protection degree | IP67, when screwed in |
| Connection 1 / 2 | M12 / Solder connection |
| Housing main material | CuZn |
| Connection thread | M12 |
| Contact material / Contact surface | Cu-alloy / Gold over nickel |
| Ambient temperature (operational) | -40 °C...85 °C |
| Connector standard | IEC 61076-2-109 |
| Current-carrying capacity | 0.5A @ 40°C |
| Rated voltage | 48 V |
| Insulation strength | 100 MΩ |
| Plugging cycles | ≥ 100 |
| Configuration | Reflow compatible |
| Wall thickness, min. / max. | 0.9 mm / 2.5 mm |
| Shielding | 360° all-round enclosure |
| Approvals | CULUS |
| Note | |

Ordering data

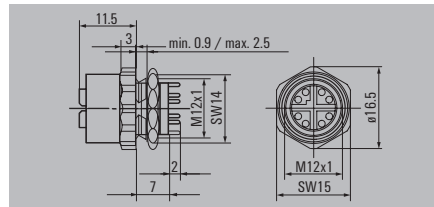
| Type | Qty. | Order No. |
|--------------------|------|-------------------|
| IE-PCB-M12X-S-180 | 10 | 1324010000 |
| IE-PCB2-M12X-S-180 | 10 | 1393080000 |

Accessories

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

Note

PCB socket



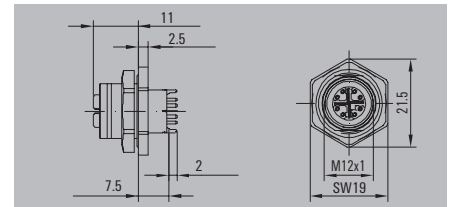
| | |
|------------------------------------|--|
| Category | Cat.6A / Class EA (ISO/IEC 11801 2010) |
| Protection degree | IP67, when screwed in |
| Connection 1 / 2 | M12 / Solder connection |
| Housing main material | CuZn |
| Connection thread | M12 |
| Contact material / Contact surface | Cu-alloy / Gold over nickel |
| Ambient temperature (operational) | -40 °C...85 °C |
| Connector standard | IEC 61076-2-109 |
| Current-carrying capacity | 0.5A @ 40°C |
| Rated voltage | 48 V |
| Insulation strength | 100 MΩ |
| Plugging cycles | ≥ 100 |
| Configuration | Reflow compatible |
| Wall thickness, min. / max. | 0.9 mm / 2.5 mm |
| Shielding | 360° all-round enclosure |
| Approvals | CULUS |
| Note | |

| Type | Qty. | Order No. |
|--------------------|------|-------------------|
| IE-PCB-M12X-S-180 | 10 | 1324010000 |
| IE-PCB2-M12X-S-180 | 10 | 1393080000 |

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

Note

PCB socket, back panel mounting



| | |
|------------------------------------|--|
| Category | Cat.6A / Class EA (ISO/IEC 11801 2010) |
| Protection degree | IP67, when screwed in |
| Connection 1 / 2 | M12 / Solder connection |
| Housing main material | CuZn |
| Connection thread | M12 |
| Contact material / Contact surface | Cu-alloy / Gold over nickel |
| Ambient temperature (operational) | -40 °C...85 °C |
| Connector standard | IEC 61076-2-109 |
| Current-carrying capacity | 0.5A @ 40°C |
| Rated voltage | 48 V |
| Insulation strength | 100 MΩ |
| Plugging cycles | ≥ 100 |
| Configuration | Reflow compatible, Back panel mounting |
| Wall thickness, min. / max. | 0.9 mm / 2.5 mm |
| Shielding | 360° all-round enclosure |
| Approvals | CULUS |
| Note | |

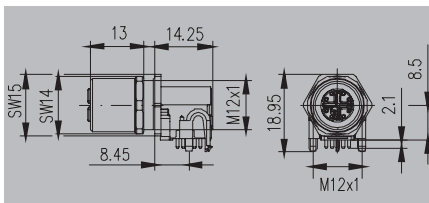
| Type | Qty. | Order No. |
|---------------------|------|-------------------|
| IE-PCBR-M12X-S-180 | 10 | 1427670000 |
| IE-PCBR2-M12X-S-180 | 10 | 1444650000 |

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

Note

PCB socket
M12 X-type Cat. 6A

PCB socket, angled



Technical data

| | |
|------------------------------------|--|
| Category | |
| Protection degree | |
| Connection 1 / 2 | |
| Housing main material | |
| Connection thread | |
| Contact material / Contact surface | |
| Ambient temperature (operational) | |
| Connector standard | |
| Current-carrying capacity | |
| Rated voltage | |
| Insulation strength | |
| Plugging cycles | |
| Configuration | |
| Wall thickness, min. / max. | |
| Shielding | |
| Approvals | |
| Note | |

| |
|--|
| Cat.6A / Class EA (ISO/IEC 11801 2010) |
| IP67, when screwed in |
| M12 / Solder connection |
| CuZn |
| M12 |
| Cu-alloy / Gold over nickel |
| -40 °C...85 °C |
| IEC 61076-2-109 |
| 0.5A @ 40°C |
| 48 V |
| 100 MΩ |
| ≥ 100 |
| Reflow compatible |
| 1 mm / 2.5 mm |
| 360° all-round enclosure |
| CULUS |

Ordering data

| | |
|-------------|----------------|
| | pre-assembled |
| | 2-part version |
| Note | |

| Type | Qty. | Order No. |
|------------------|------|------------|
| IE-PCB-M12X-S-90 | 10 | 2168220000 |

Accessories

| |
|--|
| |
|--|

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

| |
|-------------|
| Note |
|-------------|

| |
|--|
| |
|--|



Inserts

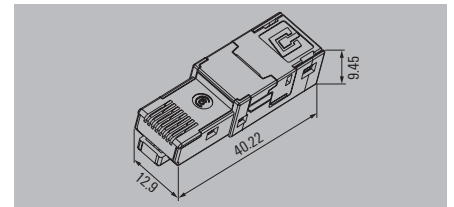
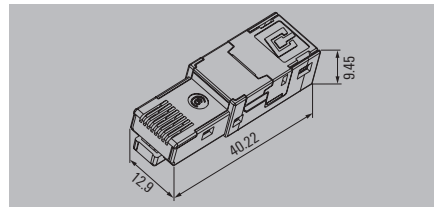
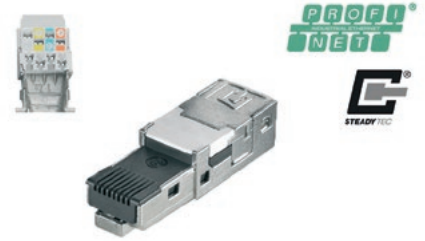
RJ45 plug inserts, tool free

- Cat. 6_A
- IP 20
- For housing variants 1, 4, 5 and 14

8-wire



4-wire



Technical data

| | |
|---|--|
| Category | |
| Protection degree | |
| Plugging cycles | |
| Shielding | |
| Housing main material | |
| Contact material | |
| Contact surface | |
| Connection cross-section, flexible, min. / max. | |
| Connection diameter, flexible, min. / max. | |
| Connection cross-section, solid, min. / max. | |
| Connection diameter, solid, min. / max. | |
| Wire connection cross-section, finely stranded | |
| Insulation diameter, min. / max. | |
| Humidity | |
| Ambient temperature (operational) | |
| Insulation strength | |
| Contact resistance | |
| Dielectric strength, contact / contact | |
| Dielectric strength, contact / shield | |
| Current-carrying capacity at 50 °C | |
| PoE / PoE+ | |
| Transmission rate | |
| Connector standard | |
| Approvals | |
| Note | |

| |
|---|
| Cat.6A / Class EA (ISO/IEC 11801 2010) |
| IP67 with housing |
| 750 |
| 360° all-round enclosure |
| Zinc diecast |
| Gold over Nickel, Au ≥ 0.8 µm |
| AWG 26 / AWG 22 |
| 0.48 mm / 0.76 mm |
| AWG 24 / AWG 22 |
| 0.4 mm / 0.64 mm |
| Approval of the cable by Weidmüller necessary |
| 0.85 mm...1.6 mm |
| -40 °C...70 °C |
| 500 MΩ |
| ≤ 20 mΩ |
| ≥ 1000 V AC/DC |
| ≥ 1500 V AC/DC |
| 1 A |
| conforming to IEEE 802.3at |
| 10 Gbit/s |
| IEC 60603-7-51 |
| CULUS; CURUS |
| Approvals available on request |

| |
|---|
| Cat.5 (ISO/IEC 11801) |
| IP67 with housing |
| 750 |
| 360° all-round enclosure |
| Zinc diecast |
| Gold over Nickel, Au ≥ 0.8 µm |
| AWG 26 / AWG 22 |
| 0.48 mm / 0.76 mm |
| AWG 24 / AWG 22 |
| 0.4 mm / 0.64 mm |
| Approval of the cable by Weidmüller necessary |
| 0.85 mm...1.6 mm |
| -40 °C...70 °C |
| 500 MΩ |
| ≤ 20 mΩ |
| ≥ 1000 V AC/DC |
| ≥ 1500 V AC/DC |
| 1 A |
| conforming to IEEE 802.3at |
| 100 MBit/s |
| IEC 60603-7-51 |
| CULUS; CURUS |

Ordering data

| | |
|------------------|------------------|
| tool-free | |
| | TIA-A/B/PROFINET |
| | TIA-A |
| | TIA-B |
| | PROFINET |
| Note | |

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-PI-RJ45-FH | 10 | 1962730000 |
| IE-PI-RJ45-FH-A | 10 | 1132010000 |
| IE-PI-RJ45-FH-B | 10 | 1132020000 |

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-PI-RJ45-FH-P | 10 | 1132030000 |

Accessories

| | |
|--------------|------------------------|
| Tools | |
| | Optional pressing tool |

| Type | Qty. | Order No. |
|----------|------|------------|
| PWZ RJ45 | 1 | 1118040000 |

| Type | Qty. | Order No. |
|----------|------|------------|
| PWZ RJ45 | 1 | 1118040000 |

| | |
|-------------|--|
| Note | |
|-------------|--|

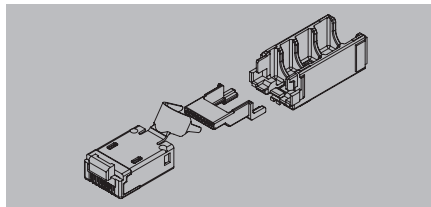
| | |
|-------------|--|
| Note | |
|-------------|--|

| | |
|-------------|--|
| Note | |
|-------------|--|

RJ45 plug inserts, crimp

- Cat. 6_A
- IP 20
- For housing variants 1, 4, 5 and 14

8-wire



Technical data

| | |
|---|--|
| Category | |
| Protection degree | |
| Plugging cycles | |
| Shielding | |
| Housing main material | |
| Contact material | |
| Contact surface | |
| Connection cross-section, flexible, min. / max. | |
| Connection diameter, flexible, min. / max. | |
| Connection cross-section, solid, min. / max. | |
| Connection diameter, solid, min. / max. | |
| Insulation diameter, min. / max. | |
| Humidity | |
| Ambient temperature (operational) | |
| Insulation strength | |
| Contact resistance | |
| Dielectric strength, contact / contact | |
| Dielectric strength, contact / shield | |
| Current-carrying capacity at 50 °C | |
| PoE / PoE+ | |
| Transmission rate | |
| Connector standard | |
| Approvals | |
| Note | |

| |
|---|
| Cat.6A / Class EA (ISO/IEC 11801 2010) |
| IP67 with housing |
| 750 |
| 360° all-round enclosure |
| Brass, PC UL 94 V0 |
| Phosphorus bronze |
| Gold over Nickel, Au ≥ 0.8 µm, Ni 2.54 µm |
| AWG 27/7 / AWG 24/7 |
| 0.46 mm / 0.61 mm |
| AWG 26/1 / AWG 24/1 |
| 0.4 mm / 0.51 mm |
| 0.85 mm...1.05 mm |
| 0...93 % rel. humidity |
| -40 °C...70 °C |
| 500 MΩ |
| ≤ 20 mΩ |
| ≥ 1000 V AC/DC |
| ≥ 1500 V AC/DC |
| 1 A |
| conforming to IEEE 802.3af |
| 10 Gbit/s |
| IEC 60603-7-51 |
| CURUS |

Ordering data

| |
|--------------|
| Crimp |
| Note |

| Type | Qty. | Order No. |
|---------------|------|------------|
| IE-PI-RJ45-TH | 10 | 1962720000 |

Accessories

| Tools | Pressing tool |
|-------|---------------|
|-------|---------------|

| Type | Qty. | Order No. |
|--------------|------|------------|
| TT 8 RS MP 8 | 1 | 9202800000 |

| |
|-------------|
| Note |
|-------------|

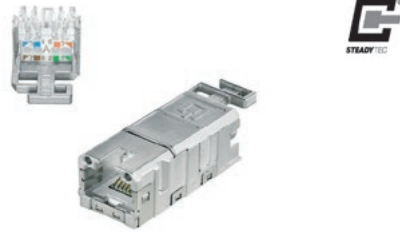
| |
|-------------|
| Note |
|-------------|

Inserts

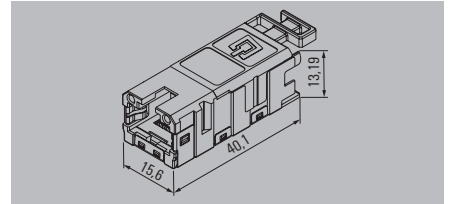
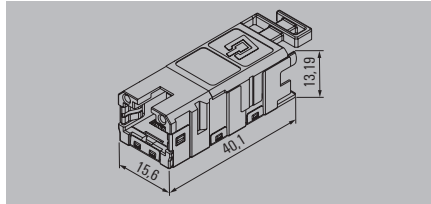
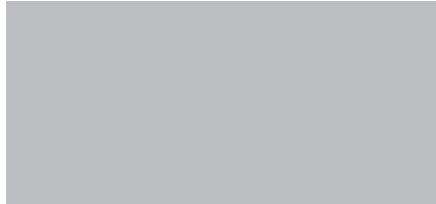
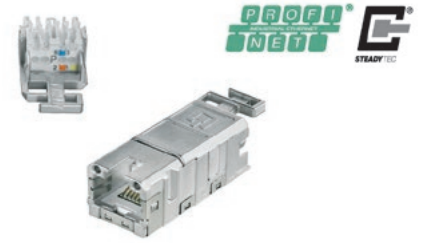
RJ45 flange inserts, module

- Completely in Cat. 6_A
- IP20
- For housing variants 1, 4, 5, 14 and for FrontCom®

8-wire



4-wire



Technical data

| |
|---|
| Category |
| Protection degree |
| Plugging cycles |
| Shielding |
| Housing main material |
| Contact surface |
| Connection cross-section, flexible, min. / max. |
| Connection cross-section, solid, min. / max. |
| Insulation diameter, min. / max. |
| Connector standard |
| Ambient temperature (operational) |
| PoE / PoE+ |
| Approvals |
| Note |

| |
|--|
| Cat.6A / Class EA (ISO/IEC 11801 2010) |
| IP67 with housing |
| 750 |
| 360° all-round enclosure, FS 2.8 Ground connection for equipotential bonding |
| Zinc diecast |
| Gold over Nickel, Au ≥ 0.8 µm |
| AWG 26 / AWG 22 |
| AWG 24 / AWG 22 |
| 0.85 mm...1.6 mm |
| IEC 60603-7-51 |
| -40 °C...70 °C |
| conforming to IEEE 802.3bt |
| CULUS |
| Connection of WM Cat. 7 AWG 27/7 LSZH possible |

| |
|--|
| Cat.5 (ISO/IEC 11801) |
| IP67 with housing |
| 750 |
| 360° all-round enclosure, FS 2.8 Ground connection for equipotential bonding |
| Zinc diecast |
| Gold over Nickel, Au ≥ 0.8 µm |
| AWG 26 / AWG 22 |
| AWG 24 / AWG 22 |
| 0.85 mm...1.6 mm |
| IEC 60603-7-51 |
| -40 °C...70 °C |
| conforming to IEEE 802.3bt |
| CULUS; DETNORVER |

Ordering data

| |
|----------------------------|
| tool-free |
| TIA-A. Cat. 6 _A |
| TIA-B. Cat. 6 _A |
| PROFINET Cat. 5 |
| Note |

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-BI-RJ45-FJ-A | 10 | 1962850000 |
| IE-BI-RJ45-FJ-B | 10 | 1963840000 |

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-BI-RJ45-FJ-P | 10 | 1963830000 |

Accessories

| |
|------------------------|
| Tools |
| Optional pressing tool |

| Type | Qty. | Order No. |
|----------|------|------------|
| PWZ RJ45 | 1 | 1118040000 |

| Type | Qty. | Order No. |
|----------|------|------------|
| PWZ RJ45 | 1 | 1118040000 |

| |
|-------------|
| Note |
|-------------|

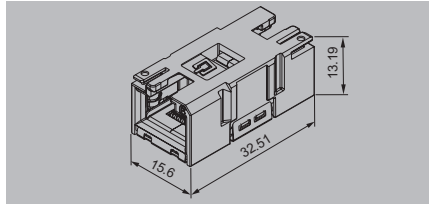
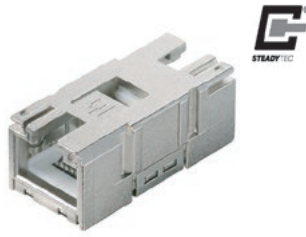
| |
|-------------|
| Note |
|-------------|

| |
|-------------|
| Note |
|-------------|

Flange inserts, coupling

- IP20
- For housing variants 1, 4, 5, 14 and for FrontCom®
- SPE coupling for FrontCom® only

RJ45, 8-wire, Cat. 6A

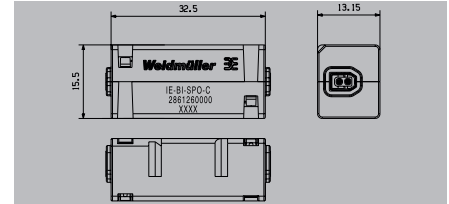


SPE, 2-wire

Pin contacts



SPElink®



Technical data

Category
 Protection degree
 Plugging cycles
 Shielding
 Housing main material
 Contact surface
 Connection cross-section, flexible, min. / max.
 Connection cross-section, solid, min. / max.
 Insulation diameter, min. / max.
 Connector standard
 Ambient temperature (operational)
 PoE / PoE+
 Approvals

Cat.6A / Class EA (ISO/IEC 11801 2010)
 IP67 with housing
 750
 360° all-round enclosure, FS 2.8 Ground connection for equipotential bonding
 Zinc diecast
 Gold over Nickel, Au ≥ 0.8 µm
 ...
 IEC 60603-7-51
 -40 °C...70 °C
 conforming to IEEE 802.3af
 CULUS; DETNORVER

T1-B
 IP67 with housing
 750
 PA 66
 Gold over nickel
 ...
 IEC 63171-2
 -40 °C...85 °C
 PoDL acc. to IEEE 802.3bu / cg

Note

Ordering data

| tool-free | |
|-------------|----------|
| | Coupling |
| Note | |

| Type | Qty. | Order No. |
|--------------|------|------------|
| IE-BI-RJ45-C | 10 | 1962840000 |
| Note | | |

| Type | Qty. | Order No. |
|-------------|------|------------|
| IE-BI-SPO-C | 10 | 2861260000 |
| Note | | |

Accessories

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

Note

Note

Note

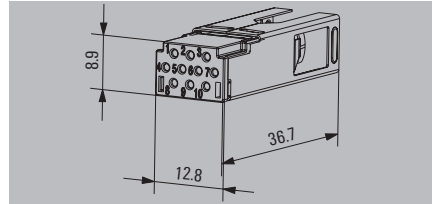
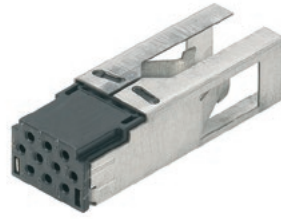
Inserts

Plug inserts Hybrid

- Cat. 5
- IP 20
- For housing variants 1 (metal) and 14

Crimp

Socket contacts



Technical data

| |
|---|
| Category |
| Protection degree |
| Plugging cycles |
| Shielding |
| Housing main material |
| Contact surface |
| Number of poles |
| Connection cross-section, flexible, min. / max. |
| Connection diameter, flexible, min. / max. |
| Insulation diameter, min. / max. |
| Ambient temperature (operational) |
| Volume resistance |
| Rated current |
| Rated voltage |
| Contact resistance |
| Approvals |

| |
|---|
| Cat.5 (ISO/IEC 11801) |
| IP67 with housing |
| 500 |
| 360° all-round enclosure |
| Nickel silver, PA 66 |
| Gold over nickel |
| 10 |
| AWG 27 / AWG 20 |
| 0.08 mm ² / 0.75 mm ² |
| 1...2.2 mm |
| -40 °C...70 °C |
| <10 mΩ |
| 3 A per contact |
| 24 V |
| ≤ 5 mΩ |
| CULUS |

Note

Ordering data

Note

Accessories

| Crimping contact (sockets) | |
|----------------------------|----------------------------|
| | 0.08...0.2 mm ² |
| | 0.2...0.5 mm ² |
| | 0.75 mm ² |
| Tools | |
| | Pressing tool |

| Type | Qty. | Order No. |
|---------------------------------------|------|------------|
| IE-PI-HYB-10P | 10 | 1068990000 |
| Contacts should be ordered separately | | |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-PI-C-HYB-S-0,2-300 | 300 | 1135150000 |
| IE-PI-C-HYB-S-0,5-300 | 300 | 1096180000 |
| IE-PI-C-HYB-S-0,75-300 | 300 | 1068950000 |
| HTF HYB | | |
| | 1 | 1119580000 |

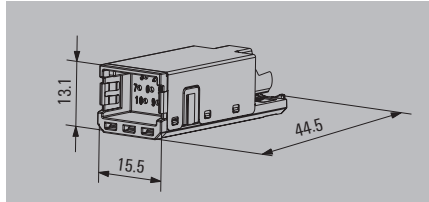
Note

Flange inserts Hybrid

- Cat. 5
- IP 20
- For housing variants 1 (metal) and 14

Module

Pin contacts



Technical data

| |
|---|
| Category |
| Protection degree |
| Plugging cycles |
| Shielding |
| Housing main material |
| Contact surface |
| Number of poles |
| Connection cross-section, flexible, min. / max. |
| Connection diameter, flexible, min. / max. |
| Insulation diameter, min. / max. |
| Rated current |
| Rated voltage |
| Contact resistance |
| Volume resistance |
| Ambient temperature (operational) |
| Approvals |

| |
|---|
| Cat.5 (ISO/IEC 11801) |
| IP67 with housing |
| 500 |
| 360° all-round enclosure |
| Zinc diecast, Nickel silver, PA 66 |
| Gold over nickel |
| 10 |
| AWG 27 / AWG 20 |
| 0.08 mm ² / 0.75 mm ² |
| 1...2.2 mm |
| 3 A per contact |
| 24 V |
| ≤ 10 mΩ |
| < 10 mΩ |
| -40 °C...70 °C |
| CULUS |

Note

Ordering data

| |
|-------------|
| Note |
|-------------|

| Type | Qty. | Order No. |
|---------------------------------------|------|------------|
| IE-BI-HYB-10P | 10 | 1069010000 |
| Contacts should be ordered separately | | |

Accessories

| Crimping contact (pins) | |
|-------------------------|----------------------------|
| | 0.08...0.2 mm ² |
| | 0.2...0.5 mm ² |
| | 0.75 mm ² |
| Tools | |
| | Pressing tool |

| Type | Qty. | Order No. |
|-----------------------|------|------------|
| IE-BIC-HYB-P-0,2-300 | 300 | 1135160000 |
| IE-BIC-HYB-P-0,5-300 | 300 | 1096150000 |
| IE-BIC-HYB-P-0,75-300 | 300 | 1068970000 |
| HTF HYB | 1 | 1119580000 |

Note

Inserts

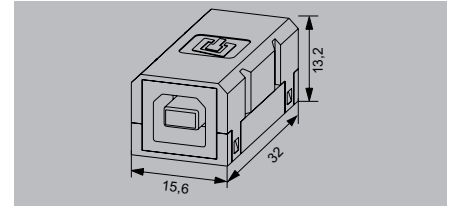
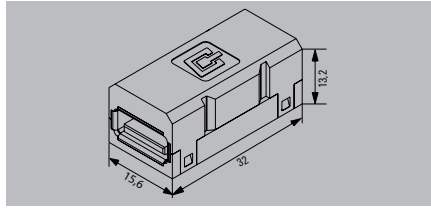
Flange inserts USB

- IP20
- For housing variants 1, 4, 5, 14 and for FrontCom®

Coupling USB A/A



Coupling USB A/B



Technical data

| |
|-----------------------------------|
| Protection degree |
| Shielding |
| Ambient temperature (operational) |
| Connection 1 / 2 |
| Connector standard |
| Approvals |
| Note |

| |
|--------------------------|
| IP67 with housing |
| 360° all-round enclosure |
| -40 °C...70 °C |
| USB A / USB A |
| IEC 61076-3-107 |
| CULUS; DETNORVER |
| Note |

| |
|--------------------------|
| IP67 with housing |
| 360° all-round enclosure |
| -40 °C...70 °C |
| USB A / USB B |
| IEC 61076-3-107 |
| CULUS; DETNORVER |
| Note |

Ordering data

| | |
|-------------|---------|
| | USB 2.0 |
| | USB 3.0 |
| Note | |

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-BI-USB-A | 10 | 1019570000 |
| IE-BI-USB-3.0-A | 10 | 1487920000 |

| Type | Qty. | Order No. |
|--------------|------|------------|
| IE-BI-USB-AB | 10 | 1131380000 |

Accessories

| USB cable 2.0 | |
|---------------|-------|
| | 0.5 m |
| | 1.0 m |
| | 1.5 m |
| | 1.8 m |
| | 3.0 m |
| USB cable 3.0 | |
| | 0.5 m |
| | 1.8 m |
| | 3.0 m |
| | 5.0 m |

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-USB-A-A-0.5M | 1 | 1993550005 |
| IE-USB-A-A-1.0M | 1 | 1993550010 |
| IE-USB-A-A-1.5M | 1 | 1993550015 |
| IE-USB-A-A-1.8M | 1 | 1993550018 |
| IE-USB-A-A-3.0M | 1 | 1993550030 |
| IE-USB-3.0-A-A-0.5M | 1 | 2581730005 |
| IE-USB-3.0-A-A-1.8M | 1 | 2581730018 |
| IE-USB-3.0-A-A-3M | 1 | 2581730030 |
| IE-USB-3.0-A-A-5M | 1 | 2581730050 |

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

Note

Note

Note

Plug inserts SC

- IP 20
- For variant 1, 4 and 14 housings

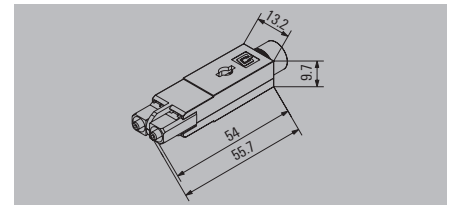
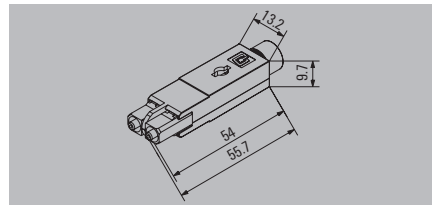
Plug insert SC, POF

only for V14



Connector insert SC, POF, reconnectable

only for V14



Technical data

Protection degree
Housing main material
Plugging cycles
Ambient temperature (operational)
Connector standard
Approvals

Note

IP67 with housing
Zinc diecast, PA
1000
-40 °C...70 °C
IEC 61754-24
UL

IP67 with housing
PA 66
≥ 500
-40 °C...70 °C
IEC 61754-24

Ordering data

POF

Note

| Type | Qty. | Order No. |
|----------------|------|------------|
| IE-PI-SCRJ-POF | 10 | 1067410000 |

| Type | Qty. | Order No. |
|-------------------|------|------------|
| IE-PI-SCRJ-POF-QA | 10 | 2564960000 |

Accessories

Tools

- Tool set POF, crimp
- Mounting tool, POF
- MULTI-STRIPAX IE-POF
- Cevlar scissors

Replacement ferrule

| Type | Qty. | Order No. |
|----------------------|------|------------|
| TOOL SET IE-POF | 1 | 1208930000 |
| HTX-IE-POF | 1 | 1208870000 |
| MULTI-STRIPAX IE-POF | 1 | 1208880000 |
| SCISSORS KEVLAR | 1 | 1208910000 |
| IE-SCRJ-IP67-POF-100 | 100 | 1278430000 |

| Type | Qty. | Order No. |
|----------------------|------|------------|
| HTX-IE-POF-QA | 1 | 2602860000 |
| MULTI-STRIPAX IE-POF | 1 | 1208880000 |
| SCISSORS KEVLAR | 1 | 1208910000 |

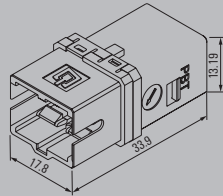
Note

Inserts

Flange inserts SC

- IP 20
- SC-RJ on 2 SC
- For variant 1, 4 and 14 housings

Flange inserts SC



Technical data

Protection degree
 Housing main material
 Plugging cycles
 Ambient temperature (operational)
 Approvals

IP67 with housing
 PA
 1000
 -40 °C...70 °C

Note

Ordering data

| Flange insert |
|---------------|
| Singlemode |
| Multimode/POF |

| Type | Qty. | Order No. |
|--------------------|------|------------|
| IE-BI-SCRJ2SC-SM-C | 10 | 1962870000 |
| IE-BI-SCRJ2SC-MM-C | 10 | 1964430000 |

Note

Accessories

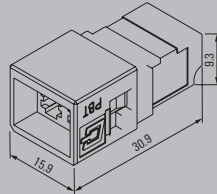
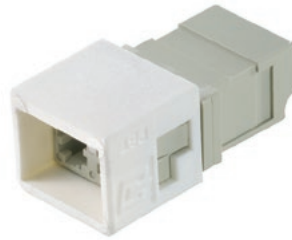
| Type | Qty. | Order No. |
|------|------|-----------|
|------|------|-----------|

Note

Flange inserts LC

- IP 20
- For variant 1, 4 and 14 housings

Flange inserts LC



Technical data

Protection degree
 Housing main material
 Plugging cycles
 Ambient temperature (operational)
 Connector standard
 Approvals

IP67 with housing
 PBT diecast zinc
 1000
 -40 °C...70 °C
 IEC 61754-20

Note

Ordering data

| Flange insert | |
|---------------|------------|
| | Singlemode |
| | Multimode |

| Type | Qty. | Order No. |
|----------------|------|------------|
| IE-BH-LCD-SM-C | 10 | 1962880000 |
| IE-BH-LCD-MM-C | 10 | 1964420000 |

Note

Accessories

| Tools | |
|-------|------------------------|
| | Crimping pliers GOF LC |

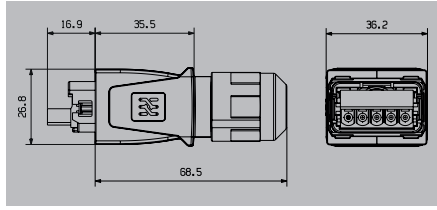
| Type | Qty. | Order No. |
|--------------|------|------------|
| IE-CT-LC-GOF | 1 | 9205330000 |

Note

PushPull Power

Plug PushPull Power

Plug Power 24 V



Technical data

| General data | |
|---|--|
| Protection degree | IP65, IP67 |
| Connector standard | in accordance with PROFINET specification, IEC 61076-3-126 |
| Ambient temperature (operational) | -40 °C...70 °C |
| Number of poles | 5 |
| Wire connection cross-section, flexible, min./max. | 0.75 mm ² / 2.5 mm ² |
| Sheath diameter, min. / max. | 8 mm / 13 mm |
| Approvals | UR |
| Material properties | |
| Housing base material | Zinc diecast, nickel-plated |
| Sealing material | NBR |
| Cable sealing material | EPDM |
| Contact material / Contact surface | Copper alloy / Gold over nickel |
| UL 94 flammability rating | V-2 |
| Pollution severity level | 2 |
| Plugging cycles | ≥ 100 |
| Electrical properties* | |
| Current-carrying capacity at 50 °C | 16 A |
| Rated voltage | 24 V |
| Note | |
| For cables with an outer diameter of 6-8 mm, order an additional reducing seal. | |

| Type | Qty. | Order No. |
|----------------------|------|------------|
| IE-PS-VAPM-5P-2.5 | 1 | 2465440000 |
| IE-PS-VAPM-5P-2.5-QT | 1 | 2912590000 |

When using wire end ferrules, we recommend the length of 10 mm.

Ordering data - Sets

| Tension clamp connection | |
|--------------------------|--|
| SNAP IN connection | |
| Note | |

Ordering data - Empty housings

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |
| Note | | |

Accessories

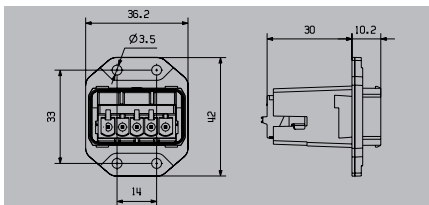
| Reducing seal insert 6-8 mm | |
|-----------------------------|--|
| Note | |

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-REDU-6-8-PS-VAPM | 10 | 2531330000 |
| Note | | |

M

Flanges PushPull Power

Flange Power 24 V



Technical data

General data

| |
|---|
| Protection degree |
| Connector standard |
| Ambient temperature (operational) |
| Number of poles |
| Wire connection cross section, finely stranded, min. / max. |
| Connection 1 |
| Approvals |
| Installation |

| |
|--|
| IP67 |
| in accordance with PROFINET specification, IEC 61076-3-126 |
| -40 °C...70 °C |
| 5 |
| 0.75 mm ² / 2.5 mm ² |
| Tension clamp |
| UR |
| 4 screws |

Material properties

| |
|------------------------------------|
| Housing base material |
| Sealing material |
| Cable sealing material |
| Contact carrier material |
| Contact material / Contact surface |
| UL 94 flammability rating |
| Pollution severity level |
| Plugging cycles |

| |
|---------------------------------|
| Zinc diecast, nickel-plated |
| NBR |
| EPDM |
| PA |
| Copper alloy / Gold over nickel |
| V-2 |
| 2 |
| ≥ 100 |

Electrical properties*

| |
|------------------------------------|
| Current-carrying capacity at 50 °C |
| Rated voltage |

| |
|------|
| 16 A |
| 24 V |

Note

Ordering data - Sets

| |
|--|
| |
|--|

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-BSS-VAPM-24V | 1 | 2493480000 |

| |
|------|
| Note |
|------|

When using wire end ferrules, we recommend the length of 10 mm.

Ordering data - Empty housings

| |
|--|
| |
|--|

| Type | Qty. | Order No. |
|-------------|------|------------|
| IE-BHD-VAPM | 1 | 2493490000 |

| |
|------|
| Note |
|------|

Accessories

| Dust protection cap | |
|---------------------|---------------------------------|
| | IP54 protective cap Dust cap |

| Type | Qty. | Order No. |
|---------------|------|------------|
| IE-BP-VAPP | 10 | 1068930000 |
| IE-BP-VAPP-DC | 10 | 2494060000 |

| |
|------|
| Note |
|------|

| |
|--|
| |
|--|

IP65 connection components / FreeCon connecting components

Overview

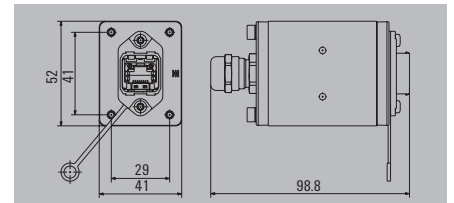
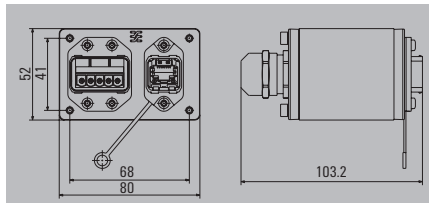
| | | |
|---|-------------------------|------|
| IP65 connection components / FreeCon connecting components | FreeCon Passive V14 | N.2 |
| | FreeCon Active PROFINET | N.8 |
| | V1 junction boxes | N.11 |
| | V4 junction boxes | N.13 |
| | V5 junction boxes | N.15 |
| | V6 junction boxes | N.16 |

FreeCon Passive V14

FreeCon V14 - junction box

Double junction box, Power / RJ45

Single junction box, RJ45



Technical data

| General data | |
|--|--|
| Housing main material | Aluminium profile, Cover: die-cast zinc, painted |
| Protection degree | IP65 |
| Ambient temperature (operational) | -40 °C...70 °C |
| Connector standard | IEC 61076-3-117 Var. 14, IEC 60603-7-5 |
| Approvals | CULUS |
| Technical specifications power connector | |
| Housing base material | Zinc diecast, nickel-plated |
| Sealing material | NBR |
| Contact material | Copper alloy |
| Contact carrier material | PA |
| Contact surface | Gold over nickel |
| Plugging cycles | ≤ 100 |
| Number of poles | 5 |
| Sheath diameter, min. / max. | 6 mm / 12 mm |
| Wire connection cross section, stranded, min. / max. | 0.75 mm ² / 2.5 mm ² |
| Connection | Tension clamp |
| Electrical properties power connector | |
| Current-carrying capacity at 50 °C | 16 A |
| Rated voltage | 24 V |
| Technical specifications for RJ45 module | |
| Housing base material | Zinc diecast |
| Contact surface | Gold over nickel |
| Connection cross-section, flexible, min. / max. | AWG 26 / AWG 22 |
| Plugging cycles (RJ45 module) | 750 |
| Connection 1 | IDC |
| Sheath diameter, min./max. | 5 mm / 10 mm |
| Electrical properties for RJ45 module | |
| Category | Cat.5 (ISO/IEC 11801) |
| Contact resistance | ≤ 20 mΩ |
| Insulation resistance | > 500 MΩ |
| Dielectric strength, contact - contact, max. | ≤ 1000 V DC |
| Dielectric strength, contact - contact, min. | ≤ 1500 V DC |
| Current carrying capacity | 1 A |
| Note | |

| General data | |
|--|--|
| Housing main material | Aluminium profile, Cover: die-cast zinc, painted |
| Protection degree | IP65 |
| Ambient temperature (operational) | -40 °C...70 °C |
| Connector standard | IEC 61076-3-117 Var. 14, IEC 60603-7-5 |
| Approvals | CULUS |
| Technical specifications power connector | |
| Housing base material | Zinc diecast, nickel-plated |
| Sealing material | NBR |
| Contact material | Copper alloy |
| Contact carrier material | PA |
| Contact surface | Gold over nickel |
| Plugging cycles | ≤ 100 |
| Number of poles | 5 |
| Sheath diameter, min. / max. | 6 mm / 12 mm |
| Wire connection cross section, stranded, min. / max. | 0.75 mm ² / 2.5 mm ² |
| Connection | Tension clamp |
| Electrical properties power connector | |
| Current-carrying capacity at 50 °C | 16 A |
| Rated voltage | 24 V |
| Technical specifications for RJ45 module | |
| Housing base material | Zinc diecast |
| Contact surface | Gold over nickel |
| Connection cross-section, flexible, min. / max. | AWG 26 / AWG 22 |
| Plugging cycles (RJ45 module) | 750 |
| Connection 1 | IDC |
| Sheath diameter, min./max. | 5 mm / 10 mm |
| Electrical properties for RJ45 module | |
| Category | Cat.5 (ISO/IEC 11801) |
| Contact resistance | ≤ 20 mΩ |
| Insulation resistance | > 500 MΩ |
| Dielectric strength, contact - contact, max. | ≤ 1000 V DC |
| Dielectric strength, contact - contact, min. | ≤ 1500 V DC |
| Current carrying capacity | 1 A |
| Note | |

| General data | |
|--|--|
| Housing main material | Aluminium profile, Cover: die-cast zinc, painted |
| Protection degree | IP65 |
| Ambient temperature (operational) | -40 °C...70 °C |
| Connector standard | IEC 61076-3-117 Var. 14, IEC 60603-7-5 |
| Approvals | CULUS |
| Technical specifications power connector | |
| Housing base material | Zinc diecast, nickel-plated |
| Sealing material | NBR |
| Contact material | Copper alloy |
| Contact carrier material | PA |
| Contact surface | Gold over nickel |
| Plugging cycles | ≤ 100 |
| Number of poles | 5 |
| Sheath diameter, min. / max. | 6 mm / 12 mm |
| Wire connection cross section, stranded, min. / max. | 0.75 mm ² / 2.5 mm ² |
| Connection | Tension clamp |
| Electrical properties power connector | |
| Current-carrying capacity at 50 °C | 16 A |
| Rated voltage | 24 V |
| Technical specifications for RJ45 module | |
| Housing base material | Zinc diecast |
| Contact surface | Gold over nickel |
| Connection cross-section, flexible, min. / max. | AWG 26 / AWG 22 |
| Plugging cycles (RJ45 module) | 750 |
| Connection 1 | IDC |
| Sheath diameter, min./max. | 5 mm / 10 mm |
| Electrical properties for RJ45 module | |
| Category | Cat.5 (ISO/IEC 11801) |
| Contact resistance | ≤ 20 mΩ |
| Insulation resistance | > 500 MΩ |
| Dielectric strength, contact - contact, max. | ≤ 1000 V DC |
| Dielectric strength, contact - contact, min. | ≤ 1500 V DC |
| Current carrying capacity | 1 A |
| Note | |

Ordering data

| Type | Qty. | Order No. |
|-------------------------|------|------------|
| IE-CD-V14MRJ/VAPM24V-FJ | 1 | 1068830000 |
| Note | | |

| Type | Qty. | Order No. |
|-------------------------|------|------------|
| IE-CD-V14MRJ/VAPM24V-FJ | 1 | 1068830000 |
| Note | | |

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-CD-V14MRJ-FJ | 1 | 1068880000 |
| Note | | |

Accessories

| Mounting foot | |
|---------------|---------------------|
| IE-CD-MA | Protective cap |
| IE-BP-V14P | IP54 protective cap |
| IE-BP-VAPP | |
| Note | |

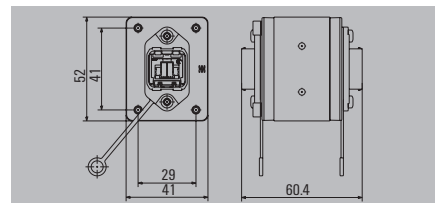
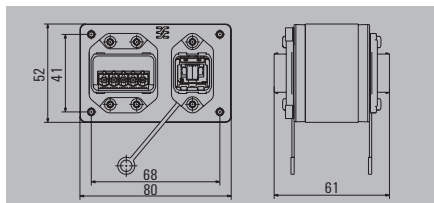
| Type | Qty. | Order No. |
|------------|------|------------|
| IE-CD-MA | 10 | 1099580000 |
| IE-BP-V14P | 10 | 1058310000 |
| IE-BP-VAPP | 10 | 1068930000 |
| Note | | |

| Type | Qty. | Order No. |
|------------|------|------------|
| IE-CD-MA | 10 | 1099580000 |
| IE-BP-V14P | 10 | 1058310000 |
| Note | | |

FreeCon V14 - coupling

Double coupling, Power / RJ45

Single coupling, RJ45



Technical data

| General data | |
|--|--|
| Housing main material | Aluminium profile, Cover: die-cast zinc, painted |
| Protection degree | IP65 |
| Ambient temperature (operational) | -40 °C...70 °C |
| Connector standard | IEC 61076-3-117 Var. 14, IEC 60603-7-5 |
| Approvals | CULUS |
| Technical specifications power connector | |
| Housing base material | Zinc diecast, nickel-plated |
| Sealing material | NBR |
| Contact material | Copper alloy |
| Contact carrier material | PA |
| Contact surface | Gold over nickel |
| Plugging cycles | ≥ 100 |
| Number of poles | 5 |
| Electrical properties power connector | |
| Current-carrying capacity at 50 °C | 16 A |
| Rated voltage | 24 V |
| Technical data for RJ45 coupling | |
| Housing base material | Zinc diecast |
| Electrical properties RJ45 coupling | |
| Category | Cat.6A / Class EA (ISO/IEC 11801 2010) |
| Contact resistance | ≤ 20 mΩ |
| Contact surface | Gold over nickel |
| Insulation resistance | > 500 MΩ |
| Dielectric strength, contact - contact, min. | ≥ 1000 V DC |
| Dielectric strength, contact - shielding, max. | ≥ 1500 V DC |
| Current carrying capacity | 1 A |
| Note | |

| General data | | |
|--|--|--|
| Housing main material | Aluminium profile, Cover: die-cast zinc, painted | |
| Protection degree | IP65 | |
| Ambient temperature (operational) | -40 °C...70 °C | |
| Connector standard | IEC 61076-3-117 Var. 14, IEC 60603-7-5 | |
| Approvals | CULUS | |
| Technical specifications power connector | | |
| Housing base material | Zinc diecast, nickel-plated | |
| Sealing material | NBR | |
| Contact material | Copper alloy | |
| Contact carrier material | PA | |
| Contact surface | Gold over nickel | |
| Plugging cycles | ≥ 100 | |
| Number of poles | 5 | |
| Electrical properties power connector | | |
| Current-carrying capacity at 50 °C | 16 A | |
| Rated voltage | 24 V | |
| Technical data for RJ45 coupling | | |
| Housing base material | Zinc diecast | |
| Electrical properties RJ45 coupling | | |
| Category | Cat.6A / Class EA (ISO/IEC 11801 2010) | |
| Contact resistance | ≤ 20 mΩ | |
| Contact surface | Gold over nickel | |
| Insulation resistance | > 500 MΩ | |
| Dielectric strength, contact - contact, min. | ≥ 1000 V DC | |
| Dielectric strength, contact - shielding, max. | ≥ 1500 V DC | |
| Current carrying capacity | 1 A | |
| Note | | |

| General data | | |
|--|--|--|
| Housing main material | Aluminium profile, Cover: die-cast zinc, painted | |
| Protection degree | IP65 | |
| Ambient temperature (operational) | -40 °C...70 °C | |
| Connector standard | IEC 61076-3-117 Var. 14, IEC 60603-7-5 | |
| Approvals | CULUS | |
| Technical specifications power connector | | |
| Housing base material | Zinc diecast, nickel-plated | |
| Sealing material | NBR | |
| Contact material | Copper alloy | |
| Contact carrier material | PA | |
| Contact surface | Gold over nickel | |
| Plugging cycles | ≥ 100 | |
| Number of poles | 5 | |
| Electrical properties power connector | | |
| Current-carrying capacity at 50 °C | 16 A | |
| Rated voltage | 24 V | |
| Technical data for RJ45 coupling | | |
| Housing base material | Zinc diecast | |
| Electrical properties RJ45 coupling | | |
| Category | Cat.6A / Class EA (ISO/IEC 11801 2010) | |
| Contact resistance | ≤ 20 mΩ | |
| Contact surface | Gold over nickel | |
| Insulation resistance | > 500 MΩ | |
| Dielectric strength, contact - contact, min. | ≥ 1000 V DC | |
| Dielectric strength, contact - shielding, max. | ≥ 1500 V DC | |
| Current carrying capacity | 1 A | |
| Note | | |

Ordering data

| Type | Qty. | Order No. |
|---------------------------|------|------------|
| IE-CD-V14MRJ/VAPM24V-C-MA | 1 | 1068820000 |
| Note | | |
| Including mounting foot | | |

| Type | Qty. | Order No. |
|---------------------------|------|------------|
| IE-CD-V14MRJ/VAPM24V-C-MA | 1 | 1068820000 |
| Note | | |
| Including mounting foot | | |

| Type | Qty. | Order No. |
|-------------------------|------|------------|
| IE-CD-V14MRJ-C-MA | 1 | 1068870000 |
| Note | | |
| Including mounting foot | | |

Accessories

| Dust protection cap | |
|---------------------|---------------------|
| IE-BP-V14P | Protective cap |
| IE-BP-VAPP | IP54 protective cap |

| Type | Qty. | Order No. |
|------------|------|------------|
| IE-BP-V14P | 10 | 1058310000 |
| IE-BP-VAPP | 10 | 1068930000 |

| Type | Qty. | Order No. |
|------------|------|------------|
| IE-BP-V14P | 10 | 1058310000 |

| Note | |
|------|--|
|------|--|

| Note | | |
|------|--|--|
|------|--|--|

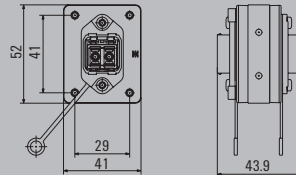
| Note | | |
|------|--|--|
|------|--|--|

FreeCon V14 - single coupling

Single coupling, SCRJ



sercos
the automation bus



Technical data

General data

| | |
|-----------------------------------|--|
| Housing main material | Aluminium profile, Cover: die-cast zinc, painted |
| Protection degree | IP65 |
| Ambient temperature (operational) | -40...70 °C |
| Connector standard | IEC 61076-3-117 Var. 14, IEC 61754-24 |
| Approvals | CULUS |

Technical specifications - fibre-optic coupler

| | |
|--|----------------|
| Housing base material (fibre-optic coupling) | PA |
| Plugging cycles (fibre-optic coupling) | ≥ 500 |
| Seal material (fibre-optic coupling) | NBR |
| Connection 1 / 2 | SCRJ / SCRJ |
| Insertion attenuation (fibre-optic coupling) | <0.2 dB |
| Fibre type | Multimode, POF |

Note

Ordering data

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-CD-V14MSCRJ-MM-C-MA | 1 | 1318150000 |

Note

Accessories

| Type | Qty. | Order No. |
|------------|------|------------|
| IE-BP-V14P | 10 | 1058310000 |

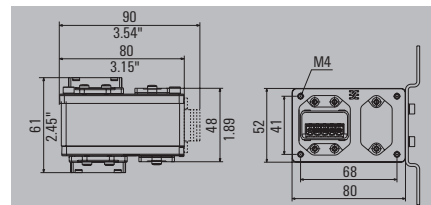
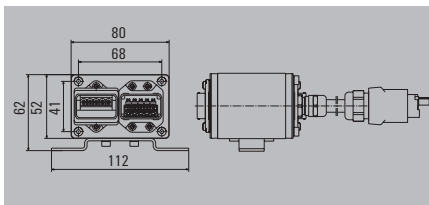
| | |
|---------------------|----------------|
| Dust protection cap | Protective cap |
|---------------------|----------------|

Note

FreeCon V14 - Power

Y-distributor, Power

Single coupling, Power



Technical data

| General data | |
|--|--|
| Housing main material | Aluminium profile, Cover: die-cast zinc, painted |
| Protection degree | IP65 |
| Ambient temperature (operational) | -40...70 °C |
| Connector standard | in accordance with PROFINET specification |
| Approvals | CULUS |
| Technical specifications power connector | |
| Housing base material | Zinc diecast, nickel-plated |
| Sealing material | NBR |
| Cable sealing material | TPE |
| Contact material | Copper alloy |
| Contact carrier material | PA |
| Contact surface | Gold over nickel |
| UL 94 flammability rating | V-0 |
| Plugging cycles | ≥ 100 |
| Pollution severity level | 2 |
| Number of poles | 5 |
| Electrical properties power connector | |
| Current-carrying capacity | 16A @ 20°C |
| Rated voltage | 24 V |
| Note | |

| |
|--|
| Aluminium profile, Cover: die-cast zinc, painted |
| IP65 |
| -40...70 °C |
| in accordance with PROFINET specification |
| CULUS |
| Zinc diecast, nickel-plated |
| NBR |
| TPE |
| Copper alloy |
| PA |
| Gold over nickel |
| V-0 |
| ≥ 100 |
| 2 |
| 5 |
| 16A @ 20°C |
| 24 V |

| |
|--|
| Aluminium profile, Cover: die-cast zinc, painted |
| IP65, If thread-locking fluid is used |
| -40...70 °C |
| in accordance with PROFINET specification |
| CULUS |
| Zinc diecast, nickel-plated |
| NBR |
| TPE |
| Copper alloy |
| PA |
| Gold over nickel |
| V-0 |
| ≥ 100 |
| 2 |
| 5 |
| 16A @ 20°C |
| 24 V |

Ordering data

| Type | Qty. | Order No. |
|--------------------|------|------------|
| IE-CD-VAPM24V-Y-MA | 1 | 1297010000 |

| Type | Qty. | Order No. |
|--------------------|------|------------|
| IE-CD-VAPM24V-C-MA | 1 | 1397690000 |

| Type | Qty. | Order No. |
|--------------------|------|------------|
| IE-CD-VAPM24V-C-MA | 1 | 1397690000 |

Accessories

| Type | Qty. | Order No. |
|------------|------|------------|
| IE-BP-VAPP | 10 | 1068930000 |

| Type | Qty. | Order No. |
|------------|------|------------|
| IE-BP-VAPP | 10 | 1068930000 |

| Type | Qty. | Order No. |
|------------|------|------------|
| IE-BP-VAPP | 10 | 1068930000 |

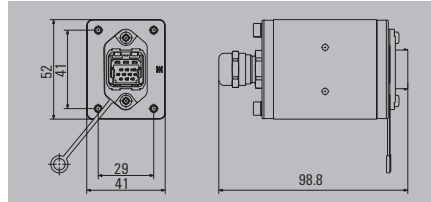
| Note | |
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| | |

| Note | |
|------|--|
| | |

| Note | |
|------|--|
| | |

FreeCon V14 - junction box

Single junction box, Hybrid



Technical data

General data

Housing main material
Protection degree
Ambient temperature (operational)
Approvals

Technical specifications hybrid connector

Housing base material
Sealing material
Contact material
Contact surface
Plugging cycles
Pole count
Connection cross-section, flexible, min. / max.
Connection cross-section, flexible, min. / max.

Electrical properties hybrid connector

Rated current (hybrid connector)
Rated voltage (DIN EN 61984)
Contact resistance

Note

Aluminium profile, Cover: die-cast zinc, painted
IP65
-40 °C...70 °C
CULUS

Zinc diecast (flange), PA 66
NBR
Copper alloy
Gold over nickel
500
10
AWG 27 / AWG 20
0.08 mm² / 0.75 mm²

3 A per contact
24 V
≤ 10 mΩ

Ordering data

Note

| Type | Qty. | Order No. |
|----------------------|------|------------|
| IE-CD-V14MHYB-10P-FJ | 1 | 1068850000 |

Contacts should be ordered separately

Accessories

Mounting foot

Crimping contact (pins)

0.08...0.2 mm²
0.2...0.5 mm²
0.75 mm²

Tools

Pressing tool

Dust protection cap

Protective cap

| Type | Qty. | Order No. |
|----------|------|------------|
| IE-CD-MA | 10 | 1099580000 |

| | | |
|-----------------------|-----|------------|
| IE-BIC-HYB-P-0,2-300 | 300 | 1135160000 |
| IE-BIC-HYB-P-0,5-300 | 300 | 1096150000 |
| IE-BIC-HYB-P-0,75-300 | 300 | 1068970000 |

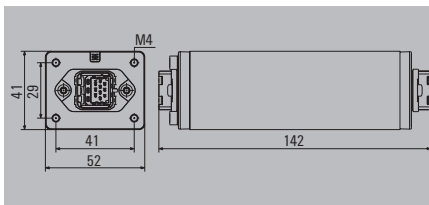
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|---------|---|------------|
| HTF HYB | 1 | 1119580000 |
|---------|---|------------|

| | | |
|------------|----|------------|
| IE-BP-V14P | 10 | 1058310000 |
|------------|----|------------|

Note

FreeCon V14 - single coupling

Single coupling, hybrid



Technical data

| General data | |
|---|--|
| Housing main material | Aluminium profile, Cover: die-cast zinc, painted |
| Protection degree | IP65 |
| Ambient temperature (operational) | -40...70 °C |
| Approvals | CULUS |
| Technical specifications hybrid connector | |
| Housing base material | Zinc diecast (flange), PA 66 |
| Sealing material | NBR |
| Contact material | Copper alloy |
| Contact surface | Gold over nickel |
| Plugging cycles | 500 |
| Pole count | 10 |
| Electrical properties hybrid connector | |
| Rated current (hybrid connector) | 3 A per contact |
| Rated voltage (DIN EN 61984) | 24 V |
| Contact resistance | ≤ 10 mΩ |
| Note | |

| Ordering data | | |
|------------------------|------|------------|
| Type | Qty. | Order No. |
| IE-CD-V14MHYB-10P-C-MA | 1 | 1068840000 |
| Note | | |

Ordering data

| Accessories | | |
|-------------|------|------------|
| Type | Qty. | Order No. |
| IE-BP-V14P | 10 | 1058310000 |
| Note | | |

Accessories

| | |
|---------------------|----------------|
| Dust protection cap | Protective cap |
|---------------------|----------------|

| Type | Qty. | Order No. |
|------------|------|------------|
| IE-BP-V14P | 10 | 1058310000 |
| Note | | |

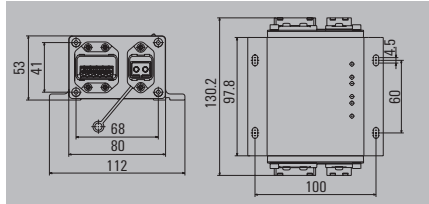
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| Note | | |
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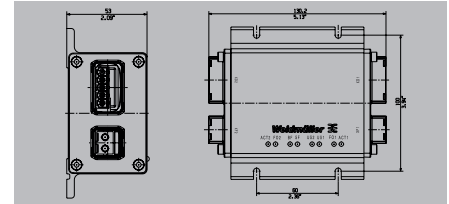
FreeCon Active PROFINET

FreeCon Active PROFINET with diagnostics functionality

POF repeater



POF repeater II



Technical data

General data

Housing main material
Data interface
Power interface
Protection degree
Ambient temperature (operational)
Network standard
Connector standard

Electrical data

Operating voltage
Operational voltage range
Current consumption
Baud rate
Protocol
LED indicator

Approvals

Note

Ordering data

Note

Accessories

Note

Aluminium profile, Cover: die-cast zinc, painted
PROFINET PushPull SCRJ POF (V14)
PROFINET PushPull Power
IP65
-20 °C...55 °C
IEC 61158, IEC 61784
IEC 61076-3-117 Var. 14, IEC 61754-24

24 V DC
18...30 V DC
200 mA typical
100 MB
PROFINET IRT

F01: port active, F02: port active, SF: general error, BF: bus error, US1: voltage 1 (electronics), US2: voltage 2

CE, CULUS

| Type | Qty. | Order No. |
|-------------------------|------|------------|
| IE-CDR-V14MSCPOF/VAPM-C | 1 | 1253240000 |

Delivery incl. protective caps

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

Aluminium profile, Cover: die-cast zinc, electroplated
PROFINET PushPull SCRJ POF (V14)
PROFINET PushPull Power
IP65
-20 °C...55 °C
IEC 61158, IEC 61784
IEC 61076-3-117 Var. 14, IEC 61754-24

24 V DC
18...30 V DC
200 mA typical
100 MB
PROFINET IRT

F01: port active, F02: port active, SF: general error, BF: bus error, US1: voltage 1 (electronics), US2: voltage 2, ACT1: activity Port1, ACT2: activity Port2

CE, CULUS

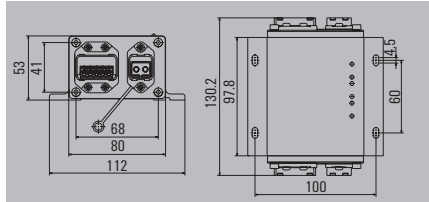
| Type | Qty. | Order No. |
|----------------------------|------|------------|
| IE-CDR-V14MSCPOF/VAPM-C II | 1 | 2455360000 |

Further development of 1253240000, IE-CDR-V14MSCPOF/VAPM-C. For commissioning, the new GSDML file (see Downloads) must be installed.

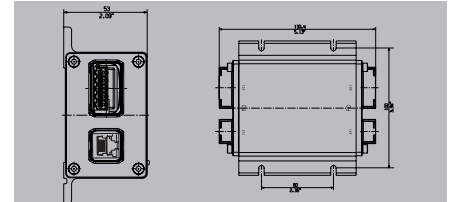
| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

FreeCon Active PROFINET
with diagnostics functionality

POF media converter



POF media converter II



Technical data

| General data | |
|-----------------------------------|--|
| Housing main material | |
| Data interface | |
| Power interface | |
| Protection degree | |
| Ambient temperature (operational) | |
| Network standard | |
| Connector standard | |
| Electrical data | |
| Operating voltage | |
| Operational voltage range | |
| Current consumption | |
| Baud rate | |
| Protocol | |
| LED indicator | |
| Approvals | |
| Note | |

| |
|--|
| Aluminium profile, Cover: die-cast zinc, painted |
| PROFINET PushPull SCRJ POF (V14), PROFINET PushPull RJ45 (V14) |
| PROFINET PushPull Power |
| IP65 |
| -20 °C...55 °C |
| IEC 61158, IEC 61784 |
| IEC 61076-3-117 Var. 14, IEC 61754-24, IEC 60603-7-51 |
| 24 V DC |
| 18...30 V DC |
| 200 mA typical |
| 100 MB |
| PROFINET IRT |
| P1: port active, P2: port active, SF: general error, BF: bus error, US1: voltage 1 (electronics), US2: voltage 2 |
| CE; CULUS |

| |
|--|
| Aluminium profile, Cover: die-cast zinc, electroplated |
| PROFINET PushPull SCRJ POF (V14), PROFINET PushPull RJ45 (V14) |
| PROFINET PushPull Power |
| IP65 |
| -20 °C...55 °C |
| IEC 61158, IEC 61784 |
| IEC 61076-3-117 Var. 14, IEC 61754-24, IEC 60603-7-51 |
| 24 V DC |
| 18...30 V DC |
| 200 mA typical |
| 100 MB |
| PROFINET IRT |
| P1: port active, P2: port active, SF: general error, BF: bus error, US1: voltage 1 (electronics), US2: voltage 2, ACT1: activity Port1, ACT2: activity Port2 |
| CULUS |
| Further development of 1324440000, IE-CDM-V14MRJSCP/VAPM-C. For commissioning, the new GSDML file (see Downloads) must be installed. |

Ordering data

| Type | Qty. | Order No. |
|--------------------------------|------|------------|
| IE-CDM-V14MRJSCP/VAPM-C | 1 | 1324440000 |
| Delivery incl. protective caps | | |
| Note | | |

| Type | Qty. | Order No. |
|--------------------------------|------|------------|
| IE-CDM-V14MRJSCP/VAPM-C | 1 | 1324440000 |
| Delivery incl. protective caps | | |

| Type | Qty. | Order No. |
|----------------------------|------|------------|
| IE-CDM-V14MRJSCP/VAPM-C II | 1 | 2588270000 |

Accessories

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

| Note |
|------|
| |

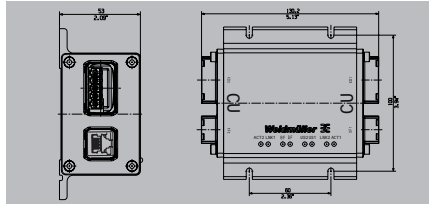
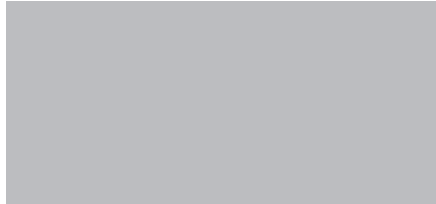
| Note |
|------|
| |

| Note |
|------|
| |

FreeCon Active PROFINET

**FreeCon Active PROFINET
with diagnostics functionality**

Copper repeater



Technical data

General data

Housing main material
Data interface
Power interface
Protection degree
Ambient temperature (operational)
Network standard
Connector standard

Aluminium profile, Cover: die-cast zinc, electroplated
PROFINET PushPull RJ45 (V14)
PROFINET PushPull Power
IP65
-20 °C...55 °C
IEC 61158, IEC 61784
IEC 61076-3-117 Var. 14

Electrical data

Operating voltage
Operational voltage range
Current consumption
Baud rate
Protocol
LED indicator

24 V DC
18...30 V DC
100 mA
100 MBit/s
PROFINET IRT
ACT1: activity Port1, ACT2: activity Port2, SF: general error, BF: bus error, US1: voltage 1 (electronics), US2: voltage 2, LNK1: port active, LNK2: port active
CULUS

Approvals

Note

Ordering data

Note

| Type | Qty. | Order No. |
|----------------------|------|-------------------|
| IE-CDR-V14MRJ/VAPM-C | 1 | 2581810000 |

Delivery incl. protective caps

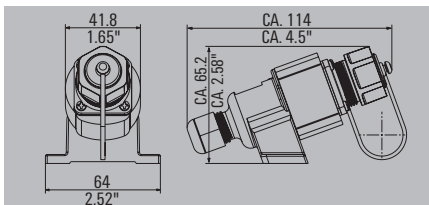
Accessories

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

Note

V1 junction boxes - plastic

Single junction box



Technical data

| |
|-----------------------------------|
| Protection degree |
| Housing main material |
| Plugging cycles |
| Ambient temperature (operational) |
| Connector standard |
| Sheath diameter min. / max. |
| Approvals |
| Note |

| |
|------------------------|
| IP67 |
| PA UL 94 V0 |
| 750 |
| -40 °C...70 °C |
| IEC 61076-3-106 Var. 1 |
| 6 mm / 9.5 mm |
| Note |

Ordering data

| |
|---------------------|
| Variant 1 |
| Pre-assembled cable |
| Note |

| Type | Qty. | Order No. |
|-------------------------------|------|------------|
| IE-OP-V01P-1S | 10 | 1061830000 |
| Order RJ45 modules separately | | |

Accessories

| Inserts, Data |
|----------------------------|
| RJ45 module EIA/TIA T568 B |
| RJ45 module PROFINET |
| RJ45 module EIA/TIA T568 A |

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-BI-RJ45-FJ-B | 10 | 1963840000 |
| IE-BI-RJ45-FJ-P | 10 | 1963830000 |
| IE-BI-RJ45-FJ-A | 10 | 1962850000 |

| |
|-------------|
| Note |
|-------------|

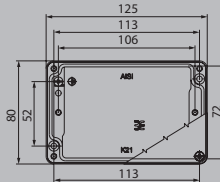
| |
|-------------|
| Note |
|-------------|

V1 junction boxes

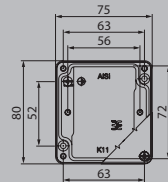
V1 junction boxes - metal

- IP 67
- For wall or floor mounting

Double junction box



Single junction box



Technical data

Protection degree
 Housing main material
 Colour
 Type of mounting
 Ambient temperature (operational)
 Plugging cycles
 Connector standard
 Sheath diameter min. / max.
 Approvals

IP67
 AL-Si 12
 grey
 Floor-mounted, Wall mounting
 -40 °C...70 °C
 750
 IEC 61076-3-106 Var. 1
 5 mm / 10 mm

IP67
 AL-Si 12
 grey
 Floor-mounted, Wall mounting
 -40 °C...70 °C
 750
 IEC 61076-3-106 Var. 1
 5 mm / 10 mm

Note

Ordering data

| Variant 1 | |
|-----------|-------------------|
| | 2 ports. straight |
| | 1 port. straight |

Note

| Type | Qty. | Order No. |
|-------------------|------|------------|
| IE-OM-V01M-K21-2S | 1 | 1966330000 |

RJ45 modules can be ordered separately

| Type | Qty. | Order No. |
|-------------------|------|------------|
| IE-OM-V01M-K11-1S | 1 | 1966300000 |

RJ45 modules can be ordered separately

Accessories

| Inserts, Data | |
|---------------|----------------------------|
| | RJ45 module EIA/TIA T568 B |
| | RJ45 module PROFINET |
| | RJ45 module EIA/TIA T568 A |

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-BI-RJ45-FJ-B | 10 | 1963840000 |
| IE-BI-RJ45-FJ-P | 10 | 1963830000 |
| IE-BI-RJ45-FJ-A | 10 | 1962850000 |

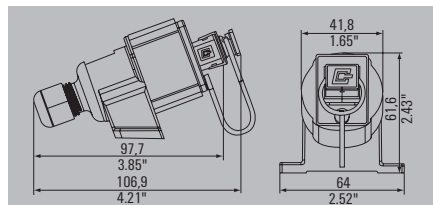
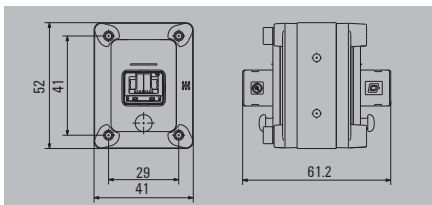
| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-BI-RJ45-FJ-B | 10 | 1963840000 |
| IE-BI-RJ45-FJ-P | 10 | 1963830000 |
| IE-BI-RJ45-FJ-A | 10 | 1962850000 |

Note

FreeCon V4 junction boxes

Single coupling, RJ45

Single junction box



Technical data

| General data | |
|--|--|
| Plugging cycles | 750 |
| Housing main material | Aluminium profile, Cover: die-cast zinc, painted |
| Contact surface | Gold over nickel |
| UL 94 flammability rating | IEC 61076-3-106 Var. 4, IEC 60603-7-5 |
| Connector standard | IP65 |
| Protection degree | -40 °C...70 °C |
| Ambient temperature (operational) | CULUS |
| Sheath diameter min. / max. | |
| Approvals | |
| Electrical properties for RJ45 module | |
| Category | Cat.6A / Class EA (ISO/IEC 11801 2010) |
| Contact resistance | ≤ 20 mΩ |
| Insulation resistance | > 500 MΩ |
| Dielectric strength, contact - contact, min. | ≥ 1000 V DC |
| Dielectric strength, contact - shielding, max. | ≥ 1500 V DC |
| Current carrying capacity | 1 A |
| Material properties RJ45 coupling | |
| Housing base material | Zinc diecast |
| Note | |

| Ordering data | | |
|-------------------------|------|------------|
| Type | Qty. | Order No. |
| IE-CD-V04PRJ-C-MA | 1 | 1122710000 |
| Including mounting foot | | |

| Ordering data | | |
|--|------|------------|
| Type | Qty. | Order No. |
| IE-OP-V04P-1S | 10 | 1045780000 |
| Order RJ45 modules separately, IP 67 protective cap included in delivery | | |

Ordering data

| Pre-assembled cable | |
|---------------------|--|
| Coupling | |
| Note | |

Accessories

| Dust protection cap | |
|---------------------------------------|--|
| Flange-mounted housing protective cap | |
| Inserts, Data | |
| RJ45 module PROFINET | |
| RJ45 module EIA/TIA T568 A | |
| RJ45 module EIA/TIA T568 B | |

| Type | Qty. | Order No. |
|------------|------|------------|
| IE-BP-V04P | 10 | 1963900000 |

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-BP-V04P | 10 | 1963900000 |
| IE-BI-RJ45-FJ-P | 10 | 1963830000 |
| IE-BI-RJ45-FJ-A | 10 | 1962850000 |
| IE-BI-RJ45-FJ-B | 10 | 1963840000 |

| Note | |
|------|--|
|------|--|

| Note | | |
|------|--|--|
|------|--|--|

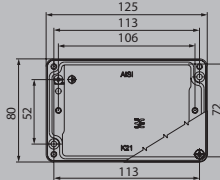
| Note | | |
|------|--|--|
|------|--|--|

V4 junction boxes

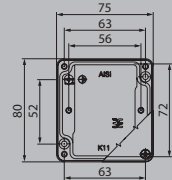
V4 junction boxes

- IP 67
- For wall or floor mounting

Double junction box



Single junction box



Technical data

Protection degree
 Housing main material
 Colour
 Type of mounting
 Ambient temperature (operational)
 Plugging cycles
 Connector standard
 Sheath diameter min. / max.
 Approvals

IP67
 AL-Si 12
 grey
 Floor-mounted, Wall mounting
 -40 °C...70 °C
 750
 IEC 61076-3-106 Var. 4
 5 mm / 10 mm

IP67
 AL-Si 12
 grey
 Floor-mounted, Wall mounting
 -40 °C...70 °C
 750
 IEC 61076-3-106 Var. 4
 5 mm / 10 mm

Note

Ordering data

| Variant 4 | |
|-----------|-------------------|
| | 2 ports. straight |
| | 1 port. straight |

Note

| Type | Qty. | Order No. |
|-------------------|------|------------|
| IE-OM-V04P-K21-2S | 1 | 1966250000 |

RJ45 modules can be ordered separately

| Type | Qty. | Order No. |
|-------------------|------|------------|
| IE-OM-V04P-K11-1S | 1 | 1966220000 |

RJ45 modules can be ordered separately

Accessories

| Inserts, Data | |
|---------------|----------------------------|
| | RJ45 module EIA/TIA T568 B |
| | RJ45 module PROFINET |
| | RJ45 module EIA/TIA T568 A |

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-BI-RJ45-FJ-B | 10 | 1963840000 |
| IE-BI-RJ45-FJ-P | 10 | 1963830000 |
| IE-BI-RJ45-FJ-A | 10 | 1962850000 |

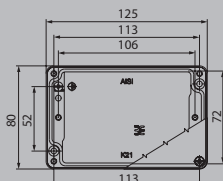
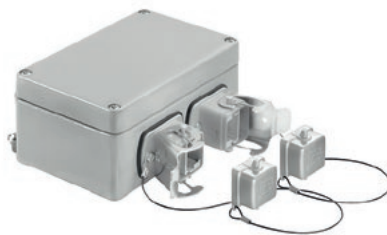
| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-BI-RJ45-FJ-B | 10 | 1963840000 |
| IE-BI-RJ45-FJ-P | 10 | 1963830000 |
| IE-BI-RJ45-FJ-A | 10 | 1962850000 |

Note

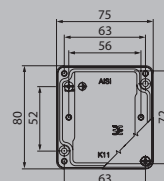
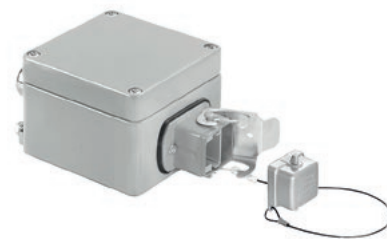
V5 junction boxes

- IP 67
- For wall or floor mounting

Double junction box



Single junction box



Technical data

Protection degree
 Housing main material
 Colour
 Type of mounting
 Ambient temperature (operational)
 Plugging cycles
 Connector standard
 Sheath diameter min. / max.
 Approvals

IP67
 AL-Si 12
 grey
 Floor-mounted, Wall mounting
 -40 °C...70 °C
 750
 IEC 61076-3-106 Var. 5
 5 mm / 10 mm

IP67
 AL-Si 12
 grey
 Floor-mounted, Wall mounting
 -40 °C...70 °C
 750
 IEC 61076-3-106 Var. 5
 5 mm / 10 mm

Note

Ordering data

| Variant 5 | |
|-----------|-------------------|
| | 2 ports. straight |
| | 1 port. straight |

Note

| Type | Qty. | Order No. |
|-------------------|------|------------|
| IE-OM-V05M-K21-2S | 1 | 1966290000 |

RJ45 modules can be ordered separately

| Type | Qty. | Order No. |
|-------------------|------|------------|
| IE-OM-V05M-K11-1S | 1 | 1966260000 |

RJ45 modules can be ordered separately

Accessories

| Inserts, Data | |
|---------------|----------------------------|
| | RJ45 module EIA/TIA T568 B |
| | RJ45 module PROFINET |
| | RJ45 module EIA/TIA T568 A |

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-BI-RJ45-FJ-B | 10 | 1963840000 |
| IE-BI-RJ45-FJ-P | 10 | 1963830000 |
| IE-BI-RJ45-FJ-A | 10 | 1962850000 |

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-BI-RJ45-FJ-B | 10 | 1963840000 |
| IE-BI-RJ45-FJ-P | 10 | 1963830000 |
| IE-BI-RJ45-FJ-A | 10 | 1962850000 |

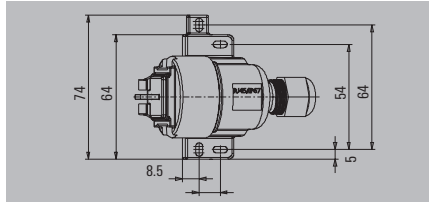
Note

V6 junction boxes

V6 junction boxes

- Cat. 6
- IP 67

Single junction box, RJ45



Technical data

Protection degree
Housing main material
Colour
Type of mounting

Configuration

Wiring
Ambient temperature (operational)
Plugging cycles
Connector standard
Sheath diameter min. / max.
Approvals

Note

IP67
PA 66, UL 94: V-0
Light Grey
Floor-mounted, for exposed connections, Wall mounting

Screw-on junction box
including RJ45 module with
IDC connection

EIA/TIA T568 A, EIA/TIA T568 B
-40 °C...70 °C
750
IEC 61076-3-106 Var. 6
6 mm / 9.5 mm
DETNRVER

Ordering data

Note

| Type | Qty. | Order No. |
|-----------|------|------------|
| IE-S-IP67 | 1 | 8808370000 |

Accessories

Tools

Pressing tool

| Type | Qty. | Order No. |
|--------------|------|------------|
| TT 8 RS MP 8 | 1 | 9202800000 |

Note

Copper cabling solutions

Overview

| | | |
|---------------------------------|---|------|
| Copper cabling solutions | Introduction AdvancedLine and CabinetLine | 0.2 |
| | Overview - Copper cables | 0.4 |
| | Raw cables - Single Pair Ethernet (SPE) cable | 0.6 |
| | Raw cables - Installation cable | 0.8 |
| | Raw cables - Connection cable | 0.10 |
| | Raw cables - Dragline cable | 0.16 |
| | Raw cables - PROFINET cable | 0.17 |
| | Raw cables - Hybrid cable | 0.19 |
| | Assembled cables - Single Pair Ethernet (SPE) cable | 0.20 |
| | Assembled cables - Patch cable | 0.23 |
| | Assembled cables - Smart Meter patch cable | 0.33 |
| | Assembled cables - PROFINET cable | 0.36 |
| | Assembled cables - PROFINET cable PushPull Power | 0.40 |
| | Assembled cables - PROFINET cable M12 | 0.41 |
| | Assembled cables - EtherNet/IP | 0.49 |
| | Assembled cables - EtherCat P cable M8 | 0.51 |
| | Assembled cables - PROFINET cable M8, D-coded | 0.55 |
| | Assembled cables - Railway cable M12 | 0.60 |
| | Assembled cables - Railway cable RJ45 | 0.65 |
| | Assembled cables - USB cable | 0.66 |

The ideal solution, whatever your needs

Our AdvancedLine and CabinetLine product ranges

AdvancedLine

CabinetLine



0

The AdvancedLine from Weidmüller offers all combinations of cables that are possible with the extensive range of plug connections.

This means flexibility and robustness through the high quality of the used components. The range comprises standard cables and customer-specific versions.

- High-quality cables with very good technical characteristics
- Suitable for demanding IP20 to IP67 applications
- Suitable for temperatures from -40 to +70 °C
- High-quality shielding

The new CabinetLine range of patch cables from Weidmüller is available in a variety of colours for visually differentiating between various networks.

Additional benefits:

All CabinetLine cables are fitted with Weidmüller TM marking sleeves for clearly labelling cables and ports. CabinetLine is available in many different colours in combination with LSZH sheathing material and transmission power Cat. 6A. CabinetLine is also available in the colour green and Cat. 5 with PUR or PVC sheathing material. All variants are fitted with protected clips which facilitate, e.g., pulling through a cable duct.

- For applications in switching cabinets and simple environmental conditions
- Suitable for temperatures from -20 to +60 °C
- Simple shielding

Overview of copper cables

Solutions for every environment

Copper cables should be your first choice for applications in offices and harsh industrial environments.

Advantages:

- Available in many different variations and lengths
- Robust
- Easy to assemble
- RJ45 connections are the most popular

Assembled cables

Industrial patch cables / CabinetLine



...not only for office applications, but also in switching cabinets for industrial applications

- Cat. 6_A
- With LSZH sheathing – low smoke and zero halogens
- In straight and crossover versions

System cable for railway applications



...pre-assembled cable for flexible wiring on railway vehicles for both interior and exterior installations.

- In Cat. 5
- Also for PROFINET
- With Radox sheath

Industrial system cables



...pre-assembled cables for flexible installation in machines and plants in industrial applications and difficult environments

- Cat. 5 or Cat. 6_A
- With PUR sheathing

Smart meter patch cable RJ45 6 kV/4 kV and RJ12



Patch Cables for Smart Metering Applications conforming to standards to DIN-VDE 0603 and VDE-AR-N 4100:2019-04

- 6 kV/4 kV impulse withstand voltage
- IP30 RJ45 connector

Industrial trailing cables



...pre-assembled cable for constant motion, e.g., with draglines

- Cat. 5
- Available for PROFINET as well
- With PUR sheathing

Industrial Single Pair Ethernet cables/SPElink®



IP20 and IP67 Patch Cables for compact Ethernet transmission with only one wire pair.

- according to IEC 63171-2 / -5
- very robust and space-saving

Raw cables

Industrial installation cables, horizontal cables



...for stationary, permanent installation in cable ducts and cable trays

- Cat. 5 or Cat. 7
- Available for PROFINET as well
- With PUR or PVC sheathing

Industrial trailing cables



...for applications subjected to constant movement

- Cat. 5
- Available for PROFINET as well
- With PUR sheathing

Industrial connecting cables



...for flexible installation in machines and plants in industrial applications and difficult environments

- Cat. 5 or Cat. 7
- Available for PROFINET as well
- With PUR or PVC sheathing

Industrial Single Pair Ethernet raw cables/SPElink®



For flexible installation in machines and plants in industrial environment / in harsh environments

- T1-B
- Jacket in PUR or LSZH

Ordering data for copper cables, raw cable

| Type | Cat./Class | Colour | AWG | Outer diameter | Length | 100 m | 305 m | 500 m | 1000 m |
|--|-----------------|---------|----------|----------------|------------|-------|------------|------------|------------|
| Industrial Single Pair Ethernet raw cables/SPElink® | | | | | | | | | |
| IE-S1DS2UE* | T1-B | black | AWG22/7 | PUR | | | | 2924340000 | |
| IE-S1DS2LE* | T1-B | black | AWG22/7 | LSZH | | | | 2924350000 | |
| IE-S1ES2UE* | T1-B | black | AWG26/7 | PUR | | | | 2924360000 | |
| IE-S1ES2LE* | T1-B | black | AWG26/7 | LSZH | | | | 2924370000 | |
| Industrial installation cables | | | | | | | | | |
| IE-C5CS8UG-xxx | Cat. 5 | green | AWG24/1 | PUR | 8813160000 | | | 2762870000 | |
| IE-C5CS8VG-xxx | Cat. 5 | green | AWG24/1 | PVC | 8813150000 | | | 2763440000 | |
| IE-C7BS8UG-xxx | Cat. 7 | green | AWG23/1 | PUR | 8813140000 | | | 2763530000 | |
| IE-C7BS8VG-xxx | Cat. 7 | green | AWG23/1 | PVC | 8813130000 | | | 2763540000 | |
| IE-C5AS4V-xxx | Cat. 5 PROFINET | green | AWG22/1 | PVC | 8899000000 | | | 2763430000 | |
| Industrial connecting cables | | | | | | | | | |
| IE-C5ES8UG-xxx | Cat. 5 | green | AWG26/7 | PUR | 8813200000 | | | 2763500000 | |
| IE-C5ES8VG-xxx | Cat. 5 | green | AWG26/7 | PVC | 8813190000 | | | 2763510000 | |
| IE-C7ES8UG-xxx | Cat. 7 | green | AWG26/7 | PUR | 8813180000 | | | 2763550000 | |
| IE-C7ES8VG-xxx | Cat. 7 | green | AWG26/7 | PVC | 8813170000 | | | 2763560000 | |
| IE-C5DS4V-xxx | Cat. 5 PROFINET | green | AWG22/7 | PVC | 8898990000 | | | 2763470000 | |
| IE-C5DHAG-xxx | Cat. 5 PROFINET | green | AWG22/7 | PVC | 2763660000 | | | 2763460000 | |
| IE-C7FS8LD-305M | Cat. 7 | grey | AWG27/7 | LSZH | | | 1273090000 | | |
| IE-C7FS8LB-305M | Cat. 7 | blue | AWG27/7 | LSZH | | | 1326540000 | | |
| IE-C7FS8LE-305M | Cat. 7 | black | AWG27/7 | LSZH | | | 1344690000 | | |
| IE-C7FS8LG-305M | Cat. 7 | green | AWG27/7 | LSZH | | | 1344680000 | | |
| IE-C7FS8LR-305M | Cat. 7 | red | AWG27/7 | LSZH | | | 1287910000 | | |
| IE-C7FS8LV-305M | Cat. 7 | violet | AWG27/7 | LSZH | | | 2779910000 | | |
| IE-C7FS8LM-305M | Cat. 7 | magenta | AWG27/7 | LSZH | | | 1333160000 | | |
| IE-C7FS8LO-305M | Cat. 7 | orange | AWG27/7 | LSZH | | | 2661080000 | | |
| IE-C7FS8LY-305M | Cat. 7 | yellow | AWG27/7 | LSZH | | | 1344670000 | | |
| Industrial trailing cables | | | | | | | | | |
| IE-C5ED8UG-xxx | Cat. 5 | green | AWG26/7 | PUR | 8813210000 | | | 2763490000 | 2781890000 |
| IE-C5ED8UB-xxx | Cat. 5 | blue | AWG26/7 | PUR | 8960670000 | | | 2763480000 | 2781880000 |
| IE-C5DD4UG-xxx | Cat. 5 PROFINET | green | AWG22/7 | PUR | 8899010000 | | | 2763450000 | |
| IE-C5IT4UGx | Cat. 5 PROFINET | green | AWG22/19 | PUR | 2764770000 | | | 2763520000 | |

Raw cables - Single Pair Ethernet (SPE) cable

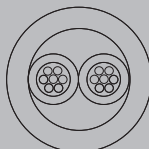
Raw cables
Single Pair Ethernet

- AWG 22

PUR



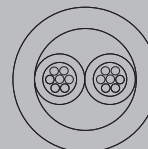
SPElink®



LSZH



SPElink®



Technical data

| | |
|-----------------------------------|--|
| Product type | System cable |
| Category | T1-B |
| Shielding | S/FTP |
| Cross-section | 1 x 2 x AWG 22/7 - 0.35 mm ² |
| Sheath diameter, max. | 5.3 mm |
| Material sheath | PUR |
| Sheathing colour | black |
| Insulation diameter | 1.7 mm |
| Min. bending radius, repetitive | 22 mm |
| Min. bending radius, once only | 22 mm |
| Ambient temperature (operational) | -40 °C...80 °C |
| Installation temperature | ... |
| Storage temperature | ... |
| Halogen | halogen-free, acc. to IEC 60754-1, halogen-free, acc. to IEC 60754-2 |
| Resistance to spread of flame | in acc. with IEC 60332-1-2 |
| Approvals | |
| Note | |

| | |
|-----------------------------------|--|
| Product type | System cable |
| Category | T1-B |
| Shielding | S/FTP |
| Cross-section | 1 x 2 x AWG 22/7 - 0.35 mm ² |
| Sheath diameter, max. | 5.1 mm |
| Material sheath | LSZH |
| Sheathing colour | black |
| Insulation diameter | 1.7 mm |
| Min. bending radius, repetitive | 22 mm |
| Min. bending radius, once only | 22 mm |
| Ambient temperature (operational) | -20 °C...60 °C |
| Installation temperature | ... |
| Storage temperature | ... |
| Halogen | halogen-free, acc. to IEC 60754-2, halogen-free, acc. to IEC 60754-1 |
| Resistance to spread of flame | in acc. with IEC 60332-1-2 |
| Approvals | |
| Note | |

| | |
|-----------------------------------|--|
| Product type | System cable |
| Category | T1-B |
| Shielding | S/FTP |
| Cross-section | 1 x 2 x AWG 22/7 - 0.35 mm ² |
| Sheath diameter, max. | 5.1 mm |
| Material sheath | LSZH |
| Sheathing colour | black |
| Insulation diameter | 1.7 mm |
| Min. bending radius, repetitive | 22 mm |
| Min. bending radius, once only | 22 mm |
| Ambient temperature (operational) | -20 °C...60 °C |
| Installation temperature | ... |
| Storage temperature | ... |
| Halogen | halogen-free, acc. to IEC 60754-2, halogen-free, acc. to IEC 60754-1 |
| Resistance to spread of flame | in acc. with IEC 60332-1-2 |
| Approvals | |
| Note | |

Ordering data

| | |
|------|---------|
| | 100.0 m |
| | 500.0 m |
| Note | |

| Type | Qty. | Order No. |
|----------------|------|------------|
| IE-S1DS2UE-100 | 1 | 2926110000 |
| IE-S1DS2UE-500 | 1 | 2924340000 |

| Type | Qty. | Order No. |
|----------------|------|------------|
| IE-S1DS2LE-100 | 1 | 2926120000 |
| IE-S1DS2LE-500 | 1 | 2924350000 |

Accessories

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

| | |
|------|--|
| Note | |
|------|--|

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|------|--|
| Note | |
|------|--|

| | |
|------|--|
| Note | |
|------|--|

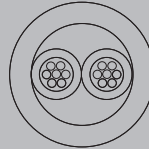
Raw cables
Single Pair Ethernet

- AWG 26

PUR



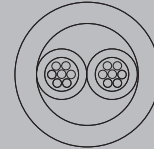
SPElink®



LSZH



SPElink®



Technical data

| | |
|-----------------------------------|--|
| Product type | System cable |
| Category | T1-B |
| Shielding | S/FTP |
| Cross-section | 1 x 2 x AWG 26/7 - 0.132 mm ² |
| Sheath diameter, max. | 4.3 mm |
| Material sheath | PUR |
| Sheathing colour | black |
| Insulation diameter | 1.15 mm |
| Min. bending radius, repetitive | 56 mm |
| Min. bending radius, once only | 28 mm |
| Ambient temperature (operational) | -40 °C...80 °C |
| Installation temperature | ... |
| Storage temperature | ... |
| Halogen | halogen-free, acc. to IEC 60754-1, halogen-free, acc. to IEC 60754-2 |
| Resistance to spread of flame | in acc. with IEC 60332-1-2 |
| Approvals | |
| Note | |

| | |
|-----------------------------------|--|
| Product type | System cable |
| Category | T1-B |
| Shielding | S/FTP |
| Cross-section | 1 x 2 x AWG 26/7 - 0.132 mm ² |
| Sheath diameter, max. | 4.3 mm |
| Material sheath | PUR |
| Sheathing colour | black |
| Insulation diameter | 1.15 mm |
| Min. bending radius, repetitive | 56 mm |
| Min. bending radius, once only | 28 mm |
| Ambient temperature (operational) | -40 °C...80 °C |
| Installation temperature | ... |
| Storage temperature | ... |
| Halogen | halogen-free, acc. to IEC 60754-1, halogen-free, acc. to IEC 60754-2 |
| Resistance to spread of flame | in acc. with IEC 60332-1-2 |
| Approvals | |
| Note | |

| | |
|-----------------------------------|--|
| Product type | System cable |
| Category | T1-B |
| Shielding | S/FTP |
| Cross-section | 1 x 2 x AWG 26/7 - 0.132 mm ² |
| Sheath diameter, max. | 3.7 mm |
| Material sheath | LSZH |
| Sheathing colour | black |
| Insulation diameter | 1.15 mm |
| Min. bending radius, repetitive | 56 mm |
| Min. bending radius, once only | 28 mm |
| Ambient temperature (operational) | -20 °C...60 °C |
| Installation temperature | ... |
| Storage temperature | ... |
| Halogen | halogen-free, acc. to IEC 60754-2, halogen-free, acc. to IEC 60754-1 |
| Resistance to spread of flame | in acc. with IEC 60332-1-2 |
| Approvals | |
| Note | |

Ordering data

| | |
|-------------|---------|
| | 100.0 m |
| | 500.0 m |
| Note | |

| Type | Qty. | Order No. |
|---------------|------|------------|
| IES1ES2UE-100 | 1 | 2926130000 |
| IES1ES2UE-500 | 1 | 2924360000 |

| Type | Qty. | Order No. |
|---------------|------|------------|
| IES1ES2LE-100 | 1 | 2926140000 |
| IES1ES2LE-500 | 1 | 2924370000 |

Accessories

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

| |
|-------------|
| Note |
|-------------|

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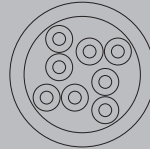
Raw cables – Installation cable

Raw cables

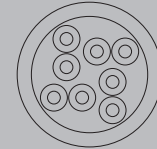
Installation cable Cat. 5

- In lengths from 100 or 500 metres

PUR



PVC



Technical data

| |
|-----------------------------------|
| Product type |
| Category |
| Shielding |
| Cross-section |
| Sheath diameter, max. |
| Material sheath |
| Sheathing colour |
| Insulation diameter |
| Min. bending radius, repetitive |
| Min. bending radius, once only |
| Ambient temperature (operational) |
| Installation temperature |
| Storage temperature |
| Abrasion resistance |
| Halogen |
| Resistance to spread of flame |
| Resistance to oils |
| Approvals |

Note

| |
|--|
| Installation cable |
| Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B) |
| SF/UTP |
| 4*2*AWG 24/1 - 4*2*0.205 mm ² |
| 6.7 mm |
| PUR |
| green (RAL 6018) |
| 1.04 mm |
| 10 x cable diameter |
| 5 x cable diameter |
| -40 °C...75 °C |
| -20 °C...60 °C |
| -40 °C...75 °C |
| very good |
| halogen-free, acc. to IEC 60754-2 |
| in acc. with IEC 60332-1, EN 13501-6 class FCa |
| in acc. with IEC 60811-2-1 |

| |
|--|
| Installation cable |
| Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B) |
| SF/UTP |
| 4*2*AWG 24/1 - 4*2*0.205 mm ² |
| 6.7 mm |
| PVC |
| green (RAL 6018) |
| 1.04 mm |
| 10 x cable diameter |
| 5 x cable diameter |
| -40 °C...80 °C |
| 0 °C...50 °C |
| -40 °C...75 °C |
| good |
| in acc. with IEC 60332-1, EN 13501-6 class ECa |
| No |

Ordering data

| |
|---------|
| 100.0 m |
| 500.0 m |

Note

| Type | Qty. | Order No. |
|----------------|------|------------|
| IE-C5CS8UG-100 | 1 | 8813160000 |
| IE-C5CS8UG-500 | 1 | 2762870000 |

| Type | Qty. | Order No. |
|----------------|------|------------|
| IE-C5CS8VG-100 | 1 | 8813150000 |
| IE-C5CS8VG-500 | 1 | 2763440000 |

Accessories

| |
|--|
| Tools |
| Sheathing strippers, For UTP and STP data cables |
| Sheathing strippers, For coaxial and round data cables |

Marking tags

| |
|--|
| Wire and cable markers. ø 4.7 - 7.4 mm |
| Wire and cable markers. ø 5.8 - 7.8 mm |
| Insertion label, yellow, 12 mm |
| Insertion label, yellow, 18 mm |
| Transparent sleeves, 12-mm length |
| Transparent sleeves, 18-mm length |

| Type | Qty. | Order No. |
|--------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |

| | | |
|------------------------|-----|------------|
| VT SF 5/21 MC NE WS VO | 160 | 1689470001 |
| VT SF 6/21 MC NE WS VO | 160 | 1730560001 |
| TM-H 12 MC NE GE | 320 | 1718411687 |
| TM-H 18 MC NE GE | 320 | 1718431687 |
| TM 4/12 HF/HB | 500 | 1719840000 |
| TM 4/18 HF/HB | 500 | 1719850000 |

| Type | Qty. | Order No. |
|--------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |

| | | |
|------------------------|-----|------------|
| VT SF 5/21 MC NE WS VO | 160 | 1689470001 |
| VT SF 6/21 MC NE WS VO | 160 | 1730560001 |
| TM-H 12 MC NE GE | 320 | 1718411687 |
| TM-H 18 MC NE GE | 320 | 1718431687 |
| TM 4/12 HF/HB | 500 | 1719840000 |
| TM 4/18 HF/HB | 500 | 1719850000 |

Note

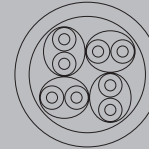
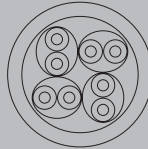
Raw cables

Installation cable Cat. 7

- In lengths from 100 or 500 metres

PUR

PVC



Technical data

| | |
|-----------------------------------|--|
| Product type | Installation cable |
| Category | Cat.7 (ISO/IEC 11801) |
| Shielding | S/FTP |
| Cross-section | 4*2*AWG 23/1 - 4*2*0.255 mm ² |
| Sheath diameter, max. | 8 mm |
| Material sheath | PUR |
| Sheathing colour | green (RAL 6018) |
| Insulation diameter | 1.4 mm |
| Min. bending radius, repetitive | 8 x cable diameter |
| Min. bending radius, once only | 4 x cable diameter |
| Ambient temperature (operational) | -40 °C...75 °C |
| Installation temperature | -20 °C...60 °C |
| Storage temperature | -40 °C...75 °C |
| Abrasion resistance | very good |
| Halogen | halogen-free, acc. to IEC 60754-2 |
| Resistance to spread of flame | in acc. with IEC 60332-1, EN 13501-6 class FCa |
| Resistance to oils | in acc. with IEC 60811-2-1 |
| Approvals | CE |
| Note | |

| | |
|-----------------------------------|--|
| Product type | Installation cable |
| Category | Cat.7 (ISO/IEC 11801) |
| Shielding | S/FTP |
| Cross-section | 4*2*AWG 23/1 - 4*2*0.255 mm ² |
| Sheath diameter, max. | 8 mm |
| Material sheath | PVC |
| Sheathing colour | green (RAL 6018) |
| Insulation diameter | 1.4 mm |
| Min. bending radius, repetitive | 8 x cable diameter |
| Min. bending radius, once only | 4 x cable diameter |
| Ambient temperature (operational) | -40 °C...75 °C |
| Installation temperature | 0 °C...50 °C |
| Storage temperature | -40 °C...75 °C |
| Abrasion resistance | good |
| Halogen | halogen-free, acc. to IEC 60754-2 |
| Resistance to spread of flame | in acc. with IEC 60332-1, EN 13501-6 class FCa |
| Resistance to oils | in acc. with IEC 60811-2-1 |
| Approvals | CE |
| Note | |

| | |
|-----------------------------------|--|
| Product type | Installation cable |
| Category | Cat.7 (ISO/IEC 11801) |
| Shielding | S/FTP |
| Cross-section | 4*2*AWG 23/1 - 4*2*0.255 mm ² |
| Sheath diameter, max. | 8 mm |
| Material sheath | PVC |
| Sheathing colour | green (RAL 6018) |
| Insulation diameter | 1.4 mm |
| Min. bending radius, repetitive | 8 x cable diameter |
| Min. bending radius, once only | 4 x cable diameter |
| Ambient temperature (operational) | -40 °C...75 °C |
| Installation temperature | 0 °C...50 °C |
| Storage temperature | -40 °C...75 °C |
| Abrasion resistance | good |
| Halogen | halogen-free, acc. to IEC 60754-2 |
| Resistance to spread of flame | in acc. with IEC 60332-1, EN 13501-6 class FCa |
| Resistance to oils | in acc. with IEC 60811-2-1 |
| Approvals | CE |
| Note | |

Ordering data

| | |
|-------------|---------|
| | 100.0 m |
| | 500.0 m |
| Note | |

| Type | Qty. | Order No. |
|----------------|------|------------|
| IE-C7BS8UG-100 | 1 | 8813140000 |
| IE-C7BS8UG-500 | 1 | 2763530000 |

| Type | Qty. | Order No. |
|----------------|------|------------|
| IE-C7BS8VG-100 | 1 | 8813130000 |
| IE-C7BS8VG-500 | 1 | 2763540000 |

Accessories

| | |
|---------------------|--|
| Tools | |
| | Sheathing strippers, For UTP and STP data cables |
| | Sheathing strippers, For coaxial and round data cables |
| Marking tags | |
| | Wire and cable markers. ø 4.7 - 7.4 mm |
| | Wire and cable markers. ø 5.8 - 7.8 mm |
| | Insertion label, yellow, 12 mm |
| | Insertion label, yellow, 18 mm |
| | Transparent sleeves, 12-mm length |
| | Transparent sleeves, 18-mm length |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |
| VT SF 5/21 MC NE WS VO | 160 | 1689470001 |
| VT SF 6/21 MC NE WS VO | 160 | 1730560001 |
| TM-H 12 MC NE GE | 320 | 1718411687 |
| TM-H 18 MC NE GE | 320 | 1718431687 |
| TM 4/12 HF/HB | 500 | 1719840000 |
| TM 4/18 HF/HB | 500 | 1719850000 |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |
| VT SF 5/21 MC NE WS VO | 160 | 1689470001 |
| VT SF 6/21 MC NE WS VO | 160 | 1730560001 |
| TM-H 12 MC NE GE | 320 | 1718411687 |
| TM-H 18 MC NE GE | 320 | 1718431687 |
| TM 4/12 HF/HB | 500 | 1719840000 |
| TM 4/18 HF/HB | 500 | 1719850000 |

| | |
|-------------|--|
| Note | |
|-------------|--|

| | |
|-------------|--|
| Note | |
|-------------|--|

| | |
|-------------|--|
| Note | |
|-------------|--|

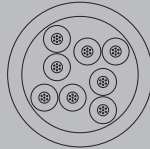
Raw cables – Connection cable

Raw cables

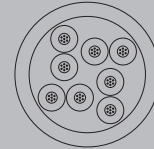
Connecting cable Cat. 5

- In lengths from 100 or 500 metres

PUR



PVC



Technical data

| |
|-----------------------------------|
| Product type |
| Category |
| Shielding |
| Cross-section |
| Sheath diameter, max. |
| Material sheath |
| Sheathing colour |
| Insulation diameter |
| Min. bending radius, repetitive |
| Min. bending radius, once only |
| Ambient temperature (operational) |
| Installation temperature |
| Storage temperature |
| Abrasion resistance |
| Halogen |
| Resistance to spread of flame |
| Resistance to oils |
| Standard, assembly |
| Approvals |

Note

| |
|---|
| System cable |
| Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B) |
| SF/UTP |
| 4*2*AWG 26/7 - 4*2*0.128 mm ² |
| 6.3 mm |
| PUR |
| green (RAL 6018) |
| 1 mm |
| 10 x cable diameter |
| 4 x cable diameter |
| -40 °C...75 °C |
| -10 °C...60 °C |
| -40 °C...75 °C |
| very good |
| halogen-free, acc. to IEC 60754-2 |
| in acc. with IEC 60332-1 |
| in acc. with IEC 60811-2-1 |
| UL-Style 20963 (80°C/30V) |

| |
|---|
| System cable |
| Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B) |
| SF/UTP |
| 4*2*AWG 26/7 - 4*2*0.128 mm ² |
| 6.1 mm |
| PVC |
| green (RAL 6018) |
| 1 mm |
| 10 x cable diameter |
| 5 x cable diameter |
| -40 °C...75 °C |
| 0 °C...50 °C |
| -40 °C...75 °C |
| good |

in acc. with IEC 60332-1

Ordering data

100.0 m
500.0 m

Note

| Type | Qty. | Order No. |
|----------------|------|------------|
| IE-C5ES8UG-100 | 1 | 8813200000 |
| IE-C5ES8UG-500 | 1 | 2763500000 |

| Type | Qty. | Order No. |
|----------------|------|------------|
| IE-C5ES8VG-100 | 1 | 8813190000 |
| IE-C5ES8VG-500 | 1 | 2763510000 |

Accessories

| Tools | |
|--|--|
| Sheathing strippers, For UTP and STP data cables | |
| Sheathing strippers, For coaxial and round data cables | |
| Marking tags | |
| Wire and cable markers. ø 4.7 - 7.4 mm | |
| Wire and cable markers. ø 5.8 - 7.8 mm | |
| Insertion label, yellow, 12 mm | |
| Insertion label, yellow, 18 mm | |
| Transparent sleeves, 12-mm length | |
| Transparent sleeves, 18-mm length | |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |
| VT SF 5/21 MC NE WS VO | 160 | 1689470001 |
| VT SF 6/21 MC NE WS VO | 160 | 1730560001 |
| TM-H 12 MC NE GE | 320 | 1718411687 |
| TM-H 18 MC NE GE | 320 | 1718431687 |
| TM 4/12 HF/HB | 500 | 1719840000 |
| TM 4/18 HF/HB | 500 | 1719850000 |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |
| VT SF 5/21 MC NE WS VO | 160 | 1689470001 |
| VT SF 6/21 MC NE WS VO | 160 | 1730560001 |
| TM-H 12 MC NE GE | 320 | 1718411687 |
| TM-H 18 MC NE GE | 320 | 1718431687 |
| TM 4/12 HF/HB | 500 | 1719840000 |
| TM 4/18 HF/HB | 500 | 1719850000 |

Note

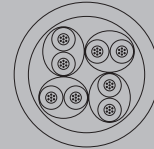
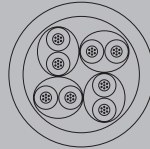
Raw cables

Connecting cable Cat. 7

- In lengths from 100 or 500 metres

PUR

PVC



Technical data

| | |
|-----------------------------------|--|
| Product type | System cable |
| Category | Cat.7 (ISO/IEC 11801) |
| Shielding | S/FTP |
| Cross-section | 4*2*AWG 26/7 - 4*2*0.128 mm ² |
| Sheath diameter, max. | 6.5 mm |
| Material sheath | PUR |
| Sheathing colour | green (RAL 6018) |
| Insulation diameter | 1.04 mm |
| Min. bending radius, repetitive | 10 x cable diameter |
| Min. bending radius, once only | 5 x cable diameter |
| Ambient temperature (operational) | -40 °C...80 °C |
| Installation temperature | -15 °C...60 °C |
| Storage temperature | -40 °C...80 °C |
| Abrasion resistance | very good |
| Halogen | halogen-free, acc. to IEC 60754-2 |
| Resistance to spread of flame | in acc. with IEC 60332-1 |
| Resistance to oils | in acc. with IEC 60811-2-1 |
| Standard, assembly | UL-Style 20963 (80°C/30V) |
| Approvals | CE |
| Note | |

| | |
|-----------------------------------|--|
| Product type | System cable |
| Category | Cat.7 (ISO/IEC 11801) |
| Shielding | S/FTP |
| Cross-section | 4*2*AWG 26/7 - 4*2*0.128 mm ² |
| Sheath diameter, max. | 6.5 mm |
| Material sheath | PVC |
| Sheathing colour | green (RAL 6018) |
| Insulation diameter | 1.04 mm |
| Min. bending radius, repetitive | 10 x cable diameter |
| Min. bending radius, once only | 5 x cable diameter |
| Ambient temperature (operational) | -40 °C...75 °C |
| Installation temperature | 0 °C...50 °C |
| Storage temperature | -40 °C...75 °C |
| Abrasion resistance | good |
| Halogen | |
| Resistance to spread of flame | in acc. with IEC 60332-1 |
| Resistance to oils | |
| Standard, assembly | UL-Style 2879 (80°C/30V) |
| Approvals | CE |
| Note | |

| | |
|-----------------------------------|--|
| Product type | System cable |
| Category | Cat.7 (ISO/IEC 11801) |
| Shielding | S/FTP |
| Cross-section | 4*2*AWG 26/7 - 4*2*0.128 mm ² |
| Sheath diameter, max. | 6.5 mm |
| Material sheath | PVC |
| Sheathing colour | green (RAL 6018) |
| Insulation diameter | 1.04 mm |
| Min. bending radius, repetitive | 10 x cable diameter |
| Min. bending radius, once only | 5 x cable diameter |
| Ambient temperature (operational) | -40 °C...75 °C |
| Installation temperature | 0 °C...50 °C |
| Storage temperature | -40 °C...75 °C |
| Abrasion resistance | good |
| Halogen | |
| Resistance to spread of flame | in acc. with IEC 60332-1 |
| Resistance to oils | |
| Standard, assembly | UL-Style 2879 (80°C/30V) |
| Approvals | CE |
| Note | |

Ordering data

| | |
|-------------|---------|
| | 100.0 m |
| | 500.0 m |
| Note | |

| Type | Qty. | Order No. |
|----------------|------|------------|
| IE-C7ES8UG-100 | 1 | 8813180000 |
| IE-C7ES8UG-500 | 1 | 2763550000 |

| Type | Qty. | Order No. |
|----------------|------|------------|
| IE-C7ES8VG-100 | 1 | 8813170000 |
| IE-C7ES8VG-500 | 1 | 2763560000 |

Accessories

| Tools |
|--|
| Sheathing strippers, For UTP and STP data cables |
| Sheathing strippers, For coaxial and round data cables |
| Marking tags |
| Wire and cable markers. ø 4.7 - 7.4 mm |
| Wire and cable markers. ø 5.8 - 7.8 mm |
| Insertion label, yellow, 12 mm |
| Insertion label, yellow, 18 mm |
| Transparent sleeves, 12-mm length |
| Transparent sleeves, 18-mm length |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |
| VT SF 5/21 MC NE WS VO | 160 | 1689470001 |
| VT SF 6/21 MC NE WS VO | 160 | 1730560001 |
| TM-H 12 MC NE GE | 320 | 1718411687 |
| TM-H 18 MC NE GE | 320 | 1718431687 |
| TM 4/12 HF/HB | 500 | 1719840000 |
| TM 4/18 HF/HB | 500 | 1719850000 |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |
| VT SF 5/21 MC NE WS VO | 160 | 1689470001 |
| VT SF 6/21 MC NE WS VO | 160 | 1730560001 |
| TM-H 12 MC NE GE | 320 | 1718411687 |
| TM-H 18 MC NE GE | 320 | 1718431687 |
| TM 4/12 HF/HB | 500 | 1719840000 |
| TM 4/18 HF/HB | 500 | 1719850000 |

| |
|-------------|
| Note |
|-------------|

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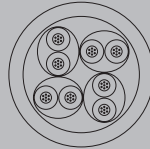
Raw cables – Connection cable

Raw cables

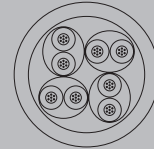
Connecting cable Cat. 7

- 305 m / 1,000 ft

LSZH grey



LSZH blue



Technical data

| |
|-----------------------------------|
| Product type |
| Category |
| Shielding |
| Cross-section |
| Sheath diameter |
| Material sheath |
| Sheathing colour |
| Insulation diameter |
| Min. bending radius, repetitive |
| Min. bending radius, once only |
| Ambient temperature (operational) |
| Installation temperature |
| Halogen |
| Resistance to spread of flame |
| Resistance to oils |
| Approvals |

Note

| |
|--|
| System cable |
| Cat.7 (ISO/IEC 11801) |
| S/FTP |
| 4*2*AWG 27/7 - 4*2*0.1 mm ² |
| 6.0 mm |
| LSZH |
| light grey (RAL 7035) |
| 1 mm |

| |
|--------------------------|
| 5 x cable diameter |
| -20 °C...60 °C |
| 0 °C...50 °C |
| No |
| in acc. with IEC 60332-1 |

CCLINK; CE; CULUS

| |
|--|
| System cable |
| Cat.7 (ISO/IEC 11801) |
| S/FTP |
| 4*2*AWG 27/7 - 4*2*0.1 mm ² |
| 6.0 mm |
| LSZH |
| blue (RAL 5015) |
| 1 mm |

| |
|--------------------------|
| 5 x cable diameter |
| -20 °C...60 °C |
| 0 °C...50 °C |
| No |
| in acc. with IEC 60332-1 |

CCLINK; CE; CULUS

Ordering data

305 m / 1000 ft

Note

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-C7FS8LD-305M | 1 | 1273090000 |

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-C7FS8LB-305M | 1 | 1326540000 |

Accessories

| Tools |
|--|
| Sheathing strippers, For UTP and STP data cables |
| Sheathing strippers, For coaxial and round data cables |

Marking tags

| |
|--|
| Wire and cable markers. ø 4.7 - 7.4 mm |
| Wire and cable markers. ø 5.8 - 7.8 mm |
| Insertion label, yellow. 12 mm |
| Insertion label, yellow. 18 mm |
| Transparent sleeves. 12-mm length |
| Transparent sleeves. 18-mm length |

| Type | Qty. | Order No. |
|--------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |

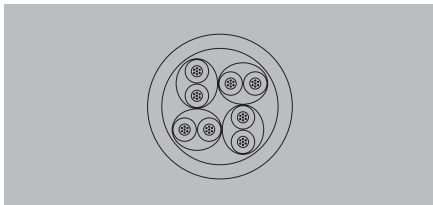
| | | |
|------------------------|-----|------------|
| VT SF 5/21 MC NE WS VO | 160 | 1689470001 |
| VT SF 6/21 MC NE WS VO | 160 | 1730560001 |
| TM-H 12 MC NE GE | 320 | 1718411687 |
| TM-H 18 MC NE GE | 320 | 1718431687 |
| TM 4/12 HF/HB | 500 | 1719840000 |
| TM 4/18 HF/HB | 500 | 1719850000 |

| Type | Qty. | Order No. |
|--------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |

| | | |
|------------------------|-----|------------|
| VT SF 5/21 MC NE WS VO | 160 | 1689470001 |
| VT SF 6/21 MC NE WS VO | 160 | 1730560001 |
| TM-H 12 MC NE GE | 320 | 1718411687 |
| TM-H 18 MC NE GE | 320 | 1718431687 |
| TM 4/12 HF/HB | 500 | 1719840000 |
| TM 4/18 HF/HB | 500 | 1719850000 |

Note

LSZH black

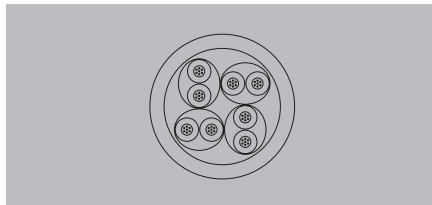


| |
|--|
| System cable |
| Cat.7 (ISO/IEC 11801) |
| S/FTP |
| 4*2*AWG 27/7 - 4*2*0.1 mm ² |
| 6.0 mm |
| LSZH |
| black |
| 1 mm |
| 5 x cable diameter |
| -20 °C...60 °C |
| 0 °C...50 °C |
| No |
| in acc. with IEC 60332-1 |
| CCLINK; CE; CULUS |

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-C7FS8LE-305M | 1 | 1344690000 |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |
| VT SF 5/21 MC NE WS VO | 160 | 1689470001 |
| VT SF 6/21 MC NE WS VO | 160 | 1730560001 |
| TMH 12 MC NE GE | 320 | 1718411687 |
| TMH 18 MC NE GE | 320 | 1718431687 |
| TM 4/12 HF/HB | 500 | 1719840000 |
| TM 4/18 HF/HB | 500 | 1719850000 |

LSZH green

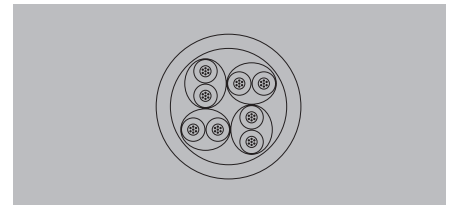


| |
|--|
| System cable |
| Cat.7 (ISO/IEC 11801) |
| S/FTP |
| 4*2*AWG 27/7 - 4*2*0.1 mm ² |
| 6.0 mm |
| LSZH |
| green |
| 1 mm |
| 5 x cable diameter |
| -20 °C...60 °C |
| 0 °C...50 °C |
| No |
| in acc. with IEC 60332-1 |
| CCLINK; CE; CULUS |

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-C7FS8LG-305M | 1 | 1344680000 |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |
| VT SF 5/21 MC NE WS VO | 160 | 1689470001 |
| VT SF 6/21 MC NE WS VO | 160 | 1730560001 |
| TMH 12 MC NE GE | 320 | 1718411687 |
| TMH 18 MC NE GE | 320 | 1718431687 |
| TM 4/12 HF/HB | 500 | 1719840000 |
| TM 4/18 HF/HB | 500 | 1719850000 |

LSZH red



| |
|--|
| System cable |
| Cat.7 (ISO/IEC 11801) |
| S/FTP |
| 4*2*AWG 27/7 - 4*2*0.1 mm ² |
| 6.0 mm |
| LSZH |
| red |
| 1 mm |
| 5 x cable diameter |
| -20 °C...60 °C |
| 0 °C...50 °C |
| No |
| in acc. with IEC 60332-1 |
| CCLINK; CE; CULUS |

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-C7FS8LR-305M | 1 | 1287910000 |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |
| VT SF 5/21 MC NE WS VO | 160 | 1689470001 |
| VT SF 6/21 MC NE WS VO | 160 | 1730560001 |
| TMH 12 MC NE GE | 320 | 1718411687 |
| TMH 18 MC NE GE | 320 | 1718431687 |
| TM 4/12 HF/HB | 500 | 1719840000 |
| TM 4/18 HF/HB | 500 | 1719850000 |

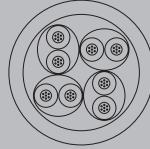
Raw cables – Connection cable

Raw cables

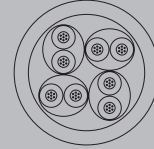
Connecting cable Cat. 7

- 305 m / 1,000 ft

LSZH magenta



LSZH violet



Technical data

| |
|-----------------------------------|
| Product type |
| Category |
| Shielding |
| Cross-section |
| Sheath diameter |
| Material sheath |
| Sheathing colour |
| Insulation diameter |
| Min. bending radius, repetitive |
| Min. bending radius, once only |
| Ambient temperature (operational) |
| Installation temperature |
| Halogen |
| Resistance to spread of flame |
| Resistance to oils |
| Approvals |

Note

| |
|--|
| System cable |
| Cat.7 (ISO/IEC 11801) |
| S/FTP |
| 4*2*AWG 27/7 - 4*2*0.1 mm ² |
| 6.0 mm |
| LSZH |
| Magenta |
| 1 mm |

| |
|--------------------------|
| 5 x cable diameter |
| -20 °C...60 °C |
| 0 °C...50 °C |
| No |
| in acc. with IEC 60332-1 |

CCLINK; CE; CULUS

| |
|--|
| System cable |
| Cat.7 (ISO/IEC 11801) |
| S/FTP |
| 4*2*AWG 27/7 - 4*2*0.1 mm ² |
| 6.0 mm |
| LSZH |
| violet |
| 1 mm |

| |
|--------------------------|
| 5 x cable diameter |
| -20 °C...60 °C |
| 0 °C...50 °C |
| No |
| in acc. with IEC 60332-1 |

CULUS

Ordering data

305 m / 1000 ft

Note

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-C7FS8LM-305M | 1 | 1333160000 |

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-C7FP8LV-305M | 1 | 2779910000 |

Accessories

Tools

| |
|--|
| Sheathing strippers, For UTP and STP data cables |
| Sheathing strippers, For coaxial and round data cables |

Marking tags

| |
|--|
| Insertion label, yellow, 12 mm |
| Insertion label, yellow, 18 mm |
| Transparent sleeves, 12-mm length |
| Transparent sleeves, 18-mm length |
| Wire and cable markers, ø 4.7 - 7.4 mm |
| Wire and cable markers, ø 5.8 - 7.8 mm |

| Type | Qty. | Order No. |
|--------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |

| | | |
|------------------------|-----|------------|
| TMH 12 MC NE GE | 320 | 1718411687 |
| TMH 18 MC NE GE | 320 | 1718431687 |
| TM 4/12 HF/HB | 500 | 1719840000 |
| TM 4/18 HF/HB | 500 | 1719850000 |
| VT SF 5/21 MC NE WS VO | 160 | 1689470001 |
| VT SF 6/21 MC NE WS VO | 160 | 1730560001 |

| Type | Qty. | Order No. |
|--------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |

| | | |
|------------------------|-----|------------|
| TMH 12 MC NE GE | 320 | 1718411687 |
| TMH 18 MC NE GE | 320 | 1718431687 |
| TM 4/12 HF/HB | 500 | 1719840000 |
| TM 4/18 HF/HB | 500 | 1719850000 |
| VT SF 5/21 MC NE WS VO | 160 | 1689470001 |
| VT SF 6/21 MC NE WS VO | 160 | 1730560001 |

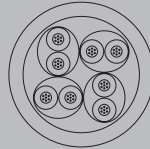
Note

Raw cables

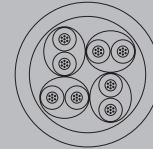
Connecting cable Cat. 7

- 305 m / 1,000 ft

LSZH yellow



LZSH orange



Technical data

| | |
|-----------------------------------|--|
| Product type | System cable |
| Category | Cat.7 (ISO/IEC 11801) |
| Shielding | S/FTP |
| Cross-section | 4*2*AWG 27/7 - 4*2*0.1 mm ² |
| Sheath diameter | 6.0 mm |
| Material sheath | LSZH |
| Sheathing colour | yellow |
| Insulation diameter | 1 mm |
| Min. bending radius, repetitive | 5 x cable diameter |
| Min. bending radius, once only | -20 °C...60 °C |
| Ambient temperature (operational) | 0 °C...50 °C |
| Installation temperature | No |
| Halogen | in acc. with IEC 60332-1 |
| Resistance to spread of flame | CCLINK; CE; CULUS |
| Resistance to oils | |
| Approvals | |
| Note | |

| | |
|-----------------------------------|--|
| Product type | System cable |
| Category | Cat.7 (ISO/IEC 11801) |
| Shielding | S/FTP |
| Cross-section | 4*2*AWG 27/7 - 4*2*0.1 mm ² |
| Sheath diameter | 6.0 mm |
| Material sheath | LSZH |
| Sheathing colour | orange |
| Insulation diameter | 1 mm |
| Min. bending radius, repetitive | 5 x cable diameter |
| Min. bending radius, once only | -20 °C...60 °C |
| Ambient temperature (operational) | 0 °C...50 °C |
| Installation temperature | No |
| Halogen | in acc. with IEC 60332-1 |
| Resistance to spread of flame | CCLINK; CE; CULUS |
| Resistance to oils | |
| Approvals | |
| Note | |

| | |
|-----------------------------------|--|
| Product type | System cable |
| Category | Cat.7 (ISO/IEC 11801) |
| Shielding | S/FTP |
| Cross-section | 4*2*AWG 27/7 - 4*2*0.1 mm ² |
| Sheath diameter | 6.0 mm |
| Material sheath | LSZH |
| Sheathing colour | orange |
| Insulation diameter | 1 mm |
| Min. bending radius, repetitive | 5 x cable diameter |
| Min. bending radius, once only | -20 °C...60 °C |
| Ambient temperature (operational) | 0 °C...50 °C |
| Installation temperature | No |
| Halogen | in acc. with IEC 60332-1 |
| Resistance to spread of flame | CCLINK; CE; CULUS |
| Resistance to oils | |
| Approvals | |
| Note | |

Ordering data

| | |
|-------------|-----------------|
| | 305 m / 1000 ft |
| Note | |

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-C7FS8LY-305M | 1 | 1344670000 |

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-C7FS8LO-305M | 1 | 2661080000 |

Accessories

| Tools | |
|--|--|
| Sheathing strippers, For UTP and STP data cables | |
| Sheathing strippers, For coaxial and round data cables | |
| Marking tags | |
| Insertion label, yellow, 12 mm | |
| Insertion label, yellow, 18 mm | |
| Transparent sleeves, 12-mm length | |
| Transparent sleeves, 18-mm length | |
| Wire and cable markers, ø 4.7 - 7.4 mm | |
| Wire and cable markers, ø 5.8 - 7.8 mm | |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |
| TM-H 12 MC NE GE | 320 | 1718411687 |
| TM-H 18 MC NE GE | 320 | 1718431687 |
| TM 4/12 HF/HB | 500 | 1719840000 |
| TM 4/18 HF/HB | 500 | 1719850000 |
| VT SF 5/21 MC NE WS VO | 160 | 1689470001 |
| VT SF 6/21 MC NE WS VO | 160 | 1730560001 |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |
| TM-H 12 MC NE GE | 320 | 1718411687 |
| TM-H 18 MC NE GE | 320 | 1718431687 |
| TM 4/12 HF/HB | 500 | 1719840000 |
| TM 4/18 HF/HB | 500 | 1719850000 |
| VT SF 5/21 MC NE WS VO | 160 | 1689470001 |
| VT SF 6/21 MC NE WS VO | 160 | 1730560001 |

| |
|-------------|
| Note |
|-------------|

| |
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| Note |
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| |
|-------------|
| Note |
|-------------|

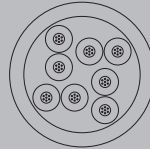
Raw cables – Dragline cable

Raw cables

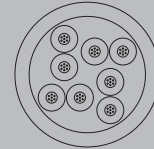
Dragline cable Cat. 5

- In lengths from 100, 500 or 1000 metres

PUR green



PUR blue



Technical data

| | PUR green | PUR blue |
|-----------------------------------|---|---|
| Product type | Dragline cable | Dragline cable |
| Category | Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B) | Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B) |
| Shielding | SF/UTP | SF/UTP |
| Cross-section | 4*2*AWG 26/7 - 4*2*0.128 mm ² | 4*2*AWG 26/7 - 4*2*0.128 mm ² |
| Sheath diameter, max. | 6.8 mm | 6.8 mm |
| Material sheath | PUR | PUR |
| Sheathing colour | green (RAL 6018) | blue (RAL 5015) |
| Insulation diameter | 0.95 mm | 0.95 mm |
| Min. bending radius, repetitive | 60 mm | 60 mm |
| Min. bending radius, once only | | |
| Bending cycles | 5 Mio | 5 Mio |
| Ambient temperature (operational) | -40 °C...80 °C | -40 °C...80 °C |
| Installation temperature | -40 °C...80 °C | -40 °C...80 °C |
| Storage temperature | -40 °C...80 °C | -40 °C...80 °C |
| Abrasion resistance | very good | very good |
| Halogen | halogen-free, acc. to IEC 60754-2 | halogen-free, acc. to IEC 60754-2 |
| Resistance to spread of flame | in acc. with IEC 60332-1 | in acc. with IEC 60332-1 |
| Resistance to oils | in acc. with IEC 60811-2-1 | in acc. with IEC 60811-2-1 |
| Standard, assembly | UL-Style 20963 (80°C/30V) | UL-Style 20963 (80°C/30V) |
| Approvals | | |
| Note | | |

Ordering data

| | Type | Qty. | Order No. |
|-------------|-----------------|------|------------|
| 100.0 m | IE-C5ED8UG-100 | 1 | 8813210000 |
| 500.0 m | IE-C5ED8UG-500 | 1 | 2763490000 |
| 1000.0 m | IE-C5ED8UG-1000 | 1 | 2781890000 |
| Note | | | |

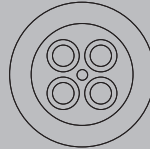
Accessories

| Tools | Type | Qty. | Order No. |
|--|------------------------|------|------------|
| Sheathing strippers, For UTP and STP data cables | AM 12 | 1 | 9030060000 |
| Sheathing strippers, For coaxial and round data cables | IE-CST | 1 | 9204350000 |
| Marking tags | | | |
| Wire and cable markers. ø 4.7 - 7.4 mm | VT SF 5/21 MC NE WS VO | 160 | 1689470001 |
| Wire and cable markers. ø 5.8 - 7.8 mm | VT SF 6/21 MC NE WS VO | 160 | 1730560001 |
| Insertion label, yellow, 12 mm | TM-H 12 MC NE GE | 320 | 1718411687 |
| Insertion label, yellow, 18 mm | TM-H 18 MC NE GE | 320 | 1718431687 |
| Transparent sleeves, 12-mm length | TM 4/12 HF/HB | 500 | 1719840000 |
| Transparent sleeves, 18-mm length | TM 4/18 HF/HB | 500 | 1719850000 |
| Note | | | |

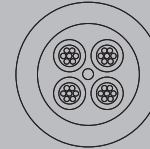
Raw cables
PROFINET cable

- In lengths from 100 or 500 metres

Installation cable type A, PVC



Connection cable type B, PVC



Technical data

| | |
|-----------------------------------|---|
| Product type | Installation cable |
| Category | Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B) |
| Shielding | SF/UTP |
| Cross-section | 4*AWG 22/1 - 0.33 mm ² |
| Sheath diameter, max. | 6.7 mm |
| Material sheath | PVC |
| Sheathing colour | green (RAL 6018) |
| Insulation diameter | 1.5 mm |
| Min. bending radius, repetitive | 8 x cable diameter |
| Min. bending radius, once only | 4 x cable diameter |
| Ambient temperature (operational) | -40 °C...80 °C |
| Installation temperature | -40 °C...80 °C |
| Storage temperature | -40 °C...80 °C |
| Abrasion resistance | good |
| Resistance to spread of flame | in acc. with IEC 60332-1 / UL 1685 |
| Standard, assembly | UL-Style 21694 |
| Approvals | |
| Note | |

| | |
|-----------------------------------|---|
| Product type | System cable |
| Category | Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B) |
| Shielding | SF/UTP |
| Cross-section | 4*AWG 22/7 - 0.32 mm ² |
| Sheath diameter, max. | 6.7 mm |
| Material sheath | PVC |
| Sheathing colour | green (RAL 6018) |
| Insulation diameter | 1.56 mm |
| Min. bending radius, repetitive | 7.5 x cable diameter |
| Min. bending radius, once only | 3.5 * diameter |
| Ambient temperature (operational) | -40 °C...80 °C |
| Installation temperature | -40 °C...80 °C |
| Storage temperature | -40 °C...80 °C |
| Abrasion resistance | good |
| Resistance to spread of flame | in acc. with IEC 60332-1 / UL 1685 |
| Standard, assembly | UL-Style 21694 |
| Approvals | |
| Note | |

| | |
|-----------------------------------|---|
| Product type | System cable |
| Category | Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B) |
| Shielding | SF/UTP |
| Cross-section | 4*AWG 22/7 - 0.32 mm ² |
| Sheath diameter, max. | 6.7 mm |
| Material sheath | PVC |
| Sheathing colour | green (RAL 6018) |
| Insulation diameter | 1.56 mm |
| Min. bending radius, repetitive | 7.5 x cable diameter |
| Min. bending radius, once only | 3.5 * diameter |
| Ambient temperature (operational) | -40 °C...80 °C |
| Installation temperature | -40 °C...80 °C |
| Storage temperature | -40 °C...80 °C |
| Abrasion resistance | good |
| Resistance to spread of flame | in acc. with IEC 60332-1 / UL 1685 |
| Standard, assembly | UL-Style 21694 |
| Approvals | |
| Note | |

Ordering data

| | |
|-------------|---------|
| | 100.0 m |
| | 500.0 m |
| Note | |

| Type | Qty. | Order No. |
|----------------|------|------------|
| IE-C5AS4VG-100 | 1 | 8899000000 |
| IE-C5AS4VG-500 | 1 | 2763430000 |

| Type | Qty. | Order No. |
|----------------|------|------------|
| IE-C5DS4VG-100 | 1 | 8898990000 |
| IE-C5DS4VG-500 | 1 | 2763470000 |

Accessories

| | |
|--|--|
| Tools | |
| Sheathing strippers, For UTP and STP data cables | |
| Sheathing strippers, For coaxial and round data cables | |
| Marking tags | |
| Wire and cable markers. ø 4.7 - 7.4 mm | |
| Wire and cable markers. ø 5.8 - 7.8 mm | |
| Insertion label, yellow, 12 mm | |
| Insertion label, yellow, 18 mm | |
| Transparent sleeves, 12-mm length | |
| Transparent sleeves, 18-mm length | |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |
| VT SF 5/21 MC NE WS VO | 160 | 1689470001 |
| VT SF 6/21 MC NE WS VO | 160 | 1730560001 |
| TM-H 12 MC NE GE | 320 | 1718411687 |
| TM-H 18 MC NE GE | 320 | 1718431687 |
| TM 4/12 HF/HB | 500 | 1719840000 |
| TM 4/18 HF/HB | 500 | 1719850000 |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |
| VT SF 5/21 MC NE WS VO | 160 | 1689470001 |
| VT SF 6/21 MC NE WS VO | 160 | 1730560001 |
| TM-H 12 MC NE GE | 320 | 1718411687 |
| TM-H 18 MC NE GE | 320 | 1718431687 |
| TM 4/12 HF/HB | 500 | 1719840000 |
| TM 4/18 HF/HB | 500 | 1719850000 |

| | |
|-------------|--|
| Note | |
|-------------|--|

| | |
|-------------|--|
| Note | |
|-------------|--|

| | |
|-------------|--|
| Note | |
|-------------|--|

Raw cables – PROFINET cable

Raw cables

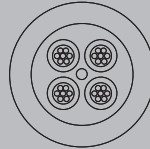
PROFINET cable

- In lengths from 100 or 500 metres

Dragline cable type C, PUR



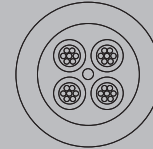
sercos
the automation bus



Torsion cable type C, PUR



sercos
the automation bus



Technical data

| |
|-----------------------------------|
| Product type |
| Category |
| Shielding |
| Cross-section |
| Sheath diameter, max. |
| Material sheath |
| Sheathing colour |
| Insulation diameter |
| Min. bending radius, repetitive |
| Min. bending radius, once only |
| Bending cycles |
| Torsion cycles |
| Torsion resistance |
| Ambient temperature (operational) |
| Installation temperature |
| Storage temperature |
| Abrasion resistance |
| Halogen |
| Resistance to spread of flame |
| Resistance to oils |
| Standard, assembly |
| Approvals |

Note

| |
|---|
| Dragline cable |
| Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B) |
| SF/UTP |
| 4*AWG 22/7 - 0.32 mm ² |
| 6.7 mm |
| PUR |
| green (RAL 6018) |
| 1.51 mm |
| 7.5 x cable diameter |
| 5 x cable diameter |
| 3 Mio |
| |
| -40 °C...70 °C |
| -20 °C...60 °C |
| -50 °C...70 °C |
| very good |
| halogen-free, acc. to IEC 60754-2 |
| in acc. with IEC 60332-1 |
| in acc. with IEC 60811-2-1 |

| |
|---|
| Torsion cable |
| Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B) |
| S/UTP |
| 4*AWG 22/19 - 0.38 mm ² |
| 6.7 mm |
| PUR |
| green (RAL 6018) |
| 1.5 mm |
| 10 x cable diameter |
| 5 x cable diameter |
| 1 mill. |
| 180 °/m |
| -40 °C...80 °C |
| -40 °C...80 °C |
| -40 °C...80 °C |
| very good |
| halogen-free, acc. to IEC 60754-2 |
| in acc. with IEC 60332-1 |
| in acc. with IEC 60811-2-1 |
| UL Style 21161 |

Ordering data

| Cat. 5 PROFINET. PUR | |
|----------------------|---------|
| | 100.0 m |
| | 500.0 m |

Note

| Type | Qty. | Order No. |
|----------------|------|------------|
| IE-C5DD4UG-100 | 1 | 8899010000 |
| IE-C5DD4UG-500 | 1 | 2763450000 |

| Type | Qty. | Order No. |
|----------------|------|------------|
| IE-C5IT4UG-100 | 1 | 2764770000 |
| IE-C5IT4UG-500 | 1 | 2763520000 |

Accessories

| Tools | |
|--|--|
| Sheathing strippers, For UTP and STP data cables | |
| Sheathing strippers, For coaxial and round data cables | |

| Marking tags | |
|--|--|
| Wire and cable markers. ø 4.7 - 7.4 mm | |
| Wire and cable markers. ø 5.8 - 7.8 mm | |
| Insertion label, yellow, 12 mm | |
| Insertion label, yellow, 18 mm | |
| Transparent sleeves, 12-mm length | |
| Transparent sleeves, 18-mm length | |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |
| VT SF 5/21 MC NE WS VO | 160 | 1689470001 |
| VT SF 6/21 MC NE WS VO | 160 | 1730560001 |
| TM-I 12 MC NE GE | 320 | 1718411687 |
| TM-I 18 MC NE GE | 320 | 1718431687 |
| TM 4/12 HF/HB | 500 | 1719840000 |
| TM 4/18 HF/HB | 500 | 1719850000 |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |
| VT SF 5/21 MC NE WS VO | 160 | 1689470001 |
| VT SF 6/21 MC NE WS VO | 160 | 1730560001 |
| TM-I 12 MC NE GE | 320 | 1718411687 |
| TM-I 18 MC NE GE | 320 | 1718431687 |
| TM 4/12 HF/HB | 500 | 1719840000 |
| TM 4/18 HF/HB | 500 | 1719850000 |

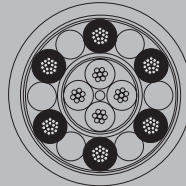
Note

Raw cables**Hybrid cable**

- In lengths from 100 or 500 metres

PVC

sercos
the automation bus

**Technical data**

| |
|-----------------------------------|
| Product type |
| Category |
| Shielding |
| Cross-section |
| Sheath diameter, max. |
| Material sheath |
| Sheathing colour |
| Insulation diameter |
| Min. bending radius, repetitive |
| Min. bending radius, once only |
| Ambient temperature (operational) |
| Installation temperature |
| Storage temperature |
| Abrasion resistance |
| Halogen |
| Resistance to spread of flame |
| Resistance to oils |
| Standard, assembly |
| Approvals |

| |
|---|
| System cable |
| Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B) |
| SF/UTP |
| 4*AWG 22/7 - 0.32 mm ² , 6*0.5 mm ² |
| 9.8 mm |
| PVC |
| green (RAL 6018) |
| 1.6 mm / 1.75 mm |
| 10 x cable diameter |
| -30 °C...75 °C |
| 0 °C...50 °C |
| -40 °C...70 °C |
| good |
| Yes |
| in acc. with IEC 60332-1 / UL 1685 |
| limited |

Note**Ordering data**

100.0 m
500.0 m

Note

| Type | Qty. | Order No. |
|---------------|------|------------|
| IE-C5DHAG-100 | 1 | 2763660000 |
| IE-C5DHAG-500 | 1 | 2763460000 |

Accessories

| Tools |
|--|
| Sheathing strippers, For UTP and STP data cables |
| Sheathing strippers, For coaxial and round data cables |
| Marking tags |
| Wire and cable markers. ø 4.7 - 7.4 mm |
| Wire and cable markers. ø 5.8 - 7.8 mm |
| Insertion label, yellow. 12 mm |
| Insertion label, yellow. 18 mm |
| Transparent sleeves. 12-mm length |
| Transparent sleeves. 18-mm length |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |
| VT SF 5/21 MC NE WS V0 | 160 | 1689470001 |
| VT SF 6/21 MC NE WS V0 | 160 | 1730560001 |
| TMH 12 MC NE GE | 320 | 1718411687 |
| TMH 18 MC NE GE | 320 | 1718431687 |
| TM 4/12 HF/HB | 500 | 1719840000 |
| TM 4/18 HF/HB | 500 | 1719850000 |

Note

Assembled cables – Single Pair Ethernet (SPE) cable

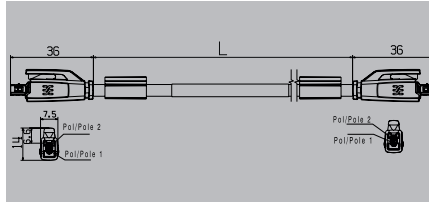
Assembled cable
Single Pair Ethernet IP20

Plug - Plug

Socket contact / Socket contact



SPElink®



Technical data

| |
|---|
| Product type |
| Ambient temperature (operational) |
| Rated voltage (DC) / Rated current |
| PoE / PoE+ |
| Transmission rate |
| Dielectric strength, contact / contact |
| Dielectric strength, contact / shield |
| Characteristic impedance |
| Capacity at 800 Hz |
| Coupling attenuation 1 to 600 MHz |
| Plug left |
| Plug right |
| Complete shielding / Overlap of shielding braid |
| Insulation |
| Sheath diameter, min. / max. |
| Cross-section / Strands |
| Shielding |
| Material sheath |
| Colour |
| Halogen |
| UV-resistant |
| Approvals |

Note

| |
|---|
| Patch cable |
| -40...80 °C |
| 60 V / 3.5 A |
| PoDL acc. to IEEE 802.3bu / cg |
| 10/100 MBit/s, 1000 MBit/s |
| 1000 V DC |
| 2250 V DC |
| 100 ± 15 Ω at 20 MHz |
| 1.6 nF/km |
| Type I |
| SPE, IP20, female contact, straight, plug, Plastic, IEC 63171-2, shielded |
| SPE, IP20, female contact, straight, plug, Plastic, IEC 63171-2, shielded |
| Shielding braid made from copper wiring / 80 % |
| PE |
| 4.9 / 5.3 mm |
| 2*AWG 22 / 7 |
| STP |
| PVC |
| black |
| Yes |
| Complies with UL 1581 Sec. 1200 |
| CE, CULUS, UKCA |

Ordering data

| |
|--------|
| 1.0 m |
| 2.0 m |
| 3.0 m |
| 5.0 m |
| 10.0 m |
| 15.0 m |
| 40.0 m |

Note

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-S1DS2VE0010T01T01-E | 1 | 2725850010 |
| IE-S1DS2VE0020T01T01-E | 1 | 2725850020 |
| IE-S1DS2VE0030T01T01-E | 1 | 2725850030 |
| IE-S1DS2VE0050T01T01-E | 1 | 2725850050 |
| IE-S1DS2VE0100T01T01-E | 1 | 2725850100 |
| IE-S1DS2VE0150T01T01-E | 1 | 2725850150 |
| IE-S1DS2VE0400T01T01-E | 1 | 2725850400 |

Accessories

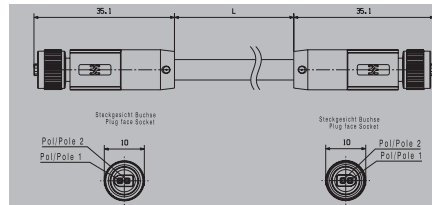
| Type | Qty. | Order No. |
|------|------|-----------|
|------|------|-----------|

Note

Assembled cable
Single Pair Ethernet IP67

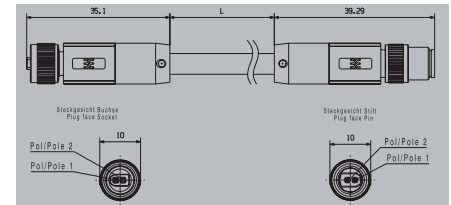
M8 plug Male / Male

Socket contact / Socket contact



M8 plug Male / Female

Socket contact / Pin contact



Technical data

| |
|---|
| Product type |
| Ambient temperature (operational) |
| Rated voltage (DC) / Rated current |
| PoE / PoE+ |
| Transmission rate |
| Dielectric strength, contact / contact |
| Dielectric strength, contact / shield |
| Characteristic impedance |
| Capacity at 800 Hz |
| Coupling attenuation 1 to 600 MHz |
| Transmission rate |
| Plug left |
| Plug right |
| Complete shielding / Overlap of shielding braid |
| Insulation |
| Sheath diameter, min. / max. |
| Cross-section / Strands |
| Shielding |
| Material sheath |
| Colour |
| Halogen |
| UV-resistant |
| Approvals |
| Note |

| |
|--|
| Patch cable |
| -40...85 °C |
| 60 V / 3.5 A |
| PoDL acc. to IEEE 802.3bu / cg |
| 10/100 MBit/s, 1000 MBit/s |
| 1000 V DC |
| 2250 V DC |
| 100 ± 15 Ω at 20 MHz |
| 1.6 nF/km |
| Type I |
| 10/100 MBit/s, 1000 MBit/s |
| M8, Number of poles: 2, IP67, female contact, straight, Plastic, IEC 63171-5, shielded |
| M8, Number of poles: 2, IP67, female contact, straight, Plastic, IEC 63171-5, shielded |
| Shielding braid made from copper wiring / 80 % |
| PE |
| 4.9 / 5.3 mm |
| 2*AWG 22 / 7 |
| STP |
| PVC |
| black |
| Yes |
| Complies with UL 1581 Sec. 1200 |
| CE |

| |
|--|
| Patch cable |
| -40...85 °C |
| 60 V / 3.5 A |
| PoDL acc. to IEEE 802.3bu / cg |
| 10/100 MBit/s, 1000 MBit/s |
| 1000 V DC |
| 2250 V DC |
| 100 ± 15 Ω at 20 MHz |
| 1.6 nF/km |
| Type I |
| 10/100 MBit/s, 1000 MBit/s |
| M8, Number of poles: 2, IP67, female contact, straight, Plastic, IEC 63171-5, shielded |
| M8, Number of poles: 2, IP67, male contact, straight, Plastic, IEC 63171-5, shielded |
| Shielding braid made from copper wiring / 80 % |
| PE |
| 4.9 / 5.3 mm |
| 2*AWG 22 / 7 |
| STP |
| PVC |
| black |
| Yes |
| Complies with UL 1581 Sec. 1200 |
| CE |

Ordering data

| | |
|------|--------|
| | 2.0 m |
| | 5.0 m |
| | 10.0 m |
| | 15.0 m |
| | 20.0 m |
| | 40.0 m |
| Note | |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-S1DS2VE0020TM1TM1-E | 1 | 2726050020 |
| IE-S1DS2VE0050TM1TM1-E | 1 | 2726050050 |
| IE-S1DS2VE0100TM1TM1-E | 1 | 2726050100 |
| IE-S1DS2VE0150TM1TM1-E | 1 | 2726050150 |
| IE-S1DS2VE0200TM1TM1-E | 1 | 2726050200 |
| IE-S1DS2VE0400TM1TM1-E | 1 | 2726050400 |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-S1DS2VE0020TM1TM2-E | 1 | 2726060020 |
| | | |
| | | |
| | | |
| | | |
| | | |

Accessories

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |
| | | |
| | | |
| | | |
| | | |
| Note | | |

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| Note | | |

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| Note | | |

Assembled cables – Single Pair Ethernet (SPE) cable

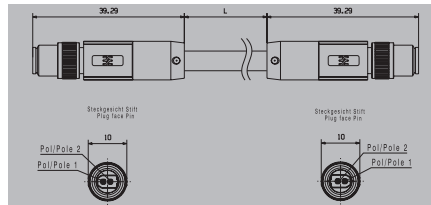
Assembled cable
Single Pair Ethernet IP67

M8 plug Female / Female

Pin contact / Pin contact



SPElink®



Technical data

| |
|---|
| Product type |
| Ambient temperature (operational) |
| Rated voltage (DC) / Rated current |
| PoE / PoE+ |
| Transmission rate |
| Dielectric strength, contact / contact |
| Dielectric strength, contact / shield |
| Characteristic impedance |
| Capacity at 800 Hz |
| Coupling attenuation 1 to 600 MHz |
| Transmission rate |
| Plug left |
| Plug right |
| Complete shielding / Overlap of shielding braid |
| Insulation |
| Sheath diameter, min. / max. |
| Cross-section / Strands |
| Shielding |
| Material sheath |
| Colour |
| Halogen |
| UV-resistant |
| Approvals |

Note

| |
|--|
| Patch cable |
| -40...85 °C |
| 60 V / 3.5 A |
| PoDL acc. to IEEE 802.3bu / cg |
| 10/100 MBit/s, 1000 MBit/s |
| 1000 V DC |
| 2250 V DC |
| 100 ± 15 Ω at 20 MHz |
| 1.6 nF/km |
| Type I |
| 10/100 MBit/s, 1000 MBit/s |
| M8, Number of poles: 2, IP67, male contact, straight, Plastic, IEC 63171-5, shielded |
| M8, Number of poles: 2, IP67, male contact, straight, Plastic, IEC 63171-5, shielded |
| Shielding braid made from copper wiring / 80 % |
| PE |
| 4.9 / 5.3 mm |
| 2*AWG 22 / 7 |
| STP |
| PVC |
| black |
| Yes |
| Complies with UL 1581 Sec. 1200 |
| CE |

Ordering data

2.0 m
5.0 m
10.0 m
15.0 m
20.0 m
40.0 m

Note

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-S1DS2VE0020TM2TM2-E | 1 | 2726070020 |
| | | |
| | | |
| | | |
| | | |

Accessories

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

Note

Assembled cables

Patch cable CabinetLine Cat. 6 straight

LSZH grey



| RJ45 | | | RJ45 |
|------|----------------|---|------|
| 1 | white (orange) | 1 | RJ45 |
| 2 | orange | 2 | |
| 3 | white (green) | 3 | |
| 4 | blue | 4 | |
| 5 | white (blue) | 5 | |
| 6 | green | 6 | |
| 7 | white (brown) | 7 | |
| 8 | brown | 8 | |

Technical data

Product type
Category
Shielding
Plug left / Plug right

Connector standard
PoE / PoE+
Cross-section
Sheath diameter, max.
Material sheath / Colour
Insulation diameter
Min. bending radius, repetitive / Min. bending radius, once only
Ambient temperature (operational)
Installation temperature
Storage temperature
Halogen
Resistance to spread of flame

Approvals

Note

Patch cable
<20 m: Cat.6A / >20 m Class EA (ISO/IEC 11801 2010)
S/FTP
RJ45, IP20, male contact, straight, plug, Plastic, shielded / RJ45, IP20, male contact, straight, plug, Plastic, shielded
IEC 60603-7-51
conforming to IEEE 802.3at
4*2*AWG 27/7 - 4*2*0.1 mm²
5.9 mm
LSZH / grey
1.04 mm
/ 4 x cable diameter
-20 °C...60 °C
0 °C...50 °C
-20 °C...60 °C
halogen-free, acc. to IEC 60754-2
in acc. with IEC 60332-2-2, in acc. with IEC 60332-1-2, in acc. with IEC 60332-3-24, in acc. with UL 2556 (FT1)
CCLINK; CE; CULUS

Ordering data

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C6FP8LD0002M40M40-D | 1 | 1165940002 |
| IE-C6FP8LD0005M40M40-D | 1 | 1165940005 |
| IE-C6FP8LD0010M40M40-D | 1 | 1165940010 |
| IE-C6FP8LD0015M40M40-D | 1 | 1165940015 |
| IE-C6FP8LD0020M40M40-D | 1 | 1165940020 |
| IE-C6FP8LD0030M40M40-D | 1 | 1165940030 |
| IE-C6FP8LD0050M40M40-D | 1 | 1165940050 |
| IE-C6FP8LD0075M40M40-D | 1 | 1165940075 |
| IE-C6FP8LD0100M40M40-D | 1 | 1165940100 |
| IE-C6FP8LD0150M40M40-D | 1 | 1165940150 |
| IE-C6FP8LD0200M40M40-D | 1 | 1165940200 |
| IE-C6FP8LD0250M40M40-D | 1 | 1165940250 |

Other lengths available on request

Note

Accessories

Tools
Sheathing strippers, For UTP and STP data cables
Sheathing strippers, For coaxial and round data cables

Marking tags
Insertion label, yellow, 12 mm
Insertion label, yellow, 18 mm

Dust protection cap
Protective cap

Cable routing
90° outlet angle

Note

| Type | Qty. | Order No. |
|-----------------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |
| TMH 12 MC NE GE | 320 | 1718411687 |
| TMH 18 MC NE GE | 320 | 1718431687 |

IE-PP-RJ45 10 2552580000

IE-CABLE-BENDER-90 50 2704480000

Assembled cables - Patch cable

Assembled cables

Patch cable CabinetLine Cat. 6 straight

LSZH blue



| RJ45 | | | | RJ45 |
|------|----------------|---|--|------|
| 1 | white (orange) | 1 | | |
| 2 | orange | 2 | | |
| 3 | white (green) | 3 | | |
| 4 | blue | 4 | | |
| 5 | white (blue) | 5 | | |
| 6 | green | 6 | | |
| 7 | white (brown) | 7 | | |
| 8 | brown | 8 | | |

LSZH black



| RJ45 | | | | RJ45 |
|------|----------------|---|--|------|
| 1 | white (orange) | 1 | | |
| 2 | orange | 2 | | |
| 3 | white (green) | 3 | | |
| 4 | blue | 4 | | |
| 5 | white (blue) | 5 | | |
| 6 | green | 6 | | |
| 7 | white (brown) | 7 | | |
| 8 | brown | 8 | | |

Technical data

Product type
Category
Shielding
Plug left / Plug right

Connector standard
PoE / PoE+
Cross-section
Sheath diameter, max.
Material sheath / Colour

Insulation diameter
Min. bending radius, repetitive / Min. bending radius, once only
Ambient temperature (operational)
Installation temperature
Storage temperature
Halogen
Resistance to spread of flame

Approvals

Note

Patch cable
<20 m: Cat.6A / >20 m Class EA (ISO/IEC 11801 2010)
S/FTP
RJ45, IP20, male contact, straight, plug, Plastic, shielded / RJ45, IP20, male contact, straight, plug, Plastic, shielded
IEC 60603-7-51
conforming to IEEE 802.3at
4*2*AWG 27/7 - 4*2*0.1 mm²
5.9 mm
LSZH / blue
1.04 mm
/ 4 x cable diameter
-20 °C...60 °C
0 °C...50 °C
-20 °C...60 °C
halogen-free, acc. to IEC 60754-2
in acc. with IEC 60332-2-2, in acc. with IEC 60332-1-2, in acc. with IEC 60332-3-24, in acc. with UL 2556 (FT1)
CCLINK; CE; CULUS

Patch cable
<20 m: Cat.6A / >20 m Class EA (ISO/IEC 11801 2010)
S/FTP
RJ45, IP20, male contact, straight, plug, Plastic, shielded / RJ45, IP20, male contact, straight, plug, Plastic, shielded
IEC 60603-7-51
conforming to IEEE 802.3at
4*2*AWG 27/7 - 4*2*0.1 mm²
5.9 mm
LSZH / black
1.04 mm
/ 4 x cable diameter
-20 °C...60 °C
0 °C...50 °C
-20 °C...60 °C
halogen-free, acc. to IEC 60754-2
in acc. with IEC 60332-2-2, in acc. with IEC 60332-1-2, in acc. with IEC 60332-3-24, in acc. with UL 2556 (FT1)
CCLINK; CE; CULUS

Ordering data

| Type | Qty. | Order No. |
|--------|------|------------|
| 0.2 m | 1 | 1165900002 |
| 0.5 m | 1 | 1165900005 |
| 1.0 m | 1 | 1165900010 |
| 1.5 m | 1 | 1165900015 |
| 2.0 m | 1 | 1165900020 |
| 3.0 m | 1 | 1165900030 |
| 5.0 m | 1 | 1165900050 |
| 10.0 m | 1 | 1165900100 |
| 15.0 m | 1 | 1165900150 |
| 20.0 m | 1 | 1165900200 |
| 25.0 m | 1 | 1165900250 |

Note

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C6FP8LB0002M40M40-B | 1 | 1165900002 |
| IE-C6FP8LB0005M40M40-B | 1 | 1165900005 |
| IE-C6FP8LB0010M40M40-B | 1 | 1165900010 |
| IE-C6FP8LB0015M40M40-B | 1 | 1165900015 |
| IE-C6FP8LB0020M40M40-B | 1 | 1165900020 |
| IE-C6FP8LB0030M40M40-B | 1 | 1165900030 |
| IE-C6FP8LB0050M40M40-B | 1 | 1165900050 |
| IE-C6FP8LB0100M40M40-B | 1 | 1165900100 |
| IE-C6FP8LB0150M40M40-B | 1 | 1165900150 |
| IE-C6FP8LB0200M40M40-B | 1 | 1165900200 |
| IE-C6FP8LB0250M40M40-B | 1 | 1165900250 |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C6FP8LE0002M40M40-E | 1 | 1251610002 |
| IE-C6FP8LE0005M40M40-E | 1 | 1251610005 |
| IE-C6FP8LE0010M40M40-E | 1 | 1251610010 |
| IE-C6FP8LE0015M40M40-E | 1 | 1251610015 |
| IE-C6FP8LE0020M40M40-E | 1 | 1251610020 |
| IE-C6FP8LE0030M40M40-E | 1 | 1251610030 |
| IE-C6FP8LE0050M40M40-E | 1 | 1251610050 |
| IE-C6FP8LE0100M40M40-E | 1 | 1251610100 |
| IE-C6FP8LE0150M40M40-E | 1 | 1251610150 |
| IE-C6FP8LE0200M40M40-E | 1 | 1251610200 |
| IE-C6FP8LE0250M40M40-E | 1 | 1251610250 |

Accessories

| Tools | Type | Qty. | Order No. |
|--|--------------------|------------------|------------|
| Sheathing strippers, For UTP and STP data cables Sheathing strippers, For coaxial and round data cables | AM 12 | 1 | 9030060000 |
| | IE-CST | 1 | 9204350000 |
| Marking tags | TM-H 12 MC NE GE | 320 | 1718411687 |
| | TM-H 18 MC NE GE | 320 | 1718431687 |
| Dust protection cap | IE-PP-RJ45 | 10 | 2552580000 |
| | IE-CABLE-BENDER-90 | 50 | 2704480000 |
| Cable routing | | | |
| | | 90° outlet angle | |

Note

| Type | Qty. | Order No. |
|--------------------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |
| TM-H 12 MC NE GE | 320 | 1718411687 |
| TM-H 18 MC NE GE | 320 | 1718431687 |
| IE-PP-RJ45 | 10 | 2552580000 |
| IE-CABLE-BENDER-90 | 50 | 2704480000 |

| Type | Qty. | Order No. |
|--------------------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |
| TM-H 12 MC NE GE | 320 | 1718411687 |
| TM-H 18 MC NE GE | 320 | 1718431687 |
| IE-PP-RJ45 | 10 | 2552580000 |
| IE-CABLE-BENDER-90 | 50 | 2704480000 |

Assembled cables

Patch cable CabinetLine Cat. 6 straight

LSZH green



| RJ45 | | | | RJ45 |
|------|----------------|---|--|------|
| 1 | white (orange) | 1 | | |
| 2 | orange | 2 | | |
| 3 | white (green) | 3 | | |
| 4 | blue | 4 | | |
| 5 | white (blue) | 5 | | |
| 6 | green | 6 | | |
| 7 | white (brown) | 7 | | |
| 8 | brown | 8 | | |

LSZH red



| RJ45 | | | | RJ45 |
|------|----------------|---|--|------|
| 1 | white (orange) | 1 | | |
| 2 | orange | 2 | | |
| 3 | white (green) | 3 | | |
| 4 | blue | 4 | | |
| 5 | white (blue) | 5 | | |
| 6 | green | 6 | | |
| 7 | white (brown) | 7 | | |
| 8 | brown | 8 | | |

Technical data

Product type
Category
Shielding
Plug left / Plug right

Connector standard
PoE / PoE+
Cross-section
Sheath diameter, max.
Material sheath / Colour

Insulation diameter
Min. bending radius, repetitive / Min. bending radius, once only
Ambient temperature (operational)
Installation temperature
Storage temperature
Halogen
Resistance to spread of flame

Approvals

Note

Patch cable
<20 m: Cat.6A / >20 m Class EA (ISO/IEC 11801 2010)

S/FTP

RJ45, IP20, male contact, straight, plug, Plastic, shielded / RJ45, IP20, male contact, straight, plug, Plastic, shielded

IEC 60603-7-51

conforming to IEEE 802.3at

4*2*AWG 27/7 - 4*2*0.1 mm²

5.9 mm

LSZH / green

1.04 mm

/ 4 x cable diameter

-20 °C...60 °C

0 °C...50 °C

-20 °C...60 °C

halogen-free, acc. to IEC 60754-2

in acc. with IEC 60332-2-2, in acc. with IEC 60332-1-2, in acc. with IEC 60332-3-24, in acc. with UL 2556 (FT1)

CCLINK; CE; CULUS

Patch cable

<20 m: Cat.6A / >20 m Class EA (ISO/IEC 11801 2010)

S/FTP

RJ45, IP20, male contact, straight, plug, Plastic, shielded / RJ45, IP20, male contact, straight, plug, Plastic, shielded

IEC 60603-7-51

conforming to IEEE 802.3at

4*2*AWG 27/7 - 4*2*0.1 mm²

5.9 mm

LSZH / red

1.04 mm

/ 4 x cable diameter

-20 °C...60 °C

0 °C...50 °C

-20 °C...60 °C

halogen-free, acc. to IEC 60754-2

in acc. with IEC 60332-2-2, in acc. with IEC 60332-1-2, in acc. with IEC 60332-3-24, in acc. with UL 2556 (FT1)

CCLINK; CE; CULUS

Ordering data

| | |
|--------|--|
| 0.2 m | |
| 0.5 m | |
| 1.0 m | |
| 1.5 m | |
| 2.0 m | |
| 3.0 m | |
| 5.0 m | |
| 10.0 m | |
| 15.0 m | |
| 20.0 m | |
| 25.0 m | |

Note

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C6FP8LG0002M40M40-G | 1 | 1251590002 |
| IE-C6FP8LG0005M40M40-G | 1 | 1251590005 |
| IE-C6FP8LG0010M40M40-G | 1 | 1251590010 |
| IE-C6FP8LG0015M40M40-G | 1 | 1251590015 |
| IE-C6FP8LG0020M40M40-G | 1 | 1251590020 |
| IE-C6FP8LG0030M40M40-G | 1 | 1251590030 |
| IE-C6FP8LG0050M40M40-G | 1 | 1251590050 |
| IE-C6FP8LG0100M40M40-G | 1 | 1251590100 |
| IE-C6FP8LG0150M40M40-G | 1 | 1251590150 |
| IE-C6FP8LG0200M40M40-G | 1 | 1251590200 |
| IE-C6FP8LG0250M40M40-G | 1 | 1251590250 |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C6FP8LR0002M40M40-R | 1 | 1166030002 |
| IE-C6FP8LR0005M40M40-R | 1 | 1166030005 |
| IE-C6FP8LR0010M40M40-R | 1 | 1166030010 |
| IE-C6FP8LR0015M40M40-R | 1 | 1166030015 |
| IE-C6FP8LR0020M40M40-R | 1 | 1166030020 |
| IE-C6FP8LR0030M40M40-R | 1 | 1166030030 |
| IE-C6FP8LR0050M40M40-R | 1 | 1166030050 |
| IE-C6FP8LR0100M40M40-R | 1 | 1166030100 |
| IE-C6FP8LR0150M40M40-R | 1 | 1166030150 |
| IE-C6FP8LR0200M40M40-R | 1 | 1166030200 |
| IE-C6FP8LR0250M40M40-R | 1 | 1166030250 |

Accessories

Tools

Sheathing strippers, For UTP and STP data cables
Sheathing strippers, For coaxial and round data cables

Marking tags

Insertion label, yellow, 12 mm
Insertion label, yellow, 18 mm

Dust protection cap

Protective cap

Cable routing

90° outlet angle

Note

| Type | Qty. | Order No. |
|--------------------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |
| TM-I 12 MC NE GE | 320 | 1718411687 |
| TM-I 18 MC NE GE | 320 | 1718431687 |
| IE-PP-RJ45 | 10 | 2552580000 |
| IE-CABLE-BENDER-90 | 50 | 2704480000 |

| Type | Qty. | Order No. |
|--------------------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |
| TM-I 12 MC NE GE | 320 | 1718411687 |
| TM-I 18 MC NE GE | 320 | 1718431687 |
| IE-PP-RJ45 | 10 | 2552580000 |
| IE-CABLE-BENDER-90 | 50 | 2704480000 |

Assembled cables - Patch cable

Assembled cables

Patch cable CabinetLine Cat. 6 straight

LSZH magenta



| RJ45 | | | | RJ45 |
|------|----------------|---|--|------|
| 1 | white (orange) | 1 | | |
| 2 | orange | 2 | | |
| 3 | white (green) | 3 | | |
| 4 | blue | 4 | | |
| 5 | white (blue) | 5 | | |
| 6 | green | 6 | | |
| 7 | white (brown) | 7 | | |
| 8 | brown | 8 | | |

LSZH violet



| RJ45 | | | | RJ45 |
|------|----------------|---|--|------|
| 1 | white (orange) | 1 | | |
| 2 | orange | 2 | | |
| 3 | white (green) | 3 | | |
| 4 | blue | 4 | | |
| 5 | white (blue) | 5 | | |
| 6 | green | 6 | | |
| 7 | white (brown) | 7 | | |
| 8 | brown | 8 | | |

Technical data

Product type
Category
Shielding
Plug left / Plug right

Connector standard
PoE / PoE+
Cross-section
Sheath diameter, max.
Material sheath / Colour
Insulation diameter
Min. bending radius, repetitive / Min. bending radius, once only
Ambient temperature (operational)
Installation temperature
Storage temperature
Halogen
Resistance to spread of flame

Approvals

Note

Patch cable
<20 m: Cat.6A / >20 m Class EA (ISO/IEC 11801 2010)
S/FTP
RJ45, IP20, male contact, straight, plug, Plastic, shielded / RJ45, IP20, male contact, straight, plug, Plastic, shielded
IEC 60603-7-51
conforming to IEEE 802.3at
4*2*AWG 27/7 - 4*2*0.1 mm²
5.9 mm
LSZH / Magenta
1.04 mm
/ 4 x cable diameter
-20 °C...60 °C
0 °C...50 °C
-20 °C...60 °C
halogen-free, acc. to IEC 60754-2
in acc. with IEC 60332-2-2, in acc. with IEC 60332-1-2, in acc. with IEC 60332-3-24, in acc. with UL 2556 (FT1)
CCLINK; CE; CULUS

Patch cable
<20 m: Cat.6A / >20 m Class EA (ISO/IEC 11801 2010)
S/FTP
RJ45, IP20, male contact, straight, plug, Plastic, shielded / RJ45, IP20, male contact, straight, plug, Plastic, shielded
IEC 60603-7-51
conforming to IEEE 802.3at
4*2*AWG 27/7 - 4*2*0.1 mm²
5.9 mm
LSZH / violet
1.04 mm
/ 4 x cable diameter
-20 °C...60 °C
0 °C...50 °C
-20 °C...60 °C
halogen-free, acc. to IEC 60754-2
in acc. with IEC 60332-2-2, in acc. with IEC 60332-1-2, in acc. with IEC 60332-3-24, in acc. with UL 2556 (FT1)
CCLINK; CE; CULUS

Ordering data

0.2 m
0.5 m
1.0 m
1.5 m
2.0 m
3.0 m
5.0 m
10.0 m
15.0 m
20.0 m
25.0 m

Note

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C6FP8LM0002M40M40-M | 1 | 1201270002 |
| IE-C6FP8LM0005M40M40-M | 1 | 1201270005 |
| IE-C6FP8LM0010M40M40-M | 1 | 1201270010 |
| IE-C6FP8LM0015M40M40-M | 1 | 1201270015 |
| IE-C6FP8LM0020M40M40-M | 1 | 1201270020 |
| IE-C6FP8LM0030M40M40-M | 1 | 1201270030 |
| IE-C6FP8LM0050M40M40-M | 1 | 1201270050 |
| IE-C6FP8LM0100M40M40-M | 1 | 1201270100 |
| IE-C6FP8LM0150M40M40-M | 1 | 1201270150 |
| IE-C6FP8LM0200M40M40-M | 1 | 1201270200 |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C6FP8LV0002M40M40-V | 1 | 2701550002 |
| IE-C6FP8LV0005M40M40-V | 1 | 2701550005 |
| IE-C6FP8LV0010M40M40-V | 1 | 2701550010 |
| IE-C6FP8LV0015M40M40-V | 1 | 2701550015 |
| IE-C6FP8LV0020M40M40-V | 1 | 2701550020 |
| IE-C6FP8LV0030M40M40-V | 1 | 2701550030 |
| IE-C6FP8LV0050M40M40-V | 1 | 2701550050 |
| IE-C6FP8LV0100M40M40-V | 1 | 2701550100 |
| IE-C6FP8LV0150M40M40-V | 1 | 2701550150 |
| IE-C6FP8LV0200M40M40-V | 1 | 2701550200 |

Accessories

Tools

Sheathing strippers, For UTP and STP data cables
Sheathing strippers, For coaxial and round data cables

Marking tags

Insertion label, yellow, 12 mm
Insertion label, yellow, 18 mm

Dust protection cap

Protective cap

Cable routing

90° outlet angle

Note

| Type | Qty. | Order No. |
|--------------------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |
| TM-I 12 MC NE GE | 320 | 1718411687 |
| TM-I 18 MC NE GE | 320 | 1718431687 |
| IE-PP-RJ45 | 10 | 2552580000 |
| IE-CABLE-BENDER-90 | 50 | 2704480000 |

| Type | Qty. | Order No. |
|--------------------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |
| TM-I 12 MC NE GE | 320 | 1718411687 |
| TM-I 18 MC NE GE | 320 | 1718431687 |
| IE-PP-RJ45 | 10 | 2552580000 |
| IE-CABLE-BENDER-90 | 50 | 2704480000 |

Assembled cables
Patch cable CabinetLine Cat. 6 straight

LSZH yellow

LSZH orange



| RJ45 | | | RJ45 |
|------|----------------|---|------|
| 1 | white (orange) | 1 | RJ45 |
| 2 | orange | 2 | |
| 3 | white (green) | 3 | |
| 4 | blue | 4 | |
| 5 | white (blue) | 5 | |
| 6 | green | 6 | |
| 7 | white (brown) | 7 | |
| 8 | brown | 8 | |

| RJ45 | | | RJ45 |
|------|----------------|---|------|
| 1 | white (orange) | 1 | RJ45 |
| 2 | orange | 2 | |
| 3 | white (green) | 3 | |
| 4 | blue | 4 | |
| 5 | white (blue) | 5 | |
| 6 | green | 6 | |
| 7 | white (brown) | 7 | |
| 8 | brown | 8 | |

Technical data

| | |
|--|---|
| Product type | Patch cable |
| Category | <20 m: Cat.6A / >20 m Class EA (ISO/IEC 11801 2010) |
| Shielding | S/FTP |
| Plug left / Plug right | RJ45, IP20, male contact, straight, plug, Plastic, shielded / RJ45, IP20, male contact, straight, plug, Plastic, shielded |
| Connector standard | IEC 60603-7-51 |
| PoE / PoE+ | conforming to IEEE 802.3at |
| Cross-section | 4*2*AWG 27/7 - 4*2*0.1 mm ² |
| Sheath diameter, max. | 5.9 mm |
| Material sheath / Colour | LSZH / yellow |
| Insulation diameter | 1.04 mm |
| Min. bending radius, repetitive / Min. bending radius, once only | / 4 x cable diameter |
| Ambient temperature (operational) | -20 °C...60 °C |
| Installation temperature | 0 °C...50 °C |
| Storage temperature | -20 °C...60 °C |
| Halogen | halogen-free, acc. to IEC 60754-2 |
| Resistance to spread of flame | in acc. with IEC 60332-2-2, in acc. with IEC 60332-1-2, in acc. with IEC 60332-3-24, in acc. with UL 2556 (FT1) |
| Approvals | CCLINK; CE; CULUS |
| Note | |

| | |
|--|---|
| Product type | Patch cable |
| Category | <20 m: Cat.6A / >20 m Class EA (ISO/IEC 11801 2010) |
| Shielding | S/FTP |
| Plug left / Plug right | RJ45, IP20, male contact, straight, plug, Plastic, shielded / RJ45, IP20, male contact, straight, plug, Plastic, shielded |
| Connector standard | IEC 60603-7-51 |
| PoE / PoE+ | conforming to IEEE 802.3at |
| Cross-section | 4*2*AWG 27/7 - 4*2*0.1 mm ² |
| Sheath diameter, max. | 5.9 mm |
| Material sheath / Colour | LSZH / orange |
| Insulation diameter | 1.04 mm |
| Min. bending radius, repetitive / Min. bending radius, once only | / 4 x cable diameter |
| Ambient temperature (operational) | -20 °C...60 °C |
| Installation temperature | 0 °C...50 °C |
| Storage temperature | -20 °C...60 °C |
| Halogen | halogen-free, acc. to IEC 60754-2 |
| Resistance to spread of flame | in acc. with IEC 60332-2-2, in acc. with IEC 60332-1-2, in acc. with IEC 60332-3-24, in acc. with UL 2556 (FT1) |
| Approvals | CCLINK; CE; CULUS |
| Note | |

| | |
|--|---|
| Product type | Patch cable |
| Category | <20 m: Cat.6A / >20 m Class EA (ISO/IEC 11801 2010) |
| Shielding | S/FTP |
| Plug left / Plug right | RJ45, IP20, male contact, straight, plug, Plastic, shielded / RJ45, IP20, male contact, straight, plug, Plastic, shielded |
| Connector standard | IEC 60603-7-51 |
| PoE / PoE+ | conforming to IEEE 802.3at |
| Cross-section | 4*2*AWG 27/7 - 4*2*0.1 mm ² |
| Sheath diameter, max. | 5.9 mm |
| Material sheath / Colour | LSZH / orange |
| Insulation diameter | 1.04 mm |
| Min. bending radius, repetitive / Min. bending radius, once only | / 4 x cable diameter |
| Ambient temperature (operational) | -20 °C...60 °C |
| Installation temperature | 0 °C...50 °C |
| Storage temperature | -20 °C...60 °C |
| Halogen | halogen-free, acc. to IEC 60754-2 |
| Resistance to spread of flame | in acc. with IEC 60332-2-2, in acc. with IEC 60332-1-2, in acc. with IEC 60332-3-24, in acc. with UL 2556 (FT1) |
| Approvals | CCLINK; CE; CULUS |
| Note | |

Ordering data

| | |
|-------------|--------|
| | 0.2 m |
| | 0.5 m |
| | 1.0 m |
| | 1.5 m |
| | 2.0 m |
| | 3.0 m |
| | 5.0 m |
| | 10.0 m |
| | 15.0 m |
| | 20.0 m |
| | 25.0 m |
| Note | |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C6FP8LY0002M40M40-Y | 1 | 1251580002 |
| IE-C6FP8LY0005M40M40-Y | 1 | 1251580005 |
| IE-C6FP8LY0010M40M40-Y | 1 | 1251580010 |
| IE-C6FP8LY0015M40M40-Y | 1 | 1251580015 |
| IE-C6FP8LY0020M40M40-Y | 1 | 1251580020 |
| IE-C6FP8LY0030M40M40-Y | 1 | 1251580030 |
| IE-C6FP8LY0050M40M40-Y | 1 | 1251580050 |
| IE-C6FP8LY0100M40M40-Y | 1 | 1251580100 |
| IE-C6FP8LY0150M40M40-Y | 1 | 1251580150 |
| IE-C6FP8LY0200M40M40-Y | 1 | 1251580200 |
| IE-C6FP8LY0250M40M40-Y | 1 | 1251580250 |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C6FP8L00002M40M40-O | 1 | 2563810002 |
| IE-C6FP8L00005M40M40-O | 1 | 2563810005 |
| IE-C6FP8L00010M40M40-O | 1 | 2563810010 |
| IE-C6FP8L00015M40M40-O | 1 | 2563810015 |
| IE-C6FP8L00020M40M40-O | 1 | 2563810020 |
| IE-C6FP8L00030M40M40-O | 1 | 2563810030 |
| IE-C6FP8L00050M40M40-O | 1 | 2563810050 |
| IE-C6FP8L00100M40M40-O | 1 | 2563810100 |
| IE-C6FP8L00150M40M40-O | 1 | 2563810150 |
| IE-C6FP8L00200M40M40-O | 1 | 2563810200 |
| IE-C6FP8L00250M40M40-O | 1 | 2563810250 |

Accessories

| | |
|----------------------------|--|
| Tools | |
| | Sheathing strippers, For UTP and STP data cables |
| | Sheathing strippers, For coaxial and round data cables |
| Marking tags | |
| | Insertion label, yellow, 12 mm |
| | Insertion label, yellow, 18 mm |
| Dust protection cap | Protective cap |
| Cable routing | 90° outlet angle |
| Note | |

| Type | Qty. | Order No. |
|--------------------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |
| TM-I 12 MC NE GE | 320 | 1718411687 |
| TM-I 18 MC NE GE | 320 | 1718431687 |
| IE-PP-RJ45 | 10 | 2552580000 |
| IE-CABLE-BENDER-90 | 50 | 2704480000 |

| Type | Qty. | Order No. |
|--------------------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |
| TM-I 12 MC NE GE | 320 | 1718411687 |
| TM-I 18 MC NE GE | 320 | 1718431687 |
| IE-PP-RJ45 | 10 | 2552580000 |
| IE-CABLE-BENDER-90 | 50 | 2704480000 |

Assembled cables - Patch cable

Assembled cables

Patch cable CabinetLine Cat. 6 angled

LSZH grey 270°



| RJ45 | | | | RJ45 |
|------|----------------|---|--|------|
| 1 | white (orange) | 1 | | |
| 2 | orange | 2 | | |
| 3 | white (green) | 3 | | |
| 4 | blue | 4 | | |
| 5 | white (blue) | 5 | | |
| 6 | green | 6 | | |
| 7 | white (brown) | 7 | | |
| 8 | brown | 8 | | |

LSZH grey 90°



| RJ45 | | | | RJ45 |
|------|----------------|---|--|------|
| 1 | white (orange) | 1 | | |
| 2 | orange | 2 | | |
| 3 | white (green) | 3 | | |
| 4 | blue | 4 | | |
| 5 | white (blue) | 5 | | |
| 6 | green | 6 | | |
| 7 | white (brown) | 7 | | |
| 8 | brown | 8 | | |

Technical data

Product type
Category
Shielding
Plug left / Plug right

Connector standard
PoE / PoE+
Cross-section
Sheath diameter, max.
Material sheath / Colour
Insulation diameter
Min. bending radius, repetitive / Min. bending radius, once only
Ambient temperature (operational)
Installation temperature
Storage temperature
Halogen
Resistance to spread of flame

Approvals

Note

Patch cable
<20 m: Cat.6A / >20 m Class EA (ISO/IEC 11801 2010)
S/FTP
RJ45, IP20, male contact, straight, plug, Plastic, shielded / RJ45, IP20, male contact, angled 270°, plug, Plastic, shielded
IEC 60603-7-51
conforming to IEEE 802.3at
4*2*AWG 27/7 - 4*2*0.1 mm²
5.9 mm
LSZH / grey
1.04 mm
/ 4 x cable diameter
-20 °C...60 °C
0 °C...50 °C
-20 °C...60 °C
halogen-free, acc. to IEC 60754-2
in acc. with IEC 60332-2-2, in acc. with IEC 60332-1-2, in acc. with IEC 60332-3-24, in acc. with UL 2556 (FT1)
CCLINK; CE; CULUS

Patch cable
<20 m: Cat.6A / >20 m Class EA (ISO/IEC 11801 2010)
S/FTP
RJ45, IP20, male contact, straight, plug, Plastic, shielded / RJ45, IP20, male contact, angled 90°, plug, Plastic, shielded
IEC 60603-7-51
conforming to IEEE 802.3at
4*2*AWG 27/7 - 4*2*0.1 mm²
5.9 mm
LSZH / grey
1.04 mm
/ 4 x cable diameter
-20 °C...60 °C
0 °C...50 °C
-20 °C...60 °C
halogen-free, acc. to IEC 60754-2
in acc. with IEC 60332-2-2, in acc. with IEC 60332-1-2, in acc. with IEC 60332-3-24, in acc. with UL 2556 (FT1)
CCLINK; CE; CULUS

Ordering data

| Length | Type | Qty. | Order No. |
|--------|------------------------|------|------------|
| 0.5 m | IE-C6FP8LD0005M40W40-D | 1 | 1233160005 |
| 1.0 m | IE-C6FP8LD0010M40W40-D | 1 | 1233160010 |
| 1.2 m | IE-C6FP8LD0012M40W40-D | 1 | 1233160012 |
| 1.5 m | IE-C6FP8LD0015M40W40-D | 1 | 1233160015 |
| 2.0 m | IE-C6FP8LD0020M40W40-D | 1 | 1233160020 |
| 3.0 m | IE-C6FP8LD0030M40W40-D | 1 | 1233160030 |
| 5.0 m | IE-C6FP8LD0050M40W40-D | 1 | 1233160050 |
| 10.0 m | IE-C6FP8LD0100M40W40-D | 1 | 1233160100 |

Note

Accessories

| Tools | Type | Qty. | Order No. |
|--|------------------|------|------------|
| Sheathing strippers, For UTP and STP data cables | AM 12 | 1 | 9030060000 |
| Sheathing strippers, For coaxial and round data cables | IE-CST | 1 | 9204350000 |
| Marking tags | | | |
| Insertion label, yellow, 12 mm | TM-I 12 MC NE GE | 320 | 1718411687 |
| Insertion label, yellow, 18 mm | TM-I 18 MC NE GE | 320 | 1718431687 |
| Dust protection cap | | | |
| Protective cap | IE-PP-RJ45 | 10 | 2552580000 |

Note

| Length | Type | Qty. | Order No. |
|--------|------------------------|------|------------|
| 0.5 m | IE-C6FP8LD0005M40V40-D | 1 | 1248280005 |
| 1.0 m | IE-C6FP8LD0010M40V40-D | 1 | 1248280010 |
| 1.2 m | IE-C6FP8LD0012M40V40-D | 1 | 1248280012 |
| 1.5 m | IE-C6FP8LD0015M40V40-D | 1 | 1248280015 |
| 2.0 m | IE-C6FP8LD0020M40V40-D | 1 | 1248280020 |
| 3.0 m | IE-C6FP8LD0030M40V40-D | 1 | 1248280030 |
| 5.0 m | IE-C6FP8LD0050M40V40-D | 1 | 1248280050 |
| 10.0 m | IE-C6FP8LD0100M40V40-D | 1 | 1248280100 |

| Tools | Type | Qty. | Order No. |
|--|------------------|------|------------|
| Sheathing strippers, For UTP and STP data cables | AM 12 | 1 | 9030060000 |
| Sheathing strippers, For coaxial and round data cables | IE-CST | 1 | 9204350000 |
| Marking tags | | | |
| Insertion label, yellow, 12 mm | TM-I 12 MC NE GE | 320 | 1718411687 |
| Insertion label, yellow, 18 mm | TM-I 18 MC NE GE | 320 | 1718431687 |
| Dust protection cap | | | |
| Protective cap | IE-PP-RJ45 | 10 | 2552580000 |

Note

Assembled cables
Patch cable CabinetLine Cat. 6 angled

LSZH 90° left

LSZH 90° right



| RJ45 | | | RJ45 |
|------|----------------|---|------|
| 1 | white (orange) | 1 | RJ45 |
| 2 | orange | 2 | |
| 3 | white (green) | 3 | |
| 4 | blue | 4 | |
| 5 | white (blue) | 5 | |
| 6 | green | 6 | |
| 7 | white (brown) | 7 | |
| 8 | brown | 8 | |

| RJ45 | | | RJ45 |
|------|----------------|---|------|
| 1 | white (orange) | 1 | RJ45 |
| 2 | orange | 2 | |
| 3 | white (green) | 3 | |
| 4 | blue | 4 | |
| 5 | white (blue) | 5 | |
| 6 | green | 6 | |
| 7 | white (brown) | 7 | |
| 8 | brown | 8 | |

Technical data

| | |
|--|--|
| Product type | Patch cable |
| Category | <20 m: Cat.6A / >20 m Class EA (ISO/IEC 11801 2010) |
| Shielding | S/FTP |
| Plug left / Plug right | RJ45, IP20, male contact, straight, plug, Plastic, shielded / RJ45, IP20, male contact, angled 90° left, plug, Plastic, shielded |
| Connector standard | IEC 60603-7-51 |
| PoE / PoE+ | conforming to IEEE 802.3at |
| Cross-section | 4*2*AWG 27/7 - 4*2*0.1 mm ² |
| Sheath diameter, max. | 5.9 mm |
| Material sheath / Colour | LSZH / grey |
| Insulation diameter | 1.04 mm |
| Min. bending radius, repetitive / Min. bending radius, once only | / 4 x cable diameter |
| Ambient temperature (operational) | -20 °C...60 °C |
| Installation temperature | 0 °C...50 °C |
| Storage temperature | -20 °C...60 °C |
| Halogen | halogen-free, acc. to IEC 60754-2 |
| Resistance to spread of flame | in acc. with IEC 60332-2-2, in acc. with IEC 60332-1-2, in acc. with IEC 60332-3-24, in acc. with UL 2556 (FT1) |
| Approvals | CCLINK; CE; CULUS |
| Note | |

| | |
|--|---|
| Product type | Patch cable |
| Category | <20 m: Cat.6A / >20 m Class EA (ISO/IEC 11801 2010) |
| Shielding | S/FTP |
| Plug left / Plug right | RJ45, IP20, male contact, straight, plug, Plastic, shielded / RJ45, IP20, male contact, angled 90° right, plug, Plastic, shielded |
| Connector standard | IEC 60603-7-51 |
| PoE / PoE+ | conforming to IEEE 802.3at |
| Cross-section | 4*2*AWG 27/7 - 4*2*0.1 mm ² |
| Sheath diameter, max. | 5.9 mm |
| Material sheath / Colour | LSZH / grey |
| Insulation diameter | 1.04 mm |
| Min. bending radius, repetitive / Min. bending radius, once only | / 4 x cable diameter |
| Ambient temperature (operational) | -20 °C...60 °C |
| Installation temperature | 0 °C...50 °C |
| Storage temperature | -20 °C...60 °C |
| Halogen | halogen-free, acc. to IEC 60754-2 |
| Resistance to spread of flame | in acc. with IEC 60332-2-2, in acc. with IEC 60332-1-2, in acc. with IEC 60332-3-24, in acc. with UL 2556 (FT1) |
| Approvals | CCLINK; CE; CULUS |
| Note | |

| | |
|--|---|
| Product type | Patch cable |
| Category | <20 m: Cat.6A / >20 m Class EA (ISO/IEC 11801 2010) |
| Shielding | S/FTP |
| Plug left / Plug right | RJ45, IP20, male contact, straight, plug, Plastic, shielded / RJ45, IP20, male contact, angled 90° right, plug, Plastic, shielded |
| Connector standard | IEC 60603-7-51 |
| PoE / PoE+ | conforming to IEEE 802.3at |
| Cross-section | 4*2*AWG 27/7 - 4*2*0.1 mm ² |
| Sheath diameter, max. | 5.9 mm |
| Material sheath / Colour | LSZH / grey |
| Insulation diameter | 1.04 mm |
| Min. bending radius, repetitive / Min. bending radius, once only | / 4 x cable diameter |
| Ambient temperature (operational) | -20 °C...60 °C |
| Installation temperature | 0 °C...50 °C |
| Storage temperature | -20 °C...60 °C |
| Halogen | halogen-free, acc. to IEC 60754-2 |
| Resistance to spread of flame | in acc. with IEC 60332-2-2, in acc. with IEC 60332-1-2, in acc. with IEC 60332-3-24, in acc. with UL 2556 (FT1) |
| Approvals | CCLINK; CE; CULUS |
| Note | |

Ordering data

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C6FP8LD0005M40L40-D | 1 | 2703320005 |
| IE-C6FP8LD0010M40L40-D | 1 | 2703320010 |
| IE-C6FP8LD0012M40L40-D | 1 | 2703320012 |
| IE-C6FP8LD0015M40L40-D | 1 | 2703320015 |
| IE-C6FP8LD0020M40L40-D | 1 | 2703320020 |
| IE-C6FP8LD0030M40L40-D | 1 | 2703320030 |
| IE-C6FP8LD0050M40L40-D | 1 | 2703320050 |
| IE-C6FP8LD0100M40L40-D | 1 | 2703320100 |
| Note | | |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C6FP8LD0005M40R40-D | 1 | 2703330005 |
| IE-C6FP8LD0010M40R40-D | 1 | 2703330010 |
| IE-C6FP8LD0012M40R40-D | 1 | 2703330012 |
| IE-C6FP8LD0015M40R40-D | 1 | 2703330015 |
| IE-C6FP8LD0020M40R40-D | 1 | 2703330020 |
| IE-C6FP8LD0030M40R40-D | 1 | 2703330030 |
| IE-C6FP8LD0050M40R40-D | 1 | 2703330050 |
| IE-C6FP8LD0100M40R40-D | 1 | 2703330100 |
| Note | | |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C6FP8LD0005M40R40-D | 1 | 2703330005 |
| IE-C6FP8LD0010M40R40-D | 1 | 2703330010 |
| IE-C6FP8LD0012M40R40-D | 1 | 2703330012 |
| IE-C6FP8LD0015M40R40-D | 1 | 2703330015 |
| IE-C6FP8LD0020M40R40-D | 1 | 2703330020 |
| IE-C6FP8LD0030M40R40-D | 1 | 2703330030 |
| IE-C6FP8LD0050M40R40-D | 1 | 2703330050 |
| IE-C6FP8LD0100M40R40-D | 1 | 2703330100 |
| Note | | |

Accessories

| Type | Qty. | Order No. |
|-----------------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |
| TMH 12 MC NE GE | 320 | 1718411687 |
| TMH 18 MC NE GE | 320 | 1718431687 |
| IE-PP-RJ45 | 10 | 2552580000 |
| Note | | |

| Type | Qty. | Order No. |
|-----------------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |
| TMH 12 MC NE GE | 320 | 1718411687 |
| TMH 18 MC NE GE | 320 | 1718431687 |
| IE-PP-RJ45 | 10 | 2552580000 |
| Note | | |

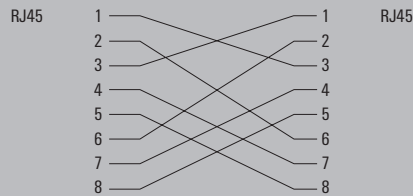
| Type | Qty. | Order No. |
|-----------------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |
| TMH 12 MC NE GE | 320 | 1718411687 |
| TMH 18 MC NE GE | 320 | 1718431687 |
| IE-PP-RJ45 | 10 | 2552580000 |
| Note | | |

Assembled cables - Patch cable

Assembled cables

Patch cable CabinetLine Cat. 6 crossover

LSZH grey



Technical data

Product type
Category
Shielding
Plug left / Plug right

Connector standard
PoE / PoE+
Cross-section
Sheath diameter, max.
Material sheath / Colour
Insulation diameter
Min. bending radius, repetitive / Min. bending radius, once only
Ambient temperature (operational)
Installation temperature
Storage temperature
Halogen
Resistance to spread of flame

Approvals

Note

Patch cable, crossover
<20 m: Cat.6A / >20 m Class EA (ISO/IEC 11801 2010)
S/FTP
RJ45, IP20, male contact, straight, plug, Plastic, shielded / RJ45, IP20, male contact, straight, plug, Plastic, shielded
IEC 60603-7-51
conforming to IEEE 802.3at
4*2*AWG 27/7 - 4*2*0.1 mm²
5.9 mm
LSZH / grey, yellow
1.04 mm
/ 4 x cable diameter
-20 °C...60 °C
0 °C...50 °C
-20 °C...60 °C
halogen-free, acc. to IEC 60754-2
in acc. with IEC 60332-2-2, in acc. with IEC 60332-1-2, in acc. with IEC 60332-3-24, in acc. with UL 2556 (FT1)
CCLINK; CE; CULUS

Ordering data

| |
|--------|
| 0.3 m |
| 0.4 m |
| 0.5 m |
| 1.0 m |
| 2.0 m |
| 3.0 m |
| 5.0 m |
| 10.0 m |
| 15.0 m |
| 20.0 m |

Note

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C6FP8LD0003X40X40-Y | 1 | 1312160003 |
| IE-C6FP8LD0004X40X40-Y | 1 | 1312160004 |
| IE-C6FP8LD0005X40X40-Y | 1 | 1312160005 |
| IE-C6FP8LD0010X40X40-Y | 1 | 1312160010 |
| IE-C6FP8LD0020X40X40-Y | 1 | 1312160020 |
| IE-C6FP8LD0030X40X40-Y | 1 | 1312160030 |
| IE-C6FP8LD0050X40X40-Y | 1 | 1312160050 |
| IE-C6FP8LD0100X40X40-Y | 1 | 1312160100 |
| IE-C6FP8LD0150X40X40-Y | 1 | 1312160150 |
| IE-C6FP8LD0200X40X40-Y | 1 | 1312160200 |

Accessories

| Tools |
|--|
| Sheathing strippers, For UTP and STP data cables |
| Sheathing strippers, For coaxial and round data cables |
| Marking tags |
| Insertion label, yellow, 12 mm |
| Insertion label, yellow, 18 mm |
| Dust protection cap |
| Protective cap |
| Cable routing |
| 90° outlet angle |

Note

| Type | Qty. | Order No. |
|--------------------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |
| TMH 12 MC NE GE | 320 | 1718411687 |
| TMH 18 MC NE GE | 320 | 1718431687 |
| IE-PP-RJ45 | 10 | 2552580000 |
| IE-CABLE-BENDER-90 | 50 | 2704480000 |

Assembled cables
Patch cable CabinetLine Cat. 5 straight

PVC green

PUR green



| RJ45 | | | RJ45 |
|------|----------------|---|------|
| 1 | white (orange) | 1 | RJ45 |
| 2 | orange | 2 | |
| 3 | white (green) | 3 | |
| 4 | blue | 4 | |
| 5 | white (blue) | 5 | |
| 6 | green | 6 | |
| 7 | white (brown) | 7 | |
| 8 | brown | 8 | |

| RJ45 | | | RJ45 |
|------|----------------|---|------|
| 1 | white (orange) | 1 | RJ45 |
| 2 | orange | 2 | |
| 3 | white (green) | 3 | |
| 4 | blue | 4 | |
| 5 | white (blue) | 5 | |
| 6 | green | 6 | |
| 7 | white (brown) | 7 | |
| 8 | brown | 8 | |

Technical data

| | |
|-----------------------------------|---|
| Product type | System cable |
| Category | Cat.5 (ISO/IEC 11801) |
| Shielding | SF/UTP |
| Plug left / Plug right | RJ45, IP20, male contact, straight, plug, Plastic, shielded / RJ45, IP20, male contact, straight, plug, Plastic, shielded |
| Connector standard | IEC 60603-7-51 |
| PoE / PoE+ | conforming to IEEE 802.3at |
| Cross-section | 4*2*AWG 26/7 - 4*2*0.128 mm ² |
| Sheath diameter, max. | 5.8 mm |
| Material sheath | PVC |
| Sheathing colour | green (RAL 6018) |
| Insulation diameter | 0.98 mm |
| Min. bending radius, repetitive | 10 x cable diameter |
| Min. bending radius, once only | 5 x cable diameter |
| Ambient temperature (operational) | -40 °C...75 °C |
| Abrasion resistance | good |
| Halogen | Yes |
| Resistance to spread of flame | in acc. with IEC 60332-1 |
| Resistance to oils | |
| Approvals | CE, UKCA |
| Note | |

| | |
|-----------------------------------|---|
| Product type | System cable |
| Category | Cat.5 (ISO/IEC 11801) |
| Shielding | SF/UTP |
| Plug left / Plug right | RJ45, IP20, male contact, straight, plug, Plastic, shielded / RJ45, IP20, male contact, straight, plug, Plastic, shielded |
| Connector standard | IEC 60603-7-51 |
| PoE / PoE+ | conforming to IEEE 802.3at |
| Cross-section | 4*2*AWG 26/7 - 4*2*0.128 mm ² |
| Sheath diameter, max. | 6 mm |
| Material sheath | PUR |
| Sheathing colour | green |
| Insulation diameter | 0.98 mm |
| Min. bending radius, repetitive | 10 x cable diameter |
| Min. bending radius, once only | 5 x cable diameter |
| Ambient temperature (operational) | -40 °C...85 °C |
| Abrasion resistance | very good |
| Halogen | halogen-free, acc. to IEC 60754-2 |
| Resistance to spread of flame | in acc. with IEC 60332-1 |
| Resistance to oils | EN 50305 |
| Approvals | CE, CULUS, UKCA |
| Note | |

| | |
|-----------------------------------|---|
| Product type | System cable |
| Category | Cat.5 (ISO/IEC 11801) |
| Shielding | SF/UTP |
| Plug left / Plug right | RJ45, IP20, male contact, straight, plug, Plastic, shielded / RJ45, IP20, male contact, straight, plug, Plastic, shielded |
| Connector standard | IEC 60603-7-51 |
| PoE / PoE+ | conforming to IEEE 802.3at |
| Cross-section | 4*2*AWG 26/7 - 4*2*0.128 mm ² |
| Sheath diameter, max. | 6 mm |
| Material sheath | PUR |
| Sheathing colour | green |
| Insulation diameter | 0.98 mm |
| Min. bending radius, repetitive | 10 x cable diameter |
| Min. bending radius, once only | 5 x cable diameter |
| Ambient temperature (operational) | -40 °C...85 °C |
| Abrasion resistance | very good |
| Halogen | halogen-free, acc. to IEC 60754-2 |
| Resistance to spread of flame | in acc. with IEC 60332-1 |
| Resistance to oils | EN 50305 |
| Approvals | CE, CULUS, UKCA |
| Note | |

Ordering data

| Length | Type | Qty. | Order No. |
|-------------|------------------------|------|------------|
| 0.5 m | IE-C5ES8VG0005M40M40-G | 1 | 1166020005 |
| 1.0 m | IE-C5ES8VG0010M40M40-G | 1 | 1166020010 |
| 1.5 m | IE-C5ES8VG0015M40M40-G | 1 | 1166020015 |
| 2.0 m | IE-C5ES8VG0020M40M40-G | 1 | 1166020020 |
| 3.0 m | IE-C5ES8VG0030M40M40-G | 1 | 1166020030 |
| 5.0 m | IE-C5ES8VG0050M40M40-G | 1 | 1166020050 |
| 10.0 m | IE-C5ES8VG0100M40M40-G | 1 | 1166020100 |
| 15.0 m | IE-C5ES8VG0150M40M40-G | 1 | 1166020150 |
| 20.0 m | IE-C5ES8VG0200M40M40-G | 1 | 1166020200 |
| Note | | | |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C5ES8VG0005M40M40-G | 1 | 1166020005 |
| IE-C5ES8VG0010M40M40-G | 1 | 1166020010 |
| IE-C5ES8VG0015M40M40-G | 1 | 1166020015 |
| IE-C5ES8VG0020M40M40-G | 1 | 1166020020 |
| IE-C5ES8VG0030M40M40-G | 1 | 1166020030 |
| IE-C5ES8VG0050M40M40-G | 1 | 1166020050 |
| IE-C5ES8VG0100M40M40-G | 1 | 1166020100 |
| IE-C5ES8VG0150M40M40-G | 1 | 1166020150 |
| IE-C5ES8VG0200M40M40-G | 1 | 1166020200 |
| Note | | |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C5ES8UG0005M40M40-G | 1 | 1166000005 |
| IE-C5ES8UG0010M40M40-G | 1 | 1166000010 |
| IE-C5ES8UG0015M40M40-G | 1 | 1166000015 |
| IE-C5ES8UG0020M40M40-G | 1 | 1166000020 |
| IE-C5ES8UG0030M40M40-G | 1 | 1166000030 |
| IE-C5ES8UG0050M40M40-G | 1 | 1166000050 |
| IE-C5ES8UG0100M40M40-G | 1 | 1166000100 |
| IE-C5ES8UG0150M40M40-G | 1 | 1166000150 |
| IE-C5ES8UG0200M40M40-G | 1 | 1166000200 |
| Note | | |

Accessories

| | |
|----------------------------|--|
| Tools | Sheathing strippers, For UTP and STP data cables Sheathing strippers, For coaxial and round data cables |
| Marking tags | Insertion label, yellow, 12 mm Insertion label, yellow, 18 mm |
| Dust protection cap | Protective cap |
| Cable routing | 90° outlet angle |
| Note | |

| Type | Qty. | Order No. |
|--------------------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |
| TM-I 12 MC NE GE | 320 | 1718411687 |
| TM-I 18 MC NE GE | 320 | 1718431687 |
| IE-PP-RJ45 | 10 | 2552580000 |
| IE-CABLE-BENDER-90 | 50 | 2704480000 |
| Note | | |

| Type | Qty. | Order No. |
|--------------------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |
| TM-I 12 MC NE GE | 320 | 1718411687 |
| TM-I 18 MC NE GE | 320 | 1718431687 |
| IE-PP-RJ45 | 10 | 2552580000 |
| IE-CABLE-BENDER-90 | 50 | 2704480000 |
| Note | | |

Assembled cables - Patch cable

Assembled cables

Patch cable CabinetLine Cat. 6 straight

PUR green



| RJ45 | | | RJ45 |
|------|----------------|---|------|
| 1 | white (orange) | 1 | RJ45 |
| 2 | orange | 2 | |
| 3 | white (green) | 3 | |
| 4 | blue | 4 | |
| 5 | white (blue) | 5 | |
| 6 | green | 6 | |
| 7 | white (brown) | 7 | |
| 8 | brown | 8 | |

Technical data

Product type
Category
Shielding
Plug left / Plug right

Connector standard
PoE / PoE+
Cross-section / Insulation diameter, min. / max.
Sheath diameter, max.
Material sheath / Sheathing colour
Min. bending radius, repetitive / Min. bending radius, once only
Ambient temperature (operational)
Abrasion resistance
Halogen
Resistance to spread of flame
Resistance to oils
Approvals

Note

System cable
<20 m: Cat.6A / >20 m Class EA (ISO/IEC 11801 2010)
S/FTP
RJ45, IP20, male contact, straight, plug, Plastic, shielded / RJ45, IP20, male contact, straight, plug, Plastic, shielded
IEC 60603-7-51
conforming to IEEE 802.3at
4*2*AWG 27/7 - 4*2*0.1 mm² / 1.02 mm
6.4 mm
PUR / green
10 x cable diameter / 5 x cable diameter
-40 °C...85 °C
very good
halogen-free, acc. to IEC 60754-2
in acc. with IEC 60332-1 / UL 1581 FT2
in acc. with IEC 60811-2-1
CE; CULUS; UKCA

Ordering data

| |
|--------|
| 0.3 m |
| 0.5 m |
| 1.0 m |
| 1.5 m |
| 2.0 m |
| 3.0 m |
| 5.0 m |
| 10.0 m |
| 15.0 m |
| 20.0 m |

Note

| Type | Qty. | Order No. |
|------------------------|------|-------------|
| IE-C6FS8UG0003A40A40-G | 1 | 894 1350003 |
| IE-C6FS8UG0005A40A40-G | 1 | 894 1350005 |
| IE-C6FS8UG0010A40A40-G | 1 | 894 1350010 |
| IE-C6FS8UG0015A40A40-G | 1 | 894 1350015 |
| IE-C6FS8UG0020A40A40-G | 1 | 894 1350020 |
| IE-C6FS8UG0030A40A40-G | 1 | 894 1350030 |
| IE-C6FS8UG0050A40A40-G | 1 | 894 1350050 |
| IE-C6FS8UG0100A40A40-G | 1 | 894 1350100 |
| IE-C6FS8UG0150A40A40-G | 1 | 894 1350150 |
| IE-C6FS8UG0200A40A40-G | 1 | 894 1350200 |

Other lengths available on request

Accessories

| Tools |
|--|
| Sheathing strippers, For UTP and STP data cables |
| Sheathing strippers, For coaxial and round data cables |
| Marking tags |
| Wire and cable markers. ø 4.7 - 7.4 mm |
| Wire and cable markers. ø 5.8 - 7.8 mm |
| Insertion label, yellow, 12 mm |
| Insertion label, yellow, 18 mm |
| Transparent sleeves, 12-mm length |
| Transparent sleeves, 18-mm length |
| Dust protection cap |
| Protective cap |
| Cable routing |
| 90° outlet angle |
| Note |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |
| VT SF 5/21 MC NE WS V0 | 160 | 1689470001 |
| VT SF 6/21 MC NE WS V0 | 160 | 1730560001 |
| TMH 12 MC NE GE | 320 | 1718411687 |
| TMH 18 MC NE GE | 320 | 1718431687 |
| TM 4/12 HF/HB | 500 | 1719840000 |
| TM 4/18 HF/HB | 500 | 1719850000 |
| IE-PP-RJ45 | 10 | 2552580000 |
| IE-CABLE-BENDER-90 | 50 | 2704480000 |

Assembled cables

Smart Metering Patch cable Cat. 5 straight

- 6 kV

blue



green



| RJ45 | | | RJ45 |
|------|----------------|---|------|
| 1 | white (orange) | 1 | |
| 2 | orange | 2 | |
| 3 | white (green) | 3 | |
| 4 | blue | 4 | |
| 5 | white (blue) | 5 | |
| 6 | green | 6 | |
| 7 | white (brown) | 7 | |
| 8 | brown | 8 | |

| RJ45 | | | RJ45 |
|------|----------------|---|------|
| 1 | white (orange) | 1 | |
| 2 | orange | 2 | |
| 3 | white (green) | 3 | |
| 4 | blue | 4 | |
| 5 | white (blue) | 5 | |
| 6 | green | 6 | |
| 7 | white (brown) | 7 | |
| 8 | brown | 8 | |

Technical data

| | |
|---------------------------------|---|
| Product type | Patch cable |
| Category | Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B) |
| Shielding | SF/UTP |
| Cable layout | Double insulation acc. to VDE 0603-100 |
| Rated impulse withstand voltage | 6 kV |
| Plug left / Plug right | RJ45, IP30 (plugged), male contact, straight, plug, shielded / RJ45, IP30 (plugged), male contact, straight, plug, shielded |

| | |
|--|---|
| Connector standard | IEC 60603-7-51 |
| PoE / PoE+ | conforming to IEEE 802.3at |
| Cross-section | 4x2xAWG 26/7, 4x2x0.128 mm ² |
| Sheath diameter | 5.5 mm |
| Material sheath / Sheathing colour | PVC / blue |
| Insulation diameter | 1 mm |
| Min. bending radius, repetitive / Min. bending radius, once only | / 5 x cable diameter |
| Ambient temperature (operational) | -20 °C...70 °C |
| Abrasion resistance | |
| Halogen | |
| Resistance to spread of flame | |
| Resistance to oils | |
| Approvals | |

| | |
|------|--|
| Note | |
|------|--|

Ordering data

| | Length |
|--|--------|
| | 0.3 m |
| | 0.4 m |
| | 0.5 m |
| | 1.0 m |
| | 1.5 m |
| | 2.0 m |
| | 2.5 m |
| | 5.0 m |

| | |
|------|--|
| Note | |
|------|--|

Accessories

| | |
|---------------------|--|
| Tools | Sheathing strippers, For UTP and STP data cables Sheathing strippers, For coaxial and round data cables |
| Dust protection cap | Protective cap |
| Cable routing | 90° outlet angle |

| | |
|------|--|
| Note | |
|------|--|

| | |
|--|---|
| Product type | Patch cable |
| Category | Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B) |
| Shielding | SF/UTP |
| Cable layout | Double insulation acc. to VDE 0603-100 |
| Rated impulse withstand voltage | 6 kV |
| Plug left / Plug right | RJ45, IP30 (plugged), male contact, straight, plug, shielded / RJ45, IP30 (plugged), male contact, straight, plug, shielded |
| Connector standard | IEC 60603-7-51 |
| PoE / PoE+ | conforming to IEEE 802.3at |
| Cross-section | 4x2xAWG 26/7, 4x2x0.128 mm ² |
| Sheath diameter | 5.5 mm |
| Material sheath / Sheathing colour | PVC / blue |
| Insulation diameter | 1 mm |
| Min. bending radius, repetitive / Min. bending radius, once only | / 5 x cable diameter |
| Ambient temperature (operational) | -20 °C...70 °C |
| Abrasion resistance | |
| Halogen | |
| Resistance to spread of flame | |
| Resistance to oils | |
| Approvals | |

| | |
|------|--|
| Note | |
|------|--|

| Type | Qty. | Order No. |
|-----------------------------|------|------------|
| IE-C5ES8VB0003N40N40-B-K6KV | 1 | 2813820003 |
| IE-C5ES8VB0004N40N40-B-K6KV | 1 | 2813820004 |
| IE-C5ES8VB0005N40N40-B-K6KV | 1 | 2813820005 |
| IE-C5ES8VB0010N40N40-B-K6KV | 1 | 2813820010 |
| IE-C5ES8VB0015N40N40-B-K6KV | 1 | 2813820015 |
| IE-C5ES8VB0020N40N40-B-K6KV | 1 | 2813820020 |
| IE-C5ES8VB0025N40N40-B-K6KV | 1 | 2813820025 |
| IE-C5ES8VB0050N40N40-B-K6KV | 1 | 2813820050 |

| Type | Qty. | Order No. |
|--------------------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |
| IE-PP-RJ45 | 10 | 2552580000 |
| IE-CABLE-BENDER-90 | 50 | 2704480000 |

| | |
|------|--|
| Note | |
|------|--|

| | |
|--|---|
| Product type | Patch cable |
| Category | Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B) |
| Shielding | SF/UTP |
| Cable layout | Double insulation acc. to VDE 0603-100 |
| Rated impulse withstand voltage | 6 kV |
| Plug left / Plug right | RJ45, IP30 (plugged), male contact, straight, plug, shielded / RJ45, IP30 (plugged), male contact, straight, plug, shielded |
| Connector standard | IEC 60603-7-51 |
| PoE / PoE+ | conforming to IEEE 802.3at |
| Cross-section | 4x2xAWG 26/7, 4x2x0.128 mm ² |
| Sheath diameter | 5.5 mm |
| Material sheath / Sheathing colour | PVC / green |
| Insulation diameter | 1 mm |
| Min. bending radius, repetitive / Min. bending radius, once only | / 5 x cable diameter |
| Ambient temperature (operational) | -20 °C...70 °C |
| Abrasion resistance | |
| Halogen | |
| Resistance to spread of flame | |
| Resistance to oils | |
| Approvals | |

| | |
|------|--|
| Note | |
|------|--|

| Type | Qty. | Order No. |
|-----------------------------|------|------------|
| IE-C5ES8VG0003N40N40-G-K6KV | 1 | 2814800003 |
| IE-C5ES8VG0005N40N40-G-K6KV | 1 | 2814800005 |
| IE-C5ES8VG0010N40N40-G-K6KV | 1 | 2814800010 |
| IE-C5ES8VG0015N40N40-G-K6KV | 1 | 2814800015 |
| IE-C5ES8VG0020N40N40-G-K6KV | 1 | 2814800020 |

| Type | Qty. | Order No. |
|--------------------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |
| IE-PP-RJ45 | 10 | 2552580000 |
| IE-CABLE-BENDER-90 | 50 | 2704480000 |

| | |
|------|--|
| Note | |
|------|--|

Assembled cables - Patch cable

Assembled cables

Smart Metering Patch cable SlimLine Cat. 6 straight

- 4 kV

orange



blue



| RJ45 | | | RJ45 |
|------|----------------|---|------|
| 1 | white (orange) | 1 | |
| 2 | orange | 2 | |
| 3 | white (green) | 3 | |
| 4 | blue | 4 | |
| 5 | white (blue) | 5 | |
| 6 | green | 6 | |
| 7 | white (brown) | 7 | |
| 8 | brown | 8 | |

| RJ45 | | | RJ45 |
|------|----------------|---|------|
| 1 | white (orange) | 1 | |
| 2 | orange | 2 | |
| 3 | white (green) | 3 | |
| 4 | blue | 4 | |
| 5 | white (blue) | 5 | |
| 6 | green | 6 | |
| 7 | white (brown) | 7 | |
| 8 | brown | 8 | |

Technical data

Product type
Category
Shielding
Cable layout
Rated impulse withstand voltage
Plug left / Plug right

Connector standard
PoE / PoE+
Cross-section
Sheath diameter
Material sheath / Sheathing colour
Insulation diameter
Min. bending radius, repetitive / Min. bending radius, once only
Ambient temperature (operational)
Abrasion resistance
Halogen
Resistance to spread of flame
Resistance to oils
Approvals

Note

Patch cable
Cat. 6
SF/UTP
Double insulation acc. to VDE 0603-100
4 kV
RJ45, IP30 (plugged), male contact, straight, plug, shielded / RJ45, IP30 (plugged), male contact, straight, plug, shielded
IEC 60603-7-51
conforming to IEEE 802.3bt
4*2*AWG 32/7 / 4*2*0,0320 mm²
3.9...4.1 mm
LSZH / orange
0.68 mm
-20 °C...70 °C
halogen-free
in acc. with IEC 60332-1-2

Patch cable
Cat. 6
SF/UTP
Double insulation acc. to VDE 0603-100
4 kV
RJ45, IP30 (plugged), male contact, straight, plug, shielded / RJ45, IP30 (plugged), male contact, straight, plug, shielded
IEC 60603-7-51
conforming to IEEE 802.3bt
4*2*AWG 32/7 / 4*2*0,0320 mm²
3.9...4.1 mm
LSZH / blue
0.68 mm
-20 °C...70 °C
halogen-free
in acc. with IEC 60332-1-2

Ordering data

0.15 m
0.2 m
0.3 m

Note

| Type | Qty. | Order No. |
|-----------------------------|------|------------|
| IE-C60P8LD015CN40N40-O-K4KV | 1 | 3009630000 |
| IE-C60P8LD020CN40N40-O-K4KV | 1 | 3009480002 |
| IE-C60P8LD030CN40N40-O-K4KV | 1 | 3009480003 |

| Type | Qty. | Order No. |
|-----------------------------|------|------------|
| IE-C60P8LB015CN40N40-B-K4KV | 1 | 3009730000 |
| IE-C60P8LB020CN40N40-B-K4KV | 1 | 3009490002 |
| IE-C60P8LB030CN40N40-B-K4KV | 1 | 3009490003 |

Accessories

Tools
Sheathing strippers, For UTP and STP data cables
Sheathing strippers, For coaxial and round data cables
Dust protection cap
Protective cap
Cable routing
90° outlet angle

| Type | Qty. | Order No. |
|--------------------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |
| IE-PP-RJ45 | 10 | 2552580000 |
| IE-CABLE-BENDER-90 | 50 | 2704480000 |

| Type | Qty. | Order No. |
|--------------------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |
| IE-PP-RJ45 | 10 | 2552580000 |
| IE-CABLE-BENDER-90 | 50 | 2704480000 |

Note

Assembled cables

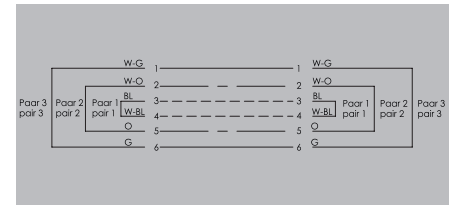
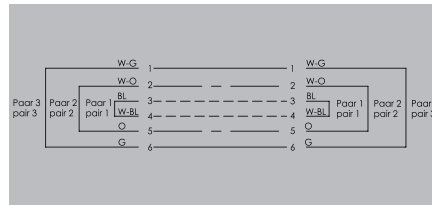
Smart Metering Patch cable RJ12 straight – 6 kV

- 6 kV

red



blue



Technical data

| |
|--|
| Product type |
| Category |
| Shielding |
| Rated impulse withstand voltage |
| Plug left / Plug right |
| Connector standard |
| PoE / PoE+ |
| Cross-section |
| Sheath diameter, max. |
| Material sheath / Sheathing colour |
| Insulation diameter |
| Min. bending radius, repetitive / Min. bending radius, once only |
| Ambient temperature (operational) |
| Abrasion resistance |
| Halogen |
| Resistance to spread of flame |
| Resistance to oils |
| Approvals |
| Note |

| |
|---|
| Patch cable |
| Cat.3 |
| U/UTP |
| 6 kV |
| RJ12, IP20, male contact, straight, plug, unshielded / RJ12, IP20, male contact, straight, plug, unshielded |
| TIA-1096-A |
| 3x2xAWG 24/7 |
| 4.95 mm |
| LSZH / red |
| 1 mm |
| -20 °C...60 °C |
| No |
| in acc. with IEC 60332-1 |
| CE |

| |
|---|
| Patch cable |
| Cat.3 |
| U/UTP |
| 6 kV |
| RJ12, IP20, male contact, straight, plug, unshielded / RJ12, IP20, male contact, straight, plug, unshielded |
| TIA-1096-A |
| 3x2xAWG 24/7 |
| 4.95 mm |
| LSZH / blue |
| 1 mm |
| -20 °C...60 °C |
| No |
| in acc. with IEC 60332-1 |
| CE |

Ordering data

| |
|-------------|
| 0.3 m |
| 1.0 m |
| 0.8 m |
| 1.1 m |
| Note |

| Type | Qty. | Order No. |
|---|------|-------------------|
| IE-C5G06LR0003F40F40-X-K6KV | 1 | 2860910003 |
| IE-C5G06LR0008F40F40-X-K6KV | 1 | 2860910008 |
| IE-C5G06LR0011F40F40-X-K6KV | 1 | 2860910011 |
| additional length in the eShop and on request | | |

| Type | Qty. | Order No. |
|---|------|-------------------|
| IE-C6G06LB0003F40F40-X-K6KV | 1 | 3036970003 |
| IE-C6G06LB0010F40F40-X-K6KV | 1 | 3036970010 |
| additional length in the eShop and on request | | |

Accessories

| Tools |
|--|
| Sheathing strippers, For UTP and STP data cables |
| Sheathing strippers, For coaxial and round data cables |

| Type | Qty. | Order No. |
|--------|------|-------------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |

| Type | Qty. | Order No. |
|--------|------|-------------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |

| |
|-------------|
| Note |
|-------------|

| |
|-------------|
| Note |
|-------------|

| |
|-------------|
| Note |
|-------------|

Assembled cables - PROFINET cable

Assembled cables

Patch cable PROFINET dragline cable (type C)

Cat. 5

IP20

RJ45 IP20



RJ45 IP20 incl. protective cap



| | | |
|--|--|--|
| | | |
|--|--|--|

| RJ45 | | RJ45 |
|------|--------|------|
| 1 | yellow | 1 |
| 2 | orange | 2 |
| 3 | white | 3 |
| 6 | blue | 6 |

| RJ45 | | RJ45 |
|------|--------|------|
| 1 | yellow | 1 |
| 2 | orange | 2 |
| 3 | white | 3 |
| 6 | blue | 6 |

Technical data

| | |
|--|---|
| Product type | Dragline cable |
| Category | Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B) |
| Shielding | SF/UTP |
| Plug left / Plug right | RJ45, IP20, male contact, straight, plug, Zinc diecast, shielded / RJ45, IP20, male contact, straight, plug, Zinc diecast, shielded |
| Cross-section | 4*AWG 22/7 - 0.32 mm ² |
| Sheath diameter, max. | 6.7 mm |
| Material sheath | PUR |
| Insulation diameter | 1.5 mm |
| Min. bending radius, repetitive / Min. bending radius, once only | 7.5 x cable diameter / 5 x cable diameter |
| Bending cycles | 3 Mio |
| Speed | 180 m/min |
| Acceleration | 4 m/s ² |
| Pulling force | ≤ 150 N |
| Ambient temperature (operational) | -40 °C...70 °C |
| Installation temperature | -20 °C...60 °C |
| Storage temperature | -50 °C...70 °C |
| Abrasion resistance | very good |
| Halogen | halogen-free, acc. to IEC 60754-2 |
| Resistance to spread of flame | in acc. with IEC 60332-1 |
| Resistance to oils | in acc. with IEC 60811-2-1 |
| Approvals | CE; CULUS; UKCA |
| Note | |

| | |
|--|---|
| Product type | Dragline cable |
| Category | Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B) |
| Shielding | SF/UTP |
| Plug left / Plug right | RJ45, IP20, male contact, straight, plug, with protective cap, Zinc diecast, shielded / RJ45, IP20, male contact, straight, plug, with protective cap, Zinc diecast, shielded |
| Cross-section | 4*AWG 22/7 - 0.32 mm ² |
| Sheath diameter, max. | 6.7 mm |
| Material sheath | PUR |
| Insulation diameter | 1.5 mm |
| Min. bending radius, repetitive / Min. bending radius, once only | 7.5 x cable diameter / 5 x cable diameter |
| Bending cycles | 3 Mio |
| Speed | 180 m/min |
| Acceleration | 4 m/s ² |
| Pulling force | ≤ 150 N |
| Ambient temperature (operational) | -40 °C...70 °C |
| Installation temperature | -20 °C...60 °C |
| Storage temperature | -50 °C...70 °C |
| Abrasion resistance | very good |
| Halogen | halogen-free, acc. to IEC 60754-2 |
| Resistance to spread of flame | in acc. with IEC 60332-1 |
| Resistance to oils | in acc. with IEC 60811-2-1 |
| Approvals | CE; UKCA |
| Note | |

| | |
|--|---|
| Product type | Dragline cable |
| Category | Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B) |
| Shielding | SF/UTP |
| Plug left / Plug right | RJ45, IP20, male contact, straight, plug, with protective cap, Zinc diecast, shielded / RJ45, IP20, male contact, straight, plug, with protective cap, Zinc diecast, shielded |
| Cross-section | 4*AWG 22/7 - 0.32 mm ² |
| Sheath diameter, max. | 6.7 mm |
| Material sheath | PUR |
| Insulation diameter | 1.5 mm |
| Min. bending radius, repetitive / Min. bending radius, once only | 7.5 x cable diameter / 5 x cable diameter |
| Bending cycles | 3 Mio |
| Speed | 180 m/min |
| Acceleration | 4 m/s ² |
| Pulling force | ≤ 150 N |
| Ambient temperature (operational) | -40 °C...70 °C |
| Installation temperature | -20 °C...60 °C |
| Storage temperature | -50 °C...70 °C |
| Abrasion resistance | very good |
| Halogen | halogen-free, acc. to IEC 60754-2 |
| Resistance to spread of flame | in acc. with IEC 60332-1 |
| Resistance to oils | in acc. with IEC 60811-2-1 |
| Approvals | CE; UKCA |
| Note | |

Ordering data

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C5DD4UG0005A20A20-E | 1 | 1173030005 |
| IE-C5DD4UG0010A20A20-E | 1 | 1173030010 |
| IE-C5DD4UG0020A20A20-E | 1 | 1173030020 |
| IE-C5DD4UG0030A20A20-E | 1 | 1173030030 |
| IE-C5DD4UG0050A20A20-E | 1 | 1173030050 |
| IE-C5DD4UG0100A20A20-E | 1 | 1173030100 |
| IE-C5DD4UG0150A20A20-E | 1 | 1173030150 |
| IE-C5DD4UG0200A20A20-E | 1 | 1173030200 |
| Note | | |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C5DD4UG0005A20A20-E | 1 | 1173030005 |
| IE-C5DD4UG0010A20A20-E | 1 | 1173030010 |
| IE-C5DD4UG0020A20A20-E | 1 | 1173030020 |
| IE-C5DD4UG0030A20A20-E | 1 | 1173030030 |
| IE-C5DD4UG0050A20A20-E | 1 | 1173030050 |
| IE-C5DD4UG0100A20A20-E | 1 | 1173030100 |
| IE-C5DD4UG0150A20A20-E | 1 | 1173030150 |
| IE-C5DD4UG0200A20A20-E | 1 | 1173030200 |
| Note | | |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C5DD4UG0005A20A20-E | 1 | 1376510005 |
| IE-C5DD4UG0010A20A20-E | 1 | 1376510010 |
| IE-C5DD4UG0020A20A20-E | 1 | 1376510020 |
| IE-C5DD4UG0030A20A20-E | 1 | 1376510030 |
| IE-C5DD4UG0050A20A20-E | 1 | 1376510050 |
| IE-C5DD4UG0100A20A20-E | 1 | 1376510100 |
| IE-C5DD4UG0150A20A20-E | 1 | 1376510150 |
| IE-C5DD4UG0200A20A20-E | 1 | 1376510200 |
| Note | | |

Accessories

| Type | Qty. | Order No. |
|------------------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |
| TM-H 12 MC NE GE | 320 | 1718411687 |
| TM-H 18 MC NE GE | 320 | 1718431687 |
| IE-PP-RJ45 | 10 | 2552580000 |
| Note | | |

| Type | Qty. | Order No. |
|------------------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |
| TM-H 12 MC NE GE | 320 | 1718411687 |
| TM-H 18 MC NE GE | 320 | 1718431687 |
| IE-PP-RJ45 | 10 | 2552580000 |
| Note | | |

| Type | Qty. | Order No. |
|------------------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |
| TM-H 12 MC NE GE | 320 | 1718411687 |
| TM-H 18 MC NE GE | 320 | 1718431687 |
| IE-PP-RJ45 | 10 | 2552580000 |
| Note | | |

Assembled cables

Patch cable PROFINET RJ45 crimp

Cat. 5

IP20

Connecting cable (Type B), PVC



| RJ45 | | RJ45 |
|------|--------|------|
| 1 | yellow | 1 |
| 2 | orange | 2 |
| 3 | white | 3 |
| 6 | blue | 6 |

Dragline cable (Type C), PUR



| RJ45 | | RJ45 |
|------|--------|------|
| 1 | yellow | 1 |
| 2 | orange | 2 |
| 3 | white | 3 |
| 6 | blue | 6 |

Technical data

| | |
|--|---|
| Product type | System cable |
| Category | Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B) |
| Shielding | SF/UTP |
| Plug left / Plug right | RJ45, IP20, male contact, straight, plug, Plastic, shielded / RJ45, IP20, male contact, straight, plug, Plastic, shielded |
| Cross-section | 4*AWG 22/7 - 0.32 mm ² |
| Sheath diameter, max. | 6.7 mm |
| Material sheath | PVC |
| Insulation diameter | 1.5 mm |
| Min. bending radius, repetitive / Min. bending radius, once only | 7.5 x cable diameter / 3.5 *diameter |
| Bending cycles | |
| Speed | |
| Acceleration | |
| Pulling force | |
| Ambient temperature (operational) | -40 °C...70 °C |
| Installation temperature | -40 °C...80 °C |
| Storage temperature | -40 °C...80 °C |
| Abrasion resistance | good |
| Halogen | Yes |
| Resistance to spread of flame | in acc. with IEC 60332-1 / UL 1685 |
| Resistance to oils | |
| Approvals | CE; UKCA |
| Note | |

Ordering data

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C5DS4VG0005A60A60-E | 1 | 1522100005 |
| IE-C5DS4VG0010A60A60-E | 1 | 1522100010 |
| IE-C5DS4VG0015A60A60-E | 1 | 1522100015 |
| IE-C5DS4VG0020A60A60-E | 1 | 1522100020 |
| IE-C5DS4VG0025A60A60-E | 1 | 1522100025 |
| IE-C5DS4VG0030A60A60-E | 1 | 1522100030 |
| IE-C5DS4VG0040A60A60-E | 1 | 1522100040 |
| IE-C5DS4VG0050A60A60-E | 1 | 1522100050 |
| IE-C5DS4VG0075A60A60-E | 1 | 1522100075 |
| IE-C5DS4VG0100A60A60-E | 1 | 1522100100 |
| IE-C5DS4VG0150A60A60-E | 1 | 1522100150 |
| IE-C5DS4VG0200A60A60-E | 1 | 1522100200 |

Other lengths available on request

Accessories

| Type | Qty. | Order No. |
|------------|------|------------|
| IE-PP-RJ45 | 10 | 2552580000 |

Note

| | |
|--|---|
| Product type | Dragline cable |
| Category | Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B) |
| Shielding | SF/UTP |
| Plug left / Plug right | RJ45, IP20, male contact, straight, plug, Plastic, shielded / RJ45, IP20, male contact, straight, plug, Plastic, shielded |
| Cross-section | 4*AWG 22/7 - 0.32 mm ² |
| Sheath diameter, max. | 6.7 mm |
| Material sheath | PUR |
| Insulation diameter | 1.5 mm |
| Min. bending radius, repetitive / Min. bending radius, once only | 7.5 x cable diameter / 5 x cable diameter |
| Bending cycles | 3 Mio |
| Speed | 180 m/min |
| Acceleration | 4 m/s ² |
| Pulling force | ≤ 150 N |
| Ambient temperature (operational) | -40 °C...70 °C |
| Installation temperature | -20 °C...60 °C |
| Storage temperature | -50 °C...70 °C |
| Abrasion resistance | very good |
| Halogen | halogen-free, acc. to IEC 60754-2 |
| Resistance to spread of flame | in acc. with IEC 60332-1 |
| Resistance to oils | in acc. with IEC 60811-2-1 |
| Approvals | CE; UKCA |
| Note | |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C5DD4UG0005A60A60-E | 1 | 2047310005 |
| IE-C5DD4UG0010A60A60-E | 1 | 2047310010 |
| IE-C5DD4UG0015A60A60-E | 1 | 2047310015 |
| IE-C5DD4UG0020A60A60-E | 1 | 2047310020 |
| IE-C5DD4UG0025A60A60-E | 1 | 2047310025 |
| IE-C5DD4UG0030A60A60-E | 1 | 2047310030 |
| IE-C5DD4UG0040A60A60-E | 1 | 2047310040 |
| IE-C5DD4UG0050A60A60-E | 1 | 2047310050 |
| IE-C5DD4UG0075A60A60-E | 1 | 2047310075 |
| IE-C5DD4UG0100A60A60-E | 1 | 2047310100 |
| IE-C5DD4UG0150A60A60-E | 1 | 2047310150 |
| IE-C5DD4UG0200A60A60-E | 1 | 2047310200 |

| Type | Qty. | Order No. |
|------------|------|------------|
| IE-PP-RJ45 | 10 | 2552580000 |

Note

Assembled cables - PROFINET cable

Assembled cables

Patch cable PROFINET dragline cable (type C)

Cat. 5

IP67

V14 RJ45 IP67



| RJ45 | | RJ45 |
|------|--------|------|
| 1 | yellow | 1 |
| 2 | orange | 2 |
| 3 | white | 3 |
| 6 | blue | 6 |

Technical data

Product type
Category
Connector standard
Shielding
Plug left / Plug right

Cross-section
Sheath diameter, max.
Material sheath
Insulation diameter
Min. bending radius, repetitive / Min. bending radius, once only
Bending cycles
Speed
Acceleration
Pulling force
Ambient temperature (operational)
Installation temperature
Storage temperature
Abrasion resistance
Halogen
Resistance to spread of flame
Resistance to oils
Approvals

Note

Dragline cable
Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)
IEC 61076-3-117 Var. 14, IEC 60603-7-51
SF/UTP
RJ45, IP67, male contact, straight, PushPull V14, plug, Zinc diecast, shielded / RJ45, IP67, male contact, straight, PushPull V14, plug, Zinc diecast, shielded
4*AWG 22/7 - 0.32 mm²
6.7 mm
PUR
1.5 mm
7.5 x cable diameter / 5 x cable diameter
3 Mio
180 m/min
4 m/s²
≤ 150 N
-40 °C...70 °C
-20 °C...60 °C
-50 °C...70 °C
very good
halogen-free, acc. to IEC 60754-2
in acc. with IEC 60332-1
in acc. with IEC 60811-2-1
CE, UKCA

Ordering data

| |
|--------|
| 1.0 m |
| 2.0 m |
| 3.0 m |
| 5.0 m |
| 10.0 m |
| 15.0 m |
| 20.0 m |

Note

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C5DD4UG0010A2EA2E-X | 1 | 1119730010 |
| IE-C5DD4UG0020A2EA2E-X | 1 | 1119730020 |
| IE-C5DD4UG0030A2EA2E-X | 1 | 1119730030 |
| IE-C5DD4UG0050A2EA2E-X | 1 | 1119730050 |
| IE-C5DD4UG0100A2EA2E-X | 1 | 1119730100 |
| IE-C5DD4UG0150A2EA2E-X | 1 | 1119730150 |
| IE-C5DD4UG0200A2EA2E-X | 1 | 1119730200 |

Accessories

Tools
Sheathing strippers, For UTP and STP data cables
Sheathing strippers, For coaxial and round data cables

Marking tags

Insertion label, yellow, 12 mm
Insertion label, yellow, 18 mm

| Type | Qty. | Order No. |
|-----------------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |
| TMH 12 MC NE GE | 320 | 1718411687 |
| TMH 18 MC NE GE | 320 | 1718431687 |

Note

Assembled cables

Patch cable PROFINET (Type C) Cat. 5, over-moulded IP67

V14 RJ45 IP67



V14 RJ45 IP67



| | | |
|--|--|--|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

| RJ45 | | RJ45 |
|------|--------|------|
| 1 | yellow | 1 |
| 2 | orange | 2 |
| 3 | white | 3 |
| 6 | blue | 6 |

| RJ45 | | RJ45 |
|------|--------|------|
| 1 | yellow | 1 |
| 2 | orange | 2 |
| 3 | white | 3 |
| 6 | blue | 6 |

Technical data

| | |
|--|---|
| Product type | Dragline cable |
| Category | Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B) |
| Connector standard | IEC 61076-3-117 Var. 14 |
| Shielding | SF/UTP |
| Plug left / Plug right | RJ45, IP67, male contact, straight, PushPull V14 moulded, plug, Zinc diecast, shielded / RJ45, IP67, male contact, straight, PushPull V14 moulded, plug, Zinc diecast, shielded |
| Cross-section | 4*AWG 22/7 - 0.32 mm ² |
| Sheath diameter, max. | 6.7 mm |
| Material sheath | PUR |
| Insulation diameter | 1.5 mm |
| Min. bending radius, repetitive / Min. bending radius, once only | 7.5 x cable diameter / 5 x cable diameter |
| Bending cycles / Pulling force | 3 Mio / ≤ 150 N |
| Torsion cycles / Torsion resistance | 180 m/min / 4 m/s ² |
| Speed / Acceleration | -40 °C...70 °C |
| Ambient temperature (operational) | -20 °C...60 °C |
| Installation temperature | -50 °C...70 °C |
| Storage temperature | very good |
| Abrasion resistance | halogen-free, acc. to IEC 60754-2 |
| Halogen | halogen-free, acc. to IEC 60332-1 |
| Resistance to spread of flame | in acc. with IEC 60811-2-1 |
| Resistance to oils | |
| Approvals | |
| Note | |

| | |
|--|---|
| Product type | Torsion cable |
| Category | Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B) |
| Connector standard | IEC 61076-3-117 Var. 14 |
| Shielding | S/UTP |
| Plug left / Plug right | RJ45, IP67, male contact, straight, PushPull V14 moulded, plug, Zinc diecast, shielded / RJ45, IP67, male contact, straight, PushPull V14 moulded, plug, Zinc diecast, shielded |
| Cross-section | 4*AWG 22/19 - 0.38 mm ² |
| Sheath diameter, max. | 6.7 mm |
| Material sheath | PUR |
| Insulation diameter | 1.5 mm |
| Min. bending radius, repetitive / Min. bending radius, once only | 10 x cable diameter / 5 x cable diameter |
| Bending cycles / Pulling force | 1 mill. / 180 °/m |
| Torsion cycles / Torsion resistance | -40 °C...80 °C |
| Speed / Acceleration | -40 °C...80 °C |
| Ambient temperature (operational) | -40 °C...80 °C |
| Installation temperature | very good |
| Storage temperature | halogen-free, acc. to IEC 60754-2 |
| Abrasion resistance | halogen-free, acc. to IEC 60332-1 |
| Halogen | in acc. with IEC 60811-2-1 |
| Resistance to spread of flame | |
| Resistance to oils | |
| Approvals | |
| Note | |

| | |
|--|--|
| Product type | |
| Category | |
| Connector standard | |
| Shielding | |
| Plug left / Plug right | |
| Cross-section | |
| Sheath diameter, max. | |
| Material sheath | |
| Insulation diameter | |
| Min. bending radius, repetitive / Min. bending radius, once only | |
| Bending cycles / Pulling force | |
| Torsion cycles / Torsion resistance | |
| Speed / Acceleration | |
| Ambient temperature (operational) | |
| Installation temperature | |
| Storage temperature | |
| Abrasion resistance | |
| Halogen | |
| Resistance to spread of flame | |
| Resistance to oils | |
| Approvals | |
| Note | |

Ordering data

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C5DD4UG0010B2EB2E-X | 1 | 1307610010 |
| IE-C5DD4UG0020B2EB2E-X | 1 | 1307610020 |
| IE-C5DD4UG0030B2EB2E-X | 1 | 1307610030 |
| IE-C5DD4UG0050B2EB2E-X | 1 | 1307610050 |
| IE-C5DD4UG0100B2EB2E-X | 1 | 1307610100 |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C5IT4UG0010B2EB2E-X | 1 | 1312690010 |
| IE-C5IT4UG0020B2EB2E-X | 1 | 1312690020 |
| IE-C5IT4UG0030B2EB2E-X | 1 | 1312690030 |
| IE-C5IT4UG0050B2EB2E-X | 1 | 1312690050 |
| IE-C5IT4UG0100B2EB2E-X | 1 | 1312690100 |

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |
| | | |
| | | |
| | | |
| | | |

Accessories

| Type | Qty. | Order No. |
|-----------------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |
| TMH 12 MC NE GE | 320 | 1718411687 |
| TMH 18 MC NE GE | 320 | 1718431687 |

| Type | Qty. | Order No. |
|-----------------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |
| TMH 12 MC NE GE | 320 | 1718411687 |
| TMH 18 MC NE GE | 320 | 1718431687 |

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |
| | | |
| | | |
| | | |

| | |
|-------------|--|
| Note | |
|-------------|--|

| | |
|-------------|--|
| Note | |
|-------------|--|

| | |
|-------------|--|
| Note | |
|-------------|--|

Assembled cables
Patch cable PushPull Power

Power IP67, PVC



Power IP67, PUR



Technical data

| | |
|---|------------------------|
| Connector standard | Plug left / Plug right |
| Ambient temperature (operational) | |
| Cross-section | |
| Wire connection cross section AWG, max. | |
| Sheath diameter, max. | |
| Material sheath | |
| Sheathing colour | |
| Insulation | |
| Number of wires | |
| Min. bending radius, once only | |
| Rated voltage | |
| Current-carrying capacity at 50 °C | |
| Approvals | |
| Note | |

| | |
|---|--|
| in acc. with PROFINET specification | |
| PushPull Power, IP67, female contact, straight, plug, Zinc diecast, unshielded / PushPull Power, IP67, female contact, straight, plug, Zinc diecast, unshielded | |
| -40 °C...70 °C | |
| 5*1.5 mm ² | |
| AWG 16 | |
| 8.1 mm | |
| PVC | |
| grey (similar to RAL 7001) | |
| PVC | |
| 5 | |
| 4 x cable diameter | |
| 24 V | |
| 16 A | |
| Note | |

| | |
|---|--|
| in acc. with PROFINET specification | |
| PushPull Power, IP67, female contact, straight, plug, Zinc diecast, unshielded / PushPull Power, IP67, female contact, straight, plug, Zinc diecast, unshielded | |
| -40 °C...80 °C | |
| 5*1.5 mm ² | |
| AWG 16 | |
| 9 mm | |
| PUR | |
| grey (similar to RAL 7001) | |
| TPE | |
| 5 | |
| 5 x cable diameter | |
| 24 V | |
| 16 A | |
| Note | |

Ordering data

| | |
|-------------|--------|
| | 1.0 m |
| | 3.0 m |
| | 5.0 m |
| | 10.0 m |
| | 15.0 m |
| | 20.0 m |
| Note | |

| Type | Qty. | Order No. |
|------------------------------------|------|------------|
| IE-CSPS5VS0010VAPVAP-X | 1 | 1350120010 |
| IE-CSPS5VS0030VAPVAP-X | 1 | 1350120030 |
| IE-CSPS5VS0050VAPVAP-X | 1 | 1350120050 |
| IE-CSPS5VS0100VAPVAP-X | 1 | 1350120100 |
| IE-CSPS5VS0150VAPVAP-X | 1 | 1350120150 |
| IE-CSPS5VS0200VAPVAP-X | 1 | 1350120200 |
| Other lengths available on request | | |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-CSPD5US0050VAPVAP-X | 1 | 1403680050 |
| IE-CSPD5US0100VAPVAP-X | 1 | 1403680100 |
| IE-CSPD5US0150VAPVAP-X | 1 | 1403680150 |
| Note | | |

Accessories

| | |
|---------------------|--|
| Tools | Sheathing strippers, For UTP and STP data cables Sheathing strippers, For coaxial and round data cables |
| Marking tags | Insertion label, yellow, 12 mm Insertion label, yellow, 18 mm |
| Note | |

| Type | Qty. | Order No. |
|------------------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |
| TM-H 12 MC NE GE | 320 | 1718411687 |
| TM-H 18 MC NE GE | 320 | 1718431687 |

| Type | Qty. | Order No. |
|------------------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |
| TM-H 12 MC NE GE | 320 | 1718411687 |
| TM-H 18 MC NE GE | 320 | 1718431687 |

| | |
|-------------|--|
| Note | |
|-------------|--|

| | |
|-------------|--|
| Note | |
|-------------|--|

| | |
|-------------|--|
| Note | |
|-------------|--|

Assembled cable**Dragline cable M12**

- Cat. 5
- PUR
- D-coded
- PROFINET type C

M12 - M12

Plug / Plug

**M12 - M12**

| M12 | | M12 |
|-----|--------|-----|
| 1 | yellow | 1 |
| 2 | white | 2 |
| 3 | orange | 3 |
| 4 | blue | 4 |

| M12 | | M12 |
|-----|--------|-----|
| 1 | yellow | 1 |
| 2 | white | 2 |
| 3 | orange | 3 |
| 4 | blue | 4 |

Technical data

| | |
|-----------------------------------|---|
| Product type | Dragline cable |
| Category | Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B) |
| Shielding | SF/UTP |
| Plug left / Plug right | M12, D-coded, IP67, male contact, straight, plug, Plastic, shielded / M12, D-coded, IP67, male contact, straight, plug, Plastic, shielded |
| Cross-section | 4*AWG 22/7 - 0.32 mm ² |
| Sheath diameter, max. | 6.7 mm |
| Material sheath | PUR |
| Sheathing colour | green (RAL 6018) |
| Insulation diameter | 1.5 mm |
| Min. bending radius, repetitive | 7.5 x cable diameter |
| Min. bending radius, once only | 5 x cable diameter |
| Bending cycles | 3 Mio |
| Speed | 180 m/min |
| Acceleration | 4 m/s ² |
| Pulling force | ≤ 150 N |
| Ambient temperature (operational) | -40 °C...70 °C |
| Installation temperature | -20 °C...60 °C |
| Storage temperature | -50 °C...70 °C |
| Abrasion resistance | very good |
| Halogen | halogen-free, acc. to IEC 60754-2 |
| Resistance to spread of flame | in acc. with IEC 60332-1 |
| Resistance to oils | in acc. with IEC 60811-2-1 |
| Approvals | CULUS |

| | |
|-----------------------------------|---|
| Product type | Dragline cable |
| Category | Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B) |
| Shielding | SF/UTP |
| Plug left / Plug right | M12, D-coded, IP67, female contact, straight, plug, Plastic, shielded / M12, D-coded, IP67, male contact, straight, plug, Plastic, shielded |
| Cross-section | 4*AWG 22/7 - 0.32 mm ² |
| Sheath diameter, max. | 6.7 mm |
| Material sheath | PUR |
| Sheathing colour | green (RAL 6018) |
| Insulation diameter | 1.5 mm |
| Min. bending radius, repetitive | 7.5 x cable diameter |
| Min. bending radius, once only | 5 x cable diameter |
| Bending cycles | 3 Mio |
| Speed | 180 m/min |
| Acceleration | 4 m/s ² |
| Pulling force | ≤ 150 N |
| Ambient temperature (operational) | -40 °C...70 °C |
| Installation temperature | -20 °C...60 °C |
| Storage temperature | -50 °C...70 °C |
| Abrasion resistance | very good |
| Halogen | halogen-free, acc. to IEC 60754-2 |
| Resistance to spread of flame | in acc. with IEC 60332-1 |
| Resistance to oils | in acc. with IEC 60811-2-1 |
| Approvals | CULUS; UKCA |

Ordering data

| | |
|--|--------|
| | 0.5 m |
| | 1.5 m |
| | 3.0 m |
| | 5.0 m |
| | 10.0 m |

Note

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C5DD4UG0005MCSMCS-E | 1 | 1025950005 |
| IE-C5DD4UG0015MCSMCS-E | 1 | 1025950015 |
| IE-C5DD4UG0030MCSMCS-E | 1 | 1025950030 |
| IE-C5DD4UG0050MCSMCS-E | 1 | 1025950050 |
| IE-C5DD4UG0100MCSMCS-E | 1 | 1025950100 |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C5DD4UG0005MSSMCS-E | 1 | 1059330005 |
| IE-C5DD4UG0015MSSMCS-E | 1 | 1059330015 |
| IE-C5DD4UG0030MSSMCS-E | 1 | 1059330030 |
| IE-C5DD4UG0050MSSMCS-E | 1 | 1059330050 |
| IE-C5DD4UG0100MSSMCS-E | 1 | 1059330100 |

Accessories

| | |
|---------------------|--------------------------------|
| Marking tags | Insertion label, yellow, 12 mm |
| | Insertion label, yellow, 18 mm |

| | |
|--------------|-------------------------------|
| Tools | Tool set |
| | Tool set with torque function |
| | Mounting tool |
| | Screwty-M12 |

| Type | Qty. | Order No. |
|------------------|------|------------|
| TM-I 12 MC NE GE | 320 | 1718411687 |
| TM-I 18 MC NE GE | 320 | 1718431687 |
| SCREWTY SET | 1 | 1910000000 |
| SCREWTY SET-DM | 1 | 1920000000 |
| SCREWTY-M12-DM | 1 | 1900001000 |
| SCREWTY-M12 | 1 | 1900000000 |

| Type | Qty. | Order No. |
|------------------|------|------------|
| TM-I 12 MC NE GE | 320 | 1718411687 |
| TM-I 18 MC NE GE | 320 | 1718431687 |
| SCREWTY SET | 1 | 1910000000 |
| SCREWTY SET-DM | 1 | 1920000000 |
| SCREWTY-M12-DM | 1 | 1900001000 |
| SCREWTY-M12 | 1 | 1900000000 |

Note

Assembled cables – PROFINET cable M12

Assembled cable
Dragline cable M12

- Cat. 5
- PUR
- D-coded
- PROFINET type C



M12 - open



| | M12 |
|--------|-----|
| yellow | 1 |
| white | 2 |
| orange | 3 |
| blue | 4 |

M12 - RJ45

Plug / Plug



| RJ45 | | M12 |
|------|--------|-----|
| 1 | yellow | 1 |
| 3 | white | 2 |
| 2 | orange | 3 |
| 6 | blue | 4 |

Technical data

| | |
|-----------------------------------|--|
| Product type | Dragline cable |
| Category | Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B) |
| Shielding | SF/UTP |
| Plug left / Plug right | M12, D-coded, IP67, male contact, straight, plug, Plastic, shielded / free conductor end |
| Cross-section | 4*AWG 22/7 - 0.32 mm ² |
| Sheath diameter, max. | 6.7 mm |
| Material sheath | PUR |
| Sheathing colour | green (RAL 6018) |
| Insulation diameter | 1.5 mm |
| Min. bending radius, repetitive | 7.5 x cable diameter |
| Min. bending radius, once only | 5 x cable diameter |
| Bending cycles | 3 Mio |
| Speed | 180 m/min |
| Acceleration | 4 m/s ² |
| Pulling force | ≤ 150 N |
| Ambient temperature (operational) | -40 °C...70 °C |
| Installation temperature | -20 °C...60 °C |
| Storage temperature | -50 °C...70 °C |
| Abrasion resistance | very good |
| Halogen | halogen-free, acc. to IEC 60754-2 |
| Resistance to spread of flame | in acc. with IEC 60332-1 |
| Resistance to oils | in acc. with IEC 60811-2-1 |
| Approvals | CULUS |
| Note | |

| | |
|-----------------------------------|--|
| Product type | Dragline cable |
| Category | Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B) |
| Shielding | SF/UTP |
| Plug left / Plug right | M12, IP67, male contact, straight, plug, Plastic, shielded / RJ45, IP20, male contact, straight, plug, Plastic, shielded |
| Cross-section | 4*AWG 22/7 - 0.32 mm ² |
| Sheath diameter, max. | 6.7 mm |
| Material sheath | PUR |
| Sheathing colour | green (RAL 6018) |
| Insulation diameter | 1.5 mm |
| Min. bending radius, repetitive | 7.5 x cable diameter |
| Min. bending radius, once only | 5 x cable diameter |
| Bending cycles | 3 Mio |
| Speed | 180 m/min |
| Acceleration | 4 m/s ² |
| Pulling force | ≤ 150 N |
| Ambient temperature (operational) | -40 °C...70 °C |
| Installation temperature | -20 °C...60 °C |
| Storage temperature | -50 °C...70 °C |
| Abrasion resistance | very good |
| Halogen | halogen-free, acc. to IEC 60754-2 |
| Resistance to spread of flame | in acc. with IEC 60332-1 |
| Resistance to oils | in acc. with IEC 60811-2-1 |
| Approvals | CULUS |
| Note | |

| | |
|-----------------------------------|--|
| Product type | Dragline cable |
| Category | Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B) |
| Shielding | SF/UTP |
| Plug left / Plug right | M12, IP67, male contact, straight, plug, Plastic, shielded / RJ45, IP20, male contact, straight, plug, Plastic, shielded |
| Cross-section | 4*AWG 22/7 - 0.32 mm ² |
| Sheath diameter, max. | 6.7 mm |
| Material sheath | PUR |
| Sheathing colour | green (RAL 6018) |
| Insulation diameter | 1.5 mm |
| Min. bending radius, repetitive | 7.5 x cable diameter |
| Min. bending radius, once only | 5 x cable diameter |
| Bending cycles | 3 Mio |
| Speed | 180 m/min |
| Acceleration | 4 m/s ² |
| Pulling force | ≤ 150 N |
| Ambient temperature (operational) | -40 °C...70 °C |
| Installation temperature | -20 °C...60 °C |
| Storage temperature | -50 °C...70 °C |
| Abrasion resistance | very good |
| Halogen | halogen-free, acc. to IEC 60754-2 |
| Resistance to spread of flame | in acc. with IEC 60332-1 |
| Resistance to oils | in acc. with IEC 60811-2-1 |
| Approvals | CULUS |
| Note | |

Ordering data

| | |
|-------------|--------|
| | 1.0 m |
| | 1.5 m |
| | 3.0 m |
| | 5.0 m |
| | 10.0 m |
| Note | |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C5DD4UG0010MCSXXX-X | 1 | 1025940010 |
| IE-C5DD4UG0015MCSXXX-X | 1 | 1025940015 |
| IE-C5DD4UG0030MCSXXX-X | 1 | 1025940030 |
| IE-C5DD4UG0050MCSXXX-X | 1 | 1025940050 |
| IE-C5DD4UG0100MCSXXX-X | 1 | 1025940100 |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C5DD4UG0010MCSA70-E | 1 | 1044470010 |
| IE-C5DD4UG0015MCSA70-E | 1 | 1044470015 |
| IE-C5DD4UG0030MCSA70-E | 1 | 1044470030 |
| IE-C5DD4UG0050MCSA70-E | 1 | 1044470050 |
| IE-C5DD4UG0100MCSA70-E | 1 | 1044470100 |

Accessories

| | |
|----------------------------|--|
| Tools | |
| | Sheathing strippers, For UTP and STP data cables |
| | Sheathing strippers, For coaxial and round data cables |
| | Tool set |
| | Tool set with torque function |
| | Mounting tool |
| | Screwty-M12 |
| Marking tags | |
| | Insertion label, yellow, 12 mm |
| | Insertion label, yellow, 18 mm |
| Dust protection cap | |
| | Protective cap |
| Note | |

| Type | Qty. | Order No. |
|------------------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |
| SCREWTY SET | 1 | 1910000000 |
| SCREWTY SET-DM | 1 | 1920000000 |
| SCREWTY-M12-DM | 1 | 1900001000 |
| SCREWTY-M12 | 1 | 1900000000 |
| TM-I 12 MC NE GE | 320 | 1718411687 |
| TM-I 18 MC NE GE | 320 | 1718431687 |

| Type | Qty. | Order No. |
|------------------|------|------------|
| SCREWTY SET | 1 | 1910000000 |
| SCREWTY SET-DM | 1 | 1920000000 |
| SCREWTY-M12-DM | 1 | 1900001000 |
| SCREWTY-M12 | 1 | 1900000000 |
| TM-I 12 MC NE GE | 320 | 1718411687 |
| TM-I 18 MC NE GE | 320 | 1718431687 |
| IE-PP-RJ45 | 10 | 2552580000 |

Assembled cables

M12 dragline cable, angled

- Cat. 5
- PUR
- D-coded
- PROFINET type C

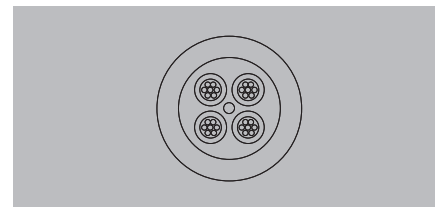
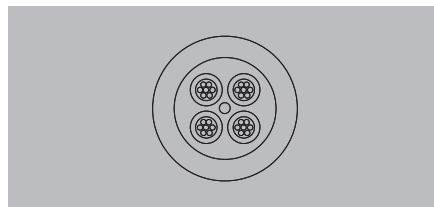
M12 - M12

Plug / Plug



M12 - M12

Plug / Plug



Technical data

| | |
|-----------------------------------|---|
| Product type | Dragline cable |
| Category | Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B) |
| Shielding | SF/UTP |
| Plug left / Plug right | M12, D-coded, IP67, male contact, straight, plug, Plastic, shielded / M12, D-coded, IP67, male contact, angled 90°, plug, Plastic, shielded |
| Cross-section | 4*AWG 22/7 - 0.32 mm ² |
| Sheath diameter, max. | 6.7 mm |
| Material sheath | PUR |
| Sheathing colour | green (RAL 6018) |
| Insulation diameter, min. / max. | 1.5 mm |
| Min. bending radius, repetitive | 7.5 x cable diameter |
| Ambient temperature (operational) | -40 °C...70 °C |
| Installation temperature | -20 °C...60 °C |
| Storage temperature | -50 °C...70 °C |
| Abrasion resistance | very good |
| Halogen | halogen-free, acc. to IEC 60754-2 |
| Resistance to oils | in acc. with IEC 60811-2-1 |
| Fire safety for railway vehicles | |
| Note | |

| | |
|-----------------------------------|---|
| Product type | Dragline cable |
| Category | Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B) |
| Shielding | SF/UTP |
| Plug left / Plug right | M12, D-coded, IP67, male contact, straight, plug, Plastic, shielded / M12, D-coded, IP67, male contact, angled 90°, plug, Plastic, shielded |
| Cross-section | 4*AWG 22/7 - 0.32 mm ² |
| Sheath diameter, max. | 6.7 mm |
| Material sheath | PUR |
| Sheathing colour | green (RAL 6018) |
| Insulation diameter, min. / max. | 1.5 mm |
| Min. bending radius, repetitive | 7.5 x cable diameter |
| Ambient temperature (operational) | -40 °C...70 °C |
| Installation temperature | -20 °C...60 °C |
| Storage temperature | -50 °C...70 °C |
| Abrasion resistance | very good |
| Halogen | halogen-free, acc. to IEC 60754-2 |
| Resistance to oils | in acc. with IEC 60811-2-1 |
| Fire safety for railway vehicles | |
| Note | |

| | |
|-----------------------------------|---|
| Product type | Dragline cable |
| Category | Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B) |
| Shielding | SF/UTP |
| Plug left / Plug right | M12, D-coded, IP67, male contact, angled 90°, plug, Plastic, shielded / M12, D-coded, IP67, male contact, angled 90°, plug, Plastic, shielded |
| Cross-section | 4*AWG 22/7 - 0.32 mm ² |
| Sheath diameter, max. | 6.7 mm |
| Material sheath | PUR |
| Sheathing colour | green (RAL 6018) |
| Insulation diameter, min. / max. | 1.5 mm |
| Min. bending radius, repetitive | 7.5 x cable diameter |
| Ambient temperature (operational) | -40 °C...70 °C |
| Installation temperature | -20 °C...60 °C |
| Storage temperature | -50 °C...70 °C |
| Abrasion resistance | very good |
| Halogen | halogen-free, acc. to IEC 60754-2 |
| Resistance to oils | in acc. with IEC 60811-2-1 |
| Fire safety for railway vehicles | |
| Note | |

Ordering data

| Cat. 5 PROFINET. PUR. M12 straight-M12 angled | |
|---|--|
| 1.5 m | |
| 3.0 m | |
| 5.0 m | |
| 10.0 m | |
| Cat. 5 PROFINET. PUR. M12 angled-M12 angled | |
| 1.5 m | |
| 3.0 m | |
| 5.0 m | |
| 10.0 m | |
| Cat. 5. PUR. M12 angled-open | |
| 1.5 m | |
| 3.0 m | |
| 5.0 m | |
| 10.0 m | |
| Note | |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C5DD4UG0015MCSMCA-E | 1 | 1059770015 |
| IE-C5DD4UG0030MCSMCA-E | 1 | 1059770030 |
| IE-C5DD4UG0050MCSMCA-E | 1 | 1059770050 |
| IE-C5DD4UG0100MCSMCA-E | 1 | 1059770100 |

| Type | Qty. | Order No. |
|-------------------------|------|------------|
| IE-C5DD4UG0015MCA-MCA-E | 1 | 1059890015 |
| IE-C5DD4UG0030MCA-MCA-E | 1 | 1059890030 |
| IE-C5DD4UG0050MCA-MCA-E | 1 | 1059890050 |
| IE-C5DD4UG0100MCA-MCA-E | 1 | 1059890100 |

Accessories

| Marking tags | |
|-----------------------------------|--|
| Insertion label, yellow, 12 mm | |
| Insertion label, yellow, 18 mm | |
| Transparent sleeves, 12-mm length | |
| Transparent sleeves, 18-mm length | |
| Note | |

| Type | Qty. | Order No. |
|------------------|------|------------|
| TM-H 12 MC NE GE | 320 | 1718411687 |
| TM-H 18 MC NE GE | 320 | 1718431687 |
| TM 4/12 HF/HB | 500 | 1719840000 |
| TM 4/18 HF/HB | 500 | 1719850000 |

| Type | Qty. | Order No. |
|------------------|------|------------|
| TM-H 12 MC NE GE | 320 | 1718411687 |
| TM-H 18 MC NE GE | 320 | 1718431687 |
| TM 4/12 HF/HB | 500 | 1719840000 |
| TM 4/18 HF/HB | 500 | 1719850000 |

Assembled cables

System cable M12 flange

- Cat. 5
- PUR
- D-coded
- PROFINET type B

M12 flange - M12 male

Plug / Socket



SERCOS
the automation bus

M12 flange - RJ45

Plug / Socket



SERCOS
the automation bus

| M12 | | M12 |
|-----|--------|-----|
| 1 | yellow | 1 |
| 2 | white | 2 |
| 3 | orange | 3 |
| 4 | blue | 4 |

| M12 | | M12 |
|-----|--------|-----|
| 1 | yellow | 1 |
| 2 | white | 2 |
| 3 | orange | 3 |
| 4 | blue | 4 |

Technical data

Product type
Category
Shielding
Plug left / Plug right

Cross-section
Sheath diameter, max.
Material sheath
Sheathing colour
Insulation diameter
Min. bending radius, repetitive
Min. bending radius, once only
Ambient temperature (operational)
Installation temperature
Storage temperature
Approvals

Note

System cable
Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)
360° shield contact
M12, D-coded, IP67, female contact, straight, flange, Plastic, shielded / M12, D-coded, IP67, male contact, straight, plug, Plastic, shielded

4*AWG 22/7 - 0.32 mm²
6.7 mm
PUR
green (RAL 6018)
1.5 mm
15 x cable diameter
5 x cable diameter
-40 °C...70 °C
-20 °C...60 °C
-50 °C...70 °C

Note

System cable
Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)
360° shield contact
M12, D-coded, IP67, female contact, straight, flange, Plastic, shielded / RJ45, IP20, male contact, straight, plug, Plastic, shielded

4*AWG 22/7 - 0.32 mm²
6.7 mm
PUR
green (RAL 6018)
1.5 mm
15 x cable diameter
5 x cable diameter
-40 °C...70 °C
-20 °C...60 °C
-50 °C...70 °C

Note

Ordering data

| |
|-------|
| 0.5 m |
| 1.0 m |
| 1.5 m |
| 2.0 m |
| 5.0 m |

Note

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C5DS4UG0005MBSMCS-E | 1 | 1244130005 |
| IE-C5DS4UG0010MBSMCS-E | 1 | 1244130010 |
| IE-C5DS4UG0015MBSMCS-E | 1 | 1244130015 |
| IE-C5DS4UG0020MBSMCS-E | 1 | 1244130020 |
| IE-C5DS4UG0050MBSMCS-E | 1 | 1244130050 |

Note

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C5DS4UG0005MBSA70-E | 1 | 1234750005 |
| IE-C5DS4UG0010MBSA70-E | 1 | 1234750010 |
| IE-C5DS4UG0015MBSA70-E | 1 | 1234750015 |
| IE-C5DS4UG0020MBSA70-E | 1 | 1234750020 |
| IE-C5DS4UG0050MBSA70-E | 1 | 1234750050 |

Note

Accessories

| Marking tags | |
|--------------|--------------------------------|
| | Insertion label, yellow, 12 mm |
| | Insertion label, yellow, 18 mm |

| Tools | |
|-------|-------------------------------|
| | Tool set |
| | Tool set with torque function |
| | Mounting tool |
| | Screwty-M12 |

| Dust protection cap | |
|---------------------|----------------|
| | Protective cap |

| Type | Qty. | Order No. |
|------------------|------|------------|
| TM-I 12 MC NE GE | 320 | 1718411687 |
| TM-I 18 MC NE GE | 320 | 1718431687 |

| Type | Qty. | Order No. |
|----------------|------|------------|
| SCREWTY SET | 1 | 1910000000 |
| SCREWTY SET-DM | 1 | 1920000000 |
| SCREWTY-M12-DM | 1 | 1900001000 |
| SCREWTY-M12 | 1 | 1900000000 |

| | |
|--|--|
| | |
|--|--|

| Type | Qty. | Order No. |
|------------------|------|------------|
| TM-I 12 MC NE GE | 320 | 1718411687 |
| TM-I 18 MC NE GE | 320 | 1718431687 |

| Type | Qty. | Order No. |
|----------------|------|------------|
| SCREWTY SET | 1 | 1910000000 |
| SCREWTY SET-DM | 1 | 1920000000 |
| SCREWTY-M12-DM | 1 | 1900001000 |
| SCREWTY-M12 | 1 | 1900000000 |

| | | |
|------------|----|------------|
| IE-PP-RJ45 | 10 | 2552580000 |
|------------|----|------------|

Note

Assembled cables

System cable M12 flange

- Cat. 5
- PUR
- D-coded
- PROFINET type B

M12 flange - open

Socket / -



| | |
|--------|-----|
| | M12 |
| yellow | 1 |
| white | 2 |
| orange | 3 |
| blue | 4 |

Technical data

Product type
 Category
 Shielding
 Plug left / Plug right

System cable
 Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)
 360° shield contact
 M12, D-coded, IP67, female contact, straight, flange, Plastic, shielded / free conductor end

Cross-section
 Sheath diameter, max.
 Material sheath
 Sheathing colour
 Insulation diameter
 Min. bending radius, repetitive
 Min. bending radius, once only
 Ambient temperature (operational)
 Installation temperature
 Storage temperature
 Approvals

4*AWG 22/7 - 0.32 mm²
 6.7 mm
 PUR
 green (RAL 6018)
 1.5 mm
 15 x cable diameter
 5 x cable diameter
 -40 °C...70 °C
 -20 °C...60 °C
 -50 °C...70 °C

Note

Ordering data

| | |
|--|-------|
| | 0.5 m |
| | 1.0 m |
| | 1.5 m |
| | 2.0 m |
| | 5.0 m |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C5DS4UG0005MBSXXX-E | 1 | 1234770005 |
| IE-C5DS4UG0010MBSXXX-E | 1 | 1234770010 |
| IE-C5DS4UG0015MBSXXX-E | 1 | 1234770015 |
| IE-C5DS4UG0020MBSXXX-E | 1 | 1234770020 |
| IE-C5DS4UG0050MBSXXX-E | 1 | 1234770050 |

Note

Accessories

| Marking tags | |
|--------------|--------------------------------|
| | Insertion label, yellow, 12 mm |
| | Insertion label, yellow, 18 mm |

| Type | Qty. | Order No. |
|------------------|------|------------|
| TM-I 12 MC NE GE | 320 | 1718411687 |
| TM-I 18 MC NE GE | 320 | 1718431687 |

| Tools | |
|-------|-------------------------------|
| | Tool set |
| | Tool set with torque function |
| | Mounting tool |
| | Screwty-M12 |

| Type | Qty. | Order No. |
|----------------|------|------------|
| SCREWTY SET | 1 | 1910000000 |
| SCREWTY SET-DM | 1 | 1920000000 |
| SCREWTY-M12-DM | 1 | 1900001000 |
| SCREWTY-M12 | 1 | 1900000000 |

| Dust protection cap | |
|---------------------|----------------|
| | Protective cap |

Note

Assembled cable

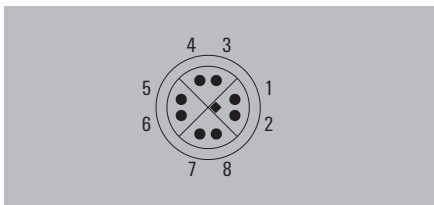
Connecting cable M12

- Cat. 6
- PVC
- X-type
- PROFINET type B

M12 - M12



M12 - open



| M12 | 1 | white, orange | 1 | M12 |
|-----|---|---------------|---|-----|
| | 2 | orange | 2 | |
| | 3 | white, green | 3 | |
| | 4 | green | 4 | |
| | 5 | white, brown | 5 | |
| | 6 | brown | 6 | |
| | 7 | white, blue | 7 | |
| | 8 | blue | 8 | |

| | White, Orange | 1 | M12 |
|--|---------------|---|-----|
| | Orange | 2 | |
| | White, Green | 3 | |
| | Green | 4 | |
| | White, Brown | 5 | |
| | Brown | 6 | |
| | White, Blue | 7 | |
| | Blue | 8 | |

Technical data

| | |
|-----------------------------------|---|
| Product type | Connecting line |
| Category | Cat.6 _A / Class E _A (ISO/IEC 11801 2010) |
| Shielding | S/FTP |
| Plug left / Plug right | M12, X-coded, IP67, male contact, straight, plug, Plastic, shielded / M12, X-coded, IP67, male contact, straight, plug, Plastic, shielded |
| Cross-section | 4*2*AWG 23/7 |
| Sheath diameter, max. | 8.8 mm |
| Material sheath | PVC |
| Sheathing colour | green (RAL 6018) |
| Insulation diameter | 1.58 mm |
| Min. bending radius, repetitive | 8 x cable diameter |
| Min. bending radius, once only | 4 x cable diameter |
| Pulling force | ≤ 150 N |
| Ambient temperature (operational) | -40 °C...80 °C |
| Installation temperature | -40 °C...80 °C |
| Storage temperature | -40 °C...80 °C |
| Halogen | Yes |
| Resistance to spread of flame | in acc. with IEC 60332-1-2 |
| Standard, assembly | UL-Style 2461 |
| Approvals | |
| Note | |

| | |
|-----------------------------------|--|
| Product type | Connecting line |
| Category | Cat.6 _A / Class E _A (ISO/IEC 11801 2010) |
| Shielding | S/FTP |
| Plug left / Plug right | M12, X-coded, IP67, male contact, straight, plug, Plastic, shielded / free conductor end |
| Cross-section | 4*2*AWG 23/7 |
| Sheath diameter, max. | 8.8 mm |
| Material sheath | PVC |
| Sheathing colour | green (RAL 6018) |
| Insulation diameter | 1.58 mm |
| Min. bending radius, repetitive | 8 x cable diameter |
| Min. bending radius, once only | 4 x cable diameter |
| Pulling force | ≤ 150 N |
| Ambient temperature (operational) | -40 °C...80 °C |
| Installation temperature | -40 °C...80 °C |
| Storage temperature | -40 °C...80 °C |
| Halogen | Yes |
| Resistance to spread of flame | in acc. with IEC 60332-1-2 |
| Standard, assembly | UL-Style 2461 |
| Approvals | |
| Note | |

| | |
|-----------------------------------|--|
| Product type | Connecting line |
| Category | Cat.6 _A / Class E _A (ISO/IEC 11801 2010) |
| Shielding | S/FTP |
| Plug left / Plug right | M12, X-coded, IP67, male contact, straight, plug, Plastic, shielded / free conductor end |
| Cross-section | 4*2*AWG 23/7 |
| Sheath diameter, max. | 8.8 mm |
| Material sheath | PVC |
| Sheathing colour | green (RAL 6018) |
| Insulation diameter | 1.58 mm |
| Min. bending radius, repetitive | 8 x cable diameter |
| Min. bending radius, once only | 4 x cable diameter |
| Pulling force | ≤ 150 N |
| Ambient temperature (operational) | -40 °C...80 °C |
| Installation temperature | -40 °C...80 °C |
| Storage temperature | -40 °C...80 °C |
| Halogen | Yes |
| Resistance to spread of flame | in acc. with IEC 60332-1-2 |
| Standard, assembly | UL-Style 2461 |
| Approvals | |
| Note | |

Ordering data

| | |
|-------------|--------|
| | 0.5 m |
| | 1.5 m |
| | 3.0 m |
| | 5.0 m |
| | 10.0 m |
| Note | |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C6KS8VG0005XCSXCS-E | 1 | 1398070005 |
| IE-C6KS8VG0015XCSXCS-E | 1 | 1398070015 |
| IE-C6KS8VG0030XCSXCS-E | 1 | 1398070030 |
| IE-C6KS8VG0050XCSXCS-E | 1 | 1398070050 |
| IE-C6KS8VG0100XCSXCS-E | 1 | 1398070100 |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C6KS8VG0005XCSXXX-E | 1 | 1449470005 |
| IE-C6KS8VG0015XCSXXX-E | 1 | 1449470015 |
| IE-C6KS8VG0030XCSXXX-E | 1 | 1449470030 |
| IE-C6KS8VG0050XCSXXX-E | 1 | 1449470050 |
| IE-C6KS8VG0100XCSXXX-E | 1 | 1449470100 |

Accessories

| Marking tags | |
|--------------|--------------------------------|
| | Insertion label, yellow, 12 mm |
| | Insertion label, yellow, 18 mm |

| Type | Qty. | Order No. |
|------------------|------|------------|
| TM-I 12 MC NE GE | 320 | 1718411687 |
| TM-I 18 MC NE GE | 320 | 1718431687 |

| Type | Qty. | Order No. |
|------------------|------|------------|
| TM-I 12 MC NE GE | 320 | 1718411687 |
| TM-I 18 MC NE GE | 320 | 1718431687 |

| | |
|-------------|--|
| Note | |
|-------------|--|

| | |
|-------------|--|
| Note | |
|-------------|--|

| | |
|-------------|--|
| Note | |
|-------------|--|

Assembled cable
Dragline cable M12

- Cat. 6
- PUR
- X-type
- PROFINET type C

M12 - M12



M12 - RJ45

Plug / Plug



| | | | | |
|-----|---|---------------|---|-----|
| M12 | 1 | white, orange | 1 | M12 |
| | 2 | orange | 2 | |
| | 3 | white, green | 3 | |
| | 4 | green | 4 | |
| | 5 | white, brown | 5 | |
| | 6 | brown | 6 | |
| | 7 | white, blue | 7 | |
| | 8 | blue | 8 | |

| | | | | |
|------|---|---------------|---|-----|
| RJ45 | 1 | White, Orange | 1 | M12 |
| | 2 | Orange | 2 | |
| | 3 | White, Green | 3 | |
| | 4 | Blue | 8 | |
| | 5 | White, Blue | 7 | |
| | 6 | Green | 4 | |
| | 7 | White, Brown | 5 | |
| | 8 | Brown | 6 | |

Technical data

| | |
|-----------------------------------|---|
| Product type | Dragline cable |
| Category | Cat.6 (ISO/IEC 11801) |
| Shielding | S/FTP |
| Plug left / Plug right | M12, X-coded, IP67, male contact, straight, plug, Plastic, shielded / M12, X-coded, IP67, male contact, straight, plug, Plastic, shielded |
| Cross-section | 4*2*AWG 26/19 - 4*2*0.128 mm ² |
| Sheath diameter, max. | 7.8 mm |
| Material sheath | PUR |
| Sheathing colour | green (RAL 6018) |
| Insulation diameter | 0.98 mm |
| Min. bending radius, repetitive | 7.5 x cable diameter |
| Min. bending radius, once only | 4 x cable diameter |
| Pulling force | ≤ 100 N |
| Ambient temperature (operational) | -40 °C...80 °C |
| Installation temperature | -30 °C...70 °C |
| Storage temperature | ... |
| Halogen | halogen-free |
| Resistance to spread of flame | in acc. with IEC 60332-1-2, in acc. with UL 1581 VW-1 and CSA FT1 |
| Standard, assembly | |
| Approvals | |
| Note | |

| | |
|-----------------------------------|---|
| Product type | Dragline cable |
| Category | Cat.6 (ISO/IEC 11801) |
| Shielding | S/FTP |
| Plug left / Plug right | RJ45, IP20, male contact, straight, plug, Plastic, shielded / M12, X-coded, IP67, male contact, straight, plug, Plastic, shielded |
| Cross-section | 4*2*AWG 26/19 - 4*2*0.128 mm ² |
| Sheath diameter, max. | 7.8 mm |
| Material sheath | PUR |
| Sheathing colour | green (RAL 6018) |
| Insulation diameter | 0.98 mm |
| Min. bending radius, repetitive | 7.5 x cable diameter |
| Min. bending radius, once only | 4 x cable diameter |
| Pulling force | ≤ 100 N |
| Ambient temperature (operational) | -40 °C...80 °C |
| Installation temperature | -30 °C...70 °C |
| Storage temperature | ... |
| Halogen | halogen-free |
| Resistance to spread of flame | in acc. with IEC 60332-1-2, in acc. with UL 1581 VW-1 and CSA FT1 |
| Standard, assembly | |
| Approvals | |
| Note | |

| | |
|-----------------------------------|---|
| Product type | Dragline cable |
| Category | Cat.6 (ISO/IEC 11801) |
| Shielding | S/FTP |
| Plug left / Plug right | RJ45, IP20, male contact, straight, plug, Plastic, shielded / M12, X-coded, IP67, male contact, straight, plug, Plastic, shielded |
| Cross-section | 4*2*AWG 26/19 - 4*2*0.128 mm ² |
| Sheath diameter, max. | 7.8 mm |
| Material sheath | PUR |
| Sheathing colour | green (RAL 6018) |
| Insulation diameter | 0.98 mm |
| Min. bending radius, repetitive | 7.5 x cable diameter |
| Min. bending radius, once only | 4 x cable diameter |
| Pulling force | ≤ 100 N |
| Ambient temperature (operational) | -40 °C...80 °C |
| Installation temperature | -30 °C...70 °C |
| Storage temperature | ... |
| Halogen | halogen-free |
| Resistance to spread of flame | in acc. with IEC 60332-1-2, in acc. with UL 1581 VW-1 and CSA FT1 |
| Standard, assembly | |
| Approvals | |
| Note | |

Ordering data

| | |
|------|--------|
| | 1.0 m |
| | 3.0 m |
| | 5.0 m |
| | 7.5 m |
| | 10.0 m |
| | 15.0 m |
| Note | |

| Type | Qty. | Order No. |
|----------------------|------|------------|
| IE-C6HD8UG0010XCXS-E | 1 | 2723040010 |
| IE-C6HD8UG0030XCXS-E | 1 | 2723040030 |
| IE-C6HD8UG0050XCXS-E | 1 | 2723040050 |
| IE-C6HD8UG0075XCXS-E | 1 | 2723040075 |
| IE-C6HD8UG0100XCXS-E | 1 | 2723040100 |
| IE-C6HD8UG0150XCXS-E | 1 | 2723040150 |
| Note | | |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C6HD8UG0010A40XCS-E | 1 | 2723030010 |
| IE-C6HD8UG0030A40XCS-E | 1 | 2723030030 |
| IE-C6HD8UG0050A40XCS-E | 1 | 2723030050 |
| IE-C6HD8UG0075A40XCS-E | 1 | 2723030075 |
| IE-C6HD8UG0100A40XCS-E | 1 | 2723030100 |
| IE-C6HD8UG0150A40XCS-E | 1 | 2723030150 |
| Note | | |

Accessories

| Marking tags | |
|--------------|--------------------------------|
| | Insertion label, yellow, 12 mm |
| | Insertion label, yellow, 18 mm |
| Note | |

| Type | Qty. | Order No. |
|------------------|------|------------|
| TM-I 12 MC NE GE | 320 | 1718411687 |
| TM-I 18 MC NE GE | 320 | 1718431687 |
| Note | | |

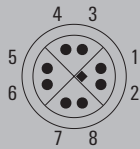
| Type | Qty. | Order No. |
|------------------|------|------------|
| TM-I 12 MC NE GE | 320 | 1718411687 |
| TM-I 18 MC NE GE | 320 | 1718431687 |
| Note | | |



Assembled cables

M12 connecting cables

- Cat. 6
- PUR
- X-type



Technical data

| |
|-----------------------------------|
| Product type |
| Category |
| Shielding |
| Plug left / Plug right |
| Cross-section |
| Sheath diameter, max. |
| Material sheath |
| Sheathing colour |
| Insulation diameter |
| Min. bending radius, repetitive |
| Min. bending radius, once only |
| Pulling force |
| Ambient temperature (operational) |
| Installation temperature |
| Storage temperature |
| Halogen |
| Resistance to spread of flame |
| Standard, assembly |
| Approvals |

Note

Ordering data

| | |
|--|--------|
| | 1.0 m |
| | 2.0 m |
| | 3.0 m |
| | 5.0 m |
| | 10.0 m |
| | 12.0 m |

Note

Accessories

| | |
|---------------------|--------------------------------|
| Marking tags | Insertion label, yellow, 12 mm |
| | Insertion label, yellow, 18 mm |
| Dust protection cap | Protective cap |

Note

M12 - RJ45

Plug / Plug



| | | | | |
|------|---|---------------|---|-----|
| RJ45 | 1 | White, Orange | 1 | M12 |
| | 2 | Orange | 2 | |
| | 3 | White, Green | 3 | |
| | 4 | Blue | 8 | |
| | 5 | White, Blue | 7 | |
| | 6 | Green | 4 | |
| | 7 | White, Brown | 5 | |
| | 8 | Brown | 6 | |

| |
|---|
| System cable |
| Cat.6 _A / Class E _A (ISO/IEC 11801 2010) |
| S/FTP |
| RJ45, IP20, male contact, straight, plug, Plastic, shielded / M12, X-coded, IP67, male contact, straight, plug, Plastic, shielded |
| 4*2*AWG 26/7 - 4*2*0.128 mm ² |
| 6.7 mm |
| PUR |
| green (RAL 6018) |
| 0.98 mm |
| 10 x cable diameter |
| 5 x cable diameter |
| -40 °C...80 °C |
| -20 °C...60 °C |
| -40 °C...80 °C |
| halogen-free, acc. to IEC 60754-1 |
| in acc. with IEC 60332-1-2 |
| UL Style 20963 |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C6EL8UG0010U40XCS-E | 1 | 1457580010 |
| IE-C6EL8UG0020U40XCS-E | 1 | 1457580020 |
| IE-C6EL8UG0030U40XCS-E | 1 | 1457580030 |
| IE-C6EL8UG0050U40XCS-E | 1 | 1457580050 |
| IE-C6EL8UG0100U40XCS-E | 1 | 1457580100 |
| IE-C6EL8UG0120U40XCS-E | 1 | 1457580120 |

| Type | Qty. | Order No. |
|------------------|------|------------|
| TM-I 12 MC NE GE | 320 | 1718411687 |
| TM-I 18 MC NE GE | 320 | 1718431687 |
| IE-PP-RJ45 | 10 | 2552580000 |

Assembled cables
EtherNet/IP patch cable

- PUR

V1 RJ45 IP 67 - metal



V1 RJ45 IP 67 - plastic



| RJ45 | | | RJ45 |
|------|----------------|---|------|
| 1 | white (orange) | 1 | RJ45 |
| 2 | orange | 2 | |
| 3 | white (green) | 3 | |
| 4 | blue | 4 | |
| 5 | white (blue) | 5 | |
| 6 | green | 6 | |
| 7 | white (brown) | 7 | |
| 8 | brown | 8 | |

| RJ45 | | | RJ45 |
|------|----------------|---|------|
| 1 | white (orange) | 1 | RJ45 |
| 2 | orange | 2 | |
| 3 | white (green) | 3 | |
| 4 | blue | 4 | |
| 5 | white (blue) | 5 | |
| 6 | green | 6 | |
| 7 | white (brown) | 7 | |
| 8 | brown | 8 | |

Technical data

| | |
|-----------------------------------|---|
| Product type | System cable |
| Category | Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B) |
| Shielding | SF/UTP |
| Plug left / Plug right | RJ45, IP67, male contact, straight, V01 Baymo, plug, Zinc diecast, shielded / RJ45, IP67, male contact, straight, V01 Baymo, plug, Zinc diecast, shielded |
| Cross-section | 4*2*AWG 26/7 - 4*2*0.128 mm ² |
| Sheath diameter, max. | 6.3 mm |
| Material sheath | PUR |
| Sheathing colour | green (RAL 6018) |
| Insulation diameter | 1 mm |
| Min. bending radius, repetitive | 10 x cable diameter |
| Min. bending radius, once only | 4 x cable diameter |
| Ambient temperature (operational) | -40 °C...80 °C |
| Installation temperature | -10 °C...60 °C |
| Storage temperature | -40 °C...75 °C |
| Abrasion resistance | very good |
| Halogen | halogen-free, acc. to IEC 60754-2 |
| Resistance to spread of flame | in acc. with IEC 60332-1 |
| Resistance to oils | in acc. with IEC 60811-2-1 |
| Approvals | CULUS |
| Note | |

| | |
|-----------------------------------|---|
| Product type | System cable |
| Category | Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B) |
| Shielding | SF/UTP |
| Plug left / Plug right | RJ45, IP67, male contact, straight, V01 Baymo, plug, Plastic, shielded / RJ45, IP67, male contact, straight, V01 Baymo, plug, Plastic, shielded |
| Cross-section | 4*2*AWG 26/7 - 4*2*0.128 mm ² |
| Sheath diameter, max. | 6.3 mm |
| Material sheath | PUR |
| Sheathing colour | green (RAL 6018) |
| Insulation diameter | 1 mm |
| Min. bending radius, repetitive | 10 x cable diameter |
| Min. bending radius, once only | 4 x cable diameter |
| Ambient temperature (operational) | -40 °C...80 °C |
| Installation temperature | -10 °C...60 °C |
| Storage temperature | -40 °C...75 °C |
| Abrasion resistance | very good |
| Halogen | halogen-free, acc. to IEC 60754-2 |
| Resistance to spread of flame | in acc. with IEC 60332-1 |
| Resistance to oils | in acc. with IEC 60811-2-1 |
| Approvals | CULUS |
| Note | |

| | |
|-----------------------------------|---|
| Product type | System cable |
| Category | Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B) |
| Shielding | SF/UTP |
| Plug left / Plug right | RJ45, IP67, male contact, straight, V01 Baymo, plug, Plastic, shielded / RJ45, IP67, male contact, straight, V01 Baymo, plug, Plastic, shielded |
| Cross-section | 4*2*AWG 26/7 - 4*2*0.128 mm ² |
| Sheath diameter, max. | 6.3 mm |
| Material sheath | PUR |
| Sheathing colour | green (RAL 6018) |
| Insulation diameter | 1 mm |
| Min. bending radius, repetitive | 10 x cable diameter |
| Min. bending radius, once only | 4 x cable diameter |
| Ambient temperature (operational) | -40 °C...80 °C |
| Installation temperature | -10 °C...60 °C |
| Storage temperature | -40 °C...75 °C |
| Abrasion resistance | very good |
| Halogen | halogen-free, acc. to IEC 60754-2 |
| Resistance to spread of flame | in acc. with IEC 60332-1 |
| Resistance to oils | in acc. with IEC 60811-2-1 |
| Approvals | CULUS |
| Note | |

Ordering data

| | |
|-------------|--------|
| | 1.0 m |
| | 2.0 m |
| | 5.0 m |
| | 10.0 m |
| Note | |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C5ES8UG0010B41B41-E | 1 | 1066850000 |
| IE-C5ES8UG0020B41B41-E | 1 | 1066860000 |
| IE-C5ES8UG0050B41B41-E | 1 | 1066870000 |
| IE-C5ES8UG0100B41B41-E | 1 | 1066880000 |
| Note | | |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C5ES8UG0010P41P41-E | 1 | 1106010000 |
| IE-C5ES8UG0020P41P41-E | 1 | 1106020000 |
| IE-C5ES8UG0050P41P41-E | 1 | 1106030000 |
| IE-C5ES8UG0100P41P41-E | 1 | 1106040000 |
| Note | | |

Accessories

| Marking tags | |
|--------------|--------------------------------|
| | Insertion label, yellow, 12 mm |
| | Insertion label, yellow, 18 mm |

| Type | Qty. | Order No. |
|------------------|------|------------|
| TM-I 12 MC NE GE | 320 | 1718411687 |
| TM-I 18 MC NE GE | 320 | 1718431687 |

| Type | Qty. | Order No. |
|------------------|------|------------|
| TM-I 12 MC NE GE | 320 | 1718411687 |
| TM-I 18 MC NE GE | 320 | 1718431687 |

| | |
|-------------|--|
| Note | |
|-------------|--|

| | |
|-------------|--|
| Note | |
|-------------|--|

| | |
|-------------|--|
| Note | |
|-------------|--|

Assembled cable
Dragline cable M8

- Cat. 5
- PUR
- P-coded
- EtherCat P - data and power via the Ethernet line

M8 - open

Socket / -



M8 - open

Plug / -



| | |
|----|--------|
| M8 | yellow |
| 1 | white |
| 2 | blue |
| 3 | orange |
| 4 | |

| | |
|----|--------|
| M8 | yellow |
| 1 | white |
| 2 | blue |
| 3 | orange |
| 4 | |

Technical data

Product type
Category
Shielding
Plug left / Plug right

Cross-section
Sheath diameter, max.
Material sheath
Sheathing colour
Insulation diameter
Min. bending radius, repetitive
Min. bending radius, once only
Ambient temperature (operational)
Installation temperature
Storage temperature
Approvals

Note

Dragline cable
Cat. 5e
SF/UTP
M8, P-coded, IP67, female contact, straight, plug, Plastic, shielded / free conductor end

2*2*AWG 22/7 - 2*2*0.36 mm²
6.7 mm
PUR
black
1.6 mm
8 x cable diameter
5 x cable diameter
-40 °C...80 °C

...

...

Dragline cable
Cat. 5e
SF/UTP
M8, P-coded, IP67, male contact, straight, plug, Plastic, shielded / free conductor end

2*2*AWG 22/7 - 2*2*0.36 mm²
6.7 mm
PUR
black
1.6 mm
8 x cable diameter
5 x cable diameter
-40 °C...80 °C

...

...

Ordering data

| | |
|--|--------|
| | 1.5 m |
| | 3.0 m |
| | 5.0 m |
| | 7.5 m |
| | 10.0 m |
| | 20.0 m |
| | 30.0 m |

Note

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C5DE4UP0015PSSXXX-E | 1 | 2717740015 |
| IE-C5DE4UP0030PSSXXX-E | 1 | 2717740030 |
| IE-C5DE4UP0050PSSXXX-E | 1 | 2717740050 |
| IE-C5DE4UP0075PSSXXX-E | 1 | 2717740075 |
| IE-C5DE4UP0100PSSXXX-E | 1 | 2717740100 |
| IE-C5DE4UP0200PSSXXX-E | 1 | 2717740200 |
| IE-C5DE4UP0300PSSXXX-E | 1 | 2717740300 |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C5DE4UP0015PCSXXX-E | 1 | 2717750015 |
| IE-C5DE4UP0030PCSXXX-E | 1 | 2717750030 |
| IE-C5DE4UP0050PCSXXX-E | 1 | 2717750050 |
| IE-C5DE4UP0075PCSXXX-E | 1 | 2717750075 |
| IE-C5DE4UP0100PCSXXX-E | 1 | 2717750100 |
| IE-C5DE4UP0200PCSXXX-E | 1 | 2717750200 |
| IE-C5DE4UP0300PCSXXX-E | 1 | 2717750300 |

Accessories

| Marking tags | |
|--------------|--------------------------------|
| | Insertion label, yellow, 12 mm |
| | Insertion label, yellow, 18 mm |

| Tools | |
|-------|-------------------------------|
| | Tool set |
| | Tool set with torque function |
| | Mounting tool |
| | Screwty-M12 |

| Type | Qty. | Order No. |
|------------------|------|------------|
| TM-I 12 MC NE GE | 320 | 1718411687 |
| TM-I 18 MC NE GE | 320 | 1718431687 |
| SCREWTY SET | 1 | 1910000000 |
| SCREWTY SET-DM | 1 | 1920000000 |
| SCREWTY-M12-DM | 1 | 1900001000 |
| SCREWTY-M12 | 1 | 1900000000 |

| Type | Qty. | Order No. |
|------------------|------|------------|
| TM-I 12 MC NE GE | 320 | 1718411687 |
| TM-I 18 MC NE GE | 320 | 1718431687 |
| SCREWTY SET | 1 | 1910000000 |
| SCREWTY SET-DM | 1 | 1920000000 |
| SCREWTY-M12-DM | 1 | 1900001000 |
| SCREWTY-M12 | 1 | 1900000000 |

Note

Assembled cables – EtherCat P cable M8

Assembled cable
Dragline cable M8

- Cat. 5
- PUR
- P-coded
- EtherCat P - data and power via the Ethernet line

M8 - open

Socket angled / -



M8 - open

Plug angled / -



| | |
|----|--------|
| M8 | yellow |
| 1 | white |
| 2 | blue |
| 3 | orange |
| 4 | |

| | |
|----|--------|
| M8 | yellow |
| 1 | white |
| 2 | blue |
| 3 | orange |
| 4 | |

Technical data

| | |
|-----------------------------------|---|
| Product type | Dragline cable |
| Category | Cat. 5e |
| Shielding | SF/UTP |
| Plug left / Plug right | M8, P-coded, IP67, female contact, angled 90°, plug, Plastic, shielded / free conductor end |
| Cross-section | 2*2*AWG 22/7 - 2*2*0.36 mm ² |
| Sheath diameter, max. | 6.7 mm |
| Material sheath | PUR |
| Sheathing colour | black |
| Insulation diameter | 1.6 mm |
| Min. bending radius, repetitive | 8 x cable diameter |
| Min. bending radius, once only | 5 x cable diameter |
| Ambient temperature (operational) | -40 °C...80 °C |
| Installation temperature | ... |
| Storage temperature | ... |
| Approvals | ... |
| Note | |

| | |
|-----------------------------------|---|
| Product type | Dragline cable |
| Category | Cat. 5e |
| Shielding | SF/UTP |
| Plug left / Plug right | M8, P-coded, IP67, male contact, angled 90°, plug, Plastic, shielded / free conductor end, shielded |
| Cross-section | 2*2*AWG 22/7 - 2*2*0.36 mm ² |
| Sheath diameter, max. | 6.7 mm |
| Material sheath | PUR |
| Sheathing colour | black |
| Insulation diameter | 1.6 mm |
| Min. bending radius, repetitive | 8 x cable diameter |
| Min. bending radius, once only | 5 x cable diameter |
| Ambient temperature (operational) | -40 °C...80 °C |
| Installation temperature | ... |
| Storage temperature | ... |
| Approvals | ... |
| Note | |

| | |
|-----------------------------------|---|
| Product type | Dragline cable |
| Category | Cat. 5e |
| Shielding | SF/UTP |
| Plug left / Plug right | M8, P-coded, IP67, male contact, angled 90°, plug, Plastic, shielded / free conductor end, shielded |
| Cross-section | 2*2*AWG 22/7 - 2*2*0.36 mm ² |
| Sheath diameter, max. | 6.7 mm |
| Material sheath | PUR |
| Sheathing colour | black |
| Insulation diameter | 1.6 mm |
| Min. bending radius, repetitive | 8 x cable diameter |
| Min. bending radius, once only | 5 x cable diameter |
| Ambient temperature (operational) | -40 °C...80 °C |
| Installation temperature | ... |
| Storage temperature | ... |
| Approvals | ... |
| Note | |

Ordering data

| | |
|------|--------|
| | 1.5 m |
| | 3.0 m |
| | 5.0 m |
| | 7.5 m |
| | 10.0 m |
| | 20.0 m |
| | 30.0 m |
| Note | |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C5DE4UP0015PSAXXX-E | 1 | 2717760015 |
| IE-C5DE4UP0030PSAXXX-E | 1 | 2717760030 |
| IE-C5DE4UP0050PSAXXX-E | 1 | 2717760050 |
| IE-C5DE4UP0075PSAXXX-E | 1 | 2717760075 |
| IE-C5DE4UP0100PSAXXX-E | 1 | 2717760100 |
| IE-C5DE4UP0200PSAXXX-E | 1 | 2717760200 |
| IE-C5DE4UP0300PSAXXX-E | 1 | 2717760300 |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C5DE4UP0015PCAXXX-E | 1 | 2717770015 |
| IE-C5DE4UP0030PCAXXX-E | 1 | 2717770030 |
| IE-C5DE4UP0050PCAXXX-E | 1 | 2717770050 |
| IE-C5DE4UP0075PCAXXX-E | 1 | 2717770075 |
| IE-C5DE4UP0100PCAXXX-E | 1 | 2717770100 |

Accessories

| | |
|--------------|--------------------------------|
| Marking tags | |
| | Insertion label, yellow, 12 mm |
| | Insertion label, yellow, 18 mm |
| Tools | |
| | Tool set |
| | Tool set with torque function |
| | Mounting tool |
| | Screwty-M12 |
| Note | |

| Type | Qty. | Order No. |
|------------------|------|------------|
| TM-I 12 MC NE GE | 320 | 1718411687 |
| TM-I 18 MC NE GE | 320 | 1718431687 |
| SCREWTY SET | 1 | 1910000000 |
| SCREWTY SET-DM | 1 | 1920000000 |
| SCREWTY-M12-DM | 1 | 1900001000 |
| SCREWTY-M12 | 1 | 1900000000 |
| Note | | |

| Type | Qty. | Order No. |
|------------------|------|------------|
| TM-I 12 MC NE GE | 320 | 1718411687 |
| TM-I 18 MC NE GE | 320 | 1718431687 |
| SCREWTY SET | 1 | 1910000000 |
| SCREWTY SET-DM | 1 | 1920000000 |
| SCREWTY-M12-DM | 1 | 1900001000 |
| SCREWTY-M12 | 1 | 1900000000 |
| Note | | |

Assembled cable
Dragline cable M8

- Cat. 5
- PUR
- P-coded
- EtherCat P - data and power via the Ethernet line

M8 - M8

Plug straight / Plug straight



M8 - M8

Plug straight / Socket straight



| | | |
|----|--------|----|
| M8 | | M8 |
| 1 | yellow | 1 |
| 2 | white | 2 |
| 3 | blue | 3 |
| 4 | orange | 4 |

| | | |
|----|--------|----|
| M8 | | M8 |
| 1 | yellow | 1 |
| 2 | white | 2 |
| 3 | blue | 3 |
| 4 | orange | 4 |

Technical data

Product type
Category
Shielding
Plug left / Plug right

Cross-section
Sheath diameter, max.
Material sheath
Sheathing colour
Insulation diameter
Min. bending radius, repetitive
Min. bending radius, once only
Ambient temperature (operational)
Installation temperature
Storage temperature
Approvals

Note

Dragline cable
Cat. 5e
SF/UTP
M8, P-coded, IP67, male contact, straight, plug, Plastic, shielded / M8, P-coded, IP67, male contact, straight, plug, Plastic, shielded

2*2*AWG 22/7 - 2*2*0.36 mm²
6.7 mm
PUR
black
1.6 mm
8 x cable diameter
5 x cable diameter
-40 °C...80 °C

...
...

Dragline cable
Cat. 5e
SF/UTP
M8, P-coded, IP67, male contact, straight, plug, Plastic, shielded / M8, P-coded, IP67, female contact, straight, plug, Plastic, shielded

2*2*AWG 22/7 - 2*2*0.36 mm²
6.7 mm
PUR
black
1.6 mm
8 x cable diameter
5 x cable diameter
-40 °C...80 °C

...
...

Ordering data

| | |
|--|--------|
| | 1.5 m |
| | 3.0 m |
| | 5.0 m |
| | 7.5 m |
| | 10.0 m |
| | 20.0 m |
| | 30.0 m |

Note

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C5DE4UP0015PCSPCS-E | 1 | 2717780015 |
| IE-C5DE4UP0030PCSPCS-E | 1 | 2717780030 |
| IE-C5DE4UP0050PCSPCS-E | 1 | 2717780050 |
| IE-C5DE4UP0075PCSPCS-E | 1 | 2717780075 |
| IE-C5DE4UP0100PCSPCS-E | 1 | 2717780100 |
| IE-C5DE4UP0200PCSPCS-E | 1 | 2717780200 |
| IE-C5DE4UP0300PCSPCS-E | 1 | 2717780300 |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C5DE4UP0015PCSPSS-E | 1 | 2717790015 |
| IE-C5DE4UP0030PCSPSS-E | 1 | 2717790030 |
| IE-C5DE4UP0050PCSPSS-E | 1 | 2717790050 |
| IE-C5DE4UP0075PCSPSS-E | 1 | 2717790075 |
| IE-C5DE4UP0100PCSPSS-E | 1 | 2717790100 |
| IE-C5DE4UP0200PCSPSS-E | 1 | 2717790200 |
| IE-C5DE4UP0300PCSPSS-E | 1 | 2717790300 |

Accessories

| Marking tags | |
|--------------|--------------------------------|
| | Insertion label, yellow, 12 mm |
| | Insertion label, yellow, 18 mm |

| Tools | |
|-------|-------------------------------|
| | Tool set |
| | Tool set with torque function |
| | Mounting tool |
| | Screwty-M12 |

| Type | Qty. | Order No. |
|------------------|------|------------|
| TM-I 12 MC NE GE | 320 | 1718411687 |
| TM-I 18 MC NE GE | 320 | 1718431687 |
| SCREWTY SET | 1 | 1910000000 |
| SCREWTY SET-DM | 1 | 1920000000 |
| SCREWTY-M12-DM | 1 | 1900001000 |
| SCREWTY-M12 | 1 | 1900000000 |

| Type | Qty. | Order No. |
|------------------|------|------------|
| TM-I 12 MC NE GE | 320 | 1718411687 |
| TM-I 18 MC NE GE | 320 | 1718431687 |
| SCREWTY SET | 1 | 1910000000 |
| SCREWTY SET-DM | 1 | 1920000000 |
| SCREWTY-M12-DM | 1 | 1900001000 |
| SCREWTY-M12 | 1 | 1900000000 |

Note

Assembled cables – EtherCat P cable M8

Assembled cable
Dragline cable M8

- Cat. 5
- PUR
- P-coded
- EtherCat P - data and power via the Ethernet line

M8 - M8

Plug angled / Plug angled



M8 - M8

Plug angled / socket angled



| | | |
|----|--------|----|
| M8 | | M8 |
| 1 | yellow | 1 |
| 2 | white | 2 |
| 3 | blue | 3 |
| 4 | orange | 4 |

| | | |
|----|--------|----|
| M8 | | M8 |
| 1 | yellow | 1 |
| 2 | white | 2 |
| 3 | blue | 3 |
| 4 | orange | 4 |

Technical data

| | |
|-----------------------------------|---|
| Product type | Dragline cable |
| Category | Cat. 5e |
| Shielding | SF/UTP |
| Plug left / Plug right | M8, P-coded, IP67, male contact, angled 90°, plug, Plastic, shielded / M8, P-coded, IP67, male contact, angled 90°, plug, Plastic, shielded |
| Cross-section | 2*2*AWG 22/7 - 2*2*0.36 mm ² |
| Sheath diameter, max. | 6.7 mm |
| Material sheath | PUR |
| Sheathing colour | black |
| Insulation diameter | 1.6 mm |
| Min. bending radius, repetitive | 8 x cable diameter |
| Min. bending radius, once only | 5 x cable diameter |
| Ambient temperature (operational) | -40 °C...80 °C |
| Installation temperature | ... |
| Storage temperature | ... |
| Approvals | ... |
| Note | |

| | |
|-----------------------------------|---|
| Product type | Dragline cable |
| Category | Cat. 5e |
| Shielding | SF/UTP |
| Plug left / Plug right | M8, P-coded, IP67, male contact, angled 90°, plug, Plastic, shielded / M8, P-coded, IP67, female contact, angled 90°, plug, Plastic, shielded |
| Cross-section | 2*2*AWG 22/7 - 2*2*0.36 mm ² |
| Sheath diameter, max. | 6.7 mm |
| Material sheath | PUR |
| Sheathing colour | black |
| Insulation diameter | 1.6 mm |
| Min. bending radius, repetitive | 8 x cable diameter |
| Min. bending radius, once only | 5 x cable diameter |
| Ambient temperature (operational) | -40 °C...80 °C |
| Installation temperature | ... |
| Storage temperature | ... |
| Approvals | ... |
| Note | |

| | |
|-----------------------------------|---|
| Product type | Dragline cable |
| Category | Cat. 5e |
| Shielding | SF/UTP |
| Plug left / Plug right | M8, P-coded, IP67, male contact, angled 90°, plug, Plastic, shielded / M8, P-coded, IP67, female contact, angled 90°, plug, Plastic, shielded |
| Cross-section | 2*2*AWG 22/7 - 2*2*0.36 mm ² |
| Sheath diameter, max. | 6.7 mm |
| Material sheath | PUR |
| Sheathing colour | black |
| Insulation diameter | 1.6 mm |
| Min. bending radius, repetitive | 8 x cable diameter |
| Min. bending radius, once only | 5 x cable diameter |
| Ambient temperature (operational) | -40 °C...80 °C |
| Installation temperature | ... |
| Storage temperature | ... |
| Approvals | ... |
| Note | |

Ordering data

| | |
|------|--------|
| | 1.5 m |
| | 3.0 m |
| | 5.0 m |
| | 7.5 m |
| | 10.0 m |
| Note | |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C5DE4UP0015PCAPCA-E | 1 | 2717800015 |
| IE-C5DE4UP0030PCAPCA-E | 1 | 2717800030 |
| IE-C5DE4UP0050PCAPCA-E | 1 | 2717800050 |
| IE-C5DE4UP0075PCAPCA-E | 1 | 2717800075 |
| IE-C5DE4UP0100PCAPCA-E | 1 | 2717800100 |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C5DE4UP0015PCAPSA-E | 1 | 2717810015 |
| IE-C5DE4UP0030PCAPSA-E | 1 | 2717810030 |
| IE-C5DE4UP0050PCAPSA-E | 1 | 2717810050 |
| IE-C5DE4UP0075PCAPSA-E | 1 | 2717810075 |
| IE-C5DE4UP0100PCAPSA-E | 1 | 2717810100 |

Accessories

| | |
|--------------|--------------------------------|
| Marking tags | Insertion label, yellow, 12 mm |
| | Insertion label, yellow, 18 mm |
| Tools | Tool set |
| | Tool set with torque function |
| | Mounting tool |
| | Screwty-M12 |

| Type | Qty. | Order No. |
|------------------|------|------------|
| TM-I 12 MC NE GE | 320 | 1718411687 |
| TM-I 18 MC NE GE | 320 | 1718431687 |
| SCREWTY SET | 1 | 1910000000 |
| SCREWTY SET-DM | 1 | 1920000000 |
| SCREWTY-M12-DM | 1 | 1900001000 |
| SCREWTY-M12 | 1 | 1900000000 |

| Type | Qty. | Order No. |
|------------------|------|------------|
| TM-I 12 MC NE GE | 320 | 1718411687 |
| TM-I 18 MC NE GE | 320 | 1718431687 |
| SCREWTY SET | 1 | 1910000000 |
| SCREWTY SET-DM | 1 | 1920000000 |
| SCREWTY-M12-DM | 1 | 1900001000 |
| SCREWTY-M12 | 1 | 1900000000 |

Note

Note

Note

Assembled cable
Dragline cable M8

- Cat. 5
- PUR
- D-coded

M8 - open

Plug / -



M8 - open

Socket / -



| | |
|----|--------|
| M8 | yellow |
| 1 | white |
| 2 | orange |
| 3 | blue |
| 4 | |

| | |
|----|--------|
| M8 | yellow |
| 1 | white |
| 2 | orange |
| 3 | blue |
| 4 | |

Technical data

| | |
|-----------------------------------|---|
| Product type | Dragline cable |
| Category | Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B) |
| Shielding | SF/UTP |
| Plug left / Plug right | M8, D-coded, IP67, male contact, straight, plug, Plastic, shielded / free conductor end |
| Cross-section | 4*AWG 22/7 - 0.32 mm ² |
| Sheath diameter, max. | 6.7 mm |
| Material sheath | PUR |
| Sheathing colour | green (RAL 6018) |
| Insulation diameter | 1.5 mm |
| Min. bending radius, repetitive | 7.5 x cable diameter |
| Min. bending radius, once only | 5 x cable diameter |
| Ambient temperature (operational) | -40 °C...70 °C |
| Installation temperature | -20 °C...60 °C |
| Storage temperature | -50 °C...70 °C |
| Approvals | |

Note

Ordering data

| | |
|--|--------|
| | 1.5 m |
| | 3.0 m |
| | 5.0 m |
| | 7.5 m |
| | 10.0 m |
| | 20.0 m |
| | 30.0 m |

Note

Accessories

| | |
|---------------------|--------------------------------|
| Marking tags | Insertion label, yellow, 12 mm |
| | Insertion label, yellow, 18 mm |
| Tools | Tool set |
| | Tool set with torque function |
| | Mounting tool |
| | Screwty-M12 |

Note

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C5DD4UG0015DCSXXX-E | 1 | 2706150015 |
| IE-C5DD4UG0030DCSXXX-E | 1 | 2706150030 |
| IE-C5DD4UG0050DCSXXX-E | 1 | 2706150050 |
| IE-C5DD4UG0075DCSXXX-E | 1 | 2706150075 |
| IE-C5DD4UG0100DCSXXX-E | 1 | 2706150100 |
| IE-C5DD4UG0200DCSXXX-E | 1 | 2706150200 |
| IE-C5DD4UG0300DCSXXX-E | 1 | 2706150300 |

| Type | Qty. | Order No. |
|------------------|------|------------|
| TM-I 12 MC NE GE | 320 | 1718411687 |
| TM-I 18 MC NE GE | 320 | 1718431687 |
| SCREWTY SET | 1 | 1910000000 |
| SCREWTY SET -DM | 1 | 1920000000 |
| SCREWTY-M12-DM | 1 | 1900001000 |
| SCREWTY- M12 | 1 | 1900000000 |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C5DD4UG0015DSSXXX-E | 1 | 2706260015 |
| IE-C5DD4UG0030DSSXXX-E | 1 | 2706260030 |
| IE-C5DD4UG0050DSSXXX-E | 1 | 2706260050 |
| IE-C5DD4UG0075DSSXXX-E | 1 | 2706260075 |
| IE-C5DD4UG0100DSSXXX-E | 1 | 2706260100 |
| IE-C5DD4UG0200DSSXXX-E | 1 | 2706260200 |
| IE-C5DD4UG0300DSSXXX-E | 1 | 2706260300 |

| Type | Qty. | Order No. |
|------------------|------|------------|
| TM-I 12 MC NE GE | 320 | 1718411687 |
| TM-I 18 MC NE GE | 320 | 1718431687 |
| SCREWTY SET | 1 | 1910000000 |
| SCREWTY SET -DM | 1 | 1920000000 |
| SCREWTY-M12-DM | 1 | 1900001000 |
| SCREWTY- M12 | 1 | 1900000000 |

Assembled cable
Dragline cable M8

- Cat. 5
- PUR
- D-coded

M8 - open



M8 - open



| | |
|----|--------|
| M8 | yellow |
| 1 | white |
| 2 | orange |
| 3 | blue |

| | |
|----|--------|
| M8 | yellow |
| 1 | white |
| 2 | orange |
| 3 | blue |

Technical data

| | |
|-----------------------------------|---|
| Product type | Dragline cable |
| Category | Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B) |
| Shielding | SF/UTP |
| Plug left / Plug right | M8, D-coded, IP67, male contact, angled 90°, plug, Plastic, shielded / free conductor end |
| Cross-section | 4*AWG 22/7 - 0.32 mm ² |
| Sheath diameter, max. | 6.7 mm |
| Material sheath | PUR |
| Sheathing colour | green (RAL 6018) |
| Insulation diameter | 1.5 mm |
| Min. bending radius, repetitive | 7.5 x cable diameter |
| Min. bending radius, once only | 5 x cable diameter |
| Ambient temperature (operational) | -40 °C...70 °C |
| Installation temperature | -20 °C...60 °C |
| Storage temperature | -50 °C...70 °C |
| Approvals | |
| Note | |

| | |
|-----------------------------------|---|
| Product type | Dragline cable |
| Category | Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B) |
| Shielding | SF/UTP |
| Plug left / Plug right | M8, D-coded, IP67, female contact, angled 90°, plug, Plastic, shielded / free conductor end |
| Cross-section | 4*AWG 22/7 - 0.32 mm ² |
| Sheath diameter, max. | 6.7 mm |
| Material sheath | PUR |
| Sheathing colour | green (RAL 6018) |
| Insulation diameter | 1.5 mm |
| Min. bending radius, repetitive | 7.5 x cable diameter |
| Min. bending radius, once only | 5 x cable diameter |
| Ambient temperature (operational) | -40 °C...70 °C |
| Installation temperature | -20 °C...60 °C |
| Storage temperature | -50 °C...70 °C |
| Approvals | |
| Note | |

| | |
|-----------------------------------|---|
| Product type | Dragline cable |
| Category | Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B) |
| Shielding | SF/UTP |
| Plug left / Plug right | M8, D-coded, IP67, female contact, angled 90°, plug, Plastic, shielded / free conductor end |
| Cross-section | 4*AWG 22/7 - 0.32 mm ² |
| Sheath diameter, max. | 6.7 mm |
| Material sheath | PUR |
| Sheathing colour | green (RAL 6018) |
| Insulation diameter | 1.5 mm |
| Min. bending radius, repetitive | 7.5 x cable diameter |
| Min. bending radius, once only | 5 x cable diameter |
| Ambient temperature (operational) | -40 °C...70 °C |
| Installation temperature | -20 °C...60 °C |
| Storage temperature | -50 °C...70 °C |
| Approvals | |
| Note | |

Ordering data

| | |
|-------------|--------|
| | 1.5 m |
| | 3.0 m |
| | 5.0 m |
| | 7.5 m |
| | 10.0 m |
| | 20.0 m |
| | 30.0 m |
| Note | |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C5DD4UG0015DCAXXX-E | 1 | 2706190015 |
| IE-C5DD4UG0030DCAXXX-E | 1 | 2706190030 |
| IE-C5DD4UG0050DCAXXX-E | 1 | 2706190050 |
| IE-C5DD4UG0075DCAXXX-E | 1 | 2706190075 |
| IE-C5DD4UG0100DCAXXX-E | 1 | 2706190100 |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C5DD4UG0015DSAXXX-E | 1 | 2706160015 |
| IE-C5DD4UG0030DSAXXX-E | 1 | 2706160030 |
| IE-C5DD4UG0050DSAXXX-E | 1 | 2706160050 |
| IE-C5DD4UG0075DSAXXX-E | 1 | 2706160075 |
| IE-C5DD4UG0100DSAXXX-E | 1 | 2706160100 |
| IE-C5DD4UG0200DSAXXX-E | 1 | 2706160200 |
| IE-C5DD4UG0300DSAXXX-E | 1 | 2706160300 |

Accessories

| | |
|---------------------|--------------------------------|
| Marking tags | Insertion label, yellow, 12 mm |
| | Insertion label, yellow, 18 mm |
| Tools | Tool set |
| | Tool set with torque function |
| | Mounting tool |
| | Screwty-M12 |

| Type | Qty. | Order No. |
|------------------|------|------------|
| TM-I 12 MC NE GE | 320 | 1718411687 |
| TM-I 18 MC NE GE | 320 | 1718431687 |
| SCREWTY SET | 1 | 1910000000 |
| SCREWTY SET -DM | 1 | 1920000000 |
| SCREWTY-M12-DM | 1 | 1900001000 |
| SCREWTY- M12 | 1 | 1900000000 |

| Type | Qty. | Order No. |
|------------------|------|------------|
| TM-I 12 MC NE GE | 320 | 1718411687 |
| TM-I 18 MC NE GE | 320 | 1718431687 |
| SCREWTY SET | 1 | 1910000000 |
| SCREWTY SET -DM | 1 | 1920000000 |
| SCREWTY-M12-DM | 1 | 1900001000 |
| SCREWTY- M12 | 1 | 1900000000 |

Note

Note

Note

Assembled cable
Dragline cable M8

- Cat. 5
- PUR
- D-coded

M8 - M8

Plug straight / Plug straight



M8 - M8

Plug straight / Socket straight



| | |
|----|--------|
| M8 | yellow |
| 1 | white |
| 2 | orange |
| 3 | blue |
| 4 | |

| | |
|----|--------|
| M8 | yellow |
| 1 | white |
| 2 | orange |
| 3 | blue |
| 4 | |

Technical data

Product type
Category
Shielding
Plug left / Plug right

Dragline cable
Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)
SF/UTP
M8, D-coded, IP67, male contact, straight, plug, Plastic, shielded / M8, D-coded, IP67, male contact, straight, plug, Plastic, shielded

Dragline cable
Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)
SF/UTP
M8, D-coded, IP67, male contact, straight, plug, Plastic, shielded / M8, D-coded, IP67, female contact, straight, plug, Plastic, shielded

Cross-section
Sheath diameter, max.
Material sheath
Sheathing colour
Insulation diameter
Min. bending radius, repetitive
Min. bending radius, once only
Ambient temperature (operational)
Installation temperature
Storage temperature
Approvals

4*AWG 22/7 - 0.32 mm²
6.7 mm
PUR
green (RAL 6018)
1.5 mm
7.5 x cable diameter
5 x cable diameter
-40 °C...70 °C
-20 °C...60 °C
-50 °C...70 °C

4*AWG 22/7 - 0.32 mm²
6.7 mm
PUR
green (RAL 6018)
1.5 mm
7.5 x cable diameter
5 x cable diameter
-40 °C...70 °C
-20 °C...60 °C
-50 °C...70 °C

Note

Ordering data

| | |
|--|--------|
| | 1.5 m |
| | 3.0 m |
| | 5.0 m |
| | 7.5 m |
| | 10.0 m |
| | 20.0 m |
| | 30.0 m |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C5DD4UG0015DCSDCS-E | 1 | 2706200015 |
| IE-C5DD4UG0030DCSDCS-E | 1 | 2706200030 |
| IE-C5DD4UG0050DCSDCS-E | 1 | 2706200050 |
| IE-C5DD4UG0075DCSDCS-E | 1 | 2706200075 |
| IE-C5DD4UG0100DCSDCS-E | 1 | 2706200100 |
| IE-C5DD4UG0200DCSDCS-E | 1 | 2706200200 |
| IE-C5DD4UG0300DCSDCS-E | 1 | 2706200300 |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C5DD4UG0015DCSDSS-E | 1 | 2706210015 |
| IE-C5DD4UG0030DCSDSS-E | 1 | 2706210030 |
| IE-C5DD4UG0050DCSDSS-E | 1 | 2706210050 |
| IE-C5DD4UG0075DCSDSS-E | 1 | 2706210075 |
| IE-C5DD4UG0100DCSDSS-E | 1 | 2706210100 |
| IE-C5DD4UG0200DCSDSS-E | 1 | 2706210200 |
| IE-C5DD4UG0300DCSDSS-E | 1 | 2706210300 |

Note

Accessories

| Marking tags | |
|--------------|--------------------------------|
| | Insertion label, yellow, 12 mm |
| | Insertion label, yellow, 18 mm |

| Type | Qty. | Order No. |
|------------------|------|------------|
| TM-I 12 MC NE GE | 320 | 1718411687 |
| TM-I 18 MC NE GE | 320 | 1718431687 |

| Type | Qty. | Order No. |
|------------------|------|------------|
| TM-I 12 MC NE GE | 320 | 1718411687 |
| TM-I 18 MC NE GE | 320 | 1718431687 |

| Tools | |
|-------|-------------------------------|
| | Tool set |
| | Tool set with torque function |
| | Mounting tool |
| | Screwty-M12 |

| Type | Qty. | Order No. |
|----------------|------|------------|
| SCREWTY SET | 1 | 1910000000 |
| SCREWTY SET-DM | 1 | 1920000000 |
| SCREWTY-M12-DM | 1 | 1900001000 |
| SCREWTY-M12 | 1 | 1900000000 |

| Type | Qty. | Order No. |
|----------------|------|------------|
| SCREWTY SET | 1 | 1910000000 |
| SCREWTY SET-DM | 1 | 1920000000 |
| SCREWTY-M12-DM | 1 | 1900001000 |
| SCREWTY-M12 | 1 | 1900000000 |

Note

Assembled cables – PROFINET cable M8, D-coded

Assembled cable
Dragline cable M8

- Cat. 5
- PUR
- D-coded

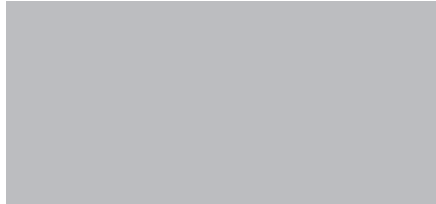
M8 - M8

Plug angled / Plug angled



M8 - M8

Plug angled / socket angled



| | |
|----|--------|
| M8 | yellow |
| 1 | white |
| 2 | orange |
| 3 | blue |
| 4 | |

| | |
|----|--------|
| M8 | yellow |
| 1 | white |
| 2 | orange |
| 3 | blue |
| 4 | |

Technical data

| | |
|-----------------------------------|---|
| Product type | Dragline cable |
| Category | Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B) |
| Shielding | SF/UTP |
| Plug left / Plug right | M8, D-coded, IP67, male contact, angled 90°, plug, Plastic, shielded / M8, D-coded, IP67, male contact, angled 90°, plug, Plastic, shielded |
| Cross-section | 4*AWG 22/7 - 0.32 mm ² |
| Sheath diameter, max. | 6.7 mm |
| Material sheath | PUR |
| Sheathing colour | green (RAL 6018) |
| Insulation diameter | 1.5 mm |
| Min. bending radius, repetitive | 7.5 x cable diameter |
| Min. bending radius, once only | 5 x cable diameter |
| Ambient temperature (operational) | -40 °C...70 °C |
| Installation temperature | -20 °C...60 °C |
| Storage temperature | -50 °C...70 °C |
| Approvals | |
| Note | |

| | |
|-----------------------------------|---|
| Product type | Dragline cable |
| Category | Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B) |
| Shielding | SF/UTP |
| Plug left / Plug right | M8, D-coded, IP67, male contact, angled 90°, plug, Plastic, shielded / M8, D-coded, IP67, female contact, angled 90°, plug, Plastic, shielded |
| Cross-section | 4*AWG 22/7 - 0.32 mm ² |
| Sheath diameter, max. | 6.7 mm |
| Material sheath | PUR |
| Sheathing colour | green (RAL 6018) |
| Insulation diameter | 1.5 mm |
| Min. bending radius, repetitive | 7.5 x cable diameter |
| Min. bending radius, once only | 5 x cable diameter |
| Ambient temperature (operational) | -40 °C...70 °C |
| Installation temperature | -20 °C...60 °C |
| Storage temperature | -50 °C...70 °C |
| Approvals | |
| Note | |

| | |
|-----------------------------------|---|
| Product type | Dragline cable |
| Category | Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B) |
| Shielding | SF/UTP |
| Plug left / Plug right | M8, D-coded, IP67, male contact, angled 90°, plug, Plastic, shielded / M8, D-coded, IP67, female contact, angled 90°, plug, Plastic, shielded |
| Cross-section | 4*AWG 22/7 - 0.32 mm ² |
| Sheath diameter, max. | 6.7 mm |
| Material sheath | PUR |
| Sheathing colour | green (RAL 6018) |
| Insulation diameter | 1.5 mm |
| Min. bending radius, repetitive | 7.5 x cable diameter |
| Min. bending radius, once only | 5 x cable diameter |
| Ambient temperature (operational) | -40 °C...70 °C |
| Installation temperature | -20 °C...60 °C |
| Storage temperature | -50 °C...70 °C |
| Approvals | |
| Note | |

Ordering data

| | |
|------|--------|
| | 1.5 m |
| | 3.0 m |
| | 5.0 m |
| | 7.5 m |
| | 10.0 m |
| Note | |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C5DD4UG0015DCADCA-E | 1 | 2706220015 |
| IE-C5DD4UG0030DCADCA-E | 1 | 2706220030 |
| IE-C5DD4UG0050DCADCA-E | 1 | 2706220050 |
| IE-C5DD4UG0075DCADCA-E | 1 | 2706220075 |
| IE-C5DD4UG0100DCADCA-E | 1 | 2706220100 |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C5DD4UG0015DCADSA-E | 1 | 2706230015 |
| IE-C5DD4UG0030DCADSA-E | 1 | 2706230030 |
| IE-C5DD4UG0050DCADSA-E | 1 | 2706230050 |
| IE-C5DD4UG0075DCADSA-E | 1 | 2706230075 |
| IE-C5DD4UG0100DCADSA-E | 1 | 2706230100 |

Accessories

| | |
|--------------|--------------------------------|
| Marking tags | Insertion label, yellow, 12 mm |
| | Insertion label, yellow, 18 mm |
| Tools | Tool set |
| | Tool set with torque function |
| | Mounting tool |
| | Screwty-M12 |

| Type | Qty. | Order No. |
|------------------|------|------------|
| TM-I 12 MC NE GE | 320 | 1718411687 |
| TM-I 18 MC NE GE | 320 | 1718431687 |
| SCREWTY SET | 1 | 1910000000 |
| SCREWTY SET-DM | 1 | 1920000000 |
| SCREWTY-M12-DM | 1 | 1900001000 |
| SCREWTY-M12 | 1 | 1900000000 |

| Type | Qty. | Order No. |
|------------------|------|------------|
| TM-I 12 MC NE GE | 320 | 1718411687 |
| TM-I 18 MC NE GE | 320 | 1718431687 |
| SCREWTY SET | 1 | 1910000000 |
| SCREWTY SET-DM | 1 | 1920000000 |
| SCREWTY-M12-DM | 1 | 1900001000 |
| SCREWTY-M12 | 1 | 1900000000 |



Assembled cable
Dragline cable M8

- Cat. 5
- PUR
- D-coded

M8 - RJ45

Plug straight / Plug straight



| RJ45 | | M8 |
|------|--------|----|
| 1 | yellow | 1 |
| 3 | white | 2 |
| 2 | orange | 3 |
| 6 | blue | 4 |

Technical data

| | |
|-----------------------------------|--|
| Product type | Dragline cable |
| Category | Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B) |
| Shielding | SF/UTP |
| Plug left / Plug right | M8, D-coded, IP67, male contact, straight, plug, Plastic, shielded / RJ45, IP20, male contact, straight, plug, Plastic, shielded |
| Cross-section | 4*AWG 22/7 - 0.32 mm ² |
| Sheath diameter, max. | 6.7 mm |
| Material sheath | PUR |
| Sheathing colour | green (RAL 6018) |
| Insulation diameter | 1.5 mm |
| Min. bending radius, repetitive | 7.5 x cable diameter |
| Min. bending radius, once only | 5 x cable diameter |
| Ambient temperature (operational) | -40 °C...70 °C |
| Installation temperature | -20 °C...60 °C |
| Storage temperature | -50 °C...70 °C |
| Approvals | |
| Note | |

| | |
|-----------------------------------|--|
| Product type | Dragline cable |
| Category | Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B) |
| Shielding | SF/UTP |
| Plug left / Plug right | M8, D-coded, IP67, male contact, straight, plug, Plastic, shielded / RJ45, IP20, male contact, straight, plug, Plastic, shielded |
| Cross-section | 4*AWG 22/7 - 0.32 mm ² |
| Sheath diameter, max. | 6.7 mm |
| Material sheath | PUR |
| Sheathing colour | green (RAL 6018) |
| Insulation diameter | 1.5 mm |
| Min. bending radius, repetitive | 7.5 x cable diameter |
| Min. bending radius, once only | 5 x cable diameter |
| Ambient temperature (operational) | -40 °C...70 °C |
| Installation temperature | -20 °C...60 °C |
| Storage temperature | -50 °C...70 °C |
| Approvals | |
| Note | |

Ordering data

| | |
|-------------|--------|
| | 1.5 m |
| | 3.0 m |
| | 5.0 m |
| | 7.5 m |
| | 10.0 m |
| | 20.0 m |
| | 30.0 m |
| Note | |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C5DD4UG0015DCSU20-E | 1 | 2706250015 |
| IE-C5DD4UG0030DCSU20-E | 1 | 2706250030 |
| IE-C5DD4UG0050DCSU20-E | 1 | 2706250050 |
| IE-C5DD4UG0075DCSU20-E | 1 | 2706250075 |
| IE-C5DD4UG0100DCSU20-E | 1 | 2706250100 |
| IE-C5DD4UG0200DCSU20-E | 1 | 2706250200 |
| IE-C5DD4UG0300DCSU20-E | 1 | 2706250300 |

Accessories

| | |
|---------------------|--------------------------------|
| Marking tags | |
| | Insertion label, yellow, 12 mm |
| | Insertion label, yellow, 18 mm |
| Tools | |
| | Tool set |
| | Tool set with torque function |
| | Mounting tool |
| | Screwty-M12 |

| Type | Qty. | Order No. |
|------------------|------|------------|
| TM-I 12 MC NE GE | 320 | 1718411687 |
| TM-I 18 MC NE GE | 320 | 1718431687 |
| SCREWTY SET | 1 | 1910000000 |
| SCREWTY SET-DM | 1 | 1920000000 |
| SCREWTY-M12-DM | 1 | 1900001000 |
| SCREWTY-M12 | 1 | 1900000000 |

| | |
|-------------|--|
| Note | |
|-------------|--|

| | |
|-------------|--|
| Note | |
|-------------|--|

Assembled cables - Railway cable M12

Assembled cable
Railway cable M12

- Cat. 5
- Radox
- D-coded

M12 - M12

Plug / plug



M12 - M12

Plug / socket



| M12 | | M12 |
|-----|--------|-----|
| 1 | yellow | 1 |
| 2 | white | 2 |
| 3 | orange | 3 |
| 4 | blue | 4 |

| M12 | | M12 |
|-----|--------|-----|
| 1 | yellow | 1 |
| 2 | white | 2 |
| 3 | orange | 3 |
| 4 | blue | 4 |

Technical data

Product type
Category
Shielding
Plug left / Plug right

Cross-section
Sheath diameter, max.
Material sheath
Sheathing colour
Insulation diameter
Min. bending radius, repetitive
Ambient temperature (operational)
Installation temperature
Storage temperature
Abrasion resistance
Halogen
Resistance to oils
Fire safety for railway vehicles

Approvals

Note

System cable
Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)
SF/UTP
M12, D-coded, IP67, male contact, straight, plug, Plastic, shielded /
M12, D-coded, IP67, male contact, straight, plug, Plastic, shielded

2*2*AWG 22/7 - 2*2*0.36 mm²
7.55 mm
Radox GKW S
black
1.95 mm
6 *diameter
-40 °C...90 °C
-25 °C...90 °C
-40 °C...90 °C
very good
halogen-free, acc. to IEC 60754-2
in acc. with EN 50306-3
Acc. to DIN 5510-2 fire safety levels 1,2,3,4, Acc. to BS 6853, Acc. to
EN50288-2-2, Acc. to EN 45545, HL1 - HL3

System cable
Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)
SF/UTP
M12, D-coded, IP67, male contact, straight, plug, Plastic, shielded /
M12, D-coded, IP67, female contact, straight, plug, Plastic, shielded

2*2*AWG 22/7 - 2*2*0.36 mm²
7.55 mm
Radox GKW S
black
1.95 mm
6 *diameter
-40 °C...90 °C
-25 °C...90 °C
-40 °C...90 °C
very good
halogen-free, acc. to IEC 60754-2
in acc. with EN 50306-3
Acc. to DIN 5510-2 fire safety levels 1,2,3,4, Acc. to BS 6853, Acc. to
EN50288-2-2, Acc. to EN 45545, HL1 - HL3

Ordering data

| | |
|--|--------|
| | 1.5 m |
| | 3.0 m |
| | 5.0 m |
| | 10.0 m |

Note

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C5DB4RE0015MCSMCS-E | 1 | 1010850015 |
| IE-C5DB4RE0030MCSMCS-E | 1 | 1010850030 |
| IE-C5DB4RE0050MCSMCS-E | 1 | 1010850050 |
| IE-C5DB4RE0100MCSMCS-E | 1 | 1010850100 |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C5DB4RE0015MSSMCS-E | 1 | 1059340015 |
| IE-C5DB4RE0030MSSMCS-E | 1 | 1059340030 |
| IE-C5DB4RE0050MSSMCS-E | 1 | 1059340050 |
| IE-C5DB4RE0100MSSMCS-E | 1 | 1059340100 |

Accessories

| Marking tags | |
|--------------|--------------------------------|
| | Insertion label, yellow, 12 mm |
| | Insertion label, yellow, 18 mm |

| Type | Qty. | Order No. |
|------------------|------|------------|
| TM-I 12 MC NE GE | 320 | 1718411687 |
| TM-I 18 MC NE GE | 320 | 1718431687 |

| Type | Qty. | Order No. |
|------------------|------|------------|
| TM-I 12 MC NE GE | 320 | 1718411687 |
| TM-I 18 MC NE GE | 320 | 1718431687 |

Note

Assembled cable Railway cable M12

- Cat. 5
- Radox
- D-coded

M12 - open

Plug / -



| | M12 |
|--------|-----|
| yellow | 1 |
| white | 2 |
| orange | 3 |
| blue | 4 |

Technical data

| | |
|-----------------------------------|--|
| Product type | System cable |
| Category | Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B) |
| Shielding | SF/UTP |
| Plug left / Plug right | M12, D-coded, IP67, male contact, straight, plug, Plastic, shielded / free conductor end |
| Cross-section | 2*2*AWG 22/7 - 2*2*0.36 mm ² |
| Sheath diameter, max. | 7.55 mm |
| Material sheath | Radox GKW S |
| Sheathing colour | black |
| Insulation diameter | 1.95 mm |
| Min. bending radius, repetitive | 6 *diameter |
| Ambient temperature (operational) | -40 °C...90 °C |
| Installation temperature | -25 °C...90 °C |
| Storage temperature | -40 °C...90 °C |
| Abrasion resistance | very good |
| Halogen | halogen-free, acc. to IEC 60754-2 |
| Resistance to oils | in acc. with EN 50306-3 |
| Fire safety for railway vehicles | Acc. to DIN 5510-2 fire safety levels 1,2,3,4, Acc. to BS 6853, Acc. to EN50288-2-2, Acc. to EN 45545, HL1 - HL3 |

Approvals

Note

Ordering data

| | |
|--|--------|
| | 1.5 m |
| | 3.0 m |
| | 5.0 m |
| | 10.0 m |

Note

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C5DB4RE0015MCSXXX-X | 1 | 1010840015 |
| IE-C5DB4RE0030MCSXXX-X | 1 | 1010840030 |
| IE-C5DB4RE0050MCSXXX-X | 1 | 1010840050 |
| IE-C5DB4RE0100MCSXXX-X | 1 | 1010840100 |

Accessories

Tools

Sheathing strippers, For UTP and STP data cables
Sheathing strippers, For coaxial and round data cables

Marking tags

Insertion label, yellow, 12 mm
Insertion label, yellow, 18 mm

| Type | Qty. | Order No. |
|-----------------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |
| TMH 12 MC NE GE | 320 | 1718411687 |
| TMH 18 MC NE GE | 320 | 1718431687 |

Note

**Assembled cables
Railway cable M12**

- Cat. 5
- Radox
- D-coded

M12 - M12

Plug / plug



M12 - M12

Plug / plug



| | | |
|--|--|--|
| | | |
| | | |
| | | |
| | | |

| M12 | | M12 |
|-----|--------|-----|
| 1 | yellow | 1 |
| 2 | white | 2 |
| 3 | orange | 3 |
| 4 | blue | 4 |

| M12 | | M12 |
|-----|--------|-----|
| 1 | yellow | 1 |
| 2 | white | 2 |
| 3 | orange | 3 |
| 4 | blue | 4 |

Technical data

Product type
Category
Shielding
Plug left / Plug right

Cross-section
Sheath diameter, max.
Material sheath
Sheathing colour
Insulation diameter, min. / max.
Min. bending radius, repetitive
Ambient temperature (operational)
Installation temperature
Storage temperature
Abrasion resistance
Halogen
Resistance to oils
Fire safety for railway vehicles

System cable
Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)
SF/UTP
M12, D-coded, IP67, male contact, straight, plug, Plastic, shielded /
M12, D-coded, IP67, male contact, angled 90°, plug, Plastic, shielded

2*2*AWG 22/7 - 2*2*0.36 mm²
7.55 mm
Radox GKW S
black
1.95 mm
6 *diameter
-40 °C...90 °C
-25 °C...90 °C
-40 °C...90 °C
very good
halogen-free, acc. to IEC 60754-2
in acc. with EN 50306-3
Acc. to DIN 5510-2 fire safety levels 1,2,3,4, Acc. to BS 6853, Acc. to EN50288-2-2, Acc. to EN 45545, HL1 - HL3

System cable
Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)
SF/UTP
M12, D-coded, IP67, male contact, angled 90°, plug, Plastic, shielded /
M12, D-coded, IP67, male contact, angled 90°, plug, Plastic, shielded

2*2*AWG 22/7 - 2*2*0.36 mm²
7.55 mm
Radox GKW S
black
1.95 mm
6 *diameter
-40 °C...90 °C
-25 °C...90 °C
-40 °C...90 °C
very good
halogen-free, acc. to IEC 60754-2
in acc. with EN 50306-3
Acc. to DIN 5510-2 fire safety levels 1,2,3,4, Acc. to BS 6853, Acc. to EN50288-2-2, Acc. to EN 45545, HL1 - HL3

Note

Ordering data

| | |
|------|--------|
| | 1.5 m |
| | 3.0 m |
| | 5.0 m |
| | 10.0 m |
| Note | |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C5DB4RE0015MCSMCA-E | 1 | 1059940015 |
| IE-C5DB4RE0030MCSMCA-E | 1 | 1059940030 |
| IE-C5DB4RE0050MCSMCA-E | 1 | 1059940050 |
| IE-C5DB4RE0100MCSMCA-E | 1 | 1059940100 |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C5DB4RE0015MCAMCA-E | 1 | 1059970015 |
| IE-C5DB4RE0030MCAMCA-E | 1 | 1059970030 |
| IE-C5DB4RE0050MCAMCA-E | 1 | 1059970050 |
| IE-C5DB4RE0100MCAMCA-E | 1 | 1059970100 |

Accessories

| Marking tags | |
|-----------------------------------|--|
| Insertion label, yellow, 12 mm | |
| Insertion label, yellow, 18 mm | |
| Transparent sleeves, 12-mm length | |
| Transparent sleeves, 18-mm length | |

| Type | Qty. | Order No. |
|------------------|------|------------|
| TM-H 12 MC NE GE | 320 | 1718411687 |
| TM-H 18 MC NE GE | 320 | 1718431687 |
| TM 4/12 HF/HB | 500 | 1719840000 |
| TM 4/18 HF/HB | 500 | 1719850000 |

| Type | Qty. | Order No. |
|------------------|------|------------|
| TM-H 12 MC NE GE | 320 | 1718411687 |
| TM-H 18 MC NE GE | 320 | 1718431687 |
| TM 4/12 HF/HB | 500 | 1719840000 |
| TM 4/18 HF/HB | 500 | 1719850000 |

Note

Assembled cables

Railway cable M12

- Cat. 5
- Radox
- D-coded

M12 - open

Plug / -



| | M12 |
|--------|-----|
| yellow | 1 |
| white | 2 |
| orange | 3 |
| blue | 4 |

Technical data

Product type
Category
Shielding
Plug left / Plug right

Cross-section
Sheath diameter, max.
Material sheath
Sheathing colour
Insulation diameter, min. / max.
Min. bending radius, repetitive
Ambient temperature (operational)
Installation temperature
Storage temperature
Abrasion resistance
Halogen
Resistance to oils
Fire safety for railway vehicles

System cable
Cat.5 (ISO/IEC 11801) / Cat.5e (TIA T568-B)
SF/UTP
M12, D-coded, IP67, male contact, angled 90°, plug, Plastic, shielded / free conductor end

2*2*AWG 22/7 - 2*2*0.36 mm²
7.55 mm
Radox GKW S
black, SF/UTP
1.95 mm
6 *diameter
-40 °C...90 °C
-25 °C...90 °C
-40 °C...90 °C
very good
halogen-free, acc. to IEC 60754-2
in acc. with EN 50306-3
Acc. to DIN 5510-2 fire safety levels 1,2,3,4, Acc. to BS 6853, Acc. to EN50288-2-2, Acc. to EN 45545, HL1 - HL3

Note

Ordering data

| | |
|--|--------|
| | 1.5 m |
| | 3.0 m |
| | 5.0 m |
| | 10.0 m |

Note

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C5DB4RE0015MCAXXX-X | 1 | 1059900015 |
| IE-C5DB4RE0030MCAXXX-X | 1 | 1059900030 |
| IE-C5DB4RE0050MCAXXX-X | 1 | 1059900050 |
| IE-C5DB4RE0100MCAXXX-X | 1 | 1059900100 |

Accessories

Marking tags

Insertion label, yellow, 12 mm
Insertion label, yellow, 18 mm
Transparent sleeves, 12-mm length
Transparent sleeves, 18-mm length

| Type | Qty. | Order No. |
|------------------|------|------------|
| TM-I 12 MC NE GE | 320 | 1718411687 |
| TM-I 18 MC NE GE | 320 | 1718431687 |
| TM 4/12 HF/HB | 500 | 1719840000 |
| TM 4/18 HF/HB | 500 | 1719850000 |

Note

Assembled cables - Railway cable M12

Assembled cables

Railway cable RW M12

- Cat. 5
- Radox
- D-coded
- RW (reduced wire): suitable for RJ45 connectors

M12 - open

Plug / -



M12 - RJ45

Plug / plug



| | | |
|--|--|--|
| | | |
|--|--|--|

| | |
|--------|-----|
| | M12 |
| yellow | 1 |
| white | 2 |
| orange | 3 |
| blue | 4 |

| | | |
|------|--------|-----|
| RJ45 | | M12 |
| 1 | yellow | 1 |
| 3 | white | 2 |
| 2 | orange | 3 |
| 6 | blue | 4 |

Technical data

| | |
|-----------------------------------|--|
| | |
| Product type | System cable |
| Category | Cat.5 (ISO/IEC 11801) |
| Shielding | SF/UTP |
| Plug left / Plug right | M12, D-coded, IP67, male contact, straight, plug, Plastic, shielded / free conductor end |
| | |
| Cross-section | 2*2*AWG 22/7 - 2*2*0.36 mm ² |
| Sheath diameter, max. | 7 mm |
| Material sheath | Radox GKW S |
| Sheathing colour | black |
| Insulation diameter | 1.58 mm |
| Min. bending radius, repetitive | 6 *diameter |
| Ambient temperature (operational) | -40 °C...90 °C |
| Storage temperature | -40 °C...90 °C |
| Abrasion resistance | very good |
| Halogen | halogen-free, acc. to IEC 60754-2 |
| Resistance to oils | in acc. with EN 50306-3 |
| Fire safety for railway vehicles | Acc. to DIN 5510-2 fire safety levels 1,2,3,4, Acc. to BS 6853, Acc. to EN50288-2-2, Acc. to EN 45545, HL1 - HL3 |
| Approvals | |
| Note | |

| | | |
|--|--|--|
| | | |
| System cable | | |
| Cat.5 (ISO/IEC 11801) | | |
| SF/UTP | | |
| M12, D-coded, IP67, male contact, straight, plug, Plastic, shielded / free conductor end | | |
| | | |
| 2*2*AWG 22/7 - 2*2*0.36 mm ² | | |
| 7 mm | | |
| Radox GKW S | | |
| black | | |
| 1.58 mm | | |
| 6 *diameter | | |
| -40 °C...90 °C | | |
| -40 °C...90 °C | | |
| very good | | |
| halogen-free, acc. to IEC 60754-2 | | |
| in acc. with EN 50306-3 | | |
| Acc. to DIN 5510-2 fire safety levels 1,2,3,4, Acc. to BS 6853, Acc. to EN50288-2-2, Acc. to EN 45545, HL1 - HL3 | | |
| | | |
| System cable | | |
| Cat.5 (ISO/IEC 11801) | | |
| SF/UTP | | |
| M12, D-coded, IP67, male contact, straight, plug, Plastic, shielded / RJ45, IP20, male contact, straight, plug, Zinc diecast, shielded | | |
| | | |
| 2*2*AWG 22/7 - 2*2*0.36 mm ² | | |
| 7 mm | | |
| Radox GKW S | | |
| black | | |
| 1.58 mm | | |
| 6 *diameter | | |
| -40 °C...90 °C | | |
| -40 °C...90 °C | | |
| very good | | |
| halogen-free, acc. to IEC 60754-2 | | |
| in acc. with EN 50306-3 | | |
| Acc. to DIN 5510-2 fire safety levels 1,2,3,4, Acc. to BS 6853, Acc. to EN50288-2-2, Acc. to EN 45545, HL1 - HL3 | | |
| | | |
| Approvals | | |
| Note | | |

| | | |
|--|--|--|
| | | |
| System cable | | |
| Cat.5 (ISO/IEC 11801) | | |
| SF/UTP | | |
| M12, D-coded, IP67, male contact, straight, plug, Plastic, shielded / RJ45, IP20, male contact, straight, plug, Zinc diecast, shielded | | |
| | | |
| 2*2*AWG 22/7 - 2*2*0.36 mm ² | | |
| 7 mm | | |
| Radox GKW S | | |
| black | | |
| 1.58 mm | | |
| 6 *diameter | | |
| -40 °C...90 °C | | |
| -40 °C...90 °C | | |
| very good | | |
| halogen-free, acc. to IEC 60754-2 | | |
| in acc. with EN 50306-3 | | |
| Acc. to DIN 5510-2 fire safety levels 1,2,3,4, Acc. to BS 6853, Acc. to EN50288-2-2, Acc. to EN 45545, HL1 - HL3 | | |
| | | |
| Approvals | | |
| Note | | |

Ordering data

| | |
|--------|--|
| | |
| 4.0 m | |
| 5.0 m | |
| 10.0 m | |
| Note | |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C5DB4WE0050MCSXXX-E | 1 | 1269740050 |
| IE-C5DB4WE0100MCSXXX-E | 1 | 1269740100 |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C5DB4WE0040MCSA70-E | 1 | 1220310040 |

Accessories

| | |
|--|--|
| Tools | |
| Sheathing strippers, For UTP and STP data cables | |
| Sheathing strippers, For coaxial and round data cables | |
| Marking tags | |
| Transparent sleeves. 12-mm length | |
| Transparent sleeves. 18-mm length | |
| Dust protection cap | |
| Protective cap | |

| Type | Qty. | Order No. |
|---------------|------|------------|
| AM 12 | 1 | 9030060000 |
| IE-CST | 1 | 9204350000 |
| TM 4/12 HF/HB | 500 | 1719840000 |
| TM 4/18 HF/HB | 500 | 1719850000 |

| Type | Qty. | Order No. |
|---------------|------|------------|
| TM 4/12 HF/HB | 500 | 1719840000 |
| TM 4/18 HF/HB | 500 | 1719850000 |
| IE-PP-RJ45 | 10 | 2552580000 |

| |
|------|
| Note |
|------|

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| |
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| |
|--|
| |
|--|

Assembled cables

Railway cable RJ45 - RJ45

- Cat. 5
- Radox
- RW (reduced wire)

RJ45 - RJ45

Plug / plug



| RJ45 | | RJ45 |
|------|--------|------|
| 1 | yellow | 1 |
| 2 | orange | 2 |
| 3 | white | 3 |
| 6 | blue | 6 |

Technical data

Product type
Category
Shielding
Plug left / Plug right

Cross-section
Sheath diameter, max.
Material sheath
Sheathing colour
Insulation diameter
Min. bending radius, repetitive
Ambient temperature (operational)
Storage temperature
Abrasion resistance
Halogen
Resistance to oils
Fire safety for railway vehicles

Approvals

Note

System cable
Cat.5 (ISO/IEC 11801)
SF/UTP
RJ45, IP20, male contact, straight, plug, Zinc diecast, shielded / RJ45, IP20, male contact, straight, plug, Zinc diecast, shielded

2*2*AWG 22/7 - 2*2*0.36 mm²
7 mm
Radox GKW S
black, SF/UTP
1.58 mm
6 *diameter
-40 °C...90 °C
-40 °C...90 °C
very good
halogen-free, acc. to IEC 60754-2
in acc. with EN 50306-3
Acc. to DIN 5510-2 fire safety levels 1,2,3,4, Acc. to BS 6853, Acc. to EN50288-2-2, Acc. to EN 45545, HL1 - HL3

Ordering data

1.0 m
2.0 m
3.0 m
4.0 m
5.0 m
10.0 m
20.0 m

Note

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-C5DB4WE0010A70A70-E | 1 | 1421710010 |
| IE-C5DB4WE0020A70A70-E | 1 | 1421710020 |
| IE-C5DB4WE0030A70A70-E | 1 | 1421710030 |
| IE-C5DB4WE0040A70A70-E | 1 | 1421710040 |
| IE-C5DB4WE0050A70A70-E | 1 | 1421710050 |
| IE-C5DB4WE0100A70A70-E | 1 | 1421710100 |
| IE-C5DB4WE0200A70A70-E | 1 | 1421710200 |

Accessories

Marking tags

Transparent sleeves. 12-mm length
Transparent sleeves. 18-mm length

Dust protection cap

Protective cap

| Type | Qty. | Order No. |
|---------------|------|------------|
| TM 4/12 HF/HB | 500 | 1719840000 |
| TM 4/18 HF/HB | 500 | 1719850000 |
| IE-PP-RJ45 | 10 | 2552580000 |

Note

Assembled cables - USB cable

Assembled cables
USB cable

USB A - USB A



USB A 3.0 - USB A 3.0



Technical data

Sheathing colour
Material sheath
Plug left
Plug right
Ambient temperature (operational)

Note

black
PVC
USB A, IP20, male contact, straight, plug, Plastic, shielded
USB A, IP20, male contact, straight, plug, Plastic, shielded
-15 °C...80 °C

black
PVC
USB A 3.0, IP20, male contact, straight, plug, Plastic, shielded
USB A 3.0, IP20, male contact, straight, plug, Plastic, shielded
-15 °C...80 °C

Ordering data

| Type | Qty. | Order No. |
|-------|------|------------|
| 0.3 m | 1 | 1993550003 |
| 0.5 m | 1 | 1993550005 |
| 1.0 m | 1 | 1993550010 |
| 1.5 m | 1 | 1993550015 |
| 1.8 m | 1 | 1993550018 |
| 3.0 m | 1 | 1993550030 |
| 5.0 m | | |

Note

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-USB-A-A-0.3M | 1 | 1993550003 |
| IE-USB-A-A-0.5M | 1 | 1993550005 |
| IE-USB-A-A-1.0M | 1 | 1993550010 |
| IE-USB-A-A-1.5M | 1 | 1993550015 |
| IE-USB-A-A-1.8M | 1 | 1993550018 |
| IE-USB-A-A-3.0M | 1 | 1993550030 |

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-USB-3.0-A-A-0.5M | 1 | 2581730005 |
| IE-USB-3.0-A-A-1.8M | 1 | 2581730018 |
| IE-USB-3.0-A-A-3M | 1 | 2581730030 |
| IE-USB-3.0-A-A-5M | 1 | 2581730050 |

Accessories

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

Note

Assembled cables
USB cable

USB Micro - FrontCom® interface



Technical data

| |
|-----------------------------------|
| Sheathing colour |
| Material sheath |
| Plug left |
| Plug right |
| Ambient temperature (operational) |
| Note |

| |
|--|
| black |
| USB A Mini, IP20, male contact, straight, plug, Plastic, shielded |
| USB A Mini, IP20, female contact, straight, Service interface, Plastic, shielded |
| ... |

Ordering data

| |
|-------------|
| 0.3 m |
| Note |

| Type | Qty. | Order No. |
|----------------------|------|------------|
| IE-FCML-MINIUSB-0.3M | 1 | 2488200000 |

Accessories

| |
|--|
| |
|--|

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

| |
|-------------|
| Note |
|-------------|

| |
|--|
| |
|--|

Assembled cables - USB cable

Assembled cables
USB cable

USB A - USB Micro



USB A - USB C



Technical data

| | |
|-----------------------------------|--|
| Sheathing colour | |
| Material sheath | |
| Plug left | |
| Plug right | |
| Ambient temperature (operational) | |
| Note | |

| |
|--|
| black |
| PVC |
| USB A, IP20, male contact, straight, Plastic, shielded |
| USB Micro, IP20, male contact, straight, Plastic, shielded |
| -15 °C...80 °C |
| |

| |
|--|
| black |
| PVC |
| USB A, IP20, male contact, straight, plug, Plastic, shielded |
| IP20, male contact, straight, plug, Plastic, shielded |
| -15 °C...80 °C |
| |

Ordering data

| | |
|------|-------|
| | 1.8 m |
| | 2.0 m |
| Note | |

| Type | Qty. | Order No. |
|---------------------|------|------------|
| IE-USB-A-MICRO-1.8M | 1 | 1487980000 |
| | | |

| Type | Qty. | Order No. |
|-----------------|------|------------|
| IE-USB-A-C-2.0M | 1 | 2838380020 |
| | | |

Accessories

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

| |
|------|
| Note |
|------|

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| |
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| |
|--|

Fibre-optic cabling solutions

Overview

| | | |
|--------------------------------------|--|------|
| Fibre-optic cabling solutions | Overview - Fibre-optic cables | P.2 |
| | Raw cable - FO connection cable / dragline cable | P.3 |
| | Assembled cables - FO PROFINET cable | P.4 |
| | Assembled cables - FO patch cable | P.5 |
| | Assembled cables - FO dragline cable | P.10 |

Overview – Fibre-optic cables

First choice for industry

Fibre-optic cables are the best option for working in harsh industrial environments, especially if you:

- Need long transmission paths (up to 120 km!)
- Need to take account of EMC issues
- Must ensure electrical isolation in the case of potential differences

Raw cables

Industrial fibre-optic dragline cable



For flexible installations in and around machinery and plants – for harsh, industrial surroundings, dragline cable compatible

- Polymer optic fibre (POF)
- Breakout cable
- Raw cable for assembling your own connecting cables

Assembled cables

Industrial FO patch cables



...for use in industrial switching cabinets or junction boxes

- Multimode glass fibre
- Singlemode glass fibre
- Polymer optic fibre (POF)

Industrial fibre-optic dragline cable



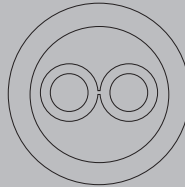
...for flexible installations in and around machinery and plants – for harsh, industrial surroundings, dragline cable compatible

- Multimode fibre-optic
- Breakout cable
- Pre-assembled cable

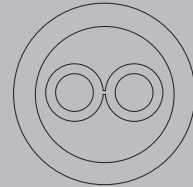
Raw cables

- Polymer optical fibre
- Customisable

Mini-Breakout (Typ B)



Breakout (Typ C)



Technical data

Product type
 Cable layout
 Sheath diameter, max.
 Material sheath
 Sheathing colour
 Insulation
 Min. bending radius, repetitive
 Min. bending radius, once only
 Bending cycles
 Ambient temperature (operational)
 Fibre type
 Bandwidth
 Attenuation
 Core diameter
 Installation temperature
 Storage temperature
 Halogen
 Approvals

Note

System cable
 Mini-Breakout
 7.5 mm
 Polyethylene
 green

10.000
 -30 °C...70 °C

POF
 > 35 MHz*100 m at 650 nm
 ≤ 160 dB/km at 650 nm
 980 µm

-30 °C...70 °C

No

Dragline cable
 Break-out dragline
 8 mm
 PUR
 green

60 mm
 25 mm
 6 Mio
 -40 °C...85 °C

POF
 > 35 MHz*100 m at 650 nm
 ≤ 160 dB/km at 650 nm
 980 µm

-40 °C...85 °C

No

Ordering data

| POF 980/1000 µm | |
|-----------------|---------|
| | 500.0 m |

Note

| Type | Qty. | Order No. |
|----------------|------|------------|
| IE-FPOB2EG-500 | 1 | 2781950000 |

| Type | Qty. | Order No. |
|----------------|------|------------|
| IE-FPOD2UG-500 | 1 | 2763640000 |

Accessories

| Marking tags | |
|--|--|
| Insertion label, yellow, 12 mm | |
| Insertion label, yellow, 18 mm | |
| Transparent sleeves, 12-mm length | |
| Transparent sleeves, 18-mm length | |
| Wire and cable markers, ø 4.7 - 7.4 mm | |
| Wire and cable markers, ø 5.8 - 7.8 mm | |

Tools

Mounting tool, POF
 Tool set POF, crimp

| Type | Qty. | Order No. |
|------------------------|------|------------|
| TM-H 12 MC NE GE | 320 | 1718411687 |
| TM-H 18 MC NE GE | 320 | 1718431687 |
| TM 4/12 HF/HB | 500 | 1719840000 |
| TM 4/18 HF/HB | 500 | 1719850000 |
| VT SF 5/21 MC NE WS VO | 160 | 1689470001 |
| VT SF 6/21 MC NE WS VO | 160 | 1730560001 |
| HTX-IE-POF | 1 | 1208870000 |
| TOOL SET IE-POF | 1 | 1208930000 |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| TM-H 12 MC NE GE | 320 | 1718411687 |
| TM-H 18 MC NE GE | 320 | 1718431687 |
| TM 4/12 HF/HB | 500 | 1719840000 |
| TM 4/18 HF/HB | 500 | 1719850000 |
| VT SF 5/21 MC NE WS VO | 160 | 1689470001 |
| VT SF 6/21 MC NE WS VO | 160 | 1730560001 |
| HTX-IE-POF | 1 | 1208870000 |
| TOOL SET IE-POF | 1 | 1208930000 |

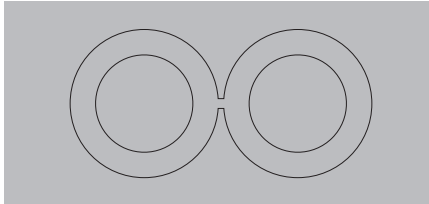
Note

Assembled cables - FO PROFINET cable

**Assembled cable
FO patch cable PROFINET**

- Polymer optical fibre

SC-RJ / SC-RJ



Technical data

Product type
Plug left / Plug right

Cable layout
Sheath diameter
Insulation
Sheathing colour
Fibre type
Core diameter
Ambient temperature (operational)
Attenuation
Insertion loss
Bandwidth
Halogen
Approvals

Connecting line
SC-RJ, IP20, male contact, straight, plug, Plastic, unshielded / SC-RJ, IP20, male contact, straight, plug, Plastic, unshielded

ZIPCORD
2.2*4.5 mm
PE
black
POF
980 µm
-20 °C...80
≤ 160 dB/km at 650 nm
≤ 1.0 dB
≥ 100 MHz*km at 650 nm
No

Note

Note

Ordering data

| POF 980/1000 µm | |
|-----------------|--------|
| | 1.0 m |
| | 3.0 m |
| | 5.0 m |
| | 10.0 m |
| | 20.0 m |

| Type | Qty. | Order No. |
|-------------------------|------|------------|
| IE-FPOZ2EE0001MSJOSJO-X | 1 | 1273430010 |
| IE-FPOZ2EE0003MSJOSJO-X | 1 | 1273430030 |
| IE-FPOZ2EE0005MSJOSJO-X | 1 | 1273430050 |
| IE-FPOZ2EE0010MSJOSJO-X | 1 | 1273430100 |
| IE-FPOZ2EE0020MSJOSJO-X | 1 | 1273430200 |

Note

Note

Accessories

| Marking tags | |
|--------------|--|
| | Wire and cable markers. ø 4.7 - 7.4 mm |
| | Wire and cable markers. ø 5.8 - 7.8 mm |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| VT SF 5/21 MC NE WS VO | 160 | 1689470001 |
| VT SF 6/21 MC NE WS VO | 160 | 1730560001 |

Note

Note

Assembled cables

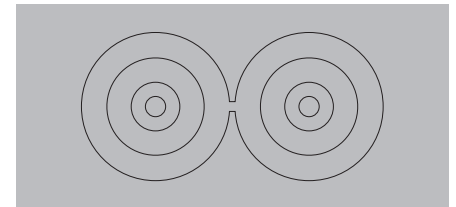
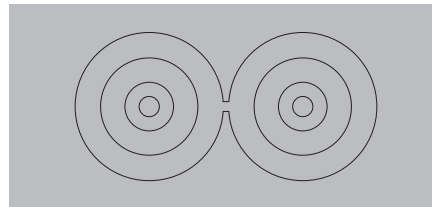
CabinetLine FO patch cable

- Multi-mode glass fibre optics
- LSZH Casing

SC-Duplex / SC-Duplex



ST / ST



Technical data

Product type
Cable layout
Sheath diameter
Material sheath
Sheathing colour
Category
Ambient temperature (operational)
Installation temperature
Storage temperature
Approvals

Patch cable, duplex clip included
ZIPCORD
2.8 * 5.7 mm
LSZH
orange

Patch cable
ZIPCORD
2.8 * 5.7 mm
LSZH
orange

-20 °C...70

-20 °C...70

Note

Ordering data

| Core 50 µm, OM2 | |
|-----------------|--|
| 0.5 m | |
| 1.0 m | |
| 2.0 m | |
| 3.0 m | |
| 5.0 m | |
| 10.0 m | |

| Core 62.5 µm, OM1 | |
|-------------------|--|
| 0.5 m | |
| 1.0 m | |
| 2.0 m | |
| 3.0 m | |
| 5.0 m | |
| 10.0 m | |

| Core 50 µm, OM4 | |
|-----------------|--|
| 0.5 m | |
| 1.0 m | |
| 1.5 m | |
| 2.0 m | |
| 3.0 m | |
| 5.0 m | |

Note

| Type | Qty. | Order No. |
|-------------------------|------|------------|
| IE-FM5Z2L00005DSDOSDO-X | 1 | 1433970005 |
| IE-FM5Z2L00001MSDOSDO-X | 1 | 1433970010 |
| IE-FM5Z2L00002MSDOSDO-X | 1 | 1433970020 |
| IE-FM5Z2L00003MSDOSDO-X | 1 | 1433970030 |
| IE-FM5Z2L00005MSDOSDO-X | 1 | 1433970050 |
| IE-FM5Z2L00010MSDOSDO-X | 1 | 1433970100 |

| Type | Qty. | Order No. |
|-------------------------|------|------------|
| IE-FM5Z2L00005DSTOSTO-X | 1 | 1433990005 |
| IE-FM5Z2L00001MSTOSTO-X | 1 | 1433990010 |
| IE-FM5Z2L00002MSTOSTO-X | 1 | 1433990020 |
| IE-FM5Z2L00003MSTOSTO-X | 1 | 1433990030 |
| IE-FM5Z2L00005MSTOSTO-X | 1 | 1433990050 |
| IE-FM5Z2L00010MSTOSTO-X | 1 | 1433990100 |

Accessories

| Marking tags | |
|--|--|
| Wire and cable markers. ø 4.7 - 7.4 mm | |
| Wire and cable markers. ø 5.8 - 7.8 mm | |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| VT SF 5/21 MC NE WS V0 | 160 | 1689470001 |
| VT SF 6/21 MC NE WS V0 | 160 | 1730560001 |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| VT SF 5/21 MC NE WS V0 | 160 | 1689470001 |
| VT SF 6/21 MC NE WS V0 | 160 | 1730560001 |

Note

Assembled cables - FO patch cable

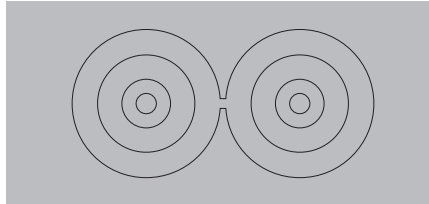
Assembled cables

CabinetLine FO patch cable

- Multi-mode glass fibre optics
- LSZH Casing

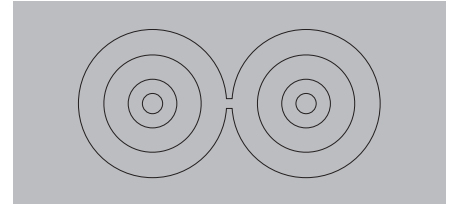
LC-Duplex / LC-Duplex

OM1 / OM2



LC-Duplex / LC-Duplex

OM4



Technical data

| | |
|-----------------------------------|--|
| Product type | |
| Cable layout | |
| Sheath diameter | |
| Material sheath | |
| Sheathing colour | |
| Category | |
| Ambient temperature (operational) | |
| Installation temperature | |
| Storage temperature | |
| Approvals | |

Note

| | |
|-----------------------------------|--|
| Patch cable, duplex clip included | |
| ZIPCORD | |
| 2.0 * 4.1 mm | |
| LSZH | |
| orange | |
| -20 °C...70 | |

Note

| | |
|-----------------------------------|--|
| Patch cable, duplex clip included | |
| ZIPCORD | |
| 2 * 1.5 mm | |
| LSZH | |
| Magenta | |
| -20 °C...70 °C | |

Note

Ordering data

| Core 50 µm, OM2 | |
|-------------------|--|
| 0.5 m | |
| 1.0 m | |
| 2.0 m | |
| 3.0 m | |
| 5.0 m | |
| 10.0 m | |
| Core 62.5 µm, OM1 | |
| 0.5 m | |
| 1.0 m | |
| 2.0 m | |
| 3.0 m | |
| 5.0 m | |
| 10.0 m | |
| Core 50 µm, OM4 | |
| 0.5 m | |
| 1.0 m | |
| 1.5 m | |
| 2.0 m | |
| 3.0 m | |
| 5.0 m | |

Note

| Type | Qty. | Order No. |
|-------------------------|------|------------|
| IE-FM5Z2L00005DL0LDO-X | 1 | 1433940005 |
| IE-FM5Z2L00001MLD0LDO-X | 1 | 1433940010 |
| IE-FM5Z2L00002MLD0LDO-X | 1 | 1433940020 |
| IE-FM5Z2L00003MLD0LDO-X | 1 | 1433940030 |
| IE-FM5Z2L00005MLD0LDO-X | 1 | 1433940050 |
| IE-FM5Z2L00010MLD0LDO-X | 1 | 1433940100 |

Note

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-FM5Z2LM0005LD0LDO-X | 1 | 2903650005 |
| IE-FM5Z2LM0010LD0LDO-X | 1 | 2903650010 |
| IE-FM5Z2LM0015LD0LDO-X | 1 | 2903650015 |
| IE-FM5Z2LM0020LD0LDO-X | 1 | 2903650020 |
| IE-FM5Z2LM0030LD0LDO-X | 1 | 2903650030 |
| IE-FM5Z2LM0050LD0LDO-X | 1 | 2903650050 |

Note

Accessories

| Marking tags | Wire and cable markers. ø 4.7 - 7.4 mm |
|--------------|--|
| | Wire and cable markers. ø 5.8 - 7.8 mm |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| VT SF 5/21 MC NE WS V0 | 160 | 1689470001 |
| VT SF 6/21 MC NE WS V0 | 160 | 1730560001 |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| VT SF 5/21 MC NE WS V0 | 160 | 1689470001 |
| VT SF 6/21 MC NE WS V0 | 160 | 1730560001 |

Note

Note

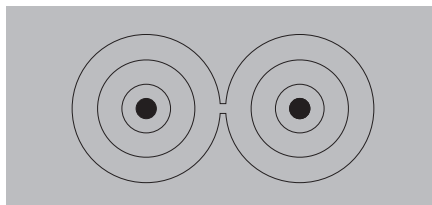
Note

Assembled cables

CabinetLine FO patch cable

- Single-mode glass fibre optics
- LSZH Casing

LC-Duplex / LC-Duplex



Technical data

| |
|-----------------------------------|
| Product type |
| Cable layout |
| Sheath diameter |
| Material sheath |
| Sheathing colour |
| Ambient temperature (operational) |
| Installation temperature |
| Storage temperature |
| Approvals |
| Note |

| |
|-----------------------------------|
| Patch cable, duplex clip included |
| ZIPCORD |
| 2.0 * 4.1 mm |
| LSZH |
| yellow |
| -20 °C...70 |
| |
| |
| |
| |
| Note |

Ordering data

| |
|-----------------------|
| Core 9 µm. OS2 |
| 0.5 m |
| 1.0 m |
| 2.0 m |
| 3.0 m |
| 5.0 m |
| 10.0 m |
| Note |

| Type | Qty. | Order No. |
|----------------------|------|------------|
| IE-FSMZ2LY0005DLDO-X | 1 | 1433950005 |
| IE-FSMZ2LY0001MLDO-X | 1 | 1433950010 |
| IE-FSMZ2LY0002MLDO-X | 1 | 1433950020 |
| IE-FSMZ2LY0003MLDO-X | 1 | 1433950030 |
| IE-FSMZ2LY0005MLDO-X | 1 | 1433950050 |
| IE-FSMZ2LY0010MLDO-X | 1 | 1433950100 |

Accessories

| |
|--|
| Marking tags |
| Wire and cable markers. ø 4.7 - 7.4 mm |
| Wire and cable markers. ø 5.8 - 7.8 mm |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| VT SF 5/21 MC NE WS V0 | 160 | 1689470001 |
| VT SF 6/21 MC NE WS V0 | 160 | 1730560001 |

Note

Note



Assembled cables - FO patch cable

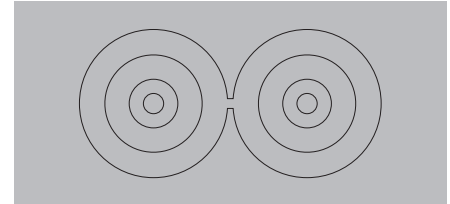
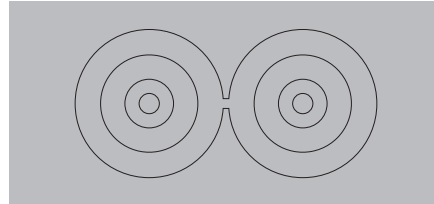
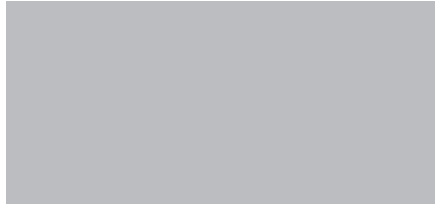
Assembled cable

FO patch cable

- Multimode glass optical fibre
- PVC outer cladding

SC-Duplex / SC-Duplex

ST / ST



Technical data

| |
|-----------------------------------|
| Product type |
| Cable layout |
| Sheath diameter |
| Material sheath |
| Sheathing colour |
| Ambient temperature (operational) |
| Installation temperature |
| Storage temperature |
| Approvals |
| Note |

| |
|--------------------------------------|
| Pre-assembled patch cable, crossover |
| ZIPCORD |
| 3*6 mm |
| PVC |
| orange |
| -5 °C...75 |
| -5 °C...50 °C |
| -25 °C...75 °C |
| Note |

| |
|----------------|
| Patch cable |
| ZIPCORD |
| 3*6 mm |
| PVC |
| orange |
| -5 °C...75 |
| -5 °C...50 °C |
| -25 °C...75 °C |
| Note |

Ordering data

| Core 50 µm, OM2 | |
|-------------------|--|
| 1.0 m | |
| 2.0 m | |
| 3.0 m | |
| 5.0 m | |
| 10.0 m | |
| Core 62.5 µm, OM1 | |
| 1.0 m | |
| 2.0 m | |
| 3.0 m | |
| 5.0 m | |
| 10.0 m | |
| Note | |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-FM5Z2V00001MSD0SD0X | 1 | 8813300000 |
| IE-FM5Z2V00002MSD0SD0X | 1 | 8813310000 |
| IE-FM5Z2V00003MSD0SD0X | 1 | 8813320000 |
| IE-FM5Z2V00005MSD0SD0X | 1 | 8876350050 |
| IE-FM5Z2V00010MSD0SD0X | 1 | 8876350100 |
| | | |
| IE-FM6Z2V00001MSD0SD0X | 1 | 8813330000 |
| IE-FM6Z2V00002MSD0SD0X | 1 | 8813340000 |
| IE-FM6Z2V00003MSD0SD0X | 1 | 8813350000 |
| IE-FM6Z2V00005MSD0SD0X | 1 | 8876360050 |
| IE-FM6Z2V00010MSD0SD0X | 1 | 8876360100 |
| Note | | |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-FM5Z2V00001MST0ST0X | 1 | 8876370010 |
| IE-FM5Z2V00002MST0ST0X | 1 | 8876370020 |
| IE-FM5Z2V00003MST0ST0X | 1 | 8876370030 |
| IE-FM5Z2V00005MST0ST0X | 1 | 8876370050 |
| IE-FM5Z2V00010MST0ST0X | 1 | 8876370100 |
| | | |
| IE-FM6Z2V00001MST0ST0X | 1 | 8813270000 |
| IE-FM6Z2V00002MST0ST0X | 1 | 8813280000 |
| IE-FM6Z2V00003MST0ST0X | 1 | 8813290000 |
| IE-FM6Z2V00005MST0ST0X | 1 | 8876380050 |
| IE-FM6Z2V00010MST0ST0X | 1 | 8876380100 |
| Note | | |

Accessories

| Marking tags | |
|--|--|
| Wire and cable markers. ø 4.7 - 7.4 mm | |
| Wire and cable markers. ø 5.8 - 7.8 mm | |
| Note | |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| VT SF 5/21 MC NE WS V0 | 160 | 1689470001 |
| VT SF 6/21 MC NE WS V0 | 160 | 1730560001 |
| Note | | |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| VT SF 5/21 MC NE WS V0 | 160 | 1689470001 |
| VT SF 6/21 MC NE WS V0 | 160 | 1730560001 |
| Note | | |

| |
|------|
| Note |
|------|

| |
|------|
| Note |
|------|

| |
|------|
| Note |
|------|

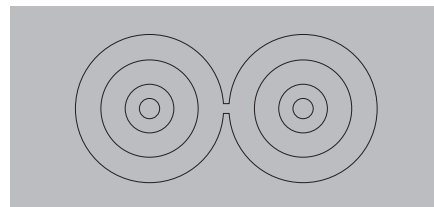
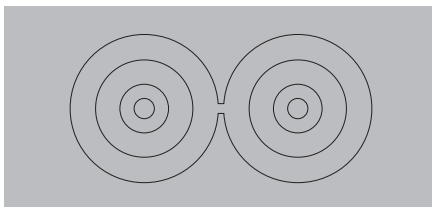
Assembled cable
FO patch cable

- Multi-mode glass fibre optics
- PVC cover

ST / SC-Duplex



LC-Duplex / LC-Duplex



Technical data

| |
|-----------------------------------|
| Product type |
| Cable layout |
| Sheath diameter |
| Material sheath |
| Sheathing colour |
| Ambient temperature (operational) |
| Installation temperature |
| Storage temperature |
| Approvals |
| Note |

| |
|--------------------------------------|
| Pre-assembled patch cable, crossover |
| ZIPCORD |
| 3*6 mm |
| PVC |
| orange |
| -5 °C...75 |
| -5 °C...50 °C |
| -25 °C...75 °C |
| |
| |

| |
|--------------------------------------|
| Pre-assembled patch cable, crossover |
| ZIPCORD |
| 3*6 mm |
| PVC |
| orange |
| -5 °C...75 |
| -5 °C...50 °C |
| -25 °C...75 °C |
| |
| |

Ordering data

| |
|--------------------------|
| Core 50 µm, OM2 |
| 1.0 m |
| 2.0 m |
| 5.0 m |
| 10.0 m |
| Core 62.5 µm, OM1 |
| 1.0 m |
| 2.0 m |
| Note |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-FM5Z2V00002MSTOSDOX | 1 | 8813390000 |
| | | |
| | | |
| IE-FM6Z2V00002MSTOSDOX | 1 | 8813400000 |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-FM5Z2V00001MLDOLD0X | 1 | 1276880000 |
| IE-FM5Z2V00002MLDOLD0X | 1 | 1062570000 |
| IE-FM5Z2V00005MLDOLD0X | 1 | 1062550000 |
| IE-FM5Z2V00010MLDOLD0X | 1 | 1062580000 |
| | | |
| IE-FM6Z2V00001MLDOLD0X | 1 | 1296450000 |

Accessories

| |
|--|
| Marking tags |
| Wire and cable markers. ø 4.7 - 7.4 mm |
| Wire and cable markers. ø 5.8 - 7.8 mm |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| VT SF 5/21 MC NE WS V0 | 160 | 1689470001 |
| VT SF 6/21 MC NE WS V0 | 160 | 1730560001 |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| VT SF 5/21 MC NE WS V0 | 160 | 1689470001 |
| VT SF 6/21 MC NE WS V0 | 160 | 1730560001 |

| |
|------|
| Note |
|------|

| |
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| |
|--|

| |
|--|
| |
|--|

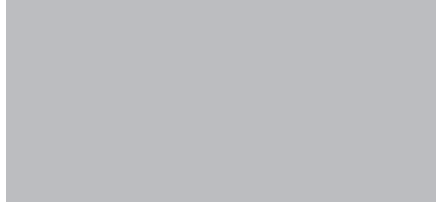
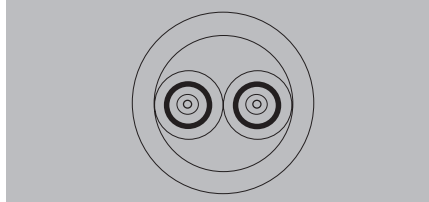
Assembled cables - FO dragline cable

Assembled cables

FO dragline cable

- Multimode glass optical fibre

LC-Duplex / LC-Duplex



Technical data

Product type
 Plug left / Plug right

Cable layout
 Sheath diameter
 Material sheath
 Sheathing colour
 Ambient temperature (operational)
 Installation temperature
 Storage temperature
 Approvals

Dragline cable
 LC-Duplex, IP20, male contact, straight, plug, Plastic, unshielded / LC-Duplex, IP20, male contact, straight, plug, Plastic, unshielded
 Break-out dragline
 6 mm
 PUR
 black
 -40 °C...80
 -20 °C...60 °C
 -40 °C...80 °C

Note

Ordering data

| Core 62.5 µm, OM1 | |
|-------------------|---------|
| | 5.0 m |
| | 20.0 m |
| | 50.0 m |
| Core 50 µm, OM2 | |
| | 10.0 m |
| | 50.0 m |
| | 100.0 m |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-FM6D2UE0005MLDOLD0X | 1 | 1220930000 |
| IE-FM6D2UE0020MLDOLD0X | 1 | 1174830000 |
| IE-FM6D2UE0050MLDOLD0X | 1 | 8993220000 |
| IE-FM5D2UE0010MLDOLD0X | 1 | 8979020000 |
| IE-FM5D2UE0050MLDOLD0X | 1 | 8979040000 |
| IE-FM5D2UE0100MLDOLD0X | 1 | 8979030000 |

Note

Accessories

| Marking tags | |
|--------------|--|
| | Wire and cable markers. ø 4.7 - 7.4 mm |
| | Wire and cable markers. ø 5.8 - 7.8 mm |

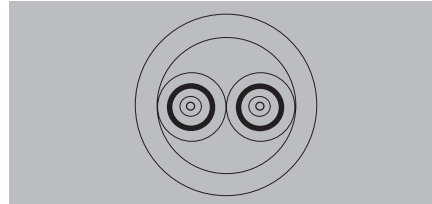
| Type | Qty. | Order No. |
|------------------------|------|------------|
| VT SF 5/21 MC NE WS V0 | 160 | 1689470001 |
| VT SF 6/21 MC NE WS V0 | 160 | 1730560001 |

Note

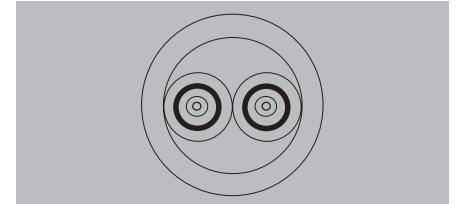
Assembled cable
FO dragline cable

- Multimode glass optical fibre

SC-Duplex / SC-Duplex



ST / ST



Technical data

| |
|-----------------------------------|
| Product type |
| Cable layout |
| Sheath diameter |
| Material sheath |
| Sheathing colour |
| Ambient temperature (operational) |
| Installation temperature |
| Storage temperature |
| Approvals |

| |
|--------------------|
| Dragline cable |
| Break-out dragline |
| 6 mm |
| PUR |
| black |
| -40 °C...80 |
| -20 °C...60 °C |
| -40 °C...80 °C |

| |
|--------------------|
| Dragline cable |
| Break-out dragline |
| 6 mm |
| PUR |
| black |
| -40 °C...80 |
| -20 °C...60 °C |
| -40 °C...80 °C |

Note

Ordering data

| Core 50 µm, OM2 | |
|-----------------|--|
| 1.0 m | |
| 3.0 m | |
| 5.0 m | |
| 10.0 m | |
| 50.0 m | |
| 100.0 m | |

| Core 62.5 µm, OM1 | |
|-------------------|--|
| 1.0 m | |
| 3.0 m | |
| 5.0 m | |
| 10.0 m | |
| 50.0 m | |
| 100.0 m | |

Note

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-FM5D2UE0001MSDOSDOX | 1 | 8876430010 |
| IE-FM5D2UE0003MSDOSDOX | 1 | 8876430030 |
| IE-FM5D2UE0005MSDOSDOX | 1 | 8876430050 |
| IE-FM5D2UE0010MSDOSDOX | 1 | 8876430100 |
| IE-FM5D2UE0050MSDOSDOX | 1 | 8876430500 |
| IE-FM5D2UE0100MSDOSDOX | 1 | 8876431000 |

| | | |
|------------------------|---|------------|
| IE-FM6D2UE0001MSDOSDOX | 1 | 8876440010 |
| IE-FM6D2UE0003MSDOSDOX | 1 | 8876440030 |
| IE-FM6D2UE0005MSDOSDOX | 1 | 8876440050 |
| IE-FM6D2UE0010MSDOSDOX | 1 | 8876440100 |
| IE-FM6D2UE0050MSDOSDOX | 1 | 8876440500 |
| IE-FM6D2UE0100MSDOSDOX | 1 | 8876441000 |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-FM5D2UE0001MSTOSTOX | 1 | 8876450010 |
| IE-FM5D2UE0003MSTOSTOX | 1 | 8876450030 |
| IE-FM5D2UE0005MSTOSTOX | 1 | 8876450050 |
| IE-FM5D2UE0010MSTOSTOX | 1 | 8876450100 |
| IE-FM5D2UE0050MSTOSTOX | 1 | 8876450500 |
| IE-FM5D2UE0100MSTOSTOX | 1 | 8876451000 |

| | | |
|------------------------|---|------------|
| IE-FM6D2UE0001MSTOSTOX | 1 | 8876460010 |
| IE-FM6D2UE0003MSTOSTOX | 1 | 8876460030 |
| IE-FM6D2UE0005MSTOSTOX | 1 | 8876460050 |
| IE-FM6D2UE0010MSTOSTOX | 1 | 8876460100 |
| IE-FM6D2UE0100MSTOSTOX | 1 | 8876461000 |

Accessories

| Marking tags | |
|--|--|
| Wire and cable markers. ø 4.7 - 7.4 mm | |
| Wire and cable markers. ø 5.8 - 7.8 mm | |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| VT SF 5/21 MC NE WS VO | 160 | 1689470001 |
| VT SF 6/21 MC NE WS VO | 160 | 1730560001 |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| VT SF 5/21 MC NE WS VO | 160 | 1689470001 |
| VT SF 6/21 MC NE WS VO | 160 | 1730560001 |

Note

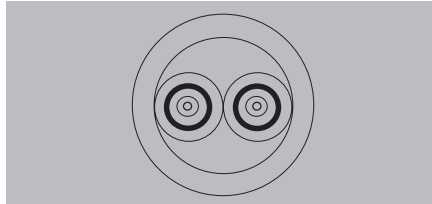
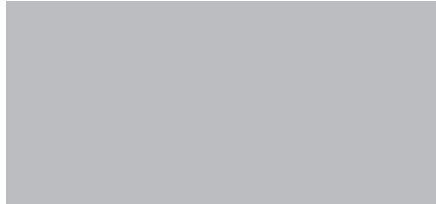
Assembled cables - FO dragline cable

Assembled cables

FO dragline cable with extended temperature range

- Multimode glass optical fibre

SC-Duplex IP67



Technical data

Product type
Cable layout
Plug left / Plug right

Sheath diameter
Material sheath
Sheathing colour
Fibre type
Bandwidth
Attenuation
Ambient temperature (operational)
Installation temperature
Storage temperature
Approvals

Note

Dragline cable
Break-out dragline
SC, IP67, male contact, straight, V1 Bayonett, plug, Zinc diecast, unshielded / SC, IP67, male contact, straight, V1 Bayonett, plug, Zinc diecast, unshielded
7.5-8 mm
PUR
black
GOF, Multimode, OM1
200 MHz*km at 850 nm, 500 MHz*km at 1300 nm
2.7 dB/km at 850 nm, ≤ 0.5 dB/km at 1300 nm
-40 °C...85
-55 °C...60 °C
-55 °C...85 °C

Ordering data

| Core 62.5 µm, OM1 | |
|-------------------|--|
| 100.0 m | |
| 180.0 m | |
| 200.0 m | |
| 250.0 m | |
| 300.0 m | |
| 350.0 m | |
| 500.0 m | |

Note

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-FM6C2UE0100MSD1SD1X | 1 | 1318011000 |
| IE-FM6C2UE0180MSD1SD1X | 1 | 1318011800 |
| IE-FM6C2UE0200MSD1SD1X | 1 | 1318012000 |
| IE-FM6C2UE0250MSD1SD1X | 1 | 1318012500 |
| IE-FM6C2UE0300MSD1SD1X | 1 | 1318013000 |
| IE-FM6C2UE0350MSD1SD1X | 1 | 1318013500 |
| IE-FM6C2UE0500MSD1SD1X | 1 | 1318015000 |

Accessories

| Marking tags | |
|--|--|
| Wire and cable markers. ø 4.7 - 7.4 mm | |
| Wire and cable markers. ø 5.8 - 7.8 mm | |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| VT SF 5/21 MC NE WS V0 | 160 | 1689470001 |
| VT SF 6/21 MC NE WS V0 | 160 | 1730560001 |

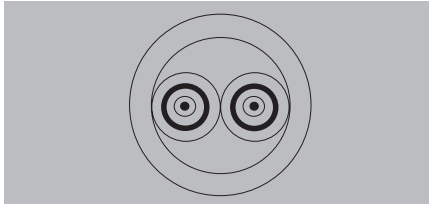
Note

Assembled cables

FO dragline cable

- Singlemode glass optical fibre

SC-Duplex IP67



Technical data

Product type
Cable layout
Plug left / Plug right

Sheath diameter
Material sheath
Sheathing colour
Fibre type
Bandwidth
Insertion loss
Attenuation
Ambient temperature (operational)
Installation temperature
Storage temperature
Approvals

Note

Dragline cable
Break-out dragline
SC, IP67, male contact, straight, PushPull V14, plug, Zinc diecast, unshielded / SC, IP67, male contact, straight, PushPull V14, plug, Zinc diecast, unshielded
6 mm
PUR
black
Singlemode, OS 2

≤ 0.5 dB
≤ 0.4 dB/km at 1310 nm
-40 °C...80
-20 °C...60 °C
-40 °C...80 °C

Ordering data

| Core 9 µm. OS2 | |
|----------------|--------|
| | 5.0 m |
| | 20.0 m |
| | 25.0 m |
| | 40.0 m |

Note

| Type | Qty. | Order No. |
|------------------------|------|------------|
| IE-FSMD2UE0005MSDESDEX | 1 | 1449420050 |
| IE-FSMD2UE0020MSDESDEX | 1 | 1449420200 |
| IE-FSMD2UE0025MSDESDEX | 1 | 1449420250 |
| IE-FSMD2UE0040MSDESDEX | 1 | 1449420400 |

Accessories

| Marking tags | |
|--------------|--|
| | Wire and cable markers. ø 4.7 - 7.4 mm |
| | Wire and cable markers. ø 5.8 - 7.8 mm |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| VT SF 5/21 MC NE WS V0 | 160 | 1689470001 |
| VT SF 6/21 MC NE WS V0 | 160 | 1730560001 |

Note

Passive components

Overview of accessories

| | | |
|---|--|------|
| Accessories – Passive components | Introduction | Q.2 |
| | Cable connector | Q.3 |
| | Copper cabling tools | Q.4 |
| | Fibre-optic cabling tools | Q.13 |
| | General tools | Q.18 |
| | Cable Entry System – Cabtite | Q.20 |
| | Cable Bender | Q.29 |
| | Protective caps | Q.30 |
| | Inkjet printer | Q.31 |
| | Markers for cables and STEADYTEC [®] | Q.33 |
| | Surge protection for data interfaces | Q.34 |

Overview of accessories

Everything from a single source

Cable connector



Connection, repair or extension of Industrial Ethernet cables to Cat.7_A

- fieldattachable with IDC connection technology
- Specified for class F_A
- IP67

Cable guiding



Cable bender to guide patch cables safely and without cable breakage or data loss by 90° angles

Copper cabling tools

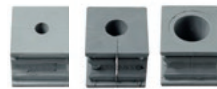


For assembling

- RJ45 crimp
- Hybrid insert

for stripping
to test the wiring

Cabletie



System-based cable entry

- Cable entry strips
- Cable grommets

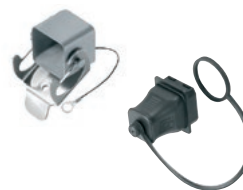
Fibre-optic cabling tools



For assembling

- SCRJ-POF
- SC-GOF
- ST-GOF

Protective caps



to protect all IE-LINE connectors with **STEADYTEC**® technology

General tools



For pressing conductors into IDC terminals and pressing RJ45 contacts

- Indentation tool
- Pressing tool

Marker



For identifying conductors, plugs and devices

- Line markers
- Housing and plug marker

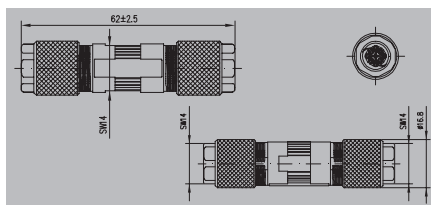
Surge protection for data interfaces



For the protection of Cat. 5 and Cat. 6 data lines - also in PoE and PoE + applications

Cable connector class 7

Cable connector



Technical data

| |
|---|
| Category |
| Protection degree |
| Connection 1 / 2 |
| Housing main material |
| Ambient temperature (operational) |
| Current-carrying capacity at 50 °C |
| Rated voltage |
| Insulation strength |
| Shielding |
| Connection diameter, flexible, min. / max. |
| Connection cross-section, flexible, min. / max. |
| Connection diameter, solid, min. / max. |
| Connection cross-section, solid, min. / max. |
| Insulation cross-section, max. |
| Sheath diameter min. / max. |
| Approvals |

| |
|---|
| Class F _A (ISO/IEC11801 2011) with cat. 7 _A Cable |
| IP67 |
| IDC / IDC |
| Zinc diecast |
| -40 °C...85 °C |
| 63 V |
| 100 MΩ |
| 360° all-round enclosure |
| 0.48 mm / 0.76 mm |
| AWG 26 / AWG 22 |
| 0.4 mm / 0.64 mm |
| AWG 24 / AWG 22 |
| 1.6 mm |
| 5 mm / 9.7 mm |

| |
|------|
| Note |
|------|

Ordering data

| |
|------|
| Note |
|------|

| |
|------|
| Note |
|------|

| Type | Qty. | Order No. |
|------------------|------|------------|
| IE-CC-8W-FA-IP67 | 1 | 1499940000 |

Accessories

| |
|------|
| Note |
|------|

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

| |
|------|
| Note |
|------|

| |
|------|
| Note |
|------|

Copper cabling tools

Stripping tools

IE-CST

1- and 2-step stripping in one operation



- Stripping tool for round (shielded) data cables of \varnothing 2.5...8 mm
- Specially designed for Ethernet cables
 - Strips sheathing and cuts shield in one operation
 - Blue blade cartridge included in delivery

AM 12

For UTP and STP data cables



- Cutting of UTP and STP data cables and other flexible copper cables with a diameter of up to 4 mm² (~AWG11)
- Stripping of the outer insulations of UTP and STP data cables and other round cables with \varnothing 0.5 ... 12.5 mm
- No damage to the shielding or conductor due to adjustable stripping blade
- Length gauge for repeated stripping lengths

Q

Technical data

| Max. cutting performance copper cable | |
|---------------------------------------|-----------------|
| Cable model | |
| Conductor cross-section | AWG |
| Conductor diameter | mm |
| Adjustable depth of cut | mm |
| Cutting performance | |
| Non-shielded & shielded data cables | mm |
| Flexible copper cable | mm ² |
| Tool data | |
| Length | mm |
| Weight | g |
| Note | |

Ordering data

| Type | Qty. | Order No. |
|--------|------|------------|
| IE-CST | 1 | 9204350000 |
| Note | | |

Accessories

| Type | Qty. | Order No. |
|-----------------------|------|------------|
| Spare cutter cassette | 1 | 9032020000 |
| Note | | |

| IE-CST | |
|-----------------------------|--|
| coaxial & round data cables | |
| 2.5 ... 8 | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| Note | |

| Type | Qty. | Order No. |
|--------|------|------------|
| IE-CST | 1 | 9204350000 |

| Type | Qty. | Order No. |
|-----------------------|------|------------|
| Spare cutter cassette | 1 | 9032020000 |

| AM 12 | |
|-------------------------|--|
| UTP and STP data cables | |
| 0.5...12.5 | |
| adjustable | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| Note | |

| Type | Qty. | Order No. |
|-------|------|------------|
| AM 12 | 1 | 9030060000 |

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

Pressing tools

- Pressing tool for modular plug connectors of the WE system (Western Electric and DEC)
- Ratchet for precise crimping
- Release option in the event of incorrect operation

3 functions:

- Pressing of plug connectors
- Pressing of enclosure shielding
- Crimping of cable shielding

TT 8 RS MP 8



For 8-pole shielded RJ45 plugs

- AWG 27...24

Pressing of IDC contacts



Pressing of shielded enclosures



Crimping of shielded cable



Technical data

| |
|-------------------------------|
| Description of contact |
| Number of poles |
| Tool data |
| Width |
| Weight |
| Note |

| |
|---------------------|
| TT 8 RS MP 8 |
| 8 |
| 255 mm |
| 1251 g |
| |

Ordering data

| |
|----------------|
| Version |
| |
| Note |
| |

| Type | Qty. | Order No. |
|---|------|-------------------|
| TT 8 RS MP 8 | 1 | 9202800000 |
| A large selection of RJ 45 connectors can be found in our current Industrial Ethernet Catalogue | | |

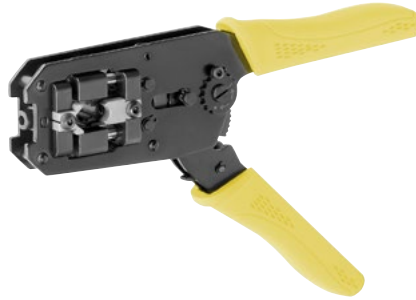


Copper cabling tools

Pressing tools

- Press (punch-down) tool for Ethernet connectors
- Ratchet for precise crimping
- Release option in the event of incorrect operation

IE-CWZ-RJ45-TH-P



For 4-pole shielded RJ45 plug

- AWG 23...22



Technical data

| | |
|-------------------------------|----|
| Description of contact | |
| No. of poles | |
| Tool data | |
| Length | mm |
| Weight | g |
| Note | |

| | | |
|-------------------------|-----|--|
| IE-CWZ-RJ45-TH-P | | |
| No. of poles | 4 | |
| Length | 250 | |
| Weight | 570 | |
| Note | | |

Ordering data

| | |
|----------------|--|
| Version | |
| Note | |

| Type | Qty. | Order No. |
|------------------|------|------------|
| IE-CWZ-RJ45-TH-P | 1 | 2614210000 |
| Note | | |

Pressing tools

- Pressing tool for pressing together both housing parts for field attachable RJ45 plugs and modules

PWZ RJ45



For field attachable RJ45 plugs and modules



Technical data

| Tool data | |
|-----------|----|
| Width | mm |
| Weight | g |
| Note | |

| PWZ RJ45 | |
|----------|-----|
| Width | 205 |
| Weight | 367 |
| Note | |

Ordering data

| Version | |
|---------|--|
| | |
| Note | |

| Type | Qty. | Order No. |
|----------|------|------------|
| PWZ RJ45 | 1 | 1118040000 |
| Note | | |



Copper cabling tools

Cable tester

Test equipment to test Ethernet cables for:

- External voltage
- Cable breakage
- Wire breakage
- Short-circuit
- Crossed wires
- Checking for twisted wires
- Testable cable length: max. 1000 m
- Wire connection: RJ45
- External-voltage resistance: 80 V AC / DC

LAN USB

LAN continuity tester



- Network cable tester for LAN and USB connections
- Including remote tester
- Connection option for RJ45 plug
- Manual and automatic test
- Display of connection faults (cable breakage, wrong connection, incorrect wiring)

IE-CT



- External voltage
- External-voltage resistance: 80 V AC / DC



Technical data

| Housing specification | |
|-----------------------------|----|
| Display | |
| Testable cable length, max. | |
| Supply | |
| Type of connection | |
| Remote box dimensions | |
| Remote box weight | |
| Depth / Width / Height | mm |
| Weight | |
| Note | |

| | |
|--------------------|--|
| LED | |
| 1000 | |
| 9V battery | |
| RJ45, USB A, USB B | |
| 65 x 28 x 27 mm | |
| 30 g | |
| 65 / 135 / 27 | |
| 174 g | |
| Note | |

| | |
|-------------|--|
| digital | |
| 9V battery | |
| / 70 / 36 | |
| 185 g | |
| Note | |

Ordering data

| Version |
|-------------|
| Note |

| Type | Qty. | Order No. |
|---|------|------------|
| LAN USB TESTER | 1 | 9205400000 |
| Battery, accessories and bag included in delivery | | |

| Type | Qty. | Order No. |
|--|------|------------|
| IE-CT | 1 | 8808420000 |
| Further test boxes on request Battery included | | |

Cutting tools

- The cutting blade design for different cable sizes increases the quality of the cuts for smaller cross-sections
- Not suitable for steel wires, steel-armoured cables, aluminium alloys and hard-drawn copper conductors!
- Cutting without deformation of the conductor
- Do not cut live conductors
- Individually tested protective insulation, 1000 V, VDE and GS tested in accordance with EN/IEC 60900
- Optimised handle ergonomics
- Minimal hand force required



KT 8



⊘ max. 8 mm

● max. 16 mm²

⊙ max. 16 mm²

⊘ max. 16 mm²



KT 8S

Cutting tool with spring



⊘ max. 8 mm

● max. 16 mm²

⊙ max. 16 mm²

⊘ max. 16 mm²



Technical data

| |
|---|
| Max. cutting performance, copper cable acc. to EN 60228 |
| Copper cable - solid, max. |
| Copper cable - stranded, max. |
| Copper cable - flexible, max. |
| Max. cutting performance, aluminium cable acc. to EN 60228 |
| Stranded aluminium cable, max (mm ²) |
| Stranded aluminium cable, max. diameter |
| Tool data |
| Depth / Width / Height |
| Weight |
| Note |

Ordering data

| |
|----------------|
| Version |
| Note |

| |
|----------------------------|
| KT8 |
| 50 mm ² / 1 AWG |
| 35 mm ² / 2 AWG |
| 25 mm ² / 4 AWG |
| 35 mm ² / 2 AWG |
| 9 mm |
| 30 / 185 / 65,5 mm |
| 180 g |
| Tool closed |

| Type | Qty. | Order No. |
|------|------|------------|
| KT 8 | 1 | 9002650000 |

| |
|----------------------------|
| 50 mm ² / 1 AWG |
| 35 mm ² / 2 AWG |
| 25 mm ² / 4 AWG |
| 35 mm ² / 2 AWG |
| 9 mm |
| 30 / 185 / 65,5 mm |
| 220 g |

| Type | Qty. | Order No. |
|-------|------|------------|
| KT 8S | 1 | 2876450000 |



Copper cabling tools

KT 12






-  max. 12 mm
-  max. 16 mm²
-  max. 25 mm²
-  max. 35 mm²



KT 14





-  max. 14 mm
-  max. 16 mm²
-  max. 35 mm²
-  max. 70 mm²

Suggested cross-section range /
Empfohlener Querschnittsbereich



KT 22



-  max. 22 mm
-  max. 25 mm²
-  max. 50 mm²
-  max. 95 mm²

Suggested cross-section range /
Empfohlener Querschnittsbereich



| |
|------------------------------|
| KT12 |
| 95 mm ² / 3/0 AWG |
| 70 mm ² / 2/0 AWG |
| 50 mm ² / 1 AWG |
| |
| 70 mm ² / 2/0 AWG |
| 11 mm |
| |
| 30 / 225 / 63.5 mm |
| 300 g |
| Tool closed |

| |
|------------------------------|
| 16 mm ² / 6 AWG |
| 35 mm ² / 2 AWG |
| 70 mm ² / 2/0 AWG |
| |
| 70 mm ² / 2/0 AWG |
| 14 mm |
| |
| 30 / 225 / 63.5 mm |
| 320 g |
| Tool closed |

| |
|-------------------------------|
| 150 mm ² / 4/0 AWG |
| 95 mm ² / 3/0 AWG |
| 70 mm ² / 2/0 AWG |
| |
| 95 mm ² / 3/0 AWG |
| 13 mm |
| |
| 31 / 249 / 71.5 mm |
| 460 g |
| Tool closed |

| Type | Qty. | Order No. |
|-------|------|------------|
| KT 12 | 1 | 9002660000 |

| Type | Qty. | Order No. |
|-------|------|------------|
| KT 14 | 1 | 1157820000 |

| Type | Qty. | Order No. |
|-------|------|------------|
| KT 22 | 1 | 1157830000 |

Single-core aluminium cable corresponds to single-wire sector cable

Cutting and releasing tools

Special cutting tool for clean pinch-free cutting of Weidmüller Z-Series cross-connections

KT Mini



max. 7 mm
 max. 6 mm²
 max. 10 mm²
 max. 10 mm²

Technical data

| | |
|---|----------------------------|
| Max. cutting performance, copper cable acc. to EN 60228 | |
| Copper cable - solid, max. | 35 mm ² / 2 AWG |
| Copper cable - stranded, max. | 25 mm ² / 4 AWG |
| Copper cable - flexible, max. | 16 mm ² / 6 AWG |
| Max. cutting performance, aluminium cable acc. to EN 60228 | |
| Stranded aluminium cable, max (mm ²) | 25 mm ² / 4 AWG |
| Stranded aluminium cable, max. diameter | 7 mm |
| Tool data | |
| Depth / Width / Height | 9.5 / 42 / 120 mm |
| Weight | 91 g |
| Note | |

| | | |
|---|----------------------------|--|
| Max. cutting performance, copper cable acc. to EN 60228 | | |
| Copper cable - solid, max. | 35 mm ² / 2 AWG | |
| Copper cable - stranded, max. | 25 mm ² / 4 AWG | |
| Copper cable - flexible, max. | 16 mm ² / 6 AWG | |
| Max. cutting performance, aluminium cable acc. to EN 60228 | | |
| Stranded aluminium cable, max (mm ²) | 25 mm ² / 4 AWG | |
| Stranded aluminium cable, max. diameter | 7 mm | |
| Tool data | | |
| Depth / Width / Height | 9.5 / 42 / 120 mm | |
| Weight | 91 g | |
| Note | | |

Ordering data

| | |
|----------------|--|
| Version | |
| Note | |

| Type | Qty. | Order No. |
|-------------|------|------------|
| KT MINI | 1 | 2876460000 |
| Note | | |



Copper cabling tools

SEE ESD 120**Electronic ESD diagonal-cutting pliers with pointed head**

- Hard wire (spring wire/steel nails): 0.2 mm/AWG 32
- Semi-hard wire (iron/nails): 1.0 mm/AWG 18
- Soft wire (copper/aluminium): 1.5 mm/AWG 15

Ordering data

| Type | Qty. | Order No. |
|-------------|------|------------|
| SEE ESD 120 | 1 | 9205130000 |

Technical data

| | |
|--------|------|
| Weight | 90 g |
|--------|------|

**SEE ESD 125****Electronic ESD diagonal-cutting pliers with oval head**

- Semi-hard wire (iron/nails): 0.3 mm/AWG 29
- Soft wire (copper/aluminium): 1.5 mm/AWG 15

Ordering data

| Type | Qty. | Order No. |
|-------------|------|------------|
| SEE ESD 125 | 1 | 9204750000 |

Technical data

| | |
|--------|------|
| Weight | 90 g |
|--------|------|

**FZE ESD 130****Electronic ESD flat-nosed pliers****Ordering data**

| Type | Qty. | Order No. |
|-------------|------|------------|
| FZE ESD 130 | 1 | 9204760000 |

Technical data

| | |
|--------|------|
| Weight | 90 g |
|--------|------|

**SZE ESD 130****Electronic ESD Snipe-nosed pliers****Ordering data**

| Type | Qty. | Order No. |
|-------------|------|------------|
| SZE ESD 130 | 1 | 9204770000 |

Technical data

| | |
|--------|------|
| Weight | 90 g |
|--------|------|

**SVSE ESD 130****Electronic ESD angle-cutting pliers**

- Hard wire (spring wire or steel nails): 0.6 mm/AWG 22
- Semi-hard wire (iron or nails): 1.0 mm/AWG 18
- Soft wire (copper or aluminium): 1.2 mm/AWG 16

Ordering data

| Type | Qty. | Order No. |
|--------------|------|------------|
| SVSE ESD 130 | 1 | 9205140000 |

Technical data

| | |
|--------|------|
| Weight | 93 g |
|--------|------|

**SUPER CUT****Electronic diagonal-cutting pliers**

- Soft wire (copper): 2 mm/AWG 12

Ordering data

| Type | Qty. | Order No. |
|-----------|------|------------|
| SUPER CUT | 1 | 9205150000 |

**KOF SET ESD****Electronic ESD case set**

Contents:

- Diagonal-cutting pliers
- Snipe-nosed pliers
- Flat-nose pliers
- Angle-cutting pliers

Ordering data

| Type | Qty. | Order No. |
|-------------|------|------------|
| KOF SET ESD | 1 | 9205210000 |



Crimping tools

Cutting, stripping and crimping tools for processing POF fibres in compliance with IEC 60793-2 A4A fibres (1000 µm/980 µm POF)

- Multifunction tool for POF fibres
- Processing the duplex POF fibres
- Stripping tool for processing POF fibres and cables
- The new set of blades for POF cables makes stripping the outer covering and the POF fibres simple
- Cable shears specially designed for aramid fibres
- Only for cutting aramid fibres (strain relief in fibre-optic cables)

Tool-Set IE-POF



Contents:

- Assortment case PSC 80
- Kevlar scissors for aramid fibres
- Multifunction tool HTX-IE-POF
- Stripping tool multi-stripax® IE-POF

multi-stripax® POF



- Excellent stripping quality for industrial applications
- Specially shaped blades enable stripping of special types of insulation and conductor configurations
- Stripping length with end stop, adjustable from 2.3...30 mm
- Very versatile thanks to interchangeable stripping units
- Stripping results reproduced accurately over and over again
- No damage to the conductor
- A long-lasting, reliable tool thanks to its sturdy design
- Integrated cutting function up to 6 mm²

Technical data

| | | |
|-------------------------|----|----------------|
| Length / Width / Height | mm | 241 / 338 / 79 |
| Weight | g | 1,833 |
| Note | | |

| | | |
|-------------------------|----|---------------|
| Length / Width / Height | mm | 250 / 85 / 40 |
| Weight | g | 250 |
| Note | | |

| | | |
|-------------------------|----|---------------|
| Length / Width / Height | mm | 250 / 85 / 40 |
| Weight | g | 250 |
| Note | | |

Ordering data

| Version | |
|-------------|--|
| | |
| Note | |

| Type | Qty. | Order No. |
|-----------------|------|------------|
| TOOL SET IE-POF | 1 | 1208930000 |
| Note | | |

| Type | Qty. | Order No. |
|----------------------|------|------------|
| MULTI-STRIPAX IE-POF | 1 | 1208880000 |
| Note | | |

Accessories

| Type | Qty. | Order No. |
|----------------------|------|------------|
| HTX-IE-POF | 1 | 1208870000 |
| MULTI-STRIPAX IE-POF | 1 | 1208880000 |
| KEVLAR SCISSORS | 1 | 1208910000 |
| Note | | |

| Type | Qty. | Order No. |
|----------------------|------|------------|
| HTX-IE-POF | 1 | 1208870000 |
| MULTI-STRIPAX IE-POF | 1 | 1208880000 |
| KEVLAR SCISSORS | 1 | 1208910000 |
| Note | | |

| Type | Qty. | Order No. |
|---------------------------|------|------------|
| Replacement cutting blade | 1 | 9203100000 |
| Replacement stop set | 1 | 9203070000 |
| AIE MULTI-STRIPAX POF | 1 | 1212770000 |
| Note | | |



Fibre-optic cabling tools

Mounting tools

- Release option in the event of incorrect operation
- With end stop for exact positioning of the contacts

HTX-IE-POF



- Only one tool needed for all SC-RJ plug processing steps
- For processing 1 mm thick polymer optical fibres, especially for the PROFINET and EtherNet/IP-SC-RJ connectors
- For stripping Duplex polymer optical fibres
- The plug is crimped and the polymer optical fibres are separated, all in a single step
- Cut surfaces do not need to be polished after cutting
- Locator for precise positioning of the SC-RJ plugs
- Ergonomic handles
- High repeat accuracy
- Ratchet for precise crimping

Three steps to produce IP67 connectors:
 1) Strip the Duplex polymer optical fibres
 2) Crimp and separate
 3) Crimp the strain relief

HTX-HTX-IE-POF-QA



- Only one tool needed for all SC-RJ QA (reconnectable) plug processing steps
- For processing 1 mm thick polymer optical fibres, especially for the PROFINET and EtherNet/IP-SC-RJ connectors
- For stripping Duplex polymer optical fibres
- Cut surfaces do not need to be polished after cutting
- Locator for precise positioning of the SC-RJ plugs
- Ergonomic handles
- High repeat accuracy

Three steps to produce IP67 connectors:
 1) Strip the Duplex polymer optical fibres
 2) Tighten strain relief
 3) Insert and Cutting

Technical data

| Material data | |
|---------------|----|
| Length | mm |
| Weight | g |
| Note | |

Ordering data

| Version |
|---------|
| |
| Note |

| HTX-IE-POF | | |
|------------|-----|--|
| Length | 220 | |
| Weight | 450 | |
| Note | | |

| Type | Qty. | Order No. |
|------------|------|------------|
| HTX-IE-POF | 1 | 1208870000 |
| Note | | |

| HTX-HTX-IE-POF-QA | | |
|-------------------|-----|--|
| Length | 220 | |
| Weight | 450 | |
| Note | | |

| Type | Qty. | Order No. |
|-------------------|------|------------|
| HTX-HTX-IE-POF-QA | 1 | 2602860000 |
| Note | | |

Kevlar Scissor

- Cable shears specially designed for aramid fibres

SCISSOR Kevlar



- Only for cutting aramid fibres (strain relief in fibre-optic cables)
- Do not use for other materials
- Special blade geometry
- Blades ground
- With teeth on the cutting edge
- Riveted joint
- Hand-friendly, impact-resistant plastic handles

Technical data

| Material data | |
|---------------|----|
| Length | mm |
| Weight | g |
| Note | |

| SCISSORS KEVLAR | |
|-----------------|-------|
| Length | 148 |
| Weight | 66.88 |
| Note | |

Ordering data

| Version |
|---------|
| |
| Note |
| |

| Type | Qty. | Order No. |
|-----------------|------|------------|
| SCISSORS KEVLAR | 1 | 1208910000 |
| Note | | |
| | | |



Fibre-optic cabling tools

Crimping tool for other contacts

- Ratchet for precise crimping
- Release option in the event of incorrect operation
- With end stop for exact positioning of the contacts
- Contact and insulation are crimped in one step

HTF HYB

0.08...1.0 mm²



For Weidmüller hybrid sockets and pins

- ~AWG 28...AWG 17



Technical data

| Description of contact | |
|------------------------|-----------------|
| Crimping range | mm ² |
| Tool data | |
| Length | mm |
| Weight | g |
| Note | |

| HTF HYB | | |
|----------|--|--|
| 0.08...1 | | |
| 200 | | |
| 443.2 | | |
| Note | | |

Ordering data

| Version | |
|---------|--|
| | |
| Note | |

| Type | Qty. | Order No. |
|---------|------|------------|
| HTF HYB | 1 | 1119580000 |
| Note | | |

Stripping and cutting tools

- Quick and accurate stripping
- No need to adjust cutting depth
- No damage to inner conductor

LWL-stripax®



Stripping and cutting tool for plastic fibre-optic cables with 1 mm diameter inner conductor

- Stripping length adjustable via end stop
- Automatic opening of the clamping jaws after stripping

Technical data

| |
|-----------------------------------|
| Max. stripping performance |
| Cable type |
| Wire cross-section, min. / max. |
| Stripping length, max. |
| Tool data |
| Width |
| Height |
| Weight |
| Note |

| |
|---|
| M-D-STRIPAX LWL |
| POF conductor with an inner conductor of 1 mm |
| 7.5 mm |
| 82 mm |
| 135 mm |
| 110 g |
| POF: polymer optical fibre |

Ordering data

| |
|----------------|
| Version |
| Note |

| Type | Qty. | Order No. |
|-----------------|------|------------|
| M-D-STRIPAX LWL | 1 | 9003750000 |

Accessories

| |
|-------------|
| Note |
|-------------|

| Type | Qty. | Order No. |
|---------------------|------|------------|
| MEHA KP LWL M-D-SPX | 1 | 9003760000 |

General tools

Insertion tool for twisted-pair cable

For connecting twisted-pair cable to terminal rails with IDC contacts e.g. in main and floor distributors, and in modular wall junction boxes for structured building cabling.

PDT



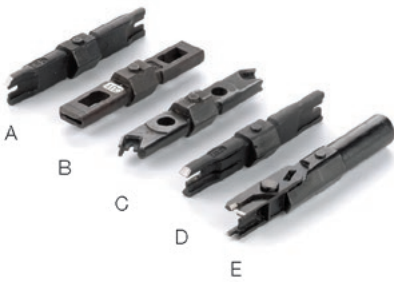
IE-FISP-V4



The punch-down tool has the following features:

- Mechanism made from metal components
- Adjustable pressing force for conductor sizes AWG 20 to AWG 28
- Different blades for connector blocks of type 110 from AT&T, type 66, type LSA Plus from Krone (standard and scissors cutting function) as well as for telephone outlets 630A6
- Incision blades with 2 functions: incision or incision with cutting off of remaining conductor
- Storage compartment for one blade

Fastening tool for the hexagon cap nut from **STEADYTEC®** V4 flange and FrontCom® Micro.



- A = PD blade 110
- B = PD blade 66
- C = PD blade 630
- D = PD blade Krone LSA (standard)
- E = PD blade Krone LSA (scissors)

Technical data

| |
|------------------------------|
| Housing specification |
| Depth / Width / Height |
| Weight |
| Note |

| |
|----------------------------|
| PUNCH DOWN TOOL PDT |
| 37 / 160 / 29 mm |
| 142 g |
| |

| |
|--------------------|
| Fixing tool |
| 115 / 28 / 28 |
| 21 |
| |

Ordering data

| |
|----------------|
| Version |
| |
| Note |

| Type | Qty. | Order No. |
|---------------------|------|------------|
| PUNCH DOWN TOOL PDT | 1 | 9013970000 |
| (without blade) | | |

| Type | Qty. | Order No. |
|------------|------|------------|
| IE-FISP-V4 | 2 | 9204370000 |

Accessories

| | |
|-------------|---|
| | A |
| | B |
| | C |
| | D |
| | E |
| Note | |

| Type | Qty. | Order No. |
|------------------------|------|------------|
| ERME 110 PDT | 1 | 9013960000 |
| ERME 66 PDT | 1 | 9013980000 |
| ERME 630 PDT | 1 | 9013990000 |
| ERME LSA PLUS STANDARD | 1 | 9014000000 |
| ERME LSA PLUS SCHERE | 1 | 9014050000 |

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |
| | | |
| | | |
| | | |

Hydraulic sheet holes

Incl. accessories:

- 1 HSS pre-drill Ø 10 mm
- 1 tension bolt Ø 19 mm
- 1 tension bolt Ø 19 x 9.5 mm
- 1 spacer nut set (3-part)
- 1 bridge
- Punching force 75 kN

IE-KO-HAT



- Pressure relief valve protects against overloading
- Cylinder head angled at 90°
- Angled head can be rotated through 360°
- Ergonomic handle springs back automatically
- The waste piece no longer becomes jammed thanks to 3-fold splitter
- Hydraulic punch made of high-strength aluminium (approx. 40% weight saving)

Technical data

| |
|---|
| Steel-sheet (S235) punching performance tension bolt, max. |
| KOHS 9,5 + 19 |
| KOHS 19 |
| Square holes |
| Rectangular holes |
| Tool data |
| Depth / Width / Height |
| Weight |
| Punching force |
| Max. operating pressure |
| Type hydraulic oil |
| Note |

| |
|-------------------|
| IE-KO-HAT |
| 2mm |
| 3mm |
| 3mm |
| 2.5mm |
| 70 / 290 / 120 mm |
| 1.75 kg |
| 75 kN |
| 680 bar |
| HLP32 |

Ordering data

| |
|----------------|
| Version |
| Note |

| Type | Qty. | Order No. |
|-----------|------|------------|
| IE-KO-HAT | 1 | 1966810000 |

Accessories

| |
|---------------|
| Tension bolt |
| Tension bolts |
| Pre-drill |
| Note |

| Type | Qty. | Order No. |
|-------------|------|------------|
| KOHS 19 | 1 | 9205010000 |
| KOHS 9.5+19 | 1 | 9205000000 |
| KOPD 10.0 | 1 | 9205020000 |

Splitting stamp on the next page

Custom stamp for Industrial Ethernet connections and FrontCom® Vario (Single Frame)



| Type | Description | Dimensions | Qty. | Order No. |
|------------|---|------------------------------------|------|------------|
| IE-KOK-V1 | Custom shape for Bajonet 01 metal | Diameter 27 mm x 1 side 25.9 mm | 1 | 1966780000 |
| IE-KOK-V4 | Custom shape for Push Pull V04 plastic | Diameter 23.2 mm x 2 sides 20.2 mm | 1 | 1966790000 |
| IE-KOK-V5 | Custom shape for RockStar® V05 metal | 22.0 x 22.0 mm | 1 | 9204790000 |
| IE-KOK-HAT | Custom shape for FrontCom® Vario Single Frame | 91.0 x 52.0 mm | 1 | 2008410000 |



Tension bolt KOHS 19



Tension bolts KOHS 9.5+19



Pre-drill KOPD 10.0

Cable Entry System – Cabtite

Cabtite SE - Sealing element small



Cable grommets for ASI cables

The Cabtite SE sealing elements are used in the frame or in the separable cable gland. The conical design allows easy installation, reliably seals gaps and provides strain relief in accordance with DIN EN 62444. For installation, the sealing elements are pressed into the snap-in inlays previously fitted in the frame or, in the case of the divisible cable gland, are placed between the cable gland half-shells. Various sealing elements with different cable diameters and geometries are available.

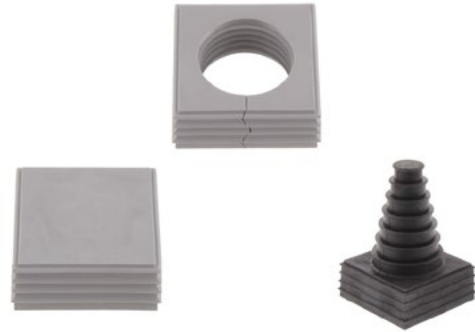
Technical data

| | |
|-----------------------------|--|
| Material | TPE |
| Halogen / Silicone | No / No |
| Operating temperature, min. | Light Grey: -40 °C; Deep black: -40 °C |
| Operating temperature, max. | Light Grey: 90 °C; Deep black: 120 °C |
| UL 94 flammability rating | Light Grey: V-0; Deep black: HB |
| Note | |

Ordering data

| Type | Clamping range | Qty. | Deep black Order No. | Light Grey Order No. |
|------------------------------------|----------------|------|-------------------------|-------------------------|
| Individual sealing elements | | | | |
| CABTITE SE 1.5-2 SML | 1.5...2 mm | 10 | 2584780000 | 2583360000 |
| CABTITE SE 2-3 SML | 2...3 mm | 10 | 2584760000 | 2583380000 |
| CABTITE SE 3-4 SML | 3...4 mm | 10 | 2584730000 | 2583400000 |
| CABTITE SE 4-5 SML | 4...5 mm | 10 | 2584680000 | 2583440000 |
| CABTITE SE 5-6 SML | 5...6 mm | 10 | 2584710000 | 2583450000 |
| CABTITE SE 6-7 SML | 6...7 mm | 10 | 2584690000 | 2583460000 |
| CABTITE SE 7-8 SML | 7...8 mm | 10 | 2584670000 | 2584660000 |
| CABTITE SE 8-9 SML | 8...9 mm | 10 | 2584330000 | 2584650000 |
| CABTITE SE 9-10 SML | 9...10 mm | 10 | 2584080000 | 2584630000 |
| CABTITE SE 10-11 SML | 10...11 mm | 10 | 2584060000 | 2584610000 |
| CABTITE SE 11-12 SML | 11...12 mm | 10 | 2584040000 | 2584600000 |
| CABTITE SE 12-13 SML | 12...13 mm | 10 | 2584020000 | 2584590000 |
| CABTITE SE 13-14 SML | 13...14 mm | 10 | 2584000000 | 2584570000 |
| CABTITE SE 14-15 SML | 14...15 mm | 10 | 2583980000 | 2584560000 |
| CABTITE SE 15-16 SML | 15...16 mm | 10 | 2583960000 | 2584550000 |
| Special geometry ASI | | | | |
| CABTITE SE 1/ASI SML | | 10 | 2583530000 | 2584810000 |
| CABTITE SE 2/ASI SML | | 10 | 2583520000 | 2584800000 |
| Multiple sealing element | | | | |
| CABTITE SE 2/4-5 SML | 4...5 mm | 10 | 2583620000 | 2584900000 |
| CABTITE SE 2/5-6 SML | 5...6 mm | 10 | 2583610000 | 2584890000 |
| CABTITE SE 2/7 SML | 7...8 mm | 10 | 2583550000 | 2584830000 |
| CABTITE SE 2/8 SML | 8...9 mm | 10 | 2583540000 | 2584820000 |
| CABTITE SE 3/5-6 SML | 5...6 mm | 10 | 2652280000 | 2652290000 |
| CABTITE SE 4/2-3 SML | 2...3 mm | 10 | 2583590000 | 2584870000 |
| CABTITE SE 4/3-4 SML | 3...4 mm | 10 | 2583580000 | 2584860000 |
| CABTITE SE 4/4-5 SML | 4...5 mm | 10 | 2583560000 | 2584840000 |
| Cone sealing element | | | | |
| CABTITE CSE 2-11 SML | 2...11 mm | 10 | 2583510000 | |
| Blind plugs | | | | |
| CABTITE BSE SML | | 10 | 2584790000 | 2583350000 |
| Note | | | | |

Cabtite SE - sealing elements large



Blanking plugs

Cone sealing element

The Cabtite SE sealing elements in large design are identical in construction to those in small design. However, they can accommodate cables with a larger outer diameter.

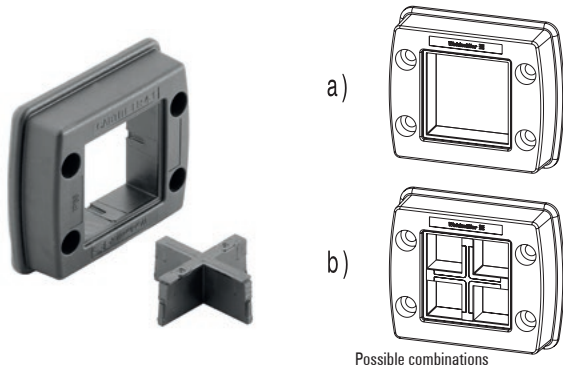
Technical data

| | |
|-----------------------------|--|
| Material | TPE |
| Halogen / Silicone | No / No |
| Operating temperature, min. | Deep black: -40 °C; Light Grey: -40 °C |
| Operating temperature, max. | Deep black: 120 °C; Light Grey: 90 °C |
| UL 94 flammability rating | Deep black: HB; Light Grey: V-0 |
| Note | |

Ordering data

| Type | Clamping range | Qty. | Deep black Order No. | Light Grey Order No. |
|------------------------------------|----------------|------|-------------------------|-------------------------|
| Individual sealing elements | | | | |
| CABTITE SE 14-15 LRG | 14...15 mm | 10 | 2583880000 | 2584510000 |
| CABTITE SE 15-16 LRG | 15...16 mm | 10 | 2583860000 | 2584500000 |
| CABTITE SE 16-17 LRG | 16...17 mm | 10 | 2583850000 | 2584490000 |
| CABTITE SE 17-18 LRG | 17...18 mm | 10 | 2583840000 | 2584480000 |
| CABTITE SE 18-19 LRG | 18...19 mm | 10 | 2583830000 | 2584470000 |
| CABTITE SE 19-20 LRG | 19...20 mm | 10 | 2583810000 | 2584460000 |
| CABTITE SE 20-21 LRG | 20...21 mm | 10 | 2583790000 | 2584450000 |
| CABTITE SE 21-22 LRG | 21...22 mm | 10 | 2583770000 | 2584440000 |
| CABTITE SE 22-23 LRG | 22...23 mm | 10 | 2583750000 | 2584430000 |
| CABTITE SE 23-24 LRG | 23...24 mm | 10 | 2583730000 | 2584420000 |
| CABTITE SE 24-25 LRG | 24...25 mm | 10 | 2583710000 | 2584410000 |
| CABTITE SE 25-26 LRG | 25...26 mm | 10 | 2583700000 | 2584400000 |
| CABTITE SE 26-27 LRG | 26...27 mm | 10 | 2583690000 | 2584390000 |
| CABTITE SE 27-28 LRG | 27...28 mm | 10 | 2583680000 | 2584370000 |
| CABTITE SE 28-29 LRG | 28...29 mm | 10 | 2583670000 | 2584350000 |
| CABTITE SE 29-30 LRG | 29...30 mm | 10 | 2583660000 | 2584380000 |
| CABTITE SE 30-31 LRG | 30...31 mm | 10 | 2583650000 | 2584360000 |
| CABTITE SE 31-32 LRG | 31...32 mm | 10 | 2583640000 | 2584340000 |
| CABTITE SE 32-33 LRG | 32...33 mm | 10 | 2583630000 | 2584920000 |
| CABTITE SE 33-34 LRG | 33...34 mm | 10 | 2595510000 | 2584910000 |
| CABTITE SE 34-35 LRG | 34...35 mm | 10 | 2595520000 | 2595530000 |
| Cone sealing element | | | | |
| CABTITE CSE 7-24 LRG | 7...24 mm | 10 | 2583500000 | |
| Blind plugs | | | | |
| CABTITE BSE LRG | | 10 | 2583900000 | 2584520000 |
| Note | | | | |

Cabtite FR - CABTITE FR 4-1 BK SET



Possible combinations

The one-piece frame, consisting of a dimensionally stable, fibreglass-reinforced plastic, is quick and easy to assemble. The foamed, captive seal guarantees a high degree of impermeability to IP66, even with painted or rough surfaces. The frame sets contain the appropriate Rastinlays to realize the individual configuration (see above a or b) of small and large sealing elements. The sealing elements are not included in the frame set and must be selected to match the cable diameter.

Technical data

| | |
|--|-----------------------------------|
| Material | Polyamide, glass fibre-reinforced |
| Colour | Deep black |
| Operating temperature | -40...120 °C |
| Protection class / Protection class (UL) | IP66 / Type 12, Type 4X |
| UL 94 flammability rating | V-0 |
| Note | |

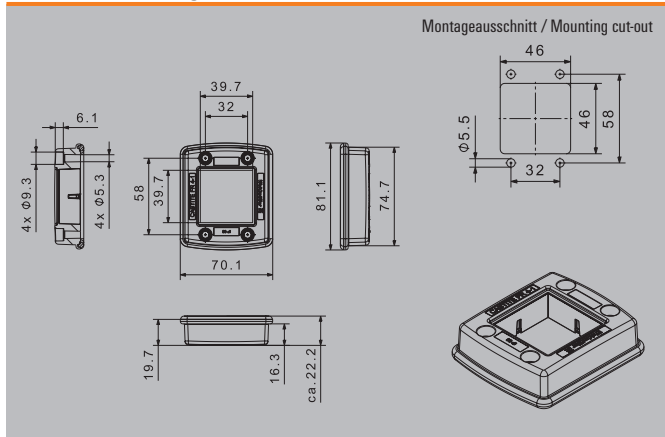
Ordering data

| Type | Qty. | Order No. |
|---|--|------------|
| Set | | |
| CABTITE FR 4-1 BK SET | 1 | 2583780000 |
| Single frame (without snap-in inlay) | | |
| CABTITE FR 4-1 BK | 1 | 2583490000 |
| Note | The individual frames do not contain any Rastinlays or sealing elements. | |

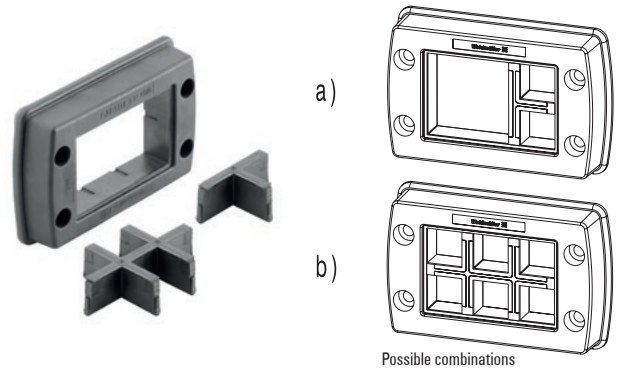
Accessories

| Product type | Type | Qty. | Order No. |
|------------------------|----------------------|------|------------|
| Locking frame (inside) | CABTITE FRL 4-1 BK | 10 | 2584260000 |
| Operating tool | CABTITE TOOL ATSE PA | 1 | 2637360000 |
| Mounting screw set | CABTITE SC M5X25 SET | 1 | 2635120000 |
| Note | | | |

Dimensioned drawing



Cabtite FR - CABTITE FR 10/6 BK SET



Possible combinations

The one-piece frame, consisting of a dimensionally stable, fibreglass-reinforced plastic, is quick and easy to assemble. The foamed, captive seal guarantees a high degree of impermeability to IP66, even with painted or rough surfaces. The frame sets contain the appropriate Rastinlays to realize the individual configuration (see above a or b) of small and large sealing elements. The sealing elements are not included in the frame set and must be selected to match the cable diameter.

Technical data

| | |
|--|-----------------------------------|
| Material | Polyamide, glass fibre-reinforced |
| Colour | Deep black |
| Operating temperature | -40...120 °C |
| Protection class / Protection class (UL) | IP66 / Type 12, Type 4X |
| UL 94 flammability rating | V-0 |
| Note | |

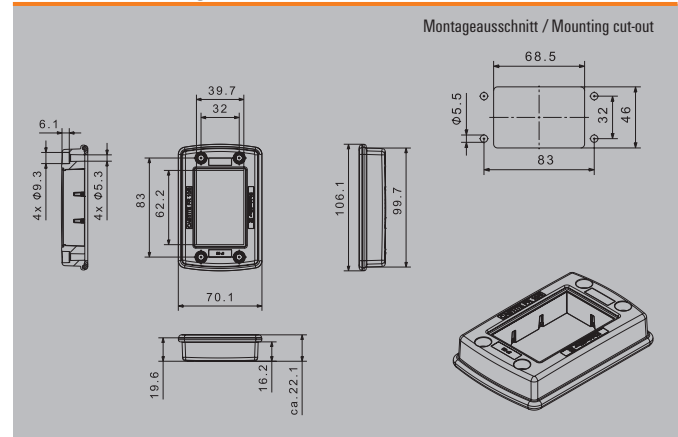
Ordering data

| Type | Qty. | Order No. |
|---|--|------------|
| Set | | |
| CABTITE FR 10/6 BK SET | 1 | 2583760000 |
| Single frame (without snap-in inlay) | | |
| CABTITE FR 10/6 BK | 1 | 2583480000 |
| Note | The individual frames do not contain any Rastinlays or sealing elements. | |

Accessories

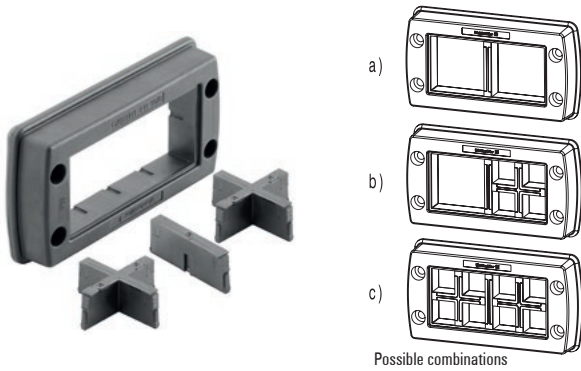
| Product type | Type | Qty. | Order No. |
|------------------------|----------------------|------|------------|
| Locking frame (inside) | CABTITE FRL 10/6 BK | 10 | 2584240000 |
| Operating tool | CABTITE TOOL ATSE PA | 1 | 2637360000 |
| Mounting screw set | CABTITE SC M5X25 SET | 1 | 2635120000 |
| Note | | | |

Dimensioned drawing



Cable Entry System – Cabtite

Cabtite FR - CABTITE FR 16/8 BK SET



Possible combinations

The one-piece frame, consisting of a dimensionally stable, fibreglass-reinforced plastic, is quick and easy to assemble. The foamed, captive seal guarantees a high degree of impermeability to IP66, even with painted or rough surfaces. The frame sets contain the appropriate Rastinlays to realize the individual configuration (see above a, b or c) of small and large sealing elements. The sealing elements are not included in the frame set and must be selected to match the cable diameters.

Technical data

| | |
|--|-----------------------------------|
| Material | Polyamide, glass fibre-reinforced |
| Colour | Deep black |
| Operating temperature | -40...120 °C |
| Protection class / Protection class (UL) | IP66 / Type 12, Type 4X |
| UL 94 flammability rating | V-0 |
| Note | |

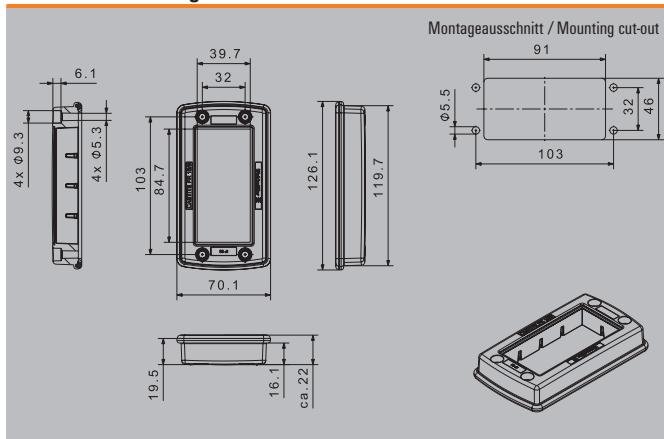
Ordering data

| Type | Qty. | Order No. |
|---|--|------------|
| Set | | |
| CABTITE FR 16/8 BK SET | 1 | 2583740000 |
| Single frame (without snap-in inlay) | | |
| CABTITE FR 16/8 BK | 1 | 2583470000 |
| Note | The individual frames do not contain any Rastinlays or sealing elements. | |

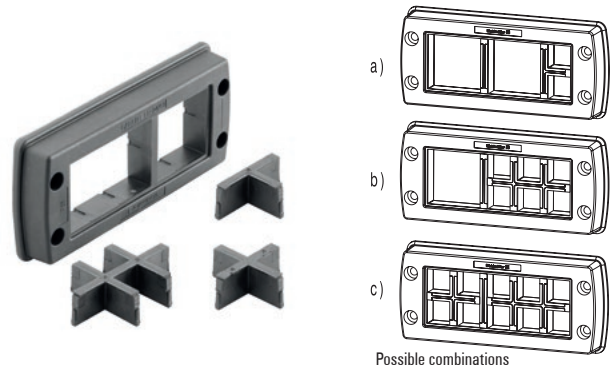
Accessories

| Product type | Type | Qty. | Order No. |
|------------------------|----------------------|------|------------|
| Locking frame (inside) | CABTITE FRL 16/8 BK | 10 | 2584220000 |
| Operating tool | CABTITE TOOL ATSE PA | 1 | 2637360000 |
| Mounting screw set | CABTITE SC M5X25 SET | 1 | 2635120000 |
| Note | | | |

Dimensioned drawing



Cabtite FR - CABTITE FR 24/10 BK SET



Possible combinations

The one-piece frame, consisting of a dimensionally stable, fibreglass-reinforced plastic, is quick and easy to assemble. The foamed, captive seal guarantees a high degree of impermeability to IP66, even with painted or rough surfaces. The frame sets contain the appropriate Rastinlays to realize the individual configuration (see above a, b or c) of small and large sealing elements. The sealing elements are not included in the frame set and must be selected to match the cable diameters.

Technical data

| | |
|--|-----------------------------------|
| Material | Polyamide, glass fibre-reinforced |
| Colour | Deep black |
| Operating temperature | -40...120 °C |
| Protection class / Protection class (UL) | IP66 / Type 12, Type 4X |
| UL 94 flammability rating | V-0 |
| Note | |

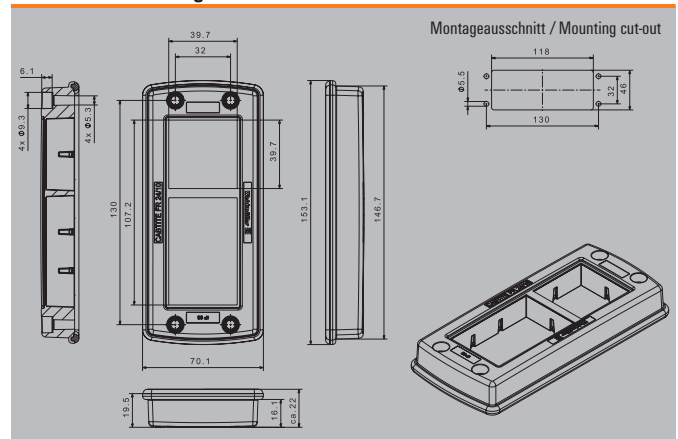
Ordering data

| Type | Qty. | Order No. |
|---|--|------------|
| Set | | |
| CABTITE FR 24/10 BK SET | 1 | 2583720000 |
| Single frame (without snap-in inlay) | | |
| CABTITE FR 24/10 BK | 1 | 2583800000 |
| Note | The individual frames do not contain any Rastinlays or sealing elements. | |

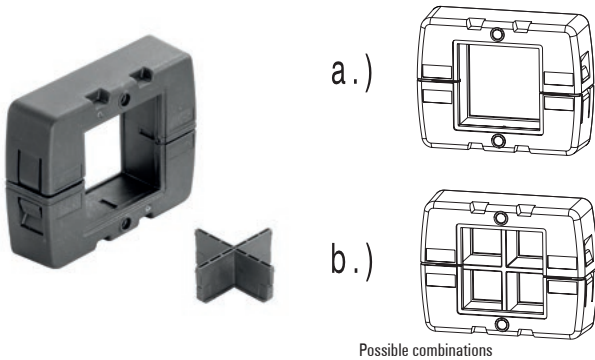
Accessories

| Product type | Type | Qty. | Order No. |
|------------------------|----------------------|------|------------|
| Locking frame (inside) | CABTITE FRL 24/10 BK | 10 | 2584210000 |
| Operating tool | CABTITE TOOL ATSE PA | 1 | 2637360000 |
| Mounting screw set | CABTITE SC M5X25 SET | 1 | 2635120000 |
| Note | | | |

Dimensioned drawing



Cabtite FT - CABTITE FRFT 4-1 SET



Possible combinations

The frame, consisting of a dimensionally stable, fibreglass-reinforced plastic, is quick and easy to assemble, the sealing elements are mounted from the outside. The captive seal guarantees a high degree of impermeability to IP66, even with painted or rough surfaces. The frame sets contain the appropriate Rastinlays to realize the individual configuration (see above a or b) of small and large sealing elements. The sealing elements are not included in the frame set and must be selected to match the cable diameter.

Technical data

| | |
|--|-----------------------------------|
| Material | Polyamide, glass fibre-reinforced |
| Colour | Deep black |
| Operating temperature | -40...120 °C |
| Protection class / Protection class (UL) | IP66 / Type 12, Type 4X |
| UL 94 flammability rating | V-0 |
| Note | |

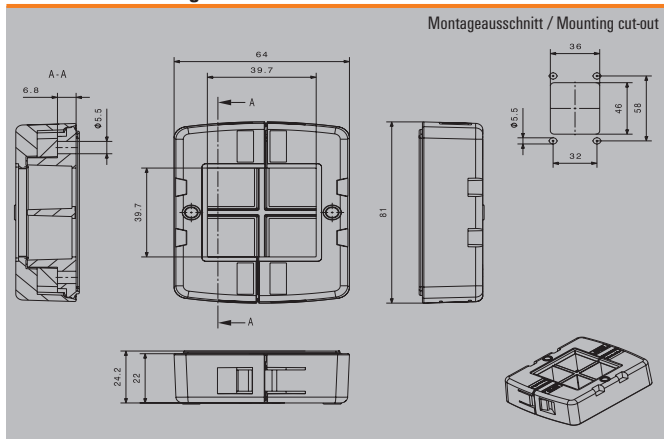
Ordering data

| Type | Qty. | Order No. |
|---|--|------------|
| Set | | |
| CABTITE FRFT 4-1 SET | 1 | 2891470000 |
| Single frame (without snap-in inlay) | | |
| CABTITE FRFT 4-1 | 1 | 2891450000 |
| Note | The individual frames do not contain any Rastinlays or sealing elements. | |

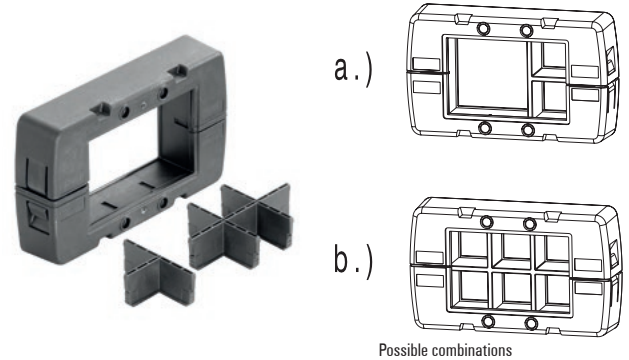
Accessories

| Product type | Type | Qty. | Order No. |
|-------------------------|----------------------|------|------------|
| Locking frame (outside) | CABTITE OFRL BK | 20 | 2907560000 |
| Operating tool | CABTITE TOOL ATSE PA | 1 | 2637360000 |
| Mounting screw set | CABTITE SC M5X25 SET | 1 | 2635120000 |
| Note | | | |

Dimensioned drawing



Cabtite FT - CABTITE FRFT 10/6 SET



Possible combinations

The frame, consisting of a dimensionally stable, fibreglass-reinforced plastic, is quick and easy to assemble, the sealing elements are mounted from the outside. The captive seal guarantees a high degree of impermeability to IP66, even with painted or rough surfaces. The frame sets contain the appropriate Rastinlays to realize the individual configuration (see above a or b) of small and large sealing elements. The sealing elements are not included in the frame set and must be selected to match the cable diameter.

Technical data

| | |
|--|-----------------------------------|
| Material | Polyamide, glass fibre-reinforced |
| Colour | Deep black |
| Operating temperature | -40...120 °C |
| Protection class / Protection class (UL) | IP66 / Type 12, Type 4X |
| UL 94 flammability rating | V-0 |
| Note | |

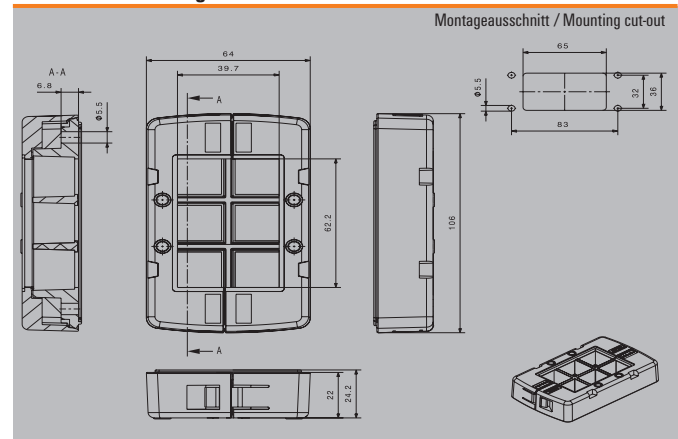
Ordering data

| Type | Qty. | Order No. |
|---|--|------------|
| Set | | |
| CABTITE FRFT 10/6 SET | 1 | 2891500000 |
| Single frame (without snap-in inlay) | | |
| CABTITE FRFT 10/6 | 1 | 2891480000 |
| Note | The individual frames do not contain any Rastinlays or sealing elements. | |

Accessories

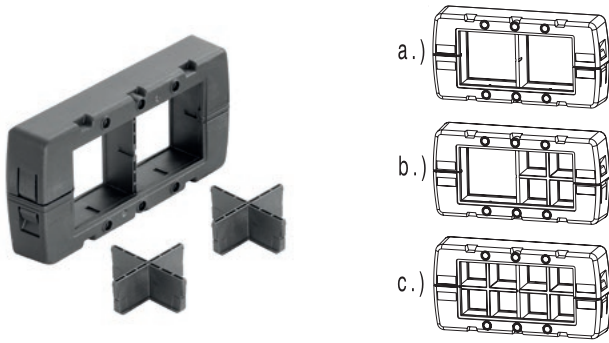
| Product type | Type | Qty. | Order No. |
|-------------------------|----------------------|------|------------|
| Locking frame (outside) | CABTITE OFRL BK | 20 | 2907560000 |
| Operating tool | CABTITE TOOL ATSE PA | 1 | 2637360000 |
| Mounting screw set | CABTITE SC M5X25 SET | 1 | 2635120000 |
| Note | | | |

Dimensioned drawing



Cable Entry System – Cabtite

Cabtite FT - CABTITE FRFT 16/8 SET



Possible combinations

The frame, consisting of a dimensionally stable, fibreglass-reinforced plastic, is quick and easy to assemble, the sealing elements are mounted from the outside. The captive seal guarantees a high degree of impermeability to IP66, even with painted or rough surfaces. The frame sets contain the appropriate Rastinlays to realize the individual configuration (see above a or b) of small and large sealing elements. The sealing elements are not included in the frame set and must be selected to match the cable diameter.

Technical data

| | |
|--|-----------------------------------|
| Material | Polyamide, glass fibre-reinforced |
| Colour | Deep black |
| Operating temperature | -40...120 °C |
| Protection class / Protection class (UL) | IP66 / Type 12, Type 4X |
| UL 94 flammability rating | V-0 |
| Note | |

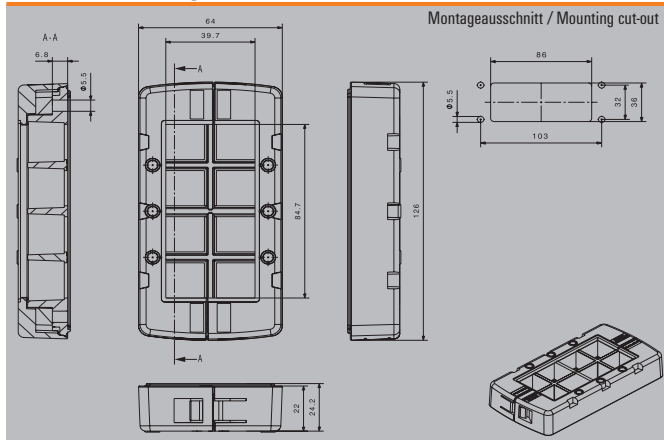
Ordering data

| Type | Qty. | Order No. |
|---|--|------------|
| Set | | |
| CABTITE FRFT 16/8 SET | 1 | 2891530000 |
| Single frame (without snap-in inlay) | | |
| CABTITE FRFT 16/8 | 1 | 2891510000 |
| Note | The individual frames do not contain any Rastinlays or sealing elements. | |

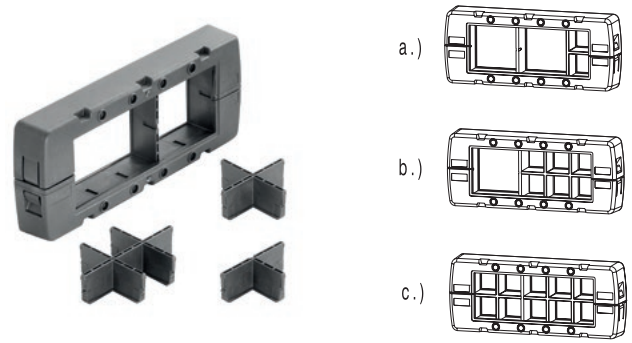
Accessories

| Product type | Type | Qty. | Order No. |
|-------------------------|----------------------|------|------------|
| Locking frame (outside) | CABTITE OFRL BK | 20 | 2907560000 |
| Operating tool | CABTITE TOOL ATSE PA | 1 | 2637360000 |
| Mounting screw set | CABTITE SC M5X25 SET | 1 | 2635120000 |
| Note | | | |

Dimensioned drawing



Cabtite FT - CABTITE FRFT 24/10 SET



Possible combinations

The frame, consisting of a dimensionally stable, fibreglass-reinforced plastic, is quick and easy to assemble, the sealing elements are mounted from the outside. The captive seal guarantees a high degree of impermeability to IP66, even with painted or rough surfaces. The frame sets contain the appropriate Rastinlays to realize the individual configuration (see above a or b) of small and large sealing elements. The sealing elements are not included in the frame set and must be selected to match the cable diameter.

Technical data

| | |
|--|-----------------------------------|
| Material | Polyamide, glass fibre-reinforced |
| Colour | Deep black |
| Operating temperature | -40...120 °C |
| Protection class / Protection class (UL) | IP66 / Type 12, Type 4X |
| UL 94 flammability rating | V-0 |
| Note | |

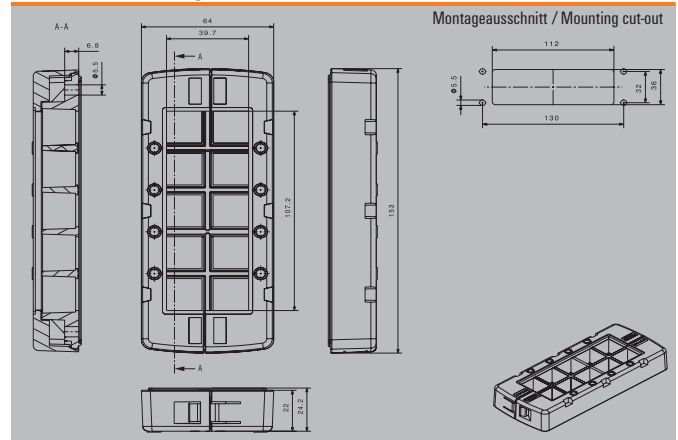
Ordering data

| Type | Qty. | Order No. |
|---|--|------------|
| Set | | |
| CABTITE FRFT 24/10 SET | 1 | 2891560000 |
| Single frame (without snap-in inlay) | | |
| CABTITE FRFT 24/10 | 1 | 2891540000 |
| Note | The individual frames do not contain any Rastinlays or sealing elements. | |

Accessories

| Product type | Type | Qty. | Order No. |
|-------------------------|----------------------|------|------------|
| Locking frame (outside) | CABTITE OFRL BK | 20 | 2907560000 |
| Operating tool | CABTITE TOOL ATSE PA | 1 | 2637360000 |
| Mounting screw set | CABTITE SC M5X25 SET | 1 | 2635120000 |
| Note | | | |

Dimensioned drawing



Cabtite CGS - separable cable gland



Spare counter nut

For metric through holes from M20 to M63, the Cabtite cable entry system offers separable cable glands for cables with and without plugs. In case of maintenance or changes in the system, pre-assembled cables with diameters from 2 to 35 mm can be quickly and safely inserted into switch cabinets or housings. After inserting the sealing elements (Cabtite SE), the two halves of the cable gland are simply snapped together. A likewise separable lock nut on the inside of the cabinet ensures a secure and firm hold.

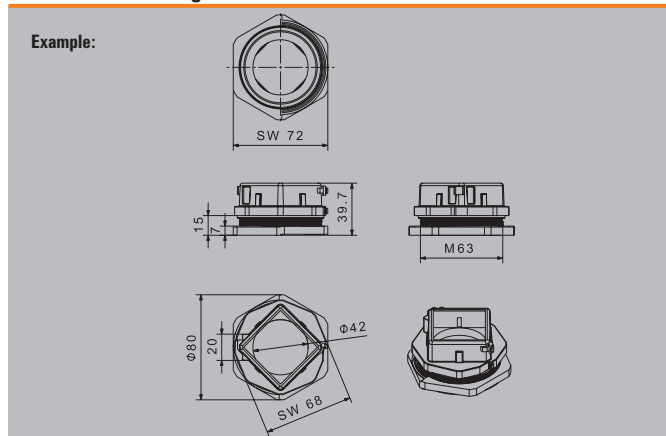
Technical data

| | |
|---------------------------|-----------------------------------|
| Material | Polyamide, glass fibre-reinforced |
| Colour | Deep black |
| Operating temperature | -40...120 °C |
| Protection class | IP66 |
| UL 94 flammability rating | V-0 |
| Note | |

Ordering data

| Type | Qty. | Order No. |
|---|------|------------|
| Divisible cable gland* | | |
| CABTITE CGS M20 BK | 10 | 2584200000 |
| CABTITE CGS M25 BK | 10 | 2584180000 |
| CABTITE CGS M32 BK | 10 | 2584160000 |
| CABTITE CGS M40 BK | 5 | 2584150000 |
| CABTITE CGS M50 BK | 5 | 2584130000 |
| CABTITE CGS M63 BK | 5 | 2584120000 |
| Articulated locknut | | |
| CABTITE LNS M20 BK | 10 | 2584110000 |
| CABTITE LNS M25 BK | 10 | 2584090000 |
| CABTITE LNS M32 BK | 10 | 2584070000 |
| CABTITE LNS M40 BK | 5 | 2584050000 |
| CABTITE LNS M50 BK | 5 | 2584030000 |
| CABTITE LNS M63 BK | 5 | 2584010000 |
| Rastinly for M40-M63** | | |
| CABTITE GI X BK | 5 | 2584290000 |
| Note *The cable glands are supplied with a locknut. **The snap-in insert is required to install 4 small sealing elements in the cable gland. | | |

Dimensioned drawing



Cabtite GI - Rastinlay



The insertable snap-in inlay allows the frame openings/cable glands to be configured as required for the small or large sealing elements used. Thus the Cabtite cable entry system can be variably configured for different requirements (cables, lines, hoses, pneumatic and hydraulic lines).

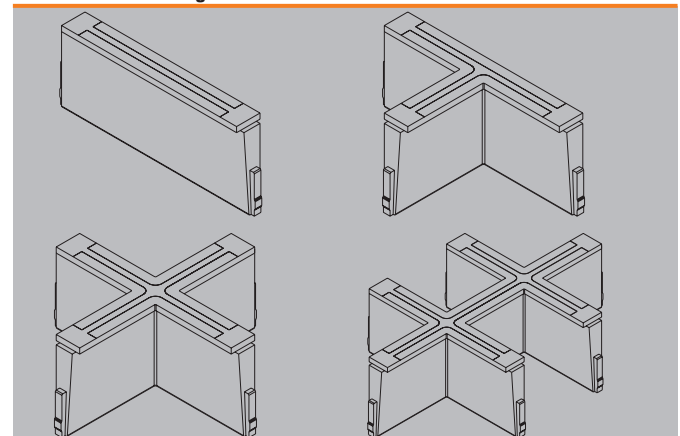
Technical data

| | |
|---------------------------|-----------------------------------|
| Material | Polyamide, glass fibre-reinforced |
| Colour | Deep black |
| Operating temperature | -40...120 °C |
| Protection class | IP66 |
| UL 94 flammability rating | V-0 |
| Note | |

Ordering data

| Type | Qty. | Order No. |
|---|------|------------|
| CABTITE GI I BK | 5 | 2584320000 |
| CABTITE GI T BK | 5 | 2584300000 |
| CABTITE GI H BK | 5 | 2584270000 |
| Rastinly for M40-M63** | | |
| CABTITE GI X BK | 5 | 2584290000 |
| Note **The locking inlay is required to install 4 small sealing elements in the cable gland. | | |

Dimensioned drawing



Cable Entry System – Cabtite

CABTITE CR - Cable support strips (EMC)



In combination with a large number of different shield connection clamps (KLBÜ), the shield connection rails enable practical, uncomplicated and fast shielding of cables.

Technical data

| | |
|----------|-------------------|
| Material | Steel, galvanized |
| Colour | silver |

Note

Ordering data

| Type | Qty. | Order No. |
|----------------------|------|------------|
| CABTITE CR 4/1 EMV | 10 | 2583950000 |
| CABTITE CR 10/6 EMV | 10 | 2583930000 |
| CABTITE CR 16/8 EMV | 10 | 2583910000 |
| CABTITE CR 24/10 EMV | 10 | 2583890000 |

Note

CABTITE BP - Blanking plug



The blind plugs are used for the safe closing of unneeded cable passages in the sealing elements.

Technical data

| | |
|-----------------------|--------------|
| Material | Polyamide |
| Colour | white |
| Operating temperature | -40...120 °C |

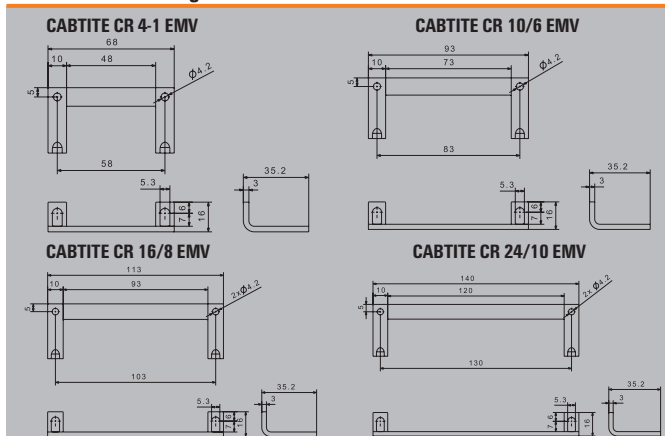
Note

Ordering data

| Type | Qty. | Order No. |
|--------------------|------|------------|
| CABTITE BP 2MM PA | 25 | 2652300000 |
| CABTITE BP 3MM PA | 25 | 2652310000 |
| CABTITE BP 4MM PA | 25 | 2652320000 |
| CABTITE BP 5MM PA | 25 | 2652330000 |
| CABTITE BP 6MM PA | 25 | 2652340000 |
| CABTITE BP 7MM PA | 25 | 2652350000 |
| CABTITE BP 8MM PA | 25 | 2652360000 |
| CABTITE BP 9MM PA | 25 | 2652370000 |
| CABTITE BP 10MM PA | 25 | 2652380000 |
| CABTITE BP 12MM PA | 25 | 2652400000 |
| CABTITE BP 13MM PA | 25 | 2652410000 |
| CABTITE BP 14MM PA | 25 | 2652420000 |
| CABTITE BP 17MM PA | 25 | 2652430000 |

Note

Dimensioned drawing



IP54 Snap version



Insert cables and wires without plugs into control cabinets, enclosures or machines easily and in the smallest possible space. The tool-free IP54 snap-in version of the cable entry plates is tested according to DIN EN 60529 and made of UL94 V-0 certified TPE material.

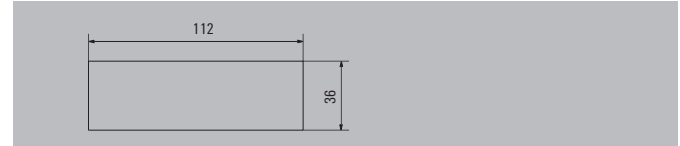
Technical data

| | |
|--|------------------------|
| Material | TPE |
| Colour | grey |
| Operating temperature | -40...90 °C |
| Protection class / Protection class (UL) | IP54 / Type 1, Type 12 |
| UL 94 flammability rating | V-0 |
| Note | |

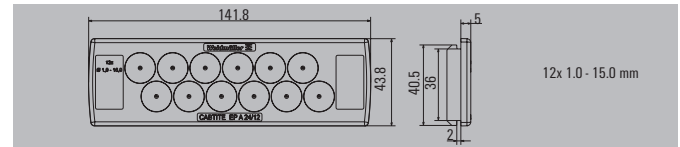
Ordering data

| Type | Qty. | Order No. |
|---|------|------------|
| Type A - for wall thicknesses 1.5 - 2.5 mm | | |
| CABTITE EP A 24/12 GY | 10 | 2743540000 |
| CABTITE EP A 24/14 GY | 10 | 2743550000 |
| CABTITE EP A 24/17 GY | 10 | 2743560000 |
| CABTITE EP A 24/18 GY | 10 | 2743570000 |
| CABTITE EP A 24/19 GY | 10 | 2743580000 |
| CABTITE EP A 24/26 GY | 10 | 2743590000 |
| CABTITE EP A 24/42 GY | 10 | 2743600000 |
| CABTITE EP A 24/48 GY | 10 | 2743610000 |
| CABTITE EP A 24/50 GY | 10 | 2743620000 |
| Type B - for wall thicknesses 2.5 - 4 mm | | |
| CABTITE EP B 24/12 GY | 10 | 2743630000 |
| CABTITE EP B 24/14 GY | 10 | 2743640000 |
| CABTITE EP B 24/17 GY | 10 | 2743650000 |
| CABTITE EP B 24/18 GY | 10 | 2743660000 |
| CABTITE EP B 24/19 GY | 10 | 2743670000 |
| CABTITE EP B 24/26 GY | 10 | 2743680000 |
| CABTITE EP B 24/42 GY | 10 | 2743690000 |
| CABTITE EP B 24/48 GY | 10 | 2743700000 |
| CABTITE EP B 24/50 GY | 10 | 2743710000 |
| Note | | |

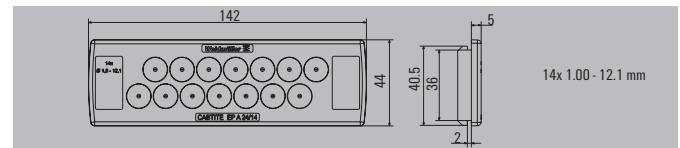
Mounting Cut-out



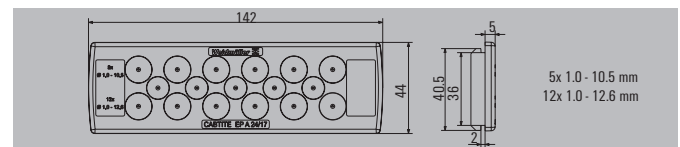
CABTITE EP ... 24/12 GY



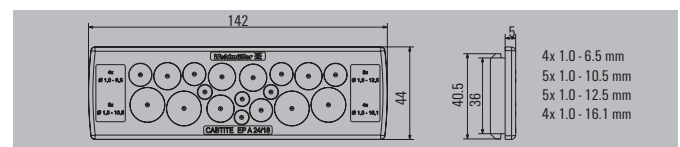
CABTITE EP ... 24/14 GY



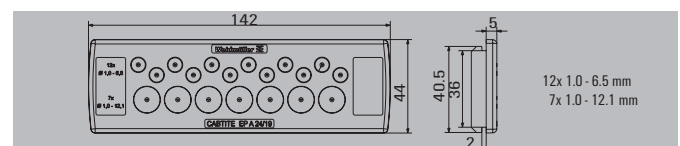
CABTITE EP ... 24/17 GY



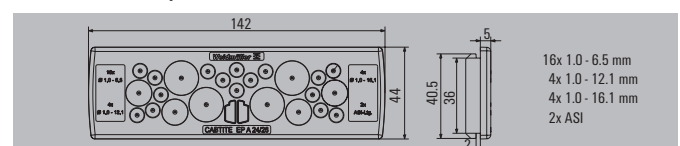
CABTITE EP ... 24/18 GY



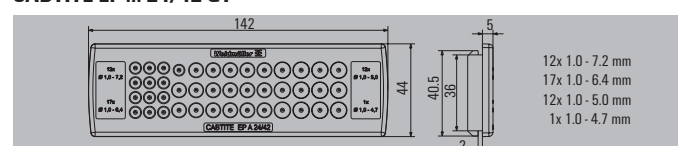
CABTITE EP ... 24/19 GY



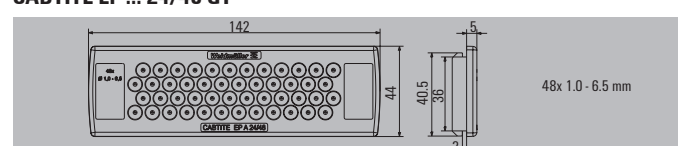
CABTITE EP ... 24/26 GY



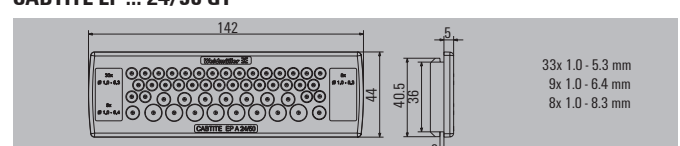
CABTITE EP ... 24/42 GY



CABTITE EP ... 24/48 GY



CABTITE EP ... 24/50 GY



Cable Entry System – Cabtite

IP66 Screw version



Insert cables and wires without plugs into control cabinets, enclosures or machines easily and in the smallest possible space. The IP66 screw version of the cable entry plates is tested according to DIN EN 60529 and made of UL94 V-0 certified TPE material with a hard plastic core.

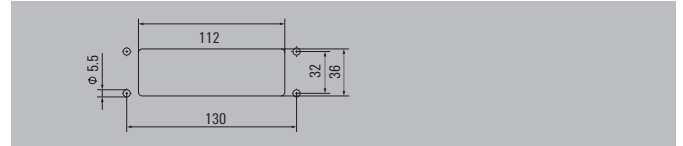
Technical data

| | |
|--|---------------------------------|
| Material | TPE |
| Colour | grey |
| Operating temperature | -40...90 °C |
| Protection class / Protection class (UL) | IP66 / Type 1, Type 12, Type 4X |
| UL 94 flammability rating | V-0 |
| Note | |

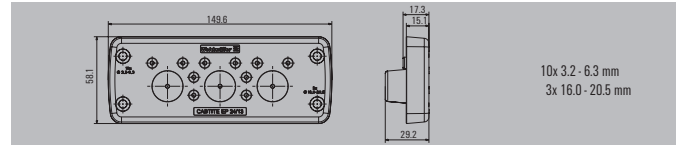
Ordering data

| Type | Qty. | Order No. |
|-----------------------|------|------------|
| CABTITE EP 24/13 GY | 10 | 2779310000 |
| CABTITE EP 24/14 GY | 10 | 2779320000 |
| CABTITE EP 24/16 GY | 10 | 2779330000 |
| CABTITE EP 24/16-1 GY | 10 | 2779340000 |
| CABTITE EP 24/17 GY | 10 | 2779350000 |
| CABTITE EP 24/20 GY | 10 | 2779360000 |
| CABTITE EP 24/21 GY | 10 | 2779370000 |
| CABTITE EP 24/32 GY | 10 | 2779380000 |
| Note | | |

Mounting Cut-out

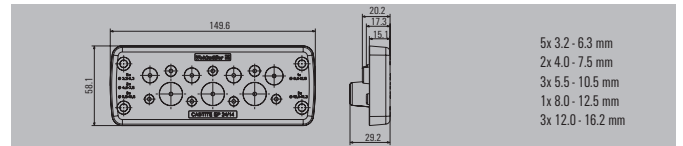


CABTITE EP 24/13



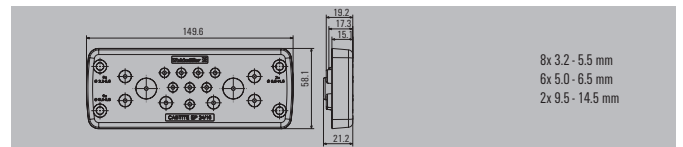
10x 3.2 - 6.3 mm
3x 16.0 - 20.5 mm

CABTITE EP 24/14



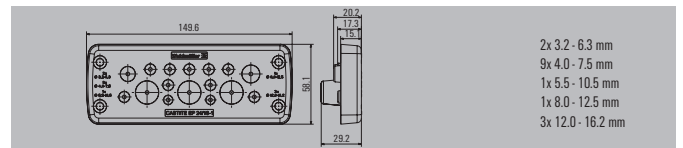
5x 3.2 - 6.3 mm
2x 4.0 - 7.5 mm
3x 5.5 - 10.5 mm
1x 8.0 - 12.5 mm
3x 12.0 - 16.2 mm

CABTITE EP 24/16



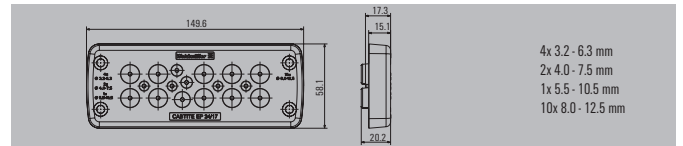
8x 3.2 - 5.5 mm
6x 5.0 - 6.5 mm
2x 9.5 - 14.5 mm

CABTITE EP 24/16-1



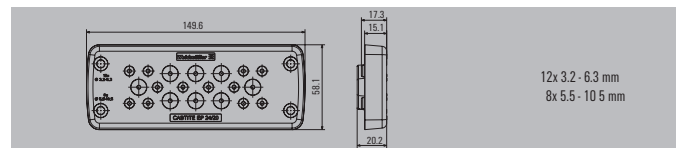
2x 3.2 - 6.3 mm
9x 4.0 - 7.5 mm
1x 5.5 - 10.5 mm
1x 8.0 - 12.5 mm
3x 12.0 - 16.2 mm

CABTITE EP 24/17



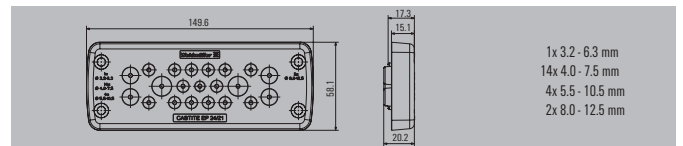
4x 3.2 - 6.3 mm
2x 4.0 - 7.5 mm
1x 5.5 - 10.5 mm
10x 8.0 - 12.5 mm

CABTITE EP 24/20



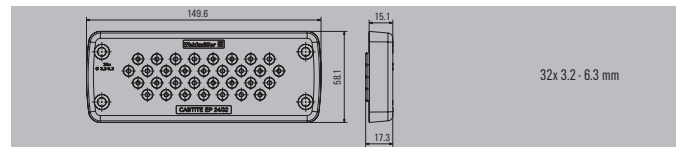
12x 3.2 - 6.3 mm
8x 5.5 - 10.5 mm

CABTITE EP 24/21



1x 3.2 - 6.3 mm
14x 4.0 - 7.5 mm
4x 5.5 - 10.5 mm
2x 8.0 - 12.5 mm

CABTITE EP 24/32



32x 3.2 - 6.3 mm

Cable Bender

Cable bender to guide patch cables safely and without cable breakage or data loss by 90° angles

Cable bender



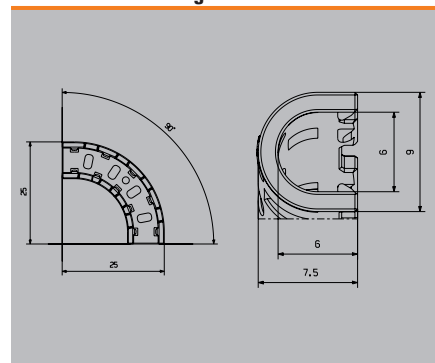
Technical data

| | |
|-----------------------|----------------|
| Cable bending radius | 90 ° |
| Colour | black |
| Temperature range | -25 °C...85 °C |
| Sheath diameter, min. | 5.5 mm |
| Sheath diameter, max | 6.5 mm |
| Hinweis | |

Ordering data

| Type | Qty. | Order No. |
|--------------------|------|------------|
| IE-CABLE-BENDER-90 | 50 | 2704480000 |
| Note | | |

Dimensioned drawings



Protective caps

Dust-protection plugs for protecting empty ports

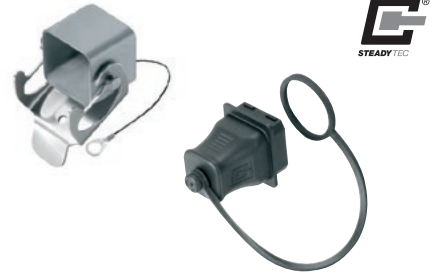
- RJ45
- **STEADYTEC**® variants
- M12

Dust Cap RJ45



- Dust Cap RJ45 with finger grip

Protective caps IP67



- Protective caps for all **STEADYTEC**® variants and for M12 plug-in connectors

Ordering data

| Type | Qty. | Order No. |
|--------|------|------------|
| IE-DPC | 100 | 8813490000 |
| Note | | |

| Type | Qty. | Order No. |
|-----------------------|------|------------|
| V1 Bayonet plug | 10 | 1965690000 |
| V1 Bayonet flange | 10 | 1965700000 |
| V4 PushPull plug | 10 | 1963890000 |
| V4 PushPull flange | 10 | 1963900000 |
| V5 HDC plug | 10 | 1968920000 |
| V5 HDC flange | 10 | 1968930000 |
| V14 PushPull plug | 10 | 1058280000 |
| V14 PushPull flange | 10 | 1058310000 |
| PushPull Power flange | 10 | 1068930000 |
| M12 plug | 1 | 2330260000 |
| M12 flange | 1 | 8425960000 |
| Note | | |

| Type | Qty. | Order No. |
|-----------------------|------|------------|
| V1 Bayonet plug | 10 | 1965690000 |
| V1 Bayonet flange | 10 | 1965700000 |
| V4 PushPull plug | 10 | 1963890000 |
| V4 PushPull flange | 10 | 1963900000 |
| V5 HDC plug | 10 | 1968920000 |
| V5 HDC flange | 10 | 1968930000 |
| V14 PushPull plug | 10 | 1058280000 |
| V14 PushPull flange | 10 | 1058310000 |
| PushPull Power flange | 10 | 1068930000 |
| M12 plug | 1 | 2330260000 |
| M12 flange | 1 | 8425960000 |
| Note | | |



PrintJet CONNECT

The networked high-performance printer for efficient and high-quality markings

Your direct connection to the optimal marking process

The PrintJet CONNECT is the consistent further development of our tried-and-tested PrintJet series. Focusing on the modern needs of industry and panel building, it combines maximum process and cost efficiency with intelligent networking and complete data consistency. For example, you can use existing data directly in the marking process – for working more efficiently and with a minimal error rate. The PrintJet CONNECT is part of the Weidmüller marking system consisting of software, markers and printers. It has an extremely durable industrial print head and has been specially optimised for fast working speed and high throughput.

Your advantages at a glance:

- Perfect printing results every time
- Fast handling of large volumes
- High level of automation thanks to magazine capacity of 50 MultiCards
- Durable and robust markers thanks to thermal fixing
- User-friendly operation thanks to intuitive touch display
- Flexible connection possibilities
- Simple function monitoring on the device



The new 7" touch colour display with a multitude of new functions ensures optimal operation.



Whether LAN, WLAN or USB: the PrintJet CONNECT offers a wide connectivity spectrum.

Technical data

| | Description |
|--|--|
| Intended use | Printing Weidmüller MultiCards and MetalliCards |
| Technology | Inkjet procedure with integrated thermal fixing unit |
| Feed | Automatic magazine for max. 30 MultiCards Individual feed for MetalliCards and MultiCards |
| Removal | Automatic dispenser magazine for up to 50 MultiCards |
| Fuses | 10 ATH 240/120 V |
| Application site | Office conditions |
| Ambient temperature | 10 °C – 35 °C 0 °F – 95 °F |
| Dimensions | Length including output rail: approx. 1.133 mm (44,60") Length not including output rail: approx. 930 mm (36,60") Width: 590 mm (23,20") Height: 454 mm (17,90") |
| Weight | 63 kg with packaging 38 kg without packaging |
| Ink system | Colour system – black, cyan, magenta, yellow |
| Included in delivery | <ul style="list-style-type: none"> • PrintJet CONNECT • Mains cable • LAN cable • USB cable • WIFI stick • one MultiCard DEK 5/5 • DVD with M-Print® PRO software • Quick start guide • Operating manual • Ink set PJ CON INK SET • 2 PrintJet cleaner cloths |
| The ink cartridges are not installed in the printer. | |

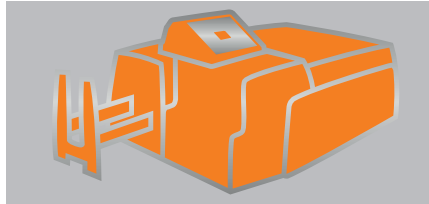


High magazine capacity for loading and dispensing of up to 50 MultiCards.

Inkjet printer

Ink-jet printer

PrintJet CONNECT



Technical data

| | |
|-----------------------------------|---|
| EAN | 4064675016922 |
| Depth | 930 mm |
| Width | 590 mm |
| Height | 454 mm |
| Net weight | 38 kg |
| Printing method | Ink jet technology |
| Printer driver / Operating system | Windows 7, Windows 8, Windows 8.1, Windows 10 |
| Printing speed | Depends on printing quality |
| Print quality | 300 dpi, 600 dpi, 1200 dpi |
| Marker type | MultiCard, MetalliCard |
| Interface | USB, LAN, Wi-Fi |
| Fueling system | Ink cartridge, CMYK |
| Voltage supply | 230 V AC / 16 A, 115 V AC / 20 A |
| Software | M-Print® PRO |
| Note | |

Ordering data

| Type | Qty. | Order No. |
|------------------|------|------------|
| PRINTJET CONNECT | 1 | 2715590000 |
| Note | | |

Accessories

| PrintJet CONNECT | | Type | Qty. | Order No. |
|-------------------|---------------------|----------------------|------|------------|
| | Software | M-PRINT PRO | 1 | 1905490000 |
| | Ink set | PJ CON INK SET | 1 | 2715600000 |
| | Cyan ink | PJ CON INK C | 1 | 2715610000 |
| | Magenta ink | PJ CON INK M | 1 | 2715620000 |
| | Yellow ink | PJ CON INK Y | 1 | 2715630000 |
| | Black ink | PJ CON INK K | 1 | 2715640000 |
| | Fluid set | PJ CON FLUID SET | 1 | 2715650000 |
| | Ink collecting tray | PJ CON WASTE PAD | 1 | 2715660000 |
| | Textile cover | PJ ADV TEXTILE COVER | 1 | 2592960000 |
| | WiFi Stick | PJ CON WIFI STICK | 1 | 2715680000 |
| PrintJet ADVANCED | | Type | Qty. | Order No. |
| | Ink collecting tray | PJ ADV TNAW | 1 | 1338710000 |
| | Cyan ink | PJ ADV TNTK INK C | 1 | 1338680000 |
| | Magenta ink | PJ ADV TNTK INK M | 1 | 1338670000 |
| | Yellow ink | PJ ADV TNTK INK Y | 1 | 1338650000 |
| | Black ink | PJ ADV TNTK INK K | 1 | 1338690000 |
| | Ink set | PJ ADV TNTK INK SET | 1 | 1338720000 |
| Note | | | | |

Q

Markers for cables and wires



SlimFix V0 for cables and wires

- Ø 4.7 to 6.8 mm SF5/21
- Ø 5.8 to 8.5 mm SF6/21

Ordering data

| Type | Qty. | Order No. |
|---------------------|------|------------|
| VT SF 5/21 NE WS V0 | 160 | 1689470001 |
| VT SF 6/21 NE WS V0 | 160 | 1730560001 |

Note: Can be printed with PrintJet PRO.

Accessories

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

Markers for IE-Line **STEADYTEC®**



MultiCard ESG 9/11 K for IE-Line **STEADYTEC®**

- 9 x 11 mm
- White

Ordering data

| Type | Qty. | Order No. |
|---------------------|------|------------|
| ESG 9/11 K MC NE WS | 200 | 1857440000 |

Note: Can be printed with PrintJet PRO.

Accessories

| Type | Qty. | Order No. |
|------|------|-----------|
| | | |

TM-I for pre-assembled M12 cables



MultiCard markers for labelling transparent M12 TM-I sleeves

- Tag length: 18 mm
- Tag width: 4 mm

Ordering data

| Type | Qty. | Order No. |
|------------------|------|------------|
| TM-I 18 MC NE WS | 320 | 1718431044 |
| TM-I 18 MC NE GE | 320 | 1718431687 |

Note: Can be printed with PrintJet PRO.

Accessories

| Type | Qty. | Order No. |
|----------------------------|------|------------|
| TM 4/12 HF/HB Length 12 mm | 500 | 1719840000 |
| TM 4/18 HF/HB Length 18 mm | 500 | 1719850000 |

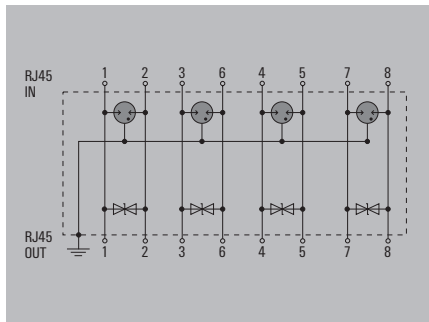
Note: Can be printed with PrintJet PRO.

Surge protection for data interfaces

V DATA Cat. 6 - surge protection for 8 wires with RJ45 socket

- RJ45 connection
- All 4 lines are protected
- Robust and compact metal housing
- Suitable for Cat. 5 (to 100 MHz) and Cat. 6 to 250 MHz (class E)
- Suitable for PoE (IEEE 802.3af) and PoE + (IEEE 802.3at)

V DATA CAT6



Technical data

Requirements category acc. to IEC 61643-21
 Surge current-carrying capacity C2
 Surge current-carrying capacity D1
 Discharge current I_n (8/20 μ s) wire-wire/wire-PE/GND-PE
 Discharge current I_{max} (8/20 μ s) wire-wire/wire-PE/GND-PE
 Lightning test I_{imp} (10/350 μ s) wire-wire/wire-PE/GND-PE
 Type of connection
 Storage temperature
 Ambient temperature (operational)
 Protection degree
 Rated voltage (AC)
 Rated current
 Insertion loss at 250 MHz
 Protection level U_p typical

Approvals

Standards

Dimensions of complete module (arrester + base element)

Height x width x depth

Note

C2, D1
 10 kA
 1 kA 10/350 μ s
 150 A / 1,25 kA
 10 kA / 5 kA
 1 kA / 1 kA
 RJ45-Port
 -40 ... +85 °C
 -40 ... +80 °C
 IP20
 48 V
 1 A
 \leq 1 dB at 250 MHz
 \leq 550 V

According to IEC61643-21

75 / 19 / 46 mm

Can also be used for Cat.5 applications

Ordering data

Note

| Type | Qty. | Order No. |
|------------|------|------------|
| VDATA CAT6 | 1 ST | 1348590000 |

Service and support

| | | |
|----------------------------|--|------|
| Service and support | Service connects - worldwide | V.2 |
| | Engineering services and customised products | V.3 |
| | easyConnect - Your Industrial Service Platform | V.4 |
| | Support Center | V.6 |
| | Additional support services | V.7 |
| | Weidmüller Configurator: intuitive, uncomplicated & fast digital engineering | V.8 |
| | Your digital ordering options at Weidmüller | V.10 |

Our expertise for your requirements

Service connects – worldwide



Automation technology functions are becoming more complex in a globally-oriented world facing ambitious targets in terms of energy efficiency and smart production. We are your equal partners for the best connections in Industrial Connectivity.

Our personal support answers all questions reliably and expertly. During planning, installation or operation our service and support offer is your best companion.

In short: Weidmüller's global service combines our expertise with your requirements.

V



Your way to our service
www.weidmueller.com/service

Engineering services and customised products

Automation engineering and connectivity consulting belongs to our services as well as assembly of engineered products. We also support the process from the idea to the product with our Weidmüller Configurator and the Configure-to-Order process.



Consulting and engineering

The challenge for you is reducing costs and increasing efficiency. This requires intelligent, individual solutions. Whether it is modified products, pre-fitted mounting rails or complete small cabinets – our application centres provide a highly qualified custom-made engineering and production service.



Connectivity Consulting

Increase your competitiveness - supported by our experts. Our drive is to optimise your competitiveness. That's why our team of experts supports you in significantly increasing your efficiency in electrical machine design and control cabinet construction. With proven products and services from the Weidmüller portfolio – and with the experience gained from over 300 projects worldwide.



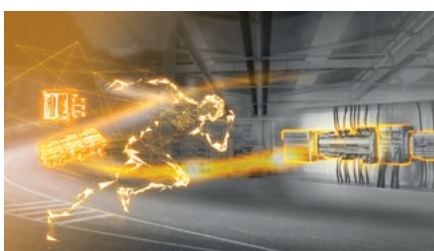
Assembled terminal rails - Flexibly designed to suit your requirements

Your processes in panel building have to be fast, flexible and productive. This is the only way you can cut your costs and increase efficiency. Depending on the application in question, you will have different requirements with respect to the engineering service, delivery speed and flexibility to be provided.



Modified and assembled enclosures - Competitive advantages included

To compete internationally, your plants need to satisfy high standards of safety, quality and performance. The smart combination of consultation, application expertise and industry know-how is our key to finding a custom-fit solution for your application. Reduce costs and increase efficiency.



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Obtain offers 24/7 and within minutes, including directly orderable article numbers with our Fast Delivery Service. The Weidmüller Configurator (WMC) for planning and configuration is key for consistent processes. Dispatch your orders in 5 days. Assemble individual terminal strips and enclosures from batch size 1!

Your ticket to the world of digital service

easyConnect – Your Industrial Service Platform



Our cloud-based platform is your ticket to the world of digital services from Weidmüller, and the intuitive and future-proof tool for your way to the Industrial IoT. Realise your use cases easily, consistently and without any relevant prior knowledge, thanks to the perfect interaction of platform, devices and diverse software services.

As an open, modular and perfectly integrable system, the platform is your enabler for a wide range of use cases. Increase your efficiency and unleash your full innovation potential with easyConnect.

V



Interested in using easyConnect?

Learn how to get started with easyConnect step-by-step.

www.weidmueller.com/easyconnect

Why should you use easyConnect?

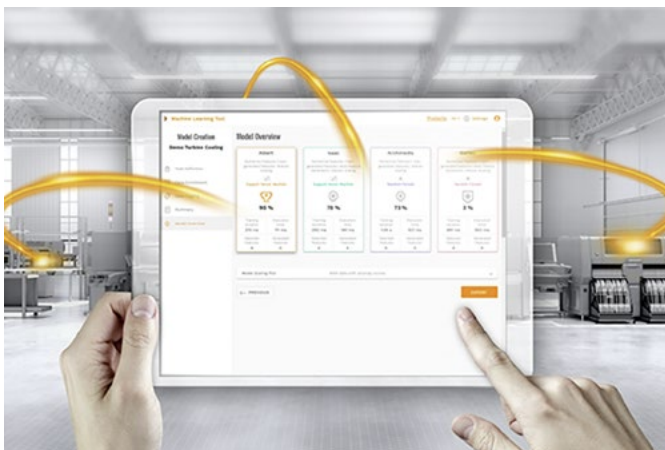
- You want to enter your digital transformation step-by-step?
- You want to make the step into Industrial IOT, but have no or little IT expertise?
- You want to use your digital data for smart & scalable services?
- You want to offer digital services (such as customised dashboard) to your customers?
- You want to improve your service offering and efficiency, e.g. through remote access?
- You feel Weidmüller's digital services are interesting, but you have „your cloud“ already?



Weidmüller comes up with the solution: easyConnect, the new digitalisation platform. It bundles Weidmüller's digital services at one place in the cloud and connects them with various Weidmüller devices.

With easyConnect you start digitalising your application step-by-step without ballast in a secure way.

The following services are initially available on easyConnect:



Device management

Adding and managing cloud-connected devices is typically the first step in any Industrial IoT use case.

Asset management

The asset management service is a modelling tool that allows users to model their assets and processes and link them to relevant time series data.

Remote access (u-link)

u-link guarantees a quick and secure access to machines and plants while also allowing for efficient management.

Data visualisation

easyConnect data visualisation services enable users to view, monitor and display live and historical data.

AutoML

With Weidmüller Industrial AutoML, you can optimize operations, increase product quality and develop new business models by benefiting from advanced analytics.

Expand the possibilities of our products

Our Support Center provides you with comprehensive, clear and personal assistance



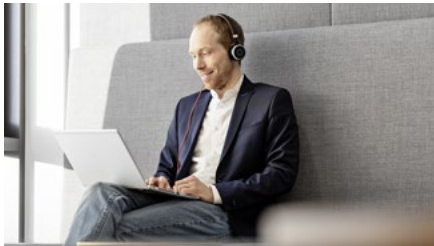
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Stay tuned in a world that is accelerating. In our entertaining interactive webinars, we offer you the opportunity to learn about new products and technology topics and to interact with our experts.



Repairs and replacement parts

We offer repair and components for our Workplace Solutions as well as assistance for other Weidmüller products. Find out how our experts can help you with your repair request.



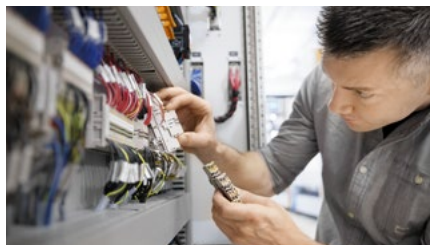
Security advisory board

Our Product Security Incident Response Team (PSIRT) continuously informs you about possible security-related vulnerabilities of our products.



Engineering data

For the quick integration of our products into your design, there are a lot of digital product data for engineering systems like EPLAN, Zuken E3.series, WSCAD and many others available for download.



Product change notifications

Technical modifications of our products always available online.



Technical product catalogues

Technical data for our entire program in Industrial Connectivity for download in PDF-format.

From the idea to the finished solution

Weidmüller Configurator: intuitive, uncomplicated & fast digital engineering

Digital engineering can be so easy – with the Weidmüller Configurator!

It's a **free to use** software application to easily configure industrial solutions. It features more than **12,000 articles** from multiple product families including rail-mounted components, industrial and ex-certified enclosures, Heavy Duty Connectors, remote I/O-systems and PCB connectors.

Unleash the full power of digital engineering:

Our application wizards help you choose the right articles.

Place, mark or modify them to your needs and get your solution **visualized in 3D** – what you see is what you get!

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- **Proven configuration designs in real 3D:** The plausibility and collision check with the complete digital documentation ensures that you can rely 100% on your configuration.
- **Seamless E-CAD Roundtrip:** Interfaces enable the simple exchange of product data between the WMC and all common engineering tools, such as Zuken E3 or EPLAN Electric P8.
- **Sample Service & Fast Delivery Service:** to support your design-in process, we offer a **3-day sample service** for many products. Inquire them directly online – for free!
You want your solution right away? Our **Fast Delivery Service** guarantees delivery of individually assembled terminal strips or enclosures within a few days.

Get started online now!

The Weidmüller Configurator makes solution planning easy. Visit our website for more information, tutorials and download it for free:



www.weidmueller.com/wmc

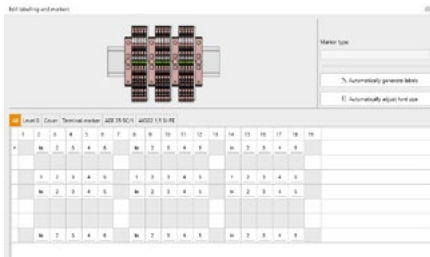


or register on easyconnect.weidmueller.com and use it online.



Wizards:

Design complete applications within few clicks – even without detailed product knowledge – for signal wiring, load monitoring, instrument transformers, enclosures, remote I/O-systems and many more.



Assistants:

Finalize your solutions with supporting assistants to add cross-connectors, markers or colors and verify the faultlessness. Automatic modes save valuable time!



1-click documentation:

Get assembly drawings for production – only 1 click. Bill of material – only 1 click. The complete solution documentation including all component data sheets – you’re right, only 1 click!



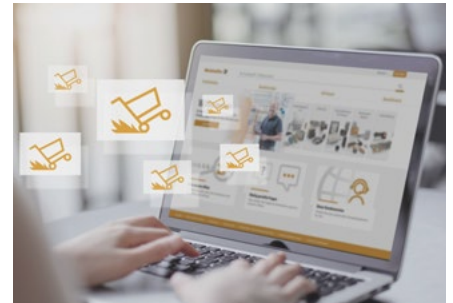
Digital ordering options

Your digital ordering options at Weidmüller

Find and easily select the products you need, with convenient ordering: as your Partner in Industrial Connectivity, we know what counts in purchasing. That is why we offer you a variety of options for ordering products from us and optimising your purchasing processes to meet your individual requirements and your workflow. The choice is yours.

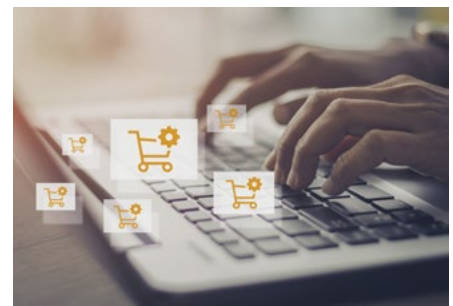
Order via the Weidmüller eShop

Our eShop offers you access to the complete Weidmüller product range around the clock – directly from a PC, tablet, or smartphone. The intuitive user guidance supports you as you select from over 50,000 products. Technical data, prices, and availabilities are available at any time. The shopping basket with check out function lets you place an order in seconds. Convenient additional functions like CSV upload, order history, reports, or custom order templates make your ordering processes even more efficient.



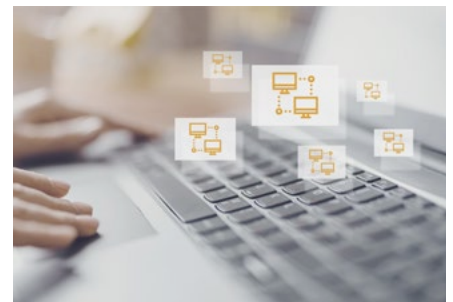
Order via the OCI interface

The Open Catalogue Interface (OCI) facilitates the exchange of data between your enterprise resource planning system and our eShop. This means that our eShop is integrated into your system via an OCI interface, so you have access to our complete product catalogue from your enterprise resource planning system. You can filter and select products, place them in your shopping basket and place direct orders without changing your software application. The open OCI standard is supported worldwide from a variety of software providers.



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Get in touch with us

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| CABTITE FRL 24/10 BK | 2584210000 | 0.22 |
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| CABTITE SE 13-14 SML BK | 2584000000 | 0.20 |
| CABTITE SE 13-14 SML GY | 2584570000 | 0.20 |
| CABTITE SE 14-15 LRG BK | 2583980000 | 0.20 |
| CABTITE SE 14-15 LRG GY | 2584510000 | 0.20 |
| CABTITE SE 14-15 SML BK | 2583980000 | 0.20 |
| CABTITE SE 14-15 SML GY | 2584560000 | 0.20 |
| CABTITE SE 15-16 LRG BK | 2583960000 | 0.20 |
| CABTITE SE 15-16 LRG GY | 2584500000 | 0.20 |
| CABTITE SE 15-16 SML BK | 2583960000 | 0.20 |
| CABTITE SE 15-16 SML GY | 2584550000 | 0.20 |
| CABTITE SE 16-17 LRG BK | 2583950000 | 0.20 |
| CABTITE SE 16-17 LRG GY | 2584490000 | 0.20 |
| CABTITE SE 17-18 LRG BK | 2583840000 | 0.20 |
| CABTITE SE 17-18 LRG GY | 2584480000 | 0.20 |
| CABTITE SE 18-19 LRG BK | 2583830000 | 0.20 |
| CABTITE SE 18-19 LRG GY | 2584470000 | 0.20 |
| CABTITE SE 19-20 LRG BK | 2583810000 | 0.20 |
| CABTITE SE 19-20 LRG GY | 2584460000 | 0.20 |
| CABTITE SE 2-3 SML BK | 2584760000 | 0.20 |
| CABTITE SE 2-3 SML GY | 2583380000 | 0.20 |
| CABTITE SE 2/4-5 SML BK | 2583620000 | 0.20 |
| CABTITE SE 2/4-5 SML GY | 2584900000 | 0.20 |
| CABTITE SE 2/5-6 SML BK | 2583610000 | 0.20 |
| CABTITE SE 2/5-6 SML GY | 2584890000 | 0.20 |
| CABTITE SE 2/7 SML BK | 2583550000 | 0.20 |
| CABTITE SE 2/7 SML GY | 2584830000 | 0.20 |
| CABTITE SE 2/8 SML BK | 2583540000 | 0.20 |
| CABTITE SE 2/8 SML GY | 2584820000 | 0.20 |
| CABTITE SE 2/ASI SML BK | 2583520000 | 0.20 |
| CABTITE SE 2/ASI SML GY | 2584800000 | 0.20 |
| CABTITE SE 20-21 LRG BK | 2583790000 | 0.20 |
| CABTITE SE 20-21 LRG GY | 2584450000 | 0.20 |
| CABTITE SE 21-22 LRG BK | 2583770000 | 0.20 |
| CABTITE SE 21-22 LRG GY | 2584440000 | 0.20 |
| CABTITE SE 22-23 LRG BK | 2583750000 | 0.20 |
| CABTITE SE 22-23 LRG GY | 2584430000 | 0.20 |
| CABTITE SE 23-24 LRG BK | 2583730000 | 0.20 |
| CABTITE SE 23-24 LRG GY | 2584420000 | 0.20 |
| CABTITE SE 24-25 LRG BK | 2583710000 | 0.20 |
| CABTITE SE 24-25 LRG GY | 2584410000 | 0.20 |
| CABTITE SE 25-26 LRG BK | 2583700000 | 0.20 |
| CABTITE SE 25-26 LRG GY | 2584400000 | 0.20 |
| CABTITE SE 26-27 LRG BK | 2583690000 | 0.20 |
| CABTITE SE 26-27 LRG GY | 2584390000 | 0.20 |
| CABTITE SE 27-28 LRG BK | 2583680000 | 0.20 |
| CABTITE SE 27-28 LRG GY | 2584370000 | 0.20 |
| CABTITE SE 28-29 LRG BK | 2583670000 | 0.20 |
| CABTITE SE 28-29 LRG GY | 2584350000 | 0.20 |
| CABTITE SE 29-30 LRG BK | 2583660000 | 0.20 |
| CABTITE SE 29-30 LRG GY | 2584340000 | 0.20 |
| CABTITE SE 3-4 SML BK | 2584370000 | 0.20 |
| CABTITE SE 3-4 SML GY | 2584400000 | 0.20 |
| CABTITE SE 3/5-6 SML BK | 2652280000 | 0.20 |
| CABTITE SE 3/5-6 SML GY | 2652290000 | 0.20 |
| CABTITE SE 30-31 LRG BK | 2583650000 | 0.20 |
| CABTITE SE 30-31 LRG GY | 2584360000 | 0.20 |
| CABTITE SE 31-32 LRG BK | 2583640000 | 0.20 |
| CABTITE SE 31-32 LRG GY | 2584340000 | 0.20 |

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| F | | |
| FZE ESD 130 | 9204760000 | Q.12 |

E

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| E | | |
| EBR-MODULE RS232 | 1241430000 | G.5 |
| EBR-MODULE RS232 | 1241430000 | G.7 |
| EBR-MODULE RS232 | 1241430000 | H.9 |
| ERAN MULTI-STRIPAX | 9203100000 | Q.13 |
| ERME 110 PDT | 9013960000 | Q.18 |
| ERME 630 PDT | 9013990000 | Q.18 |
| ERME 66 PDT | 9013980000 | Q.18 |
| ERME LSA PLUS SCHERE | 9014050000 | Q.18 |
| ERME LSA PLUS STANDARD | 9014000000 | Q.18 |
| ERME MULTI-STRIPAX | 9203070000 | Q.13 |
| ESG 7/20 SIRIUS MC NE WS | 1736181044 | L.2 |
| ESG 7/20 SIRIUS MC NE WS | 1736181044 | L.3 |
| ESG 7/20 SIRIUS MC NE WS | 1736181044 | L.4 |
| ESG 7/20 SIRIUS MC NE WS | 1736181044 | L.5 |
| ESG 7/20 SIRIUS MC NE WS | 1736181044 | L.6 |
| ESG 7/20 SIRIUS MC NE WS | 1736181044 | L.7 |
| ESG 7/20 SIRIUS MC NE WS | 1736181044 | L.9 |
| ESG 7/20 SIRIUS MC NE WS | 1736181044 | L.10 |
| ESG 7/20 SIRIUS MC NE WS | 1736181044 | L.11 |
| ESG 7/20 SIRIUS MC NE WS | 1736181044 | L.12 |
| ESG 7/20 SIRIUS MC NE WS | 1736181044 | L.13 |
| ESG 7/20 SIRIUS MC NE WS | 1736181044 | L.14 |
| ESG 9/11 K MC NE WS | 1857440000 | K.16 |
| ESG 9/11 K MC NE WS | 1857440000 | K.13 |
| ESG 9/11 K MC NE WS | 1857440000 | K.14 |
| ESG 9/11 K MC NE WS | 1857440000 | K.16 |
| ESG 9/11 K MC NE WS | 1857440000 | K.19 |
| ESG 9/11 K MC NE WS | 1857440000 | K.20 |
| ESG 9/11 K MC NE WS | 1857440000 | K.21 |
| ESG 9/11 K MC NE WS | 1857440000 | L.35 |
| ESG 9/11 K MC NE WS | 1857440000 | L.37 |
| ESG 9/11 K MC NE WS | 1857440000 | M.2 |
| ESG 9/11 K MC NE WS | 1857440000 | M.3 |
| ESG 9/11 K MC NE WS | 1857440000 | M.7 |
| ESG 9/11 K MC NE WS | 1857440000 | M.10 |
| ESG 9/11 K MC NE WS | 1857440000 | M.12 |
| ESG 9/11 K MC NE WS | 1857440000 | M.16 |
| ESG 9/11 K MC NE WS | 1857440000 | M.19 |
| ESG 9/11 K MC NE WS | 1857440000 | M.20 |
| ESG 9/11 K MC NE WS | 1857440000 | M.21 |
| ESG 9/11 K MC NE WS | 1857440000 | M.22 |
| ESG 9/11 K MC NE WS | 1857440000 | M.23 |
| ESG 9/11 K MC NE WS | 1857440000 | M.24 |
| ESG 9/11 K MC NE WS | 1857440000 | Q.33 |

F

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| F | | |
| FTF HYB | 1119580000 | M.7 |
| FTF HYB | 1119580000 | M.8 |
| FTF HYB | 1119580000 | M.54 |
| FTF HYB | 1119580000 | M.55 |
| FTF HYB | 1119580000 | N.6 |
| FTF HYB | 1119580000 | Q.16 |
| HTX IE-POF | 1208870000 | K.10 |
| HTX IE-POF | 1208870000 | M.10 |
| HTX IE-POF | 1208870000 | M.57 |
| HTX IE-POF | 1208870000 | P.3 |
| HTX IE-POF | 1208870000 | Q.13 |
| HTX IE-POF | 1208870000 | Q.14 |
| HTX IE-POF-QA | 2602860000 | K.10 |
| HTX IE-POF-QA | 2602860000 | M.10 |
| HTX IE-POF-QA | 2602860000 | M.57 |
| HTX IE-POF-QA | 2602860000 | Q.14 |

G

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| G | | |

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| I | | |
| IE-AD-BHS-V14M-RJA | 1302000000 | M.9 |
| IE-AD-M12DRJ45-MF-180 | 1514970000 | M.39 |
| IE-AD-M12DRJ45-MF-90 | 1514940000 | M.39 |
| IE-AD-M12XRJ45-180 | 1400620000 | M.47 |
| IE-AD-M12XRJ45-90 | 1400610000 | M.47 |
| IE-AD-SP0-P-SPM-P-90 | 2814400000 | J.14 |
| IE-AD-SP0-P-SPM-P-90 | 2814400000 | |

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| IE-C5DHAG-500 | 2763460000 | M.8 |
| IE-C5DHAG-500 | 2763460000 | 0.5 |
| IE-C5DHAG-500 | 2763460000 | 0.19 |
| IE-C5DS4UG0005MBSA70-E | 1234750005 | 0.45 |
| IE-C5DS4UG0005MBSMCS-E | 1244130005 | 0.45 |
| IE-C5DS4UG0005MBSXXX-E | 1234770005 | 0.46 |
| IE-C5DS4UG0010MBSA70-E | 1234750010 | 0.45 |
| IE-C5DS4UG0010MBSMCS-E | 1244130010 | 0.45 |
| IE-C5DS4UG0010MBSXXX-E | 1234770010 | 0.46 |
| IE-C5DS4UG0015MBSA70-E | 1234750015 | 0.45 |
| IE-C5DS4UG0015MBSMCS-E | 1244130015 | 0.45 |
| IE-C5DS4UG0015MBSXXX-E | 1234770015 | 0.46 |
| IE-C5DS4UG0020MBSA70-E | 1234750020 | 0.45 |
| IE-C5DS4UG0020MBSMCS-E | 1244130020 | 0.45 |
| IE-C5DS4UG0020MBSXXX-E | 1234770020 | 0.46 |
| IE-C5DS4UG0050MBSA70-E | 1234750050 | 0.45 |
| IE-C5DS4UG0050MBSMCS-E | 1244130050 | 0.45 |
| IE-C5DS4UG0050MBSXXX-E | 1234770050 | 0.46 |
| IE-C5DS4VG-100 | 8898990000 | 1.9 |
| IE-C5DS4VG-100 | 8898990000 | 0.5 |
| IE-C5DS4VG-100 | 8898990000 | 0.17 |
| IE-C5DS4VG-500 | 2763470000 | 1.9 |
| IE-C5DS4VG-500 | 2763470000 | 0.5 |
| IE-C5DS4VG-500 | 2763470000 | 0.17 |
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| IE-C5DS4VG0010A60A60-E | 1522100010 | 0.38 |
| IE-C5DS4VG0010A60A60-E | 1522100010 | 0.37 |
| IE-C5DS4VG0015A60A60-E | 1522100015 | 0.37 |
| IE-C5DS4VG0020A60A60-E | 1522100020 | 0.37 |
| IE-C5DS4VG0025A60A60-E | 1522100025 | 0.38 |
| IE-C5DS4VG0030A60A60-E | 1522100030 | 1.8 |
| IE-C5DS4VG0030A60A60-E | 1522100030 | 0.37 |
| IE-C5DS4VG0040A60A60-E | 1522100040 | 0.37 |
| IE-C5DS4VG0050A60A60-E | 1522100050 | 1.8 |
| IE-C5DS4VG0050A60A60-E | 1522100050 | 0.37 |
| IE-C5DS4VG0100A60A60-E | 1522100100 | 1.8 |
| IE-C5DS4VG0100A60A60-E | 1522100100 | 0.37 |
| IE-C5DS4VG0200A60A60-E | 1522100200 | 0.37 |
| IE-C5ED8UB-100 | 8960670000 | 0.5 |
| IE-C5ED8UB-100 | 8960670000 | 0.16 |
| IE-C5ED8UB-1000 | 2781880000 | 0.5 |
| IE-C5ED8UB-1000 | 2781880000 | 0.16 |
| IE-C5ED8UB-500 | 2763480000 | 0.5 |
| IE-C5ED8UB-500 | 2763480000 | 0.16 |
| IE-C5ED8UB-100 | 8813210000 | 0.5 |
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| IE-C5ED8UB-1000 | 2781880000 | 0.5 |
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| IE-C5ED8UB-500 | 2763490000 | 0.5 |
| IE-C5ED8UB-500 | 2763490000 | 0.16 |
| IE-C5ES8UG-100 | 8813200000 | 1.13 |
| IE-C5ES8UG-100 | 8813200000 | 0.5 |
| IE-C5ES8UG-1000 | 2781880000 | 0.5 |
| IE-C5ES8UG-1000 | 2781880000 | 0.16 |
| IE-C5ES8UG-500 | 2763500000 | 1.13 |
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| IE-C5ES8UG-500 | 2763500000 | 0.10 |
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| IE-C5ES8UG0010B41B41-E | 1066880000 | 0.50 |
| IE-C5ES8UG0010M40M40-G | 1166000010 | 0.31 |
| IE-C5ES8UG0010P41P41-E | 1106010000 | 1.13 |
| IE-C5ES8UG0010P41P41-E | 1106010000 | 0.50 |
| IE-C5ES8UG0015M40M40-G | 1166000015 | 0.31 |
| IE-C5ES8UG0020M40M40-G | 1166000020 | 1.13 |
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| IE-C5ES8UG0020B41B41-E | 1066880000 | 0.50 |
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| IE-C5ES8VB0004N40N40-B-K6KV | 2813820004 | 0.33 |
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| IE-C5ES8VB0025N40N40-B-K6KV | 2813820025 | 0.33 |
| IE-C5ES8VB0050N40N40-B-K6KV | 2813820050 | 0.33 |
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| IE-C5ES8VG-500 | 2763510000 | 0.5 |
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| IE-C5ES8VG0005M40M40-G | 1166020005 | 0.31 |

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| IE-C5ES8VG0015M40M40-G | 1166020015 | 0.31 |
| IE-C5ES8VG0015N40N40-G-K6KV | 2814800015 | 0.33 |
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| IE-C5ES8VG0020N40N40-G-K6KV | 2814800020 | 0.33 |
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| IE-C5ES8VG0050M40M40-G | 1166020050 | 0.31 |
| IE-C5ES8VG0100M40M40-G | 1166020100 | 0.31 |
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| IE-C5ES8VG0200M40M40-G | 1166020200 | 0.31 |
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| IE-C5G06LB0010F40F40-X-K6KV | 3036970010 | 0.35 |
| IE-C5G06LB0003F40F40-X-K6KV | 2860910003 | 0.35 |
| IE-C5G06LB0008F40F40-X-K6KV | 2860910008 | 0.35 |
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| IE-C5IT4UG0030B2EB2E-X | 1312690030 | 0.39 |
| IE-C5IT4UG0050B2EB2E-X | 1312690050 | 0.39 |
| IE-C5IT4UG0100B2EB2E-X | 1312690100 | 0.39 |
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| IE-CBEL8UG0020U40XC5-E | 1457580020 | 0.49 |
| IE-CBEL8UG0030U40XC5-E | 1457580030 | 0.49 |
| IE-CBEL8UG0050U40XC5-E | 1457580050 | 0.49 |
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| IE-CBEP8L80025M40M40-B | 1165900025 | 0.24 |
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| IE-CBEP8L80040M40M40-B | 1165900040 | 0.24 |
| IE-CBEP8L80045M40M40-B | 1165900045 | 0.24 |
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| IE-CBEP8L80004X40X40-Y | 1312160004 | 0.30 |
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| IE-CBEP8L80025M40M40-B | 1165900025 | 0.24 |
| IE-CBEP8L80030M40M40-B | 1165900030 | 0.24 |
| IE-CBEP8L80035M40M40-B | 1165900035 | 0.24 |
| IE-CBEP8L80040M40M40-B | 1165900040 | 0.24 |
| IE-CBEP8L80045M40M40-B | 1165900045 | 0.24 |
| IE-CBEP8L80050M40M40-B | 1165900050 | 0.24 |

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| IE-C6FP8LE0020M40M40-E | 1251610020 | 0.24 |
| IE-C6FP8LE0030M40M40-E | 1251610030 | 0.24 |
| IE-C6FP8LE0050M40M40-E | 1251610050 | 0.24 |
| IE-C6FP8LE0100M40M40-E | 1251610100 | 0.24 |
| IE-C6FP8LE0150M40M40-E | 1251610150 | 0.24 |
| IE-C6FP8LE0200M40M40-E | 1251610200 | 0.24 |
| IE-C6FP8LE0250M40M40-E | 1251610250 | 0.24 |
| IE-C6FP8LE0300M40M40-E | 1251590002 | 0.25 |
| IE-C6FP8LE0350M40M40-E | 1251590005 | 0.25 |
| IE-C6FP8LE0400M40M40-E | 1251590010 | 0.25 |
| IE-C6FP8LE0450M40M40-E | 1251590015 | 0.25 |
| IE-C6FP8LE0500M40M40-E | 1251590020 | 0.25 |
| IE-C6FP8LE0550M40M40-E | 1251590025 | 0.25 |
| IE-C6FP8LE0600M40M40-E | 1251590030 | 0.25 |
| IE-C6FP8LE0650M40M40-E | 1251590035 | 0.25 |
| IE-C6FP8LE0700M40M40-E | 1251590040 | 0.25 |
| IE-C6FP8LE0750M40M40-E | 1251590045 | 0.25 |
| IE-C6FP8LE0800M40M40-E | 1251590050 | 0.25 |
| IE-C6FP8LE0850M40M40-E | 1251590055 | 0.25 |
| IE-C6FP8LE0900M40M40-E | 1251590060 | 0.25 |
| IE-C6FP8LE0950M40M40-E | 1251590065 | 0.25 |
| IE-C6FP8LE1000M40M40-E | 1251590070 | 0.25 |
| IE-C6FP8LE1050M40M40-E | 1251590075 | 0.25 |
| IE-C6FP8LE1100M40M40-E | 1251590080 | 0.25 |
| IE-C6FP8LE1150M40M40-E | 1251590085 | 0.25 |
| IE-C6FP8LE1200M40M40-E | 1251590090 | 0.25 |
| IE-C6FP8LE1250M40M40-E | 1251590095 | 0.25 |
| IE-C6FP8LE1300M40M40-E | 1251590100 | 0.25 |
| IE-C6FP8LE1350M40M40-E | 1251590105 | 0.25 |
| IE-C6FP8LE1400M40M40-E | 1251590110 | 0.25 |
| IE-C6FP8LE1450M40M40-E | 1251590115 | 0.25 |
| IE-C6FP8LE1500M40M40-E | 1251590120 | 0.25 |
| IE-C6FP8LE1550M40M40-E | 1251590125 | 0.25 |
| IE-C6FP8LE1600M40M40-E | 1251590130 | 0.25 |
| IE-C6FP8LE1650M40M40-E | 1251590135 | 0.25 |
| IE-C6FP8LE1700M40M40-E | 1251590140 | 0.25 |
| IE-C6FP8LE1750M40M40-E | 1251590145 | 0.25 |
| IE-C6FP8LE1800M40M40-E | 1251590150 | 0.25 |
| IE-C6FP8LE1850M40M40-E | 1251590155 | 0.25 |
| IE-C6FP8LE1900M40M40-E | 1251590160 | 0.25 |
| IE-C6FP8LE1950M40M40-E | 1251590165 | 0.25 |
| IE-C6FP8LE2000M40M40-E | 1251590170 | 0.25 |
| IE-C6FP8LE2050M40M40-E | 1251590175 | 0.25 |
| IE-C6FP8LE2100M40M40-E | 1251590180 | 0.25 |
| IE-C6FP8LE2150M40M40-E | 1251590185 | 0.25 |
| IE-C6FP8LE2200M40M40-E | 1251590190 | 0.25 |
| IE-C6FP8LE2250M40M40-E | 1251590195 | 0.25 |
| IE-C6FP8LE2300M40M40-E | 1251590200 | 0.25 |
| IE-C6FP8LE2350M40M40-E | 1251590205 | 0.25 |
| IE-C6FP8LE2400M40M40-E | 1251590210 | 0.25 |
| IE-C6FP8LE2450M40M40-E | 1251590215 | 0.25 |
| IE-C6FP8LE2500M40M40-E | 1251590220 | 0.25 |
| IE-C6FP8LE2550M40M40-E | 1251590225 | 0.25 |
| IE-C6FP8LE2600M40M40-E | 1251590230 | 0.25 |
| IE-C6FP8LE2650M40M40-E | 1251590235 | 0.25 |
| IE-C6FP8LE2700M40M40-E | 1251590240 | 0.25 |
| IE-C6FP8LE2750M40M40-E | 1251590245 | 0.25 |
| IE-C6FP8LE2800M40M40-E | 1251590250 | 0.25 |
| IE-C6FP8LE2850M40M40-E | 1251590255 | 0.25 |
| IE-C6FP8LE2900M40M40-E | 1251590260 | 0.25 |
| IE-C6FP8LE2950M40M40-E | 1251590265 | 0.25 |
| IE-C6FP8LE3000M4 | | |

Table with 4 columns: Type, Order No., Page, and a blank column. It contains a comprehensive list of product codes (e.g., IE-CD-VAPM24V-Y-MA) and their corresponding page numbers.



| Type | Order No. | Page | Type | Order No. | Page | Type | Order No. | Page | Type | Order No. | Page |
|----------------------------------|------------|------|----------------------------|------------|------|------------------------------|------------|------|---------------------------|------------|------|
| IE-KOK-V5 | 9204790000 | Q.19 | IE-PP-RJ45 | 2552580000 | 0.30 | IE-PS-VAPM-5P-2-5-QT | 2912590000 | 1.8 | IE-SW-AL08M-8TX | 2682280000 | C.7 |
| IE-M12-ADAP A | 8901630000 | M.39 | IE-PP-RJ45 | 2552580000 | 0.31 | IE-PS-VAPM-5P-2-5-QT | 2912590000 | M.60 | IE-SW-AL10M-8TX-26C | 2740420000 | C.17 |
| IE-M12-ADAP S | 8901620000 | M.39 | IE-PP-RJ45 | 2552580000 | 0.32 | IE-REDU-6-8-PS-VAPM | 2531330000 | M.60 | IE-SW-AL12M-8GT-4GESSFP | 2682340000 | C.20 |
| IE-M12-COUP | 8901640000 | M.40 | IE-PP-RJ45 | 2552580000 | 0.33 | IE-S-IP67 | 8808370000 | N.16 | IE-SW-AL14M-12GT-2GESFP | 2682360000 | C.21 |
| IE-M12-PCBCCE | 8902810000 | M.41 | IE-PP-RJ45 | 2552580000 | 0.34 | IE-SIDS2LE-100 | 2926120000 | J.11 | IE-SW-AL16M-16TX | 2682310000 | C.8 |
| IE-M12-PCBCCE-PANEL | 8902820000 | M.41 | IE-PP-RJ45 | 2552580000 | 0.36 | IE-SIDS2LE-100 | 2926120000 | 0.6 | IE-SW-AL18M-16TX-26C | 2682330000 | C.18 |
| IE-M12-PCBCCE-PANELA | 1393470000 | M.41 | IE-PP-RJ45 | 2552580000 | 0.37 | IE-SIDS2LE-500 | 2924350000 | J.11 | IE-SW-AL24M-16GT-8GESFP | 2682370000 | C.22 |
| IE-MC-VLT-1TX-1SC | 1241400000 | F.4 | IE-PP-RJ45 | 2552580000 | 0.42 | IE-SIDS2LE-500 | 2924350000 | 0.5 | IE-SW-AL24M-24TX | 2682320000 | C.9 |
| IE-MC-VLT-1TX-1SCS | 1241420000 | F.4 | IE-PP-RJ45 | 2552580000 | 0.45 | IE-SIDS2LE-500 | 2924350000 | 0.6 | IE-SW-BL05-16T-4GTPOE | 1504320000 | B.40 |
| IE-MC-VLT-1TX-1ST | 1241410000 | F.4 | IE-PP-RJ45 | 2552580000 | 0.49 | IE-SIDS2UE-100 | 2926110000 | J.11 | IE-SW-BL05-4GT-1GS | 2435400000 | B.31 |
| IE-MC-VLT-1TX-1SC | 1268880000 | F.4 | IE-PP-RJ45 | 2552580000 | 0.64 | IE-SIDS2UE-100 | 2926110000 | 0.6 | IE-SW-BL05-4TX-1SC | 1240890000 | B.12 |
| IE-MC-VLT-1TX-1SCS | 1268900000 | F.4 | IE-PP-RJ45 | 2552580000 | 0.65 | IE-SIDS2UE-500 | 2924340000 | J.11 | IE-SW-BL05-4TX-1SCS | 1240870000 | B.13 |
| IE-MC-VLT-1TX-1ST | 1268890000 | F.4 | IE-PP-V01P | 1965690000 | M.12 | IE-SIDS2UE-500 | 2924340000 | 0.5 | IE-SW-BL05-4TX-1ST | 1240880000 | B.13 |
| IE-OM-V01M-K11-1S | 1966300000 | N.12 | IE-PP-V01P | 1965690000 | M.16 | IE-SIDS2UE-500 | 2924340000 | 0.6 | IE-SW-BL05-5TX | 1240840000 | B.12 |
| IE-OM-V01M-K21-2S | 1966330000 | N.12 | IE-PP-V01P | 1965690000 | Q.30 | IE-SIDS2VE0010T01TO1-E | 2725850010 | J.8 | IE-SW-BL05-16T-4GTPOE | 1504340000 | B.40 |
| IE-OM-V04P-K11-1S | 1966220000 | N.14 | IE-PP-V04P | 1963890000 | M.19 | IE-SIDS2VE0010T01TO1-E | 2725850010 | 0.20 | IE-SW-BL05-4GT-1GS | 2435410000 | B.31 |
| IE-OM-V04M-K21-2S | 1966250000 | N.14 | IE-PP-V04P | 1963890000 | Q.30 | IE-SIDS2VE0020T01TO1-E | 2725850020 | J.8 | IE-SW-BL05-4TX-1SC | 1286550000 | B.12 |
| IE-OM-V05M-K11-1S | 1966260000 | N.15 | IE-PP-V05M | 1968920000 | M.25 | IE-SIDS2VE0020T01TO1-E | 2725850020 | 0.20 | IE-SW-BL05-4TX-1SCS | 1286530000 | B.13 |
| IE-OM-V05M-K21-2S | 1966290000 | N.15 | IE-PP-V05M | 1968920000 | Q.30 | IE-SIDS2VE0020TMT1M1-E | 2726050020 | J.9 | IE-SW-BL05-4TX-1ST | 1286540000 | B.13 |
| IE-OP-V01P-1S | 1061830000 | L.13 | IE-PP-V14P | 1068280000 | M.2 | IE-SIDS2VE0020TMT1M1-E | 2726050020 | 0.21 | IE-SW-BL05-5TX | 1240850000 | B.12 |
| IE-OP-V01P-1S | 1061830000 | L.13 | IE-PP-V14P | 1068280000 | M.3 | IE-SIDS2VE0020TMT1M2-E | 2726060020 | J.9 | IE-SW-BL06-2TX-4POE | 1241380000 | B.24 |
| IE-OP-V04P-1S | 1045780000 | N.13 | IE-PP-V14P | 1068280000 | M.7 | IE-SIDS2VE0020TMT2M2-E | 2726070020 | J.10 | IE-SW-BL06-2TX-4POE | 1286920000 | B.24 |
| IE-P | 8813100000 | K.8 | IE-PP-V14P | 1068280000 | M.10 | IE-SIDS2VE0020TMT2M2-E | 2726070020 | 0.22 | IE-SW-BL08-6TX-2SC | 1240910000 | B.14 |
| IE-P-IP67 | 8808380000 | M.27 | IE-PP-V14P | 1068280000 | Q.30 | IE-SIDS2VE0030T01TO1-E | 2725850030 | J.8 | IE-SW-BL08-6TX-2SCS | 1412110000 | B.15 |
| IE-P63 | 8813110000 | K.8 | IE-PS-M12X-180-P-TH-CG | 2664820000 | M.44 | IE-SIDS2VE0030T01TO1-E | 2725850030 | 0.20 | IE-SW-BL08-6TX-2ST | 1240930000 | B.15 |
| IE-P70 | 8813120000 | K.8 | IE-PS-M12X-180-S-TH-CG | 2672440000 | M.44 | IE-SIDS2VE0030T01TO1-E | 2725850030 | 0.20 | IE-SW-BL08-7TX-1SC | 1412070000 | B.15 |
| IE-PCB-M12X-S-180 | 1324010000 | M.48 | IE-PS-M12X-90-P-TH-CG | 2702710000 | M.44 | IE-SIDS2VE0050T01TO1-E | 2725850050 | J.8 | IE-SW-BL08-8TX | 1240900000 | B.14 |
| IE-PCB-M12X-S-90 | 2168220000 | M.49 | IE-PS-M12X-90-S-TH-CG | 2702720000 | M.44 | IE-SIDS2VE0050T01TO1-E | 2725850050 | 0.20 | IE-SW-BL08-6TX-2SC | 1240920000 | B.14 |
| IE-PCB-SPE-P-180V2.1-THR RL | 2795170000 | J.19 | IE-PS-M12X-P-AWG22/27FH | 2007500000 | M.42 | IE-SIDS2VE0050TMT1M1-E | 2726050050 | J.9 | IE-SW-BL08-6TX-2SCS | 1412120000 | B.15 |
| IE-PCB-SPE-P-180V2.1-THR RL | 2795170000 | K.3 | IE-PS-M12X-P-FH | 1324020000 | M.42 | IE-SIDS2VE0050TMT1M1-E | 2726050050 | 0.21 | IE-SW-BL08-6TX-2ST | 1286570000 | B.15 |
| IE-PCB-SPE-P-90V2.1-THR RL | 2726010000 | J.18 | IE-PS-M12X-S-FH | 1516330000 | M.43 | IE-SIDS2VE0100T01TO1-E | 2725850100 | J.8 | IE-SW-BL08-7TX-1SC | 1412080000 | B.15 |
| IE-PCB-SPE-P-90V2.1-THR RL | 2726010000 | K.3 | IE-PS-RJ45-FH-180-A-1.1 | 1928950000 | K.5 | IE-SIDS2VE0100T01TO1-E | 2725850100 | 0.20 | IE-SW-BL08-8TX | 1286580000 | B.14 |
| IE-PCB-SPE-P-90V2.1-THR-YG/YG RL | 2795120000 | J.18 | IE-PS-RJ45-FH-180-A-1.1-CG | 2703440000 | K.5 | IE-SIDS2VE0100TMT1M1-E | 2726050100 | J.9 | IE-SW-BL08-6GT-1GESFP | 2908180000 | B.34 |
| IE-PCB-SPE-P-90V2.1-THR-YG/YG RL | 2795120000 | K.3 | IE-PS-RJ45-FH-180-A-1.1-CG | 2703440000 | K.5 | IE-SIDS2VE0100TMT1M1-E | 2726050100 | 0.21 | IE-SW-BL05-4TX-1FESFP | 2908140000 | B.16 |
| IE-PCB-SPM-P-180-SMD | 2795110000 | J.21 | IE-PS-RJ45-FH-180-A-1.6-CG | 2703390000 | K.5 | IE-SIDS2VE0150T01TO1-E | 2725850150 | J.8 | IE-SW-BL05-5GT | 2908070000 | B.33 |
| IE-PCB-SPM-P-180-SMD | 2795110000 | M.31 | IE-PS-RJ45-FH-180-B-1.1 | 1928960000 | K.5 | IE-SIDS2VE0150T01TO1-E | 2725850150 | 0.20 | IE-SW-BL05-5GT-C | 2908100000 | B.33 |
| IE-PCB-SPM-P-180-THR | 2735920000 | J.21 | IE-PS-RJ45-FH-180-B-1.1-CG | 2703460000 | K.5 | IE-SIDS2VE0150TMT1M1-E | 2726050150 | J.9 | IE-SW-BL05-5TX | 2908030000 | B.16 |
| IE-PCB-SPM-P-180-THR | 2735920000 | M.31 | IE-PS-RJ45-FH-180-B-1.6 | 1928930000 | K.5 | IE-SIDS2VE0150TMT1M1-E | 2726050150 | 0.21 | IE-SW-BL08-6TX-2FESFP | 2908180000 | B.17 |
| IE-PCB-SPM-P-90-THR | 2795100000 | J.21 | IE-PS-RJ45-FH-180-B-1.6-CG | 2703410000 | K.5 | IE-SIDS2VE0200TMT1M1-E | 2726050200 | J.9 | IE-SW-BL08-7TX-1FESFP | 2908150000 | B.18 |
| IE-PCB-SPM-P-90-THR | 2795100000 | M.31 | IE-PS-RJ45-FH-180-P-1.6 | 1928940000 | K.5 | IE-SIDS2VE0200TMT1M1-E | 2726050200 | 0.21 | IE-SW-BL08-8GT | 2908080000 | B.35 |
| IE-PCB2-M12X-S-180 | 1393080000 | M.48 | IE-PS-RJ45-FH-180-P-1.6-CG | 2703420000 | K.7 | IE-SIDS2VE0400T01TO1-E | 2725850400 | J.8 | IE-SW-BL08-8GT-C | 2908110000 | B.35 |
| IE-PCB2-M12X-S-180 | 1427670000 | M.48 | IE-PS-RJ45-FH-90-A-1.1 | 1518080000 | K.6 | IE-SIDS2VE0400T01TO1-E | 2725850400 | 0.20 | IE-SW-BL08-8TX | 2908040000 | B.17 |
| IE-PCB2-M12X-S-180 | 1444650000 | M.48 | IE-PS-RJ45-FH-90-A-1.6 | 1928970000 | K.6 | IE-SIDS2VE0400TMT1M1-E | 2726050400 | J.9 | IE-SW-BL10-8GT-2GESFP | 2908190000 | B.36 |
| IE-PH-AD-V05M-RJ45 | 1993540000 | M.25 | IE-PS-RJ45-FH-90-B-1.1 | 1518090000 | K.6 | IE-SIDS2VE0400TMT1M1-E | 2726050400 | 0.21 | IE-SW-BL10-8GT-2GESFP | 2908130000 | B.38 |
| IE-PH-RJ45-TH-BK | 1962500000 | K.8 | IE-PS-RJ45-FH-90-B-1.6 | 1928980000 | K.6 | IE-SIES2LE-100 | 2926140000 | J.12 | IE-SW-BL16-16GT | 2908090000 | B.37 |
| IE-PH-RJ45-TH-BK | 1962470000 | K.8 | IE-PS-RJ45-FH-90-P-1.6 | 1518100000 | K.8 | IE-SIES2LE-100 | 2926140000 | 0.7 | IE-SW-BL16-16GT-C | 2908120000 | B.37 |
| IE-PH-RJ45-TH-GN | 1962490000 | K.8 | IE-PS-RJ45-FH-90-P-1.6 | 1518100000 | 1.7 | IE-SIES2LE-500 | 2924370000 | J.12 | IE-SW-BL16-16TX | 2908050000 | B.19 |
| IE-PH-RJ45-TH-GY | 1962440000 | K.8 | IE-PS-RJ45-FH-BK | 1963600000 | K.4 | IE-SIES2LE-500 | 2924370000 | 0.5 | IE-SW-BL18-16TX-2GESFP | 2908170000 | B.26 |
| IE-PH-RJ45-TH-GD | 1962450000 | K.8 | IE-PS-RJ45-FH-BKA | 1132040000 | 1.12 | IE-SIES2LE-500 | 2924370000 | 0.7 | IE-SW-BL24-24TX | 2908060000 | B.20 |
| IE-PH-RJ45-TH-VH | 1962430000 | K.8 | IE-PS-RJ45-FH-BKB | 1132040000 | K.4 | IE-SIES2UE-100 | 2926130000 | J.12 | IE-SW-EL05-4GT-1GESFP | 2682220000 | B.27 |
| IE-PH-RJ45-TH-YE | 1962480000 | K.8 | IE-PS-RJ45-FH-BKB-B | 1132050000 | 1.12 | IE-SIES2UE-100 | 2926130000 | 0.7 | IE-SW-EL05-5GT | 2682210000 | B.27 |
| IE-PH-V01M | 1962550000 | M.12 | IE-PS-RJ45-FH-BK-B | 1132050000 | K.4 | IE-SIES2UE-500 | 2924360000 | J.12 | IE-SW-EL05-5TX | 2682130000 | B.4 |
| IE-PH-V01M-BP | 1962560000 | M.12 | IE-PS-RJ45-FH-BK-P | 1132060000 | 1.8 | IE-SIES2UE-500 | 2924360000 | 0.5 | IE-SW-EL06-4POE-2SC | 2682390000 | B.23 |
| IE-PH-V01P | 1012440000 | M.16 | IE-PS-RJ45-FH-BK-P | 1132060000 | K.4 | IE-SIES2UE-500 | 2924360000 | 0.7 | IE-SW-EL08-6TX-2SC | 2682170000 | B.5 |
| IE-PH-V01P-BP | 1012460000 | M.16 | IE-PS-RJ45-TH-BK | 1963590000 | 1.12 | IE-SCRJ-IP67-PDF-100 | 1278430000 | M.10 | IE-SW-EL08-6TX-2SCS | 2682180000 | B.5 |
| IE-PH-V04P | 1962520000 | M.19 | IE-PS-RJ45-TH-BK | 1963590000 | K.8 | IE-SCRJ-IP67-PDF-100 | 1278430000 | M.57 | IE-SW-EL08-8GT | 2682230000 | B.28 |
| IE-PH-V04P-BP | 1962530000 | M.19 | IE-PS-RJ45-TH-BK-P | 2584980000 | K.9 | IE-SCRJ-IP20-PDF-100 | 1278420000 | K.10 | IE-SW-EL08-8GT-MINI | 2705000000 | B.28 |
| IE-PH-V05M | 1962540000 | M.25 | IE-PS-SCRJ1-PDF | 1206720000 | 1.12 | IE-SFP-10GE-MM-03 | 2779110000 | H.7 | IE-SW-EL08-8GT-POE | 2682400000 | B.39 |
| IE-PH-V14M-FO | 1058100000 | M.10 | IE-PS-SCRJ1-PDF | 1206720000 | 1.12 | IE-SFP-10GE-MM-03 | 2779120000 | H.7 | IE-SW-EL08-8PDE | 2682380000 | B.23 |
| IE-PH-V14M-RJ | 1011560000 | M.2 | IE-PS-SCRJ1-PDF | 1206720000 | K.10 | IE-SFP-10GE-MM-40 | 2779130000 | H.7 | IE-SW-EL08-8TX | 2682140000 | B.4 |
| IE-PH-V14M-RJ | 1011560000 | M.2 | IE-PS-SCRJ1-PDF-QA | 2564950000 | 1.8 | IE-SFP-1FE-MM-2 | 2682450000 | H.4 | IE-SW-EL10-8GT-2GESFP | 2682240000 | B.29 |
| IE-PH-V14M-RJ | 1011560000 | M.7 | IE-PS-SCRJ1-PDF-QA | 2564950000 | K.10 | IE-SFP-1FE-MM-60 | 2682470000 | H.4 | IE-SW-EL10-8GT-POE-2GESFP | 2682410000 | B.39 |
| IE-PH-V14M-RJ | 1088990000 | M.54 | IE-PS-SPD-S-FH-180 | 2726040000 | J.13 | IE-SFP-1FE-SC-LC | 1241450000 | H.8 | IE-SW-EL16-16TX | 2682150000 | B.6 |
| IE-PH-RJ45-FH | 1962730000 | M.50 | IE-PS-SPD-S-FH-180 | 2726040000 | K.2 | IE-SFP-1FE-SC-LC | 1241470000 | H.8 | IE-SW-EL18-16TX-26C | 2682200000 | B.25 |
| IE-PH-RJ45-FH-A | 1132010000 | M.50 | IE-PS-V01M-2SC-PDF | 1963280000 | 1.12 | IE-SFP-1GE-MM-05 | 2682480000 | H.5 | IE-SW-EL24-24TX | 2682190000 | B.7 |
| IE-PH-RJ45-FH-A-1.1 | 1992920000 | K.6 | IE-PS-V01M-RJ45-FH | 1963120000 | 1.12 | IE-SFP-1GE-MM-2 | 2682490000 | H.5 | IE-SW-ELB-05-4TX-1FESFP | 2828590000 | B.8 |
| IE-PH-RJ45-FH-A-1.1 | 1992920000 | K.6 | IE-PS-V01M-RJ45-FH | 1963120000 | M.12 | IE-SFP-1GE-RJ45 | 2766120000 | H.6 | IE-SW-ELB-05-5GT | 2828560000 | B.30 |
| IE-PH-RJ45-FH-A-1.6 | 1992880000 | K.5 | IE-PS-V01M-RJ45-FH | 1963130000 | M.12 | IE-SFP-1GE-MM-10 | 2682500000 | H.5 | IE-SW-ELB-05-5TX | 2828540000 | B.8 |
| IE-PH-RJ45-FH-B | 1132020000 | M.50 | IE-PS-V01M-RJ45-FH | 1963140000 | 1.12 | IE-SFP-1GE-SM-10-BIDI-TX1310 | 2682520000 | H.5 | IE-SW-ELB-08-6TX-2FESFP | 2682860000 | B.9 |
| IE-PH-RJ45-FH-B-1.1 | 1992930000 | K.6 | IE-PS-V01M-RJ45-FH | 1963150000 | M.12 | IE-SFP-1GE-SM-10-BIDI-TX1550 | 2682530000 | H.5 | IE-SW-ELB-08-8GT | 2828570000 | B.30 |
| IE-PH-RJ45-FH-B-1.1 | 1992930000 | K.6 | IE-PS-V01P-RJ45-FH | 1012490000 | 1.12 | IE-SFP-1GE-SM-20-BIDI-TX1310 | 2682540000 | H.5 | IE-SW-ELB-08-8TX | 2828550000 | B.9 |
| IE-PH-RJ45-FH-B-1.6 | 1992900000 | K.5 | IE-PS-V01P-RJ45-FH | 1012490000 | M.16 | IE-SFP-1GE-SM-20-BIDI-TX1550 | 2682550000 | H.5 | IE-SW-ELB-16-16TX | 2828580000 | B.10 |
| IE-PH-RJ45-FH-B-1.6 | 1992900000 | K.6 | IE-PS-V01P-RJ45-FH | 1012570000 | M.16 | IE-SFP-1GE-SM-40 | 2682510000 | H.5 | IE-SW-IP67-5M12 | 1504410000 | B.22 |
| IE-PH-RJ45-FH-P | 1132030000 | M.50 | IE-PS-V01P-RJ45-FH | 1012570000 | M.16 | IE-SFP-1GLHXL | 1241520000 | H.8 | IE-SW-IP67-5M12 | 1504420000 | B.22 |
| IE-PH-RJ45-FH-P-1.6 | | | | | | | | | | | |

| Type | Order No. | Page |
|------------------------|------------|------|
| IE-SWM-SL02-2GESFP+ | 2779210000 | C.40 |
| IE-SWM-SL04-4GESFP | 2779200000 | C.39 |
| IE-SWM-SL04-4GESFP+ | 2779220000 | C.40 |
| IE-SWM-SL04-4SC | 2779170000 | C.35 |
| IE-SWM-SL04-4SCS | 2779160000 | C.35 |
| IE-SWM-SL04-4ST | 2779190000 | C.36 |
| IE-SWM-SL04-4STS | 2779180000 | C.36 |
| IE-SWM-SL08-8GESFP | 2779150000 | C.38 |
| IE-SWM-SL08-8GT | 2779140000 | C.38 |
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| IE-TO-LCD-SM | 8947020000 | K.21 |
| IE-TO-RJ12-C | 2861240000 | K.18 |
| IE-TO-RJ45-C | 8946920000 | I.8 |
| IE-TO-RJ45-C | 8946920000 | I.12 |
| IE-TO-RJ45-C | 8946920000 | K.16 |
| IE-TO-RJ45-C-LP | 2812440000 | I.8 |
| IE-TO-RJ45-C-LP | 2812440000 | K.17 |
| IE-TO-RJ45-C-ZP-C5 | 2819260000 | K.17 |
| IE-TO-RJ45-FJ-A | 8946930000 | I.12 |
| IE-TO-RJ45-FJ-A | 8946930000 | K.14 |
| IE-TO-RJ45-FJ-B | 8946940000 | I.12 |
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| IE-TO-SCD-MM | 8946970000 | K.20 |
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| IE-TO-SCRJ-MM | 8946990000 | I.8 |
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| IE-TO-SCRJ-MM | 8946990000 | K.20 |
| IE-TO-SCRJ-SM | 8947000000 | I.8 |
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| IE-TO-SCRJ-SM | 8947000000 | K.20 |
| IE-TO-SPO-C-LP | 2870790000 | J.16 |
| IE-TO-SPO-C-LP | 2870790000 | K.13 |
| IE-TO-USB | 8946960000 | K.19 |
| IE-TO-USB-AB | 1438180000 | K.19 |
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| IE-USB-3.0-A-A-1.8M | 2581730018 | L.17 |
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| IE-USB-A-A-3.0M | 1993550030 | O.66 |
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| SAISC-D-18/28-4/9CG | 2664810000 | M.36 |
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| SCREWTY-M12-DM | 1900001000 | O.55 |
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| SCREWTY-M12-DM | 1900001000 | O.57 |
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| TM-I 18 MC NE GE | 1718431687 | 0.57 |
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| 1010840015 | IE-C5DB4RE0015MCSXXX-X | 0.61 |
| 1010840030 | IE-C5DB4RE0030MCSXXX-X | 0.61 |
| 1010840050 | IE-C5DB4RE0050MCSXXX-X | 0.61 |
| 1010840100 | IE-C5DB4RE0100MCSXXX-X | 0.61 |
| 1010850015 | IE-C5DB4RE0015MCSMCS-E | 0.60 |
| 1010850030 | IE-C5DB4RE0030MCSMCS-E | 0.60 |
| 1010850050 | IE-C5DB4RE0050MCSMCS-E | 0.60 |
| 1010850100 | IE-C5DB4RE0100MCSMCS-E | 0.60 |
| 1011540000 | IE-BHS-V14M-RJA | M.4 |
| 1011540000 | IE-BHS-V14M-RJA | M.5 |
| 1011540000 | IE-BHS-V14M-RJA | M.6 |
| 1011540000 | IE-BHS-V14M-RJA | M.8 |
| 1011560000 | IE-PH-V14M-RJ | M.2 |
| 1011560000 | IE-PH-V14M-RJ | M.3 |
| 1011560000 | IE-PH-V14M-RJ | M.7 |
| 1012160000 | IE-PS-V14M-RJ45-TH | M.3 |
| 1012170000 | IE-PS-V14M-RJ45-FH-P | 1.9 |
| 1012170000 | IE-PS-V14M-RJ45-FH-P | M.2 |
| 1012310000 | IE-BSS-V14M-RJ45-C | 1.8 |
| 1012310000 | IE-BSS-V14M-RJ45-C | M.5 |
| 1012320000 | IE-BSS-V14M-RJ45-FJ-A | M.4 |
| 1012370000 | IE-BS-V01P-RJ45-C | 1.12 |
| 1012370000 | IE-BS-V01P-RJ45-C | M.17 |
| 1012380000 | IE-BS-V01P-RJ45-FJ-A | 1.12 |
| 1012380000 | IE-BS-V01P-RJ45-FJ-A | M.17 |
| 1012440000 | IE-PH-V01P | M.16 |
| 1012460000 | IE-PH-V01P-PP | M.16 |
| 1012470000 | IE-PS-V01P-RJ45-TH | 1.12 |
| 1012470000 | IE-PS-V01P-RJ45-TH | M.16 |
| 1012490000 | IE-PS-V01P-RJ45-FH | 1.12 |
| 1012490000 | IE-PS-V01P-RJ45-FH | M.16 |
| 1012560000 | IE-PS-V01P-RJ45-TH-PP | M.16 |
| 1012570000 | IE-PS-V01P-RJ45-FH-PP | M.16 |
| 1016980000 | IE-BH-V01P | M.17 |
| 1018790000 | IE-FCM-RJ45-C | 1.8 |
| 1018790000 | IE-FCM-RJ45-C | 1.12 |
| 1018790000 | IE-FCM-RJ45-C | L.36 |
| 1018810000 | IE-FCM-RJ45-FJ-A | 1.12 |
| 1018810000 | IE-FCM-RJ45-FJ-A | L.35 |
| 1018820000 | IE-FCM-RJ45-FJ-B | 1.12 |
| 1018820000 | IE-FCM-RJ45-FJ-B | L.35 |
| 1018830000 | IE-FCM-RJ45-FJ-P | 1.8 |
| 1018830000 | IE-FCM-RJ45-FJ-P | L.35 |
| 1018840000 | IE-FCM-USB-A | L.37 |
| 1019570000 | IE-BI-USB-A | L.6 |
| 1019570000 | IE-BI-USB-A | L.7 |
| 1019570000 | IE-BI-USB-A | L.9 |
| 1019570000 | IE-BI-USB-A | L.11 |
| 1019570000 | IE-BI-USB-A | L.12 |
| 1019570000 | IE-BI-USB-A | L.13 |
| 1019570000 | IE-BI-USB-A | L.14 |
| 1019570000 | IE-BI-USB-A | L.17 |
| 1019570000 | IE-BI-USB-A | M.56 |

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| 1025940010 | IE-C5DD4UG0010MCSXXX-X | 0.42 |
| 1025940015 | IE-C5DD4UG0015MCSXXX-X | 0.42 |
| 1025940030 | IE-C5DD4UG0030MCSXXX-X | 0.42 |
| 1025940050 | IE-C5DD4UG0050MCSXXX-X | 0.42 |
| 1025940100 | IE-C5DD4UG0100MCSXXX-X | 0.42 |
| 1025950005 | IE-C5DD4UG0005MCSMCS-E | 0.41 |
| 1025950015 | IE-C5DD4UG0015MCSMCS-E | 0.41 |
| 1025950030 | IE-C5DD4UG0030MCSMCS-E | 0.41 |
| 1025950050 | IE-C5DD4UG0050MCSMCS-E | 0.41 |
| 1025950100 | IE-C5DD4UG0100MCSMCS-E | 0.41 |

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| 1044470010 | IE-C5DD4UG0010MCSA70-E | 0.42 |
| 1044470015 | IE-C5DD4UG0015MCSA70-E | 0.42 |
| 1044470030 | IE-C5DD4UG0030MCSA70-E | 0.42 |
| 1044470050 | IE-C5DD4UG0050MCSA70-E | 0.42 |
| 1044470100 | IE-C5DD4UG0100MCSA70-E | 0.42 |
| 1045960000 | IE-CP-V04P-IS | N.13 |
| 1045960000 | IE-CC-V04P | M.21 |
| 1047940000 | IE-BHD-V14M | 1.8 |
| 1047940000 | IE-BHD-V14M | M.4 |
| 1047940000 | IE-BHD-V14M | M.5 |
| 1047940000 | IE-BHD-V14M | M.6 |
| 1047940000 | IE-BHD-V14M | M.11 |
| 1047950000 | IE-BHC-V14M-RJA | M.4 |
| 1047950000 | IE-BHC-V14M-RJA | M.5 |
| 1047950000 | IE-BHC-V14M-RJA | M.6 |

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| 1058100000 | IE-PH-V14M-F0 | M.10 |
| 1058120000 | IE-BSS-V14M-SCRJ-MM-C | 1.8 |
| 1058120000 | IE-BSS-V14M-SCRJ-MM-C | M.11 |
| 1058130000 | IE-BSS-V14M-LCD-MM-C | M.11 |
| 1058140000 | IE-BSS-V14M-SCRJ-SM-C | 1.8 |
| 1058140000 | IE-BSS-V14M-SCRJ-SM-C | M.11 |
| 1058150000 | IE-BSS-V14M-LCD-SM-C | M.11 |
| 1058250000 | IE-BSC-V14M-RJ45-C | 1.8 |
| 1058250000 | IE-BSC-V14M-RJ45-C | M.5 |
| 1058270000 | IE-BSC-V14M-RJ45-FJ-A | M.4 |

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| 1058280000 | IE-PP-V14P | M.2 |
| 1058280000 | IE-PP-V14P | M.3 |
| 1058280000 | IE-PP-V14P | M.7 |
| 1058280000 | IE-PP-V14P | M.10 |
| 1058280000 | IE-PP-V14P | M.30 |
| 1058310000 | IE-BP-V14P | M.4 |
| 1058310000 | IE-BP-V14P | M.5 |
| 1058310000 | IE-BP-V14P | M.6 |
| 1058310000 | IE-BP-V14P | M.8 |
| 1058310000 | IE-BP-V14P | M.11 |
| 1058310000 | IE-BP-V14P | N.2 |
| 1058310000 | IE-BP-V14P | N.3 |
| 1058310000 | IE-BP-V14P | N.4 |
| 1058310000 | IE-BP-V14P | N.6 |
| 1058310000 | IE-BP-V14P | N.7 |
| 1058310000 | IE-BP-V14P | 0.30 |
| 1059330005 | IE-C5DD4UG0005MSSMCS-E | 0.41 |
| 1059330015 | IE-C5DD4UG0015MSSMCS-E | 0.41 |
| 1059330030 | IE-C5DD4UG0030MSSMCS-E | 0.41 |
| 1059330050 | IE-C5DD4UG0050MSSMCS-E | 0.41 |
| 1059330100 | IE-C5DD4UG0100MSSMCS-E | 0.41 |
| 1059340015 | IE-C5DB4RE0015MCSMCS-E | 0.60 |
| 1059340030 | IE-C5DB4RE0030MCSMCS-E | 0.60 |
| 1059340050 | IE-C5DB4RE0050MCSMCS-E | 0.60 |
| 1059340100 | IE-C5DB4RE0100MCSMCS-E | 0.60 |
| 1059750015 | IE-C5DD4UG0015MCAXXX-X | 0.44 |
| 1059750030 | IE-C5DD4UG0030MCAXXX-X | 0.44 |
| 1059750050 | IE-C5DD4UG0050MCAXXX-X | 0.44 |
| 1059750100 | IE-C5DD4UG0100MCAXXX-X | 0.44 |
| 1059770015 | IE-C5DD4UG0015MCSMCA-E | 0.43 |
| 1059770030 | IE-C5DD4UG0030MCSMCA-E | 0.43 |
| 1059770050 | IE-C5DD4UG0050MCSMCA-E | 0.43 |
| 1059770100 | IE-C5DD4UG0100MCSMCA-E | 0.43 |
| 1059880015 | IE-C5DD4UG0015MCAECA-E | 0.43 |
| 1059880030 | IE-C5DD4UG0030MCAECA-E | 0.43 |
| 1059880050 | IE-C5DD4UG0050MCAECA-E | 0.43 |
| 1059880100 | IE-C5DD4UG0100MCAECA-E | 0.43 |
| 1059890015 | IE-C5DB4RE0015MCAECA-E | 0.63 |
| 1059890030 | IE-C5DB4RE0030MCAECA-E | 0.63 |
| 1059890050 | IE-C5DB4RE0050MCAECA-E | 0.63 |
| 1059890100 | IE-C5DB4RE0100MCAECA-E | 0.63 |
| 1059940015 | IE-C5DB4RE0015MCSMCA-E | 0.62 |
| 1059940030 | IE-C5DB4RE0030MCSMCA-E | 0.62 |
| 1059940050 | IE-C5DB4RE0050MCSMCA-E | 0.62 |
| 1059940100 | IE-C5DB4RE0100MCSMCA-E | 0.62 |
| 1059970015 | IE-C5DB4RE0015MCAECA-E | 0.62 |
| 1059970030 | IE-C5DB4RE0030MCAECA-E | 0.62 |
| 1059970050 | IE-C5DB4RE0050MCAECA-E | 0.62 |
| 1059970100 | IE-C5DB4RE0100MCAECA-E | 0.62 |

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| 1061820000 | IE-CC-V01P | 1.13 |
| 1061820000 | IE-CC-V01P | M.18 |
| 1061830000 | IE-OP-V01P-IS | 1.13 |
| 1061830000 | IE-OP-V01P-IS | N.11 |
| 1062550000 | IE-FMS22V00005MLDLDLX | P.9 |
| 1062570000 | IE-FMS22V00020MLDLDLX | P.9 |
| 1062580000 | IE-FMS22V00010MLDLDLX | P.9 |
| 1062590000 | IE-BSC-V14M-SCRJ-MM-C | 1.8 |
| 1062590000 | IE-BSC-V14M-SCRJ-MM-C | M.11 |
| 1062600000 | IE-BSC-V14M-SCRJ-SM-C | 1.8 |
| 1062600000 | IE-BSC-V14M-SCRJ-SM-C | M.11 |
| 1062610000 | IE-BSC-V14M-LCD-MM-C | M.11 |
| 1062620000 | IE-BSC-V14M-LCD-SM-C | M.11 |
| 1066850000 | IE-C5ES8UG0010B4I841-E | 1.13 |
| 1066850000 | IE-C5ES8UG0010B4I841-E | 0.50 |
| 1066860000 | IE-C5ES8UG0020B4I841-E | 1.13 |
| 1066860000 | IE-C5ES8UG0020B4I841-E | 0.50 |
| 1066870000 | IE-C5ES8UG0050B4I841-E | 1.13 |
| 1066870000 | IE-C5ES8UG0050B4I841-E | 0.50 |
| 1066880000 | IE-C5ES8UG0100B4I841-E | 1.13 |
| 1066880000 | IE-C5ES8UG0100B4I841-E | 0.50 |
| 1067410000 | IE-PI-SCRJ-PDF | M.10 |
| 1067410000 | IE-PI-SCRJ-PDF | M.57 |
| 1068820000 | IE-CD-V14MRJ/VAPM24V-C-MA | 1.9 |
| 1068820000 | IE-CD-V14MRJ/VAPM24V-C-MA | N.3 |
| 1068830000 | IE-CD-V14MRJ/VAPM24V-FJ | 1.9 |
| 1068830000 | IE-CD-V14MRJ/VAPM24V-FJ | N.2 |
| 1068840000 | IE-CD-V14MHYB-10P-C-MA | 1.9 |
| 1068840000 | IE-CD-V14MHYB-10P-C-MA | N.7 |
| 1068850000 | IE-CD-V14MHYB-10P-FJ | 1.9 |
| 1068850000 | IE-CD-V14MHYB-10P-FJ | N.6 |
| 1068870000 | IE-CD-V14MRJ-J-CA | 1.9 |
| 1068870000 | IE-CD-V14MRJ-J-CA | N.3 |
| 1068880000 | IE-CD-V14MRJ-FJ | 1.9 |
| 1068880000 | IE-CD-V14MRJ-FJ | N.2 |
| 1068930000 | IE-BP-VAPP | M.61 |
| 1068930000 | IE-BP-VAPP | N.2 |
| 1068930000 | IE-BP-VAPP | N.3 |
| 1068930000 | IE-BP-VAPP | N.5 |
| 1068930000 | IE-BP-VAPP | 0.30 |
| 1068950000 | IE-PIC-HYB-S-0,75-300 | M.7 |
| 1068950000 | IE-PIC-HYB-S-0,75-300 | M.54 |
| 1068970000 | IE-BIC-HYB-P-0,75-300 | 1.8 |
| 1068970000 | IE-BIC-HYB-P-0,75-300 | M.8 |
| 1068970000 | IE-BIC-HYB-P-0,75-300 | M.55 |
| 1068970000 | IE-BIC-HYB-P-0,75-300 | N.6 |
| 1068990000 | IE-PI-HYB-10P | M.54 |

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| 1069010000 | IE-BI-HYB-10P | M.55 |
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| 1072900000 | IE-BSS-V14M-HYB-10P-FJ | 1.8 |
| 1072900000 | IE-BSS-V14M-HYB-10P-FJ | M.8 |
| 1072910000 | IE-PS-V14M-HYB-10P | 1.9 |
| 1072910000 | IE-PS-V14M-HYB-10P | M.7 |
| 1073340000 | SM 27/18 K MC NE GR | L.2 |
| 1073340000 | SM 27/18 K MC NE GR | L.3 |
| 1073340000 | SM 27/18 K MC NE GR | L.4 |
| 1073340000 | SM 27/18 K MC NE GR | L.5 |
| 1073340000 | SM 27/18 K MC NE GR | M.25 |

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| 1085260000 | IE-BSS-V14M-RJ45-FJ-P | 1.8 |
| 1085260000 | IE-BSS-V14M-RJ45-FJ-P | M.4 |

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| 1096150000 | IE-BIC-HYB-P-0,5-300 | 1.8 |
| 1096150000 | IE-BIC-HYB-P-0,5-300 | M.8 |
| 1096150000 | IE-BIC-HYB-P-0,5-300 | M.55 |
| 1096150000 | IE-BIC-HYB-P-0,5-300 | N.6 |
| 1096180000 | IE-PIC-HYB-S-0,5-300 | M.7 |
| 1096180000 | IE-PIC-HYB-S-0,5-300 | M.54 |
| 1099580000 | IE-CD-MA | N.2 |
| 1099580000 | IE-CD-MA | N.6 |

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| 1106010000 | IE-C5ES8UG0010P4I41-E | 1.13 |
| 1106010000 | IE-C5ES8UG0010P4I41-E | 0.50 |
| 1106020000 | IE-C5ES8UG0020P4I41-E | 1.13 |
| 1106020000 | IE-C5ES8UG0020P4I41-E | 0.50 |
| 1106030000 | IE-C5ES8UG0050P4I41-E | 1.13 |
| 1106030000 | IE-C5ES8UG0050P4I41-E | 0.50 |
| 1106040000 | IE-C5ES8UG0100P4I41-E | 1.13 |
| 1106040000 | IE-C5ES8UG0100P4I41-E | 0.50 |

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| 1118040000 | PWZ RJ45 | K.4 |
| 1118040000 | PWZ RJ45 | K.5 |
| 1118040000 | PWZ RJ45 | K.6 |
| 1118040000 | PWZ RJ45 | K.7 |
| 1118040000 | PWZ RJ45 | L.16 |
| 1118040000 | PWZ RJ45 | M.50 |
| 1118040000 | PWZ RJ45 | M.52 |
| 1118040000 | PWZ RJ45 | M.7 |
| 1119580000 | HTF HYB | 0.7 |
| 1119580000 | HTF HYB | M.8 |
| 1119580000 | HTF HYB | M.54 |
| 1119580000 | HTF HYB | M.55 |
| 1119580000 | HTF HYB | N.6 |
| 1119580000 | HTF HYB | 0.16 |
| 1119730010 | IE-C5DD4UG0010A2EA2E-X | 1.9 |
| 1119730010 | IE-C5DD4UG0010A2EA2E-X | 0.38 |
| 1119730020 | IE-C5DD4UG0020A2EA2E-X | 0.38 |
| 1119730030 | IE-C5DD4UG0030A2EA2E-X | 1.9 |
| 1119730030 | IE-C5DD4UG0030A2EA2E-X | 0.38 |
| 1119730050 | IE-C5DD4UG0050A2EA2E-X | 1.9 |
| 1119730050 | IE-C5DD4UG0050A2EA2E-X | 0.38 |
| 1119730100 | IE-C5DD4UG0100A2EA2E-X | 1.9 |
| 1119730100 | IE-C5DD4UG0100A2EA2E-X | 0.38 |
| 1119730150 | IE-C5DD4UG0150A2EA2E-X | 0.38 |
| 1119730200 | IE-C5DD4UG0200A2EA2E-X | 0.38 |

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| 1122710000 | IE-CD-V04PRJ-C-MA | N.13 |
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| 1131380000 | IE-BI-USB-AB | L.6 |
| 1131380000 | IE-BI-USB-AB | L.7 |
| 1131380000 | IE-BI-USB-AB | L.9 |
| 1131380000 | IE-BI-USB-AB | L.11 |
| 1131380000 | IE-BI-USB-AB | L.12 |
| 1131380000 | IE-BI-USB-AB | L.13 |

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| 120888000 | MULTI-STRIPAX IE-POF | M.57 |
| 120888000 | MULTI-STRIPAX IE-POF | Q.13 |
| 120891000 | SCISSORS KEVLAR | M.10 |
| 120891000 | SCISSORS KEVLAR | M.57 |
| 120891000 | SCISSORS KEVLAR | Q.13 |
| 120891000 | SCISSORS KEVLAR | Q.15 |
| 120893000 | TOOL SET IE-POF | M.10 |
| 120893000 | TOOL SET IE-POF | M.57 |
| 120893000 | TOOL SET IE-POF | P.3 |
| 120893000 | TOOL SET IE-POF | Q.13 |

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| 1212770000 | AIE MULTI-STRIPAX PDF | Q.13 |
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| 1220310040 | IE-C5DB4WE004MCSA70-E | 0.64 |
| 1220930000 | IE-FM6D2UE0005MLDOLDXX | P.10 |
| 1221010000 | IE-BS-V01M-SCRJ-MM | L.12 |
| 1221010000 | IE-BS-V01M-SCRJ-MM | M.14 |
| 1221020000 | IE-BS-V01M-SCRJ-MM | L.12 |
| 1221020000 | IE-BS-V01M-SCRJ-MM | M.14 |
| 1221030000 | IE-BHD-V01M-SCA | M.14 |
| 1222550000 | IE-FCM-USB-AB | L.37 |

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| 1233160005 | IE-C6FP8LD0005M40W40-D | 0.28 |
| 1233160010 | IE-C6FP8LD0010M40W40-D | 0.28 |
| 1233160012 | IE-C6FP8LD0012M40W40-D | 0.28 |
| 1233160015 | IE-C6FP8LD0015M40W40-D | 0.28 |
| 1233160020 | IE-C6FP8LD0020M40W40-D | 0.28 |
| 1233160030 | IE-C6FP8LD0030M40W40-D | 0.28 |
| 1233160050 | IE-C6FP8LD0050M40W40-D | 0.28 |
| 1233160100 | IE-C6FP8LD0100M40W40-D | 0.28 |
| 1234750005 | IE-C5DS4UG0005MBSA70-E | 0.45 |
| 1234750010 | IE-C5DS4UG0010MBSA70-E | 0.45 |
| 1234750015 | IE-C5DS4UG0015MBSA70-E | 0.45 |
| 1234750020 | IE-C5DS4UG0020MBSA70-E | 0.45 |
| 1234750050 | IE-C5DS4UG0050MBSA70-E | 0.45 |
| 1234770005 | IE-C5DS4UG0005MBSXXX-E | 0.46 |
| 1234770010 | IE-C5DS4UG0010MBSXXX-E | 0.46 |
| 1234770020 | IE-C5DS4UG0020MBSXXX-E | 0.46 |
| 1234770050 | IE-C5DS4UG0050MBSXXX-E | 0.46 |

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| 1240840000 | IE-SW-BL05-5TX | B.12 |
| 1240850000 | IE-SW-BL05T-5TX | B.12 |
| 1240870000 | IE-SW-BL05-4TX-1SCS | B.13 |
| 1240880000 | IE-SW-BL05-4TX-1ST | B.12 |
| 1240890000 | IE-SW-BL05-4TX-1SCS | B.13 |
| 1240900000 | IE-SW-BL08-8TX | B.14 |
| 1240910000 | IE-SW-BL08-6TX-2SC | B.14 |
| 1240920000 | IE-SW-BL08T-6TX-2SC | B.14 |
| 1240930000 | IE-SW-BL08-6TX-2ST | B.15 |
| 1240940000 | IE-SW-VL08MT-8TX | C.11 |
| 1240950000 | IE-SW-VL08MT-6TX-2ST | C.13 |
| 1241000000 | IE-SW-VL16-16TX | B.21 |
| 1241020000 | IE-SW-VL08MT-6TX-2SCS | C.14 |
| 1241270000 | IE-SW-VL08-8GT | B.32 |
| 1241280000 | IE-SW-VL08-6GT-2GS | B.32 |
| 1241380000 | IE-SW-BL06-2TX-4POE | B.24 |
| 1241400000 | IE-MC-VL1TX-1SC | F.4 |
| 1241410000 | IE-MC-VL1TX-1ST | F.4 |
| 1241420000 | IE-MC-VL1TX-1SCS | F.4 |

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| 1241430000 | EBR-MODULE RS232 | G.5 |
| 1241430000 | EBR-MODULE RS232 | G.7 |
| 1241430000 | EBR-MODULE RS232 | H.9 |
| 1241440000 | RM-KIT | F.4 |
| 1241440000 | RM-KIT | F.5 |
| 1241440000 | RM-KIT | F.6 |
| 1241440000 | RM-KIT | G.5 |
| 1241440000 | RM-KIT | G.7 |
| 1241440000 | RM-KIT | H.20 |
| 1241450000 | IE-SFP-1FEMLC-T | H.8 |
| 1241470000 | IE-SFP-1FESLC-T | H.8 |
| 1241490000 | IE-SFP-1GSXLC | H.8 |
| 1241500000 | IE-SFP-1GLSXL | H.8 |
| 1241510000 | IE-SFP-1GLXLC | H.8 |
| 1241520000 | IE-SFP-1GLHXL | H.8 |
| 1242080000 | IE-CS-2TX-1RS232/485 | F.5 |
| 1242090000 | IE-CS-2TX-2RS232/485 | F.5 |
| 1244130005 | IE-C5DS4UG0005MBSMCS-E | 0.45 |
| 1244130015 | IE-C5DS4UG0015MBSMCS-E | 0.45 |
| 1244130025 | IE-C5DS4UG0025MBSMCS-E | 0.45 |
| 1244130050 | IE-C5DS4UG0050MBSMCS-E | 0.45 |
| 1248280005 | IE-C6FP8LD0005M40V40-D | 0.28 |
| 1248280010 | IE-C6FP8LD0010M40V40-D | 0.28 |
| 1248280012 | IE-C6FP8LD0012M40V40-D | 0.28 |
| 1248280015 | IE-C6FP8LD0015M40V40-D | 0.28 |
| 1248280020 | IE-C6FP8LD0020M40V40-D | 0.28 |
| 1248280030 | IE-C6FP8LD0030M40V40-D | 0.28 |
| 1248280050 | IE-C6FP8LD0050M40V40-D | 0.28 |
| 1248280100 | IE-C6FP8LD0100M40V40-D | 0.28 |

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| 1251580002 | IE-C6FP8LY0002M40M40-Y | 0.27 |
| 1251580005 | IE-C6FP8LY0005M40M40-Y | 0.27 |
| 1251580010 | IE-C6FP8LY0010M40M40-Y | 0.27 |
| 1251580015 | IE-C6FP8LY0015M40M40-Y | 0.27 |
| 1251580020 | IE-C6FP8LY0020M40M40-Y | 0.27 |
| 1251580030 | IE-C6FP8LY0030M40M40-Y | 0.27 |
| 1251580050 | IE-C6FP8LY0050M40M40-Y | 0.27 |
| 1251580100 | IE-C6FP8LY0100M40M40-Y | 0.27 |
| 1251580150 | IE-C6FP8LY0150M40M40-Y | 0.27 |
| 1251580200 | IE-C6FP8LY0200M40M40-Y | 0.27 |
| 1251580250 | IE-C6FP8LY0250M40M40-Y | 0.27 |
| 1251590002 | IE-C6FP8LGO002M40M40-G | 0.25 |
| 1251590005 | IE-C6FP8LGO005M40M40-G | 0.25 |
| 1251590010 | IE-C6FP8LGO010M40M40-G | 0.25 |
| 1251590015 | IE-C6FP8LGO015M40M40-G | 0.25 |
| 1251590020 | IE-C6FP8LGO020M40M40-G | 0.25 |
| 1251590025 | IE-C6FP8LGO025M40M40-G | 0.25 |
| 1251590030 | IE-C6FP8LGO030M40M40-G | 0.25 |
| 1251590050 | IE-C6FP8LGO050M40M40-G | 0.25 |
| 1251590100 | IE-C6FP8LGO100M40M40-G | 0.25 |
| 1251590150 | IE-C6FP8LGO150M40M40-G | 0.25 |
| 1251590200 | IE-C6FP8LGO200M40M40-G | 0.25 |
| 1251590250 | IE-C6FP8LGO250M40M40-G | 0.25 |
| 1251610002 | IE-C6FP8LE0002M40M40-E | 0.24 |
| 1251610005 | IE-C6FP8LE0005M40M40-E | 0.24 |
| 1251610010 | IE-C6FP8LE0010M40M40-E | 0.24 |
| 1251610015 | IE-C6FP8LE0015M40M40-E | 0.24 |
| 1251610020 | IE-C6FP8LE0020M40M40-E | 0.24 |
| 1251610030 | IE-C6FP8LE0030M40M40-E | 0.24 |
| 1251610050 | IE-C6FP8LE0050M40M40-E | 0.24 |
| 1251610100 | IE-C6FP8LE0100M40M40-E | 0.24 |
| 1251610150 | IE-C6FP8LE0150M40M40-E | 0.24 |
| 1251610200 | IE-C6FP8LE0200M40M40-E | 0.24 |
| 1251610250 | IE-C6FP8LE0250M40M40-E | 0.24 |
| 1253240000 | IE-CDR-V14M3SCPDF/VAPM-C | N.8 |

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| 1269740050 | IE-C5DB4WE0050MCSXXX-E | 0.64 |
| 1269740100 | IE-C5DB4WE0100MCSXXX-E | 0.64 |

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| 1271240000 | IE-PS-V04P-RJ45-FH-B | M.19 |
| 1271250000 | IE-PS-V05M-RJ45-FH-B | M.25 |
| 1273090000 | IE-C7FS8LD-305M | 0.5 |
| 1273090000 | IE-C7FS8LD-305M | 0.12 |
| 1273430010 | IE-FPOZ2EE0001MSJOSJ0-X | I.8 |
| 1273430010 | IE-FPOZ2EE0001MSJOSJ0-X | I.12 |
| 1273430030 | IE-FPOZ2EE0003MSJOSJ0-X | P.4 |
| 1273430030 | IE-FPOZ2EE0003MSJOSJ0-X | I.12 |
| 1273430030 | IE-FPOZ2EE0003MSJOSJ0-X | P.4 |
| 1273430050 | IE-FPOZ2EE0005MSJOSJ0-X | I.8 |
| 1273430050 | IE-FPOZ2EE0005MSJOSJ0-X | I.12 |
| 1273430050 | IE-FPOZ2EE0005MSJOSJ0-X | P.4 |
| 1273430100 | IE-FPOZ2EE010MSJOSJ0-X | I.8 |
| 1273430100 | IE-FPOZ2EE010MSJOSJ0-X | I.12 |
| 1273430100 | IE-FPOZ2EE010MSJOSJ0-X | P.4 |
| 1273430200 | IE-FPOZ2EE020MSJOSJ0-X | P.4 |
| 1276880000 | IE-FMS2ZV00001MLDOLDXX | P.9 |
| 1278420000 | IE-SCRJ1-IP20-POF-100 | K.10 |
| 1278430000 | IE-SCRJ1-IP67-POF-100 | M.10 |
| 1278430000 | IE-SCRJ1-IP67-POF-100 | M.57 |

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| 1286830000 | IE-CST-2TX-1RS232/485 | F.5 |
| 1286840000 | IE-CST-2TX-2RS232/485 | F.5 |
| 1286850000 | IE-SW-BL05T-4TX-1SCS | B.13 |
| 1286850000 | IE-SW-BL05T-4TX-1ST | B.13 |
| 1286850000 | IE-SW-BL05T-4TX-1SCS | B.14 |
| 1286850000 | IE-SW-BL08T-8TX | B.12 |
| 1286850000 | IE-SW-BL08T-6TX-2ST | B.15 |
| 1286859000 | IE-SW-VL16T-16TX | B.21 |
| 1286700000 | IE-SFP-1GSXLC-T | H.8 |
| 1286710000 | IE-SFP-1GLSXL-T | H.8 |
| 1286720000 | IE-SFP-1GLXLC-T | H.8 |
| 1286730000 | IE-SFP-1GLHXL-T | H.8 |
| 1286860000 | IE-SW-VL08T-8GT | B.32 |
| 1286870000 | IE-SW-VL08T-6GT-2GS | B.32 |
| 1286880000 | IE-MC-VLT1TX-1SC | F.4 |
| 1286890000 | IE-MC-VLT1TX-1ST | F.4 |
| 1286890000 | IE-MC-VLT1TX-1SCS | F.4 |
| 1286920000 | IE-SW-BL06T-2TX-4POE | B.24 |
| 1287910000 | IE-C7FS8LR-305M | 0.5 |
| 1287910000 | IE-C7FS8LR-305M | 0.13 |

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| 1296450000 | IE-FM6Z2V00001MLDOLDXX | P.9 |
| 1296710000 | IE-BHS-V14M-RJ45-485 | M.9 |
| 1297010000 | IE-CD-VAPM24V-Y-MA | N.5 |
| 1297010000 | IE-CD-VAPM24V-Y-MA | N.9 |

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| 1302000000 | IE-AD-BHS-V14M-RJA | M.9 |
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| 1307610010 | IE-C5DD4UG0010B2EB2E-X | 0.39 |
| 1307610020 | IE-C5DD4UG0020B2EB2E-X | 0.39 |
| 1307610030 | IE-C5DD4UG0030B2EB2E-X | 0.39 |
| 1307610050 | IE-C5DD4UG0050B2EB2E-X | 0.39 |
| 1307610100 | IE-C5DD4UG0100B2EB2E-X | 0.39 |

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| 1312160003 | IE-C6FP8LD0003X40X40-Y | 0.30 |
| 1312160004 | IE-C6FP8LD0004X40X40-Y | 0.30 |
| 1312160005 | IE-C6FP8LD0005X40X40-Y | 0.30 |
| 1312160010 | IE-C6FP8LD0010X40X40-Y | 0.30 |
| 1312160020 | IE-C6FP8LD0020X40X40-Y | 0.30 |
| 1312160030 | IE-C6FP8LD0030X40X40-Y | 0.30 |
| 1312160050 | IE-C6FP8LD0050X40X40-Y | 0.30 |
| 1312160100 | IE-C6FP8LD0100X40X40-Y | 0.30 |
| 1312160150 | IE-C6FP8LD0150X40X40-Y | 0.30 |
| 1312160200 | IE-C6FP8LD0200X40X40-Y | 0.30 |
| 1312690010 | IE-C5IT4UG0010B2EB2E-X | 0.39 |
| 1312690030 | IE-C5IT4UG0030B2EB2E-X | 0.39 |
| 1312690050 | IE-C5IT4UG0050B2EB2E-X | 0.39 |
| 1312690100 | IE-C5IT4UG0100B2EB2E-X | 0.39 |
| 1318010000 | IE-FM6C2UE0100MSD1SD1X | P.12 |
| 1318011800 | IE-FM6C2UE0180MSD1SD1X | P.12 |
| 1318012000 | IE-FM6C2UE0200MSD1SD1X | P.12 |
| 1318012500 | IE-FM6C2UE0250MSD1SD1X | P.12 |
| 1318013000 | IE-FM6C2UE0300MSD1SD1X | P.12 |
| 1318013500 | IE-FM6C2UE0350MSD1SD1X | P.12 |
| 1318015000 | IE-FM6C2UE0500MSD1SD1X | P.12 |
| 1318150000 | IE-CD-V14MSCRJ-MM-C-MA | I.9 |
| 1318150000 | IE-CD-V14MSCRJ-MM-C-MA | N.4 |

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| 1324010000 | IE-PCB-M12X-S-180 | M.48 |
| 1324020000 | IE-PS-M12X-P-FH | M.42 |
| 1324440000 | IE-CDM-V14MRJSCP/VAPM-C | N.9 |
| 1326540000 | IE-C7FS8LB-305M | 0.12 |
| 1326540000 | IE-C7FS8LB-305M | 0.5 |

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| 1333160000 | IE-C7FS8LM-305M | 0.5 |
| 1333160000 | IE-C7FS8LM-305M | 0.14 |
| 1338650000 | PJ ADV TNTK INK Y | 0.32 |
| 1338670000 | PJ ADV TNTK INK M | 0.32 |
| 1338680000 | PJ ADV TNTK INK C | 0.32 |
| 1338690000 | PJ ADV TNTK INK K | 0.32 |
| 1338710000 | PJ ADV TNVW | 0.32 |
| 1338720000 | PJ ADV TMTK INK SET | 0.32 |

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| 1450600000 | IE-FC-SP-PWS/2ST/1D9 | L11 |
| 1450610000 | IE-FC-SP-PWS/2D9 | L12 |
| 1450620000 | IE-FC-SP-PWU/2ST | L13 |
| 1450630000 | IE-FC-IP-PWB/2ST | L9 |
| 1450640000 | IE-FC-IP-PWS/4ST | L12 |
| 1450650000 | IE-FC-IP-1ST/1D9/1D25 | L14 |
| 1450670000 | IE-FC-IP-2ST/2D9 | L14 |
| 1450680000 | IE-FC-IP-PWS/2D9 | L12 |
| 1450690000 | IE-FC-IP-PWS/2ST/1D9 | L11 |
| 1450700000 | IE-FC-IP-PWU/2ST | L13 |
| 1450710000 | IE-FC-IP-8P | L8 |
| 1450730000 | IE-FCI-PWB-DE | K.22 |
| 1450730000 | IE-FCI-PWB-DE | L.21 |
| 1450730000 | IE-FCI-PWB-DE | L.22 |
| 1450770000 | IE-FCI-PWB-GB | K.22 |
| 1450770000 | IE-FCI-PWB-GB | L.21 |
| 1450770000 | IE-FCI-PWB-GB | L.23 |
| 1450780000 | IE-FCI-PWB-CH | K.22 |
| 1450780000 | IE-FCI-PWB-CH | L.21 |
| 1450780000 | IE-FCI-PWB-CH | L.22 |
| 1450790000 | IE-FCI-PWB-CN | K.22 |
| 1450790000 | IE-FCI-PWB-CN | L.21 |
| 1450790000 | IE-FCI-PWB-CN | L.25 |
| 1450800000 | IE-FCI-PWS-US | L.13 |
| 1450800000 | IE-FCI-PWS-US | L.21 |
| 1450800000 | IE-FCI-PWS-US | L.27 |
| 1450810000 | IE-FCI-PWS-IT | K.22 |
| 1450810000 | IE-FCI-PWS-IT | L.12 |
| 1450810000 | IE-FCI-PWS-IT | L.21 |
| 1450810000 | IE-FCI-PWS-IT | L.24 |
| 1450820000 | IE-FC-PWPC | L.2 |
| 1450820000 | IE-FC-PWPC | L.3 |
| 1450820000 | IE-FC-PWPC | L.4 |
| 1450820000 | IE-FC-PWPC | L.5 |
| 1450820000 | IE-FC-PWPC | L.6 |
| 1450820000 | IE-FC-PWPC | L.9 |
| 1450820000 | IE-FC-PWPC | L.10 |
| 1450820000 | IE-FC-PWPC | L.11 |
| 1450820000 | IE-FC-PWPC | L.12 |
| 1450820000 | IE-FC-PWPC | L.13 |
| 1450820000 | IE-FC-PWPC | L.14 |
| 1450820000 | IE-FC-PWPC | L.32 |
| 1450830000 | IE-FCI-PWB-AU | K.22 |
| 1450830000 | IE-FCI-PWB-AU | L.21 |
| 1450830000 | IE-FCI-PWB-AU | L.24 |
| 1450840000 | IE-FCI-D9-FF | L.7 |
| 1450840000 | IE-FCI-D9-FF | L.9 |
| 1450840000 | IE-FCI-D9-FF | L.11 |
| 1450840000 | IE-FCI-D9-FF | L.12 |
| 1450840000 | IE-FCI-D9-FF | L.14 |
| 1450840000 | IE-FCI-D9-FF | L.18 |
| 1450850000 | IE-FCI-D9-FM | L.7 |
| 1450850000 | IE-FCI-D9-FM | L.9 |
| 1450850000 | IE-FCI-D9-FM | L.11 |
| 1450850000 | IE-FCI-D9-FM | L.12 |
| 1450850000 | IE-FCI-D9-FM | L.14 |
| 1450850000 | IE-FCI-D9-FM | L.18 |
| 1450850000 | IE-FCI-D9-FM | L.18 |
| 1450900000 | IE-FCI-D25-FS | L.14 |
| 1450900000 | IE-FCI-D25-FS | L.18 |
| 1450900000 | IE-FCI-D25-FS | L.18 |
| 1457580010 | IE-C6EL8UG0010U40XCS-E | 0.49 |
| 1457580020 | IE-C6EL8UG0020U40XCS-E | 0.49 |
| 1457580030 | IE-C6EL8UG0030U40XCS-E | 0.49 |
| 1457580050 | IE-C6EL8UG0050U40XCS-E | 0.49 |
| 1457580100 | IE-C6EL8UG0100U40XCS-E | 0.49 |
| 1457580120 | IE-C6EL8UG0120U40XCS-E | 0.49 |

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| 1487920000 | IE-BI-USB-3.0-A | L.6 |
| 1487920000 | IE-BI-USB-3.0-A | L.7 |
| 1487920000 | IE-BI-USB-3.0-A | L.9 |
| 1487920000 | IE-BI-USB-3.0-A | L.11 |
| 1487920000 | IE-BI-USB-3.0-A | L.12 |
| 1487920000 | IE-BI-USB-3.0-A | L.13 |
| 1487920000 | IE-BI-USB-3.0-A | L.14 |
| 1487920000 | IE-BI-USB-3.0-A | L.17 |
| 1487920000 | IE-BI-USB-3.0-A | M.56 |
| 1487980000 | IE-USB-A-MICRO-1.8M | 0.68 |

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| 1491180000 | IE-CC-NM-SMAM-2M | H.17 |
| 1491190000 | IE-CC-NM-SMAM-4M | H.17 |
| 1491210000 | IE-CC-NM-SMAM-6M | H.17 |
| 1491920000 | VFSKHV/1.5-2.5/485 | L.27 |
| 1491940000 | VFSKHV/1.5-2.5/638 | L.31 |
| 1491970000 | VFSKHV/1.5-2.5 | L.31 |
| 1493940000 | IE-CC-8W-FA-IP67 | Q.3 |

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| 1500000000 | | |
| 1504280000 | IE-SW-VL05M-5TX | C.10 |
| 1504310000 | IE-SW-VL05MT-5TX | C.10 |
| 1504320000 | IE-SW-BL05-1GT-4GTPOE | B.40 |
| 1504340000 | IE-SW-BL05T-1GT-4GTPOE | B.40 |
| 1504410000 | IE-SW-IP67-5M12 | B.22 |
| 1504420000 | IE-SW-IP67-5M12 | B.22 |

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| 1514940000 | IE-AD-M12DR.J45-MF-90 | M.39 |
| 1514970000 | IE-AD-M12DR.J45-MF-180 | M.39 |
| 1516330000 | IE-PS-M12X-S-FH | M.43 |
| 1516340000 | IE-BS-M12X-S-FH | M.43 |
| 1518080000 | IE-PS-RJ45-FH-90-A-1.1 | K.6 |
| 1518090000 | IE-PS-RJ45-FH-90-B-1.1 | K.6 |
| 1518100000 | IE-PS-RJ45-FH-90-P-1.6 | I.8 |
| 1518100000 | IE-PS-RJ45-FH-90-P-1.6 | K.7 |

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| 1522100005 | IE-C5DS4VG0005A60A60-E | 0.37 |
| 1522100010 | IE-C5DS4VG0010A60A60-E | 1.8 |
| 1522100010 | IE-C5DS4VG0010A60A60-E | 0.37 |
| 1522100015 | IE-C5DS4VG0015A60A60-E | 0.37 |
| 1522100020 | IE-C5DS4VG0020A60A60-E | 0.37 |
| 1522100025 | IE-C5DS4VG0025A60A60-E | 0.37 |
| 1522100030 | IE-C5DS4VG0030A60A60-E | 1.8 |
| 1522100030 | IE-C5DS4VG0030A60A60-E | 0.37 |
| 1522100040 | IE-C5DS4VG0040A60A60-E | 0.37 |
| 1522100050 | IE-C5DS4VG0050A60A60-E | 1.8 |
| 1522100050 | IE-C5DS4VG0050A60A60-E | 0.37 |
| 1522100075 | IE-C5DS4VG0075A60A60-E | 0.37 |
| 1522100100 | IE-C5DS4VG0100A60A60-E | 1.8 |
| 1522100100 | IE-C5DS4VG0100A60A60-E | 0.37 |
| 1522100150 | IE-C5DS4VG0150A60A60-E | 0.37 |
| 1522100200 | IE-C5DS4VG0200A60A60-E | 0.37 |
| 1529580000 | IE-FC-SET-SPDE0001-KN-P | L.33 |

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| 1534250000 | IE-FCI-PWB-RCB0 | K.22 |
| 1534250000 | IE-FCI-PWB-RCB0 | L.28 |

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| 1543680000 | IE-FC-SET-IPDEK001-KY-P | L.34 |
| 1543690000 | IE-FCI-PWCB-3A | L.7 |
| 1543690000 | IE-FCI-PWCB-3A | L.13 |
| 1543690000 | IE-FCI-PWCB-3A | L.31 |
| 1543710000 | IE-FC-IP-PWU/1ST/CB | L.13 |
| 1546590000 | IE-FCI-PWB-AU-10A | K.22 |
| 1546590000 | IE-FCI-PWB-AU-10A | L.21 |
| 1546590000 | IE-FCI-PWB-AU-10A | L.25 |

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| 1554000000 | IE-FCI-PWB-DE-OR | K.22 |
| 1554000000 | IE-FCI-PWB-DE-OR | L.22 |
| 1556290000 | IE-FCI-HD15-FF | L.7 |
| 1556290000 | IE-FCI-HD15-FF | L.9 |
| 1556290000 | IE-FCI-HD15-FF | L.11 |
| 1556290000 | IE-FCI-HD15-FF | L.12 |
| 1556290000 | IE-FCI-HD15-FF | L.14 |
| 1556290000 | IE-FCI-HD15-FF | L.20 |

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| 1689470001 | VT SF 5/21 MC NE WS VO | 0.8 |
| 1689470001 | VT SF 5/21 MC NE WS VO | 0.9 |
| 1689470001 | VT SF 5/21 MC NE WS VO | 0.10 |
| 1689470001 | VT SF 5/21 MC NE WS VO | 0.11 |
| 1689470001 | VT SF 5/21 MC NE WS VO | 0.12 |
| 1689470001 | VT SF 5/21 MC NE WS VO | 0.13 |
| 1689470001 | VT SF 5/21 MC NE WS VO | 0.14 |
| 1689470001 | VT SF 5/21 MC NE WS VO | 0.15 |
| 1689470001 | VT SF 5/21 MC NE WS VO | 0.16 |
| 1689470001 | VT SF 5/21 MC NE WS VO | 0.17 |
| 1689470001 | VT SF 5/21 MC NE WS VO | 0.18 |
| 1689470001 | VT SF 5/21 MC NE WS VO | 0.19 |
| 1689470001 | VT SF 5/21 MC NE WS VO | 0.32 |
| 1689470001 | VT SF 5/21 MC NE WS VO | P.3 |
| 1689470001 | VT SF 5/21 MC NE WS VO | P.4 |
| 1689470001 | VT SF 5/21 MC NE WS VO | P.5 |
| 1689470001 | VT SF 5/21 MC NE WS VO | P.6 |
| 1689470001 | VT SF 5/21 MC NE WS VO | P.7 |
| 1689470001 | VT SF 5/21 MC NE WS VO | P.8 |
| 1689470001 | VT SF 5/21 MC NE WS VO | P.9 |
| 1689470001 | VT SF 5/21 MC NE WS VO | P.10 |
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| 1689470001 | VT SF 5/21 MC NE WS VO | P.17 |
| 1689470001 | VT SF 5/21 MC NE WS VO | Q.33 |

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| 1699860000 | SM 27/18 MC NE WS | J.15 |
| 1699860000 | SM 27/18 MC NE WS | L.35 |

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| 1699860000 | SM 27/18 MC NE WS | L.36 |
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| 1707270000 | SM 27/18 K MC NE WS | L.2 |
| 1707270000 | SM 27/18 K MC NE WS | L.3 |
| 1707270000 | SM 27/18 K MC NE WS | L.4 |
| 1707270000 | SM 27/18 K MC NE WS | L.5 |

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| 1713760000 | SM 27/18 K MC NE SI | L.2 |
| 1713760000 | SM 27/18 K MC NE SI | L.3 |
| 1713760000 | SM 27/18 K MC NE SI | L.4 |
| 1713760000 | SM 27/18 K MC NE SI | L.5 |
| 1716630000 | SM-H 27/18 SW | J.15 |
| 1716630000 | SM-H 27/18 SW | L.35 |
| 1716630000 | SM-H 27/18 SW | L.36 |
| 1716630000 | SM-H 27/18 SW | L.37 |
| 1718411687 | TM-H 12 MC NE GE | 0.8 |
| 1718411687 | TM-H 12 MC NE GE | 0.9 |
| 1718411687 | TM-H 12 MC NE GE | 0.10 |
| 1718411687 | TM-H 12 MC NE GE | 0.11 |
| 1718411687 | TM-H 12 MC NE GE | 0.12 |
| 1718411687 | TM-H 12 MC NE GE | 0.13 |
| 1718411687 | TM-H 12 MC NE GE | 0.14 |
| 1718411687 | TM-H 12 MC NE GE | 0.15 |
| 1718411687 | TM-H 12 MC NE GE | 0.16 |
| 1718411687 | TM-H 12 MC NE GE | 0.17 |
| 1718411687 | TM-H 12 MC NE GE | 0.18 |
| 1718411687 | TM-H 12 MC NE GE | 0.19 |
| 1718411687 | TM-H 12 MC NE GE | 0.23 |
| 1718411687 | TM-H 12 MC NE GE | 0.24 |
| 1718411687 | TM-H 12 MC NE GE | 0.25 |
| 1718411687 | TM-H 12 MC NE GE | 0.26 |
| 1718411687 | TM-H 12 MC NE GE | 0.27 |
| 1718411687 | TM-H 12 MC NE GE | 0.28 |
| 1718411687 | TM-H 12 MC NE GE | 0.29 |
| 1718411687 | TM-H 12 MC NE GE | 0.30 |
| 1718411687 | TM-H 12 MC NE GE | 0.31 |
| 1718411687 | TM-H 12 MC NE GE | 0.32 |
| 1718411687 | TM-H 12 MC NE GE | 0.36 |
| 1718411687 | TM-H 12 MC NE GE | 0.38 |
| 1718411687 | TM-H 12 MC NE GE | 0.39 |
| 1718411687 | TM-H 12 MC NE GE | 0.40 |
| 1718411687 | TM-H 12 MC NE GE | 0.41 |
| 1718411687 | TM-H 12 MC NE GE | 0.42 |
| 1718411687 | TM-H 12 MC NE GE | 0.43 |
| 1718411687 | TM-H 12 MC NE GE | 0.44 |
| 1718411687 | TM-H 12 MC NE GE | 0.45 |
| 1718411687 | TM-H 12 MC NE GE | 0.46 |
| 1718411687 | TM-H 12 MC NE GE | 0.47 |
| 1718411687 | TM-H 12 MC NE GE | 0.48 |
| 1718411687 | TM-H 12 MC NE GE | 0.49 |
| 1718411687 | TM-H 12 MC NE GE | 0.50 |
| 1718411687 | TM-H 12 MC NE GE | 0.51 |
| 1718411687 | TM-H 12 MC NE GE | 0.52 |
| 1718411687 | TM-H 12 MC NE GE | 0.53 |
| 1718411687 | TM-H 12 MC NE GE | 0.54 |
| 1718411687 | TM-H 12 MC NE GE | 0.55 |
| 1718411687 | TM-H 12 MC NE GE | 0.56 |
| 1718411687 | TM-H 12 MC NE GE | 0.57 |
| 1718411687 | TM-H 12 MC NE GE | 0.58 |
| 1718411687 | TM-H 12 MC NE GE | 0.59 |
| 1718411687 | TM-H 12 MC NE GE | 0.60 |
| 1718411687 | TM-H 12 MC NE GE | 0.61 |
| 1718411687 | TM-H 12 MC NE GE | 0.62 |
| 1718411687 | TM-H 12 MC NE GE | 0.63 |
| 1718411687 | TM-H 12 MC NE GE | P.3 |
| 1718411687 | TM-H 18 MC NE WS | 0.9 |
| 1718431687 | TM-H 18 MC NE GE | 0.8 |
| 1718431687 | TM-H 18 MC NE GE | 0.9 |
| 1718431687 | TM-H 18 MC NE GE | 0.10 |
| 1718431687 | TM-H 18 MC NE GE | 0.11 |
| 1718431687 | TM-H 18 MC NE GE | 0.12 |
| 1718431687 | TM-H 18 MC NE GE | 0.13 |
| 1718431687 | TM-H 18 MC NE GE | 0.14 |
| 1718431687 | TM-H 18 MC NE GE | 0.15 |
| 1718431687 | TM-H 18 MC NE GE | 0.16 |
| 1718431687 | TM-H 18 MC NE GE | 0.17 |
| 1718431687 | TM-H 18 MC NE GE | 0.18 |
| 1718431687 | TM-H 18 MC NE GE | 0.19 |
| 1718431687 | TM-H 18 MC NE GE | 0.23 |
| 1718431687 | TM-H 18 MC NE GE | 0.24 |
| 1718431687 | TM-H 18 MC NE GE | 0.25 |
| 1718431687 | TM-H 18 MC NE GE | 0.26 |
| 1718431687 | TM-H 18 MC NE GE | 0.27 |
| 1718431687 | TM-H 18 MC NE GE | 0.28 |
| 1718431687 | TM-H 18 MC NE GE | 0.29 |
| 1718431687 | TM-H 18 MC NE GE | 0.30 |
| 1718431687 | TM-H 18 MC NE GE | 0.31 |
| 1718431687 | TM-H 18 MC NE GE | 0.32 |
| 1718431687 | TM-H 18 MC NE GE | 0.36 |
| 1718431687 | TM-H 18 MC NE GE | 0.38 |
| 1718431687 | TM-H 18 MC NE GE | 0.39 |
| 1718431687 | TM-H 18 MC NE GE | 0.40 |
| 1718431687 | TM-H 18 MC NE GE | 0.41 |
| 1718431687 | TM-H 18 MC NE GE | 0.42 |

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| 1718431687 | TM-H 18 MC NE GE | 0.43 |
| 1718431687 | TM-H 18 MC NE GE | 0.44 |
| 1718431687 | TM-H 18 MC NE GE | 0.45 |
| 1718431687 | TM-H 18 MC NE GE | 0.46 |
| 1718431687 | TM-H 18 MC NE GE | 0.47 |
| 1718431687 | TM-H 18 MC NE GE | 0.48 |
| 1718431687 | TM-H 18 MC NE GE | 0.49 |
| 1718431687 | TM-H 18 MC NE GE | 0.50 |
| 1718431687 | TM-H 18 MC NE GE | 0.51 |
| 1718431687 | TM-H 18 MC NE GE | 0.52 |
| 1718431687 | TM-H 18 MC NE GE | 0.53 |
| 1718431687 | TM-H 18 MC NE GE | 0.54 |
| 171843 | | |

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| 1736181044 | ESG 7/20 SIRIUS MC NE WS | L.9 |
| 1736181044 | ESG 7/20 SIRIUS MC NE WS | L.10 |
| 1736181044 | ESG 7/20 SIRIUS MC NE WS | L.11 |
| 1736181044 | ESG 7/20 SIRIUS MC NE WS | L.12 |
| 1736181044 | ESG 7/20 SIRIUS MC NE WS | L.13 |
| 1736181044 | ESG 7/20 SIRIUS MC NE WS | L.14 |

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| 1803930001 | SAISW-4/8S-M12 4P D-ZF | M.33 |
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| 1857440000 | ESG 9/11 K MC NE WS | J.16 |
| 1857440000 | ESG 9/11 K MC NE WS | K.13 |
| 1857440000 | ESG 9/11 K MC NE WS | K.14 |
| 1857440000 | ESG 9/11 K MC NE WS | K.16 |
| 1857440000 | ESG 9/11 K MC NE WS | K.19 |
| 1857440000 | ESG 9/11 K MC NE WS | K.20 |
| 1857440000 | ESG 9/11 K MC NE WS | K.21 |
| 1857440000 | ESG 9/11 K MC NE WS | L.35 |
| 1857440000 | ESG 9/11 K MC NE WS | L.37 |
| 1857440000 | ESG 9/11 K MC NE WS | M.2 |
| 1857440000 | ESG 9/11 K MC NE WS | M.3 |
| 1857440000 | ESG 9/11 K MC NE WS | M.7 |
| 1857440000 | ESG 9/11 K MC NE WS | M.10 |
| 1857440000 | ESG 9/11 K MC NE WS | M.12 |
| 1857440000 | ESG 9/11 K MC NE WS | M.16 |
| 1857440000 | ESG 9/11 K MC NE WS | M.19 |
| 1857440000 | ESG 9/11 K MC NE WS | M.20 |
| 1857440000 | ESG 9/11 K MC NE WS | M.21 |
| 1857440000 | ESG 9/11 K MC NE WS | M.22 |
| 1857440000 | ESG 9/11 K MC NE WS | M.23 |
| 1857440000 | ESG 9/11 K MC NE WS | M.24 |
| 1857440000 | ESG 9/11 K MC NE WS | Q.33 |

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| 1866730000 | REMOVAL TOOL HD | K.10 |
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| 1892120000 | SAISM-4/8S-M12-4P D-CDD | M.34 |
| 1892120001 | SAISM-4/8S-M12 4P D-ZF | M.33 |
| 1892130000 | SAIBM-4/8S-M12-4P D-CDD | M.34 |
| 1892130001 | SAIBM-4/8S-M12 4P D-ZF | M.33 |

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| 1900000000 | SCREWTY-M12 | 0.41 |
| 1900000000 | SCREWTY-M12 | 0.42 |
| 1900000000 | SCREWTY-M12 | 0.45 |
| 1900000000 | SCREWTY-M12 | 0.46 |
| 1900000000 | SCREWTY-M12 | 0.51 |
| 1900000000 | SCREWTY-M12 | 0.52 |
| 1900000000 | SCREWTY-M12 | 0.53 |
| 1900000000 | SCREWTY-M12 | 0.54 |
| 1900000000 | SCREWTY-M12 | 0.55 |
| 1900000000 | SCREWTY-M12 | 0.56 |
| 1900000000 | SCREWTY-M12 | 0.57 |
| 1900000000 | SCREWTY-M12 | 0.58 |
| 1900000000 | SCREWTY-M12 | 0.59 |
| 1900001000 | SCREWTY-M12-DM | 0.41 |
| 1900001000 | SCREWTY-M12-DM | 0.42 |
| 1900001000 | SCREWTY-M12-DM | 0.45 |
| 1900001000 | SCREWTY-M12-DM | 0.46 |
| 1900001000 | SCREWTY-M12-DM | 0.47 |
| 1900001000 | SCREWTY-M12-DM | 0.48 |
| 1900001000 | SCREWTY-M12-DM | 0.49 |
| 1900001000 | SCREWTY-M12-DM | 0.50 |
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| 1900001000 | SCREWTY-M12-DM | 0.52 |
| 1900001000 | SCREWTY-M12-DM | 0.53 |
| 1900001000 | SCREWTY-M12-DM | 0.54 |
| 1900001000 | SCREWTY-M12-DM | 0.55 |
| 1900001000 | SCREWTY-M12-DM | 0.56 |
| 1900001000 | SCREWTY-M12-DM | 0.57 |
| 1900001000 | SCREWTY-M12-DM | 0.58 |
| 1900001000 | SCREWTY-M12-DM | 0.59 |
| 1900020000 | SCREWTY-M12 F | M.43 |
| 1900021000 | SCREWTY-M12 F-DM | M.43 |
| 1905490000 | M-PRINT PRO | Q.32 |

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| 1910000000 | SCREWTY SET | M.43 |
| 1910000000 | SCREWTY SET | 0.41 |
| 1910000000 | SCREWTY SET | 0.42 |
| 1910000000 | SCREWTY SET | 0.45 |
| 1910000000 | SCREWTY SET | 0.46 |
| 1910000000 | SCREWTY SET | 0.51 |
| 1910000000 | SCREWTY SET | 0.52 |
| 1910000000 | SCREWTY SET | 0.53 |
| 1910000000 | SCREWTY SET | 0.54 |
| 1910000000 | SCREWTY SET | 0.55 |
| 1910000000 | SCREWTY SET | 0.56 |
| 1910000000 | SCREWTY SET | 0.57 |
| 1910000000 | SCREWTY SET | 0.58 |
| 1910000000 | SCREWTY SET | 0.59 |

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| 1920000000 | SCREWTY SET-DM | M.43 |
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| 1920000000 | SCREWTY SET-DM | 0.41 |
| 1920000000 | SCREWTY SET-DM | 0.42 |
| 1920000000 | SCREWTY SET-DM | 0.45 |
| 1920000000 | SCREWTY SET-DM | 0.46 |
| 1920000000 | SCREWTY SET-DM | 0.51 |
| 1920000000 | SCREWTY SET-DM | 0.52 |
| 1920000000 | SCREWTY SET-DM | 0.53 |
| 1920000000 | SCREWTY SET-DM | 0.54 |
| 1920000000 | SCREWTY SET-DM | 0.55 |
| 1920000000 | SCREWTY SET-DM | 0.56 |
| 1920000000 | SCREWTY SET-DM | 0.57 |
| 1920000000 | SCREWTY SET-DM | 0.58 |
| 1920000000 | SCREWTY SET-DM | 0.59 |

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| 1962430000 | IE-PH-RJ45-TH-WH | K.8 |
| 1962440000 | IE-PH-RJ45-TH-GY | K.8 |
| 1962450000 | IE-PH-RJ45-TH-BG | K.8 |
| 1962470000 | IE-PH-RJ45-TH-BU | K.8 |
| 1962480000 | IE-PH-RJ45-TH-YE | K.8 |
| 1962490000 | IE-PH-RJ45-TH-GN | K.8 |
| 1962500000 | IE-PH-RJ45-TH-BK | K.8 |
| 1962520000 | IE-PH-V04P | M.19 |
| 1962530000 | IE-PH-V04P-BP | M.19 |
| 1962540000 | IE-PH-V05M | M.25 |
| 1962550000 | IE-PH-V01M | M.12 |
| 1962560000 | IE-PH-V01M-BP | M.12 |
| 1962720000 | IE-PR-RJ45-TH | M.51 |
| 1962730000 | IE-PR-RJ45-FH | M.50 |
| 1962840000 | IE-BI-RJ45-C | L.6 |
| 1962840000 | IE-BI-RJ45-C | L.7 |
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| 1962840000 | IE-BI-RJ45-C | L.11 |
| 1962840000 | IE-BI-RJ45-C | L.12 |
| 1962840000 | IE-BI-RJ45-C | L.13 |
| 1962840000 | IE-BI-RJ45-C | L.14 |
| 1962840000 | IE-BI-RJ45-C | L.16 |
| 1962840000 | IE-BI-RJ45-C | M.53 |
| 1962850000 | IE-BI-RJ45-FJA | L.13 |
| 1962850000 | IE-BI-RJ45-FJA | L.6 |
| 1962850000 | IE-BI-RJ45-FJA | L.7 |
| 1962850000 | IE-BI-RJ45-FJA | L.9 |
| 1962850000 | IE-BI-RJ45-FJA | L.11 |
| 1962850000 | IE-BI-RJ45-FJA | L.12 |
| 1962850000 | IE-BI-RJ45-FJA | L.13 |
| 1962850000 | IE-BI-RJ45-FJA | L.14 |
| 1962850000 | IE-BI-RJ45-FJA | L.16 |
| 1962850000 | IE-BI-RJ45-FJA | M.18 |
| 1962850000 | IE-BI-RJ45-FJA | M.21 |
| 1962850000 | IE-BI-RJ45-FJA | M.52 |
| 1962850000 | IE-BI-RJ45-FJA | M.11 |
| 1962850000 | IE-BI-RJ45-FJA | N.11 |
| 1962850000 | IE-BI-RJ45-FJA | N.12 |
| 1962850000 | IE-BI-RJ45-FJA | N.13 |
| 1962850000 | IE-BI-RJ45-FJA | N.14 |
| 1962850000 | IE-BI-RJ45-FJA | N.15 |
| 1962850000 | IE-BI-RJ45-FJA | N.16 |
| 1962850000 | IE-BI-RJ45-FJA | N.17 |
| 1962850000 | IE-BI-RJ45-FJA | N.18 |
| 1962850000 | IE-BI-RJ45-FJA | N.19 |
| 1962850000 | IE-BI-RJ45-FJA | N.20 |
| 1962850000 | IE-BI-RJ45-FJA | N.21 |
| 1962850000 | IE-BI-RJ45-FJA | N.22 |
| 1962850000 | IE-BI-RJ45-FJA | N.23 |
| 1962850000 | IE-BI-RJ45-FJA | N.24 |
| 1962850000 | IE-BI-RJ45-FJA | N.25 |
| 1962850000 | IE-BI-RJ45-FJA | N.26 |
| 1962850000 | IE-BI-RJ45-FJA | N.27 |
| 1962850000 | IE-BI-RJ45-FJA | N.28 |
| 1962850000 | IE-BI-RJ45-FJA | N.29 |
| 1962850000 | IE-BI-RJ45-FJA | N.30 |
| 1962850000 | IE-BI-RJ45-FJA | N.31 |
| 1962850000 | IE-BI-RJ45-FJA | N.32 |
| 1962850000 | IE-BI-RJ45-FJA | N.33 |
| 1962850000 | IE-BI-RJ45-FJA | N.34 |
| 1962850000 | IE-BI-RJ45-FJA | N.35 |
| 1962850000 | IE-BI-RJ45-FJA | N.36 |
| 1962850000 | IE-BI-RJ45-FJA | N.37 |
| 1962850000 | IE-BI-RJ45-FJA | N.38 |
| 1962850000 | IE-BI-RJ45-FJA | N.39 |
| 1962850000 | IE-BI-RJ45-FJA | N.40 |
| 1962850000 | IE-BI-RJ45-FJA | N.41 |
| 1962850000 | IE-BI-RJ45-FJA | N.42 |
| 1962850000 | IE-BI-RJ45-FJA | N.43 |
| 1962850000 | IE-BI-RJ45-FJA | N.44 |
| 1962850000 | IE-BI-RJ45-FJA | N.45 |
| 1962850000 | IE-BI-RJ45-FJA | N.46 |
| 1962850000 | IE-BI-RJ45-FJA | N.47 |
| 1962850000 | IE-BI-RJ45-FJA | N.48 |
| 1962850000 | IE-BI-RJ45-FJA | N.49 |
| 1962850000 | IE-BI-RJ45-FJA | N.50 |
| 1962850000 | IE-BI-RJ45-FJA | N.51 |
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| 1962850000 | IE-BI-RJ45-FJA | N.55 |
| 1962850000 | IE-BI-RJ45-FJA | N.56 |
| 1962850000 | IE-BI-RJ45-FJA | N.57 |
| 1962850000 | IE-BI-RJ45-FJA | N.58 |
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| 1962850000 | IE-BI-RJ45-FJA | N.62 |
| 1962850000 | IE-BI-RJ45-FJA | N.63 |
| 1962850000 | IE-BI-RJ45-FJA | N.64 |
| 1962850000 | IE-BI-RJ45-FJA | N.65 |
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| 1962850000 | IE-BI-RJ45-FJA | N.69 |
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| 1962850000 | IE-BI-RJ45-FJA | N.75 |
| 1962850000 | IE-BI-RJ45-FJA | N.76 |
| 1962850000 | IE-BI-RJ45-FJA | N.77 |
| 1962850000 | IE-BI-RJ45-FJA | N.78 |
| 1962850000 | IE-BI-RJ45-FJA | N.79 |
| 1962850000 | IE-BI-RJ45-FJA | N.80 |
| 1962850000 | IE-BI-RJ45-FJA | N.81 |
| 1962850000 | IE-BI-RJ45-FJA | N.82 |
| 1962850000 | IE-BI-RJ45-FJA | N.83 |
| 1962850000 | IE-BI-RJ45-FJA | N.84 |
| 1962850000 | IE-BI-RJ45-FJA | N.85 |
| 1962850000 | IE-BI-RJ45-FJA | N.86 |
| 1962850000 | IE-BI-RJ45-FJA | N.87 |
| 1962850000 | IE-BI-RJ45-FJA | N.88 |
| 1962850000 | IE-BI-RJ45-FJA | N.89 |
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| 1962850000 | IE-BI-RJ45-FJA | N.93 |
| 1962850000 | IE-BI-RJ45-FJA | N.94 |
| 1962850000 | IE-BI-RJ45-FJA | N.95 |
| 1962850000 | IE-BI-RJ45-FJA | N.96 |
| 1962850000 | IE-BI-RJ45-FJA | N.97 |
| 1962850000 | IE-BI-RJ45-FJA | N.98 |
| 1962850000 | IE-BI-RJ45-FJA | N.99 |
| 1962850000 | IE-BI-RJ45-FJA | N.100 |

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| 1963700000 | IE-BS-V05M-RJ45-FJ-P | M.26 |
| 1963730000 | IE-BS-V04P-RJ45-FJ-B | M.20 |
| 1963830000 | IE-BI-RJ45-FJ-P | L.6 |
| 1963830000 | IE-BI-RJ45-FJ-P | L.7 |
| 1963830000 | IE-BI-RJ45-FJ-P | L.9 |
| 1963830000 | IE-BI-RJ45-FJ-P | L.11 |
| 1963830000 | IE-BI-RJ45-FJ-P | L.12 |
| 1963830000 | IE-BI-RJ45-FJ-P | L.13 |
| 1963830000 | IE-BI-RJ45-FJ-P | L.14 |
| 1963830000 | IE-BI-RJ45-FJ-P | L.16 |
| 1963830000 | IE-BI-RJ45-FJ-P | M.18 |
| 1963830000 | IE-BI-RJ45-FJ-P | M.21 |
| 1963830000 | IE-BI-RJ45-FJ-P | M.52 |
| 1963830000 | IE-BI-RJ45-FJ-P | N.11 |
| 1963830000 | IE-BI-RJ45-FJ-P | N.12 |
| 1963830000 | IE-BI-RJ45-FJ-P | N.13 |
| 1963830000 | IE-BI-RJ45-FJ-P | N.14 |
| 1963830000 | IE-BI-RJ45-FJ-P | N.15 |
| 1963840000 | IE-BI-RJ45-FJ-B | L.13 |
| 1963840000 | IE-BI-RJ45-FJ-B | L.6 |
| 1963840000 | IE-BI-RJ45-FJ-B | L.7 |
| 1963840000 | IE-BI-RJ45-FJ-B | L.9 |
| 1963840000 | IE-BI-RJ45-FJ-B | L.11 |
| 1963840000 | IE-BI-RJ45-FJ-B | L.12 |
| 1963840000 | IE-BI-RJ45-FJ-B | L.13 |
| 1963840000 | IE-BI-RJ45-FJ-B | L.14 |
| 1963840000 | IE-BI-RJ45-FJ-B | L.16 |
| 1963840000 | IE-BI-RJ45-FJ-B | M.18 |
| 1963840000 | IE-BI-RJ45-FJ-B | M.21 |
| 1963840000 | IE-BI-RJ45-FJ-B | M.52 |
| 1963840000 | IE-BI-RJ45-FJ-B | N.11 |
| 1963840000 | IE-BI-RJ45-FJ-B | N.12 |
| 1963840000 | IE-BI-RJ45-FJ-B | N.13 |
| 1963840000 | IE-BI-RJ45-FJ-B | N.14 |
| 1963840000 | IE-BI-RJ45-FJ-B | N.15 |
| 1963890000 | IE-PP-V04P | M.19 |
| 1963890000 | IE-PP-V04P | Q.30 |
| 1963900000 | IE-BP-V04P | M.20 |
| 1963900000 | IE-BP-V04P | M.22 |
| 1963900000 | IE-BP-V04P | M.23 |
| 1963900000 | IE-BP-V04P | M.24 |
| 1963900000 | IE-BP-V04P | N.13 |
| 1963900000 | IE-BP-V04P | Q.30 |
| 1964420000 | IE-BI-LCD-MM-C | M.59 |
| 1964430000 | IE-BI-SCRJ2SC-MM-C | M.58 |
| 1964440000 | IE-BS-V01M-LCD-MM-C | M.15 |
| 1964460000 | IE-BS-V04P-LCD-MM-C | M.24 |
| 1964470000 | | |

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| 2465440000 | IE-PS-VAPM-5P-2.5 | 1.8 |
| 2465440000 | IE-PS-VAPM-5P-2.5 | M.60 |

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| 2488200000 | IE-FCML-MINIUSB-0.3M | 0.67 |
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| 2493480000 | IE-BSS-VAPM-24V | 1.8 |
| 2493480000 | IE-BSS-VAPM-24V | M.61 |
| 2493490000 | IE-BHD-VAPM | 1.8 |
| 2493490000 | IE-BHD-VAPM | M.61 |
| 2494060000 | IE-BP-VAPP-DC | M.61 |

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| 2500710000 | IE-FCI-PWB-IND | K.22 |
| 2500710000 | IE-FCI-PWB-IND | L.21 |
| 2500710000 | IE-FCI-PWB-IND | L.26 |
| 2505070000 | IE-FCI-PWB-ZUSB-A-5V | L.29 |

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| 2531060000 | IE-FCI-PWB-ISR | K.22 |
| 2531060000 | IE-FCI-PWB-ISR | L.21 |
| 2531060000 | IE-FCI-PWB-ISR | L.26 |
| 2531330000 | IE-REDU-6-8-PS-VAPM | M.60 |
| 2534680000 | IE-DINRAIL-AD-PWB | K.22 |
| 2534680000 | IE-DINRAIL-AD-PWB | L.22 |
| 2534680000 | IE-DINRAIL-AD-PWB | L.23 |
| 2534680000 | IE-DINRAIL-AD-PWB | L.24 |
| 2534680000 | IE-DINRAIL-AD-PWB | L.25 |
| 2534680000 | IE-DINRAIL-AD-PWB | L.26 |
| 2534680000 | IE-DINRAIL-AD-PWB | L.27 |
| 2534680000 | IE-DINRAIL-AD-PWB | L.28 |
| 2534680000 | IE-DINRAIL-AD-PWB | L.29 |
| 2534680000 | IE-DINRAIL-AD-PWB | L.30 |
| 2536600000 | IE-WL-BL-AP-CL-EU | G.5 |
| 2536650000 | IE-WLT-BL-AP-CL-EU | G.5 |
| 2536660000 | IE-WL-BL-AP-CL-US | G.5 |
| 2536670000 | IE-WLT-BL-AP-CL-US | G.5 |
| 2536680000 | IE-WL-VL-AP-BR-CL-EU | G.6 |
| 2536690000 | IE-WL-VL-AP-BR-CL-EU | G.7 |
| 2536700000 | IE-WL-VL-AP-BR-CL-US | G.6 |
| 2536710000 | IE-WLT-VL-AP-BR-CL-US | G.7 |

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| 2548060000 | IE-FC-IP-PWB | L.10 |
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| 2552580000 | IE-PP-RJ45 | 0.23 |
| 2552580000 | IE-PP-RJ45 | 0.24 |
| 2552580000 | IE-PP-RJ45 | 0.25 |
| 2552580000 | IE-PP-RJ45 | 0.26 |
| 2552580000 | IE-PP-RJ45 | 0.27 |
| 2552580000 | IE-PP-RJ45 | 0.28 |
| 2552580000 | IE-PP-RJ45 | 0.29 |
| 2552580000 | IE-PP-RJ45 | 0.30 |
| 2552580000 | IE-PP-RJ45 | 0.31 |
| 2552580000 | IE-PP-RJ45 | 0.32 |
| 2552580000 | IE-PP-RJ45 | 0.33 |
| 2552580000 | IE-PP-RJ45 | 0.34 |
| 2552580000 | IE-PP-RJ45 | 0.36 |
| 2552580000 | IE-PP-RJ45 | 0.37 |
| 2552580000 | IE-PP-RJ45 | 0.42 |
| 2552580000 | IE-PP-RJ45 | 0.45 |
| 2552580000 | IE-PP-RJ45 | 0.49 |
| 2552580000 | IE-PP-RJ45 | 0.64 |
| 2552580000 | IE-PP-RJ45 | 0.65 |

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| 2563810002 | IE-C6FP8L00002M40M40-0 | 0.27 |
| 2563810005 | IE-C6FP8L00005M40M40-0 | 0.27 |
| 2563810010 | IE-C6FP8L00010M40M40-0 | 0.27 |
| 2563810015 | IE-C6FP8L00015M40M40-0 | 0.27 |
| 2563810020 | IE-C6FP8L00020M40M40-0 | 0.27 |
| 2563810030 | IE-C6FP8L00030M40M40-0 | 0.27 |
| 2563810050 | IE-C6FP8L00050M40M40-0 | 0.27 |
| 2563810100 | IE-C6FP8L00100M40M40-0 | 0.27 |
| 2563810150 | IE-C6FP8L00150M40M40-0 | 0.27 |
| 2563810200 | IE-C6FP8L00200M40M40-0 | 0.27 |
| 2563810250 | IE-C6FP8L00250M40M40-0 | 0.27 |
| 2564950000 | IE-PS-SCRJ1-PDF-QA | K.10 |
| 2564950000 | IE-PS-SCRJ1-PDF-QA | L.18 |
| 2564960000 | IE-PI-SCRJ1-PDF-QA | M.10 |
| 2564960000 | IE-PI-SCRJ1-PDF-QA | M.57 |
| 2568260000 | IE-PS-V14M-2SC-PDF-QA | 1.9 |
| 2568260000 | IE-PS-V14M-2SC-PDF-QA | M.10 |

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| 2581730005 | IE-USB-3.0-A-A-0.5M | L.17 |
| 2581730005 | IE-USB-3.0-A-A-0.5M | L.37 |

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| 2581730005 | IE-USB-3.0-A-A-0.5M | M.56 |
| 2581730005 | IE-USB-3.0-A-A-0.5M | 0.66 |
| 2581730018 | IE-USB-3.0-A-A-1.8M | L.17 |
| 2581730018 | IE-USB-3.0-A-A-1.8M | L.37 |
| 2581730018 | IE-USB-3.0-A-A-1.8M | M.56 |
| 2581730018 | IE-USB-3.0-A-A-1.8M | 0.66 |
| 2581730030 | IE-USB-3.0-A-A-3M | L.17 |
| 2581730030 | IE-USB-3.0-A-A-3M | L.37 |
| 2581730030 | IE-USB-3.0-A-A-3M | M.56 |
| 2581730030 | IE-USB-3.0-A-A-3M | 0.66 |
| 2581730050 | IE-USB-3.0-A-A-5M | L.17 |
| 2581730050 | IE-USB-3.0-A-A-5M | L.37 |
| 2581730050 | IE-USB-3.0-A-A-5M | M.56 |
| 2581730050 | IE-USB-3.0-A-A-5M | 0.66 |
| 2581810000 | IE-CDR-V14MRJ/VAPM-C | 1.9 |
| 2581810000 | IE-CDR-V14MRJ/VAPM-C | N.10 |
| 2583350000 | CABTITE BSE SML GY | 0.20 |
| 2583380000 | CABTITE SE 1.5-2 SML GY | 0.20 |
| 2583380000 | CABTITE SE 2-3 SML GY | 0.20 |
| 2583400000 | CABTITE SE 3-4 SML GY | 0.20 |
| 2583440000 | CABTITE SE 4-5 SML GY | 0.20 |
| 2583450000 | CABTITE SE 5-6 SML GY | 0.20 |
| 2583460000 | CABTITE SE 6-7 SML GY | 0.20 |
| 2583470000 | CABTITE FR 16/8 BK | 0.22 |
| 2583480000 | CABTITE FR 16/8 BK | 0.21 |
| 2583490000 | CABTITE FR 4-1 BK | 0.21 |
| 2583500000 | CABTITE CSE 7-24 LRG BK | 0.20 |
| 2583510000 | CABTITE CSE 2-11 SML BK | 0.20 |
| 2583520000 | CABTITE SE 2/ASI SML BK | 0.20 |
| 2583530000 | CABTITE SE 1/ASI SML BK | 0.20 |
| 2583540000 | CABTITE SE 2/8 SML BK | 0.20 |
| 2583550000 | CABTITE SE 2/7 SML BK | 0.20 |
| 2583560000 | CABTITE SE 4/4-5 SML BK | 0.20 |
| 2583580000 | CABTITE SE 4/3-4 SML BK | 0.20 |
| 2583590000 | CABTITE SE 4/2-3 SML BK | 0.20 |
| 2583610000 | CABTITE SE 2/5-6 SML BK | 0.20 |
| 2583620000 | CABTITE SE 2/4-5 SML BK | 0.20 |
| 2583630000 | CABTITE SE 32-33 LRG BK | 0.20 |
| 2583640000 | CABTITE SE 31-32 LRG BK | 0.20 |
| 2583650000 | CABTITE SE 30-31 LRG BK | 0.20 |
| 2583660000 | CABTITE SE 29-30 LRG BK | 0.20 |
| 2583670000 | CABTITE SE 28-29 LRG BK | 0.20 |
| 2583680000 | CABTITE SE 27-28 LRG BK | 0.20 |
| 2583690000 | CABTITE SE 26-27 LRG BK | 0.20 |
| 2583700000 | CABTITE SE 25-26 LRG BK | 0.20 |
| 2583710000 | CABTITE SE 24-25 LRG BK | 0.20 |
| 2583720000 | CABTITE FR 24/10 BK SET | 0.22 |
| 2583730000 | CABTITE SE 23-24 LRG BK | 0.20 |
| 2583740000 | CABTITE FR 16/8 BK SET | 0.22 |
| 2583750000 | CABTITE SE 22-23 LRG BK | 0.20 |
| 2583760000 | CABTITE FR 10/6 BK SET | 0.21 |
| 2583770000 | CABTITE SE 21-22 LRG BK | 0.20 |
| 2583780000 | CABTITE FR 4-1 BK SET | 0.21 |
| 2583790000 | CABTITE SE 20-21 LRG BK | 0.20 |
| 2583800000 | CABTITE FR 24/10 BK | 0.22 |
| 2583810000 | CABTITE SE 19-20 LRG BK | 0.20 |
| 2583830000 | CABTITE SE 18-19 LRG BK | 0.20 |
| 2583840000 | CABTITE SE 17-18 LRG BK | 0.20 |
| 2583850000 | CABTITE SE 16-17 LRG BK | 0.20 |
| 2583860000 | CABTITE SE 15-16 LRG BK | 0.20 |
| 2583880000 | CABTITE SE 14-15 LRG BK | 0.20 |
| 2583890000 | CABTITE CR 24/10 EMV | 0.26 |
| 2583900000 | CABTITE BSE LRG BK | 0.20 |
| 2583910000 | CABTITE CR 16/8 EMV | 0.26 |
| 2583930000 | CABTITE CR 10/6 EMV | 0.26 |
| 2583950000 | CABTITE CR 4/1 EMV | 0.26 |
| 2583960000 | CABTITE SE 15-16 SML BK | 0.20 |
| 2583980000 | CABTITE SE 14-15 SML BK | 0.20 |
| 2584000000 | CABTITE SE 13-14 SML BK | 0.20 |
| 2584010000 | CABTITE LNS M63 BK | 0.25 |
| 2584020000 | CABTITE SE 12-13 SML BK | 0.20 |
| 2584030000 | CABTITE LNS M50 BK | 0.25 |
| 2584040000 | CABTITE SE 11-12 SML BK | 0.20 |
| 2584050000 | CABTITE LNS M40 BK | 0.25 |
| 2584060000 | CABTITE SE 10-11 SML BK | 0.20 |
| 2584070000 | CABTITE LNS M32 BK | 0.25 |
| 2584080000 | CABTITE SE 9-10 SML BK | 0.20 |
| 2584090000 | CABTITE LNS M25 BK | 0.25 |
| 2584100000 | CABTITE LNS M20 BK | 0.25 |
| 2584120000 | CABTITE CGS M63 BK | 0.25 |
| 2584130000 | CABTITE CGS M50 BK | 0.25 |
| 2584150000 | CABTITE CGS M40 BK | 0.25 |
| 2584160000 | CABTITE CGS M32 BK | 0.25 |
| 2584180000 | CABTITE CGS M25 BK | 0.25 |
| 2584200000 | CABTITE CGS M20 BK | 0.25 |
| 2584210000 | CABTITE FRL 24/10 BK | 0.22 |
| 2584220000 | CABTITE FR 16/8 BK | 0.22 |
| 2584240000 | CABTITE FR 10/6 BK | 0.21 |
| 2584260000 | CABTITE FR 4-1 BK | 0.21 |
| 2584270000 | CABTITE GI BK | 0.25 |
| 2584290000 | CABTITE GI X BK | 0.25 |
| 2584300000 | CABTITE GI T BK | 0.25 |
| 2584320000 | CABTITE GI I BK | 0.25 |
| 2584330000 | CABTITE SE 8-9 SML BK | 0.20 |
| 2584340000 | CABTITE SE 31-32 LRG BK | 0.20 |
| 2584350000 | CABTITE SE 28-29 LRG BK | 0.20 |
| 2584360000 | CABTITE SE 30-31 LRG BK | 0.20 |
| 2584370000 | CABTITE SE 27-28 LRG BK | 0.20 |
| 2584380000 | CABTITE SE 29-30 LRG BK | 0.20 |

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| 2584390000 | CABTITE SE 26-27 LRG GY | 0.20 |
| 2584400000 | CABTITE SE 25-26 LRG GY | 0.20 |
| 2584410000 | CABTITE SE 24-25 LRG GY | 0.20 |
| 2584420000 | CABTITE SE 23-24 LRG GY | 0.20 |
| 2584430000 | CABTITE SE 22-23 LRG GY | 0.20 |
| 2584440000 | CABTITE SE 21-22 LRG GY | 0.20 |
| 2584450000 | CABTITE SE 20-21 LRG GY | 0.20 |
| 2584460000 | CABTITE SE 19-20 LRG GY | 0.20 |
| 2584470000 | CABTITE SE 18-19 LRG GY | 0.20 |
| 2584480000 | CABTITE SE 17-18 LRG GY | 0.20 |
| 2584490000 | CABTITE SE 16-17 LRG GY | 0.20 |
| 2584500000 | CABTITE SE 15-16 LRG GY | 0.20 |
| 2584510000 | CABTITE SE 14-15 LRG GY | 0.20 |
| 2584520000 | CABTITE BSE LRG GY | 0.20 |
| 2584550000 | CABTITE SE 15-16 SML GY | 0.20 |
| 2584560000 | CABTITE SE 14-15 SML GY | 0.20 |
| 2584570000 | CABTITE SE 13-14 SML GY | 0.20 |
| 2584590000 | CABTITE SE 12-13 SML GY | 0.20 |
| 2584600000 | CABTITE SE 11-12 SML GY | 0.20 |
| 2584610000 | CABTITE SE 10-11 SML GY | 0.20 |
| 2584630000 | CABTITE SE 9-10 SML GY | 0.20 |
| 2584650000 | CABTITE SE 8-9 SML GY | 0.20 |
| 2584660000 | CABTITE SE 7-8 SML GY | 0.20 |
| 2584670000 | CABTITE SE 7-8 SML BK | 0.20 |
| 2584680000 | CABTITE SE 4-5 SML BK | 0.20 |
| 2584690000 | CABTITE SE 6-7 SML BK | 0.20 |
| 2584710000 | CABTITE SE 5-6 SML BK | 0.20 |
| 2584730000 | CABTITE SE 3-4 SML BK | 0.20 |
| 2584760000 | CABTITE SE 2-3 SML BK | 0.20 |
| 2584780000 | CABTITE SE 1-5-2 SML BK | 0.20 |
| 2584790000 | CABTITE BSE SML BK | 0.20 |
| 2584800000 | CABTITE SE 2/ASI SML GY | 0.20 |
| 2584810000 | CABTITE SE 1/ASI SML GY | 0.20 |
| 2584820000 | CABTITE SE 2/8 SML GY | 0.20 |
| 2584830000 | CABTITE SE 2/7 SML GY | 0.20 |
| 2584840000 | CABTITE SE 4/4-5 SML GY | 0.20 |
| 2584860000 | CABTITE SE 4/3-4 SML GY | 0.20 |
| 2584870000 | CABTITE SE 4/2-3 SML GY | 0.20 |
| 2584890000 | CABTITE SE 2/5-6 SML GY | 0.20 |
| 2584900000 | CABTITE SE 2/4-5 SML GY | 0.20 |
| 2584910000 | CABTITE SE 32-33 LRG GY | 0.20 |
| 2584920000 | CABTITE SE 33-34 LRG GY | 0.20 |
| 2584980000 | IE-PS-RJ45-TH-BK-P | K.9 |
| 2588270000 | IE-CDM-V14MRJSCP/VAPM-C-II | 1.9 |
| 2588270000 | IE-CDM-V14MRJSCP/VAPM-C-II | N.9 |

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| 2592960000 | PJ ADV TEXTILE COVER | 0.32 |
| 2595510000 | CABTITE SE 33-34 LRG BK | 0.20 |
| 2595520000 | CABTITE SE 34-35 LRG BK | 0.20 |
| 2595530000 | CABTITE SE 34-35 LRG GY | 0.20 |

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Table with columns: Order No., Type, Page. Contains a long list of order numbers and their corresponding types and page numbers.

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Table with columns: Order No., Type, Page. Contains a long list of order numbers and their corresponding types and page numbers.

| Order No. | Type | Page |
|------------|-----------------------------|------|
| 2814800005 | IE-C5ES8VG0005N40N40-G-K6KV | 0.33 |
| 2814800010 | IE-C5ES8VG0010N40N40-G-K6KV | 0.33 |
| 2814800015 | IE-C5ES8VG0015N40N40-G-K6KV | 0.33 |
| 2814800020 | IE-C5ES8VG0020N40N40-G-K6KV | 0.33 |
| 2819260000 | IE-TO-RJ45-C-ZP-C5 | K.17 |

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|------------|-------------------------|------|
| 2828540000 | IE-SW-ELB-05-5TX | B.8 |
| 2828550000 | IE-SW-ELB-08-8TX | B.9 |
| 2828560000 | IE-SW-ELB-05-5GT | B.30 |
| 2828570000 | IE-SW-ELB-08-8GT | B.30 |
| 2828580000 | IE-SW-ELB-16-16TX | B.10 |
| 2828590000 | IE-SW-ELB-05-4TX-IFESFP | B.8 |
| 2828600000 | IE-SW-ELB-08-6TX-2FESFP | B.9 |

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| 2838380020 | IE-USB-A-C-2.0M | 0.68 |
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| 2860910003 | IE-C5G06LR0003F40F40-X-K6KV | 0.35 |
| 2860910008 | IE-C5G06LR0008F40F40-X-K6KV | 0.35 |
| 2860910011 | IE-C5G06LR0011F40F40-X-K6KV | 0.35 |
| 2861240000 | IE-TO-RJ12-C | K.18 |
| 2861260000 | IE-BI-SPO-C | J.17 |
| 2861280000 | IE-BI-SPO-C | L.6 |
| 2861280000 | IE-BI-SPO-C | L.7 |
| 2861280000 | IE-BI-SPO-C | L.9 |
| 2861280000 | IE-BI-SPO-C | L.11 |
| 2861280000 | IE-BI-SPO-C | L.12 |
| 2861280000 | IE-BI-SPO-C | L.13 |
| 2861280000 | IE-BI-SPO-C | L.14 |
| 2861280000 | IE-BI-SPO-C | L.15 |
| 2861280000 | IE-BI-SPO-C | M.53 |

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|------------|-------------------------|------|
| 2870090000 | U-LINK-50-DEVICES-1Y | E.6 |
| 2870100000 | U-LINK-100-DEVICES-1Y | E.6 |
| 2870110000 | U-LINK-250-DEVICES-1Y | E.6 |
| 2870120000 | U-LINK-500-DEVICES-1Y | E.6 |
| 2870130000 | U-LINK-1-CONNECTION-1Y | E.7 |
| 2870140000 | U-LINK-CNSERVER-1Y | E.7 |
| 2870790000 | IE-TO-SPO-C-LP | J.16 |
| 2870790000 | IE-TO-SPO-C-LP | K.13 |
| 2870820000 | IE-FCM-SPO-C | J.15 |
| 2870820000 | IE-FCM-SPO-C | L.36 |
| 2873910000 | IE-SR-4GT | D.10 |
| 2873920000 | IE-SR-4GT-LTE/4G-UE | D.11 |
| 2873930000 | IE-SR-4GT-LTE/4G-USEMEA | D.12 |
| 2875580000 | IE-SW-L3-SL28M-HV | C.33 |
| 2875590000 | IE-SW-L3-SL28M-LV | C.34 |
| 2876450000 | KT 8S | Q.9 |
| 2876460000 | KT MINI | Q.11 |

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| 2891450000 | CABTITE FRFT 4-1 | Q.23 |
| 2891470000 | CABTITE FRFT 4-1 SET | Q.23 |
| 2891480000 | CABTITE FRFT 10/6 | Q.23 |
| 2891500000 | CABTITE FRFT 10/6 SET | Q.23 |
| 2891510000 | CABTITE FRFT 16/8 | Q.24 |
| 2891530000 | CABTITE FRFT 16/8 SET | Q.24 |
| 2891540000 | CABTITE FRFT 24/10 | Q.24 |
| 2891560000 | CABTITE FRFT 24/10 SET | Q.24 |
| 2897320000 | IE-FC-DIP-PWC-3A/2ST/109 | L.7 |

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|------------|--------------------------|------|
| 2902340000 | IE-FCI-PWB-2USB-A/C-5V | L.30 |
| 2902350000 | IE-FCI-PWB-2USB-C-5V | L.29 |
| 2903850005 | IE-FM5Z2LM0005LDLDDX | P.6 |
| 2903850010 | IE-FM5Z2LM0010LDLDDX | P.6 |
| 2903850015 | IE-FM5Z2LM0015LDLDDX | P.6 |
| 2903850020 | IE-FM5Z2LM0020LDLDDX | P.6 |
| 2903850030 | IE-FM5Z2LM0030LDLDDX | P.6 |
| 2903850050 | IE-FM5Z2LM0050LDLDDX | P.6 |
| 2907560000 | CABTITE OFRL BK | Q.23 |
| 2907560000 | CABTITE OFRL BK | Q.24 |
| 2908030000 | IE-SW-BLB-05-5TX | B.16 |
| 2908040000 | IE-SW-BLB-08-8TX | B.17 |
| 2908050000 | IE-SW-BLB-16-16TX | B.19 |
| 2908060000 | IE-SW-BLB-24-24TX | B.20 |
| 2908070000 | IE-SW-BLB-05-5GT | B.33 |
| 2908080000 | IE-SW-BLB-08-8GT | B.35 |
| 2908090000 | IE-SW-BLB-16-16GT | B.37 |
| 2908100000 | IE-SW-BLB-05-5GT-C | B.33 |
| 2908110000 | IE-SW-BLB-08-8GT-C | B.35 |
| 2908120000 | IE-SW-BLB-16-16GT-C | B.37 |
| 2908130000 | IE-SW-BLB-16-16GT-2GESFP | B.38 |
| 2908140000 | IE-SW-BLB-05-4TX-IFESFP | B.16 |
| 2908150000 | IE-SW-BLB-08-7TX-IFESFP | B.17 |
| 2908160000 | IE-SW-BLB-08-8TX-2FESFP | B.18 |
| 2908170000 | IE-SW-BLB-18-16TX-2GESFP | B.26 |
| 2908180000 | IE-SW-BLB-05-4GT-1GESFP | B.34 |
| 2908190000 | IE-SW-BLB-10-8GT-2GESFP | B.36 |

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| 2910000000 | | |
| 2912590000 | IE-PS-VAPM-5P-2.5-QT | 1.8 |
| 2912590000 | IE-PS-VAPM-5P-2.5-QT | M.60 |

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|------------|------------------------|------|
| 2924220000 | U-LINK-1000-DEVICES-1Y | E.6 |
| 2924340000 | IE-SIDS2UE-500 | J.11 |
| 2924340000 | IE-SIDS2UE-500 | 0.5 |
| 2924340000 | IE-SIDS2UE-500 | 0.6 |
| 2924350000 | IE-SIDS2UE-500 | J.11 |
| 2924350000 | IE-SIDS2UE-500 | J.11 |
| 2924350000 | IE-SIDS2UE-500 | 0.5 |
| 2924350000 | IE-SIDS2UE-500 | 0.6 |
| 2924360000 | IE-SIES2UE-500 | J.12 |
| 2924360000 | IE-SIES2UE-500 | 0.5 |
| 2924360000 | IE-SIES2UE-500 | 0.7 |
| 2924370000 | IE-SIES2LE-500 | J.12 |
| 2924370000 | IE-SIES2LE-500 | 0.5 |
| 2924370000 | IE-SIES2LE-500 | 0.7 |
| 2926110000 | IE-SIDS2UE-100 | J.11 |
| 2926120000 | IE-SIDS2UE-100 | 0.6 |
| 2926120000 | IE-SIDS2UE-100 | J.11 |
| 2926120000 | IE-SIDS2LE-100 | 0.6 |
| 2926130000 | IE-SIES2UE-100 | J.12 |
| 2926130000 | IE-SIES2UE-100 | 0.7 |
| 2926140000 | IE-SIES2LE-100 | J.12 |
| 2926140000 | IE-SIES2LE-100 | 0.7 |

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| 2971460000 | IE-FC-DFM-PWPC | L.32 |
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| 2985050000 | IE-SWM-SLQ2-PRP/HSR | C.37 |
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| 2990440000 | IE-SR-4GT-LTE/4G-USEMEA-M | D.14 |
| 2990450000 | IE-SR-4GT-M | D.13 |

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| 3024610000 | U-LINK-BASIC-EXTENSION-1Y | E.6 |
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| 3041950000 | IE-FC-SFPP-KNOB | L.4 |
| 3042050000 | IE-FCI-DP-FF | L.10 |
| 3042050000 | IE-FCI-DP-FF | L.19 |
| 3042060000 | IE-FC-IP-PWB/1DP | L.10 |

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| 3088740000 | IE-FCI-PWB-DE-BK | L.22 |
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| 8425960000 | SAI-SK-M12 BU | Q.30 |
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| 8808330000 | IE-XR-J45/DC | M.28 |
| 8808340000 | IE-XM-ST/ST | K.21 |
| 8808380000 | IE-XM-RJ45/DC | K.15 |
| 8808370000 | IE-S-IP67 | N.16 |
| 8808380000 | IE-P-IP67 | M.27 |
| 8808420000 | IE-CT | Q.8 |
| 8808440000 | IE-XM-RJ45/DC-IP67 | M.28 |
| 8808450000 | IE-XM-RJ45/RJ45-IP67 | M.28 |

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| 8813100000 | IE-P | K.8 |
| 8813110000 | IE-P63 | K.8 |
| 8813120000 | IE-P70 | K.8 |
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| 8813130000 | IE-C7BS8VG-100 | 0.9 |

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| 8813140000 | IE-C7BS8VG-100 | 0.9 |
| 8813150000 | IE-C5CS8VG-100 | 1.13 |
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| 8813150000 | IE-C5CS8VG-100 | 0.8 |
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| 8813160000 | IE-C5CS8VG-100 | 0.8 |
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| 8813180000 | IE-C7ES8VG-100 | 0.5 |
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| 8813200000 | IE-C5ES8VG-100 | 0.5 |
| 8813210000 | IE-C5ED8VG-100 | 0.5 |
| 8813210000 | IE-C5ED8VG-100 | 0.16 |
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| 8813280000 | IE-FM6Z2V0002MSTOSTOX | P.8 |
| 8813290000 | IE-FM6Z2V0003MSTOSTOX | P.8 |
| 8813300000 | IE-FM5Z2V0001MSDOSDX | P.8 |
| 8813310000 | IE-FM5Z2V0002MSDOSDX | P.8 |
| 8813320000 | IE-FM5Z2V0003MSDOSDX | P.8 |
| 8813330000 | IE-FM6Z2V0001MSDOSDX | P.8 |
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| 8813390000 | IE-FM5Z2V0002MSTOSTOX | P.9 |
| 8813400000 | IE-FM6Z2V0002MSTOSTOX | P.9 |
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| 8813500000 | IE-DM | K.16 |
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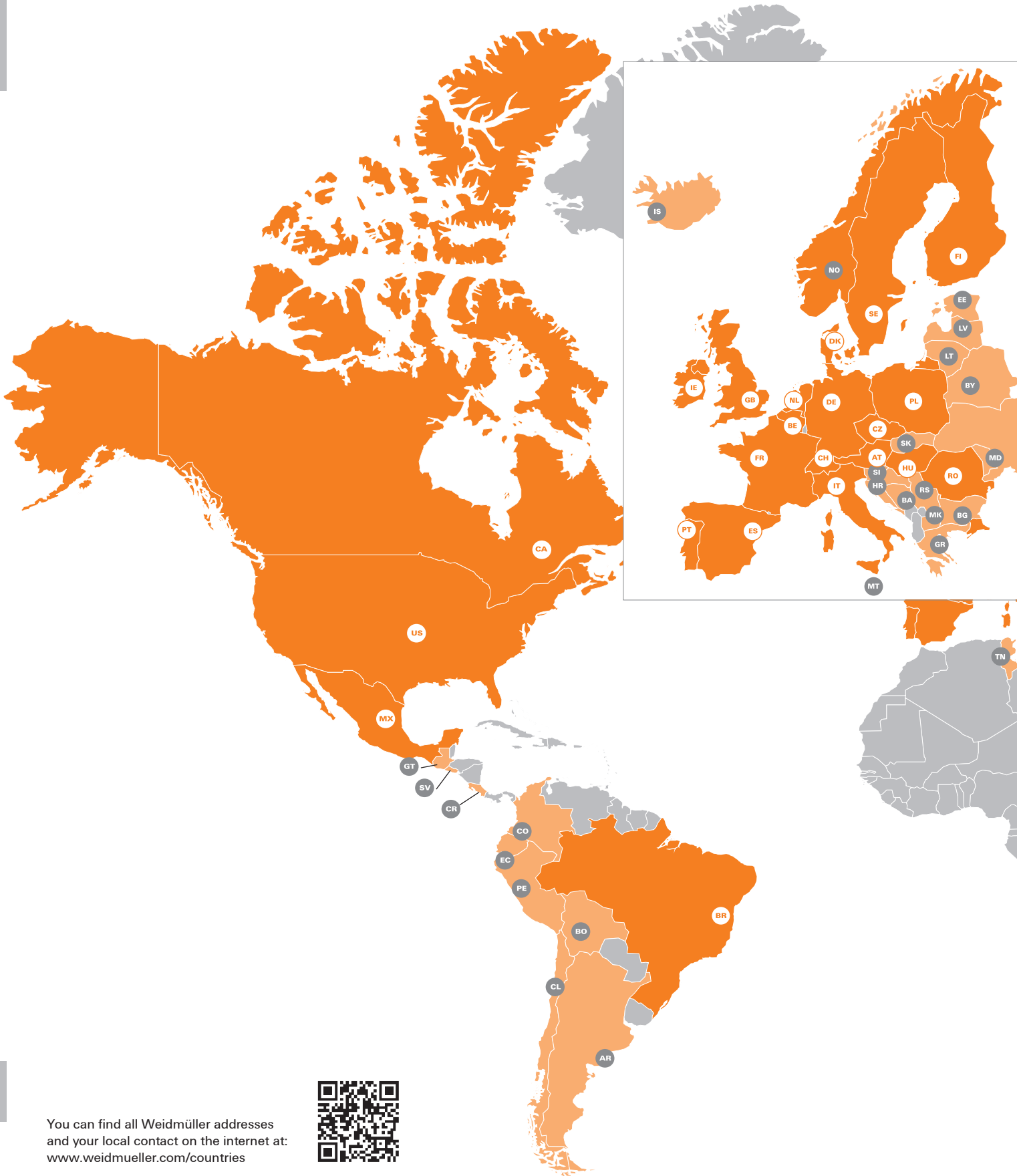
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| 8876430010 | IE-FM5D2UE0001MSDOSDX | P.11 |
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| 8876450100 | IE-FM5D2UE0010MSTOST | |

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| 9030060000 | AM 12 | 0.4 |
| 9032020000 | MEKA BL CST | 0.4 |

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| 9202800000 | TT 8 RS MP 8 | M.51 |
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| 9204370000 | IE-FISP-V4 | L.35 |
| 9204370000 | IE-FISP-V4 | L.36 |
| 9204370000 | IE-FISP-V4 | L.37 |
| 9204370000 | IE-FISP-V4 | M.20 |
| 9204370000 | IE-FISP-V4 | M.22 |
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| 9204370000 | IE-FISP-V4 | M.24 |
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| 9204760000 | FZE ESD 130 | 0.12 |
| 9204770000 | SZE ESD 130 | 0.12 |
| 9204790000 | IE-KOK-V5 | 0.19 |
| 9205000000 | KOHS 9.5+19 | 0.19 |
| 9205010000 | KOHS 19 | 0.19 |
| 9205020000 | KOPD 10.0 | 0.19 |
| 9205130000 | SEE ESD 120 | 0.12 |
| 9205140000 | SVSE ESD 130 | 0.12 |
| 9205150000 | SUPER CUT | 0.12 |
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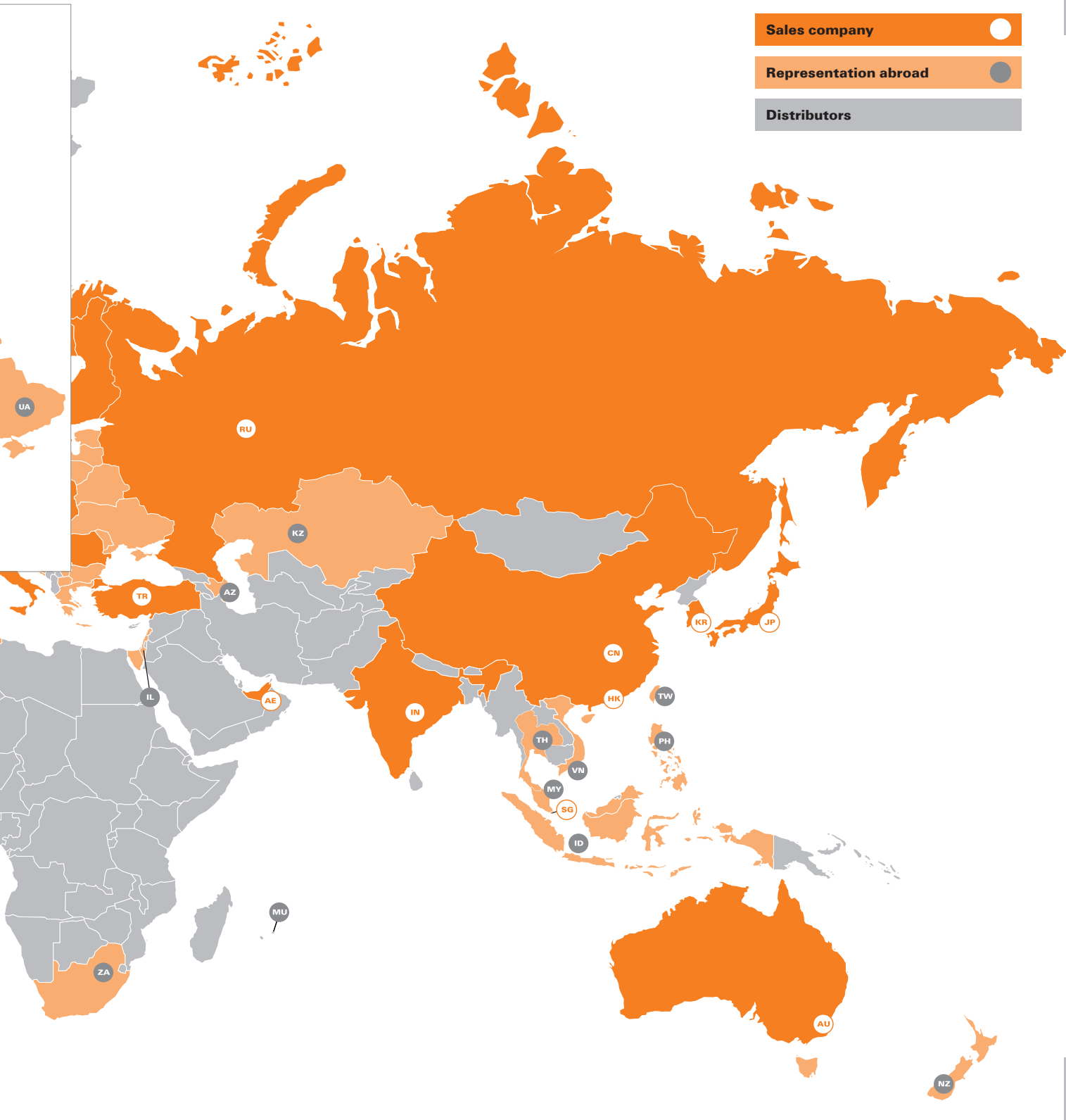
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