



# u-mation Automation and Software tools





# Automation and Software tools

## Catalogue 10

### Automation and Software tools

Automation and Industrial IoT with Weidmüller

#### Hardware

u-control / u-extend – Controllers and Edge devices

u-remote – I/O systems

u-view – Touch Panels

Overview Industrial Ethernet

#### Software

u-OS – Operating system

PROCON-Connect – Data acquisition, pre-processing and communication

PROCON-WEB – Visualisation software

Industrial AI – Data analysis and automated machine learning

ResMa® – Energy management software

u-link – Remote maintenance

### Appendix

#### Service and support

#### Index

Index Type / Index Order No.

# Have you already discovered our Weidmüller IndustryMatch?

Dive into an interactive 3D world and experience how application expertise and consulting competence come to life – intuitive and tailored to each industry.



More than information – it's an experience  
[www.weidmueller.com/industrymatch](http://www.weidmueller.com/industrymatch)





Hydrogen

Shipbuilding

Water & Wastewater Treatment

Railway

Oil & Gas

Traditional Power

Power Transmission & Distribution

Cabinet Building

## u-control / u-extend – Controllers and Edge devices

### M3000 / M4000

Page B.2



- MultiCore technology for independent installation of several runtime systems
- M3000 with two CPU cores & M4000, with 4 CPU cores

### u-extend

Page B.6



- Extension of the M-Series with memory and communication interfaces
- Up to 6 expansion modules for CAN or RS232/485

### Control web

Page B.12

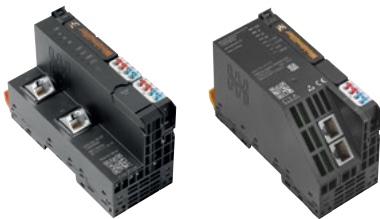


- Web-based // HTML5
- Dual-core CPU, 512 Mbyte RAM
- with integrated Software

## u-remote – I/O systems IP20

### Fieldbus coupler

Page C.4



- PROFINET, PROFIBUS, EtherCAT, ModbusTCP, EtherNet/IP, DeviceNet, CANopen, POWERLINK, CC-Link, CC-Link IE TSN, IEC 61162-450

### Digital input modules

Page C.36



- 2-16 digital inputs
- Positive & negative switching
- 2-wire, 3-wire and 3-wire+FE connection
- Electrogalvanised insulated variation

### Digital output modules

Page C.52



- 4-16 digital outputs
- Positive & negative switching
- 2-wire, 3-wire and 3-wire+FE connection
- Electrogalvanised insulated variation

### Digital input and output modules

Page C.68



- 8 digital inputs/outputs (configurable)
- Positive switching
- 2-wire, 3-wire connection

### Pulse width modulation and stepper motor modules

Page C.70



- Pulse-width modulation modules:
- 2 pulse width outputs
  - Load capacity up to 0.5 - 2 A per channel
- Stepper motor module:
- 4 digital inputs and 2 inputs for 2-channel incremental (rotary) encoder
  - 50 W power output stage

### Analogue input modules

Page C.76



- 2-8 analog inputs
- 12 to 32 bit resolution
- 2-wire, 3-wire and 3-wire+FE connection
- Extended diagnostic function
- HART communication variation
- Electrogalvanised insulated variation

# u-remote – I/O systems IP20

## Temperature modules and potentiometer input module Page C.94



- Temperature modules:
- 4 - 8 analog inputs
  - Temperature measurement via resistance
- Potentiometer input module:
- 4 potentiometer inputs
  - Measuring area from 300 Ω ... 50 kΩ

## Strain gauge module Page C.100



- 2 differential inputs for strain gages
- 24 bit resolution
- 4- or 6-wire connection

## Power measurement module Page C.102



- Acquisition and processing of measured variables from single-phase or three-phase power consumers (up to 500 V AC phase-to-phase voltage)
- Currents up to 5 A directly detectable
- Limit value monitoring

## Analogue output modules Page C.108



- 2 and 4 analog outputs
- 16 bit resolution
- 2-wire and 4-wire connection
- Extended diagnostic function
- Electro-galvanised insulated variation

## Digital counter and communication modules Page C.118/C.124



- Counter modules
- Latch, gate- and reset input
  - Counter width 32 Bit
  - Maximum input frequency 100 kHz
- Communication modules:
- IP67 SAI-PRO modules can be integrated
  - Interface for RS232, RS485 and RS422 periphery
  - IO-Link standard according to IEC 61131-9

## Safe I/O modules and safe power-feed modules Page C.132



- PROFIsafe, FailSafe over EtherCAT or CC-Link Safety
- 4 to 8 digital inputs (partly parameterizable)
- 4 digital outputs (partly parameterizable)
- OSSD-output reports status to controller

## Power-feed modules Page C.142



- Input of the current paths
- Feed-in current 10 A

## Accessories Page C.146



- Potential distribution modules
- Empty slot module
- Markers and plug-in connectors

## u-remote – I/O systems IP67

### PROFINET IO-LINK

Page C.156



- IO-Link, 4x Type A, 4x Type B
- Fieldbus protocol PROFINET
- Width 30 to 60 mm

### Multiprotocol (PROFINET + EtherCAT + EtherNet/IP)

Page C.157



- 8 to 16 digital inputs and outputs
- Fieldbus protocol PROFINET, EtherNet/IP and EtherCAT
- M12, L-coded or 7/8" connection

### Subbus

Page C.162



- Subbus Module
- 8 digital inputs/ 8 digital outputs
- 4 analog outputs

### Accessories

Page C.166



- Sensor cables
- Assembly tool

## u-view – Touch Panels

### Touch Panels – Avanced Line

Page D.4



- Capacitive multi-touch
- 7"; 10,1"; 15,6"; 21,5"
- Fitted glass front

# Overview Industrial Ethernet

## Industrial Ethernet

Seite E.2



- High-performance industrial Ethernet solutions for a wide range of industrial applications

# u-OS – Operating system

## u-OS

Page F.2



- Open: Easy integration of your own applications
- Flexible: Can be expanded to meet individual requirements
- Independent: Future-proof thanks to open standards

# PROCON-Connect – Data acquisition, pre-processing and communication

## PROCON-Connect

Page G.2



- Platform-independent app
- Open standards and interfaces
- Intuitive web engineering

# PROCON-WEB – Visualisation software

## PROCON-WEB Embedded Systems

Page H.2



- Portable and easily configurable HMI and IIoT solution
- High performance with low resource requirements
- Compatible with devices featuring OPC-UA server, Modbus interface, Codesys PLCs, and u-OS PLCs
- Dynamic web interface

## PROCON-WEB SCADA

Page H.6



- Easy creation of modern user interfaces
- Dynamic web interface
- User and rights management
- Ideal for control systems or complex digitalization tasks

# Industrial AI – Data analysis and automated machine learning

## Model Builder

Page I.2



- ModelBuilder  
From Data to Model
- ModelRuntime  
Flexible Deployment in the Cloud

## edgeML

Page I.4



- edgeML  
Simple and flexible ML integration into automation
- edgeML ModelRuntime

# ResMa® – Energy management software

## ResMa®

Page J.2



- ResMa® Basic  
Analyze data – Plan optimizations
- ResMa® Packages
  - ResMa® Energy
  - ResMa® Production
  - ResMa® Regression Analysis
  - ResMa® Recipe Management
  - ResMa® Import

# u-link – Remote maintenance

## u-link

Page K.2



- Secure remote access and remote diagnostics
- Condition monitoring and status reporting
- Individual system management
- Low configuration effort

# Service and support

## Service connects – worldwide

Page V.2



- Service connects – worldwide
- Engineering services and customised products
- Support Center
- easyConnect – Your Industrial Service Platform
- Digitales Engineering
- Connectivity Consulting
- Additional support services

## Weidmüller Configurator (WMC)

Page V.10



- Software for digital cabinet building:
- Weidmüller Configurator (WMC)
  - New: Online Weidmüller Configurator

## Digital ordering options

Page V.12



- Purchasing made easy:
- Weidmüller eShop
  - OCI interface
  - EDI interface

# Automation and Industrial IoT with Weidmüller

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Automation and Industrial IoT  
with Weidmüller

Introduction

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A.2

# The easy way into Industrial IoT and automation

## With our integrated and future-oriented portfolio

### Build on openness

Innovative Industrial IoT and automation applications create significant added value for our customers. The added value is mainly generated by software. Whether energy management, remote maintenance, predictive maintenance, asset management or classic anomaly detection – all use cases are based on a similar mode of operation: data is collected in the field, pre-processed at the machine (edge), converted into control commands and communicated to a central location (cloud or on-premise system). There, software visualizes and analyses the data and converts it into added value. **From data to value.**

This is how it works in a wide variety of industrial segments: From mechanical engineering, renewable energies and shipbuilding to smart agriculture. As an **enabler**, we offer you, our diverse customers, a comprehensive and universal **modular system** in the field of Industrial IoT and automation. We cover all data levels „from data to value“ with our **hardware, software, cloud applications and associated services**. Depending on the combination and parameterisation/configuration of the individual components, different systems are created to suit your application.



Scalability plays a central role for us, as it gives you maximum flexibility and the ability to map applications of varying complexity. **Everything can, nothing must – from individual components to fully vertically integrated systems.** Our top priority is to make it **as easy as possible** for you. Easy access to our digital services is just one example of this. With our Industrial Service Platform easyConnect, we make this possible throughout the entire life cycle.

We also focus on openness in terms of partnerships, technologies and products. We believe in open source and de facto standards. In many of our industrial IoT and automation projects, we connect ecosystems with each other through open communication interfaces, for example, thus creating future security and the greatest possible flexibility for you. Our open software platform for industrial IoT and automation u-OS is a concrete example of this.

The potential around Industry 4.0 is huge. By combining Industrial IoT and automation, we enable you **to tap into individual fields of application easily, efficiently, and consistently** and move step by step towards Industry 4.0.



# From single purpose system for automation to multi purpose Use Case



An existing automation task is to be expanded to include Industrial IoT functionalities. Nowadays, it is often no longer just about controlling a machine, for example.

To be future-proof, it is crucial to have the option to easily integrate additional software. This enables the realisation of use cases in the field of Industrial IoT.

## Open for the future | u-OS

The open, modular u-OS operating system enables efficient data pre-processing and precise control directly at the machine. CODESYS or other solutions from u-OS technology partners are available for automation. u-OS offers a web-based system configuration and is expandable so that further use cases can be realised. Various apps from Weidmüller can be used here. Thanks to the open concept, third-party apps can also be easily integrated.

The u-OS Datahub enables the software to be closely interlinked or I/O systems to be integrated quickly and easily. All apps installed on u-OS access the u-OS Datahub to retrieve the relevant data. This facilitates the interaction of different apps, which leads to a significant increase in efficiency.

The actual engineering involves little effort. No programming is necessary, configuration is sufficient.

### Your Advantages:

- Maximum flexibility and modularity
- Future-proof thanks to the open concept
- No extensive programming knowledge required, the actual engineering involves little effort



# The easy way to remote maintenance

## Use case



The remote maintenance of machines and plants is often complex and time-consuming. Additionally, there is also the demand for a targeted and safeguarded functional connection to the associated IT systems. For many users, these two issues make the connection of plants around the world a major obstacle. How do you guarantee a quick and secure access to machines while also allowing for efficient management of production plants, user clients, access rights or firmware versions?

### u-link – System for individually designed remote maintenance solutions

The easy way to remote maintenance or: how you can easily and securely reduce your service technician interventions by up to 60%.

Seamless production sits at the core of every company's operations. If production stops, due to an error for example, a quick response is required. But what if the specialist for the plant is not on site? Thanks to digitalisation, the magic words in this case are often remote maintenance. Estimates assume that up to 60% of errors can be resolved or at least supported via remote access. Not having to send out a service technician can mean savings of EUR 1,000 or more.

However, remote maintenance is not only important for analysing and correcting errors: It is also beneficial for setting up and maintaining the plant, as well as for carrying out optimisation work. Weidmüller's u-link remote access service offers a system that is easy to install, easy to configure and easy to manage – and guarantees a high level of security at all times.

#### Your Advantages:

- Secure remote access
- A wide range of functions for your use cases
- Simple operation and configuration



# The easy way to machine learning

## Use case



The use of artificial intelligence usually requires specific know-how in the field of data science. However, data science know-how alone is not enough – only the combination of data science and application knowledge provides the perfect basis for optimizing your production.

How can you bring this know-how together and make the most out of machine learning for your production without years of data science training?

### Machine Learning Tool for machinery and plant engineering

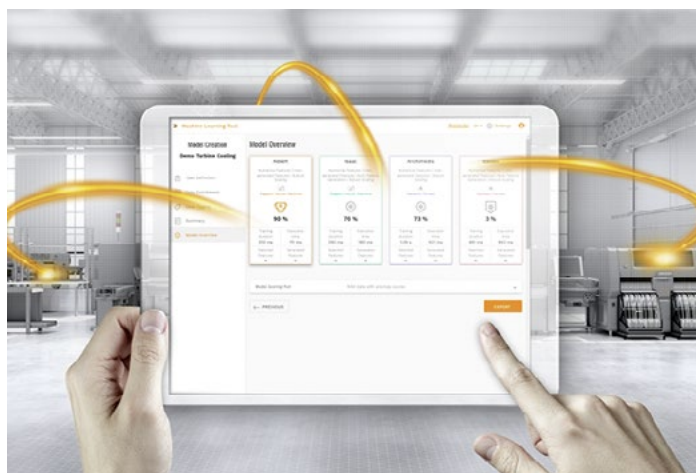
Weidmüller has standardised and simplified the use of ML for industrial applications to such an extent that domain experts without specialist knowledge of data science can generate ML solutions themselves.

The software tool guides the user through the process of model development, which is why Weidmüller also refers to this as „guided analytics“. Machine and process experts can easily create, modify and execute ML models without the support of data scientists, in order to reduce downtime and errors, optimise maintenance activities and improve product quality.

The software helps with translating and archiving the complex application knowledge into a reliable machine learning application. The experts focus on their knowledge of machine and process behaviour and link this to the ML steps running in the background.

#### Your Advantages:

- Transparency for your data
- Build your own machine learning models within minutes
- Build customer relationships and new business models

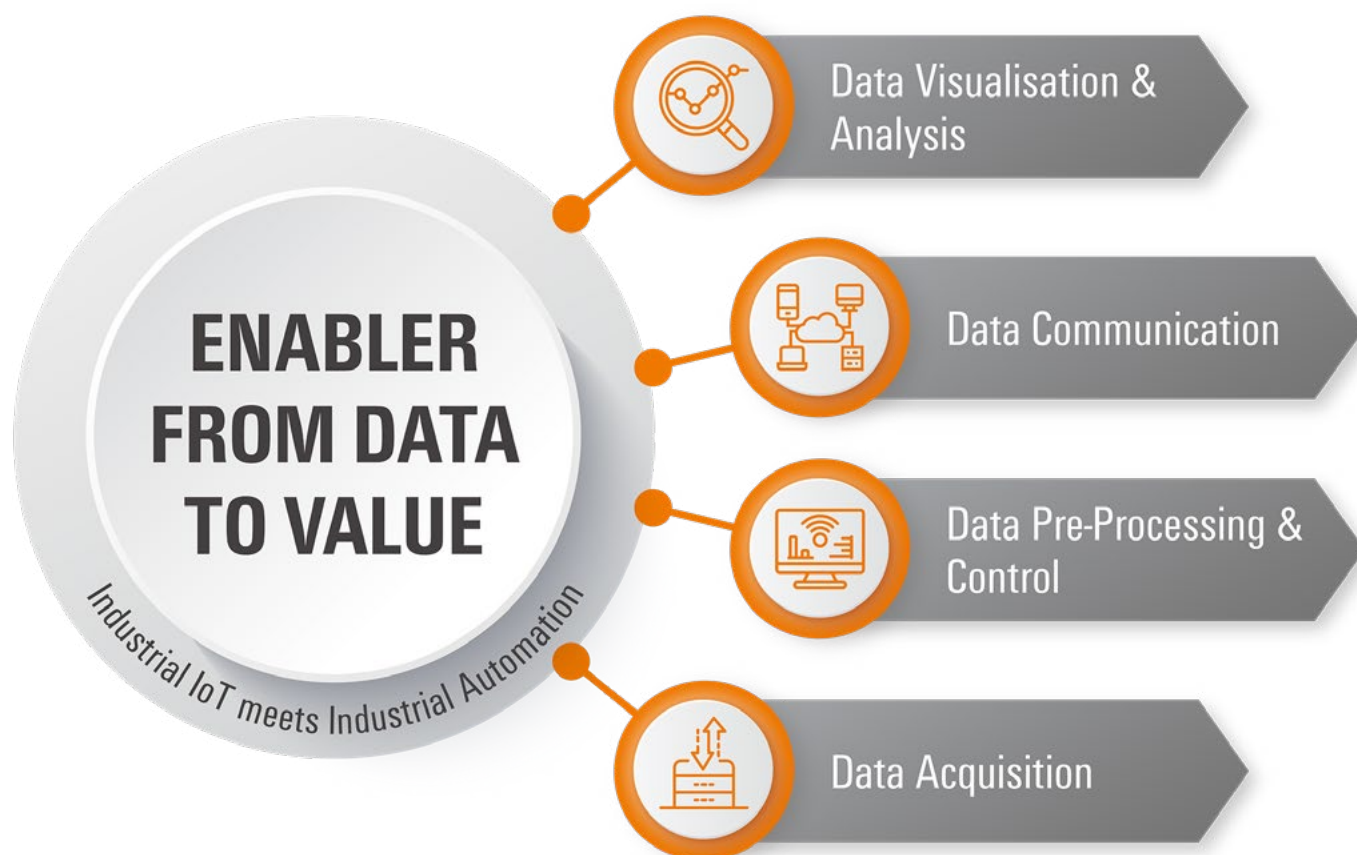


## Components and systems for all data levels

The easy way „from data to value“

With our Industrial IoT and automation portfolio, we cover all data levels from **data acquisition**, **data pre-processing/control** and **data communication** to **data visualization/analysis**. As an **enabler from data to value**, we offer you individual components as well as a comprehensive modular system for both greenfield and brownfield applications. Our range of services covers hardware, software, cloud applications and the associated services.

We hope you enjoy making your selection.





# u-control / u-extend – Controllers and Edge devices

<b>u-control / u-extend – Controllers and Edge devices</b>	M3000/M4000 modular control systems	B.2
	u-extend modules for M-Series controllers	B.6
	u-control WL2000	B.12

# Combining OT and IT to perfection

## Modular controllers for industrial automation and IoT applications

### B

In the context of automation, more and more physical devices are being integrated into networks. This promotes the trend towards convergence of IT and OT systems. The new modular control systems u-control M3000 and M4000 point the way to the future.

#### M3000 or M4000 – which controller is right for you?

With u-control M3000, automation solutions can be perfectly integrated into the IoT integration. The powerful controller also serves as an edge device for information in the network and can be expanded by connecting function modules – ideal for automation and Industrial IoT applications. u-control M4000 also offers two additional CPU cores, four Ethernet interfaces and more RAM, NV-RAM and flash memory for complex edge computing in automation.



#### Approvals:



#### Planned approvals:



**PLC and edge device in  
one device**

**MultiCore technology**



**u-OS  
inside**

**2 Ethernet interfaces**

**4 Ethernet interfaces**

**Simple option for connecting  
additional function modules**

**Optional extension with  
additional interfaces (field  
buses, Wifi, GSM)**

## M3000/M4000 modular control systems

### UC20-M3000

- Controller for automation and IoT applications
- u-OS integrated
- System supply for 64 u-remote I/O modules
- Additional interface for function modules that can be bayed on the left
- Dual-core CPU, 1.2 GHz
- 2 x 10 A current path

### UC20-M3000



#### Technical data

System data	
Connection type	PUSH IN
max. number of modules	64
Configuration interface	USB-C (3.1), MicroSD CARD
Processor	Dual Core ARM Cortex A53, 1200 MHz
Memory (Flash)	16 GB
Real-time clock	Battery buffered
Engineering tool	u-OS
Supply	
Supply voltage for inputs	24 V DC +20 %/ -15 %
Supply voltage for outputs	24 V DC +20 %/ -15 %
Feed current for I <sub>IN</sub> (input current path) , max.	10 A
Feed current for I <sub>OUT</sub> (output current path) , max.	10 A
Current consumption I <sub>IN</sub> (power segment of the field bus coupler), typ.	116 mA
General data	
Weight	588 g
Dimensions H x W x D	120 mm / 80 mm / 101 mm
Note	

#### Ordering data

Module variants	
<b>Note</b>	

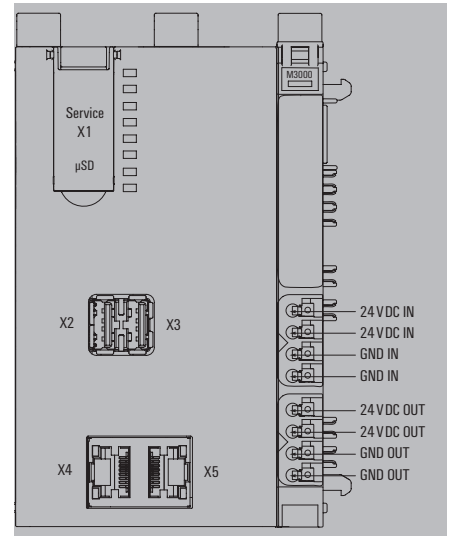
#### Accessories

Swivel marker	
Connection marker for pusher neutral	
Module marker for custom printing	
Module marker for neutral	
Thermotransfer version (material: polyester)	
USB cable (USB A to Micro USB)	
Replacement parts	
Plug-in connector unit	
Control accessories	
SD Memory Card	
Note	

Connection type	PUSH IN
max. number of modules	64
Configuration interface	USB-C (3.1), MicroSD CARD
Processor	Dual Core ARM Cortex A53, 1200 MHz
Memory (Flash)	16 GB
Real-time clock	Battery buffered
Engineering tool	u-OS
Supply voltage for inputs	24 V DC +20 %/ -15 %
Supply voltage for outputs	24 V DC +20 %/ -15 %
Feed current for I <sub>IN</sub> (input current path) , max.	10 A
Feed current for I <sub>OUT</sub> (output current path) , max.	10 A
Current consumption I <sub>IN</sub> (power segment of the field bus coupler), typ.	116 mA
Weight	588 g
Dimensions H x W x D	120 mm / 80 mm / 101 mm

Type	Qty.	Order No.
UC20-M3000	1	2839150000
A termination kit (UC20-EBK-ACC) is included in the controller package.		

Type	Qty.	Order No.
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
IE-USB-A-MICRO-1.8M	1	1487980000
UR20-PK-1334950000-SP	5	2605360000
MICRO-SD-CARD-20GB	1	2684400000
u-link licences: See catalogue 9 - Industrial Ethernet in chapter E, PROCON-WEB licences: See chapter G		



**UC20-M4000**

- Controller for automation and IoT applications
- u-OS integrated
- System supply for 64 u-remote I/O modules
- Additional interface for function modules that can be bayed on the left
- Quad-Core CPU, 1.2 GHz
- 2 x 10 A current path

**Technical data****System data**

Connection type  
max. number of modules  
Configuration interface  
Processor  
Memory (Flash)  
Real-time clock  
Engineering tool

**Supply**

Supply voltage for inputs  
Supply voltage for outputs  
Feed current for  $I_{IN}$  (input current path) , max.  
Feed current for  $I_{OUT}$  (output current path) , max.  
Current consumption  $I_{IN}$  (power segment of the field bus coupler), typ.

**General data**

Weight  
Dimensions H x W x D

**Note****Ordering data****Module variants****Note****Accessories**

Swivel marker  
Connection marker for pusher neutral  
Module marker for custom printing  
Module marker for neutral  
Thermotransfer version (material: polyester)  
USB cable (USB A to Micro USB)

**Replacement parts**

Plug-in connector unit

**Control accessories**

SD Memory Card

**Note****UC20-M4000**

PUSH IN
64
USB-C (3.1), MicroSD CARD
Quad Core ARM Cortex A53, 1200 MHz
16 GB
Battery buffered
u-OS
24 V DC +20 %/ -15 %
24 V DC +20 %/ -15 %
10 A
10 A
116 mA
604 g
120 mm / 80 mm / 101 mm

Type	Qty.	Order No.
UC20-M4000	1	2839160000

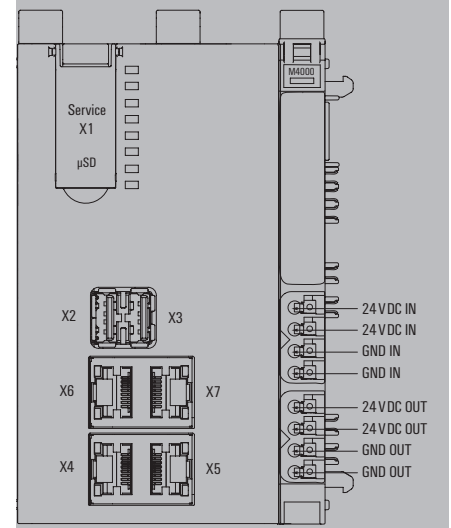
A termination kit (UC20-EBK-ACC) is included in the controller package.

Type	Qty.	Order No.
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
IE-USB-A-MICRO-1.8M	1	1487980000

UR20-PK-1334950000-SP	5	2605360000
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MICRO-SD-CARD-20GB	1	2684400000
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u-link licences: See catalogue 9 - Industrial Ethernet in chapter E, PROCON-WEB licences: See chapter G



# Open system architecture: Lining up hardware on the left side of the controller

## u-extend modules for the M-series controllers

### B

Interfaces to the left of Weidmüller’s u-control M3000 and M4000 control systems increase the flexibility of systems. In addition to the open operating system u-OS, the u-control M-Series, together with u-extend, offers the flexibility to configure or retrofit hardware interfaces on controllers.

#### Modular controls

The modular control systems u-control M3000 and M4000 can be extended on the left side, e.g. with a serial or a CAN interface. Additionally, extra memory can be added via an M.2 interface.

The left-side mounted modules of the u-control are made up of two parts. On the one hand, from the function module; mounted on the mounting rail, it keeps the connection to the controller via the USB and PCIe interfaces. On the other hand, it consists of expansion modules. Each function module can carry up to two expansion modules. With the launch of u-extend, Weidmüller offers a CAN interface and a serial interface (RS232 / RS485) as expansion modules.

#### Planned approvals:



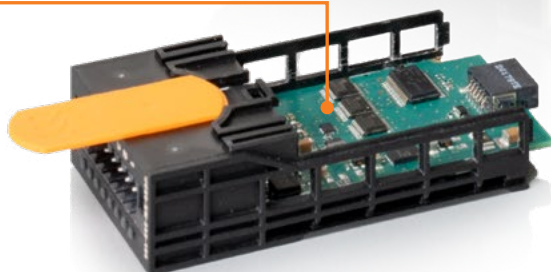
**Function Module UC20-FM-BASE**

- 2 slots for extension modules
- u-control extension module interface
- Power supply via controller
- Placeholder Modules included



**Extension modules**

- UC20-EM-CAN
- UC20-EM-232-485

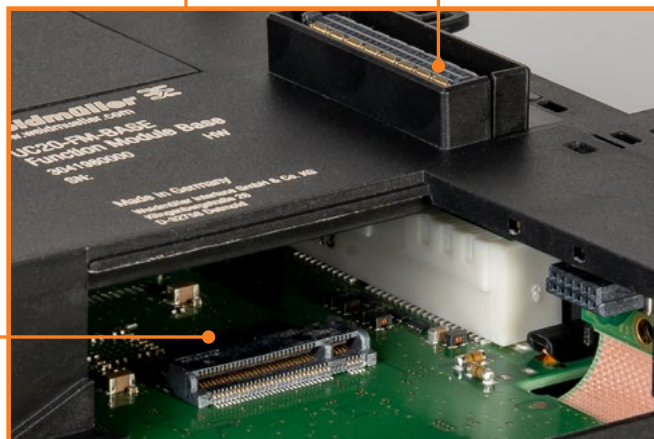


**Interface to control via Multi Standard Interface**

- Power supply
- PCIe interface
- Ethernet
- USB

**Memory Expansion**

- M.2 interface
- PCIe Gen 1 x2



**u-extend modules for the M-series controllers**

**UC20-FM-BASE**

- Function module for left-side expansion of the u-control M series
- Simple interface connection via standard PC interfaces (USB and PCIe)
- Storage expansion via M.2 interface - Easy integration into container software (Docker) or other apps
- Power supply via the control systems
- Customised solutions – easy to implement

**UC20-FM-BASE**



**Technical data**

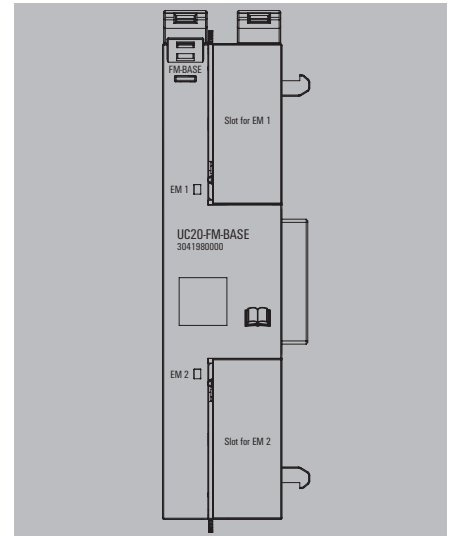
<b>System data</b>	
max. number of modules	2
<b>Supply</b>	
Supply voltage	5 V DC ±4 % via UC20
<b>General data</b>	
Weight	120 g
Dimensions H x W x D	120 mm / 30 mm / 101 mm
<b>Note</b>	A maximum of 3x UC20-FM-BASE units can be connected to a u-control M-Series; memory expansion is only available in the first module.

**Ordering data**

<b>Module variants</b>		
<b>Type</b>	<b>Qty.</b>	<b>Order No.</b>
UC20-FM-BASE	1	3041980000
<b>Note</b>		

**Accessories**

	Plug-in module	<b>Type</b>	<b>Qty.</b>	<b>Order No.</b>
	Plug-in module	UC20-EM-CAN	1	3042010000
		UC20-EM-232-485	1	3042000000
	Module marker for custom printing	DEK 5/8-11.5 MC SDR	100	1341610000
	Module marker for neutral	DEK 5/8-11.5 MC NE WS	500	1341630000
<b>Note</b>				



### UC20-EM-CAN

- Plug-in module for the 'UC20-FM-BASE' function module
- Extends the controller with a CAN interface
- Direct connection via standard Linux drivers
- Easy integration into container software (Docker) or other applications
- Power supply via the function module

### UC20-EM-CAN



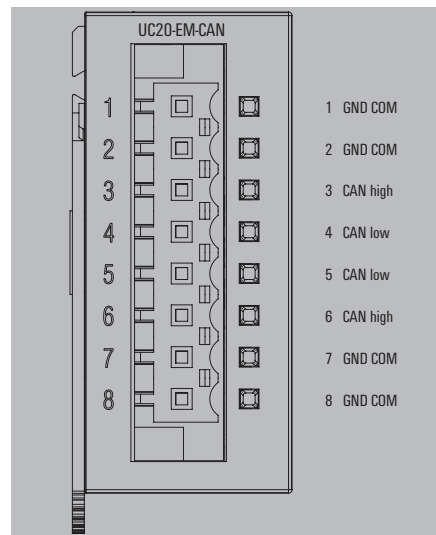
### Technical data

System data	
Connection type	PUSH IN
Interface	CAN-FD, CAN
Supply	
Galvanic isolation	500 V DC
Power consumption	<1 W
Transmission rate	CAN: 50, 100, 125, 250, 500, 800, 1000 kBit/s, CAN-FD: 50 kBit/s ... 4 MBit/s
Current consumption $I_m$ (power segment of the field bus coupler), typ.	<200 mA
General data	
Weight	23 g
Dimensions H x W x D	66.5 mm / 18.5 mm / 40.5 mm
Note	

### Ordering data

Module variants		
Type	Qty.	Order No.
UC20-EM-CAN	1	3042010000
Note		

Type	Qty.	Order No.
UC20-EM-CAN	1	3042010000
Note		



**u-extend modules for the M-series controllers**

**UC20-EM-232-485**

- Plug-in module for the 'UC20-FM-BASE' function module
- Extends the controller with an RS232/485 interface
- Direct connection via standard Linux drivers
- Easy integration into container software (Docker) or other apps
- Power supply via the function module

**UC20-EM-232-485**



**Technical data**

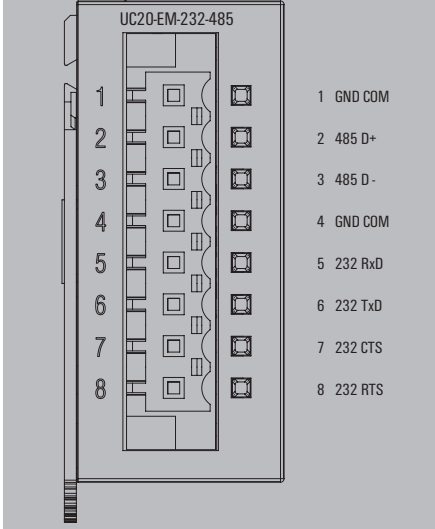
System data	
Connection type	PUSH IN
Interface	RS232/485
Supply	
Galvanic isolation	500 V DC
Power consumption	<1 W
Transmission rate	300 / 600 / 1200 / 1800 / 2400 / 4800 / 9600 / 14400 / 19200 / 28800 / 38400 / 57600 / 115200 / 230400 Bit/s
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	<200 mA
General data	
Weight	23 g
Dimensions H x W x D	40.5 mm / 18.5 mm / 66.5 mm
Note	

PUSH IN		
RS232/485		
500 V DC		
<1 W		
300 / 600 / 1200 / 1800 / 2400 / 4800 / 9600 / 14400 / 19200 / 28800 / 38400 / 57600 / 115200 / 230400 Bit/s		
<200 mA		
23 g		
40.5 mm / 18.5 mm / 66.5 mm		

**Ordering data**

Module variants	
Note	

Type	Qty.	Order No.
UC20-EM-232-485	1	3042000000





## Flexible automation of applications

### u-control WL2000 for compact and cost-optimised control

The u-control WL2000 controller is based on the compact design of the u-remote fieldbus coupler – for even greater space saving and maximum flexibility when it comes to the implementation of individual automation solutions. It is compatible with the u-remote range and allows for direct connection of I/O modules. Combined with our open u-OS operating system, it can be utilised for its entire range of applications, and offers an excellent level of customisation. For further information on u-OS, read chapter E.

The u-control WL2000 is equipped with an Ethernet-based fieldbus and one or optionally two TCP/IP interfaces. The controller also has an optional CAN interface. In addition, communication via the Modbus TCP protocol or OPC-UA is also possible over our u-OS operating system and Codesys. u-control WL2000 also has a Dual-Core ARM A9 processor and a USB service interface. In addition to the battery-buffered real-time clock, there is also a plug-in station for a microSD card with up to 32 GB of storage space for your projects.



**Versatile connection options**  
Fitted with a fieldbus and TCP/IP interface, plus an optional CAN interface.

**Battery-buffered real-time clock**  
Battery-buffered real-time clock and slot for MicroSD cards up to 32 GB.

**Separate power supply**  
Galvanic isolation of the physical input and output power supply.

**u-OS  
inside**

**Simple data exchange**  
The micro USB interface enables easy data exchange and service of the control.

**Input & output current**  
3 separate current paths for system bus, as well as input current and output current path.

## u-control WL2000

### UC20-WL2000-AC

- Controller for automation and IoT applications
- Engineering tool u-create web
- System supply of 64 I/O modules
- Dual-Core CPU, 624 MHz
- 2 x 5 A current path

### UC20-WL2000-AC



#### Technical data

System data	
Connection type	2 x RJ45 plug-in connectors
max. number of modules	64
Configuration interface	Micro USB 2.0
Processor	Dual Core ARM Cortex A9, 624 MHz, 512 Mbyte RAM
Memory (Flash)	8 GB, 32 GB via microSD
Real-time clock	Battery buffered
Engineering tool	u-create web, u-OS
Supply	
Supply voltage for inputs	24 V DC +20 % / -15 %
Supply voltage for outputs	24 V DC +20 % / -15 %
Feed current for I <sub>IN</sub> (input current path) , max.	5 A
Feed current for I <sub>OUT</sub> (output current path) , max.	5 A
Current consumption I <sub>IN</sub> (power segment of the field bus coupler), typ.	116 mA
General data	
Weight	232 g
Dimensions H x W x D	120 mm / 52 mm / 76 mm
Note	

#### Ordering data

Module variants	
	Automation controller (Web engineering)
Note	

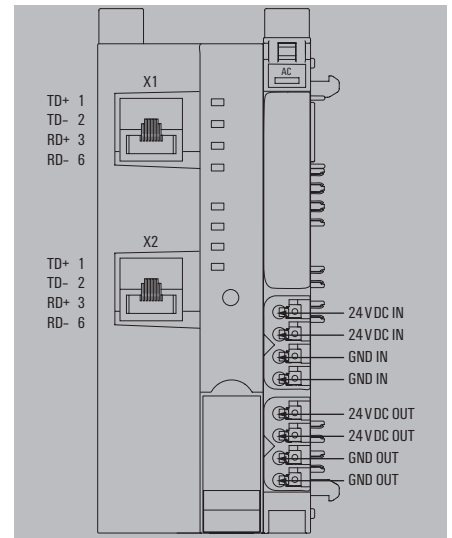
#### Accessories

	Swivel marker
	Connection marker for pusher neutral
	Module marker for custom printing
	Module marker for neutral
	Thermotransfer version (material: polyester)
	USB cable (USB A to Micro USB)
Replacement parts	
	Plug-in connector unit
Control accessories	
	SD Memory Card
	Battery for real-time clock
Note	

	2 x RJ45 plug-in connectors
	64
	Micro USB 2.0
	Dual Core ARM Cortex A9, 624 MHz, 512 Mbyte RAM
	8 GB, 32 GB via microSD
	Battery buffered
	u-create web, u-OS
	24 V DC +20 % / -15 %
	24 V DC +20 % / -15 %
	5 A
	5 A
	116 mA
	232 g
	120 mm / 52 mm / 76 mm

Type	Qty.	Order No.
UC20-WL2000-AC	1	1334950000
A termination kit (UC20-EBK-ACC) is included in the controller package.		

Type	Qty.	Order No.
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
IE-USB-A-MICRO-1.8M	1	1487980000
UR20-PK-1334950000-SP	5	2605360000
MICRO-SD-CARD-20GB	1	2684400000
BATTERY-CR1220-3V	1	2684410000
u-link licences: See catalogue 9 - Industrial Ethernet in chapter E, PROCON-WEB licences: See chapter G		



**UC20-WL2000-AC-CAN**

- Controller for automation and IoT applications
- Engineering tool u-create web
- System supply of 64 I/O modules
- Dual-Core CPU, 624 MHz
- 2 x 5 A current path
- CAN Interface

**UC20-WL2000-AC-CAN**



**Technical data**

**System data**

Connection type
max. number of modules
Configuration interface
Processor
Memory (Flash)
Real-time clock
Engineering tool

**Supply**

Supply voltage for inputs
Supply voltage for outputs
Feed current for I <sub>IN</sub> (input current path) , max.
Feed current for I <sub>OUT</sub> (output current path) , max.
Current consumption I <sub>IN</sub> (power segment of the field bus coupler), typ.

**General data**

Weight
Dimensions H x W x D

**Note**

PUSH IN
64
Micro USB 2.0
Dual Core ARM Cortex A9, 624 MHz, 512 Mbyte RAM
8 GB, 32 GB via microSD
Battery buffered
u-create web, u-OS
24 V DC +20 %/ -15 %
24 V DC +20 %/ -15 %
5 A
5 A
116 mA
232 g
120 mm / 52 mm / 76 mm

**Ordering data**

**Module variants**

Automation controller (Web engineering)

**Note**

Type	Qty.	Order No.
UC20-WL2000-AC-CAN	1	2928020000
A termination kit (UC20-EBK-ACC) is included in the controller package.		

**Accessories**

Swivel marker
Connection marker for pusher neutral
Module marker for custom printing
Module marker for neutral
Thermotransfer version (material: polyester)
USB cable (USB A to Micro USB)

**Replacement parts**

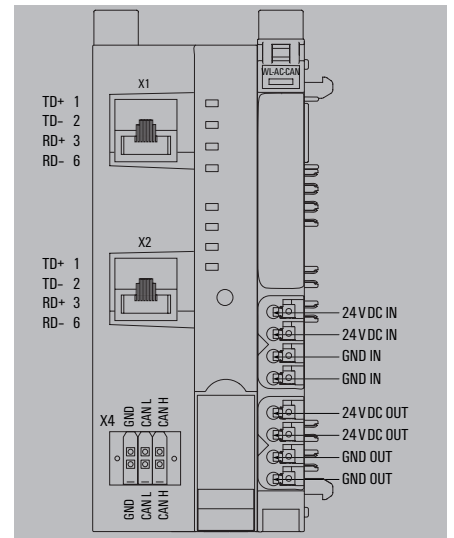
Plug-in connector unit

**Control accessories**

SD Memory Card  
Battery for real-time clock

**Note**

Type	Qty.	Order No.
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
IE-USB-A-MICRO-1.8M	1	1487980000
UR20-PK-1334950000-SP	5	2605360000
MICRO-SD-CARD-20GB	1	2684400000
BATTERY-CR1220-3V	1	2684410000
u-link licences: See catalogue 9 - Industrial Ethernet in chapter E, PROCON-WEB licences: See chapter 6		



# B

# u-remote – I/O Systems

<b>u-remote – I/O Systeme</b>	<b>I/O system IP20</b>		
		Introduction	C.2
		Fieldbus coupler	C.4
		Digital input modules	C.36
		Digital output modules	C.52
		Digital input and output modules	C.68
		Pulse width modulation and stepper motor modules	C.70
		Analogue input modules	C.76
		Temperature modules and potentiometer input module	C.94
		Strain gauge module	C.100
		Power measurement module	C.102
		Analogue output modules	C.108
		Digital counter modules	C.118
		Communication modules	C.124
		Safe I/O modules and safe power-feed modules	C.132
		Power-feed modules	C.142
		System overview	C.150
		Decentralised I/O system IP20 – u-remote	C.152
	<b>I/O system IP67</b>	Introduction	C.154
		u-remote IP67 – PROFINET IO-Link, Multiprotocol	C.156
		SAI Active Universal Pro	C.162
		Accessories for sensor cables	C.166
		Quick selection IP67 remote I/O modules	C.172
		u-mation configurator	C.174

## Achieving maximum efficiency in the control cabinet

### With great savings potential and optimum system performance

u-remote from Weidmüller is the reliable interface between field bus and field level in automation. The modular system is based on various components: a fieldbus coupler, up to 64 I/O modules, optional power-feed modules and a wealth of accessories, such as markers and terminating elements.

**C** The fieldbus coupler is the central link between the various field bus standards and the u-remote system bus. At the same time, up to 64 I/O modules are supplied via its integrated power contacts. The well-engineered technology of the connection system enables 2 x 10 A to be supplied for the input and output modules and the system voltage to be fully supplied through the fieldbus coupler. Every fieldbus coupler provides direct access to the u-remote system via a web server without additional software having to be installed. This means that the system can be parameterised and its configuration checked. Inputs and outputs can also be checked or influenced. The connection may take the form of an Ethernet-based field bus or micro USB. The u-remote fieldbus couplers are integrated in the standard simple manner. The corresponding development environments of the control systems and the device description files available online, e.g. GSD, ESD, EDS or XML, can be used to easily perform the necessary settings.

The modularly structured I/O modules are unique in that they allow the sensor and actuator wiring to be designed in both a robust and plug-in manner. This allows the electronics to be replaced at any time even with permanent wiring. This achieves an invaluable time saving, in terms of both wiring inaccessible cabinets and rapidly replacing sensors. Thanks to the "PUSH IN" technology for up to 1.5 mm<sup>2</sup>, in their narrowest form of 11.5 mm, the modularly structured u-remote I/O modules can be used for all sensor and actuator connections with a very high connection density. A clear status and diagnosis display on the connection also ensures rapid and precise checks for individual sensors and actuators.



**Why waste space?**

Design your cabinets one size smaller: u-remote, with the highest connection density on a module, offers you the most slender module width and a far lower space requirement for power-feed modules – an unrivaled channel density and extremely flexible design options.

**Simply plug and go**

The plug-in connection level allows sensors and actuators to be connected with pre-assembled cables. This means improved time benefits, better handling, and minimises the number of mistakes in system wiring.

**Diagnostics, even without a control connection**

u-remote simplifies machine commissioning section-by-section and accelerates maintenance work with its integrated web server. Thanks to the high performance diagnostic tool, you can simulate the functionality of inputs and outputs prior to control connection. You can conduct plain text error analyses using any standard browser – whether you're working on-site or remotely.

**Intelligently separated**

u-remote separates the supply for inputs and outputs using two 10 A current paths which are able to withstand high loads. High productivity translates into fewer power-feed modules and therefore more space and less planning.



# PROFIBUS fieldbus coupler

## DP-V1, Web server tool, Sub-D connection



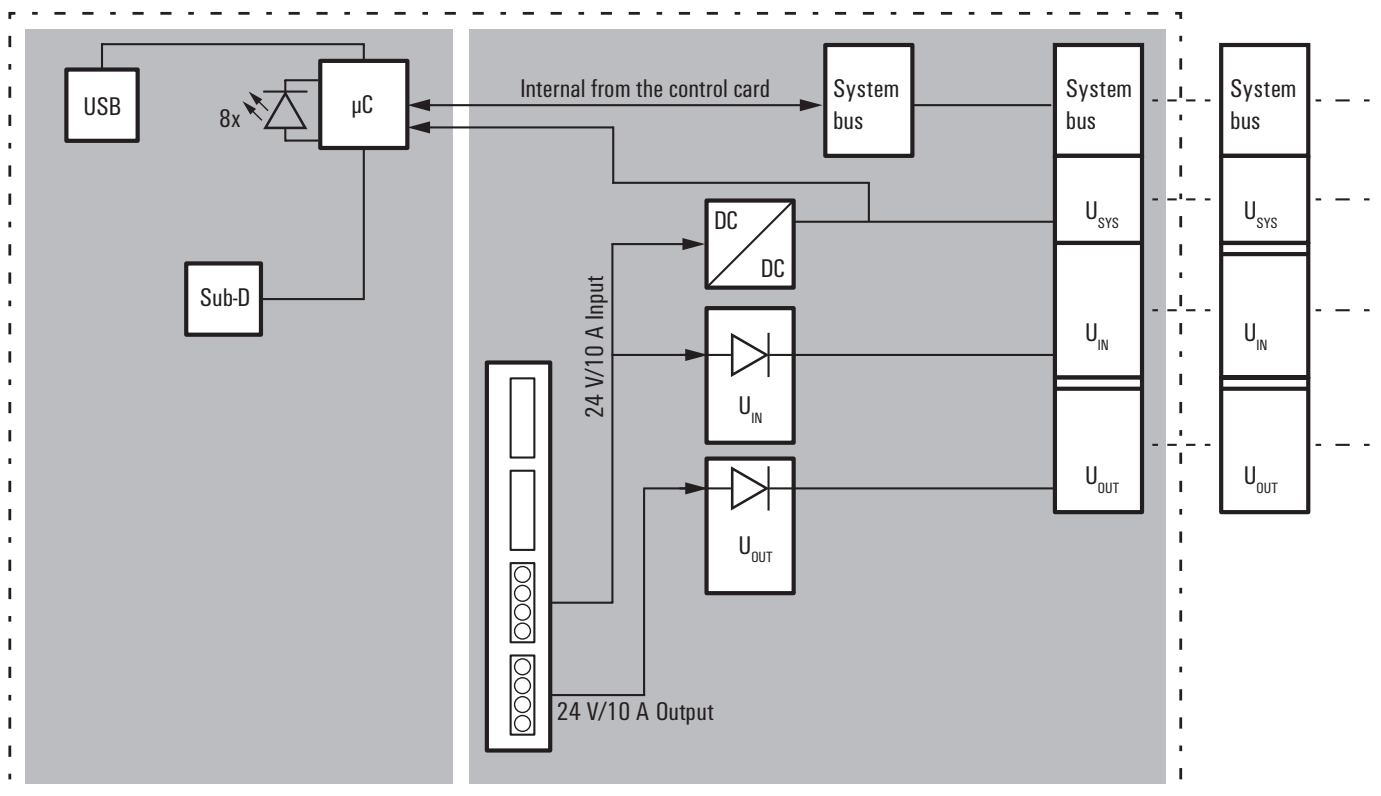
In automation technology, the PROFIBUS-DP standard enables the controlled incorporation of sensors and actuators via one central control unit.

The UR20-FBC-PB-DP-V2 fieldbus coupler is a PROFIBUS-DP-V1 participant certified by the PROFIBUS user organisation. With options for connecting up to 64 u-remote participants, it serves as the head module for the u-remote system bus. The PROFIBUS-DP coupler has a Sub-D plug-in connector and supports all services according to the DP-V1 specification. Two rotary coding switches are used to address individual PROFIBUS participants.

The coupler can be activated with a system-independent web server application via the USB service interface. All information, such as diagnoses, status values and parameters, can therefore be read out. All connected inputs can also be simulated or outputs set. The initial system power supply is already integrated in the fieldbus coupler. Power is supplied via two 4-pin connectors, separated into the input and output current paths.

Since the PROFIBUS-DP products from Weidmüller make full use of all the latest technological possibilities, such as GSD files and diagnosis messages, they actively support your application in the most important tasks – from engineering and commissioning to fault diagnosis.

### Block diagram PROFIBUS fieldbus coupler



## PROFIBUS

- 2 x 10 A current paths
- Web server
- System supply of 64 I/O modules
- Temperature range -20... +60 °C
- PROFIBUS DP-V1
- Address can be set using rotary switch

## UR20-FBC-PB-DP-V2



### Technical data

#### System data

Connection type
Field bus protocol
Process data
Parameter data
Diagnostic data
max. number of modules
Configuration interface
Transmission rate of field bus, max.
Transmission speed of system bus, max.

#### Supply

Supply voltage for inputs
Supply voltage for outputs
Feed current for $I_{IN}$ (input current path) , max.
Feed current for $I_{OUT}$ (output current path) , max.
Current consumption $I_{IN}$ (power segment of the field bus coupler), typ.

#### General data

Weight
Dimensions H x W x D

#### Note

9-pole SUB-D socket (female)

PROFIBUS DP-V1

488 Byte

244 Byte

244 Byte

64

Micro USB 2.0

12 Mbit/s

48 MBit/s

24 V DC +20 %/ -15 %

24 V DC +20 %/ -15 %

10 A

10 A

90 mA

247 g

120 mm / 52 mm / 76 mm

Download of GSD-file on [www.weidmueller.com](http://www.weidmueller.com)

### Ordering data

#### Module variants

Field bus coupler, Profibus DP-V1

#### Note

Type	Qty.	Order No.
UR20-FBC-PB-DP-V2	1	2614380000

A termination kit (UR20-EBK-ACC) is included in the coupler package

### Accessories

Type	Qty.	Order No.
Termination kit	5	1346610000
Swivel marker	20	1339920000
Connection marker for pusher neutral	960	1323710000
Module marker for custom printing	100	1341610000
Module marker for neutral	500	1341630000
Thermotransfer version (material: polyester)	1	1429420000
USB cable (USB A to Micro USB)	1	1487980000

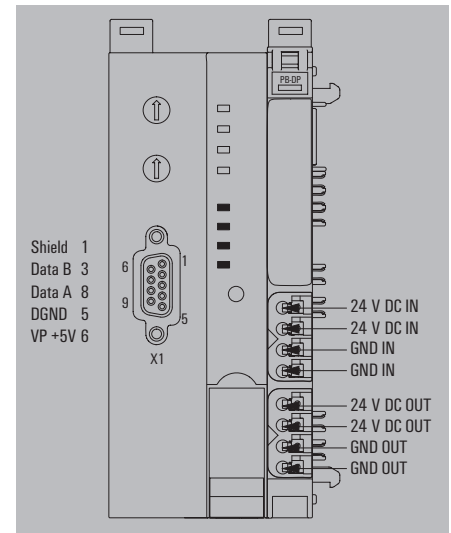
#### Replacement parts

Plug-in connector unit

#### Note

UR20-PK-2614380000-SP	5	2623120000
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1 roll = 1000 labels = 1 Qty.  
1 sheet = 60 labels = 1 unit



# PROFINET fieldbus coupler

## RT and IRT, Webserver Tool, two RJ45 Ports, 100 Mbit/s

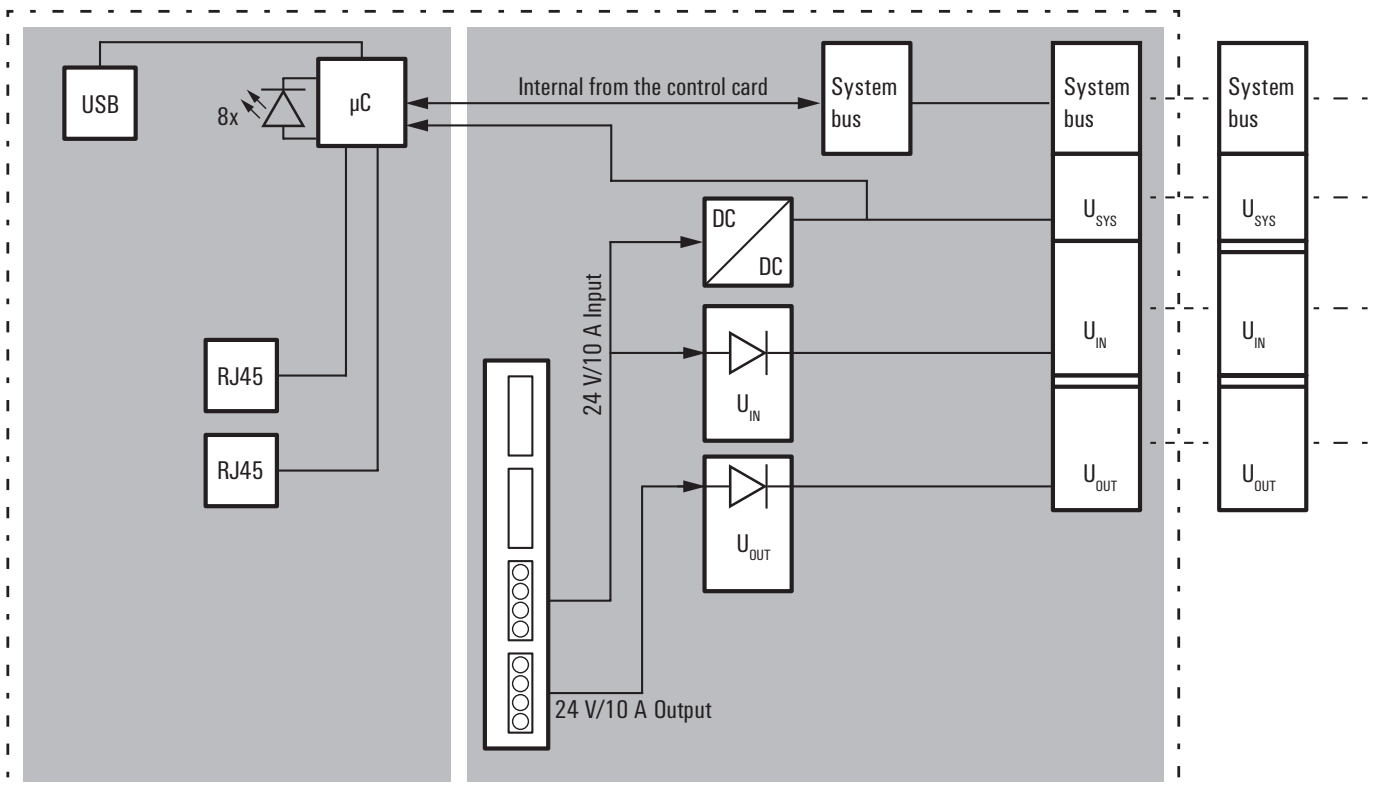


PROFINET is gaining in importance as a rapidly growing Industrial Ethernet Standard. By supporting real-time functionality (RT) and isochronous real-time functionality (IRT), the technology complies with modern system and application requirements to a large extent. The UR20-FBC-PN-IRT-V2 fieldbus coupler is a PROFINET-IRT participant certified by the PROFIBUS user organisation. It is able to connect up to 64 u-remote participants and two Ethernet ports with integrated switch to implement a line network structure.

The coupler can be activated with a system-independent web server application via the USB service interface or the Ethernet ports. All information, such as diagnoses, status values and parameters, can therefore be read out. All connected inputs can also be simulated or outputs set. The initial system power supply is already integrated in the fieldbus coupler. Power is supplied via two 4-pin connectors, separated into the input and output current paths.

Since the PROFINET products from Weidmüller make full use of all the latest technological possibilities, such as GSDML files and diagnosis messages, they actively support your application in the most important tasks – from engineering and commissioning to fault diagnosis.

### Block diagram PROFINET fieldbus coupler



**PROFINET**

- 2 x 10 A current paths
- Web server
- System supply of 64 I/O modules
- Temperature range -20... +60 °C
- PROFINET IRT/RT capable
- PROFINET diagnosis
- LLDP – Neighborhood detection

**Technical data**

System data	
Connection type	2x RJ45 plug-in connectors
Field bus protocol	PROFINET IRT+RT
Process data	1024 Byte
Parameter data	1485 Byte
Diagnostic data	1485 Byte
Fast Startup	Yes
max. number of modules	64
Configuration interface	Micro USB 2.0
Transmission rate of field bus, max.	100 Mbit/s
Transmission speed of system bus, max.	48 Mbit/s
Supply	
Supply voltage for inputs	24 V DC +20 % / -15 %
Supply voltage for outputs	24 V DC +20 % / -15 %
Feed current for I <sub>in</sub> (input current path) , max.	10 A
Feed current for I <sub>out</sub> (output current path) , max.	10 A
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	100 mA
General data	
Weight	247 g
Dimensions H x W x D	120 mm / 52 mm / 76 mm
Note	
Download of GSDML-file on <a href="http://www.weidmueller.com">www.weidmueller.com</a>	

**Ordering data**

Module variants	
	Field bus coupler, PROFINET IRT
Note	

**Accessories**

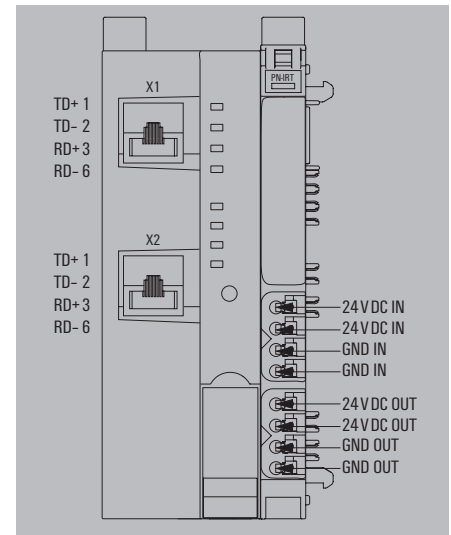
	Termination kit
	Swivel marker
	Connection marker for pusher neutral
	Module marker for custom printing
	Module marker for neutral
	Thermotransfer version (material: polyester)
	USB cable (USB A to Micro USB)
Replacement parts	
	Plug-in connector unit
Note	

**UR20-FBC-PN-IRT-V2**

2x RJ45 plug-in connectors
PROFINET IRT+RT
1024 Byte
1485 Byte
1485 Byte
Yes
64
Micro USB 2.0
100 Mbit/s
48 Mbit/s
24 V DC +20 % / -15 %
24 V DC +20 % / -15 %
10 A
10 A
100 mA
247 g
120 mm / 52 mm / 76 mm
Download of GSDML-file on <a href="http://www.weidmueller.com">www.weidmueller.com</a>

Type	Qty.	Order No.
UR20-FBC-PN-IRT-V2	1	2566380000
A termination kit (UR20-EBK-ACC) is included in the coupler package		

Type	Qty.	Order No.
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
IE-USB-A-MICRO-1.8M	1	1487980000
UR20-PK-2566380000-SP	5	2623640000
1 roll = 1000 labels = 1 Qty. 1 sheet = 60 labels = 1 unit		



## PROFINET fieldbus coupler ECO

RT, Webserver tool,  
two RJ45 Ports, 100 Mbit/s



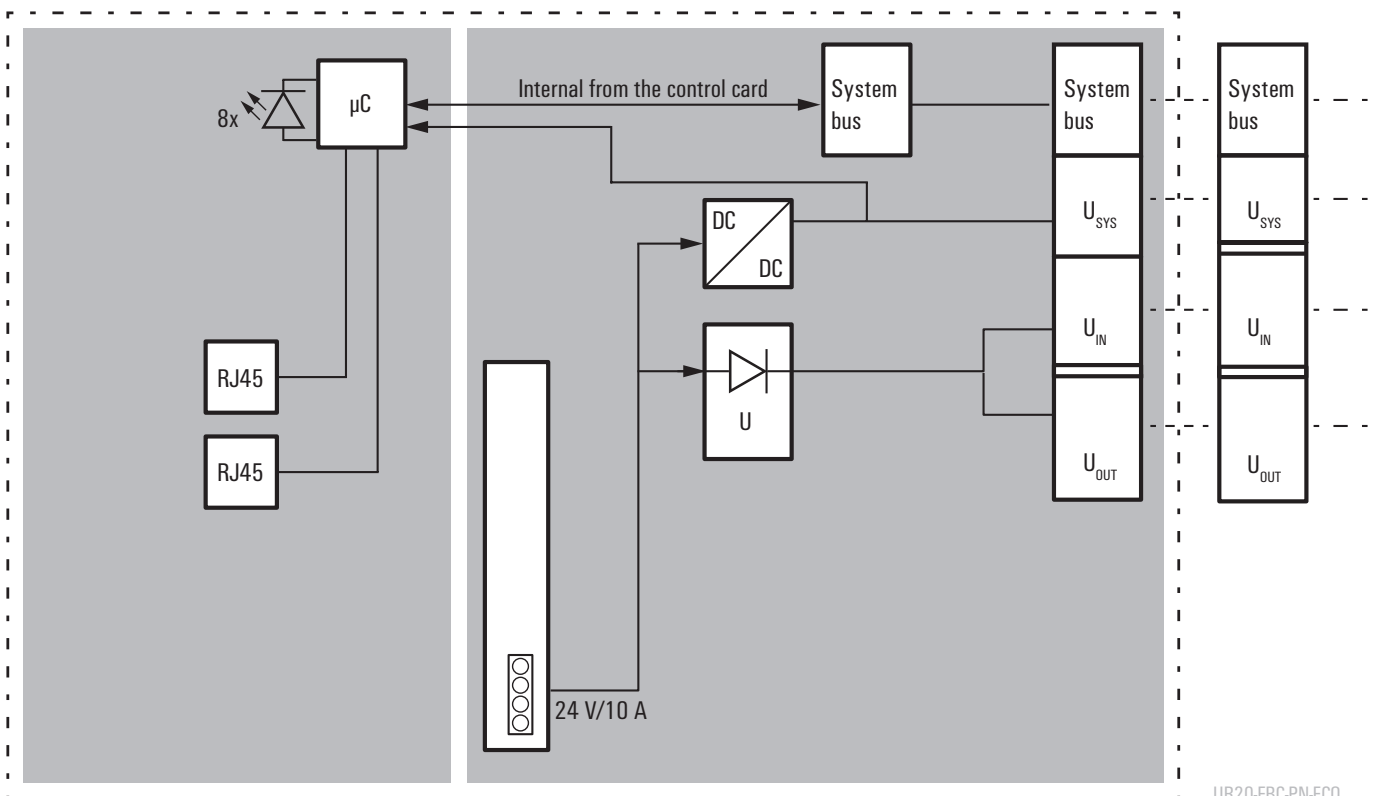
PROFINET is gaining in importance as a rapidly growing Industrial Ethernet Standard. By supporting real-time functionality (RT), the technology complies with modern system and application requirements to a large extent. The UR20-FBC-PN-ECO fieldbus coupler is a PROFINET participant certified by the PROFIBUS user organisation. It can connect up to 16 u-remote participants and two Ethernet ports with integrated switch to implement a line network structure.

C

The coupler can be activated with a system-independent web server application via the Ethernet ports. All information, such as diagnoses, status values and parameters, can therefore be read out. All connected inputs can also be simulated or outputs set. The system's initial power supply is already integrated in the ECO fieldbus coupler.

PROFINET products from Weidmüller fully exploit all the possibilities of the technology standard, e.g. using a GSDML file and diagnostic messages. In this way, they actively support your application in the most important tasks – from engineering and commissioning to fault diagnosis.

### Block diagram PROFINET fieldbus coupler ECO



UR20-FBC-PN-ECO

## PROFINET ECO

- 10 A current paths
- Web server via ethernet
- System supply of 16 I/O modules
- Temperature range 0... +50 °C
- PROFINET RT capable
- PROFINET diagnosis

## Technical data

System data	
Connection type	2x RJ45 plug-in connectors
Field bus protocol	PROFINET RT
Process data	1024 Byte
Parameter data	4362 kByte
Diagnostic data	1408 Byte
Fast Startup	Yes
max. number of modules	16
Transmission rate of field bus, max.	100 Mbit/s
Transmission speed of system bus, max.	48 Mbit/s
Supply	
Supply voltage	24 V DC +20 %/ -15 %, via the system bus
Feed current for $I_{in}$ (input current path) , max.	10 A
Current consumption $I_{in}$ (power segment of the field bus coupler), typ.	80 mA
General data	
Weight	247 g
Dimensions H x W x D	120 mm / 52 mm / 76 mm
Note	
Download of GSDML-file on <a href="http://www.weidmueller.com">www.weidmueller.com</a>	

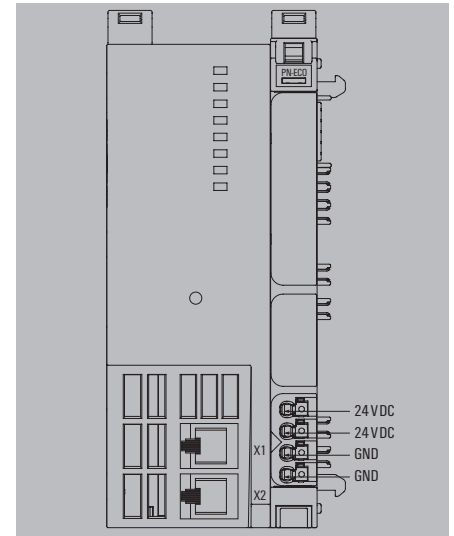
## Ordering data

Module variants	
	Field bus coupler, PROFINET RT
Note	
A termination kit (UR20-EBK-ACC) is included in the coupler package.	

## Accessories

Type	Qty.	Order No.
Termination kit	5	1346610000
Swivel marker	20	1339920000
Connection marker for pusher neutral	960	1323710000
Module marker for custom printing	100	1341610000
Module marker for neutral	500	1341630000
Thermotransfer version (material: polyester)	1	1429420000
Replacement parts		
Plug-in connector unit	5	2702590000
Note		
1 roll = 1000 labels = 1 Qty. 1 sheet = 60 labels = 1 unit		

## UR20-FBC-PN-ECO



# EtherCAT fieldbus coupler

## Web server tool, two RJ45 Ports, 100 Mbit/s



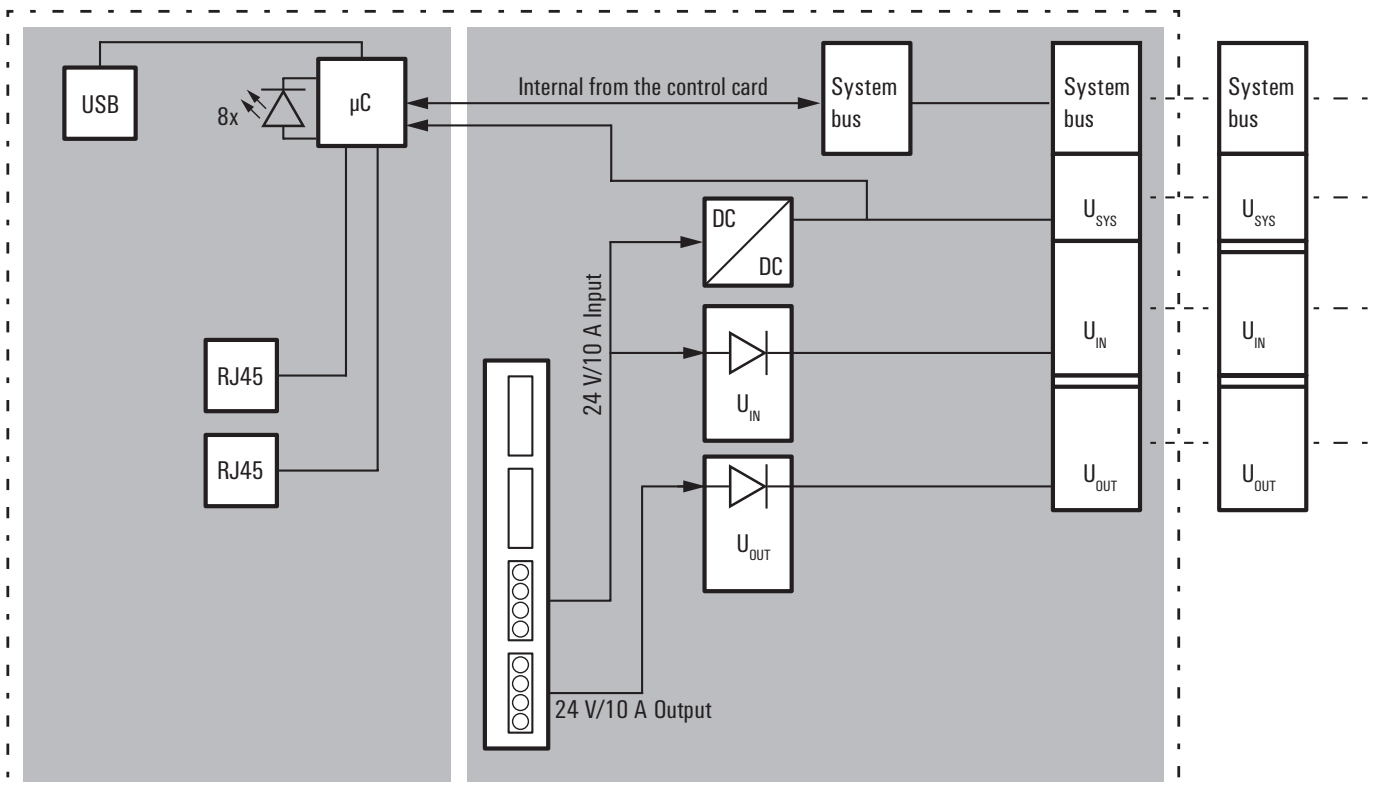
EtherCAT is a popular field bus standard for systems with stringent time requirements. The UR20-FBC-EC fieldbus coupler is an EtherCAT participant certified by the EtherCAT Technology Group. With options for connecting up to 64 u-remote participants, it serves as the head module for the u-remote system bus. The EtherCAT coupler has two Ethernet ports with integrated switch for implementing a line network structure.

C

The coupler can be activated with a system-independent web server application via the USB service interface or the Ethernet ports. All information, such as diagnoses, status values and parameters, can therefore be read out. All connected inputs can also be simulated or outputs set. The system's initial power supply is already integrated in the fieldbus coupler. Power is supplied via two 4-pin connectors, separated into the input and output current paths.

Since the EtherCAT products from Weidmüller make full use of all the latest technological possibilities, such as use of XML files, they actively support your application in the most important tasks – from engineering and commissioning to fault diagnosis.

### Block diagram EtherCAT fieldbus coupler



### EtherCAT

- 2 x 10 A current path
- Web server
- System supply for 64 I/O modules
- Temperature range: -20... +60 °C
- Various EtherCAT services

### UR20-FBC-EC



### Technical data

#### System data

Connection type  
Field bus protocol  
Process data  
Parameter data  
Diagnostic data  
max. number of modules  
Configuration interface  
Transmission rate of field bus, max.  
Transmission speed of system bus, max.

2x RJ45 plug-in connectors  
EtherCAT  
1024 Byte  
4 kByte  
3200 Byte  
64  
Micro USB 2.0  
100 Mbit/s  
48 Mbit/s

#### Supply

Supply voltage for inputs  
Supply voltage for outputs  
Feed current for  $I_{IN}$  (input current path) , max.  
Feed current for  $I_{OUT}$  (output current path) , max.  
Current consumption  $I_{IN}$  (power segment of the field bus coupler), typ.

24 V DC +20 %/ -15 %  
24 V DC +20 %/ -15 %  
10 A  
10 A  
130 mA

#### General data

Weight  
Dimensions H x W x D

227 g  
120 mm / 52 mm / 76 mm

#### Note

Download of ESHfile on [www.weidmueller.com](http://www.weidmueller.com)

### Ordering data

#### Module variants

Field bus coupler, EtherCAT

#### Note

Type	Qty.	Order No.
UR20-FBC-EC	1	1334910000

A termination kit (UR20-EBK-ACC) is included in the coupler package

### Accessories

Termination kit  
Swivel marker  
Connection marker for pusher neutral  
Module marker for custom printing  
Module marker for neutral  
Thermotransfer version (material: polyester)  
USB cable (USB A to Micro USB)

Type	Qty.	Order No.
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
IE-USB-A-MICRO-1.8M	1	1487980000

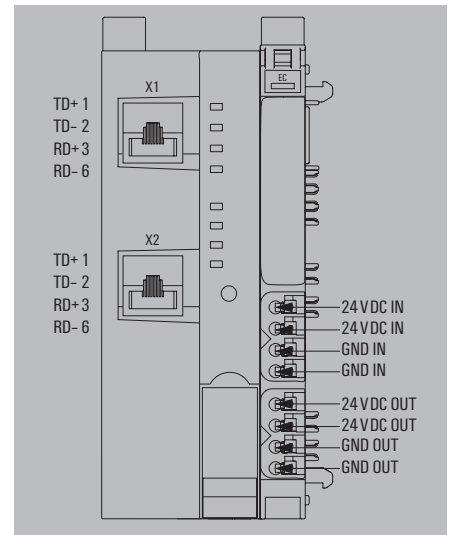
#### Replacement parts

Plug-in connector unit

UR20-PK-1334910000-SP	5	1484440000
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1 roll = 1000 label = 1 Qty.  
1 sheet = 60 label = 1 Qty.

#### Note



# EtherCAT fieldbus coupler ECO

Web server tool,  
two RJ45 Ports, 100 Mbit/s



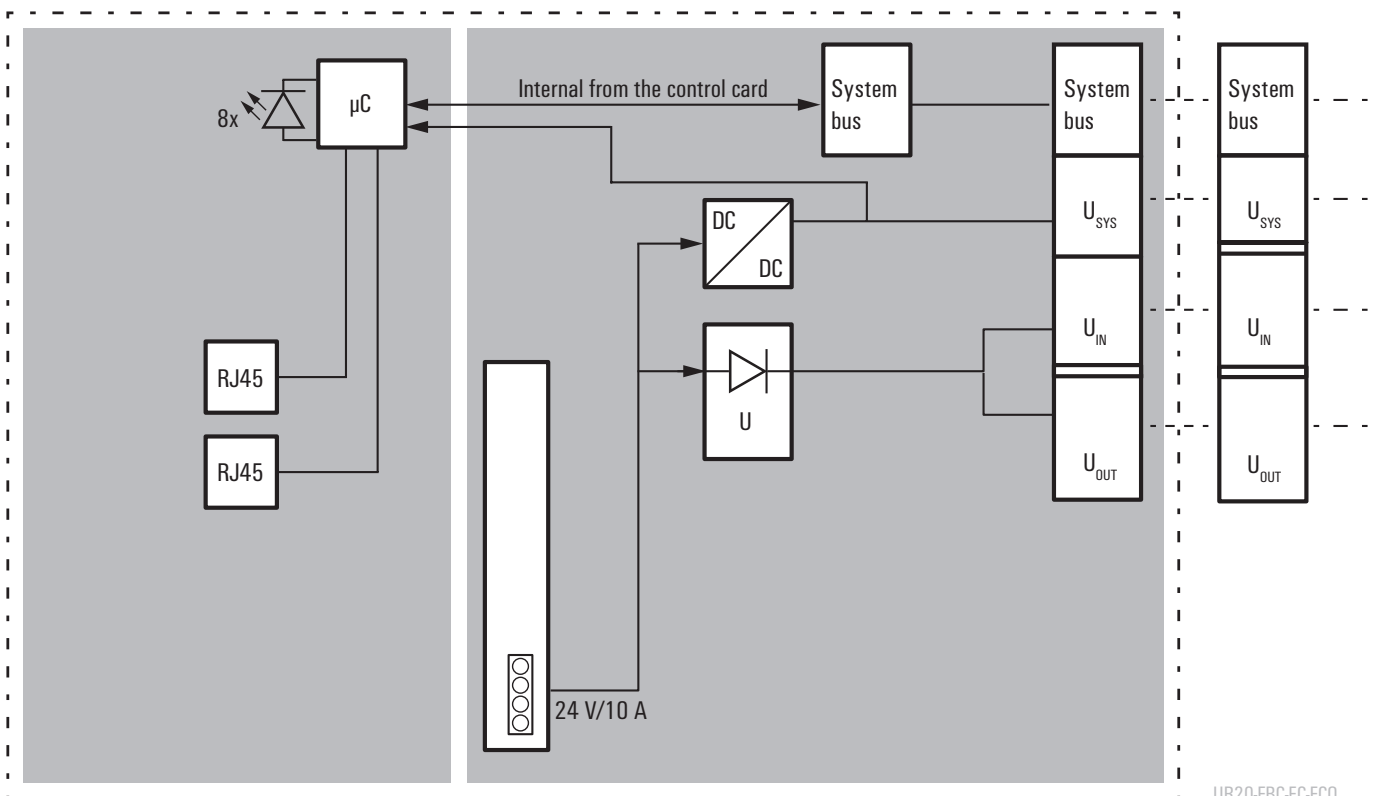
EtherCAT is a popular field bus standard for systems with stringent time requirements. The UR20-FBC-EC-ECO fieldbus coupler is an EtherCAT participant certified by the EtherCAT Technology Group. With options for connecting up to 16 u-remote participants, it serves as the head module for the u-remote system bus. The EtherCAT coupler ECO has two Ethernet ports with integrated switch for implementing a line network structure.

C

The coupler can be activated with a system-independent web server application via the Ethernet ports. All information, such as diagnoses, status values and parameters, can therefore be read out. All connected inputs can also be simulated or outputs set. The initial system power supply is already integrated in the fieldbus coupler.

EtherCAT products from Weidmüller fully exploit all the possibilities of the technology standard, e.g. the use of ESI files. In this way, they actively support your application in the most important tasks – from engineering and commissioning to fault diagnosis.

## Block diagram EtherCAT fieldbus coupler ECO



**EtherCAT ECO**

- 10 A current paths
- Web server via ethernet
- System supply of 16 I/O modules
- Temperature range 0... +50 °C
- Various EtherCAT services

**Technical data****System data**

Connection type
Field bus protocol
Process data
Parameter data
Diagnostic data
max. number of modules
Transmission rate of field bus, max.
Transmission speed of system bus, max.

**Supply**

Supply voltage
Feed current for $I_{IN}$ (input current path) , max.
Current consumption $I_M$ (power segment of the field bus coupler), typ.

**General data**

Weight
Dimensions H x W x D

**Note****Ordering data****Module variants**

Field bus coupler, EtherCAT

**Note****Accessories**

Termination kit
Swivel marker
Connection marker for pusher neutral
Module marker for custom printing
Module marker for neutral
Thermotransfer version (material: polyester)

**Replacement parts**

Plug-in connector unit

**Note****UR20-FBC-EC-ECO**

2x RJ45 plug-in connectors
EtherCAT
1024 Byte
1024 Byte
800 Byte
16
100 Mbit/s
48 Mbit/s

24 V DC +20 %/ -15 %, via the system bus
10 A
80 mA

247 g
120 mm / 52 mm / 76 mm

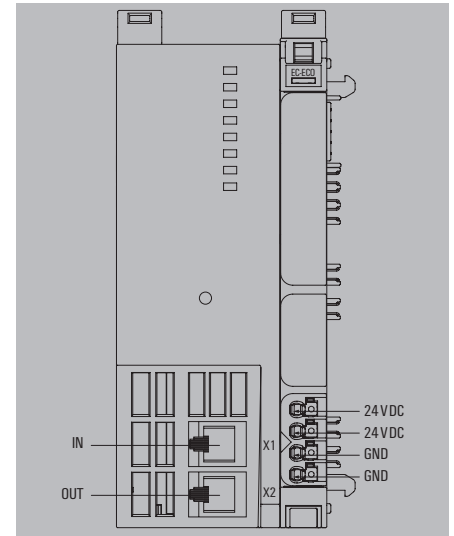
Download of ESH-file on [www.weidmueller.com](http://www.weidmueller.com)

Type	Qty.	Order No.
UR20-FBC-EC-ECO	1	2659690000

A termination kit (UR20-EBK-ACC) is included in the coupler package.

Type	Qty.	Order No.
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000

UR20-PK-2659690000-SP	5	2702600000
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1 roll = 1000 labels = 1 Qty.  
1 sheet = 60 labels = 1 unit

# ModbusTCP fieldbus coupler

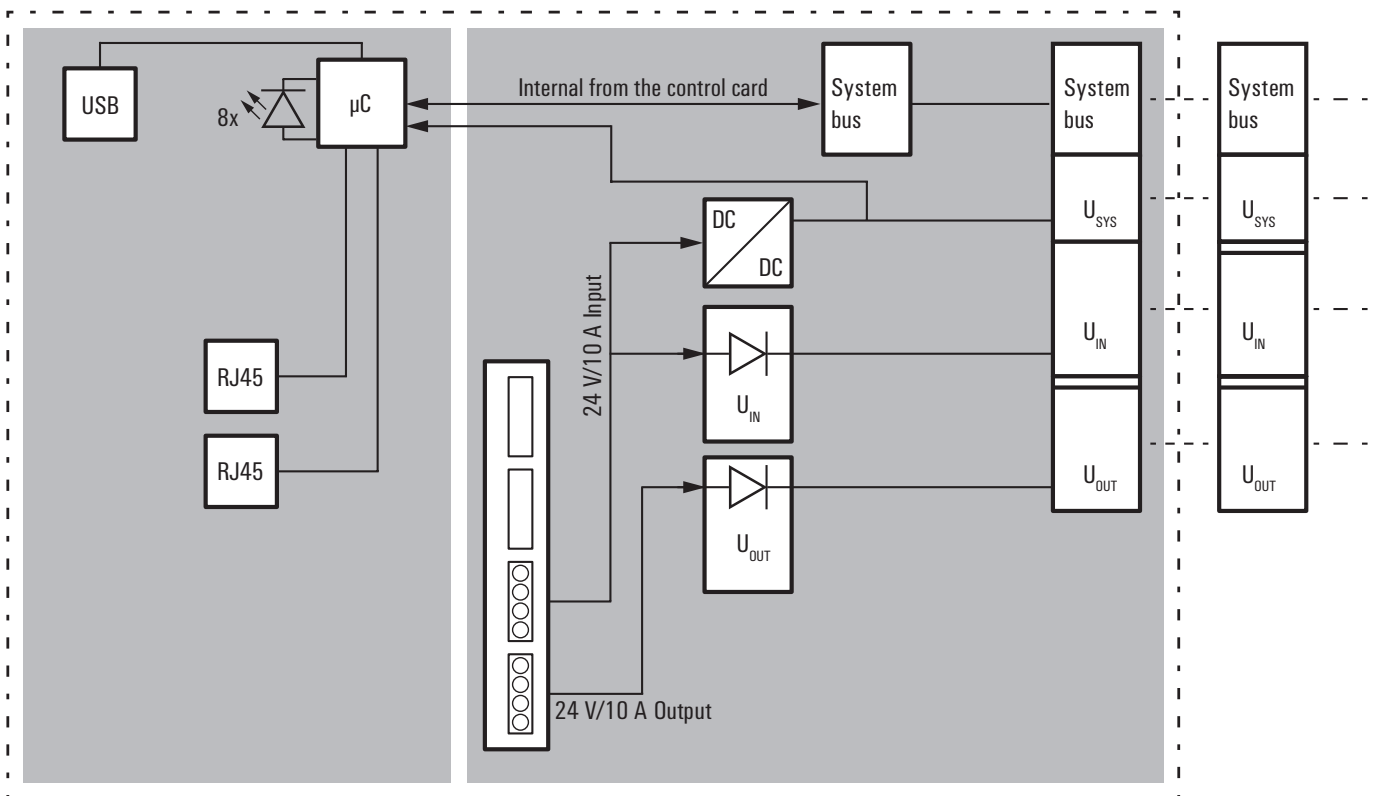
## Web server tool, two RJ45 Ports, 10/100 Mbit/s

System safety around the globe is provided by the ModbusTCP version, which is stated in IEC 61158 as an Industrial Ethernet Standard. The UR20-FBC-MOD-TCP-V2 from Weidmüller is a fieldbus coupler designed in accordance with IEC 61158. With options for connecting up to 64 u-remote participants, it serves as the head module for the u-remote system bus.

The coupler can be activated with a system-independent web server application via the USB service interface or the Ethernet ports. All information, such as diagnoses, status values and parameters, can therefore be read out. All connected inputs can also be simulated or outputs set. The system's initial power supply is already integrated in the fieldbus coupler. Power is supplied via two 4-pin connectors, separated into the input and output current paths.

Since the ModbusTCP products from Weidmüller make full use of all the latest technological possibilities, such as diagnosis options, they actively support your application in the most important tasks – from engineering and commissioning to fault diagnosis.

### Block diagram Modbus TCP fieldbus coupler



**ModbusTCP**

- 2 x 10 A current path
- Web server
- System supply for 64 I/O modules
- Temperature range: -20... +60 °C
- Dual LAN mode
- Various Modbus services

**UR20-FBC-MOD-TCP-V2****Technical data**

System data	
Connection type	2x RJ45 plug-in connectors
Field bus protocol	Modbus/TCP
Process data	1 kByte
Parameter data	1024 Byte
Diagnostic data	1024 Byte
max. number of modules	64
Configuration interface	Micro USB 2.0
Transmission rate of field bus, max.	100 Mbit/s
Transmission speed of system bus, max.	48 Mbit/s
Supply	
Supply voltage for inputs	24 V DC +20 %/ -15 %
Supply voltage for outputs	24 V DC +20 %/ -15 %
Feed current for I <sub>IN</sub> (input current path) , max.	10 A
Feed current for I <sub>OUT</sub> (output current path) , max.	10 A
Current consumption I <sub>IN</sub> (power segment of the field bus coupler), typ.	112 mA
General data	
Weight	223 g
Dimensions H x W x D	120 mm / 52 mm / 76 mm
Note	

Type	Qty.	Order No.
UR20-FBC-MOD-TCP-V2	1	2476450000
A termination kit (UR20-EBK-ACC) is included in the coupler package		

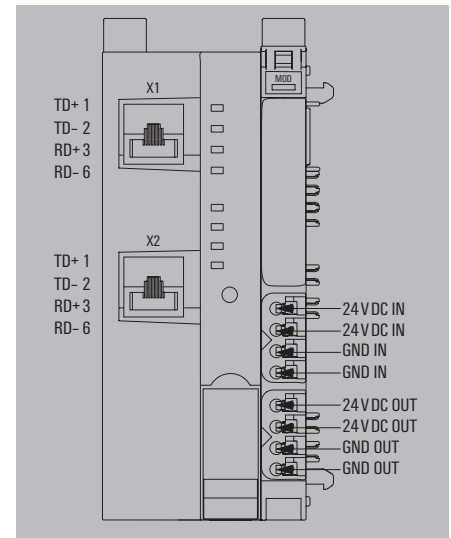
**Ordering data**

Module variants	
	Fieldbus coupler, ModbusTCP
Note	

**Accessories**

Type	Qty.	Order No.
Termination kit	5	1346610000
Swivel marker	20	1339920000
Connection marker for pusher neutral	960	1323710000
Module marker for custom printing	100	1341610000
Module marker for neutral	500	1341630000
Thermotransfer version (material: polyester)	1	1429420000
USB cable (USB A to Micro USB)	1	1487980000
Replacement parts		
Plug-in connector unit	5	2485280000
Note		
1 roll = 1000 labels = 1 Qty. 1 sheet = 60 labels = 1 unit		

Type	Qty.	Order No.
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
IE-USB-A-MICRO-1.8M	1	1487980000
Replacement parts		
UR20-PK-2476450000-SP	5	2485280000
Note		
1 roll = 1000 labels = 1 Qty. 1 sheet = 60 labels = 1 unit		



# ModbusTCP fieldbus coupler ECO

## Web server tool, two RJ45 Ports, 100 Mbit/s

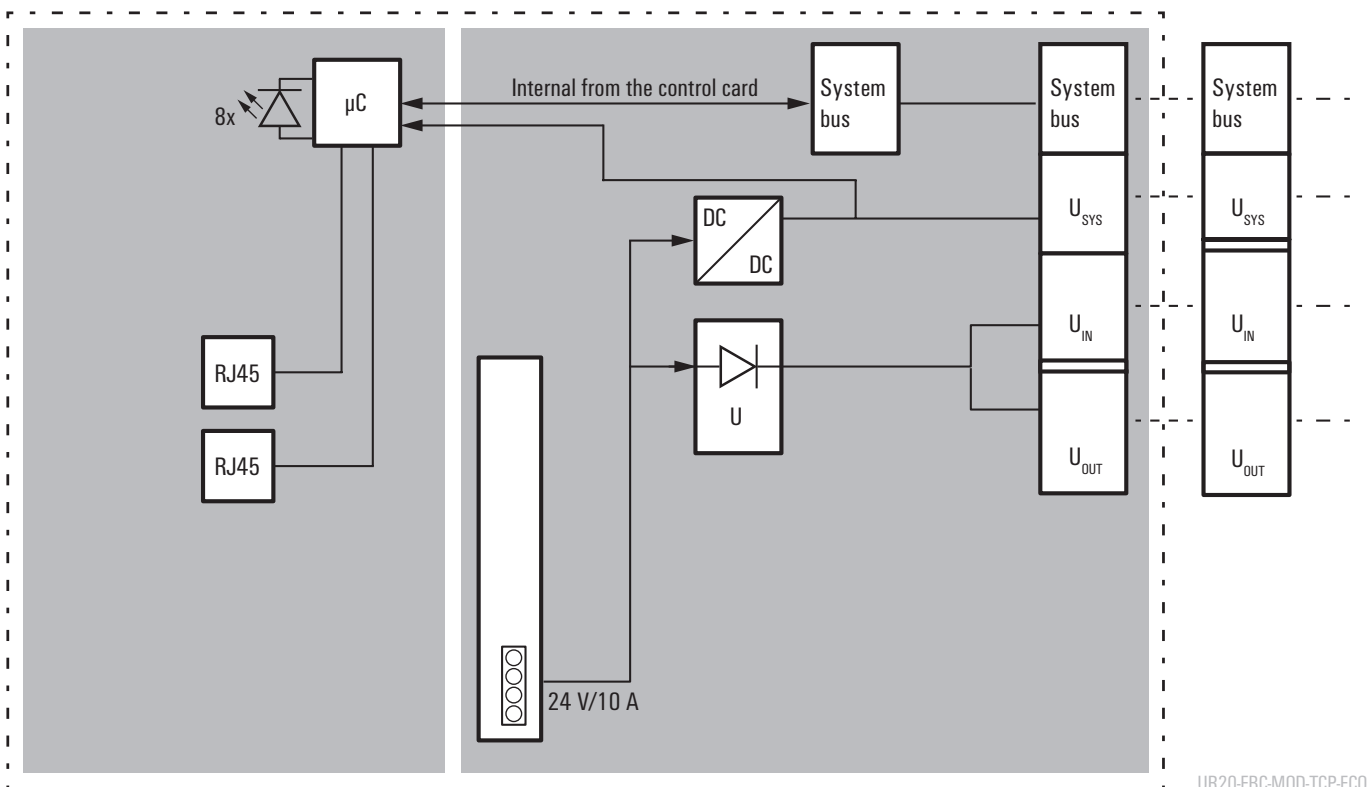
**ModbusTCP**

System safety around the globe is provided by the Modbus TCP version, which is stated in IEC 61158 as an Industrial Ethernet Standard. The UR20-FBC-MOD-TCP-ECO from Weidmüller is a fieldbus coupler designed in accordance with IEC 61158. With options for connecting up to 16 u-remote participants, it serves as the head module for the u-remote system bus.

The coupler can be activated with a system-independent web server application via the Ethernet ports. All information, such as diagnoses, status values and parameters, can therefore be read out. All connected inputs can also be simulated or outputs set. The initial system power supply is already integrated in the fieldbus coupler.

ModbusTCP products from Weidmüller fully exploit all the possibilities of the technology standard, e.g. through diagnostic options. In this way, they actively support your application in the most important tasks – from engineering and commissioning to fault diagnosis.

### Block diagram Modbus TCP fieldbus coupler ECO



UR20-FBC-MOD-TCP-ECO

**ModbusTCP ECO**

- 10 A current paths
- Web server via ethernet
- System supply of 16 I/O modules
- Temperature range 0... +50 °C
- Various Modbus services

**UR20-FBC-MOD-TCP-ECO****Technical data****System data**

Connection type  
Field bus protocol  
Process data  
Parameter data  
Diagnostic data  
max. number of modules  
Transmission rate of field bus, max.  
Transmission speed of system bus, max.

2x RJ45 plug-in connectors

Modbus/TCP

1 kByte

1 kByte

1 kByte

16

100 Mbit/s

48 Mbit/s

**Supply**

Supply voltage  
Feed current for  $I_{IN}$  (input current path) , max.  
Current consumption  $I_M$  (power segment of the field bus coupler), typ.

24 V DC +20 %/ -15 %, via the system bus

10 A

80 mA

**General data**

Weight  
Dimensions H x W x D

247 g

120 mm / 52 mm / 76 mm

**Note****Ordering data****Module variants**

Fieldbus coupler, ModbusTCP

**Note**

Type	Qty.	Order No.
UR20-FBC-MOD-TCP-ECO	1	2659700000

A termination kit (UR20-EBK-ACC) is included in the coupler package.

**Accessories**

Termination kit	UR20-EBK-ACC	5	1346610000
Swivel marker	UR20-SM-ACC	20	1339920000
Connection marker for pusher neutral	PM 2.7/2.6 MC NE WS	960	1323710000
Module marker for custom printing	DEK 5/8-11.5 MC SDR	100	1341610000
Module marker for neutral	DEK 5/8-11.5 MC NE WS	500	1341630000
Thermotransfer version (material: polyester)	THM UR20 WS	1	1429420000

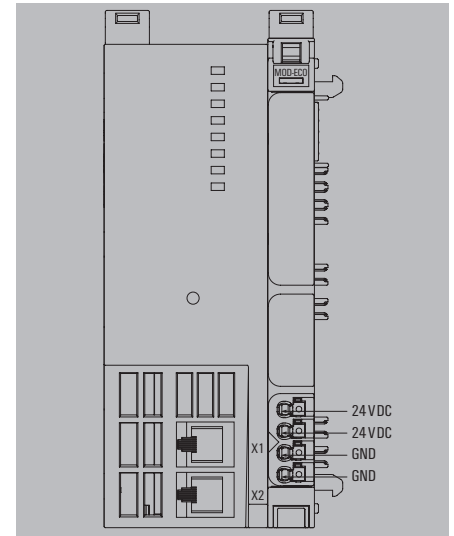
**Replacement parts**

Plug-in connector unit

**Note**

UR20-PK-2659700000-SP	5	2702610000
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1 roll = 1000 labels = 1 Qty.  
1 sheet = 60 labels = 1 unit



# EtherNet/IP™ fieldbus coupler

## Web server tool, two RJ45 Ports, 100 Mbit/s

EtherNet/IP™ is a widely used, real-time capable industrial Ethernet field bus system. Based on Ethernet technology standards such as TCP and UDP, EtherNet/IP™ offers not only the transmission of unicast messages between two participants but also the possibility of sending I/O data cyclically to several recipients via multicast. The fieldbus couplers UR20-FBC-EIP and UR20-FBC-EIP-V2, developed according to IEC 61158, are EtherNet/IP™ participants. With options for connecting up to 64 u-remote participants, it serves as the head module for the u-remote system bus.

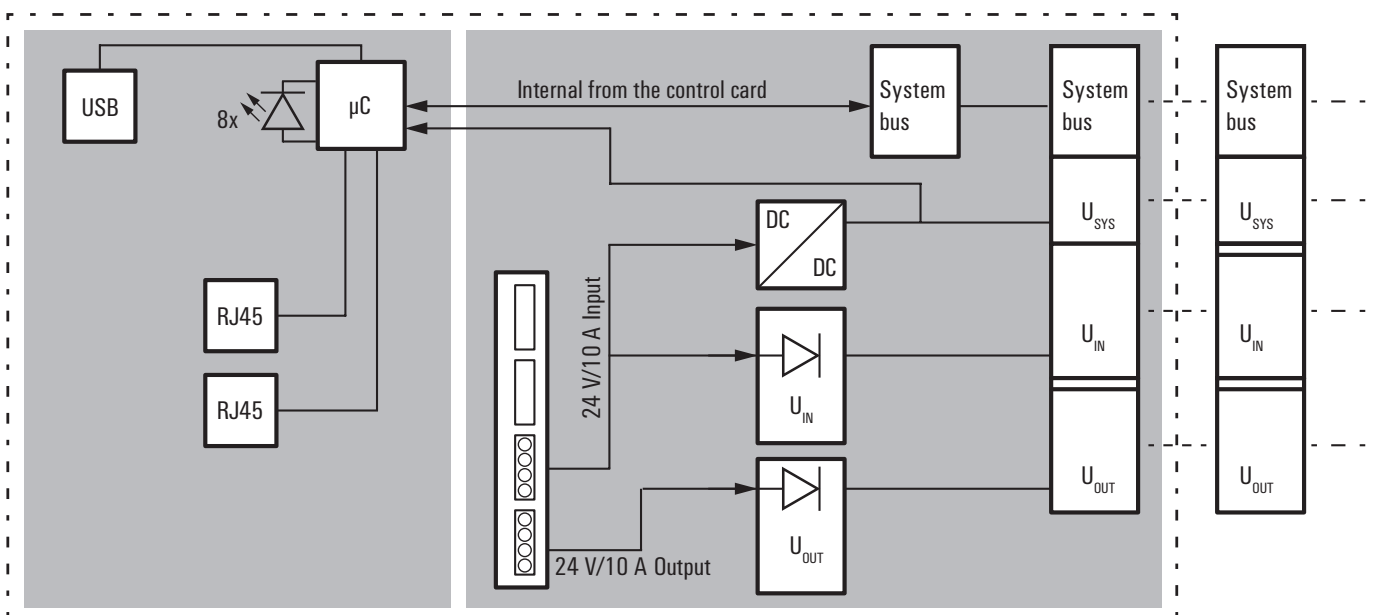
C

The coupler can be activated with a system-independent web server application via the USB service interface or the Ethernet ports. All information, such as diagnoses, status values and parameters, can therefore be read out. All connected inputs can also be simulated or outputs set. The system's initial power supply is already integrated in the coupler. Power is supplied via two 4-pin connectors, separated into the input and output current paths.

The UR20-FBC-EIP-V2 coupler also supports the redundancy protocols Device Level Ring (DLR), Parallel Redundancy Protocol (PRP) and RSTP. VLAN tagging can also be activated.

EtherNet/IP™ products from Weidmüller fully exploit all the possibilities of the technology standard, e.g. through diagnostic options. In this way, they actively support your application in the most important tasks – from engineering and commissioning to fault diagnosis.

### Block diagram EtherNet/IP™ fieldbus coupler



### EtherNet/IP

- 2 x 10 A current path
- Web server
- System supply for 64 I/O modules
- Temperature range: -20... +60 °C

### UR20-FBC-EIP



### Technical data

System data	
Connection type	2x RJ45 plug-in connectors
Field bus protocol	EtherNet/IP
Process data	988 Byte
Parameter data	4 kByte
Diagnostic data	3008 Byte
max. number of modules	64
Configuration interface	Micro USB 2.0
Transmission rate of field bus, max.	100 Mbit/s
Transmission speed of system bus, max.	48 Mbit/s
Supply	
Supply voltage for inputs	24 V DC +20 %/ -15 %
Supply voltage for outputs	24 V DC +20 %/ -15 %
Feed current for I <sub>IN</sub> (input current path) , max.	10 A
Feed current for I <sub>OUT</sub> (output current path) , max.	10 A
Current consumption I <sub>IN</sub> (power segment of the field bus coupler), typ.	112 mA
General data	
Weight	223 g
Dimensions H x W x D	120 mm / 52 mm / 76 mm
Note	
Download of EDS-file on <a href="http://www.weidmueller.com">www.weidmueller.com</a>	

### Ordering data

Module variants	
	Field bus coupler, EtherNet/IP
Note	

### Accessories

Termination kit	UR20-EBK-ACC	5	1346610000
Swivel marker	UR20-SM-ACC	20	1339920000
Connection marker for pusher neutral	PM 2.7/2.6 MC NE WS	960	1323710000
Module marker for custom printing	DEK 5/8-11.5 MC SDR	100	1341610000
Module marker for neutral	DEK 5/8-11.5 MC NE WS	500	1341630000
Thermotransfer version (material: polyester)	THM UR20 WS	1	1429420000
USB cable (USB A to Micro USB)	IE-USB-A-MICRO-1.8M	1	1487980000

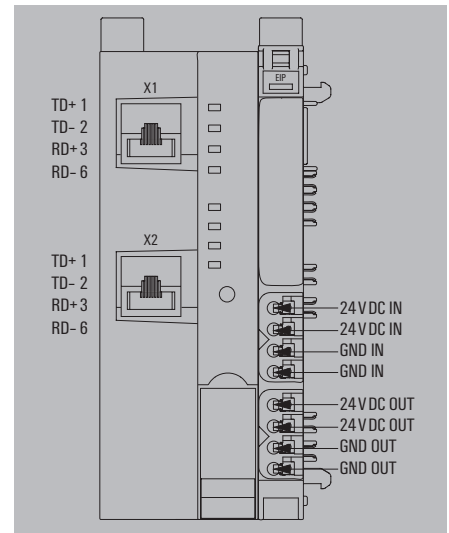
### Replacement parts

Plug-in connector unit	UR20-PK-1334920000-SP	5	1541290000
Note			
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.			

Type	Qty.	Order No.
UR20-FBC-EIP	1	1334920000
A termination kit (UR20-EBK-ACC) is included in the coupler package		

Type	Qty.	Order No.
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
IE-USB-A-MICRO-1.8M	1	1487980000

UR20-PK-1334920000-SP	5	1541290000
Note		
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		



## I/O system IP20 – Fieldbus coupler

### EtherNet/IP

- 2 x 10 A current path
- Web server
- System supply for 64 I/O modules
- Temperature range: -20... +60 °C
- Redundancy capable via DL/PRP (IEC 62439-6)

### UR20-FBC-EIP-V2



### Technical data

System data	
Connection type	2x RJ45 plug-in connectors
Field bus protocol	EtherNet/IP
Process data	988 Byte
Parameter data	4 kByte
Diagnostic data	3008 Byte
max. number of modules	64
Configuration interface	Micro USB 2.0
Transmission rate of field bus, max.	100 Mbit/s
Transmission speed of system bus, max.	48 Mbit/s
Supply	
Supply voltage for inputs	24 V DC +20 %/ -15 %
Supply voltage for outputs	24 V DC +20 %/ -15 %
Feed current for I <sub>IN</sub> (input current path) , max.	10 A
Feed current for I <sub>OUT</sub> (output current path) , max.	10 A
Current consumption I <sub>IN</sub> (power segment of the field bus coupler), typ.	100 mA
General data	
Weight	223 g
Dimensions H x W x D	120 mm / 52 mm / 76 mm
Note	
Download of EDS-file on <a href="http://www.weidmueller.com">www.weidmueller.com</a>	

### Ordering data

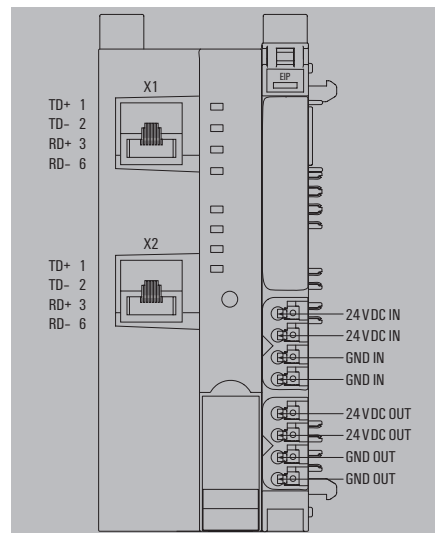
Module variants	
	Field bus coupler, EtherNet/IP
Note	

### Accessories

	Termination kit
	Swivel marker
	Connection marker for pusher neutral
	Module marker for custom printing
	Module marker for neutral
	Thermotransfer version (material: polyester)
	USB cable (USB A to Micro USB)
Replacement parts	
	Plug-in connector unit
Note	

Type	Qty.	Order No.
UR20-FBC-EIP-V2	1	1550550000
A termination kit (UR20-EBK-ACC) is included in the coupler package		

Type	Qty.	Order No.
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
IE-USB-A-MICRO-1.8M	1	1487980000
Replacement parts		
UR20-PK-1550550000-SP	1	2780340000
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		





# EtherNet/IP™ fieldbus coupler ECO



Web server tool,  
two RJ45 Ports, 100 Mbit/s

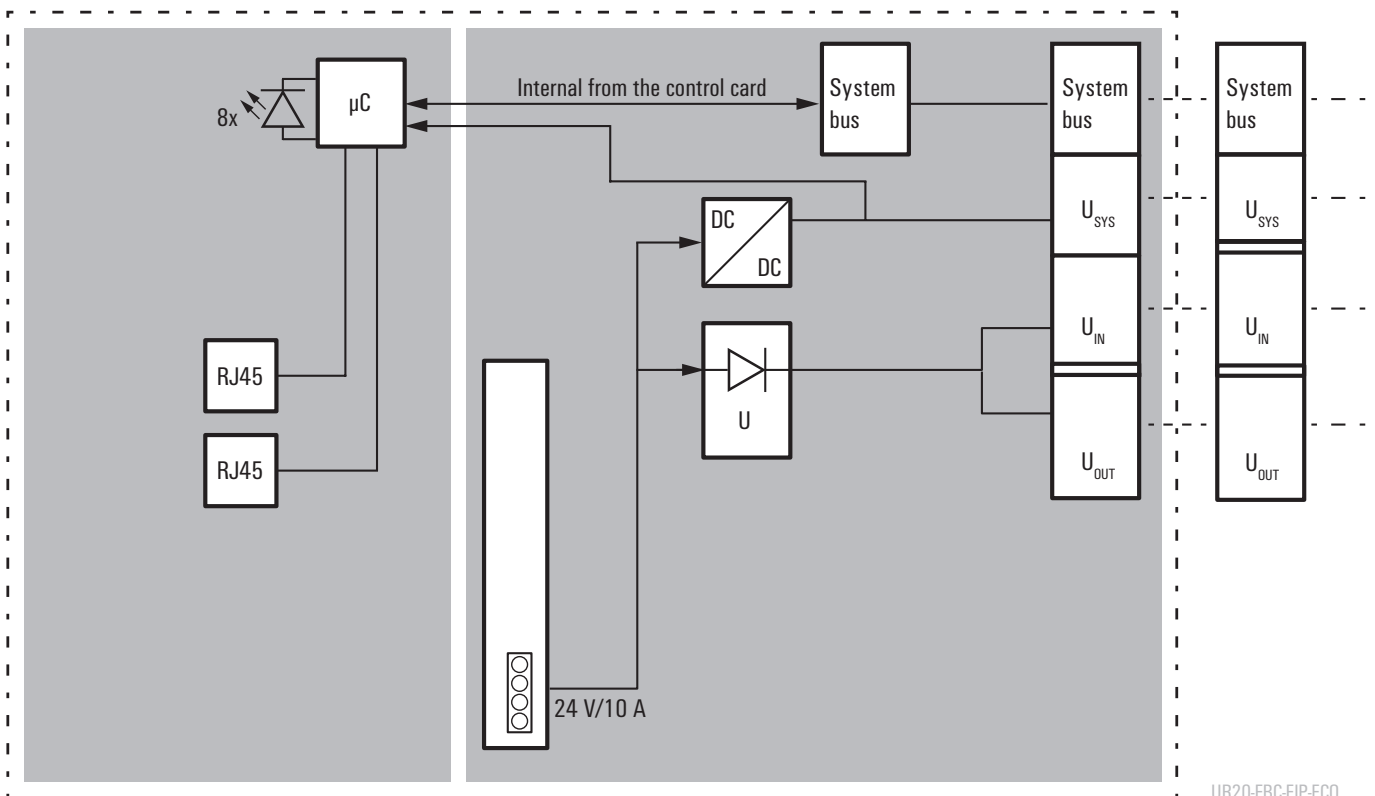
EtherNet/IP™ is a widely used, real-time capable industrial Ethernet field bus system. Based on Ethernet technology standards such as TCP and UDP, EtherNet/IP™ offers not only the transmission of unicast messages between two participants but also the possibility of sending I/O data cyclically to several recipients via multicast. The fieldbus coupler UR20-FBC-EIP-ECO, developed according to IEC 61158, is an EtherNet/IP™ participant. With options for connecting up to 16 u-remote participants, it serves as the head module for the u-remote system bus.

C

The coupler can be activated with a system-independent web server application via the Ethernet ports. All information, such as diagnoses, status values and parameters, can therefore be read out. All connected inputs can also be simulated or outputs set. The system's initial power supply is already integrated in the coupler.

EtherNet/IP™ products from Weidmüller fully exploit all the possibilities of the technology standard, e.g. through diagnostic options. In this way, they actively support your application in the most important tasks – from engineering and commissioning to fault diagnosis.

## Block diagram EtherNet/IP™ fieldbus coupler ECO



UR20-FBC-EIP-ECO

**EtherNet/IP ECO**

- 10 A current paths
- Web server via ethernet
- System supply of 16 I/O modules
- Temperature range 0... +50 °C

**UR20-FBC-EIP-ECO****Technical data****System data**

Connection type
Field bus protocol
Process data
Parameter data
Diagnostic data
max. number of modules
Transmission rate of field bus, max.
Transmission speed of system bus, max.

2x RJ45 plug-in connectors

EtherNet/IP

988 Byte

1024 Byte

752 Byte

16

100 Mbit/s

48 Mbit/s

**Supply**

Supply voltage
Feed current for $I_{IN}$ (input current path) , max.
Current consumption $I_{IN}$ (power segment of the field bus coupler), typ.

24 V DC +20 %/ -15 %, via the system bus

10 A

61 mA

**General data**

Weight
Dimensions H x W x D

247 g

120 mm / 52 mm / 76 mm

Download of EDS-file on [www.weidmueller.com](http://www.weidmueller.com)**Note****Ordering data****Module variants**

Field bus coupler, EtherNet/IP

**Note**

Type	Qty.	Order No.
UR20-FBC-EIP-ECO	1	2799510000

A termination kit (UR20-EBK-ACC) is included in the coupler package.

**Accessories**

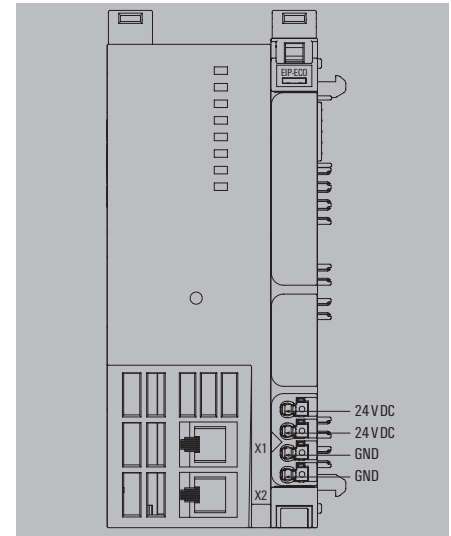
Termination kit
Swivel marker
Connection marker for pusher neutral
Module marker for custom printing
Module marker for neutral
Thermotransfer version (material: polyester)

Type	Qty.	Order No.
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000

**Replacement parts**

Plug-in connector unit

UR20-PK-2799510000-SP	1	2832900000
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1 roll = 1000 label = 1 Qty.  
1 sheet = 60 label = 1 Qty.**Note**

# DeviceNet™ fieldbus coupler

## Web server tool, PCB plug-in connector

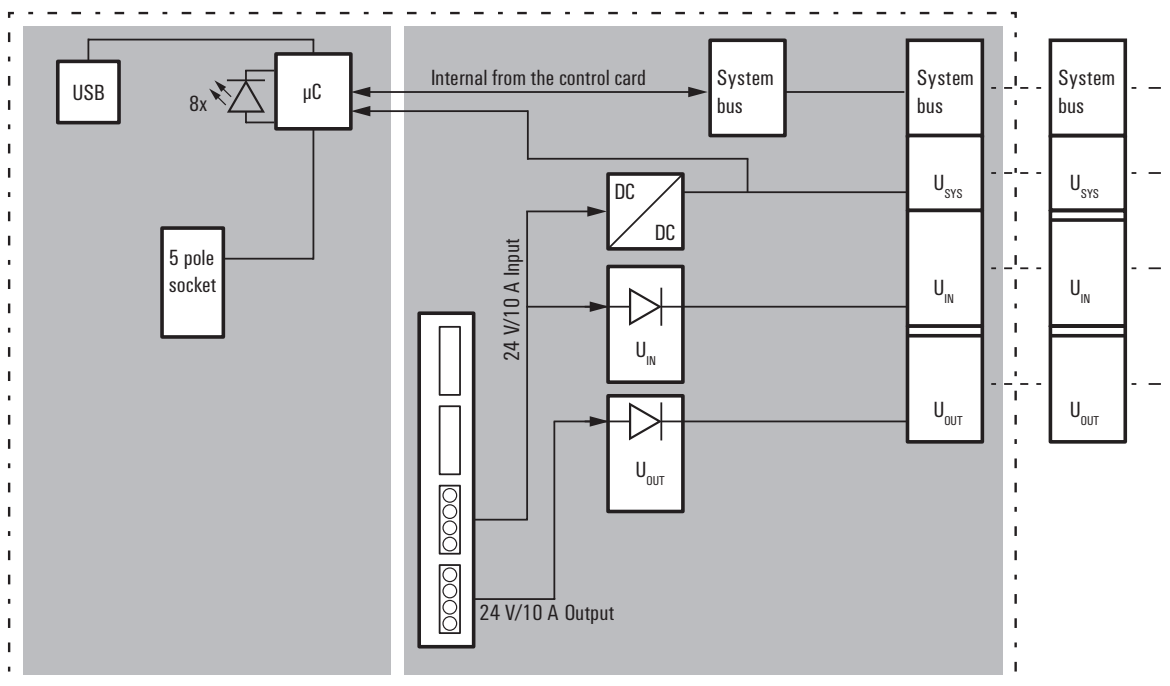


DeviceNet™ is a serial, CAN-based field bus system, which was developed by Allen-Bradley and later on passed as an open standard to the ODVA (Open DeviceNet™ Vendor Association). Today it is used worldwide in automation technology. DeviceNet™ can be operated with a maximum of 64 network nodes per field bus segment. The fieldbus coupler UR20-FBC-DN is connected via a 5-pin PCB connector to the network. With options for connecting up to 64 u-remote participants, it serves as the head module for the u-remote system bus.

The coupler can be activated with a system-independent web server application via the USB service interface. All information, such as diagnoses, status values and parameters, can therefore be read out. All connected inputs can also be simulated or outputs set. The initial system power supply is already integrated in the fieldbus coupler. Power is supplied via two 4-pin connectors, separated into the input and output current paths.

Since the DeviceNet™ products from Weidmüller make full use of all the latest technological possibilities, such as diagnosis options, they actively support your application in the most important tasks – from engineering and commissioning to fault diagnosis.

### Block diagram DeviceNet™ fieldbus coupler



## DeviceNet

- 2 x 10 A current path
- Web server
- System supply for 64 I/O modules
- Temperature range: -20... +60 °C

## UR20-FBC-DN



## Technical data

### System data

Connection type
Field bus protocol
Process data
Parameter data
Diagnostic data
max. number of modules
Configuration interface
Transmission rate of field bus, max.
Transmission speed of system bus, max.

### Supply

Supply voltage for inputs
Supply voltage for outputs
Feed current for $I_{IN}$ (input current path) , max.
Feed current for $I_{OUT}$ (output current path) , max.
Current consumption $I_{IN}$ (power segment of the field bus coupler), typ.

### General data

Weight
Dimensions H x W x D

### Note

Socket for 5-pole PCB plug-in connector

DeviceNet

1008 Byte

4 kByte

3008 Byte

64

Micro USB 2.0

500 kbit/s

48 Mbit/s

24 V DC +20 % / -15 %

24 V DC +20 % / -15 %

10 A

10 A

75 mA (+15 mA from DeviceNet supply)

220 g

120 mm / 52 mm / 76 mm

Download of EDS-file on [www.weidmueller.com](http://www.weidmueller.com)

## Ordering data

### Module variants

Field bus coupler, DeviceNet

### Note

Type	Qty.	Order No.
UR20-FBC-DN	1	1334900000

A termination kit (UR20-EBK-ACC) is included in the coupler package

## Accessories

Termination kit
Swivel marker
Connection marker for pusher neutral
Module marker for custom printing
Module marker for neutral
Thermotransfer version (material: polyester)
USB cable (USB A to Micro USB)

PCB plug-in connector, socket plug, 5 pole, 10 pin

### Replacement parts

Plug-in connector unit

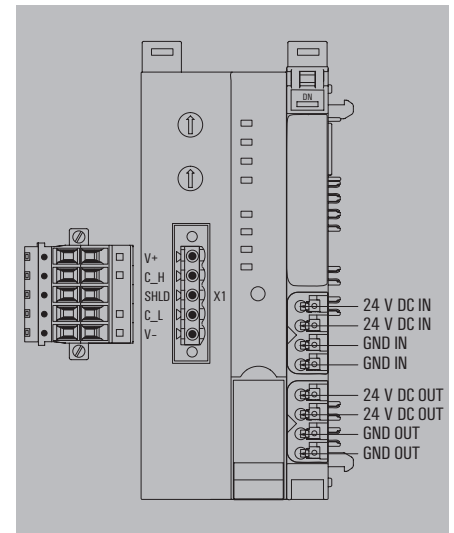
### Note

Type	Qty.	Order No.
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
IE-USB-A-MICRO-1.8M	1	1487980000

BLDZ DN5.08/05/180F GY BX PRT 50 1919990000

UR20-PK-1334900000-SP 5 2003540000

1 roll = 1000 label = 1 Qty.  
1 sheet = 60 label = 1 Qty.



# CANopen<sup>®</sup> fieldbus coupler

## Web server tool; Sub-D connection



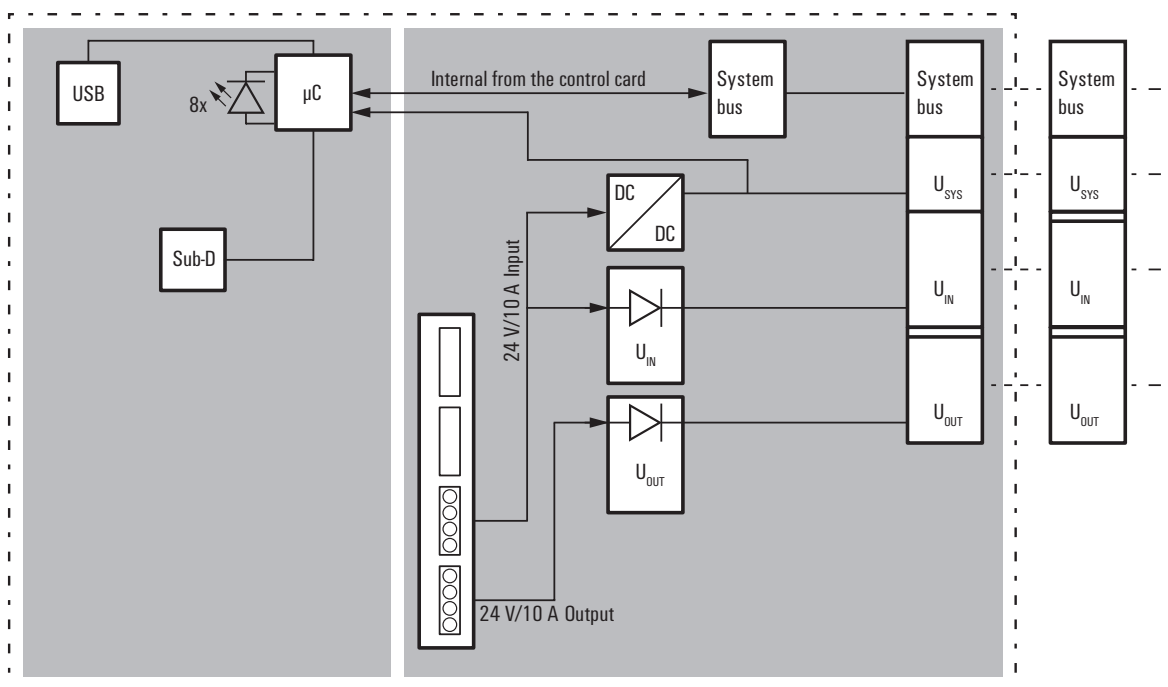
C

The CAN bus (Controller Area Network) is a serial field bus, which was introduced in 1983 by Bosch and Intel. Due to the good characteristics it is particularly suitable for applications where high data security is required. The fieldbus coupler UR20-FBC-CAN uses the CAN based Layer 7 communication protocol CANopen<sup>®</sup>, the device profile CiA DS401 for digital and analog I/O modules is supported. With options for connecting up to 64 u-remote participants, it serves as the head module for the u-remote system bus.

The coupler can be activated with a system-independent web server application via the USB service interface. All information, such as diagnoses, status values and parameters, can therefore be read out. All connected inputs can also be simulated or outputs set. The initial system power supply is already integrated in the fieldbus coupler. Power is supplied via two 4-pin connectors, separated into the input and output current paths.

Since the CANopen<sup>®</sup> products from Weidmüller make full use of all the latest technological possibilities, such as diagnosis options, they actively support your application in the most important tasks – from engineering and commissioning to fault diagnosis.

### Block diagram CANopen<sup>®</sup> fieldbus coupler



**CANopen**

- 2 x 10 A current path
- Web server
- System supply for 64 I/O modules
- Temperature range: -20... +60 °C

**UR20-FBC-CAN****Technical data****System data**

Connection type  
Field bus protocol  
Process data  
Parameter data  
Diagnostic data  
max. number of modules  
Configuration interface  
Transmission rate of field bus, max.  
Transmission speed of system bus, max.

**Supply**

Supply voltage for inputs  
Supply voltage for outputs  
Feed current for  $I_{IN}$  (input current path) , max.  
Feed current for  $I_{OUT}$  (output current path) , max.  
Current consumption  $I_{IN}$  (power segment of the field bus coupler), typ.

**General data**

Weight  
Dimensions H x W x D

**Note**

SUB-D9 (male plug)

CANopen

488 Byte

244 Byte

244 Byte

64

Micro USB 2.0

1 Mbit/s

48 Mbit/s

24 V DC +20 %/ -15 %

24 V DC +20 %/ -15 %

10 A

10 A

90 mA

220 g

120 mm / 52 mm / 76 mm

Download of EDS-file on [www.weidmueller.com](http://www.weidmueller.com)**Ordering data****Module variants**

Field bus coupler, CANopen

**Note****Accessories**

Termination kit  
Swivel marker  
Connection marker for pusher neutral  
Module marker for custom printing  
Module marker for neutral  
Thermotransfer version (material: polyester)  
USB cable (USB A to Micro USB)

**Replacement parts**

Plug-in connector unit

**Note**

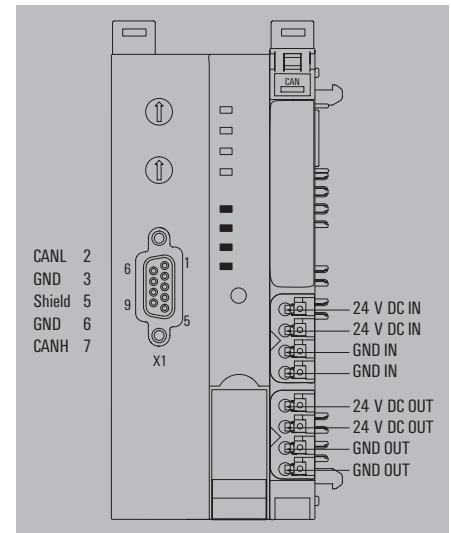
Type	Qty.	Order No.
UR20-FBC-CAN	1	1334890000

A termination kit (UR20-EBK-ACC) is included in the coupler package

Type	Qty.	Order No.
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
IE-USB-A-MICRO-1.8M	1	1487980000

UR20-PK-1334890000-SP	5	2003530000
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1 roll = 1000 label = 1 Qty.  
1 sheet = 60 label = 1 Qty.



## POWERLINK fieldbus coupler

Web server tool,  
two RJ45 Ports, 100 Mbit/s

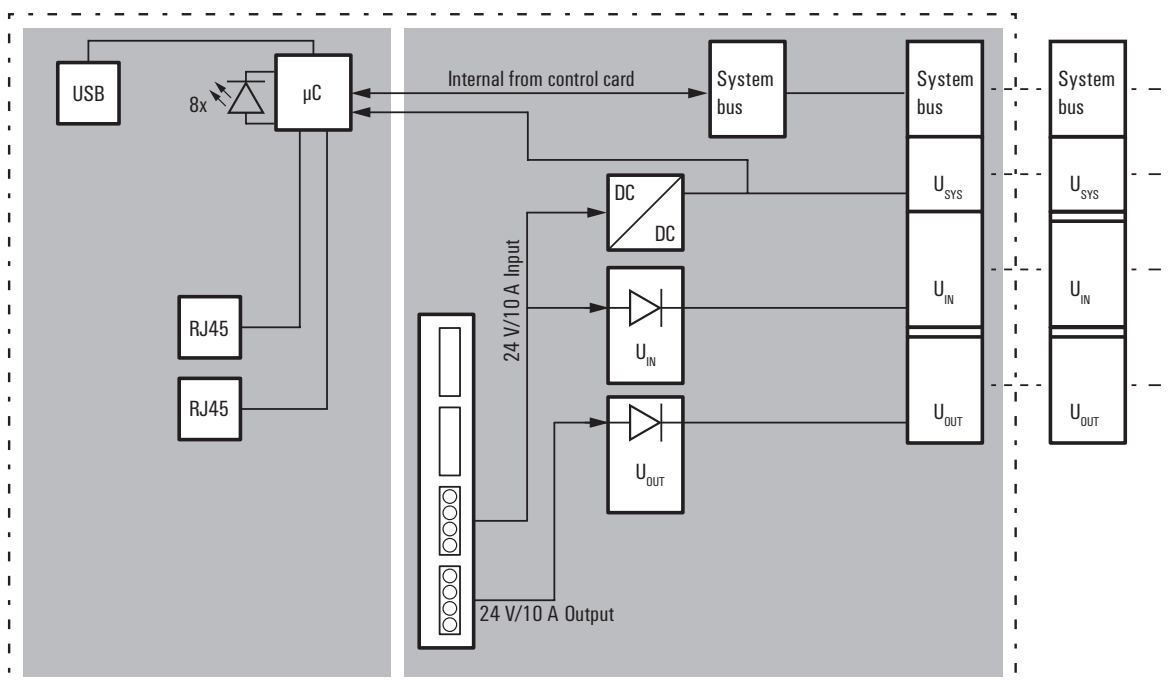
ETHERNET   
**POWERLINK**

The POWERLINK fieldbus coupler supports the Industrial Ethernet standard. An integrated web server enables system diagnostics even before the controller is connected. The UR20-FBC-PL fieldbus coupler is a Ethernet POWERLINK Standardization Group (EPSSG)-certified Ethernet POWERLINK device. It is the head module for the u-remote system bus, to which up to 64 active u-remote modules can be connected. The POWERLINK coupler has two Ethernet connections, the integrated hub has a supports a line network structure.

The coupler can be activated with a system-independent web server application via the USB service interface or the Ethernet ports. All information, such as diagnoses, status values and parameters, can therefore be read out. All connected inputs can also be simulated or outputs set. The initial system power supply is already integrated in the fieldbus coupler. Power is supplied via two 4-pin connectors, separated into the input and output current paths.

Since the POWERLINK products from Weidmüller make full use of all the latest technological possibilities, such as XDD files and diagnosis messages, they actively support your application in the most important tasks – from engineering and commissioning to fault diagnosis.

### Block diagram POWERLINK fieldbus Coupler



**POWERLINK**

- 2 x 10 A current path
- Web server
- System supply for 64 I/O modules
- Temperature range: -20... +60 °C
- Address can be set using rotary switch

**UR20-FBC-PL****Technical data****System data**

Connection type  
Field bus protocol  
Process data  
Parameter data  
Diagnostic data  
max. number of modules  
Configuration interface  
Transmission rate of field bus, max.  
Transmission speed of system bus, max.

2x RJ45 plug-in connectors  
POWERLINK  
2980 Byte  
4 kByte  
3008 Byte  
64  
Micro USB 2.0  
100 Mbit/s  
48 Mbit/s

**Supply**

Supply voltage for inputs  
Supply voltage for outputs  
Feed current for  $I_{IN}$  (input current path), max.  
Feed current for  $I_{OUT}$  (output current path), max.  
Current consumption  $I_{IN}$  (power segment of the field bus coupler), typ.

24 V DC +20 %/ -15 %  
24 V DC +20 %/ -15 %  
10 A  
10 A  
100 mA

**General data**

Weight  
Dimensions H x W x D

224 g  
120 mm / 52 mm / 76 mm

**Note**

Download of XDD-files on [www.weidmueller.com](http://www.weidmueller.com)

**Ordering data****Module variants**

Field bus coupler, POWERLINK

**Note**

Type	Qty.	Order No.
UR20-FBC-PL	1	1334940000

A termination kit (UR20-EBK-ACC) is included in the coupler package

**Accessories**

Termination kit  
Swivel marker  
Connection marker for pusher neutral  
Module marker for custom printing  
Module marker for neutral  
Thermotransfer version (material: polyester)  
USB cable (USB A to Micro USB)

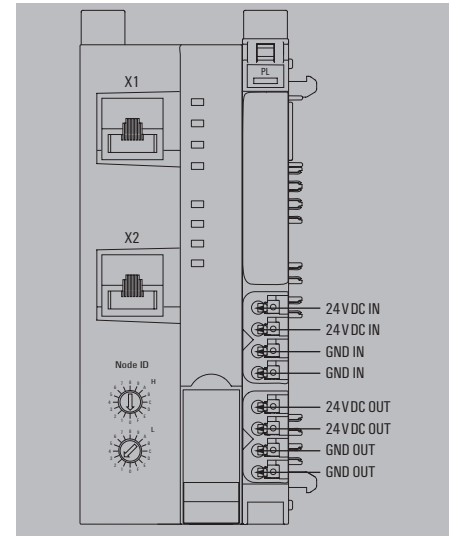
Type	Qty.	Order No.
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
IE-USB-A-MICRO-1.8M	1	1487980000

**Replacement parts**

Plug-in connector unit

UR20-PK-1334940000-SP	5	2425170000
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1 roll = 1000 label = 1 Qty.  
1 sheet = 60 label = 1 Qty.

**Note**

# CC-Link V2 fieldbus coupler

## Web server tool, PCB plug-in connector, 10 Mbit/s



CC-Link V2 is an industrial network for automation that can transmit both control data and information at high speed, ensuring efficient, integrated system or process automation.

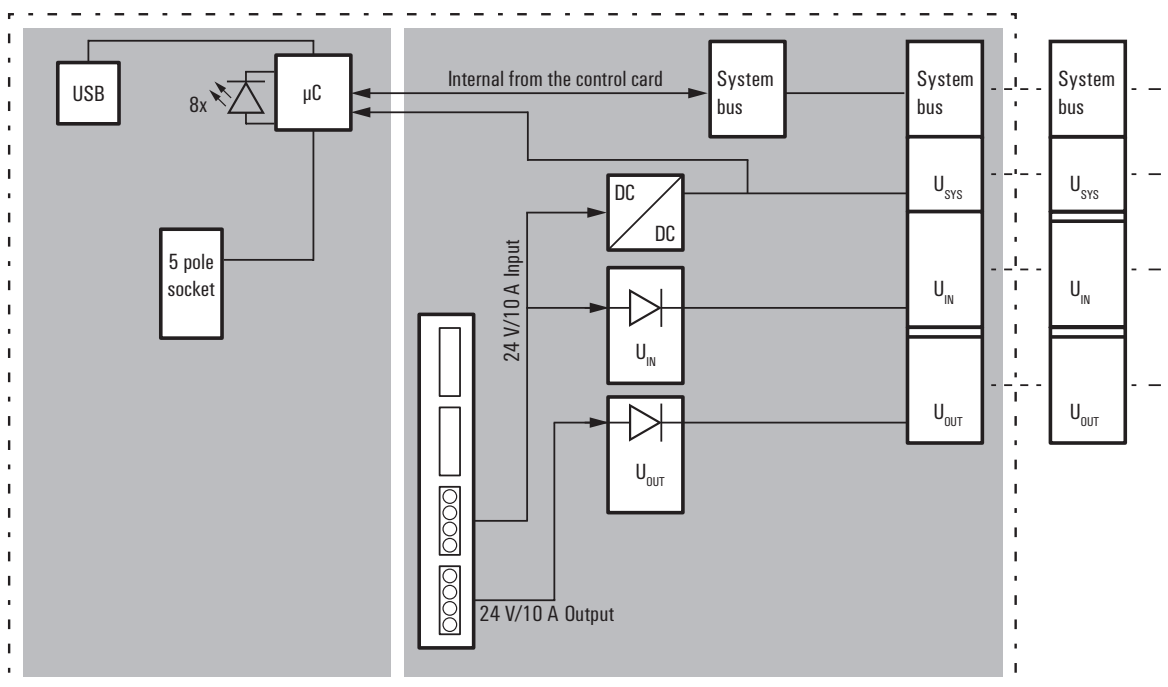
With options for connecting up to 64 u-remote participants, it serves as the head module for the u-remote system bus. The fieldbus coupler has a 5-pole PCB connector with integrated switch for implementing a line network structure.

### C

The coupler can be activated with a system-independent web server application via the USB service interface. All information, such as diagnoses, status values and parameters, can therefore be read out. All connected inputs can also be simulated or outputs set. The initial system power supply is already integrated in the fieldbus coupler. Power is supplied via two 4-pin connectors, separated into the input and output current paths.

CC-Link products from Weidmüller fully exploit all the possibilities of the technology standard, e.g. the use of CSP files. In this way, they actively support your application in the most important tasks – from engineering and commissioning to fault diagnosis.

### Block diagram CC-Link V2 fieldbus coupler



## CC-Link V2

- 2 x 10 A current paths
- Web server
- System supply of 64 I/O modules
- Temperature range -20... +60 °C
- CC-Link V2 capable

## UR20-FBC-CC



### Technical data

System data	
Connection type	Socket for 5-pole PCB plug-in connector
Field bus protocol	CC-Link
Process data	512 Byte
Parameter data	4 kByte
Diagnostic data	3008 Byte
max. number of modules	64
Configuration interface	Micro USB 2.0
Transmission rate of field bus, max.	10 Mbit/s
Transmission speed of system bus, max.	48 Mbit/s
Supply	
Supply voltage for inputs	24 V DC +20 %/ -15 %
Supply voltage for outputs	24 V DC +20 %/ -15 %
Feed current for I <sub>IN</sub> (input current path) , max.	10 A
Feed current for I <sub>OUT</sub> (output current path) , max.	10 A
Current consumption I <sub>IN</sub> (power segment of the field bus coupler), typ.	85 mA
General data	
Weight	320 g
Dimensions H x W x D	120 mm / 52 mm / 76 mm
Note	Download of CSP-file on <a href="http://www.weidmueller.com">www.weidmueller.com</a>

### Ordering data

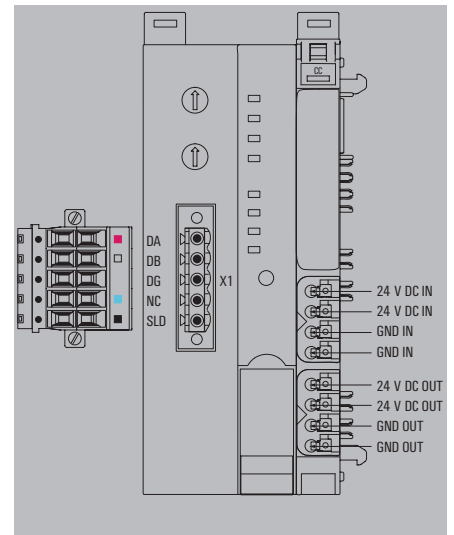
Module variants	
	Field bus coupler, CC-Link
Note	

### Accessories

	Termination kit
	Swivel marker
	Connection marker for pusher neutral
	Module marker for custom printing
	Module marker for neutral
	Thermotransfer version (material: polyester)
	USB cable (USB A to Micro USB)
Replacement parts	
	Plug-in connector unit
Note	

Type	Qty.	Order No.
UR20-FBC-CC	1	2625010000
A termination kit (UR20-EBK-ACC) is included in the coupler package.		

Type	Qty.	Order No.
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
IE-USB-A-MICRO-1.8M	1	1487980000
UR20-PK-2625010000-SP		
	5	2625060000
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		



# CC-Link IE TSN fieldbus coupler

Web server tool,  
two RJ45 Ports, 1 Gbit/s



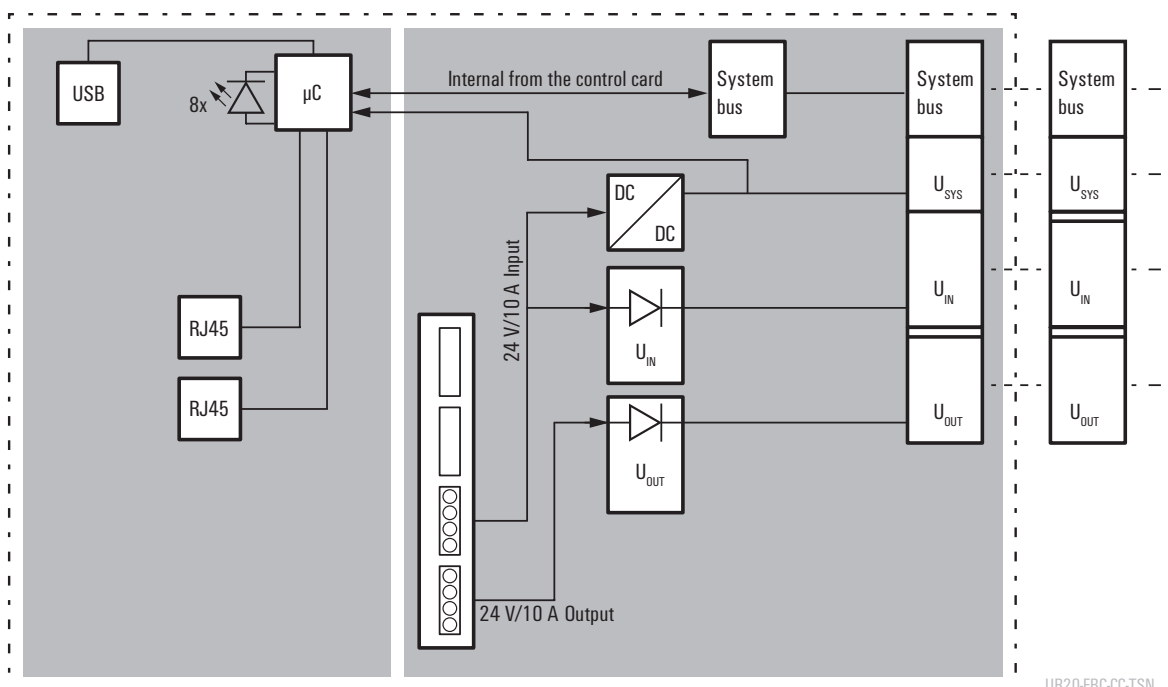
CC-Link IE TSN combines gigabit bandwidth with Time-Sensitive Networking (TSN) standards as an open industrial Ethernet. CC-Link IE TSN is a key technology for the convergence of operational technology (OT) and information technology (IT). It can connect up to 64 u-remote participants and two Ethernet ports with integrated switch to implement a line network structure.

C

The coupler can be activated with a system-independent web server application via the USB service interface or the Ethernet ports. All information, such as diagnoses, status values and parameters, can therefore be read out. All connected inputs can also be simulated or outputs set. The system's initial power supply is already integrated in the fieldbus coupler. Power is supplied via two 4-pin connectors, separated into the input and output current paths.

CC-Link IE TSN products from Weidmüller fully exploit all the possibilities of the technology standard, e.g. using a CSP file and diagnostic messages. In this way, they actively support your application in the most important tasks – from engineering and commissioning to fault diagnosis.

### Block diagram CC-Link IE TSN fieldbus coupler



**CC-Link IE TSN**

- 2 x 10 A current paths
- Web server
- System supply of 64 I/O modules
- Temperature range -20... +60 °C
- CC-Link IE TSN capable

**Technical data****System data**

Connection type
Field bus protocol
Process data
Parameter data
Diagnostic data
max. number of modules
Configuration interface
Transmission rate of field bus, max.
Transmission speed of system bus, max.

**Supply**

Supply voltage for inputs
Supply voltage for outputs
Feed current for $I_{IN}$ (input current path) , max.
Feed current for $I_{OUT}$ (output current path) , max.
Current consumption $I_{IN}$ (power segment of the field bus coupler), typ.

**General data**

Weight
Dimensions H x W x D

**Note****Ordering data****Module variants**

Field bus coupler, CC-Link IE TSN

**Note****Accessories**

Termination kit
Swivel marker
Connection marker for pusher neutral
Module marker for custom printing
Module marker for neutral
Thermotransfer version (material: polyester)
USB cable (USB A to Micro USB)

**Replacement parts**

Plug-in connector unit

**Note****UR20-FBC-CC-TSN**

2x RJ45 plug-in connectors

CC-Link IE TSN

1024 Byte

4 kByte

3008 Byte

64

Micro USB 2.0

1 Gbit/s

48 Mbit/s

24 V DC +20 % / -15 %

24 V DC +20 % / -15 %

10 A

10 A

140 mA

210 g

120 mm / 52 mm / 76 mm

Download of CSP-file on [www.weidmueller.com](http://www.weidmueller.com)

Type	Qty.	Order No.
UR20-FBC-CC-TSN	1	2680260000

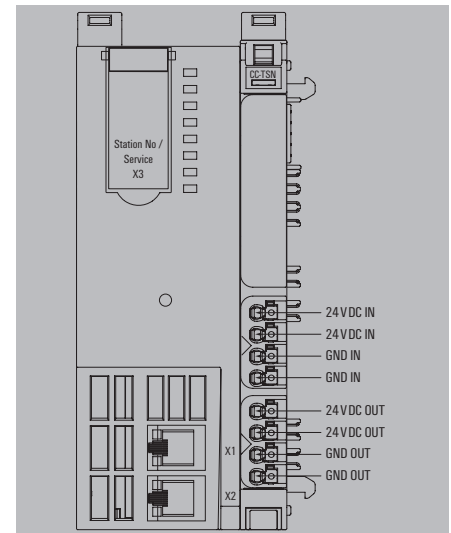
A termination kit (UR20-EBK-ACC) is included in the coupler package.

Type	Qty.	Order No.
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
IE-USB-A-MICRO-1.8M	1	1487980000

UR20-PK-2680260000-SP	5	2699160000
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1 roll = 1000 label = 1 Qty.

1 sheet = 60 label = 1 Qty.



## IEC 61162-450 fieldbus coupler

Web server tool,  
two RJ45 Ports, 100 Mbit/s

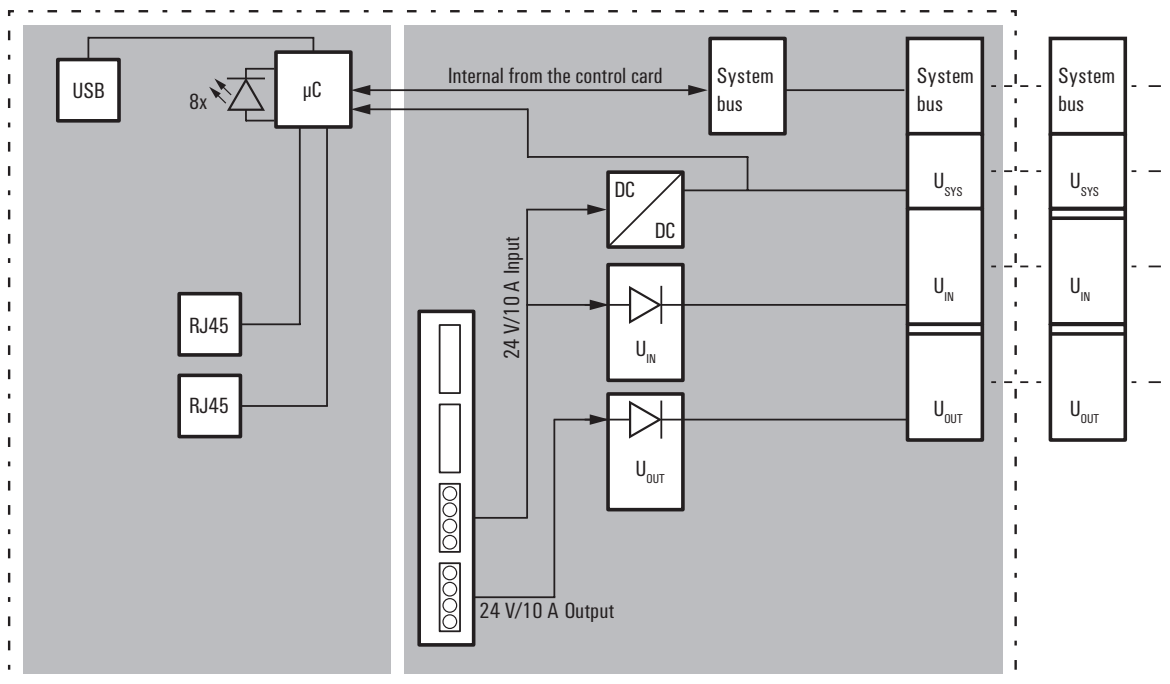
## IEC 61162-450

IEC 61162-450 specifies physical interface requirements as well as protocols and data formats for high-speed communication on ships, such as for wireless or navigation equipment and other ship systems. The fieldbus coupler can connect up to 64 u-remote participants and two Ethernet ports with integrated switch to implement a line network structure.

C

The coupler can be activated with a system-independent web server application via the USB service interface or the Ethernet ports. All information, such as diagnoses, status values and parameters, can therefore be read out. All connected inputs can also be simulated or outputs set. The system's initial power supply is already integrated in the fieldbus coupler. Power is supplied via two 4-pin connectors, separated into the input and output current paths.

### Block diagram IEC 61162-450 fieldbus coupler



**IEC 61162-450**

- 2 x 10 A current paths
- Web server
- System supply of 64 I/O modules
- Temperature range -20... +60 °C
- SNGF device according IEC 61162-450

**Technical data**

System data	
Connection type	2x RJ45 plug-in connectors
Field bus protocol	IEC 61162-450
max. number of modules	64
Configuration interface	Micro USB 2.0
Transmission rate of field bus, max.	100 Mbit/s
Transmission speed of system bus, max.	48 Mbit/s
Supply	
Supply voltage for inputs	24 V DC +20 %/ -15 %
Supply voltage for outputs	24 V DC +20 %/ -15 %
Feed current for $I_{in}$ (input current path) , max.	10 A
Feed current for $I_{out}$ (output current path) , max.	10 A
Current consumption $I_M$ (power segment of the field bus coupler), typ.	112 mA
General data	
Weight	276.32 g
Dimensions H x W x D	120 mm / 52 mm / 76 mm
Note	

**Ordering data**

Module variants	
	Field bus coupler, IEC 61162-450
Note	

**Accessories**

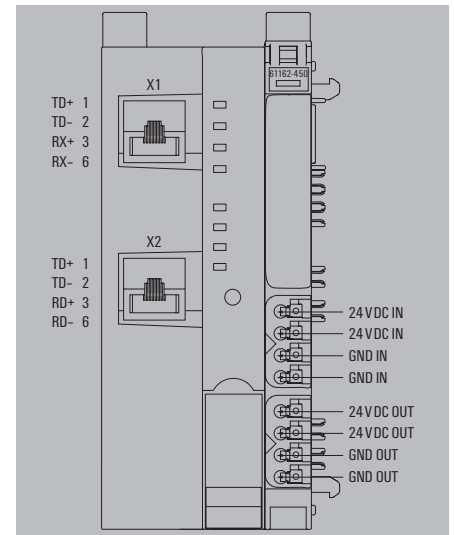
	Termination kit
	Swivel marker
	Connection marker for pusher neutral
	Module marker for custom printing
	Module marker for neutral
	Thermotransfer version (material: polyester)
	USB cable (USB A to Micro USB)
Replacement parts	
	Plug-in connector unit
Note	

**UR20-FBC-IEC61162-450**

Connection type	2x RJ45 plug-in connectors
Field bus protocol	IEC 61162-450
max. number of modules	64
Configuration interface	Micro USB 2.0
Transmission rate of field bus, max.	100 Mbit/s
Transmission speed of system bus, max.	48 Mbit/s
Supply voltage for inputs	24 V DC +20 %/ -15 %
Supply voltage for outputs	24 V DC +20 %/ -15 %
Feed current for $I_{in}$ (input current path) , max.	10 A
Feed current for $I_{out}$ (output current path) , max.	10 A
Current consumption $I_M$ (power segment of the field bus coupler), typ.	112 mA
Weight	276.32 g
Dimensions H x W x D	120 mm / 52 mm / 76 mm

Type	Qty.	Order No.
UR20-FBC-IEC61162-450	1	2661310000
A termination kit (UR20-EBK-ACC) is included in the coupler package.		

Type	Qty.	Order No.
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
IE-USB-A-MICRO-1.8M	1	1487980000
UR20-PK-2661310000-SP	5	2680540000
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		



## Digital input modules

### P- or N-switching, Reverse polarity protection, up to 3-wire+FE

Digital input modules from Weidmüller are available in different versions and are used primarily to receive binary control signals from sensors, transmitters, switches or proximity switches. Thanks to their flexible design, they will satisfy your need for well coordinated project planning with reserve potential.

All modules are available with 4, 8 or 16 inputs and comply fully with IEC 61131-2. The digital input modules are available as P- or N-switching variant. The digital inputs are for Type 1 and Type 3 sensors in accordance with the standard. With a maximum input frequency of up to 1 kHz, they are used in many different applications. The variant for PLC interface units enables rapid cabling to the proven Weidmüller interface sub-assemblies using system cables. This ensures rapid incorporation into your overall system. Two modules with a timestamp function are able to capture binary signals and to provide a timestamp in 1  $\mu$ s resolution. Further solutions are possible with the module UR20-4DI-2W-230V-AC which works with accurate current up to 230 V as an input signal.

The module electronics supply the connected sensors from the input current path ( $U_{IN}$ ).



**4DI-P**

- 4 digital inputs for sensors such as transmitters, switches and proximity sensors
- Positive switching
- 2-wire, 3-wire, 3-wire+FE connection
- Reverse polarity protection
- Input filter can be set channel by channel
- Integrated sensor supply
- Types 1 and 3 acc. to IEC 61131-2

**Technical data****System data**

Interface  
Transmission speed of system bus, max.  
Galvanic isolation

**Supply**

Supply voltage  
Current consumption  $I_m$  (power segment of the field bus coupler), typ.  
Current consumption  $I_m$  (the respective power segment)

**Digital inputs**

Number of digital inputs  
Type  
Input filter  
Input voltage, low  
Input voltage, high  
Sensor supply  
Sensor connection  
Reverse polarity protection  
Module diagnosis  
Individual channel diagnosis

**General data**

Weight  
Dimensions H x W x D

**Note****Ordering data****Module variants**

Digital input module, 4 channels

**Note****Accessories**

Coding elements  
Termination kit  
Swivel marker  
Connection marker for pusher neutral  
Module marker for custom printing  
Module marker for neutral  
Thermotransfer version (material: polyester)

**Replacement parts**

Electronic module  
Basic module  
Plug-in connector unit

**Note****UR20-4DI-P**

u-remote system bus  
48 MBit/s  
500 V DC between the current paths

24 V DC +20 %/ -15 %, via the system bus  
8 mA  
10 mA + load

4  
Types 1 and 3, EN 61131-2

configurable

<5 V

> 11 V

Yes

2-wire, 3-wire, 3-wire + FE

Yes

Yes

No

87 g

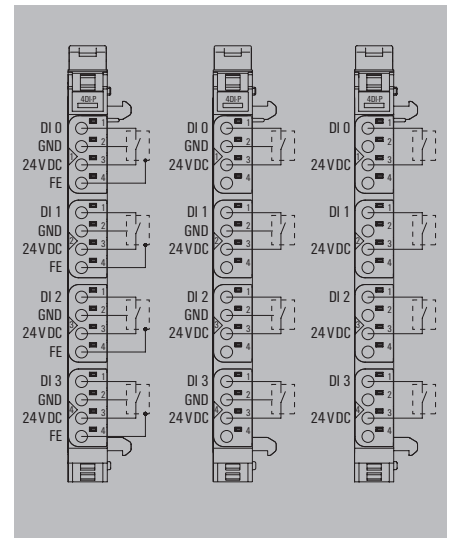
120 mm / 11.5 mm / 76 mm

Type	Qty.	Order No.
UR20-4DI-P	1	1315170000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000

UR20-EM-1315170000-SP	1	1346640000
UR20-BM-SP	5	1350930000
UR20-PK-1315170000-SP	5	1346440000

1 roll = 1000 label = 1 Qty.  
1 sheet = 60 label = 1 Qty.



## I/O system IP20 – Digital input modules

### 4DI-P-3W

- 4 digital inputs for sensors such as transmitters, switches and proximity sensors
- Positive switching
- 2-wire and 3-wire connection
- Reverse polarity protection
- Input filter can be set channel by channel
- Integrated sensor supply
- Types 1 and 3 acc. to IEC 61131-2

### UR20-4DI-P-3W



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/ -15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	10 mA + load
Digital inputs	
Number of digital inputs	4
Type	Types 1 and 3, EN 61131-2
Input filter	configurable
Input voltage, low	<5 V
Input voltage, high	> 11 V
Sensor supply	Yes
Sensor connection	2-wire, 3-wire
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
General data	
Weight	85 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

System data		
Interface	u-remote system bus	
Transmission speed of system bus, max.	48 MBit/s	
Galvanic isolation	500 V DC between the current paths	
Supply		
Supply voltage	24 V DC +20 %/ -15 %, via the system bus	
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA	
Current consumption I <sub>m</sub> (the respective power segment)	10 mA + load	
Digital inputs		
Number of digital inputs	4	
Type	Types 1 and 3, EN 61131-2	
Input filter	configurable	
Input voltage, low	<5 V	
Input voltage, high	> 11 V	
Sensor supply	Yes	
Sensor connection	2-wire, 3-wire	
Reverse polarity protection	Yes	
Module diagnosis	Yes	
Individual channel diagnosis	No	
General data		
Weight	85 g	
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm	
Note		

#### Ordering data

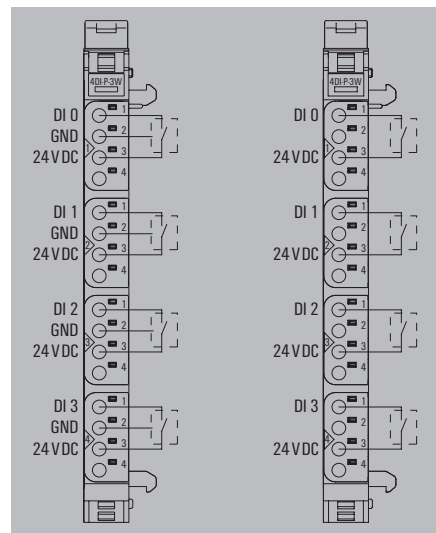
Module variants	
	Digital input module, 4 channels, 3-wire
Note	

Type	Qty.	Order No.
UR20-4DI-P-3W	1	2009360000

#### Accessories

	Coding elements
	Termination kit
	Swivel marker
	Connection marker for pusher neutral
	Module marker for custom printing
	Module marker for neutral
	Thermotransfer version (material: polyester)
Replacement parts	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
Replacement parts		
UR20-EM-2009360000-SP	1	2011260000
UR20-BM-SP	5	1350930000
UR20-PK-2009360000-SP	5	2011240000
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		



**8DI-P-2W**

- 8 digital inputs for sensors such as transmitters, switches and proximity sensors
- Positive switching
- 2-wire connection
- Reverse polarity protection
- Input filter can be set channel by channel
- Types 1 and 3 acc. to IEC 61131-2

**UR20-8DI-P-2W****Technical data****System data**

Interface  
Transmission speed of system bus, max.  
Galvanic isolation

**Supply**

Supply voltage  
Current consumption  $I_M$  (power segment of the field bus coupler), typ.  
Current consumption  $I_M$  (the respective power segment)

**Digital inputs**

Number of digital inputs  
Type  
Input filter  
Input voltage, low  
Input voltage, high  
Sensor supply  
Sensor connection  
Reverse polarity protection  
Module diagnosis  
Individual channel diagnosis

**General data**

Weight  
Dimensions H x W x D

**Note**

u-remote system bus  
48 MBit/s  
500 V DC between the current paths

24 V DC +20 %/-15 %, via the system bus  
8 mA  
30 mA

8  
Types 1 and 3, EN 61131-2  
configurable  
<5 V  
> 11 V  
Yes  
2-wire  
Yes  
Yes  
No

85 g  
120 mm / 11.5 mm / 76 mm

**Ordering data****Module variants**

Digital input module, 8 channels, 2-wire

**Note**

Type	Qty.	Order No.
UR20-8DI-P-2W	1	1315180000

**Accessories**

Coding elements  
Termination kit  
Swivel marker  
Connection marker for pusher neutral  
Module marker for custom printing  
Module marker for neutral  
Thermotransfer version (material: polyester)

**Replacement parts**

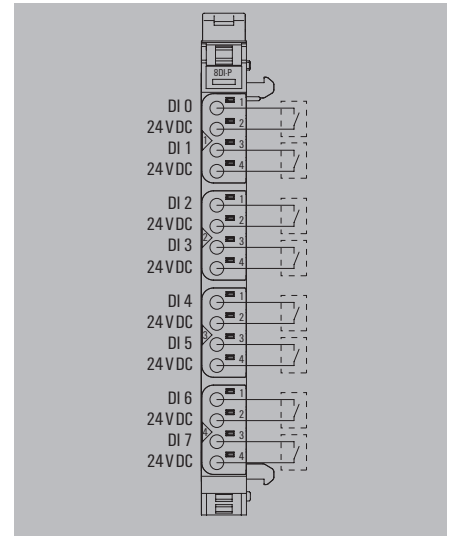
Electronic module  
Basic module  
Plug-in connector unit

**Note**

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000

UR20-EM-1315180000-SP	1	1490220000
UR20-BM-SP	5	1350930000
UR20-PK-1315180000-SP	5	1346430000

1 roll = 1000 label = 1 Qty.  
1 sheet = 60 label = 1 Qty.



## I/O system IP20 – Digital input modules

### 8DI-P-3W

- 8 digital inputs for sensors such as transmitters, switches and proximity sensors
- Positive switching
- 2-wire and 3-wire connection
- Reverse polarity protection
- Input filter can be set channel by channel
- Integrated sensor supply
- Types 1 and 3 acc. to IEC 61131-2

### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/ -15 %, via the system bus
Current consumption $I_{in}$ (power segment of the field bus coupler), typ.	8 mA
Current consumption $I_{in}$ (the respective power segment)	<22 mA + sensor feed
Digital inputs	
Number of digital inputs	8
Type	Types 1 and 3, EN 61131-2
Input filter	configurable
Input voltage, low	<5 V
Input voltage, high	> 11 V
Sensor supply	Yes
Sensor connection	2-wire, 3-wire
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
General data	
Weight	83 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

### Ordering data

Module variants	
	Digital input module, 8 channels, 3-wire
Note	

### Accessories

	Coding elements
	Termination kit
	Swivel marker
	Connection marker for pusher neutral
	Module marker for custom printing
	Module marker for neutral
	Thermotransfer version (material: polyester)
Replacement parts	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

### UR20-8DI-P-3W

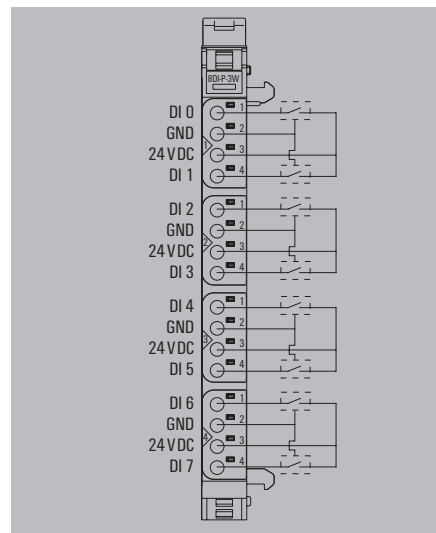


u-remote system bus	48 MBit/s
500 V DC between the current paths	
24 V DC +20 %/ -15 %, via the system bus	8 mA
<22 mA + sensor feed	
8	
Types 1 and 3, EN 61131-2	
configurable	
<5 V	
> 11 V	
Yes	
2-wire, 3-wire	
Yes	
Yes	
No	
83 g	
120 mm / 11.5 mm / 76 mm	

Type	Qty.	Order No.
UR20-8DI-P-3W	1	1394400000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
UR20-EM-1394400000-SP	1	1346650000
UR20-BM-SP	5	1350930000
UR20-PK-1394400000-SP	5	1411430000

1 roll = 1000 label = 1 Qty.  
1 sheet = 60 label = 1 Qty.



**8DI-P-3W-HD**

- 8 digital inputs for sensors such as transmitters, switches and proximity sensors
- Positive switching
- 2-wire and 3-wire connection
- Reverse polarity protection
- Input filter can be set channel by channel
- Integrated sensor supply
- Types 1 and 3 acc. to IEC 61131-2

**Technical data****System data**

Interface  
Transmission speed of system bus, max.  
Galvanic isolation

**Supply**

Supply voltage  
Current consumption  $I_m$  (power segment of the field bus coupler), typ.  
Current consumption  $I_m$  (the respective power segment)

**Digital inputs**

Number of digital inputs  
Type  
Input filter  
Input voltage, low  
Input voltage, high  
Sensor supply  
Sensor connection  
Reverse polarity protection  
Module diagnosis  
Individual channel diagnosis

**General data**

Weight  
Dimensions H x W x D

**Note****Ordering data****Module variants**

Digital input module, 8 channels, 3-wire, HD plug

**Note****Accessories**

Coding elements
Termination kit
Swivel marker
Module marker for custom printing
Module marker for neutral
Thermotransfer version (material: polyester)

**Connector and tools**

<sup>\*3)</sup> HD plug  
<sup>\*4)</sup> Stripping tool  
<sup>\*5)</sup> Pressing tool

**Replacement parts**

Electronic module  
Basic module  
Plug-in connector unit

**Note****UR20-8DI-P-3W-HD**

Note: Please order connector separately

u-remote system bus  
48 MBit/s  
500 V DC between the current paths

24 V DC +20 %/-15 %, via the system bus  
8 mA  
<22 mA + sensor feed

8  
Types 1 and 3, EN 61131-2  
configurable  
<5 V  
> 11 V  
Yes  
2-wire, 3-wire  
Yes  
Yes  
No

66 g  
120 mm / 11.5 mm / 76 mm

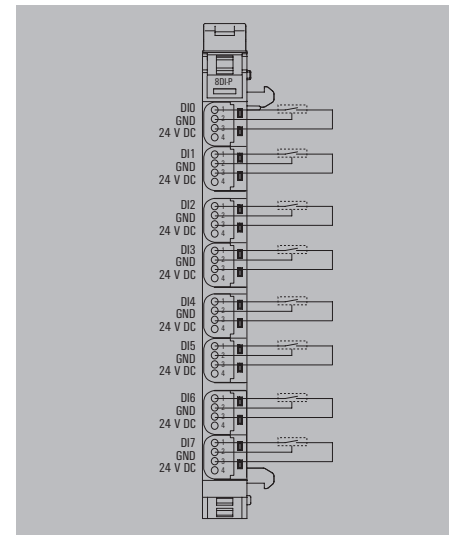
Type	Qty.	Order No.
UR20-8DI-P-3W-HD	1	1315190000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000

UR20-PG0.35	8	1469340000
MULTI-STRIPAX 6-16	1	9202210000
PWZ-UR20-HD	1	1525820000

UR20-EM-1315190000-SP	1	1346670000
UR20-BM-SP	5	1350930000
UR20-PK-1315190000-SP	5	1518800000

Note: please order plug (1469340000) separately.



## I/O system IP20 – Digital input modules

### 16DI-P

- 16 digital inputs
- Positive switching
- 1-wire connection
- Reverse polarity protection
- Permanently set input filter, 3 ms
- Types 1 and 3 acc. to IEC 61131-2

### UR20-16DI-P



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	<25 mA
Digital inputs	
Number of digital inputs	16
Type	Types 1 and 3, EN 61131-2
Input filter	3 ms
Input voltage, low	<5 V
Input voltage, high	> 11 V
Sensor supply	No
Sensor connection	Single-conductor
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
General data	
Weight	44 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

System data		
Interface	u-remote system bus	
Transmission speed of system bus, max.	48 MBit/s	
Galvanic isolation	500 V DC between the current paths	
Supply		
Supply voltage	24 V DC +20 %/-15 %, via the system bus	
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA	
Current consumption I <sub>m</sub> (the respective power segment)	<25 mA	
Digital inputs		
Number of digital inputs	16	
Type	Types 1 and 3, EN 61131-2	
Input filter	3 ms	
Input voltage, low	<5 V	
Input voltage, high	> 11 V	
Sensor supply	No	
Sensor connection	Single-conductor	
Reverse polarity protection	Yes	
Module diagnosis	Yes	
Individual channel diagnosis	No	
General data		
Weight	44 g	
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm	
Note		

#### Ordering data

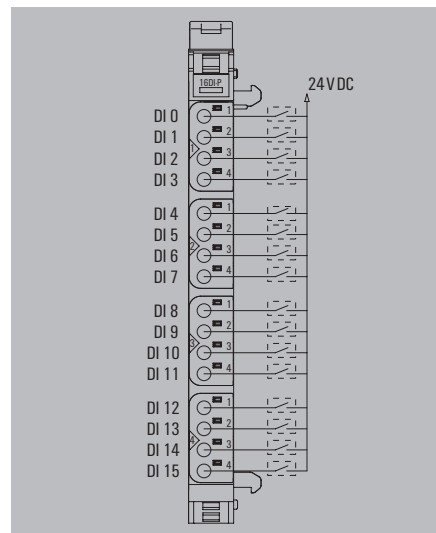
Module variants	
	Digital input module, 16 channels
Note	

Type	Qty.	Order No.
UR20-16DI-P	1	1315200000

#### Accessories

	Coding elements
	Termination kit
	Swivel marker
	Connection marker for pusher neutral
	Module marker for custom printing
	Module marker for neutral
	Thermotransfer version (material: polyester)
Replacement parts	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
Replacement parts		
UR20-EM-1315200000-SP	1	1346680000
UR20-BM-SP	5	1350930000
UR20-PK-1315200000-SP	5	1346400000
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		



**16DI-P-PLC-INT**

- 16 digital inputs
- Positive switching
- For connecting a PLC interface element
- Reverse polarity protection
- Permanently set input filter, 3 ms
- Types 1 and 3 acc. to IEC 61131-2

**Technical data****System data**

Interface  
Transmission speed of system bus, max.  
Galvanic isolation

**Supply**

Supply voltage  
Current consumption  $I_m$  (power segment of the field bus coupler), typ.  
Current consumption  $I_m$  (the respective power segment)

**Digital inputs**

Number of digital inputs  
Type  
Input filter  
Input voltage, low  
Input voltage, high  
Sensor supply  
Sensor connection  
Reverse polarity protection  
Module diagnosis  
Individual channel diagnosis

**General data**

Weight  
Dimensions H x W x D

**Note****Ordering data****Module variants**

Digital input module, 16 channels, PLC interface

**Note****Accessories**

Coding elements  
Termination kit  
Swivel marker  
Connection marker for pusher neutral  
Module marker for custom printing  
Module marker for neutral  
Thermotransfer version (material: polyester)

**Connector and cable**

PLC interface element  
Pre-assembled cable, 1m

**Replacement parts**

Electronic module  
Basic module  
Plug-in connector unit

**Note****UR20-16DI-P-PLC-INT**

u-remote system bus  
48 MBit/s  
500 V DC between the current paths  
24 V DC +20 %/-15 %, via the system bus  
8 mA  
<15 mA  
16  
Types 1 and 3, EN 61131-2  
3 ms  
<5 V  
> 11 V  
external  
PLC-Interface  
Yes  
Yes  
No  
85 g  
120 mm / 11.5 mm / 76 mm

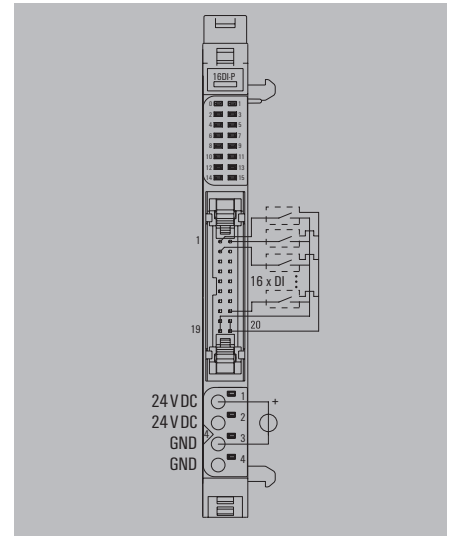
Type	Qty.	Order No.
UR20-16DI-P-PLC-INT	1	1315210000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000

RS 16IO 1W H S	1	9445700000
PAC-UNIV-HE20-LCH-1M	1	7789306010

UR20-EM-1315210000-SP	1	1346690000
UR20-BM-SP	5	1350930000
UR20-PK-1315210000-SP	5	1346590000

1 roll = 1000 label = 1 Qty.  
1 sheet = 60 label = 1 Qty.



## I/O system IP20 – Digital input modules

### 2DI-P-TS

- 2 digital inputs for sensors such as transmitters, switches and proximity sensors
- Positive switching
- 2-wire, 3-wire, 3-wire+FE connection
- 1 µs Timestamp resolution
- Input filter can be set channel by channel
- Types 1 and 3 acc. to IEC 61131-2

### UR20-2DI-P-TS



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	10 mA + load
Digital inputs	
Number of digital inputs	2
Type	Types 1 and 3, EN 61131-2
Input filter	configurable
Input voltage, low	<5 V
Input voltage, high	> 11 V
Sensor supply	Yes
Sensor connection	2-wire, 3-wire, 3-wire + FE
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
Time stamp data width	16 Bit
Time stamp resolution	1 µs
General data	
Weight	83 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

System data		
Interface	u-remote system bus	
Transmission speed of system bus, max.	48 MBit/s	
Galvanic isolation	500 V DC between the current paths	
Supply		
Supply voltage	24 V DC +20 %/-15 %, via the system bus	
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA	
Current consumption I <sub>m</sub> (the respective power segment)	10 mA + load	
Digital inputs		
Number of digital inputs	2	
Type	Types 1 and 3, EN 61131-2	
Input filter	configurable	
Input voltage, low	<5 V	
Input voltage, high	> 11 V	
Sensor supply	Yes	
Sensor connection	2-wire, 3-wire, 3-wire + FE	
Reverse polarity protection	Yes	
Module diagnosis	Yes	
Individual channel diagnosis	No	
Time stamp data width	16 Bit	
Time stamp resolution	1 µs	
General data		
Weight	83 g	
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm	
Note		

#### Ordering data

Module variants	
Digital input module, 2 channels, Timestamp	
Note	

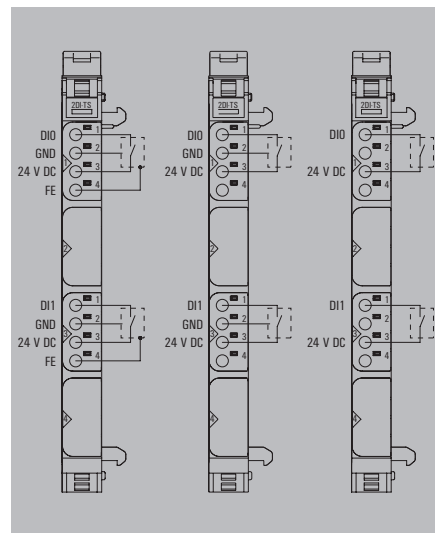
Type	Qty.	Order No.
UR20-2DI-P-TS	1	1460140000

#### Accessories

Coding elements	
Termination kit	
Swivel marker	
Connection marker for pusher neutral	
Module marker for custom printing	
Module marker for neutral	
Thermotransfer version (material: polyester)	
Replacement parts	
Electronic module	
Basic module	
Plug-in connector unit	
Note	

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
UR20-EM-1460140000-SP	1	1463690000
UR20-BM-SP	5	1350930000
UR20-PK-1460140000-SP	5	1484110000

1 roll = 1000 label = 1 Qty.  
1 sheet = 60 label = 1 Qty.



**4DI-P-TS**

- 4 digital inputs for sensors such as transmitters, switches and proximity sensors
- Positive switching
- 2-wire, 3-wire, 3-wire+FE connection
- 1  $\mu$ s Timestamp resolution
- Input filter can be set channel by channel
- Types 1 and 3 acc. to IEC 61131-2

**Technical data****System data**

Interface  
Transmission speed of system bus, max.  
Galvanic isolation

**Supply**

Supply voltage  
Current consumption  $I_m$  (power segment of the field bus coupler), typ.  
Current consumption  $I_m$  (the respective power segment)

**Digital inputs**

Number of digital inputs  
Type  
Input filter  
Input voltage, low  
Input voltage, high  
Sensor supply  
Sensor connection  
Reverse polarity protection  
Module diagnosis  
Individual channel diagnosis  
Time stamp data width  
Time stamp resolution

**General data**

Weight  
Dimensions H x W x D

**Note****Ordering data****Module variants**

Digital input module, 4 channels, Timestamp

**Note****Accessories**

Coding elements  
Termination kit  
Swivel marker  
Connection marker for pusher neutral  
Module marker for custom printing  
Module marker for neutral  
Thermotransfer version (material: polyester)

**Replacement parts**

Electronic module  
Basic module  
Plug-in connector unit

**Note****UR20-4DI-P-TS**

u-remote system bus  
48 MBit/s  
500 V DC between the current paths

24 V DC +20 %/-15 %, via the system bus  
8 mA  
10 mA + load

4  
Types 1 and 3, EN 61131-2

configurable

<5 V

> 11 V

Yes

2-wire, 3-wire, 3-wire + FE

Yes

Yes

No

16 Bit

1  $\mu$ s

87 g

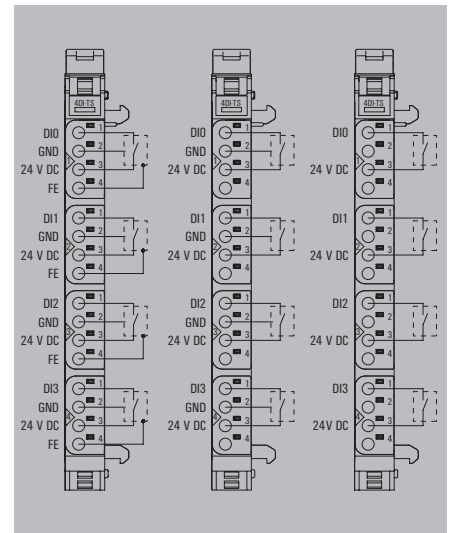
120 mm / 11.5 mm / 76 mm

Type	Qty.	Order No.
UR20-4DI-P-TS	1	1460150000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000

UR20-EM-1460150000-SP	1	1463680000
UR20-BM-SP	5	1350930000
UR20-PK-1460150000-SP	5	1484430000

1 roll = 1000 label = 1 Qty.  
1 sheet = 60 label = 1 Qty.



## I/O system IP20 – Digital input modules

### 4DI-N

- 4 digital inputs for sensors such as transmitters, switches and proximity sensors
- Negative switching
- 2-wire, 3-wire, 3-wire+FE connection
- Reverse polarity protection
- Input filter can be set channel by channel
- Integrated sensor supply
- Types 1 and 3 acc. to IEC 61131-2

### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/-15 %, via the system bus
Current consumption $I_m$ (power segment of the field bus coupler), typ.	8 mA
Current consumption $I_m$ (the respective power segment)	10 mA + load
Digital inputs	
Number of digital inputs	4
Type	Types 1 and 3, EN 61131-2
Input filter	configurable
Input voltage, low	> -5 V referred to +24 V of the input power supply $U_m$
Input voltage, high	< 11 V referred to +24 V of the input power supply $U_m$
Sensor supply	Yes
Sensor connection	2-wire, 3-wire, 3-wire + FE
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
General data	
Weight	87 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

### Ordering data

Module variants	
	Digital input module, 4 channels
Note	

### Accessories

	Coding elements
	Termination kit
	Swivel marker
	Connection marker for pusher neutral
	Module marker for custom printing
	Module marker for neutral
	Thermotransfer version (material: polyester)
Replacement parts	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

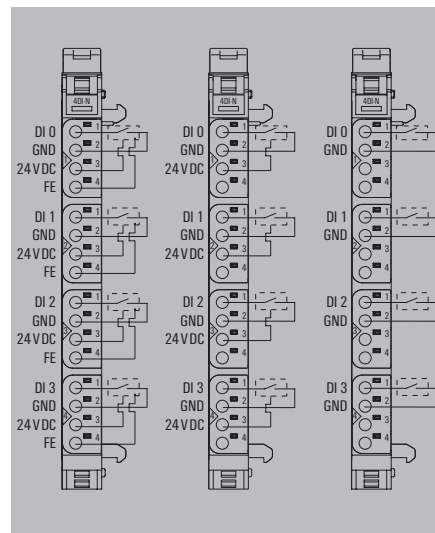
### UR20-4DI-N



System data		
Interface	u-remote system bus	
Transmission speed of system bus, max.	48 MBit/s	
Galvanic isolation	500 V DC between the current paths	
Supply		
Supply voltage	24 V DC +20 %/-15 %, via the system bus	
Current consumption $I_m$ (power segment of the field bus coupler), typ.	8 mA	
Current consumption $I_m$ (the respective power segment)	10 mA + load	
Digital inputs		
Number of digital inputs	4	
Type	Types 1 and 3, EN 61131-2	
Input filter	configurable	
Input voltage, low	> -5 V referred to +24 V of the input power supply $U_m$	
Input voltage, high	< 11 V referred to +24 V of the input power supply $U_m$	
Sensor supply	Yes	
Sensor connection	2-wire, 3-wire, 3-wire + FE	
Reverse polarity protection	Yes	
Module diagnosis	Yes	
Individual channel diagnosis	No	
General data		
Weight	87 g	
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm	
Note		

Type	Qty.	Order No.
UR20-4DI-N	1	1315350000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
Replacement parts		
UR20-EM-1315350000-SP	1	1346870000
UR20-BM-SP	5	1350930000
UR20-PK-1315350000-SP	5	1559770000
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		



**8DI-N-3W**

- 8 digital inputs for sensors such as transmitters, switches and proximity sensors
- Negative switching
- 2-wire and 3-wire connection
- Reverse polarity protection
- Input filter can be set channel by channel
- Integrated sensor supply
- Types 1 and 3 acc. to IEC 61131-2

**Technical data**

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/ -15 %, via the system bus
Current consumption $I_M$ (power segment of the field bus coupler), typ.	8 mA
Current consumption $I_M$ (the respective power segment)	<20 mA + sensor feed
Digital inputs	
Number of digital inputs	8
Type	Types 1 and 3, EN 61131-2
Input filter	configurable
Input voltage, low	> -5 V referred to +24 V of the input power supply $U_M$
Input voltage, high	< 11 V referred to +24 V of the input power supply $U_M$
Sensor supply	Yes
Sensor connection	2-wire, 3-wire
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
General data	
Weight	83 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

**Ordering data**

Module variants	
	Digital input module, 8 channels, 3-wire
Note	

**Accessories**

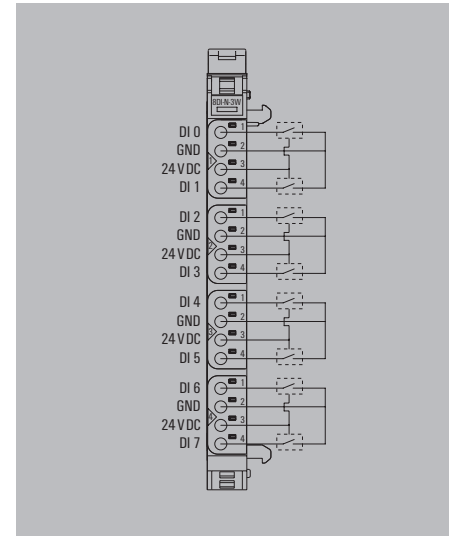
	Coding elements
	Termination kit
	Swivel marker
	Connection marker for pusher neutral
	Module marker for custom printing
	Module marker for neutral
	Thermotransfer version (material: polyester)
Replacement parts	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

**UR20-8DI-N-3W**

u-remote system bus	48 MBit/s
500 V DC between the current paths	
24 V DC +20 %/ -15 %, via the system bus	8 mA
<20 mA + sensor feed	
8	
Types 1 and 3, EN 61131-2	
configurable	
> -5 V referred to +24 V of the input power supply $U_M$	
< 11 V referred to +24 V of the input power supply $U_M$	
Yes	
2-wire, 3-wire	
Yes	
Yes	
No	
83 g	
120 mm / 11.5 mm / 76 mm	

Type	Qty.	Order No.
UR20-8DI-N-3W	1	1315370000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
UR20-EM-1315370000-SP	1	1346880000
UR20-BM-SP	5	1350930000
UR20-PK-1315370000-SP	5	1559780000
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		



## I/O system IP20 – Digital input modules

### 16DI-N

- 16 digital inputs
- Negative switching
- 1-wire connection
- Reverse polarity protection
- Permanently set input filter, 3 ms
- Types 1 and 3 acc. to IEC 61131-2

### UR20-16DI-N



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/ -15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	<15 mA
Digital inputs	
Number of digital inputs	16
Type	Types 1 and 3, EN 61131-2
Input filter	3 ms
Input voltage, low	> - 5 V referred to +24 V of the input power supply U <sub>N</sub>
Input voltage, high	< 11 V referred to +24 V of the input power supply U <sub>N</sub>
Sensor supply	No
Sensor connection	Single-conductor
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
General data	
Weight	86 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

System data		
Interface	u-remote system bus	
Transmission speed of system bus, max.	48 MBit/s	
Galvanic isolation	500 V DC between the current paths	
Supply		
Supply voltage	24 V DC +20 %/ -15 %, via the system bus	
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA	
Current consumption I <sub>m</sub> (the respective power segment)	<15 mA	
Digital inputs		
Number of digital inputs	16	
Type	Types 1 and 3, EN 61131-2	
Input filter	3 ms	
Input voltage, low	> - 5 V referred to +24 V of the input power supply U <sub>N</sub>	
Input voltage, high	< 11 V referred to +24 V of the input power supply U <sub>N</sub>	
Sensor supply	No	
Sensor connection	Single-conductor	
Reverse polarity protection	Yes	
Module diagnosis	Yes	
Individual channel diagnosis	No	
General data		
Weight	86 g	
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm	
Note		

#### Ordering data

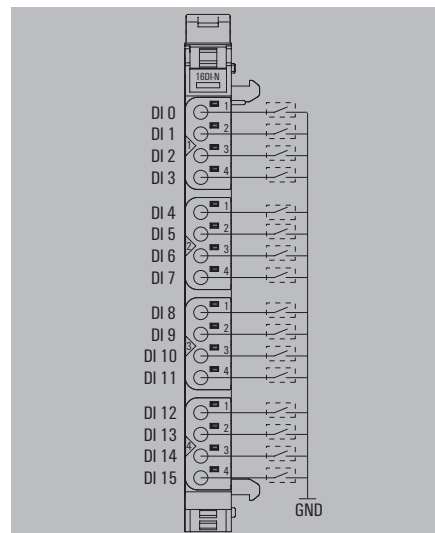
Module variants	
	Digital input module, 16 channels
Note	

Type	Qty.	Order No.
UR20-16DI-N	1	1315390000

#### Accessories

	Coding elements
	Termination kit
	Swivel marker
	Connection marker for pusher neutral
	Module marker for custom printing
	Module marker for neutral
	Thermotransfer version (material: polyester)
Replacement parts	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
Replacement parts		
UR20-EM-1315390000-SP	1	1346920000
UR20-BM-SP	5	1350930000
UR20-PK-1315390000-SP	5	1559790000
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		



**16DI-N-PLC-INT**

- 16 digital inputs
- Negative switching
- For connecting a PLC interface element
- Reverse polarity protection
- Permanently set input filter, 3 ms
- Types 1 and 3 acc. to IEC 61131-2

**Technical data**

System data	
Interface	
Transmission speed of system bus, max.	
Galvanic isolation	
Supply	
Supply voltage	
Current consumption $I_N$ (power segment of the field bus coupler), typ.	
Current consumption $I_N$ (the respective power segment)	
Digital inputs	
Number of digital inputs	
Type	
Input filter	
Input voltage, low	
Input voltage, high	
Sensor supply	
Sensor connection	
Reverse polarity protection	
Module diagnosis	
Individual channel diagnosis	
General data	
Weight	
Dimensions H x W x D	
Note	

**Ordering data**

Module variants	
Digital input module, 16 channels, PLC interface	
Note	

**Accessories**

Coding elements	
Termination kit	
Swivel marker	
Connection marker for pusher neutral	
Module marker for custom printing	
Module marker for neutral	
Thermotransfer version (material: polyester)	
Connector and cable	
PLC interface element	
Pre-assembled cable, 1m	
Replacement parts	
Electronic module	
Basic module	
Plug-in connector unit	
Note	

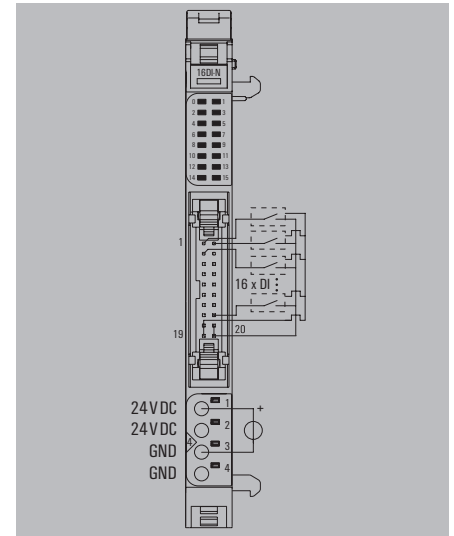
**UR20-16DI-N-PLC-INT**

u-remote system bus	
48 MBit/s	
500 V DC between the current paths	
24 V DC +20 %/-15 %, via the system bus	
8 mA	
<15 mA	
16	
Types 1 and 3, EN 61131-2	
3 ms	
> -5 V referred to +24 V of the input power supply $U_N$	
< -11 V referred to +24 V of the input power supply $U_N$	
external	
PLC-Interface	
Yes	
Yes	
No	
82 g	
120 mm / 11.5 mm / 76 mm	

Type	Qty.	Order No.
UR20-16DI-N-PLC-INT	1	1315400000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
RS 16IO 1W H S	1	9445700000
PAC-UNIV-HE20-LCH-1M	1	7789306010
UR20-EM-1315400000-SP	1	1346930000
UR20-BM-SP	5	1350930000
UR20-PK-1315400000-SP	5	1559800000

1 roll = 1000 label = 1 Qty.  
1 sheet = 60 label = 1 Qty.



## I/O system IP20 – Digital input modules

### 8DI-ISO-2W

- 8 digital inputs for sensors
- Insulation up to 500 V
- 2-wire connection
- Reverse polarity protection
- Types 1 and 3 acc. to IEC 61131-2

### UR20-8DI-ISO-2W



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	no
Current consumption $I_M$ (power segment of the field bus coupler), typ.	8 mA
Current consumption $I_M$ (the respective power segment)	No
Digital inputs	
Number of digital inputs	8
Type	Types 1 and 3, EN 61131-2
Input filter	Input delay adjustable from 0 to 40 ms
Input voltage, low	<10 V
Input voltage, high	> 11 V
Sensor supply	No
Sensor connection	2-wire
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
Insulation	500 V (channel to channel), 500 V (channel to supply voltage)
General data	
Weight	85 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

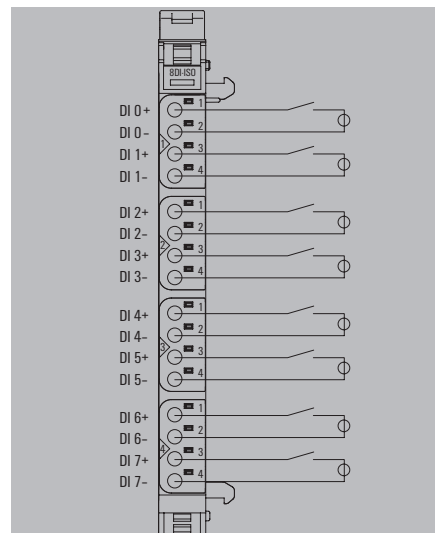
Type	Qty.	Order No.
UR20-8DI-ISO-2W	1	2457240000

#### Ordering data

Module variants	
Digital input module, 8 channels, isolated	
Note	

#### Accessories

Coding elements	KOSM BHZ5.00	100	1483050000
Termination kit	UR20-EBK-ACC	5	1346610000
Swivel marker	UR20-SM-ACC	20	1339920000
Connection marker for pusher neutral	PM 2.7/2.6 MC NE WS	960	1323710000
Module marker for custom printing	DEK 5/8-11.5 MC SDR	100	1341610000
Module marker for neutral	DEK 5/8-11.5 MC NE WS	500	1341630000
Thermotransfer version (material: polyester)	THM UR20 WS	1	1429420000
Replacement parts			
Electronic module	UR20-EM-2457240000-SP	1	2545780000
Basic module	UR20-BM-SP	5	1350930000
Plug-in connector unit	UR20-PK-2457240000-SP	5	2545760000
Note			
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.			



**4DI-2W-230V-AC**

- 4 digital inputs for sensors such as transmitters, switches and proximity sensors
- Positive switching
- 2-wire connection
- Input filter can be set channel by channel
- Galvanic isolation by 4 kV
- Types 3 acc. to IEC 61131-2

**Technical data****System data**

Interface  
Transmission speed of system bus, max.  
Galvanic isolation  
Line-to-line voltage

**Supply**

Supply voltage  
Current consumption  $I_m$  (power segment of the field bus coupler), typ.

**Digital inputs**

Number of digital inputs  
Type  
Input filter  
Input voltage, low  
Input voltage, high  
Supply voltage (input)  
Input frequency  
Sensor supply  
Sensor connection  
Module diagnosis  
Individual channel diagnosis

**General data**

Weight  
Dimensions H x W x D

**Note****Ordering data****Module variants**

Digital input module, 4 channels, 230V AC

**Note****Accessories**

Coding elements  
Termination kit  
Swivel marker  
Connection marker for pusher neutral  
Module marker for custom printing  
Module marker for neutral  
Thermotransfer version (material: polyester)

**Replacement parts**

Electronic module  
Basic module  
Plug-in connector unit

**Note****UR20-4DI-2W-230V-AC**

u-remote system bus  
48 MBit/s  
500 V DC between the current paths  
400 V is possible between the channels

24 V DC +20 %/ -15 %, via the system bus  
8 mA

4  
Types 1 and 3, EN 61131-2  
configurable, 10 ms  
<65 V  
≥ 80 V  
277 V AC (UL), 265 V AC (VDE)  
50 Hz, 60 Hz  
No  
2-wire  
Yes  
No

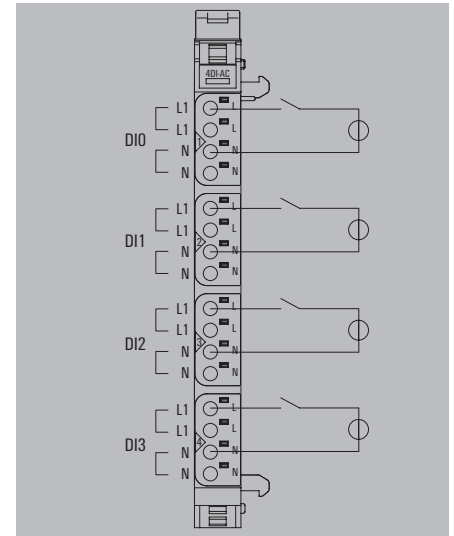
89 g  
120 mm / 11.5 mm / 76 mm

Type	Qty.	Order No.
UR20-4DI-2W-230V-AC	1	1550070000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000

UR20-EM-1550070000-SP	1	1558880000
UR20-BM-SP	5	1350930000
UR20-PK-1550070000-SP	5	1559820000

1 roll = 1000 label = 1 Qty.  
1 sheet = 60 label = 1 Qty.



## Digital output modules

### P- or N-switching, short-circuit-proof, up to 3-wire+FE

Digital output modules are available in the following variants: 4DO, 8DO with 2-wire technology, 16DO with or without PLC interface connection. They are used primarily for incorporating decentralised actuators. The digital output modules are available as P- or N-switching variant. All outputs are designed for DC-13 actuators acc. to DIN EN 60947-5-1 and IEC 61131-2 specifications. Just like the digital input modules, frequencies of up to 1 kHz are possible. Maximum system safety is ensured by protecting the outputs. This consists of an automatic restart following a short-circuit. Clearly recognisable LEDs also signal the status of the entire module as well as individual channels.

In addition to the standard applications of the digital output modules, the portfolio also includes special variants, such as the 4RO-SSR module for rapidly switching applications. Fitted with solid state technology, 0.5 A is available for each output. Furthermore, there is also the 4RO-CO relay module for power-intensive applications. This is equipped with four change-over contacts, optimised for a switching voltage of 277 V AC and designed for a switching current of 6 A. To serve negative switching requirements there is a parameterisable version of the 4DO modules.

The module electronics supply the connected actuators from the output current path ( $U_{OUT}$ ).



**4DO-P**

- 4 digital outputs
- Positive switching
- 2-wire, 3-wire, 3-wire+FE connection
- Can be loaded up to 0.5 A per channel
- Short-circuit-proof
- DC-13 load
- IEC 61131-2 compliant

**Technical data****System data**

Interface  
Transmission speed of system bus, max.  
Galvanic isolation

**Supply**

Supply voltage  
Current consumption  $I_{in}$  (power segment of the field bus coupler), typ.  
Current consumption from  $I_{out}$  (the respective power segment)

**Digital outputs**

Number of digital outputs  
Type  
Max. response time, high  
Max. response time, low  
Output current per channel, max.  
Output current per module, max.  
Switching frequenz max. Resistive load (min. 47  $\Omega$ )  
Switching frequenz max. Inductive load (DC13)  
Switching frequenz max. Lamp load (12 W)  
Actuator connection  
Short-circuit-proof  
Feedback-free  
Module diagnosis  
Individual channel diagnosis  
Switch-off energy (inductive)  
Response time of the protective circuit (current limiting)

**General data**

Weight  
Dimensions H x W x D

**Note****Ordering data****Module variants**

Digital output module, 4 channels

**Note****Accessories**

Coding elements  
Termination kit  
Swivel marker  
Connection marker for pusher neutral  
Module marker for custom printing  
Module marker for neutral  
Thermotransfer version (material: polyester)

**Replacement parts**

Electronic module  
Basic module  
Plug-in connector unit

**Note****UR20-4DO-P**

u-remote system bus  
48 MBit/s  
500 V DC between the current paths

24 V DC +20 %/-15 %, via the system bus  
8 mA  
10 mA + load

4  
Lamp load, Ohmic, Inductive  
100  $\mu$ s  
250  $\mu$ s  
500 mA  
2000 mA  
1 kHz  
0.2 Hz  
1 kHz  
2-wire, 3-wire, 3-wire + FE  
Yes (thermal cut-out)  
Yes  
Yes  
No  
<150 mJ / channel  
<100 $\mu$ s

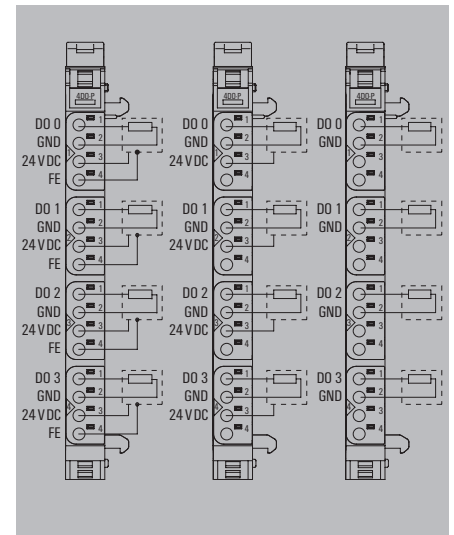
86 g  
120 mm / 11.5 mm / 76 mm

Type	Qty.	Order No.
UR20-4DO-P	1	1315220000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000

UR20-EM-1315220000-SP	1	1346700000
UR20-BM-SP	5	1350930000
UR20-PK-1315220000-SP	5	1483960000

1 roll = 1000 label = 1 Qty.  
1 sheet = 60 label = 1 Qty.



## I/O system IP20 – Digital output modules

### 4D0-P-2A

- 4 digital outputs
- Positive switching
- Can be loaded up to 2 A per channel
- 2-wire, 3-wire, 3-wire+FE connection
- Module can be loaded up to 8 A
- Short-circuit-proof
- DC-13 load
- IEC 61131-2 compliant

### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>out</sub> (the respective power segment)	10 mA + load
Digital outputs	
Number of digital outputs	4
Type	Lamp load, Ohmic, Inductive
Max. response time, high	100 µs
Max. response time, low	250 µs
Output current per channel, max.	2000 mA
Output current per module, max.	8000 mA
Switching frequenz max. Resistive load (min. 47 Ω)	1 kHz
Switching frequenz max. Inductive load (DC13)	0.2 Hz
Switching frequenz max. Lamp load (12 W)	1 kHz
Actuator connection	2-wire, 3-wire, 3-wire + FE
Short-circuit-proof	Yes (thermal cut-out)
Feedback-free	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
Switch-off energy (inductive)	<150 mJ / channel
Response time of the protective circuit (current limiting)	<100µs
General data	
Weight	85 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

### Ordering data

Module variants	
	Digital output module, 4 channels, 2 A
Note	

### Accessories

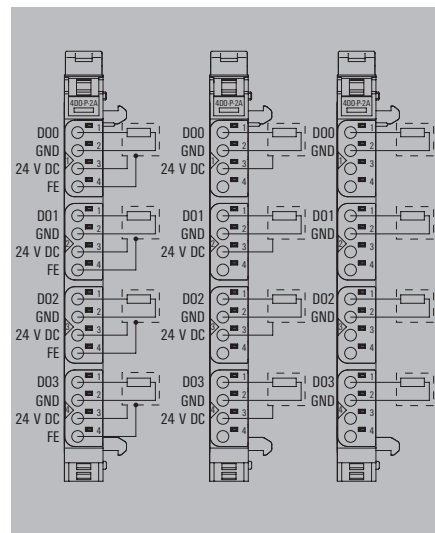
	Coding elements
	Termination kit
	Swivel marker
	Connection marker for pusher neutral
	Module marker for custom printing
	Module marker for neutral
	Thermotransfer version (material: polyester)
Replacement parts	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

### UR20-4D0-P-2A



Type		
Type	Qty.	Order No.
UR20-4D0-P-2A	1	1315230000
Note		

Type		
Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
Replacement parts		
UR20-EM-1315230000-SP	1	1346710000
UR20-BM-SP	5	1350930000
UR20-PK-1315230000-SP	5	1483970000
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		



**4DO-PN-2A**

- 4 digital outputs
- Positive or negative switching
- Can be loaded up to 2 A per channel
- 2-wire, 3-wire, 3-wire+FE connection
- Module can be loaded up to 8 A
- Short-circuit-proof
- IEC 61131-2 compliant

**Technical data****System data**

Interface  
Transmission speed of system bus, max.  
Galvanic isolation

**Supply**

Supply voltage  
Current consumption  $I_{in}$  (power segment of the field bus coupler), typ.  
Current consumption from  $I_{out}$  (the respective power segment)

**Digital outputs**

Number of digital outputs  
Positive or negative switching  
Type  
Max. response time, high  
Max. response time, low  
Output current per channel, max.  
Output current per module, max.  
Switching frequenz max. Resistive load (min. 47  $\Omega$ )  
Switching frequenz max. Inductive load (DC13)  
Switching frequenz max. Lamp load (12 W)  
Actuator connection  
Short-circuit-proof  
Feedback-free  
Module diagnosis  
Individual channel diagnosis  
Switch-off energy (inductive)  
Response time of the protective circuit (current limiting)

**General data**

Weight  
Dimensions H x W x D

**Note****Ordering data****Module variants**

Digital output module, 4 channels

**Note****Accessories**

Coding elements  
Termination kit  
Swivel marker  
Connection marker for pusher neutral  
Module marker for custom printing  
Module marker for neutral  
Thermotransfer version (material: polyester)

**Replacement parts**

Electronic module  
Basic module  
Plug-in connector unit

**Note****UR20-4DO-PN-2A**

u-remote system bus  
48 MBit/s  
500 V DC between the current paths

24 V DC +20 %/ -15 %, via the system bus  
8 mA  
10 mA + load

4  
Positive or negative switching  
Inductive, Ohmic, Lamp load  
100  $\mu$ s  
250  $\mu$ s  
2 A  
8000 mA  
1 kHz  
2 Hz  
1 kHz

2-wire, 3-wire, 3-wire + FE  
Yes (thermal cut-out)

Yes  
Yes  
No  
<150 mJ / channel  
<100  $\mu$ s

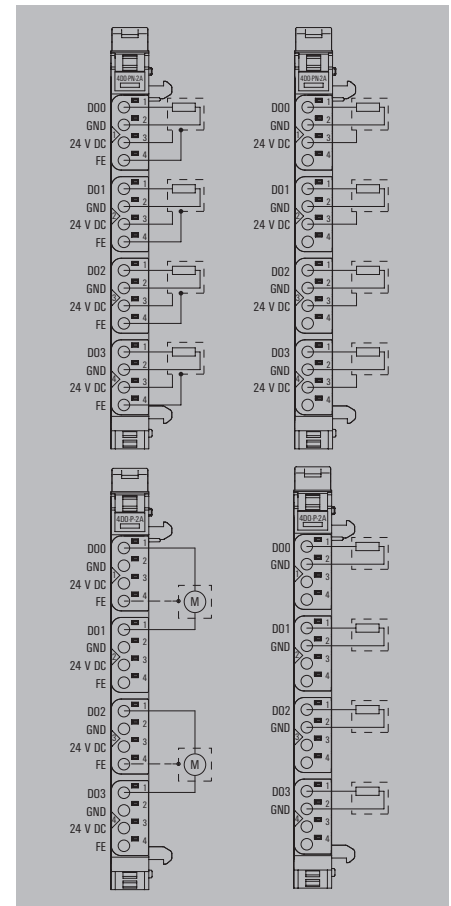
85 g  
120 mm / 11.5 mm / 76 mm

Type	Qty.	Order No.
UR20-4DO-PN-2A	1	1394420000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000

UR20-EM-1394420000-SP	1	1480950000
UR20-BM-SP	5	1350930000
UR20-PK-1394420000-SP	5	1483980000

1 roll = 1000 label = 1 Qty.  
1 sheet = 60 label = 1 Qty.



## I/O system IP20 – Digital output modules

### 8DO-P

- 8 digital outputs
- Positive switching
- Can be loaded up to 0.5 A per channel
- 2-wire connection
- Short-circuit-proof
- DC-13 load
- IEC 61131-2 compliant

### UR20-8DO-P



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/ -15 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>out</sub> (the respective power segment)	15 mA + load
Digital outputs	
Number of digital outputs	8
Type	Lamp load, Ohmic, Inductive
Max. response time, high	100 µs
Max. response time, low	250 µs
Output current per channel, max.	500 mA
Output current per module, max.	4000 mA
Switching frequenz max. Resistive load (min. 47 Ω)	1 kHz
Switching frequenz max. Inductive load (DC13)	0.2 Hz
Switching frequenz max. Lamp load (12 W)	1 kHz
Actuator connection	2-wire
Short-circuit-proof	Yes (thermal cut-out)
Feedback-free	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
Switch-off energy (inductive)	<150 mJ / channel
Response time of the protective circuit (current limiting)	<100µs
General data	
Weight	87 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

Type	Qty.	Order No.
UR20-8DO-P	1	1315240000

For this and additional technical data, please refer to the manual available at [www.weidmuller.de](http://www.weidmuller.de).

#### Ordering data

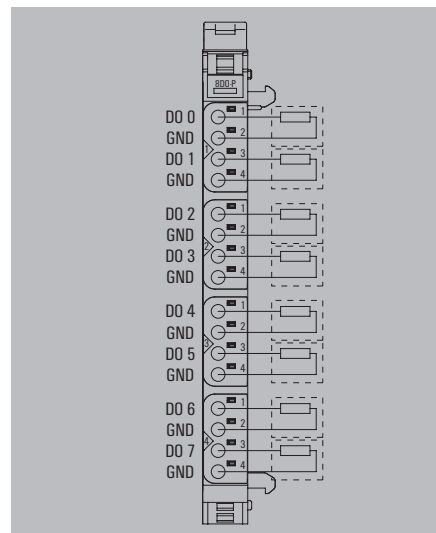
Module variants	
	Digital output module, 8 channels
Note	

#### Accessories

	Coding elements
	Termination kit
	Swivel marker
	Connection marker for pusher neutral
	Module marker for custom printing
	Module marker for neutral
	Thermotransfer version (material: polyester)
Replacement parts	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
UR20-EM-1315240000-SP	1	1346720000
UR20-BM-SP	5	1350930000
UR20-PK-1315240000-SP	5	1346410000

1 roll = 1000 label = 1 Qty.  
1 sheet = 60 label = 1 Qty.



**8DO-P-2W-HD**

- 8 digital outputs
- Positive switching
- Can be loaded up to 0.5 A per channel
- 2-wire connection
- Short-circuit-proof
- DC-13 load
- IEC 61131-2 compliant

**Technical data**

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/ -15 %, via the system bus
Current consumption $I_{in}$ (power segment of the field bus coupler), typ.	8 mA
Current consumption from $I_{out}$ (the respective power segment)	33 mA + load
Digital outputs	
Number of digital outputs	8
Type	Lamp load, Ohmic, Inductive
Max. response time, high	100 $\mu$ s
Max. response time, low	250 $\mu$ s
Output current per channel, max.	500 mA
Output current per module, max.	4 A
Switching frequenz max. Resistive load (min. 47 $\Omega$ )	1 kHz
Switching frequenz max. Inductive load (DC13)	0.2 Hz
Switching frequenz max. Lamp load (12 W)	1 kHz
Actuator connection	2-wire
Short-circuit-proof	Yes (thermal cut-out)
Feedback-free	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
Switch-off energy (inductive)	<150 mJ / channel
Response time of the protective circuit (current limiting)	<100 $\mu$ s
General data	
Weight	66 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

**Ordering data**

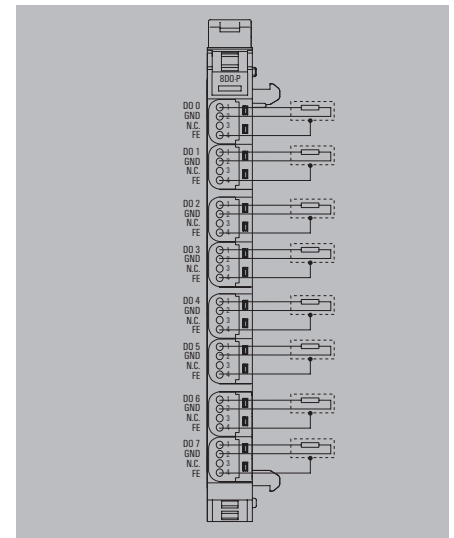
Module variants	
Digital output module, 8 channels, HD-plug	
Note	

**Accessories**

Coding elements	
Termination kit	
Swivel marker	
Module marker for custom printing	
Module marker for neutral	
Thermotransfer version (material: polyester)	
Connector and tools	
<sup>*)</sup> HD plug	
<sup>*)</sup> Stripping tool	
<sup>*)</sup> Pressing tool	
Replacement parts	
Electronic module	
Basic module	
Plug-in connector unit	
Note	

**UR20-8DO-P-2W-HD**

Note: Please order connector separately



Type	Qty.	Order No.
UR20-8DO-P-2W-HD	1	1509830000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
UR20-PG0.35	8	1469340000
MULTI-STRIPAX 6-16	1	9202210000
PWZ-UR20-HD	1	1525820000
UR20-EM-1509830000-SP	1	1515450000
UR20-BM-SP	5	1350930000
UR20-PK-1509830000-SP	5	1559720000

Note: please order plug (1469340000) separately.

## I/O system IP20 – Digital output modules

### 16DO-P

- 16 digital outputs
- Positive switching
- 1-wire connection
- Can be loaded up to 0.5 A per channel
- Short-circuit-proof
- DC-13 load
- IEC 61131-2 compliant

### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/ -15 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>out</sub> (the respective power segment)	25 mA + load
Digital outputs	
Number of digital outputs	16
Type	Lamp load, Ohmic, Inductive
Max. response time, high	100 µs
Max. response time, low	250 µs
Output current per channel, max.	500 mA
Output current per module, max.	8000 mA
Switching frequenz max. Resistive load (min. 47 Ω)	1 kHz
Switching frequenz max. Inductive load (DC13)	0.2 Hz
Switching frequenz max. Lamp load (12 W)	1 kHz
Actuator connection	Single-conductor
Short-circuit-proof	Yes (thermal cut-out)
Feedback-free	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
Switch-off energy (inductive)	<150 mJ / channel
Response time of the protective circuit (current limiting)	<100µs
General data	
Weight	83 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

### Ordering data

Module variants	
	Digital output module, 16 channels
Note	

### Accessories

	Coding elements
	Termination kit
	Swivel marker
	Connection marker for pusher neutral
	Module marker for custom printing
	Module marker for neutral
	Thermotransfer version (material: polyester)
Replacement parts	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

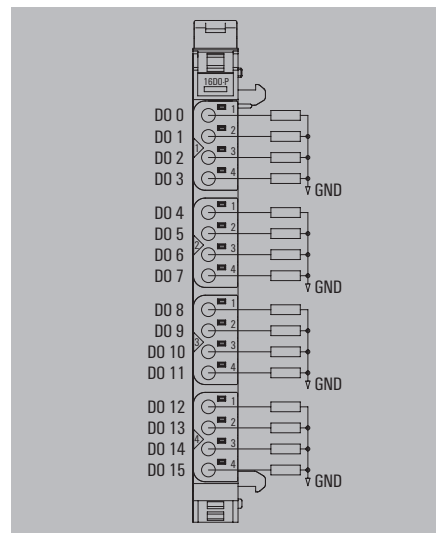
### UR20-16DO-P



u-remote system bus	48 MBit/s
500 V DC between the current paths	
24 V DC +20 %/ -15 %, via the system bus	8 mA
25 mA + load	
16	
Lamp load, Ohmic, Inductive	100 µs
	250 µs
	500 mA
	8000 mA
	1 kHz
	0.2 Hz
	1 kHz
Single-conductor	Yes (thermal cut-out)
	Yes
	Yes
	No
	<150 mJ / channel
	<100µs
	83 g
	120 mm / 11.5 mm / 76 mm

Type	Qty.	Order No.
UR20-16DO-P	1	1315250000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
UR20-EM-1315250000-SP	1	1346730000
UR20-BM-SP	5	1350930000
UR20-PK-1315250000-SP	5	1483990000
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		



**16DO-P-PLC-INT**

- 16 digital outputs
- Positive switching
- For connecting a PLC interface element
- Can be loaded up to 0.5 A per channel
- Short-circuit-proof
- DC-13 load
- IEC 61131-2 compliant

**Technical data****System data**

Interface  
Transmission speed of system bus, max.  
Galvanic isolation

**Supply**

Supply voltage  
Current consumption  $I_{in}$  (power segment of the field bus coupler), typ.  
Current consumption from  $I_{out}$  (the respective power segment)

**Digital outputs**

Number of digital outputs  
Type  
Max. response time, high  
Max. response time, low  
Output current per channel, max.  
Output current per module, max.  
Switching frequenz max. Resistive load (min. 47  $\Omega$ )  
Switching frequenz max. Inductive load (DC13)  
Switching frequenz max. Lamp load (12 W)  
Actuator connection  
Short-circuit-proof  
Feedback-free  
Module diagnosis  
Individual channel diagnosis  
Switch-off energy (inductive)  
Response time of the protective circuit (current limiting)

**General data**

Weight  
Dimensions H x W x D

**Note****Ordering data****Module variants**

Digital output module, 16 channels, PLC interface

**Note****Accessories**

Coding elements  
Termination kit  
Swivel marker  
Connection marker for pusher neutral  
Module marker for custom printing  
Module marker for neutral  
Thermotransfer version (material: polyester)

**Connector and cable**

PLC interface element  
Pre-assembled cable, 1m

**Replacement parts**

Electronic module  
Basic module  
Plug-in connector unit

**Note****UR20-16DO-P-PLC-INT**

u-remote system bus  
48 MBit/s  
500 V DC between the current paths

24 V DC +20 % / -15 %  
8 mA  
25 mA + load

16  
Lamp load, Ohmic, Inductive  
100  $\mu$ s  
250  $\mu$ s  
500 mA  
8 A

1 kHz  
0.2 Hz  
1 kHz  
PLC-Interface

Yes (thermal cut-out)  
Yes  
Yes  
No  
<150 mJ / channel  
<100 $\mu$ s

85 g  
120 mm / 11.5 mm / 76 mm

In case of supply via the ribbon cable, the maximum output current per module is 2 A.

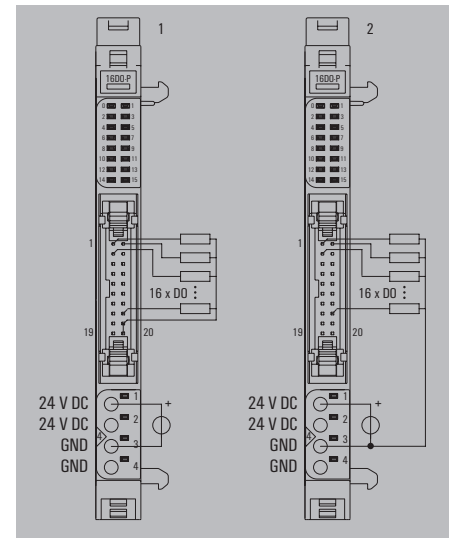
Type	Qty.	Order No.
UR20-16DO-P-PLC-INT	1	1315270000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000

RS 16IO 1W H S	1	9445700000
PAC-UNIV-HE20-LCH-1M	1	7789306010

UR20-EM-1315270000-SP	1	1346740000
UR20-BM-SP	5	1350930000
UR20-PK-1315270000-SP	5	1483940000

1 roll = 1000 label = 1 Qty.  
1 sheet = 60 label = 1 Qty.



## I/O system IP20 – Digital output modules

### 4DO-N

- 4 digital outputs
- Negative switching
- 2-wire, 3-wire, 3-wire+FE connection
- DC-13 load
- Can be loaded up to 0.5 A per channel
- Short-circuit-proof
- IEC 61131-2 compliant

### UR20-4DO-N



### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/ -15 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>OUT</sub> (the respective power segment)	10 mA + load
Digital outputs	
Number of digital outputs	4
Type	Lamp load, Ohmic, Inductive
Max. response time, high	100 µs
Max. response time, low	250 µs
Output current per channel, max.	500 mA
Output current per module, max.	2000 mA
Switching frequenz max. Resistive load (min. 47 Ω)	1 kHz
Switching frequenz max. Inductive load (DC13)	2 Hz
Switching frequenz max. Lamp load (12 W)	10 Hz
Actuator connection	2-wire, 3-wire, 3-wire + FE
Short-circuit-proof	Yes
Feedback-free	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
Switch-off energy (inductive)	<150 mJ / channel
Response time of the protective circuit (current limiting)	<100µs
General data	
Weight	85 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

Type	Qty.	Order No.
UR20-4DO-N	1	1315410000

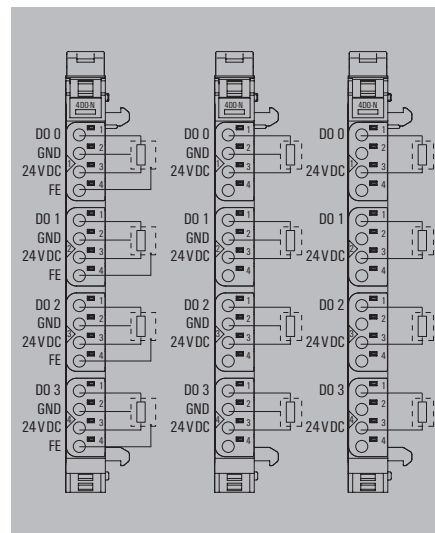
### Ordering data

Module variants	
	Digital output module, 4 channels
Note	

### Accessories

	Coding elements
	Termination kit
	Swivel marker
	Connection marker for pusher neutral
	Module marker for custom printing
	Module marker for neutral
	Thermotransfer version (material: polyester)
Replacement parts	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
UR20-EM-1315410000-SP	1	1346940000
UR20-BM-SP	5	1350930000
UR20-PK-1315410000-SP	5	1559840000
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		



### 4DO-N-2A

- 4 digital outputs
- Negative switching
- 2-wire, 3-wire, 3-wire+FE connection
- Module can be loaded up to 8 A
- Can be loaded up to 2 A per channel
- Short-circuit-proof
- DC-13 load
- IEC 61131-2 compliant

### UR20-4DO-N-2A



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 % / -15 %
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>out</sub> (the respective power segment)	10 mA + load
Digital outputs	
Number of digital outputs	4
Type	Lamp load, Ohmic, Inductive
Max. response time, high	100 µs
Max. response time, low	250 µs
Output current per channel, max.	2 A
Output current per module, max.	8 A
Switching frequenz max. Resistive load (min. 47 Ω)	1 kHz
Switching frequenz max. Inductive load (DC13)	2 Hz
Switching frequenz max. Lamp load (12 W)	10 Hz
Actuator connection	2-wire, 3-wire + FE
Short-circuit-proof	Yes
Feedback-free	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
Switch-off energy (inductive)	<150 mJ / channel
Response time of the protective circuit (current limiting)	<100µs
General data	
Weight	87 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

Type	Qty.	Order No.
UR20-4DO-N-2A	1	1315420000

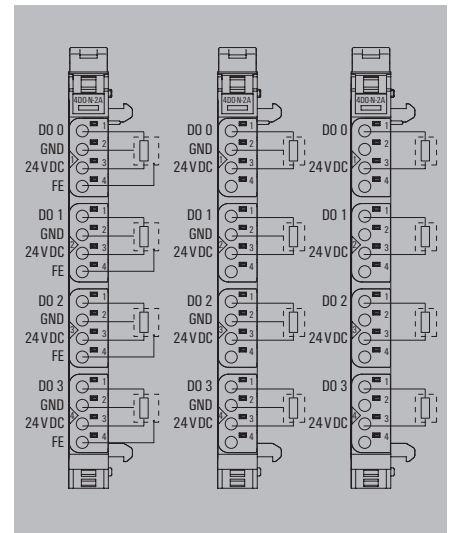
#### Ordering data

Module variants	
	Digital output module, 4 channels, 2 A
Note	

#### Accessories

	Coding elements
	Termination kit
	Swivel marker
	Connection marker for pusher neutral
	Module marker for custom printing
	Module marker for neutral
	Thermotransfer version (material: polyester)
Replacement parts	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
UR20-EM-1315420000-SP	1	1346950000
UR20-BM-SP	5	1350930000
UR20-PK-1315420000-SP	5	1559850000
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		



C

### 8DO-N

- 8 digital outputs
- Negative switching
- Can be loaded up to 0.5 A per channel
- 2-wire connection
- Short-circuit-proof
- DC-13 load
- IEC 61131-2 compliant

### UR20-8DO-N



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/ -15 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>out</sub> (the respective power segment)	15 mA + load
Digital outputs	
Number of digital outputs	8
Type	Lamp load, Ohmic, Inductive
Max. response time, high	100 µs
Max. response time, low	250 µs
Output current per channel, max.	500 mA
Output current per module, max.	4000 mA
Switching frequenz max. Resistive load (min. 47 Ω)	1 kHz
Switching frequenz max. Inductive load (DC13)	2 Hz
Switching frequenz max. Lamp load (12 W)	10 Hz
Actuator connection	2-wire
Short-circuit-proof	Yes
Feedback-free	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
Switch-off energy (inductive)	<150 mJ / channel
Response time of the protective circuit (current limiting)	<100µs
General data	
Weight	86.4 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

Type	Qty.	Order No.
UR20-8DO-N	1	1315430000

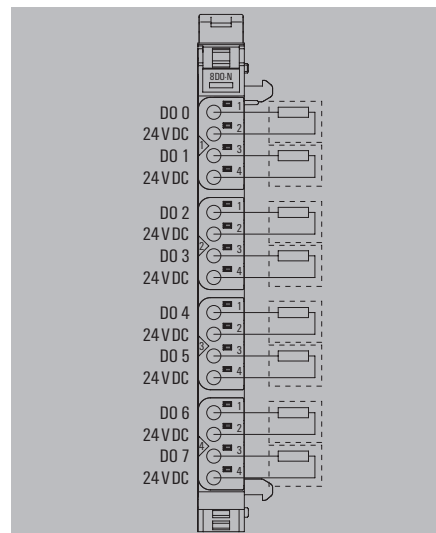
#### Ordering data

Module variants	
	Digital output module, 8 channels
Note	

#### Accessories

	Coding elements
	Termination kit
	Swivel marker
	Connection marker for pusher neutral
	Module marker for custom printing
	Module marker for neutral
	Thermotransfer version (material: polyester)
Replacement parts	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
UR20-EM-1315430000-SP	1	1346970000
UR20-BM-SP	5	1350930000
UR20-PK-1315430000-SP	5	1984770000
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		



**16DO-N**

- 16 digital outputs
- Negative switching
- 1-wire connection
- Can be loaded up to 0.5 A per channel
- Short-circuit-proof
- DC-13 load
- IEC 61131-2 compliant

**Technical data**

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 % / -15 %, via the system bus
Current consumption $I_{in}$ (power segment of the field bus coupler), typ.	8 mA
Current consumption from $I_{out}$ (the respective power segment)	30 mA + load
Digital outputs	
Number of digital outputs	16
Type	Lamp load, Ohmic, Inductive
Max. response time, high	100 $\mu$ s
Max. response time, low	250 $\mu$ s
Output current per channel, max.	500 mA
Output current per module, max.	8000 mA
Switching frequenz max. Resistive load (min. 47 $\Omega$ )	1 kHz
Switching frequenz max. Inductive load (DC13)	0.2 Hz
Switching frequenz max. Lamp load (12 W)	10 Hz
Actuator connection	Single-conductor
Short-circuit-proof	Yes (thermal cut-out)
Feedback-free	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
Switch-off energy (inductive)	<150 mJ / channel
Response time of the protective circuit (current limiting)	<100 $\mu$ s
General data	
Weight	87 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

**Ordering data**

Module variants	
	Digital output module, 16 channels
Note	

**Accessories**

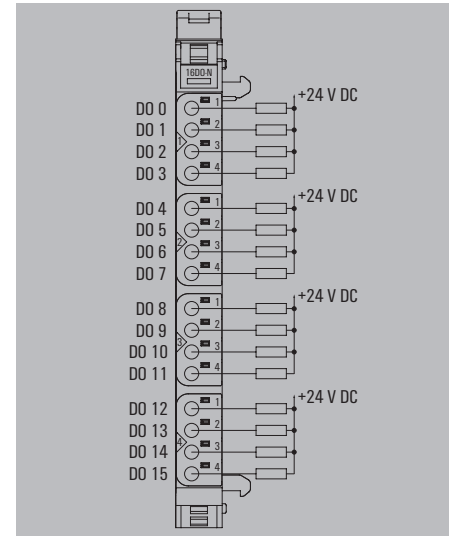
	Coding elements
	Termination kit
	Swivel marker
	Connection marker for pusher neutral
	Module marker for custom printing
	Module marker for neutral
	Thermotransfer version (material: polyester)
Replacement parts	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

**UR20-16DO-N**

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 % / -15 %, via the system bus
Current consumption $I_{in}$ (power segment of the field bus coupler), typ.	8 mA
Current consumption from $I_{out}$ (the respective power segment)	30 mA + load
Digital outputs	
Number of digital outputs	16
Type	Lamp load, Ohmic, Inductive
Max. response time, high	100 $\mu$ s
Max. response time, low	250 $\mu$ s
Output current per channel, max.	500 mA
Output current per module, max.	8000 mA
Switching frequenz max. Resistive load (min. 47 $\Omega$ )	1 kHz
Switching frequenz max. Inductive load (DC13)	0.2 Hz
Switching frequenz max. Lamp load (12 W)	10 Hz
Actuator connection	Single-conductor
Short-circuit-proof	Yes (thermal cut-out)
Feedback-free	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
Switch-off energy (inductive)	<150 mJ / channel
Response time of the protective circuit (current limiting)	<100 $\mu$ s
General data	
Weight	87 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

Type	Qty.	Order No.
UR20-16DO-N	1	1315440000
Note		

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
Replacement parts		
UR20-EM-1315440000-SP	1	1346980000
UR20-BM-SP	5	1350930000
UR20-PK-1315440000-SP	5	2000520000
Note		
1 roll = 1000 label = 1 Qty.		
1 sheet = 60 label = 1 Qty.		



## I/O system IP20 – Digital output modules

### 16DO-N-PLC-INT

- 16 digital outputs
- Negative switching
- For connecting a PLC interface element
- Can be loaded up to 0.5 A per channel
- Short-circuit-proof
- DC-13 load
- IEC 61131-2 compliant

### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>out</sub> (the respective power segment)	30 mA
Digital outputs	
Number of digital outputs	16
Type	Lamp load, Ohmic, Inductive
Max. response time, high	100 µs
Max. response time, low	250 µs
Output current per channel, max.	500 mA
Output current per module, max.	8000 mA
Switching frequenz max. Resistive load (min. 47 Ω)	1 kHz
Switching frequenz max. Inductive load (DC13)	0.2 Hz
Switching frequenz max. Lamp load (12 W)	10 Hz
Actuator connection	PLC-Interface
Short-circuit-proof	Yes (thermal cut-out)
Feedback-free	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
Switch-off energy (inductive)	<150 mJ / channel
Response time of the protective circuit (current limiting)	<100µs
General data	
Weight	87 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

### Ordering data

Module variants	
Digital output module, 16 channels, PLC interface	
Note	

### Accessories

Coding elements	
Termination kit	
Swivel marker	
Connection marker for pusher neutral	
Module marker for custom printing	
Module marker for neutral	
Thermotransfer version (material: polyester)	
Connector and cable	
PLC interface element	
Pre-assembled cable, 1m	
Replacement parts	
Electronic module	
Basic module	
Plug-in connector unit	
Note	

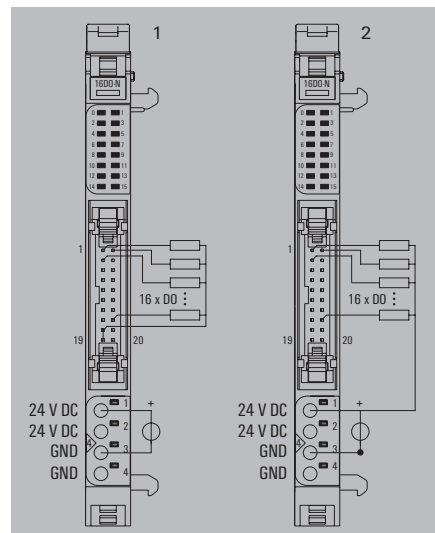
### UR20-16DO-N-PLC-INT



System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>out</sub> (the respective power segment)	30 mA
Digital outputs	
Number of digital outputs	16
Type	Lamp load, Ohmic, Inductive
Max. response time, high	100 µs
Max. response time, low	250 µs
Output current per channel, max.	500 mA
Output current per module, max.	8000 mA
Switching frequenz max. Resistive load (min. 47 Ω)	1 kHz
Switching frequenz max. Inductive load (DC13)	0.2 Hz
Switching frequenz max. Lamp load (12 W)	10 Hz
Actuator connection	PLC-Interface
Short-circuit-proof	Yes (thermal cut-out)
Feedback-free	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
Switch-off energy (inductive)	<150 mJ / channel
Response time of the protective circuit (current limiting)	<100µs
General data	
Weight	87 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

Type	Qty.	Order No.
UR20-16DO-N-PLC-INT	1	1315450000
Note		

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
Note		
RS 16IO 1W H S	1	9445700000
PAC-UNIV-HE20-LCH-1M	1	7789306010
Replacement parts		
UR20-EM-1315450000-SP	1	1346990000
UR20-BM-SP	5	1350930000
UR20-PK-1315450000-SP	5	2000540000
Note		
1 roll = 1000 label = 1 Qty.		
1 sheet = 60 label = 1 Qty.		



### 4DO-ISO-4A

- 4 digital outputs
- Insulation up to 500 V between the channels
- Can be loaded up to 4 A per channel
- 2-wire connection
- Short-circuit-proof
- IEC 61131-2 compliant

### UR20-4DO-ISO-4A



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>OUT</sub> (the respective power segment)	30 mA
Digital outputs	
Number of digital outputs	4
Type	Lamp load, Ohmic, Inductive
Max. response time, high	250 µs
Max. response time, low	250 µs
Output current per channel, max.	4 A
Output current per module, max.	10 A
Switching frequenz max. Resistive load (min. 47 Ω)	1 kHz
Switching frequenz max. Inductive load (DC13)	0.2 Hz
Switching frequenz max. Lamp load (12 W)	10 Hz
Actuator connection	2-wire
Short-circuit-proof	Yes
Feedback-free	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
Switch-off energy (inductive)	<150 mJ / channel
Response time of the protective circuit (current limiting)	<100µs
General data	
Weight	91 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

Type	Qty.	Order No.
UR20-4DO-ISO-4A	1	2457250000

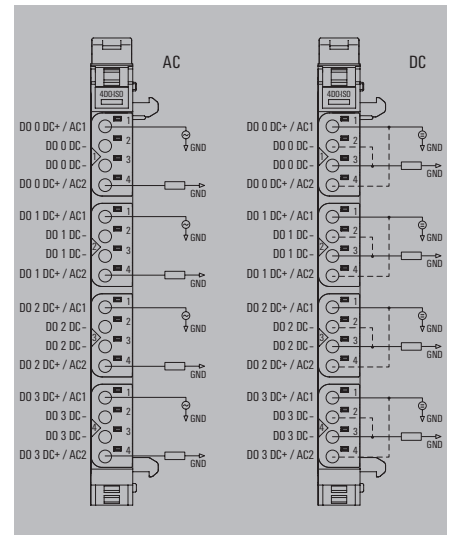
#### Ordering data

Module variants	
Digital output module, 4 channels, isolated	
Note	

#### Accessories

Coding elements	
Termination kit	
Swivel marker	
Connection marker for pusher neutral	
Module marker for custom printing	
Module marker for neutral	
Thermotransfer version (material: polyester)	
Replacement parts	
Electronic module	
Basic module	
Plug-in connector unit	
Note	

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
UR20-EM-2457250000-SP	1	2545790000
UR20-BM-SP	5	1350930000
UR20-PK-2457250000-SP	5	2545770000



## I/O system IP20 – Digital output modules

### 4RO-SSR-255

- 4 digital outputs
- Can be loaded up to 1 A per channel
- Solid state relay

### UR20-4RO-SSR-255



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>out</sub> (the respective power segment)	<15 mA
Digital outputs	
Number	4
Type	SSR / Triac
Max. response time, high	10 ms
Max. response time, low	10 ms
Output current per channel, max.	1 A
Output current per module, max.	4 A
Max. switching frequency	20 Hz
Short-circuit-proof	No
Feedback-free	Yes
Switching voltage, max.	255 V AC, UL: 277 V AC
Module diagnosis	Yes
Individual channel diagnosis	No
General data	
Weight	83 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

#### Ordering data

Module variants	
	Digital output module, 4 channels, SSR
Note	

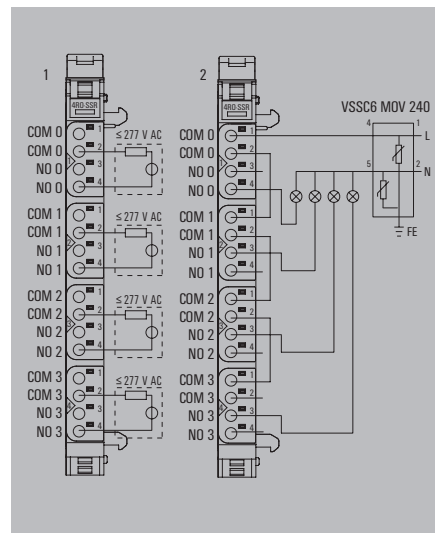
#### Accessories

	Coding elements
	Termination kit
	Swivel marker
	Connection marker for pusher neutral
	Module marker for custom printing
	Module marker for neutral
	Thermotransfer version (material: polyester)
Replacement parts	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

Type	Qty.	Order No.
UR20-4RO-SSR-255	1	1315540000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
UR20-EM-1315540000-SP	1	1347120000
UR20-BM-SP	5	1350930000
UR20-PK-1315540000-SP	5	1484000000

1 roll = 1000 label = 1 Qty.  
1 sheet = 60 label = 1 Qty.



**4R0-C0-255**

- 4 digital outputs
- Can be loaded up to 6 A per channel
- Relay output, change-over contact
- Switching voltage 277 V AC/DC

**Technical data****System data**

Interface  
Transmission speed of system bus, max.  
Galvanic isolation

**Supply**

Supply voltage  
Current consumption  $I_{in}$  (power segment of the field bus coupler), typ.  
Current consumption from  $I_{out}$  (the respective power segment)

**Digital outputs**

Number  
Type  
Max. response time, high  
Max. response time, low  
Output current per channel, max.  
Output current per module, max.  
Max. switching frequency  
Short-circuit-proof  
Feedback-free  
Switching voltage, max.  
Module diagnosis  
Individual channel diagnosis

**General data**

Weight  
Dimensions H x W x D

**Note****Ordering data****Module variants**

Digital output module, 4 channels, relay

**Note****Accessories**

Coding elements  
Termination kit  
Swivel marker  
Connection marker for pusher neutral  
Module marker for custom printing  
Module marker for neutral  
Thermotransfer version (material: polyester)

**Replacement parts**

Electronic module  
Basic module  
Plug-in connector unit

**Note****UR20-4R0-C0-255**

u-remote system bus  
48 MBit/s  
500 V DC between the current paths

24 V DC +20 %/ -15 %, via the system bus  
8 mA  
<15 mA

4  
CO contact  
20 ms  
20 ms  
6 A  
24 A  
5 Hz  
No  
Yes  
255 V AC, UL: 277 V AC, DC  
Yes  
No

119 g  
120 mm / 11.5 mm / 76 mm

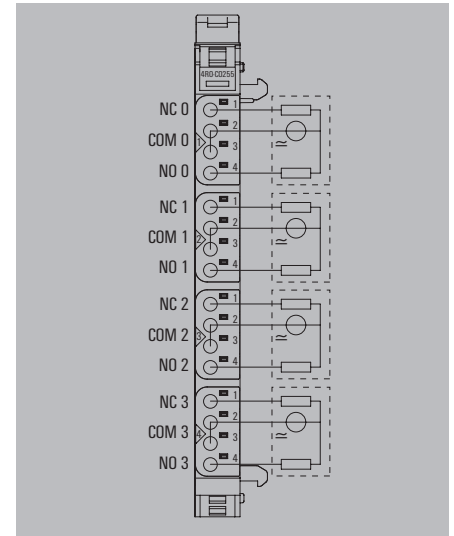
Note temperature derating!

Type	Qty.	Order No.
UR20-4R0-C0-255	1	1315550000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000

UR20-EM-1315550000-SP	1	1347130000
UR20-BM-SP	5	1350930000
UR20-PK-1315550000-SP	5	1346500000

1 roll = 1000 label = 1 Qty.  
1 sheet = 60 label = 1 Qty.



## Digital input and output modules

### 8 universally switchable digital inputs/outputs

The automation of machines and plants is usually planned in great detail. The aim is to ensure smooth commissioning and error-free operation. If unexpected changes nevertheless occur, a flexible automation infrastructure is a great advantage.

**C** u-remote UR20-8DIO-P-3W-DIAG is a universally applicable digital I/O module in which each individual channel can be parameterised independently as an input or output. Sensors and actuators can be connected to the same module, which reduces the number of modules per I/O station.

In addition, subsequent changes to the system can be made by reconfiguring the system. Adjustable individual channel diagnoses for inputs and outputs increase the transparency of the device or system status.

The digital input or output module provides 8 channels, each of which can be configured as an input or output. Up to 2 sensors or actuators can be connected to each plug-in connector in 2-wire or 3-wire connection. The inputs are designed as type 1 and 3 according to IEC 61131-2. The sensor supply is limited to 0.3 A per connecting plug and is equipped with an individual channel diagnosis. For the outputs, the individual channel diagnosis monitors switched-on outputs for overload and switched-off outputs for load (line break detection). The short-circuit-proof outputs have a max. output current of 0.5 A at 24 V DC.

UR20-8DIO-P-3W-DIAG



**8DIO-P-3W-DIAG**

- 8 digital inputs and 8 digital outputs
- 2-wire, 3-wire connection
- Overcurrent monitoring and electronic protection
- Overload monitoring
- Line break detection

**Technical data****System data**

Interface  
Transmission speed of system bus, max.  
Galvanic isolation

**Supply**

Supply voltage  
Current consumption  $I_{in}$  (power segment of the field bus coupler), typ.  
Current consumption from  $I_{out}$  (the respective power segment)

**Digital inputs**

Number of digital inputs  
Input type  
Input filter  
Input voltage, low  
Input voltage, high  
Sensor supply  
Sensor connection  
Reverse polarity protection  
Module diagnosis  
Individual channel diagnosis

**Digital outputs**

Number of digital outputs  
Type  
Output current per channel, max.  
Output current per module, max.  
Switching frequenz max. Resistive load (min. 47  $\Omega$ )  
Switching frequenz max. Inductive load (DC13)  
Switching frequenz max. Lamp load (12 W)  
Actuator connection  
Short-circuit-proof / Feedback-free  
Individual channel diagnosis  
Switch-off energy (inductive)  
Response time of the protective circuit (current limiting)

**General data**

Weight  
Dimensions H x W x D

**Note****Ordering data****Module variants**

Digital input and output module, 8 channels

**Note****Accessories**

Coding elements  
Termination kit  
Swivel marker  
Connection marker for pusher neutral  
Module marker for custom printing  
Module marker for neutral  
Thermotransfer version (material: polyester)

**Replacement parts**

Electronic module  
Basic module  
Plug-in connector unit

**Note****UR20-8DIO-P-3W-DIAG**

u-remote system bus  
48 MBit/s  
500 V DC between the current paths

24 V DC +20 %/ -15 %, via the system bus  
8 mA  
32 mA + I-Last

8  
P-switching, for Type 1 and Type 3 sensors as per IEC 61131-2  
Input delay adjustable from 0 to 40 ms  
<+ 5 V referred to 0 V of the output power supply  $U_{out}$   
> + 11 V referred to 0 V of the output power supply  $U_{out}$   
 $\geq 0.3$  A per connector, limited electronically  
2-wire, 3-wire  
No, Input voltage below -10 V can destroy the module  
Yes  
only auxiliary voltage output

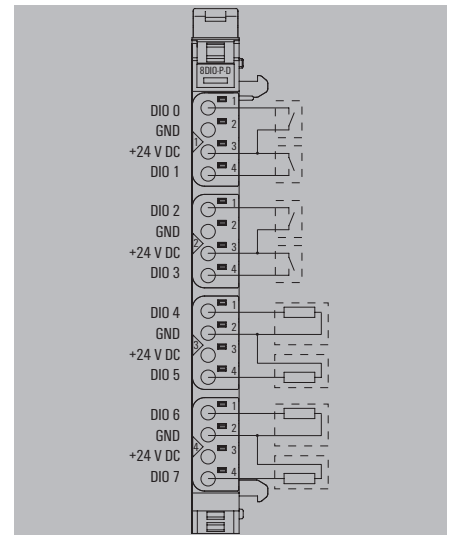
8  
PNP switched  
0.5 A  
4 A  
1 kHz  
0.2 Hz  
10 Hz  
2-wire, 3-wire  
Yes / Yes  
Yes, Overcurrent monitoring > 0.5 A, line break detection  
<150 mJ / channel  
<100  $\mu$ s

83 g  
120 mm / 11.5 mm / 76 mm

Type	Qty.	Order No.
UR20-8DIO-P-3W-DIAG	1	2456530000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000

UR20-EM-2456530000-SP	1	2593330000
UR20-BM-SP	5	1350930000
UR20-PK-2456530000-SP	5	2593320000



## Pulse width modulation and stepper motor modules

As part of the u-remote system, Weidmüller offers a specialised solution for controlling small motors with a current requirement of 0.5 A to 2 A, which can also be used to control valve flaps. The pulse width modulation modules can be adjusted within the switching frequencies up to 40 kHz and the modules can also be switched in the motor control with the aid of push/pull output stages, e.g. to change the direction of rotation.

### C

Weidmüller's stepper motor module is efficient and flexible for use in the automation of robots, handling systems or placement machines with stepper motors. Variably adjustable operating parameters as well as a wide range supply from 12 V DC to 50 V DC make the module flexibly applicable for various target applications. Six integrated, parameterisable encoder or digital inputs and two digital outputs with 0.5 A make the control module a complete solution in the smallest of spaces.

The module electronics supplies the connected actuators from the output current path ( $U_{OUT}$ ).

**UR20-2PWM-PN-0.5A-V2**



**UR20-2PWM-PN-2A-V2**



**UR20-2PWM-I-2.5A-2DI-P**



**UR20-1SM-50W-6DI2DO-P**



**2PWM-PN-0.5A-V2**

- 2 pulse width modulation module outputs
- Can be loaded up to 0.5 A per channel
- Short-circuit-proof
- Push/pull output
- Maximum 40 kHz output frequency (adjustable)

**UR20-2PWM-PN-0.5A-V2**



**Technical data**

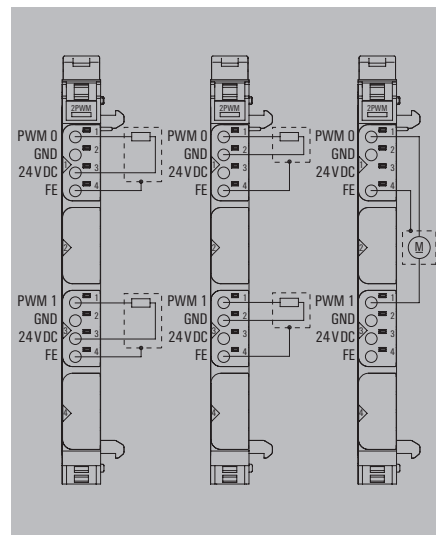
<b>System data</b>	
Interface	u-remote system bus
Transmission speed of system bus, max.	192 MBit/s
Galvanic isolation	500 V DC between the current paths
<b>Supply</b>	
Supply voltage	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>out</sub> (the respective power segment)	40 mA
<b>Digital outputs</b>	
Number of digital outputs	2
Type	DO PWM push / pull
Resolution	32 Bit
Accuracy	1 Bit
Max. response time, high	100 ns
Max. response time, low	100 ns
Output current per channel, max.	500 mA
Output current per module, max.	1000 mA
Switching frequency, resistive load	Static, 6 Hz ... 40 kHz
Switching frequency, inductive load	Static, 6 Hz ... 40 kHz
Switching frequency, lamp load	Static, 6 Hz ... 40 kHz
Actuator connection	2-wire, 3-wire, 3-wire + FE
Short-circuit-proof	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
Feedback-free	Yes
Pulse duty factor	0--100% push/pull or push, parameterisable
<b>General data</b>	
Weight	85 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
<b>Note</b>	

<b>System data</b>		
Interface	u-remote system bus	
Transmission speed of system bus, max.	192 MBit/s	
Galvanic isolation	500 V DC between the current paths	
<b>Supply</b>		
Supply voltage	24 V DC +20 %/-15 %, via the system bus	
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA	
Current consumption from I <sub>out</sub> (the respective power segment)	40 mA	
<b>Digital outputs</b>		
Number of digital outputs	2	
Type	DO PWM push / pull	
Resolution	32 Bit	
Accuracy	1 Bit	
Max. response time, high	100 ns	
Max. response time, low	100 ns	
Output current per channel, max.	500 mA	
Output current per module, max.	1000 mA	
Switching frequency, resistive load	Static, 6 Hz ... 40 kHz	
Switching frequency, inductive load	Static, 6 Hz ... 40 kHz	
Switching frequency, lamp load	Static, 6 Hz ... 40 kHz	
Actuator connection	2-wire, 3-wire, 3-wire + FE	
Short-circuit-proof	Yes	
Module diagnosis	Yes	
Individual channel diagnosis	No	
Feedback-free	Yes	
Pulse duty factor	0--100% push/pull or push, parameterisable	
<b>General data</b>		
Weight	85 g	
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm	
<b>Note</b>		

**Ordering data**

<b>Module variants</b>	
	Digital output module, PWM, 2 channels, 0.5 A
<b>Note</b>	

Type	Qty.	Order No.
UR20-2PWM-PN-0.5A-V2	1	3036960000
<b>Note</b>		



**2PWM-PN-2A-V2**

- 2 pulse width modulation module outputs
- Can be loaded up to 2 A per channel
- Short-circuit-proof
- Push/pull output
- Maximum 40 kHz output frequency (adjustable)

**UR20-2PWM-PN-2A-V2**



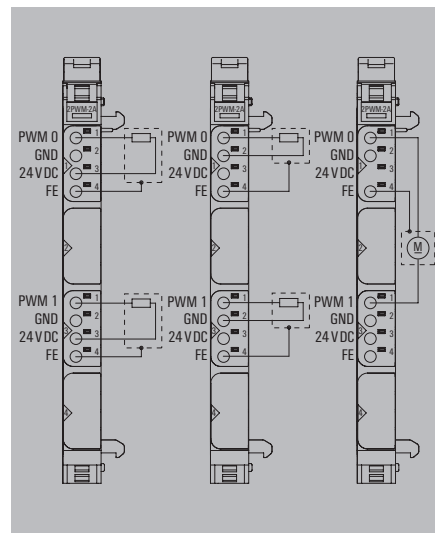
**Technical data**

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/ -15 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>out</sub> (the respective power segment)	40 mA
Digital outputs	
Number of digital outputs	2
Type	DO PWM push / pull
Resolution	32 Bit
Accuracy	1 Bit
Max. response time, high	100 ns
Max. response time, low	100 ns
Output current per channel, max.	2000 mA
Output current per module, max.	4000 mA
Switching frequency, resistive load	Static, 6 Hz ... 40 kHz
Switching frequency, inductive load	Static, 6 Hz ... 40 kHz
Switching frequency, lamp load	Static, 6 Hz ... 40 kHz
Actuator connection	2-wire, 3-wire, 3-wire + FE
Short-circuit-proof	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
Feedback-free	Yes
Pulse duty factor	0--100% push/pull or push, parameterisable
General data	
Weight	83 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

Type	Qty.	Order No.
UR20-2PWM-PN-2A-V2	1	3036950000

**Ordering data**

Module variants	
	Digital output module, PWM, 2 channels, 2 A
Note	



**2PWM-I-2.5A-2DI-P**

- 2 pulse width outputs
- PWM-controlled current regulation (parameterisable)
- Loadable up to 3 A (1-channel) or 2.5 A (2-channel)
- Switching frequency (pulse width modulation, adjustable): 30 kHz ± 10 %
- Overload-proof and short-circuit-proof
- Push/pull output enables current flow switching (direction of rotation of motors)

**Technical data**

<b>System data</b>	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
<b>Supply</b>	
Supply voltage	24 V DC +20 %/ -15 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ...9mA	0...9mA
Current consumption from I <sub>out</sub> (the respective power segment)	0...25mA
<b>Digital outputs</b>	
Number of digital outputs	2
Type	Power amplifier output, PWM signal
Resolution	12 Bit (A/D converter), 16 Bit (current target value)
Output current per channel, max.	2.5 A
Output current per module, max.	5 A
Actuator connection	bipolar (A+, A- and B+, B-), unipolar (each with additional return conductor CA and CB), parameterisable
Module diagnosis	Yes
Individual channel diagnosis	Yes
Feedback-free	Yes
Pulse duty factor	0--100% push/pull or push, parameterisable
<b>General data</b>	
Weight	85 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
<b>Note</b>	

**Ordering data**

<b>Module variants</b>	
Digital output module, PWM, 2 channels, 2.5 A	
<b>Note</b>	

**Accessories**

Coding elements	KOSM BHZ5.00	100	1483050000
Termination kit	UR20-EBK-ACC	5	1346610000
Swivel marker	UR20-SM-ACC	20	1339920000
Connection marker for pusher neutral	PM 2.7/2.6 MC NE WS	960	1323710000
Module marker for custom printing	DEK 5/8-11.5 MC SDR	100	1341610000
Module marker for neutral	DEK 5/8-11.5 MC NE WS	500	1341630000
Thermotransfer version (material: polyester)	THM UR20 WS	1	1429420000
<b>Replacement parts</b>			
Electronic module	UR20-EM-2697910000-SP	1	2735380000
Basic module	UR20-BM-SP	5	1350930000
Plug-in connector unit	UR20-PK-2697910000-SP	5	2735370000
<b>Note</b>			

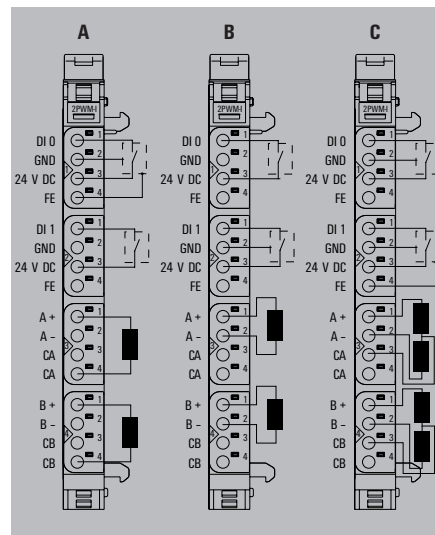
**UR20-2PWM-I-2.5A-2DI-P**



<b>u-remote system bus</b>		
Interface	u-remote system bus	
Transmission speed of system bus, max.	48 MBit/s	
Galvanic isolation	500 V DC between the current paths	
<b>Supply</b>		
Supply voltage	24 V DC +20 %/ -15 %, via the system bus	
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ...9mA	0...9mA	
Current consumption from I <sub>out</sub> (the respective power segment)	0...25mA	
<b>Digital outputs</b>		
Number of digital outputs	2	
Type	Power amplifier output, PWM signal	
Resolution	12 Bit (A/D converter), 16 Bit (current target value)	
Output current per channel, max.	2.5 A	
Output current per module, max.	5 A	
Actuator connection	bipolar (A+, A- and B+, B-), unipolar (each with additional return conductor CA and CB), parameterisable	
Module diagnosis	Yes	
Individual channel diagnosis	Yes	
Feedback-free	Yes	
Pulse duty factor	0--100% push/pull or push, parameterisable	
<b>General data</b>		
Weight	85 g	
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm	
<b>Note</b>		

<b>Type</b>	<b>Qty.</b>	<b>Order No.</b>
UR20-2PWM-I-2.5A-2DI-P	1	2697910000
<b>Note</b>		

<b>Type</b>	<b>Qty.</b>	<b>Order No.</b>
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
<b>Replacement parts</b>		
UR20-EM-2697910000-SP	1	2735380000
UR20-BM-SP	5	1350930000
UR20-PK-2697910000-SP	5	2735370000
<b>Note</b>		



## I/O system IP20 – Pulse width modulation and stepper motor modules

### 1SM-50W-6DI2DO-P

- Power output stage for drive power up to 50 W
- 6 configurable encoder/digital inputs
- 2 digital outputs (0.5 A)
- Supply voltage range from 12 to 50 V DC
- Up to 256 micro-steps
- Relative and absolute positioning

### UR20-1SM-50W-6DI2DO-P



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/ -15 %
Current consumption $I_{in}$ (power segment of the field bus coupler), typ.	8 mA
Current consumption from $I_{out}$ (the respective power segment)	10 mA + load
Current consumption from external power supply	35 mA + load
Stepper motor connections	
Number of channels	1
Power output stage, max.	50 W
Connection type	4-wire
Digital inputs DI 0...DI 3	
Number of channels	4
Input type	P-switching, for Type 1 and Type 3 sensors as per IEC 61131-2
Current supply, sensor	max. 1 A per plug
Sensor connection	2-wire, 3-wire
Reverse polarity protection	Yes
Digital inputs DI 4...DI 5	
Number of channels	2
Input type	Input characteristics for sensor types 1 and 3 are according to EN 61131-2, P-switching
Suitable for incremental encoder	Yes
Input frequency, max.	100kHz
Mode of operation	AB mode with 4-times sampling
Current supply, sensor	max. 1 A per plug
Sensor connection	2-wire, 3-wire
Digital outputs DO 0...DO 1	
Number of channels	2
Response time low-high, max. / Response time high-low, max.	100µs / 250µs
Output current per channel, max.	0.5A
Actuator connection	2-wire
Short-circuit-proof / Reactionless	Yes / Yes
General data	
Weight / Dimensions H x W x D	173 g / 120 / 23 / 76 mm
Note	

Type	Qty.	Order No.
UR20-1SM-50W-6DI2DO-P	1	2489830000

#### Ordering data

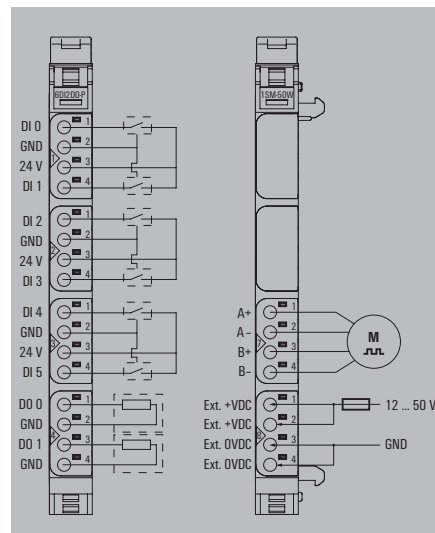
Module variants	
	Stepper motor module, 6 digital inputs, 2 digital outputs
Note	

#### Accessories

	Coding elements
	Termination kit
	Swivel marker
	Connection marker for pusher neutral
	Module marker for custom printing
	Module marker for neutral
	Thermotransfer version (material: polyester)

Replacement parts	
	Electronic module
	Basic module
	Plug-in connector unit
	Plug-in connector unit
Note	

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
UR20-EM-2489830000-SP	1	2585660000
UR20-BM-SP	5	1350930000
UR20-PK1-2489830000-SP	5	2573750000
UR20-PK2-2489830000-SP	5	2585650000





## Analogue input modules

Input parameters can be set for current or voltage, up to 3-wire+FE, Accuracy 0.1% FSR

The analogue input modules can detect up to 2, 4 or 8 analogue sensors with +/-10 V, +/-5 V, 0...10 V, 0...5 V, 2...10 V, 1...5 V, 0...20 mA or 4...20 mA. Variations are available in 12 and 16 Bit resolution per channel. Sensors in a 2-wire, 3-wire or 3-wire connection + FE can be connected to each plug-in connector. The measurement range is defined using parametrization. Versions with 2, 4 or 8 Channels in accordance to IEC 61131-2 are available. A status LED is assigned to each channel right beside the connection point. The inputs are protected against voltage surges and overcurrent. The module electronics supply the connected sensors from the input current path IIN (The "ISO" module is an exception: the module has no auxiliary voltage outputs. Connected sensors must be supplied with power from external sources).

"DIAG" module versions provide individual channel diagnosis with channel-related fault Messages in addition. The "DIF" module with differential inputs provides a common-mode voltage range of +/-30 V. On the HART Master module, HART devices can be connected to each channel in single connection (point-to-point, P2P) or multiple connection (multidrop). Also an analogue Input Module providing isolated channels for special robustness requirements is available.



### 2AI-UI-16

- 2 analogue inputs
- Parameterisable inputs (voltage, current)
- 16-bit resolution
- 2-wire, 3-wire and 3-wire + FE connection

#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	25 mA + sensor feed
Analogue inputs	
Number analogue inputs	2
Type	1. U (0...5 V, 0...10 V, 1...5 V, 2...10 V, ±10 V), 2. I (0-20 mA or 4-20 mA)
Resolution	16 Bit
Accuracy	0.1% FSR
Sensor supply	Yes
Sensor connection	2-wire, 3-wire, 3-wire + FE
Conversion time	1 ms
Internal resistance U	100 kΩ
Internal resistance I	41.2 Ω
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
Short-circuit-proof	Yes
General data	
Weight	82.2 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

#### Ordering data

Module variants	
	Analogue input module, 2 channels, 16 bits
Note	

#### Accessories

	Coding elements
	Termination kit
	Swivel marker
	Connection marker for pusher neutral
	Module marker for custom printing
	Module marker for neutral
	Thermotransfer version (material: polyester)

Replacement parts	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

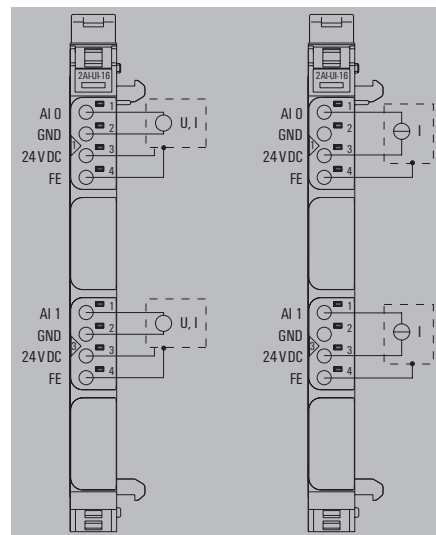
### UR20-2AI-UI-16



System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	25 mA + sensor feed
Analogue inputs	
Number analogue inputs	2
Type	1. U (0...5 V, 0...10 V, 1...5 V, 2...10 V, ±10 V), 2. I (0-20 mA or 4-20 mA)
Resolution	16 Bit
Accuracy	0.1% FSR
Sensor supply	Yes
Sensor connection	2-wire, 3-wire, 3-wire + FE
Conversion time	1 ms
Internal resistance U	100 kΩ
Internal resistance I	41.2 Ω
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
Short-circuit-proof	Yes
General data	
Weight	82.2 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

Type	Qty.	Order No.
UR20-2AI-UI-16	1	2705620000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
Replacement parts		
UR20-EM-2705620000-SP	1	2788700000
UR20-BM-SP	5	1350930000
UR20-PK-2705620000-SP	5	2788710000



## C

### 4AI-UI-12

- 4 analogue inputs
- Parameterisable inputs (voltage, current)
- 12-bit resolution
- 2-wire, 3-wire and 3-wire + FE connection
- Accuracy 0.25 % FSR

### UR20-4AI-UI-12



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	25 mA + sensor feed
Analogue inputs	
Number analogue inputs	4
Type	1. U (0...5 V, 0...10 V, 1...5 V, 2...10 V, ±10 V), 2. I (0-20 mA or 4-20 mA), Adjustable input for current or voltage
Resolution	12-bit
Accuracy	0.1% FSR
Sensor supply	Yes
Sensor connection	2-wire, 3-wire, 3-wire + FE
Conversion time	1 ms
Internal resistance U	100 kΩ
Internal resistance I	41.2 Ω
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
Short-circuit-proof	Yes
General data	
Weight	87 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

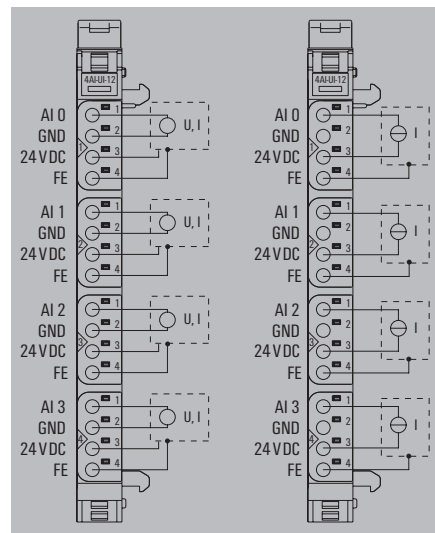
Type	Qty.	Order No.
UR20-4AI-UI-12	1	1394390000

#### Ordering data

Module variants	
	Analogue input module, 4 channels, 12 bits
Note	

#### Accessories

	Coding elements	KOSM BHZ5.00	100	1483050000
	Termination kit	UR20-EBK-ACC	5	1346610000
	Swivel marker	UR20-SM-ACC	20	1339920000
	Connection marker for pusher neutral	PM 2.7/2.6 MC NE WS	960	1323710000
	Module marker for custom printing	DEK 5/8-11.5 MC SDR	100	1341610000
	Module marker for neutral	DEK 5/8-11.5 MC NE WS	500	1341630000
	Thermotransfer version (material: polyester)	THM UR20 WS	1	1429420000
Replacement parts				
	Electronic module	UR20-EM-1394390000-SP	1	1434230000
	Basic module	UR20-BM-SP	5	1350930000
	Plug-in connector unit	UR20-PK-1394390000-SP	5	1484030000
Note				
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.				



**4AI-UI-16**

- 4 analogue inputs
- Parameterisable inputs (voltage, current)
- 16-bit resolution
- 2-wire, 3-wire and 3-wire + FE connection
- Accuracy 0.1 % FSR

**UR20-4AI-UI-16**



**Technical data**

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	25 mA + sensor feed
Analogue inputs	
Number analogue inputs	4
Type	1. U (0...5 V, 0...10 V, 1...5 V, 2...10 V, ±10 V), 2. I (0-20 mA or 4-20 mA), Adjustable input for current or voltage
Resolution	16 Bit
Accuracy	0.1% FSR
Sensor supply	Yes
Sensor connection	2-wire, 3-wire, 3-wire + FE
Conversion time	1 ms
Internal resistance U	100 kΩ
Internal resistance I	41.2 Ω
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
Short-circuit-proof	Yes
General data	
Weight	89 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

Type	Qty.	Order No.
UR20-4AI-UI-16	1	1315620000

**Ordering data**

Module variants	
	Analogue input module, 4 channels, 16 bits
Note	

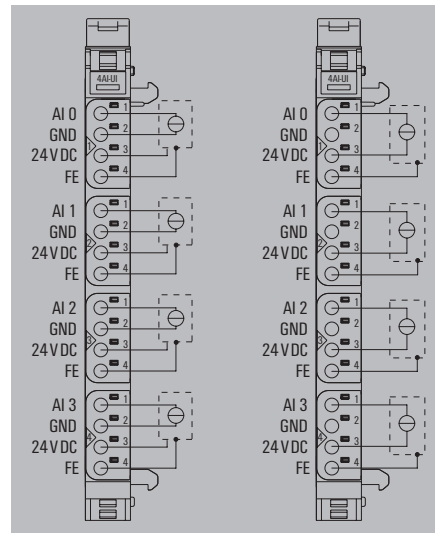
**Accessories**

	Coding elements
	Termination kit
	Swivel marker
	Connection marker for pusher neutral
	Module marker for custom printing
	Module marker for neutral
	Thermotransfer version (material: polyester)

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000

Replacement parts	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

Type	Qty.	Order No.
UR20-EM-1315620000-SP	1	1347200000
UR20-BM-SP	5	1350930000
UR20-PK-1315620000-SP	5	1484020000
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		



## I/O system IP20 – Analogue input modules

### 2AI-UI-16-DIAG

- 2 analogue inputs
- Parameterisable inputs (voltage, current)
- Advanced diagnosis functions
- 16-bit resolution
- 2-wire, 3-wire and 3-wire + FE connection
- Accuracy 0,1 % FSR

### UR20-2AI-UI-16-DIAG



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	DC 500 V between current paths
Supply	
Supply voltage	24 V DC +20 % / -15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	25 mA + sensor feed
Analogue inputs	
Number analogue inputs	2
Type	1. U (0...5 V, 0...10 V, 1...5 V, 2...10 V, ±10 V), 2. I (0-20 mA or 4-20 mA)
Resolution	16 Bit
Accuracy	0.1% FSR
Sensor supply	Yes
Sensor connection	2-wire, 3-wire, 3-wire + FE
Conversion time	1 ms
Internal resistance U	100 kΩ
Internal resistance I	41.2 Ω
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	Yes
Short-circuit-proof	Yes
General data	
Weight	82.5 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

Type	Qty.	Order No.
UR20-2AI-UI-16-DIAG	1	2566090000

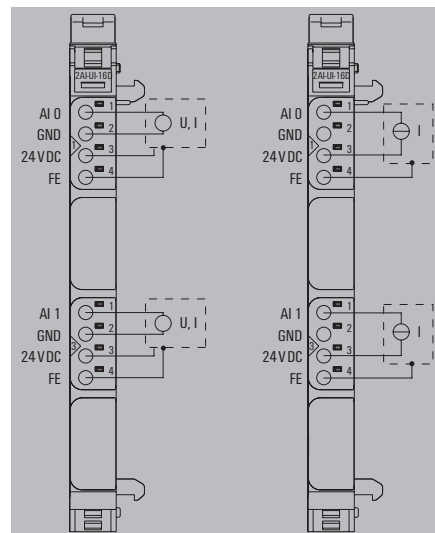
#### Ordering data

Module variants	
Analogue input module, 2 channels, 16 bits, diagnosis functions	
Note	

#### Accessories

Termination kit	UR20-EBK-ACC	5	1346610000
Swivel marker	UR20-SM-ACC	20	1339920000
Connection marker for pusher neutral	PM 2.7/2.6 MC NE WS	960	1323710000
Module marker for custom printing	DEK 5/8-11.5 MC SDR	100	1341610000
Module marker for neutral	DEK 5/8-11.5 MC NE WS	500	1341630000
Thermotransfer version (material: polyester)	THM UR20 WS	1	1429420000

Replacement parts			
Electronic module	UR20-EM-2566090000-SP	1	2568080000
Basic module	UR20-BM-SP	5	1350930000
Plug-in connector unit	UR20-PK-2566090000-SP	5	2568070000
Note			



### 4AI-UI-16-DIAG

- Advanced diagnosis functions
- 4 analogue inputs
- Parameterisable inputs (voltage, current)
- 16-bit resolution
- 2-wire, 3-wire and 3-wire + FE connection
- Accuracy 0.1 % FSR

### UR20-4AI-UI-16-DIAG



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	25 mA + sensor feed
Analogue inputs	
Number analogue inputs	4
Type	1. U (0...5 V, 0...10 V, 1...5 V, 2...10 V, ±10 V), 2. I (0-20 mA or 4-20 mA)
Resolution	16 Bit
Accuracy	0.1% FSR
Sensor supply	Yes
Sensor connection	2-wire, 3-wire, 3-wire + FE
Conversion time	1 ms
Internal resistance U	100 kΩ
Internal resistance I	41.2 Ω
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	Yes
Short-circuit-proof	Yes
General data	
Weight	89 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

Type	Qty.	Order No.
UR20-4AI-UI-16-DIAG	1	1315690000

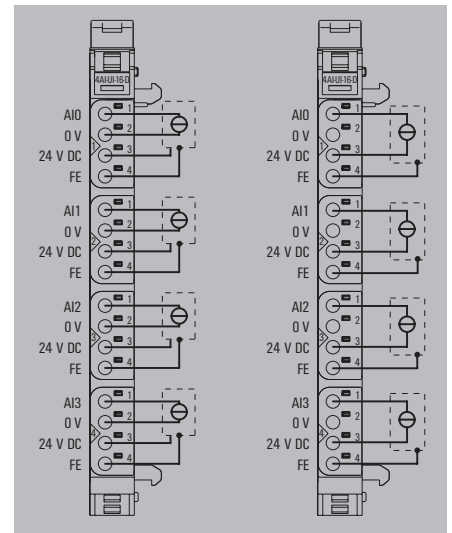
#### Ordering data

Module variants	
Analogue input module, 4 channels, 16 bits, diagnosis functions	
Note	

#### Accessories

Coding elements	KOSM BHZ5.00	100	1483050000
Termination kit	UR20-EBK-ACC	5	1346610000
Swivel marker	UR20-SM-ACC	20	1339920000
Connection marker for pusher neutral	PM 2.7/2.6 MC NE WS	960	1323710000
Module marker for custom printing	DEK 5/8-11.5 MC SDR	100	1341610000
Module marker for neutral	DEK 5/8-11.5 MC NE WS	500	1341630000
Thermotransfer version (material: polyester)	THM UR20 WS	1	1429420000

Replacement parts			
Electronic module	UR20-EM-1315690000-SP	1	1347280000
Basic module	UR20-BM-SP	5	1350930000
Plug-in connector unit	UR20-PK-1315690000-SP	5	1518870000
Note			
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.			



### 4AI-UI-ISO-16-DIAG

- 4 analogue inputs
- Extended diagnostic function
- Parameterisable inputs (voltage, current)
- 16-bit resolution
- 2-wire
- Accuracy 0.1 % FSR

### UR20-4AI-UI-ISO-16-DIAG



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/ -15 %
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	31 mA
Analogue inputs	
Number analogue inputs	4
Input value	Voltage U (0...5 V, ±5 V, 0...10 V, ±10 V, 1...5 V, 2...10 V), Current I (0...20 mA, 4...20 mA)
Resolution	16 Bit
Accuracy	0.1% FSR
Sensor supply	No
Sensor connection	2-wire
Conversion time	1 ms
Internal resistance U	200 kΩ
Internal resistance I	70 Ω
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	Yes
General data	
Weight	89.9 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

Type	Qty.	Order No.
UR20-4AI-UI-ISO-16-DIAG	1	2566960000

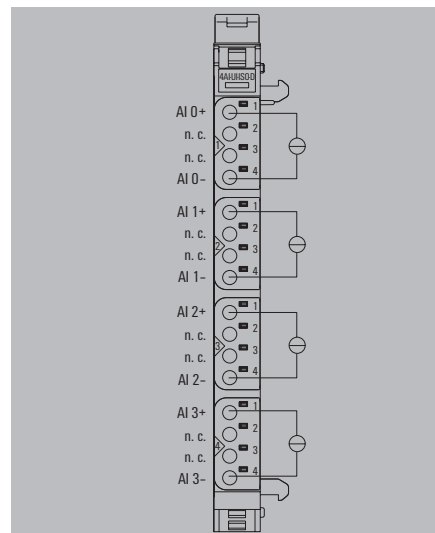
#### Ordering data

Module variants	
	Analogue input module, 4 channels, 16 bit, isolated
Note	

#### Accessories

	Coding elements
	Termination kit
	Swivel marker
	Connection marker for pusher neutral
	Module marker for custom printing
	Module marker for neutral
	Thermotransfer version (material: polyester)
Replacement parts	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
UR20-EM-2566960000-SP	1	2568360000
UR20-BM-SP	5	1350930000
UR20-PK-2566960000-SP	5	2568320000



### 4AI-UI-16-HD

- 4 analogue inputs
- Parameterisable inputs (voltage, current)
- 16-bit resolution
- 2-wire, 3-wire and 3-wire + FE connection
- Accuracy 0.1 % FSR

#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/-15 %, via the system bus
Current consumption $I_M$ (power segment of the field bus coupler), typ.	8 mA
Current consumption $I_M$ (the respective power segment)	25 mA + sensor feed
Analogue inputs	
Number analogue inputs	4
Type	1. U (0...5 V, 0...10 V, 1...5 V, 2...10 V, $\pm 10$ V), 2. I (0-20 mA or 4-20 mA)
Resolution	16 Bit
Accuracy	0.1% FSR
Sensor supply	Yes
Sensor connection	2-wire, 3-wire, 3-wire + FE
Conversion time	1 ms
Internal resistance U	100 k $\Omega$
Internal resistance I	45 $\Omega$
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
Short-circuit-proof	Yes
General data	
Weight	72 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

#### Ordering data

Module variants	
	Analogue input module, 4 channels, 16 bits, HD plug
Note	

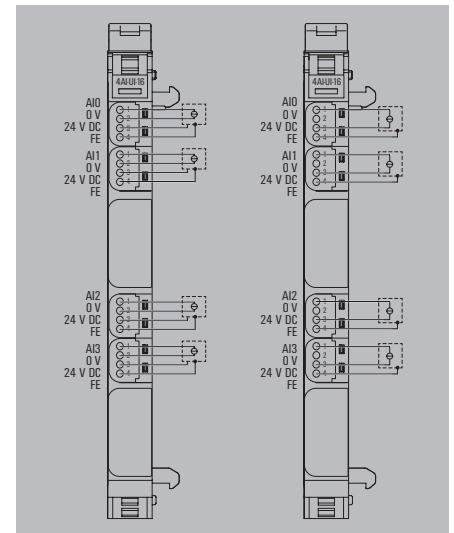
#### Accessories

	Coding elements
	Termination kit
	Swivel marker
	Module marker for custom printing
	Module marker for neutral
	Thermotransfer version (material: polyester)
Connector and tools	
	<sup>*)</sup> HD plug
	<sup>*)</sup> Stripping tool
	<sup>*)</sup> Pressing tool
Replacement parts	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

### UR20-4AI-UI-16-HD



Note: Please order connector separately



u-remote system bus
48 MBit/s
500 V DC between the current paths
24 V DC +20 %/-15 %, via the system bus
8 mA
25 mA + sensor feed
4
1. U (0...5 V, 0...10 V, 1...5 V, 2...10 V, $\pm 10$ V), 2. I (0-20 mA or 4-20 mA)
16 Bit
0.1% FSR
Yes
2-wire, 3-wire, 3-wire + FE
1 ms
100 k $\Omega$
45 $\Omega$
Yes
Yes
No
Yes
72 g
120 mm / 11.5 mm / 76 mm

Type	Qty.	Order No.
UR20-4AI-UI-16-HD	1	1506920000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
UR20-PG0.35	8	1469340000
MULTI-STRIPAX 6-16	1	9202210000
PWZ-UR20-HD	1	1525820000
UR20-EM-1506920000-SP	1	1515420000
UR20-BM-SP	5	1350930000
UR20-PK-1506920000-SP	5	1518830000

Note: please order plug (1469340000) separately.

### 4AI-UI-16-DIAG-HD

- Advanced diagnosis functions
- 4 analogue inputs
- Parameterisable inputs (voltage, current)
- 16-bit resolution
- 2-wire, 3-wire and 3-wire + FE connection
- Accuracy 0.1 % FSR

#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	25 mA + sensor feed
Analogue inputs	
Number analogue inputs	4
Type	1. U (0...5 V, 0...10 V, 1...5 V, 2...10 V, ±10 V), 2. I (0-20 mA or 4-20 mA)
Resolution	16 Bit
Accuracy	0.1% FSR
Sensor supply	Yes
Sensor connection	2-wire, 3-wire, 3-wire + FE
Conversion time	1 ms
Internal resistance U	100 kΩ
Internal resistance I	45 Ω
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	Yes
Short-circuit-proof	Yes
General data	
Weight	72 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

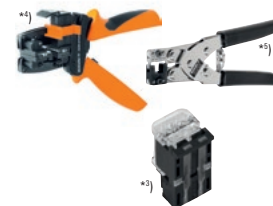
#### Ordering data

Module variants	
Analogue input module, 4 channels, diagnosis functions, HD-plug	
Note	

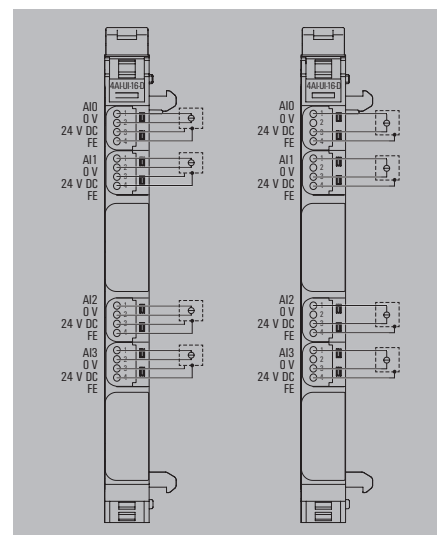
#### Accessories

Coding elements	KOSM BHZ5.00	100	1483050000
Termination kit	UR20-EBK-ACC	5	1346610000
Swivel marker	UR20-SM-ACC	20	1339920000
Module marker for custom printing	DEK 5/8-11.5 MC SDR	100	1341610000
Module marker for neutral	DEK 5/8-11.5 MC NE WS	500	1341630000
Thermotransfer version (material: polyester)	THM UR20 WS	1	1429420000
Connector and tools			
<sup>*)</sup> HD plug	UR20-PG0.35	8	1469340000
<sup>*)</sup> Stripping tool	MULTI-STRIPAX 6-16	1	9202210000
<sup>*)</sup> Pressing tool	PWZ-UR20-HD	1	1525820000
Replacement parts			
Electronic module	UR20-EM-1506910000-SP	1	1515430000
Basic module	UR20-BM-SP	5	1350930000
Plug-in connector unit	UR20-PK-1506910000-SP	5	1518820000
Note			
Note: please order plug (1469340000) separately.			

### UR20-4AI-UI-16-DIAG-HD



Note: Please order connector separately



### 8AI-I-16-DIAG

- Extended diagnostic function
- 8 analogue inpts (current)
- 16-bit resolution
- 2-wire, 3-wire and 3-wire + FE connection
- Accuracy typ. 0.05% FSR

### UR20-8AI-I-16-DIAG



#### Technical data

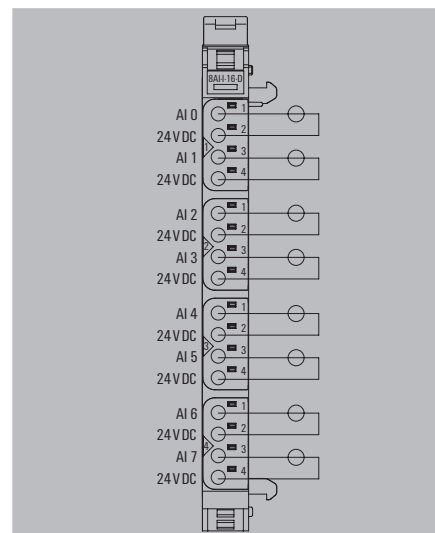
System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24V DC +20 %/-15 % (according to IEC 61131), 24V DC +30%/-25% (according to DNV GL)
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	23 mA + load
Analogue inputs	
Number analogue inputs	8
Type	Current I (0...20 mA, 4...20 mA)
Resolution	16 Bit
Accuracy	max. 0,1% FSR (at 25°C), ±50 ppm/K max.
Sensor supply	max. 125 mA per channel
Sensor connection	2-wire
Conversion time	1 ms
Internal resistance I	45 Ω
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	Yes
Short-circuit-proof	Yes
General data	
Weight	89 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

System data		
Interface	u-remote system bus	
Transmission speed of system bus, max.	48 MBit/s	
Galvanic isolation	500 V DC between the current paths	
Supply		
Supply voltage	24V DC +20 %/-15 % (according to IEC 61131), 24V DC +30%/-25% (according to DNV GL)	
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA	
Current consumption I <sub>m</sub> (the respective power segment)	23 mA + load	
Analogue inputs		
Number analogue inputs	8	
Type	Current I (0...20 mA, 4...20 mA)	
Resolution	16 Bit	
Accuracy	max. 0,1% FSR (at 25°C), ±50 ppm/K max.	
Sensor supply	max. 125 mA per channel	
Sensor connection	2-wire	
Conversion time	1 ms	
Internal resistance I	45 Ω	
Reverse polarity protection	Yes	
Module diagnosis	Yes	
Individual channel diagnosis	Yes	
Short-circuit-proof	Yes	
General data		
Weight	89 g	
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm	
Note		

#### Ordering data

Module variants	
Note	

Type	Qty.	Order No.
UR20-8AI-I-16-DIAG	1	1529370000



## I/O system IP20 – Analogue input modules

### 8AI-16-HD

- 8 analogue inputs (current)
- 16-bit resolution
- 2-wire, 3-wire and 3-wire + FE connection
- Accuracy 0.1 % FSR

### UR20-8AI-16-HD



Note: Please order connector separately

#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	20 mA + load
Analogue inputs	
Number analogue inputs	8
Input value	Current I (0...20 mA, 4...20 mA)
Resolution	16 Bit
Accuracy	0.1% FSR
Sensor supply	Yes
Sensor connection	2-wire, 3-wire, 3-wire + FE
Conversion time	1 ms
Internal resistance I	50 Ω
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
Short-circuit-proof	Yes
General data	
Weight	74 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

#### Ordering data

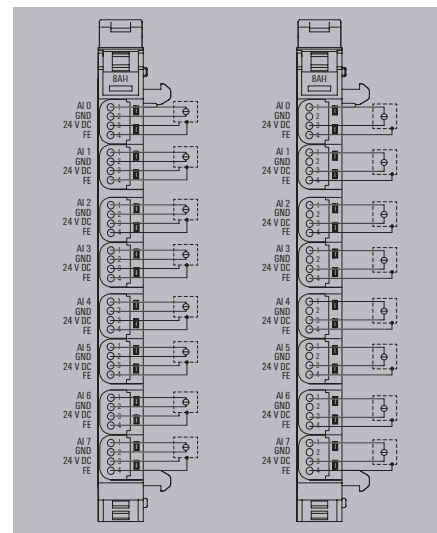
Module variants	
Analogue input module, 8 channels, 16 Bits, HD-plug	
Note	

Type	Qty.	Order No.
UR20-8AI-16-HD	1	1315650000

#### Accessories

Coding elements	
Termination kit	
Swivel marker	
Module marker for custom printing	
Module marker for neutral	
Thermotransfer version (material: polyester)	
Connector and tools	
<sup>*)</sup> HD plug	
<sup>*)</sup> Stripping tool	
<sup>*)</sup> Pressing tool	
Replacement parts	
Electronic module	
Basic module	
Plug-in connector unit	
Note	

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
UR20-PG0.35	8	1469340000
MULTI-STRIPAX 6-16	1	9202210000
PWZ-UR20-HD	1	1525820000
UR20-EM-1315650000-SP	1	1347240000
UR20-BM-SP	5	1350930000
UR20-PK-1315650000-SP	5	1559740000
Note: please order plug (1469340000) separately.		



**8AI-I-16-DIAG-HD**

- Advanced diagnosis functions
- 8 analogue inputs (current)
- 16-bit resolution
- 2-wire, 3-wire and 3-wire + FE connection
- Accuracy 0.1 % FSR

**Technical data**

<b>System data</b>	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
<b>Supply</b>	
Supply voltage	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	20 mA + load
<b>Analogue inputs</b>	
Number analogue inputs	8
Input value	Current I (0...20 mA, 4...20 mA)
Resolution	16 Bit
Accuracy	0.1% FSR
Sensor supply	Yes
Sensor connection	2-wire, 3-wire, 3-wire + FE
Conversion time	1 ms
Internal resistance I	50 Ω
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	Yes
Short-circuit-proof	Yes
<b>General data</b>	
Weight	74 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
<b>Note</b>	

**Ordering data**

<b>Module variants</b>	
Analogue input module, 4 channels, diagnosis functions, HD-plug	
<b>Note</b>	

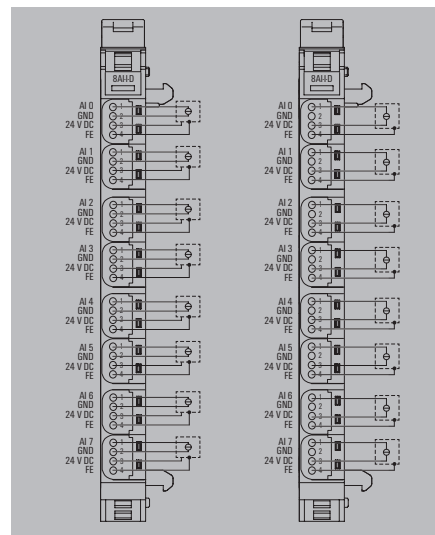
**Accessories**

Coding elements	
Termination kit	
Swivel marker	
Module marker for custom printing	
Module marker for neutral	
Thermotransfer version (material: polyester)	
<b>Connector and tools</b>	
	<sup>*)</sup> HD plug
	<sup>*)</sup> Stripping tool
	<sup>*)</sup> Pressing tool
<b>Replacement parts</b>	
Electronic module	UR20-EM-1315720000-SP
Basic module	UR20-BM-SP
Plug-in connector unit	UR20-PK-1315720000-SP
<b>Note</b>	

**UR20-8AI-I-16-DIAG-HD**



Note: Please order connector separately



Type	Qty.	Order No.
UR20-8AI-I-16-DIAG-HD	1	1315720000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
UR20-PGO.35	8	1469340000
MULTI-STRIPAX 6-16	1	9202210000
PWZ-UR20-HD	1	1525820000
UR20-EM-1315720000-SP	1	1347320000
UR20-BM-SP	5	1350930000
UR20-PK-1315720000-SP	5	1559750000

Note: please order plug (1469340000) separately.

## I/O system IP20 – Analogue input modules

### 8AI-PLC-INT

- 8 analogue inputs (current)
- Rapid cabling with flat ribbon cable
- 0/4 to 20 mA with 0.1 % accuracy with a 16-bit resolution
- Inputs can be parameterised (passive or active operating mode)
- Accuracy 0,1 % FSR

### UR20-8AI-PLC-INT



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 Mbit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/ -15 %, via the system bus
Current consumption $I_{M1}$ (power segment of the field bus coupler), typ.	8 mA
Current consumption $I_{M2}$ (the respective power segment)	<20 mA
Analogue inputs	
Number analogue inputs	8
Type	Current input
Resolution	16 Bit
Accuracy	0.1% FSR
Sensor supply	external
Sensor connection	PLC interface unit
Conversion time	1 ms
Internal resistance I	50 Ω
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
Short-circuit-proof	Yes
General data	
Weight	85 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

System data		
Interface	u-remote system bus	
Transmission speed of system bus, max.	48 Mbit/s	
Galvanic isolation	500 V DC between the current paths	
Supply		
Supply voltage	24 V DC +20 %/ -15 %, via the system bus	
Current consumption $I_{M1}$ (power segment of the field bus coupler), typ.	8 mA	
Current consumption $I_{M2}$ (the respective power segment)	<20 mA	
Analogue inputs		
Number analogue inputs	8	
Type	Current input	
Resolution	16 Bit	
Accuracy	0.1% FSR	
Sensor supply	external	
Sensor connection	PLC interface unit	
Conversion time	1 ms	
Internal resistance I	50 Ω	
Reverse polarity protection	Yes	
Module diagnosis	Yes	
Individual channel diagnosis	No	
Short-circuit-proof	Yes	
General data		
Weight	85 g	
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm	
Note		

#### Ordering data

Module variants	
	Analogue input module, 8 channels, PLC interface
Note	

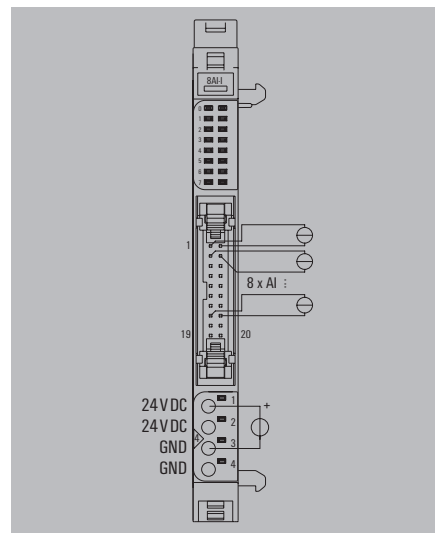
Type	Qty.	Order No.
UR20-8AI-PLC-INT	1	1315670000

#### Accessories

	Coding elements
	Termination kit
	Swivel marker
	Connection marker for pusher neutral
	Module marker for custom printing
	Module marker for neutral
	Thermotransfer version (material: polyester)
Connector and cable	
	PLC interface element
	Pre-assembled cable, 1m
Replacement parts	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
RS F20 LP2N 5/20	1	0224261001
PAC-UNIV-HE20-LCH-1M	1	7789306010
UR20-EM-1315670000-SP	1	1347250000
UR20-BM-SP	5	1350930000
UR20-PK-1315670000-SP	5	1483950000

1 roll = 1000 label = 1 Qty.  
1 sheet = 60 label = 1 Qty.



### 4AI-UI-DIF-16-DIAG

- 4 differential analog inputs
- Advanced diagnosis functions
- Parameterizable inputs (voltage, current)
- 16-bit resolution
- 2-wire, 3-wire and 4-wire
- Accuracy 0.1% FSR

#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/-15 %, via the system bus
Current consumption $I_m$ (power segment of the field bus coupler), typ.	8 mA
Current consumption $I_m$ (the respective power segment)	33 mA + load
Analogue inputs	
Number analogue inputs	4
Input value	Voltage U (0...5 V, ±5 V, 0...10 V, ±10 V, 1...5 V, 2...10 V), Current I (0...20 mA, 4...20 mA)
Resolution	16 Bit
Accuracy	0.1% FSR
Sensor supply	Yes
Sensor supply	500mA
Sensor connection	2-wire, 3-wire, 4-wire
Input type	Differential input
Common mode range	-30V...30V
Conversion time	1 ms
Internal resistance I	18 Ω
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	Yes
Short-circuit-proof	Yes
General data	
Weight	90 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

#### Ordering data

Module variants	
Analogue input module, 4 channels, 16 Bits, Differential inputs	
Note	

#### Accessories

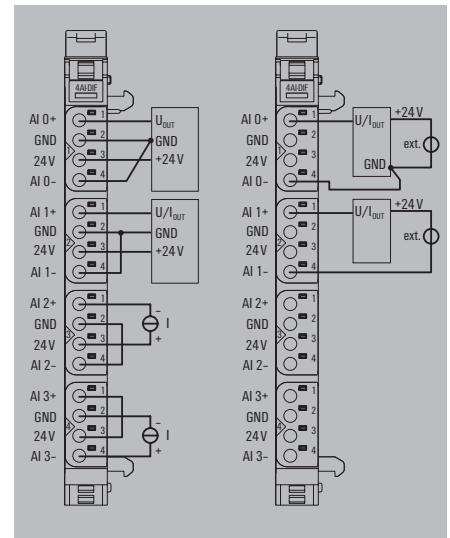
Coding elements	KOSM BHZ5.00	100	1483050000
Termination kit	UR20-EBK-ACC	5	1346610000
Swivel marker	UR20-SM-ACC	20	1339920000
Connection marker for pusher neutral	PM 2.7/2.6 MC NE WS	960	1323710000
Module marker for custom printing	DEK 5/8-11.5 MC SDR	100	1341610000
Module marker for neutral	DEK 5/8-11.5 MC NE WS	500	1341630000
Thermotransfer version (material: polyester)	THM UR20 WS	1	1429420000
Replacement parts			
Electronic module	UR20-EM-1993880000-SP	1	2446190000
Basic module	UR20-BM-SP	5	1350930000
Plug-in connector unit	UR20-PK-1993880000-SP	5	2446200000
Note			
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.			

### UR20-4AI-UI-DIF-16-DIAG



Type		
UR20-4AI-UI-DIF-16-DIAG	Qty. 1	Order No. 1993880000
Note		

Type		
KOSM BHZ5.00	Qty. 100	Order No. 1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
Note		
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		



### 4AI-UI-DIF-32-DIAG

- 4 differential analog inputs
- Advanced diagnosis functions
- Parameterizable inputs (voltage, current)
- 16-bit resolution
- 2-wire, 3-wire and 4-wire
- Accuracy 0.1% FSR

### UR20-4AI-UI-DIF-32-DIAG



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 % / -15 %, via the system bus
Current consumption $I_m$ (power segment of the field bus coupler), typ.	8 mA
Current consumption $I_m$ (the respective power segment)	31 mA + load
Analogue inputs	
Number analogue inputs	4
Input value	Voltage U (0...5 V, ±5 V, 0...10 V, ±10 V, 1...5 V, 2...10 V), Current I (0...20 mA, 4...20 mA)
Resolution	16 Bit
Accuracy	0.1% FSR
Sensor supply	Yes
Sensor supply	500mA
Sensor connection	2-wire, 3-wire, 4-wire
Input type	Differential input
Common mode range	-30V...30V
Conversion time	1 ms
Internal resistance I	16 Ω
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	Yes
Short-circuit-proof	Yes
General data	
Weight	90 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

Type	Qty.	Order No.
UR20-4AI-UI-DIF-32-DIAG	1	2544660000

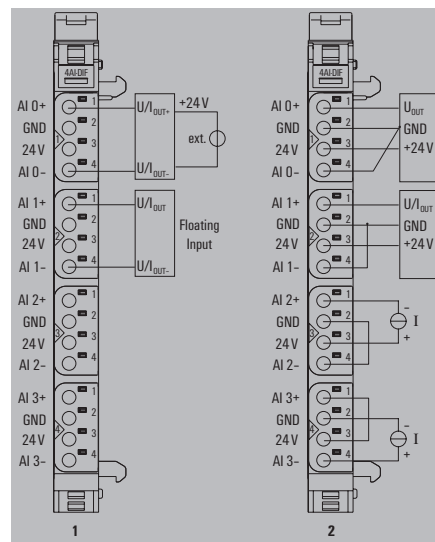
Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000

#### Ordering data

Module variants	
Analogue input module, 4 channels, 16 Bits, Differential inputs	
Note	

#### Accessories

Replacement parts	
Electronic module	UR20-EM-2544660000-SP
Basic module	UR20-BM-SP
Plug-in connector unit	UR20-PK-2544660000-SP
Note	



### 4AI-HART-16-DIAG

- 4 HART inputs
- max. 1 ms conversion time
- 16-bit resolution
- Accuracy 0,1 % FSR
- Individual channel diagnosis

### Technical data

<b>System data</b>	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
<b>Supply</b>	
Supply voltage	24 V DC +20 %/ -15 %, via the system bus
Current consumption $I_M$ (power segment of the field bus coupler), typ.	8 mA
Current consumption $I_M$ (the respective power segment)	27 mA + Sensor feed
<b>Analogue inputs</b>	
Number analogue inputs	4
Sensor connection	2-wire, 3-wire, 4-wire
Input value	Current I (0...20 mA, 4...20 mA)
Conversion time	1 ms
Resolution	16 Bit
Accuracy	0.1% FSR
Sensor supply	Yes
Internal resistance I	250 Ω
Supply voltage	24 V DC +20 %/ -15 %, via the system bus
Module diagnosis	Yes
Individual channel diagnosis	Yes
<b>General data</b>	
Weight	88 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
<b>Note</b>	

### Ordering data

<b>Module variants</b>	
Analogue input module HART Master, 4 channels, 16 bits	
<b>Note</b>	

### Accessories

Coding elements	KOSM BHZ5.00	100	1483050000
Termination kit	UR20-EBK-ACC	5	1346610000
Swivel marker	UR20-SM-ACC	20	1339920000
Connection marker for pusher neutral	PM 2.7/2.6 MC NE WS	960	1323710000
Module marker for custom printing	DEK 5/8-11.5 MC SDR	100	1341610000
Module marker for neutral	DEK 5/8-11.5 MC NE WS	500	1341630000
Thermotransfer version (material: polyester)	THM UR20 WS	1	1429420000
<b>Replacement parts</b>			
Electronic module	UR20-EM-2617520000-SP	1	2702570000
Basic module	UR20-BM-SP	5	1350930000
Plug-in connector unit	UR20-PK-2617520000-SP	5	2702540000
<b>Note</b>			

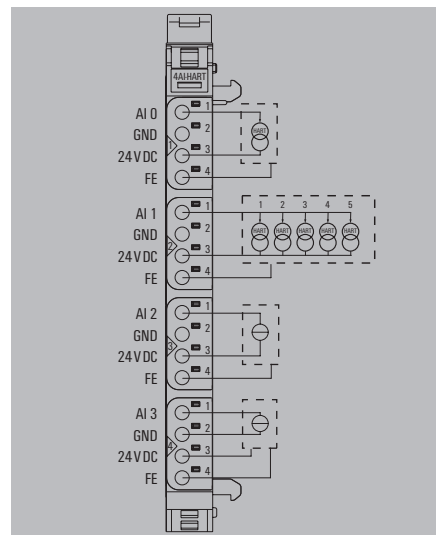
### UR20-4AI-HART-16-DIAG



u-remote system bus	24 V DC +20 %/ -15 %, via the system bus
48 MBit/s	8 mA
500 V DC between the current paths	27 mA + Sensor feed
<b>Analogue inputs</b>	
4	2-wire, 3-wire, 4-wire
2-wire, 3-wire, 4-wire	Current I (0...20 mA, 4...20 mA)
1 ms	16 Bit
16 Bit	0.1% FSR
0.1% FSR	Yes
Yes	250 Ω
250 Ω	24 V DC +20 %/ -15 %, via the system bus
24 V DC +20 %/ -15 %, via the system bus	Yes
Yes	Yes
Yes	88 g
88 g	120 mm / 11.5 mm / 76 mm
120 mm / 11.5 mm / 76 mm	

Type	Qty.	Order No.
UR20-4AI-HART-16-DIAG	1	2617520000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
UR20-EM-2617520000-SP	1	2702570000
UR20-BM-SP	5	1350930000
UR20-PK-2617520000-SP	5	2702540000



## I/O system IP20 – Analogue input modules

### 4AI-HART-ISO-16

- 4 HART inputs
- Insulation up to 500 V
- max. 1 ms conversion time
- 16-bit resolution
- Accuracy 0,1 % FSR

### UR20-4AI-HART-ISO-16



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24V DC +20 %/-15 % (according to IEC 61131), 24V DC +30%/-25% (according to DNV GL)
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	32 mA
Analogue inputs	
Number analogue inputs	4
Sensor connection	2-wire, 2 wire + FE
Input value	Current I (0...20 mA, 4...20 mA)
Conversion time	1 ms
Resolution	16 Bit
Accuracy	max. 0,1% FSR (at 25°C), ±50 ppm/K max.
Sensor supply	No
Internal resistance I	250 Ω
Supply voltage	24V DC +20 %/-15 % (according to IEC 61131), 24V DC +30%/-25% (according to DNV GL)
Module diagnosis	Yes
Individual channel diagnosis	Yes
General data	
Weight	93 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

Type	Qty.	Order No.
UR20-4AI-HART-ISO-16	1	2828350000

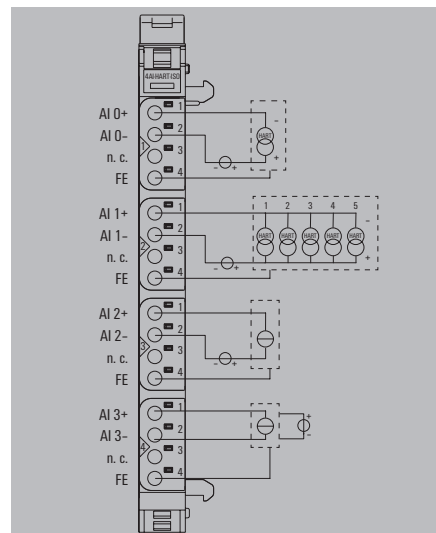
#### Ordering data

Module variants	
Note	

#### Accessories

Coding elements	
Termination kit	
Swivel marker	
Connection marker for pusher neutral	
Module marker for custom printing	
Module marker for neutral	
Thermotransfer version (material: polyester)	
Replacement parts	
Electronic module	
Basic module	
Plug-in connector unit	
Note	

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
UR20-EM-2828350000-SP	1	2935070000
UR20-BM-SP	5	1350930000
UR20-PK-2828350000-SP	5	2935060000



### 15AI-U-16-DIAG

- Module for Cell Voltage Monitoring
- 14/15 analog voltage inputs, 1-wire connection
- Simplified stack wiring via an optional switchable bridge
- Alternatively, 8 analog voltage inputs, 2-wire connection
- Inputs configurable from 0..3 V up to +/- 100 V
- Galvanic isolation up to 1.500 V DC, continuous
- Process data can be accessed via a mailbox, allowing more modules to be used on a single bus coupler

#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	between field and power rails: 1500V DC permanently (PD:2; OV:2; RI), between field and system bus: 1500V DC permanently (PD:2; OV:2; RI)
Supply	
Supply voltage	24V DC +20 %/-15 % (according to IEC 61131)
Current consumption $I_m$ (power segment of the field bus coupler), typ.	6 mA
Current consumption $I_m$ (the respective power segment)	18.8 mA
Analogue inputs	
Number analogue inputs	15
Sensor connection	1-wire Connection, for daisy chained battery cell stack; configurable
Input value	Voltage U ( $\pm 3V / \pm 5V / \pm 10V / \pm 30V / 0..3V / 0..5V / 0..10V / 0..30V$ , only channel AI0...AI13: $0..100V / \pm 100V$ )
Conversion time	1 ms
Resolution	16 Bit
Accuracy	max. 0,1% FSR (at 25°C)
Sensor supply	No
Internal resistance I	1 MΩ
Module diagnosis	Yes
Individual channel diagnosis	Yes
General data	
Weight	88 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	
In combination with UR20-ES, HW02.00. Without this module the galvanic isolation will be 1,200 V DC.	

#### Ordering data

Module variants	
None	
Note	
None	

#### Accessories

Coding elements	
Termination kit	
Swivel marker	
Connection marker for pusher neutral	
Module marker for custom printing	
Module marker for neutral	
Thermotransfer version (material: polyester)	

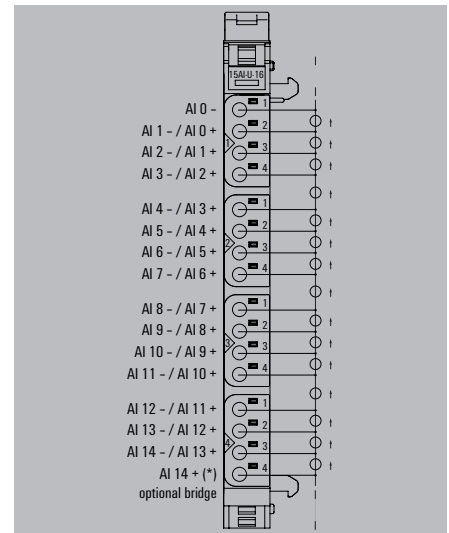
Replacement parts	
Electronic module	
Basic module	
Plug-in connector unit	
Note	
None	

### UR20-15AI-U-16-DIAG



Type		
Type	Qty.	Order No.
UR20-15AI-U-16-DIAG	1	3039320000

Type		
Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
Type		
Type	Qty.	Order No.
UR20-EM-3039320000-SP	1	3151190000
UR20-BM-SP	5	1350930000
UR20-PK-3039320000-SP	1	3151180000



## Temperature modules and potentiometer input module

### Available for TC and RTD, 16-bit resolution, 50/60 Hz suppression

The analogue temperature modules and potentiometer input module can acquire up to 4 or 8 analogue resistance thermocouplers, thermocouple sensors, potentiometers or voltages from +/-15 mV to +/- 2 V. The resolution is 16 bits per channel. A sensor can be connected to each connector in a 2-wire, 3-wire or 4-wire connection. Sensor type and temperature range are set using parametrisation. A status LED is assigned to each channel.

The inputs are protected against voltage surges and overcurrent. In addition, the modules provide individual channel diagnosis with channel-related fault messages.

"HP" module: the module is intended for high-precision applications. A user calibration can be parametrised for the resistance measurement.

"TC" module: internal or external cold junction compensation (CJC) can be parametrised for each channel.

UR20-4AI-RTD-DIAG



UR20-4AI-RTD-HP-DIAG



UR20-8AI-RTD-DIAG-2W



UR20-4AI-TC-DIAG



UR20-4AI-R-HS-16-DIAG



### 4AI-RTD-DIAG

- 4 analogue inputs
- For 2-, 3- and 4-wire RTDs
- Temperature measurement via resistor
- 16-bit resolution
- Individual channel diagnosis
- Automatic 50 and 60 Hz suppression
- High accuracy
- Integrated, parameterisable characteristic curves for almost all common sensors

### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	DC 500 V between current paths
Supply	
Supply voltage	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	<20 mA
Analogue inputs	
Number analogue inputs	4
Type	Pt100, Pt200, Pt500, Pt1000, Ni100, Ni120, Ni 200, Ni500, Ni1000, Cu10, 40Ω, 80Ω, 150Ω, 300Ω, 500Ω, 1kΩ, 2kΩ, 4kΩ
Resolution	16 Bit
Accuracy	0.2% FSR / 0.3% FSR for Ni sensors / 0.6% FSR for Cu10
Sensor connection	2-wire, 3-wire, 4-wire
Temperature coefficient	≤ 50 ppm/K
Temperature range	-200...850 °C
Conversion time	adjustable, 36...240 ms
Internal resistance U	1 MΩ
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	Yes
General data	
Weight	91 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

### Ordering data

Module variants	
	Analogue input module, 4 channels, RTD
Note	

### Accessories

	Coding elements
	Termination kit
	Swivel marker
	Connection marker for pusher neutral
	Module marker for custom printing
	Module marker for neutral
	Thermotransfer version (material: polyester)

Replacement parts	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

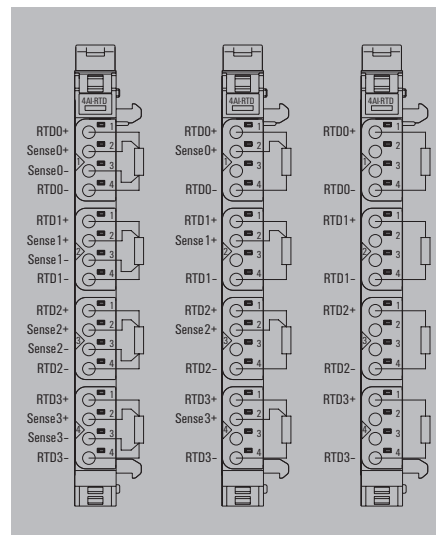
### UR20-4AI-RTD-DIAG



System data		
Interface	u-remote system bus	
Transmission speed of system bus, max.	48 MBit/s	
Galvanic isolation	DC 500 V between current paths	
Supply		
Supply voltage	24 V DC +20 %/-15 %, via the system bus	
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA	
Current consumption I <sub>m</sub> (the respective power segment)	<20 mA	
Analogue inputs		
Number analogue inputs	4	
Type	Pt100, Pt200, Pt500, Pt1000, Ni100, Ni120, Ni 200, Ni500, Ni1000, Cu10, 40Ω, 80Ω, 150Ω, 300Ω, 500Ω, 1kΩ, 2kΩ, 4kΩ	
Resolution	16 Bit	
Accuracy	0.2% FSR / 0.3% FSR for Ni sensors / 0.6% FSR for Cu10	
Sensor connection	2-wire, 3-wire, 4-wire	
Temperature coefficient	≤ 50 ppm/K	
Temperature range	-200...850 °C	
Conversion time	adjustable, 36...240 ms	
Internal resistance U	1 MΩ	
Reverse polarity protection	Yes	
Module diagnosis	Yes	
Individual channel diagnosis	Yes	
General data		
Weight	91 g	
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm	
Note		

Type	Qty.	Order No.
UR20-4AI-RTD-DIAG	1	1315700000
Note		

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
Replacement parts		
UR20-EM-1315700000-SP	1	1347290000
UR20-BM-SP	5	1350930000
UR20-PK-1315700000-SP	5	1484040000
Note		
1 roll = 1000 label = 1 Qty.		
1 sheet = 60 label = 1 Qty.		



### 4AI-RTD-HP-DIAG

- 4 analogue inputs
- For 2-,3- and 4wire RTDs
- Temperature measurement via resistor
- 16-bit resolution
- Individual channel diagnosis
- Increased accuracy
- Integrated, parameterisable characteristic curves for almost all common sensors

### UR20-4AI-RTD-HP-DIAG



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	<20 mA
Analogue inputs	
Number analogue inputs	4
Type	Pt100, Pt200, Pt500, Pt1000, Ni100, Ni120, Ni 200, Ni500, Ni1000, Cu10, 40Ω, 80Ω, 150Ω, 300Ω, 500Ω, 1kΩ, 2kΩ, 4kΩ
Resolution	16 Bit
Accuracy	max. 0,6 K for Measurement range Pt100 (-200 ... +250 °C), max. 0,2 % FSR for Pt sensors and resistance measurement (-200 ... +250 °C), max. 0,3 % FSR for Ni sensors, max. 0,6 % FSR for Cu10
Sensor connection	2-wire, 3-wire, 4-wire
Temperature coefficient	≤ 50 ppm/K
Temperature range	-200...850 °C
Conversion time	adjustable, 36...240 ms
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	Yes
General data	
Weight	88 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

Type	Qty.	Order No.
UR20-4AI-RTD-HP-DIAG	1	2456540000

#### Ordering data

Module variants	
	Analogue input module, 4 channels, RTD
Note	

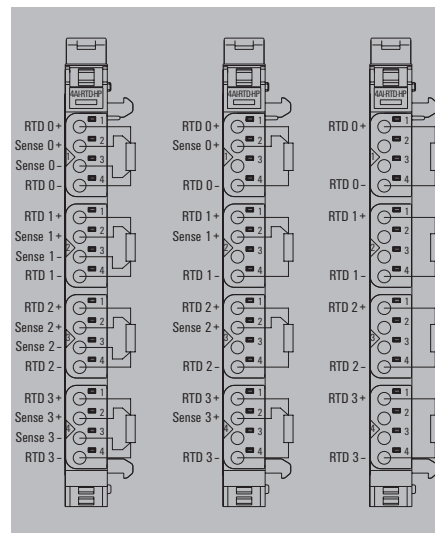
#### Accessories

	Coding elements
	Termination kit
	Swivel marker
	Connection marker for pusher neutral
	Module marker for custom printing
	Module marker for neutral
	Thermotransfer version (material: polyester)

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000

Replacement parts	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

Type	Qty.	Order No.
UR20-EM-2456540000-SP	1	2545620000
UR20-BM-SP	5	1350930000
UR20-PK-2456540000-SP	5	2545610000



### 8AI-RTD-DIAG-2W

- 4 analogue inputs
- For 2-wire RTDs
- Temperature measurement via resistor
- 16-bit resolution
- Individual channel diagnosis
- High accuracy
- Integrated, parameterisable characteristic curves for almost all common sensors

### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	<20 mA
Analogue inputs	
Number analogue inputs	8
Type	Pt100, Pt200, Pt500, Pt1000, Ni100, Ni120, Ni 200, Ni500, Ni1000, Cu10, 40Ω, 80Ω, 150Ω, 300Ω, 500Ω, 1kΩ, 2kΩ, 4kΩ
Resolution	16 Bit
Accuracy	0.2% FSR / 0.3% FSR for Ni sensors / 0.6% FSR for Cu10
Sensor connection	2-wire
Temperature coefficient	≤ 50 ppm/K
Temperature range	-200...850 °C
Conversion time	80 ms
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	Yes
General data	
Weight	91 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

### Ordering data

Module variants	
	Analogue input module, 8 channels, RTD
Note	

### Accessories

	Coding elements
	Termination kit
	Swivel marker
	Connection marker for pusher neutral
	Module marker for custom printing
	Module marker for neutral
	Thermotransfer version (material: polyester)
Replacement parts	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

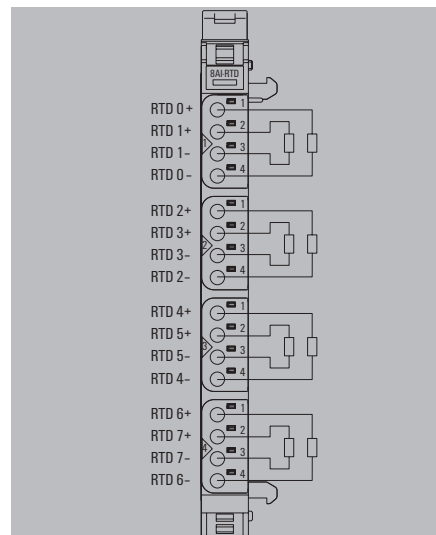
### UR20-8AI-RTD-DIAG-2W



u-remote system bus	
48 MBit/s	
500 V DC between the current paths	
24 V DC +20 %/-15 %, via the system bus	
8 mA	
<20 mA	
8	
Pt100, Pt200, Pt500, Pt1000, Ni100, Ni120, Ni 200, Ni500, Ni1000, Cu10, 40Ω, 80Ω, 150Ω, 300Ω, 500Ω, 1kΩ, 2kΩ, 4kΩ	
16 Bit	
0.2% FSR / 0.3% FSR for Ni sensors / 0.6% FSR for Cu10	
2-wire	
≤ 50 ppm/K	
-200...850 °C	
80 ms	
Yes	
Yes	
Yes	
91 g	
120 mm / 11.5 mm / 76 mm	
Note	

Type	Qty.	Order No.
UR20-8AI-RTD-DIAG-2W	1	2555940000
Note		

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
Note		
UR20-EM-2555940000-SP	1	2593310000
UR20-BM-SP	5	1350930000
UR20-PK-2555940000-SP	5	2593300000
Note		



## I/O system IP20 – Temperature modules and potentiometer input module

### 4AI-TC-DIAG

- 4 analogue inputs
- Various TC sensors
- Individual channel diagnosis
- High accuracy of 0.2 % FSR
- 16-bit resolution
- Internal or external cold-junction compensation possible
- Automatic 50 and 60 Hz suppression

### UR20-4AI-TC-DIAG



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	DC 500 V between current paths
Supply	
Supply voltage	24 V DC +20 %/ -15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	<20 mA
Analogue inputs	
Number analogue inputs	4
Type	J, K, T, B, N, E, R, S, L, U, C, mV
Resolution	16 Bit
Accuracy	0.2% FSR
Sensor connection	2-wire
cold junction compensation	Internal and external (int. accuracy ≤ 3 K)
Temperature coefficient	≤ 50 ppm/K
Temperature range	-200...2315 °C
Conversion time	adjustable, 36...240 ms
Internal resistance U	1 MΩ
Module diagnosis	Yes
Individual channel diagnosis	Yes
Reverse polarity protection	Yes
General data	
Weight	86 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

Type	Qty.	Order No.
UR20-4AI-TC-DIAG	1	1315710000

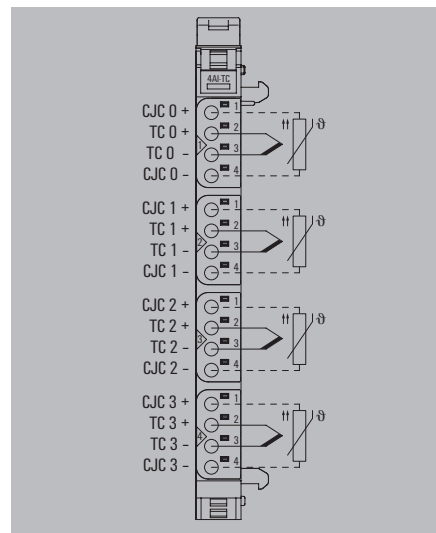
#### Ordering data

Module variants	
Analogue input module, 4 channels, thermocouple	
Note	

#### Accessories

Coding elements	
Termination kit	
Swivel marker	
Connection marker for pusher neutral	
Module marker for custom printing	
Module marker for neutral	
Thermotransfer version (material: polyester)	
Replacement parts	
Electronic module	
Basic module	
Plug-in connector unit	
Note	

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
UR20-EM-1315710000-SP	1	1435740000
UR20-BM-SP	5	1350930000
UR20-PK-1315710000-SP	5	1484050000
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		



### 4AI-R-HS-16-DIAG

- 4 potentiometer inputs
- Measuring range from 300 Ω ... 50 kΩ
- 16 Bit resolution
- 500 µs conversion time
- Accuracy < ± 0.25 % FSR
- Individual calibration and scaling

### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	26 mA
Analogue inputs	
Number analogue inputs	4
Sensor connection	3-wire, 3-wire + FE
Input value	Ratiometric potentiometer evaluation with own power supply
Measurement range	300 Ω ... 50 kΩ
Conversion time	typ. 500 µs (typ. 625 µs at 50 Hz / typ. 521 µs at 60 Hz frequency suppression)
Resolution	16 Bit
Accuracy	<± 0.25 % FSR at 25 °C
Temperature coefficient	≤ 50 ppm/K
Input resistance	typ. 500 kΩ against the wiper connection
Supply voltage	24 V DC +20 %/-15 %, via the system bus
Current of supply voltage output	max. 0.05 A per channel, total 0.2 A
Wire-break recognition	Yes
Short-circuit-proof	Yes
Module diagnosis	Yes
Individual channel diagnosis	Yes
General data	
Weight	89 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

### Ordering data

Module variants	
Analogue input module for potentiometer, 4 channels, 16 bits	
Note	

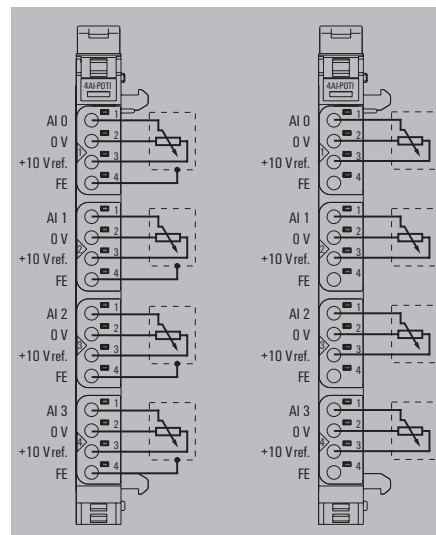
### Accessories

Coding elements	
Termination kit	
Swivel marker	
Connection marker for pusher neutral	
Module marker for custom printing	
Module marker for neutral	
Thermotransfer version (material: polyester)	
Replacement parts	
Electronic module	
Basic module	
Plug-in connector unit	
Note	

### UR20-4AI-R-HS-16-DIAG



Type		
UR20-4AI-R-HS-16-DIAG	Qty. 1	Order No. 2001670000
Type		
KOSM BHZ5.00	Qty. 100	Order No. 1483050000
UR20-EBK-ACC	Qty. 5	Order No. 1346610000
UR20-SM-ACC	Qty. 20	Order No. 1339920000
PM 2.7/2.6 MC NE WS	Qty. 960	Order No. 1323710000
DEK 5/8-11.5 MC SDR	Qty. 100	Order No. 1341610000
DEK 5/8-11.5 MC NE WS	Qty. 500	Order No. 1341630000
THM UR20 WS	Qty. 1	Order No. 1429420000
Type		
UR20-EM-2001670000-SP	Qty. 1	Order No. 2068640000
UR20-BM-SP	Qty. 5	Order No. 1350930000
UR20-PK-2001670000-SP	Qty. 5	Order No. 2068610000
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		



## Strain gauge module

### 2-channel module for u-remote load cell analysis

The UR20-2AI-SG-24-DIAG strain gauge module is an analogue input module designed for the connection of force sensors that use strain gauges. In this way, weights, torques or vibrations can be precisely recorded. The module can be calibrated via parametrisation. The web server can be used to calibrate the module with password protection, and the calibration settings are then documented.

#### C

The tare function can be triggered individually for each channel via a digital input or via software. Several sensors can be connected in parallel to each of the two channels in a 4- or 6-wire connection, as long as their input impedance is within the permissible sensor load. The resolution per channel is 24 bits with an accuracy of 0.01% of full scale. A status LED is assigned to each channel. The module electronic supplies the connected sensors from a potential electrogalvanised from the input current path ( $I_{IN}$ ). The inputs are protected against voltage surges and overcurrent.

The u-remote strain gauge module enables the parallel analysis of measurement data from up to four load cells on a single channel.

UR20-2AI-SG-24-DIAG



### 2AI-SG-24-DIAG

- 2 differential inputs for strain gauge
- 24-bit resolution
- Individual channel diagnosis
- 4- or 6-wire connection
- Accuracy ±0.01% FSR

#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/ -15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	35 mA
Analogue inputs	
Number analogue inputs	2
Input value	Differential, to evaluate a strain gauge full-bridge
Resolution	24 bit per channel
Accuracy	Customer calibration: ±0.01% FSR (100 ppm), ±1% FSR (with interference)
Supported sensor sensitivity	0.5 mV - 30 V, parameterisable
Temperature coefficient	<5 ppm/K
Permissible sensor load	85 ... 5000 Ω
Conversion time	5 - 800 ms, parameterisable
Measurement range	± 150 mV
Module diagnosis	Yes
Individual channel diagnosis	Yes
Short-circuit-proof	Yes
Digital inputs	
Input filter	10 ms
Input voltage, high	> 11 V
Input voltage, low	<5 V
Individual channel diagnosis	Yes
Short-circuit-proof	Yes
Module diagnosis	Yes
Input type	Type 1 in acc. with IEC 61131-2, Type 3 in acc. with IEC 61131-2
General data	
Weight	90 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

#### Ordering data

Module variants	
	Strain gauge module, 2 channels
Note	

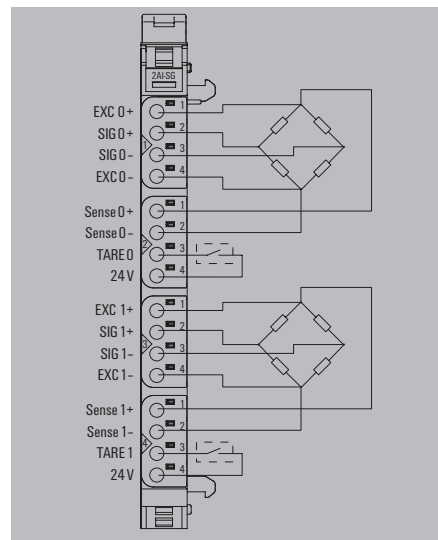
#### Accessories

	Coding elements
	Termination kit
	Swivel marker
	Connection marker for pusher neutral
	Module marker for custom printing
	Module marker for neutral
	Thermotransfer version (material: polyester)
Replacement parts	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

### UR20-2AI-SG-24-DIAG



Type		
Type	Qty.	Order No.
UR20-2AI-SG-24-DIAG	1	1990070000
Type		
Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
Type		
Type	Qty.	Order No.
UR20-EM-1990070000-SP	1	1562260000
UR20-BM-SP	5	1350930000
UR20-PK-1990070000-SP	5	2068620000



## Power measurement modules

### Power measurement via 1A, 5A, 333mV current transformers or Rogowski Coils

The UR20-3EM-400V-AC-XX power measurement modules are available in different versions- for Current transformers with 1A or 5A, 333mV transformers or Rogowski Coils (up to 520 V AC phase-to-phase voltage). The modules can measure and process all relevant measurands of one or three phase networks. All relevant electrical Values such as Current (RMS/average/peak), Voltage (RMS/average/peak), Reactive- apparent and active power – Power consumption – Power factor – Frequency – etc. can be measured.

Additionally Counters and Alarms such as - Voltage upper and lower alarm or Current upper and lower alarm, provide a comfortable use in applications. The usage is possible for several different electrical topologies. The modules deliver input process data cyclically to the fieldbus via six measurement data (16 bit each) and three energy counter data (32 bit each).

Via a Mailbox System all 128 measured Values can be read back easily that are not pre-mapped to the process data inputs. The data is updated within one millisecond from the module to the coupler.

UR20-3EM-400V-AC-333MV



UR20-3EM-400V-AC-CT1A



UR20-3EM-400V-AC-CT5A



UR20-3EM-400V-AC-RC



### 3EM-400V-AC-333MV

- 1-phase power measurement for current transformers with 333 mV output
- 16 bit resolution
- 32 bit resolution for energy meters
- Power-/ reactive power measurement
- Energy meter Active / reactive
- Power factor
- Frequency measurement 45 ... 65 Hz
- Analysis of 43 harmonics

#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 % / -15 %, via the system bus, 24V DC +20 % / -15 % (according to IEC 61131), 24V DC +30%/-25% (according to DNV GL)
Current consumption $I_{in}$ (power segment of the field bus coupler), typ.	8 mA
Current consumption $I_{in}$ (the respective power segment)	<35 mA
Analogue inputs	
Number	3
Rated voltage	520 V <sub>eff</sub> (L-L), according to table I.1 of IEC 61010-1:2010/AMD1:2016/COR1:2019, 300 V <sub>eff</sub> (L-N)
Resolution	16 bit per channel (internal 24 bit), 32 bit for energy counter
Sampling rate of current measurement	Sigma Delta ADC with 1.024 MHz (bandwidth of interest from 40 Hz to 3.3 kHz)
Frequency of the supply system	45...65 Hz
Analysis of harmonic	up to 43rd
Nominal load capacity	0...1 A / 0...5 A AC
Insulation	reinforced insulation
Category for voltage measurements	CAT III (according to IEC 61010-1), CAT II (according to IEC 61010-1) for installations with rated voltage to earth > 300 V
Measurement method	High Resolution Delta Sigma (current measurement in outer conductor)
Measurement accuracy	0.25% in relation to final value (U / I), 0.5% for the calculated values, 0.75% for harmonics
Connectable converter ratios	1 ... 1000
Input impedance voltage	1.881 MΩ
Measurement resistance (shunt)	4 mΩ (at 5 A), 20 mΩ (at 1 A)
General data	
Weight	88 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

#### Ordering data

Module variants	
	Power measurement module, 3 channels
Note	

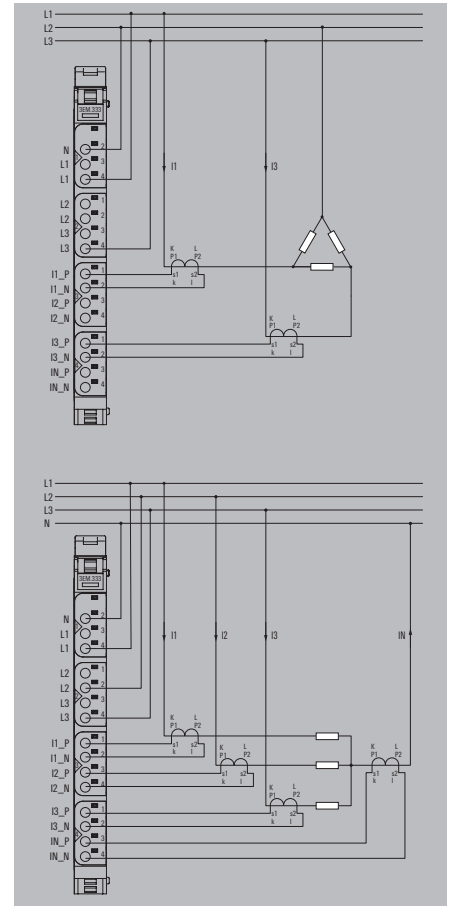
#### Accessories

	Coding elements
	Termination kit
	Swivel marker
	Connection marker for pusher neutral
	Module marker for custom printing
	Module marker for neutral
	Thermotransfer version (material: polyester)
Replacement parts	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

### UR20-3EM-400V-AC-333MV



Type		
Type	Qty.	Order No.
UR20-3EM-400V-AC-333MV	1	2920860000
Type		
Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
Type		
Type	Qty.	Order No.
UR20-EM-2920860000-SP		3052200000
UR20-BM-SP	5	1350930000
UR20-PK-2920860000-SP		3052210000
Note		



## I/O system IP20 – Power measurement module

### 3EM-400V-AC-CT1A

- 1-phase power measurement for 1 A converter (with or without transformer)
- 16 bit resolution
- 32 bit resolution for energy meters
- Power-/ reactive power measurement
- Energy meter Active / reactive
- Power factor
- Frequency measurement 45 ... 65 Hz
- Analysis of 43 harmonics

### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/-15 %, via the system bus, 24V DC +20 %/-15 % (according to IEC 61131), 24V DC +30%/-25% (according to DNV GL)
Current consumption $I_m$ (power segment of the field bus coupler), typ.	8 mA
Current consumption $I_m$ (the respective power segment)	<35 mA
Analogue inputs	
Number	3
Rated voltage	300 V eff AC (L-N), 520 V eff AC (L-L), according to table I.1 of IEC 61010-1:2010/AMD1:2016/COR1:2019
Resolution	16 bit per channel (internal 24 bit), 32 bit for energy counter
Sampling rate of current measurement	Sigma Delta ADC with 1.024 MHz (bandwidth of interest from 40 Hz to 3.3 kHz)
Frequency of the supply system	45...65 Hz
Analysis of harmonic	up to 43rd
Nominal load capacity	0...1 A AC
Insulation	reinforced insulation
Category for voltage measurements	CAT III (according to IEC 61010-1), CAT II (according to IEC 61010-1) for installations with rated voltage to earth > 300 V
Measurement method	High Resolution Delta Sigma (current measurement in outer conductor)
Measurement accuracy	0.25% in relation to final value (U / I), 0.5% for the calculated values, 0.75% for harmonics
Connectable converter ratios	1:1
Input impedance voltage	1.881 MΩ
Measurement resistance (shunt)	20 mΩ (at 1 A)
General data	
Weight	88 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

### Ordering data

Module variants	
	Power measurement module, 3 channels
Note	

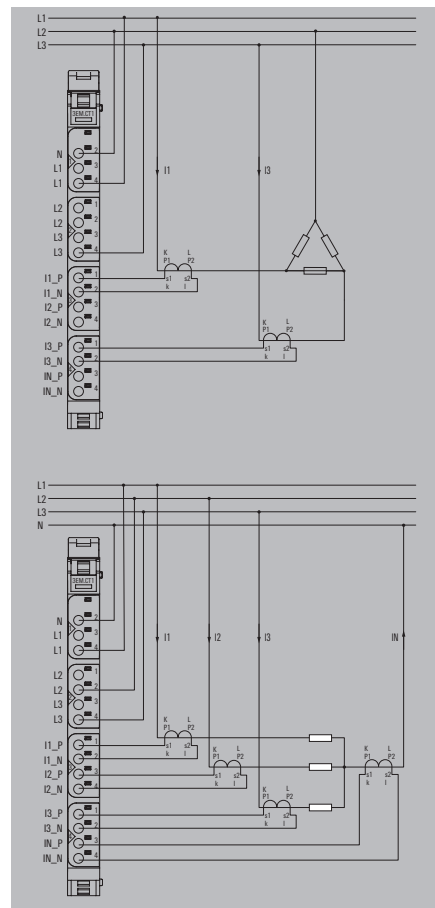
### Accessories

	Coding elements	KOSM BHZ5.00	100	1483050000
	Termination kit	UR20-EBK-ACC	5	1346610000
	Swivel marker	UR20-SM-ACC	20	1339920000
	Connection marker for pusher neutral	PM 2.7/2.6 MC NE WS	960	1323710000
	Module marker for custom printing	DEK 5/8-11.5 MC SDR	100	1341610000
	Module marker for neutral	DEK 5/8-11.5 MC NE WS	500	1341630000
	Thermotransfer version (material: polyester)	THM UR20 WS	1	1429420000
Replacement parts				
	Electronic module	UR20-EM-2920830000-SP	1	3052120000
	Basic module	UR20-BM-SP	5	1350930000
	Plug-in connector unit	UR20-PK-2920830000-SP	5	3052170000
Note				

### UR20-3EM-400V-AC-CT1A



Type		
Type	Qty.	Order No.
UR20-3EM-400V-AC-CT1A	1	2920830000
Type		
Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
UR20-EM-2920830000-SP	1	3052120000
UR20-BM-SP	5	1350930000
UR20-PK-2920830000-SP	5	3052170000



### 3EM-400V-AC-CT5A

- 1-phase power measurement for 5 A converter (with or without transformer)
- 16 bit resolution
- 32 bit resolution for energy meters
- Power-/ reactive power measurement
- Energy meter Active / reactive
- Power factor
- Frequency measurement 45 ... 65 Hz
- Analysis of 43 harmonics

#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/-15 %, via the system bus, 24V DC +20 %/-15 % (according to IEC 61131), 24V DC +30%/-25% (according to DNV GL)
Current consumption $I_m$ (power segment of the field bus coupler), typ.	8 mA
Current consumption $I_m$ (the respective power segment)	<35 mA
Analogue inputs	
Number	3
Rated voltage	300 V eff AC (L-N), 520 V eff AC (L-L), according to table I.1 of IEC 61010-1:2010/AMD1:2016/COR1:2019
Resolution	16 bit per channel (internal 24 bit), 32 bit for energy counter
Sampling rate of current measurement	Sigma Delta ADC with 1.024 MHz (bandwidth of interest from 40 Hz to 3.3 kHz)
Frequency of the supply system	45...65 Hz
Analysis of harmonic	up to 43rd
Nominal load capacity	0...5 A AC
Insulation	reinforced insulation
Category for voltage measurements	CAT III (according to IEC 61010-1), CAT II (according to IEC 61010-1) for installations with rated voltage to earth > 300 V
Measurement method	High Resolution Delta Sigma (current measurement in outer conductor)
Measurement accuracy	0.25% in relation to final value (U / I), 0.5% for the calculated values, 0.75% for harmonics
Connectable converter ratios	5:5
Input impedance voltage	1.881 MΩ
Measurement resistance (shunt)	4 mΩ (at 5 A), 20 mΩ (at 1 A)
General data	
Weight	88 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

#### Ordering data

Module variants	
	Power measurement module, 3 channels
Note	

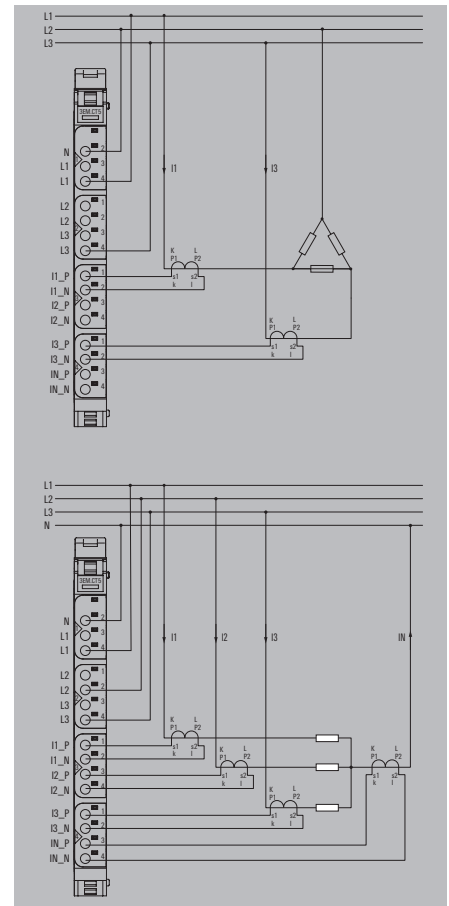
#### Accessories

	Coding elements
	Termination kit
	Swivel marker
	Connection marker for pusher neutral
	Module marker for custom printing
	Module marker for neutral
	Thermotransfer version (material: polyester)
Replacement parts	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

### UR20-3EM-400V-AC-CT5A



Type		
Type	Qty.	Order No.
UR20-3EM-400V-AC-CT5A	1	2920840000
Type		
Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
Type		
Type	Qty.	Order No.
UR20-EM-2920840000-SP	1	3052130000
UR20-BM-SP	5	1350930000
UR20-PK-2920840000-SP	5	3052180000
Note		



## I/O system IP20 – Power measurement module

### 3EM-400V-AC-RC

- 1-phase power measurement for Rogowski coil
- 16 bit resolution
- 32 bit resolution for energy meters
- Power-/ reactive power measurement
- Energy meter Active / reactive
- Power factor
- Frequency measurement 45 ... 65 Hz
- Analysis of 43 harmonics

### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/-15 %, via the system bus, 24V DC +20 %/-15 % (according to IEC 61131), 24V DC +30%/-25% (according to DNV GL)
Current consumption $I_m$ (power segment of the field bus coupler), typ.	8 mA
Current consumption $I_m$ (the respective power segment)	<35 mA
Analogue inputs	
Number	3
Rated voltage	according to table L1 of IEC 61010-1:2010/AMD1:2016/COR1:2019, 520 V <sub>eff</sub> (L-L), 300 V <sub>eff</sub> (L-N)
Resolution	16 bit per channel (internal 24 bit), 32 bit for energy counter
Sampling rate of current measurement	Sigma Delta ADC with 1.024 MHz (bandwidth of interest from 40 Hz to 3.3 kHz)
Frequency of the supply system	45...65 Hz
Analysis of harmonic	up to 43rd
Nominal load capacity	0...1 A / 0...5 A AC
Insulation	reinforced insulation
Category for voltage measurements	CAT III (according to IEC 61010-1), CAT II (according to IEC 61010-1) for installations with rated voltage to earth > 300 V
Measurement method	High Resolution Delta Sigma (current measurement in outer conductor)
Measurement accuracy	0.25% in relation to final value (U / I), 0.5% for the calculated values, 0.75% for harmonics
Connectable converter ratios	1 ... 1000
Input impedance voltage	1.881 MΩ
Measurement resistance (shunt)	4 mΩ (at 5 A), 20 mΩ (at 1 A)
General data	
Weight	88 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

### Ordering data

Module variants	
	Power measurement module, 3 channels
Note	

### Accessories

	Coding elements
	Termination kit
	Swivel marker
	Connection marker for pusher neutral
	Module marker for custom printing
	Module marker for neutral
	Thermotransfer version (material: polyester)
Replacement parts	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

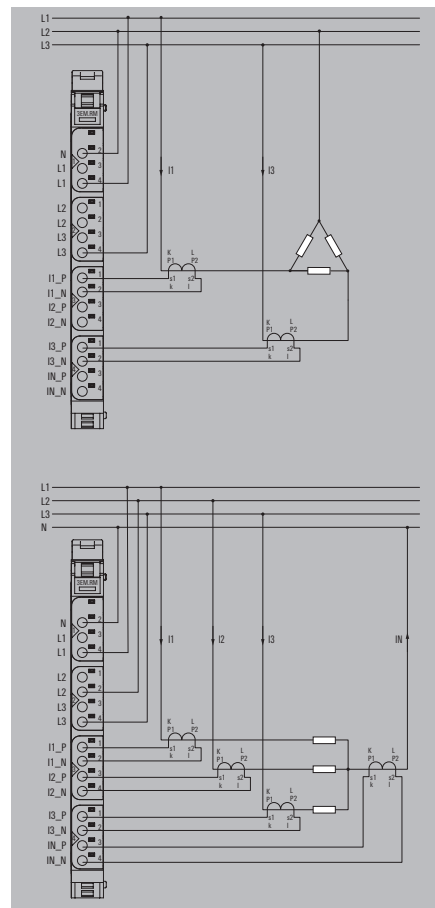
### UR20-3EM-400V-AC-RC



u-remote system bus	48 MBit/s
500 V DC between the current paths	
24 V DC +20 %/-15 %, via the system bus, 24V DC +20 %/-15 % (according to IEC 61131), 24V DC +30%/-25% (according to DNV GL)	
8 mA	
<35 mA	
3	
according to table L1 of IEC 61010-1:2010/AMD1:2016/COR1:2019, 520 V <sub>eff</sub> (L-L), 300 V <sub>eff</sub> (L-N)	
16 bit per channel (internal 24 bit), 32 bit for energy counter	
Sigma Delta ADC with 1.024 MHz (bandwidth of interest from 40 Hz to 3.3 kHz)	
45...65 Hz	
up to 43rd	
0...1 A / 0...5 A AC	
reinforced insulation	
CAT III (according to IEC 61010-1), CAT II (according to IEC 61010-1) for installations with rated voltage to earth > 300 V	
High Resolution Delta Sigma (current measurement in outer conductor)	
0.25% in relation to final value (U / I), 0.5% for the calculated values, 0.75% for harmonics	
1 ... 1000	
1.881 MΩ	
4 mΩ (at 5 A), 20 mΩ (at 1 A)	
88 g	
120 mm / 11.5 mm / 76 mm	

Type	Qty.	Order No.
UR20-3EM-400V-AC-RC	1	2920850000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
UR20-EM-2920850000-SP		3052140000
UR20-BM-SP	5	1350930000
UR20-PK-2920850000-SP		3052190000





## Analogue output modules

### 2- or 4-wire connection, 16-bit resolution, 4 outputs

The analogue output modules can control up to 2 or 4 actuators with +/-10 V, +/-5 V, 0...10 V, 0...5 V, 2...10 V, 1...5 V, 0...20 mA or 4...20 mA. The resolution is 16 bits per channel. An actuator can be connected to each connector in a 2-wire or 4-wire connection. The internal switching is automatic. The output range is defined using parametrisation. A status LED is assigned to each channel. The outputs are supplied from the output current path ( $I_{OUT}$ ) and are decoupled from the system bus ( $I_{SYS}$ ).

"DIAG" module: the module provides individual channel diagnosis with channel-related fault messages.

"M" module: the module is approved for usage in industrial, marine and offshore applications.

"ISO" module: actuators can only be connected in a 2-wire connection. The outputs are not only decoupled from the system bus ( $I_{SYS}$ ), but also from the output current path ( $I_{OUT}$ ) and from each other.

The outputs are supplied from the output current path ( $U_{OUT}$ ).

UR20-2A0-UI-16



UR20-4A0-UI-16



UR20-4A0-UI-16-M



UR20-2A0-UI-16-DIAG



UR20-2A0-UI-ISO-16-DIAG



UR20-4A0-UI-16-DIAG



UR20-4A0-UI-16-M-DIAG



UR20-4A0-UI-16-HD



**2A0-UI-16**

- 2 analogue outputs
- Outputs can be parameterised by channel (voltage, current)
- 16-bit resolution
- 2- and 4-wire connection
- Short-circuit-proof

**Technical data**

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/-15 %, via the system bus
Current consumption $I_{in}$ (power segment of the field bus coupler), typ.	8 mA
Current consumption from $I_{out}$ (the respective power segment)	110 mA
Analogue outputs	
Number analogue outputs	2
Output variable	Voltage (0..5 V, 0..10 V, 1..5 V, 2..10 V, $\pm 10$ V, $\pm 5$ V), Current (0..20 mA or 4..20 mA)
Response time	1 ms / 2 channels
Resolution	16 Bit
Accuracy	$\pm 0,1$ % FSR max., 0,05 % FSR typ.
load impedance voltage	> 1 k $\Omega$ (at >50 °C ambient temperature, max. total sensor current = 25 mA)
Load impedance current	<600 $\Omega$
Actuator connection	2-wire (automatic detection), 4-wire
Temperature coefficient	30 ppm/K
Max. error between T min. and T max. in FSR	0,24 %
Monotonicity	Yes
Cross-talk between the channels in FSR	0,001 %
Repeat accuracy	<1 mV eff.
Module diagnosis	Yes
Substitute values	Yes
General data	
Weight	83 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

**Ordering data**

Module variants	
	Analogue output module, 2 channels, 16 bits
Note	

**Accessories**

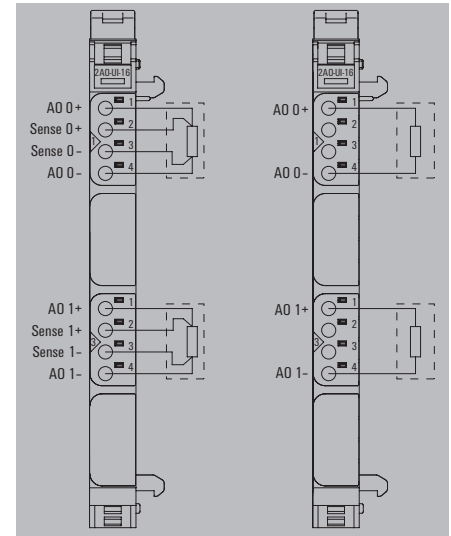
	Coding elements
	Termination kit
	Swivel marker
	Connection marker for pusher neutral
	Module marker for custom printing
	Module marker for neutral
	Thermotransfer version (material: polyester)
Replacement parts	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

**UR20-2A0-UI-16**

u-remote system bus	48 MBit/s
500 V DC between the current paths	
24 V DC +20 %/-15 %, via the system bus	8 mA
8 mA	110 mA
2	
Voltage (0..5 V, 0..10 V, 1..5 V, 2..10 V, $\pm 10$ V, $\pm 5$ V), Current (0..20 mA or 4..20 mA)	1 ms / 2 channels
1 ms / 2 channels	16 Bit
16 Bit	$\pm 0,1$ % FSR max., 0,05 % FSR typ.
$\pm 0,1$ % FSR max., 0,05 % FSR typ.	> 1 k $\Omega$ (at >50 °C ambient temperature, max. total sensor current = 25 mA)
> 1 k $\Omega$ (at >50 °C ambient temperature, max. total sensor current = 25 mA)	<600 $\Omega$
<600 $\Omega$	2-wire (automatic detection), 4-wire
2-wire (automatic detection), 4-wire	30 ppm/K
30 ppm/K	0,24 %
0,24 %	Yes
Yes	0,001 %
0,001 %	<1 mV eff.
<1 mV eff.	Yes
Yes	Yes
Yes	
	83 g
	120 mm / 11.5 mm / 76 mm

Type	Qty.	Order No.
UR20-2A0-UI-16	1	2705630000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
UR20-EM-2705630000-SP	1	2777420000
UR20-BM-SP	5	1350930000
UR20-PK-2705630000-SP	5	2777410000



## I/O system IP20 – Analogue output modules

### 2AO-UI-16-DIAG

- 2 analogue outputs
- Outputs can be parameterised by channel (voltage, current)
- 16-bit resolution
- Extended diagnostic function
- 2- and 4-wire connection
- Short-circuit-proof

### UR20-2AO-UI-16-DIAG



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	DC 500 V between current paths
Supply	
Supply voltage	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>out</sub> (the respective power segment)	110 mA
Analogue outputs	
Number analogue outputs	2
Output variable	Voltage (0...5 V, 0...10 V, 1...5 V, 2...10 V, ±10 V, ±5 V), Current (0...20 mA or 4...20 mA)
Response time	1 ms / 2 channels
Resolution	16 Bit
Accuracy	±0,1 % FSR max., 0,05 % FSR typ.
load impedance voltage	> 1 kΩ (at >50 °C ambient temperature, max. total sensor current = 25 mA)
Load impedance current	<600 Ω
Actuator connection	2-wire (automatic detection), 4-wire
Temperature coefficient	30 ppm/K
Max. error between T min. and T max. in FSR	0.24 %
Monotonicity	Yes
Cross-talk between the channels in FSR	0.001 %
Repeat accuracy	<1 mV eff.
Module diagnosis	Yes
Substitute values	Yes
General data	
Weight	83 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

Type	Qty.	Order No.
UR20-2AO-UI-16-DIAG	1	2566100000

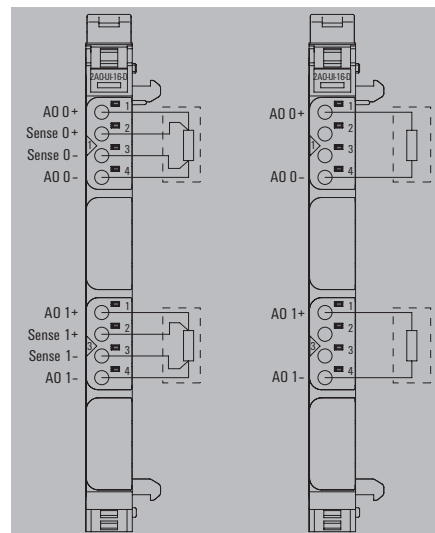
#### Ordering data

Module variants	
Analogue output module, 2 channels, 16 bits, diagnosis functions	
Note	

#### Accessories

Coding elements	
Termination kit	
Swivel marker	
Connection marker for pusher neutral	
Module marker for custom printing	
Module marker for neutral	
Thermotransfer version (material: polyester)	
Replacement parts	
Electronic module	
Basic module	
Plug-in connector unit	
Note	

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
UR20-EM-2566100000-SP	1	2568380000
UR20-BM-SP	5	1350930000
UR20-PK-2566100000-SP	5	2568340000



## 2AO-UI-ISO-16-DIAG

- 2 analogue outputs
- Outputs can be parameterised by channel (voltage, current)
- Insulation up to 500 V
- 16-bit resolution
- Extended diagnostic function
- 2- and 4-wire connection
- Short-circuit-proof

### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>OUT</sub> (the respective power segment)	110 mA
Analogue outputs	
Number analogue outputs	2
Output variable	Voltage (0...5 V, 0...10 V, 1...5 V, 2...10 V, ±10 V, ±5 V), Current (0...20 mA or 4...20 mA)
Response time	1 ms / 2 channels
Resolution	16 Bit
Accuracy	±0,1 % FSR max., 0,05 % FSR typ.
load impedance voltage	≥ 1 kΩ
Load impedance current	<600 Ω
Actuator connection	2-wire
Temperature coefficient	30 ppm/K
Max. error between T min. and T max. in FSR	0,24 %
Monotonicity	Yes
Cross-talk between the channels in FSR	0,001 %
Repeat accuracy	<1 mV eff.
Module diagnosis	Yes
Substitute values	Yes
General data	
Weight	85 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

### Ordering data

Module variants	
Analogue output module, 2 channels, 16 bits, diagnosis functions	
Note	

### Accessories

Coding elements	
Termination kit	
Swivel marker	
Connection marker for pusher neutral	
Module marker for custom printing	
Module marker for neutral	
Thermotransfer version (material: polyester)	
Replacement parts	
Electronic module	
Basic module	
Plug-in connector unit	
Note	

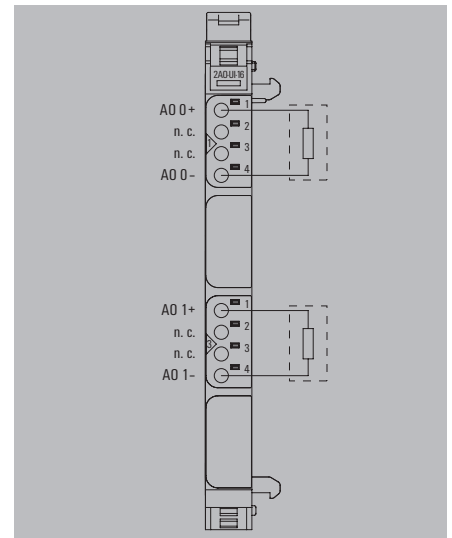
## UR20-2AO-UI-ISO-16-DIAG



System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>OUT</sub> (the respective power segment)	110 mA
Analogue outputs	
Number analogue outputs	2
Output variable	Voltage (0...5 V, 0...10 V, 1...5 V, 2...10 V, ±10 V, ±5 V), Current (0...20 mA or 4...20 mA)
Response time	1 ms / 2 channels
Resolution	16 Bit
Accuracy	±0,1 % FSR max., 0,05 % FSR typ.
load impedance voltage	≥ 1 kΩ
Load impedance current	<600 Ω
Actuator connection	2-wire
Temperature coefficient	30 ppm/K
Max. error between T min. and T max. in FSR	0,24 %
Monotonicity	Yes
Cross-talk between the channels in FSR	0,001 %
Repeat accuracy	<1 mV eff.
Module diagnosis	Yes
Substitute values	Yes
General data	
Weight	85 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

Type	Qty.	Order No.
UR20-2AO-UI-ISO-16-DIAG	1	2566970000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
UR20-EM-2566970000-SP	1	2568370000
UR20-BM-SP	5	1350930000
UR20-PK-2566970000-SP	5	2568330000



## I/O system IP20 – Analogue output modules

### 4AO-UI-16

- 4 analogue outputs
- Outputs can be parameterised by channel (voltage, current)
- 16-bit resolution
- 2- and 4-wire connection
- Accuracy typ. 0.05% FSR
- Replacement values can be set per channel
- Reactionless
- Short-circuit-proof

### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 % / -15 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>out</sub> (the respective power segment)	85 mA
Analogue outputs	
Number analogue outputs	4
Output variable	Voltage (0...5 V, 0...10 V, 1...5 V, 2...10 V, ±10 V, ±5 V), Current (0...20 mA or 4...20 mA)
Response time	1 ms / 4 channels
Resolution	16 Bit
Accuracy	±0,1 % FSR max., 0,05 % FSR typ.
load impedance voltage	> 1 kΩ (at >50 °C ambient temperature, max. total sensor current = 25 mA)
Load impedance current	<600 Ω
Actuator connection	2-wire (automatic detection), 4-wire
Temperature coefficient	20 ppm voltage / 31 ppm current measurement / °K
Max. error between T min. and T max. in FSR	220 %
Monotonicity	Yes
Cross-talk between the channels in FSR	0.001 %
Repeat accuracy	<1 mV eff.
Module diagnosis	Yes
Substitute values	Yes
General data	
Weight	87 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

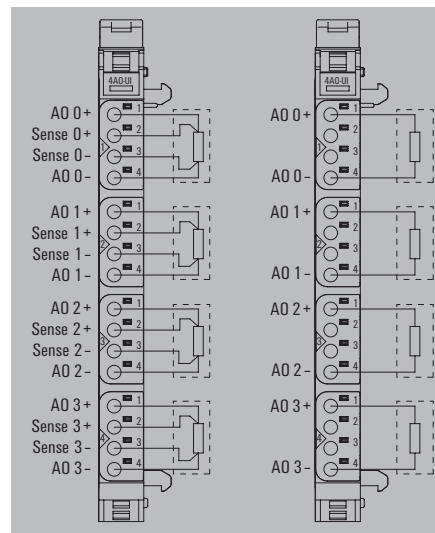
### Ordering data

Module variants	
Analogue output module, 4 channels, 16 Bit	UR20-4AO-UI-16
Note	

### Accessories

Coding elements	KOSM BHZ5.00	100	1483050000
Termination kit	UR20-EBK-ACC	5	1346610000
Swivel marker	UR20-SM-ACC	20	1339920000
Connection marker for pusher neutral	PM 2.7/2.6 MC NE WS	960	1323710000
Module marker for custom printing	DEK 5/8-11.5 MC SDR	100	1341610000
Module marker for neutral	DEK 5/8-11.5 MC NE WS	500	1341630000
Thermotransfer version (material: polyester)	THM UR20 WS	1	1429420000
Replacement parts			
Electronic module	UR20-EM-1315680000-SP	1	1347270000
Basic module	UR20-BM-SP	5	1350930000
Plug-in connector unit	UR20-PK-1315680000-SP	5	1484070000
Note			
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.			

### UR20-4AO-UI-16



### 4AO-UI-16-M

- 4 analogue outputs
- Outputs can be parameterised by channel (voltage, current)
- 16-bit resolution
- 2- and 4-wire connection
- Accuracy typ. 0.05% FSR
- Replacement values can be set per channel
- Reactionless
- Short-circuit-proof

### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +30 %/ -25 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>OUT</sub> (the respective power segment)	85 mA
Analogue outputs	
Number analogue outputs	4
Output variable	Voltage (0..5 V, 0..10 V, 1..5 V, 2..10 V, ±10 V, ±5 V), Current (0..20 mA or 4..20 mA)
Response time	1 ms / 4 channels
Resolution	16 Bit
Accuracy	±0,1 % FSR max., 0,05 % FSR typ.
load impedance voltage	> 1 kΩ (at >50 °C ambient temperature, max. total sensor current = 25 mA)
Load impedance current	<600 Ω
Actuator connection	2-wire (automatic detection), 4-wire
Temperature coefficient	20 ppm voltage / 31 ppm current measurement / °K
Max. error between T min. and T max. in FSR	220 %
Monotonicity	Yes
Cross-talk between the channels in FSR	0.001 %
Repeat accuracy	<1 mV eff.
Module diagnosis	Yes
Substitute values	Yes
General data	
Weight	94 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

### Ordering data

Module variants	
	Analogue output module, 4 channels, 16 Bit
Note	

### Accessories

	Coding elements
	Termination kit
	Swivel marker
	Connection marker for pusher neutral
	Module marker for custom printing
	Module marker for neutral
	Thermotransfer version (material: polyester)
Replacement parts	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

### UR20-4AO-UI-16-M

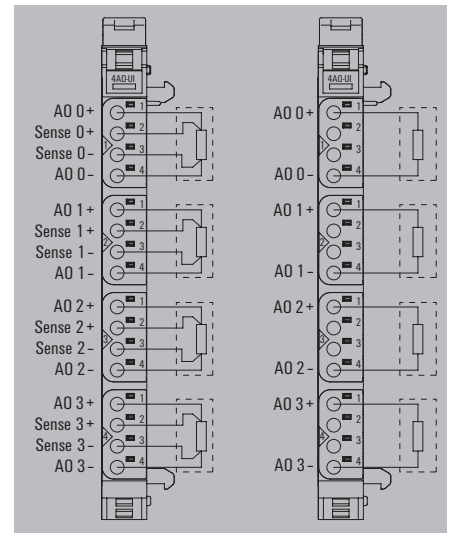


System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +30 %/ -25 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>OUT</sub> (the respective power segment)	85 mA
Analogue outputs	
Number analogue outputs	4
Output variable	Voltage (0..5 V, 0..10 V, 1..5 V, 2..10 V, ±10 V, ±5 V), Current (0..20 mA or 4..20 mA)
Response time	1 ms / 4 channels
Resolution	16 Bit
Accuracy	±0,1 % FSR max., 0,05 % FSR typ.
load impedance voltage	> 1 kΩ (at >50 °C ambient temperature, max. total sensor current = 25 mA)
Load impedance current	<600 Ω
Actuator connection	2-wire (automatic detection), 4-wire
Temperature coefficient	20 ppm voltage / 31 ppm current measurement / °K
Max. error between T min. and T max. in FSR	220 %
Monotonicity	Yes
Cross-talk between the channels in FSR	0.001 %
Repeat accuracy	<1 mV eff.
Module diagnosis	Yes
Substitute values	Yes
General data	
Weight	94 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

Type	Qty.	Order No.
UR20-4AO-UI-16-M	1	2453880000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
UR20-EM-2453880000-SP	1	2508790000
UR20-BM-SP	5	1350930000
UR20-PK-2453880000-SP	5	2508770000

1 roll = 1000 label = 1 Qty.  
1 sheet = 60 label = 1 Qty.



## I/O system IP20 – Analogue output modules

### 4AO-UI-16-DIAG

- 4 analogue outputs
- Outputs can be parameterised by channel (voltage, current)
- 16-bit resolution
- Extended diagnostic function
- 2- and 4-wire connection
- Accuracy typ. 0.05% FSR
- Replacement values can be set per channel
- Reactionless
- Short-circuit-proof

### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>out</sub> (the respective power segment)	85 mA
Analogue outputs	
Number analogue outputs	4
Output variable	Voltage (0...5 V, 0...10 V, 1...5 V, 2...10 V, ±10 V, ±5 V), Current (0...20 mA or 4...20 mA)
Response time	1 ms / 4 channels
Resolution	16 Bit
Accuracy	±0,1 % FSR max., 0,05 % FSR typ.
load impedance voltage	> 1 kΩ (at >50 °C ambient temperature, max. total sensor current = 25 mA)
Load impedance current	<600 Ω
Actuator connection	2-wire (automatic detection), 4-wire
Temperature coefficient	20 ppm voltage / 31 ppm current measurement / °K
Max. error between T min. and T max. in FSR	220 %
Monotonicity	Yes
Cross-talk between the channels in FSR	0.001 %
Repeat accuracy	<1 mV eff.
Module diagnosis	Yes
Individual channel diagnosis	Yes
Substitute values	Yes
General data	
Weight	86 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

### Ordering data

Module variants	
Analogue output module, 4 channels, 16 Bits, diagnosis functions	
Note	

### Accessories

Coding elements	
Termination kit	
Swivel marker	
Connection marker for pusher neutral	
Module marker for custom printing	
Module marker for neutral	
Thermotransfer version (material: polyester)	
Replacement parts	
Electronic module	
Basic module	
Plug-in connector unit	
Note	

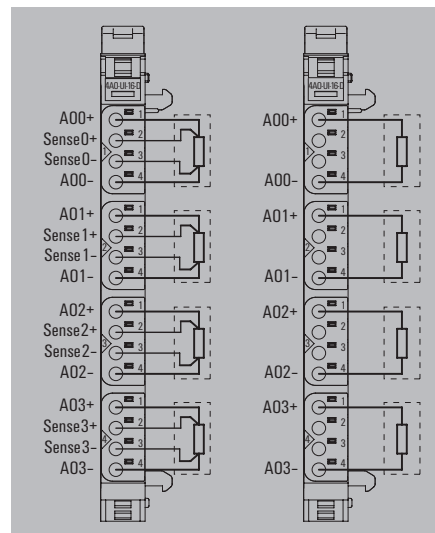
### UR20-4AO-UI-16-DIAG



System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>out</sub> (the respective power segment)	85 mA
Analogue outputs	
Number analogue outputs	4
Output variable	Voltage (0...5 V, 0...10 V, 1...5 V, 2...10 V, ±10 V, ±5 V), Current (0...20 mA or 4...20 mA)
Response time	1 ms / 4 channels
Resolution	16 Bit
Accuracy	±0,1 % FSR max., 0,05 % FSR typ.
load impedance voltage	> 1 kΩ (at >50 °C ambient temperature, max. total sensor current = 25 mA)
Load impedance current	<600 Ω
Actuator connection	2-wire (automatic detection), 4-wire
Temperature coefficient	20 ppm voltage / 31 ppm current measurement / °K
Max. error between T min. and T max. in FSR	220 %
Monotonicity	Yes
Cross-talk between the channels in FSR	0.001 %
Repeat accuracy	<1 mV eff.
Module diagnosis	Yes
Individual channel diagnosis	Yes
Substitute values	Yes
General data	
Weight	86 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

Type	Qty.	Order No.
UR20-4AO-UI-16-DIAG	1	1315730000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
Replacement parts		
UR20-EM-1315730000-SP	1	1347330000
UR20-BM-SP	5	1350930000
UR20-PK-1315730000-SP	5	1518880000
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		



### 4AO-UI-16-M-DIAG

- 4 analogue outputs
- Outputs can be parameterised by channel (voltage, current)
- 16-bit resolution
- Extended diagnostic function
- 2- and 4-wire connection
- Accuracy typ. 0.05% FSR
- Replacement values can be set per channel

### UR20-4AO-UI-16-M-DIAG



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +30 %/ -25 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>out</sub> (the respective power segment)	85 mA
Analogue outputs	
Number analogue outputs	4
Output variable	Voltage (0...5 V, 0...10 V, 1...5 V, 2...10 V, ±10 V, ±5 V), Current (0...20 mA or 4...20 mA)
Response time	1 ms / 4 channels
Resolution	16 Bit
Accuracy	±0,1 % FSR max., 0,05 % FSR typ.
load impedance voltage	> 1 kΩ (at >50 °C ambient temperature, max. total sensor current = 25 mA)
Load impedance current	<600 Ω
Actuator connection	2-wire (automatic detection), 4-wire
Temperature coefficient	20 ppm voltage / 31 ppm current measurement / °K
Max. error between T min. and T max. in FSR	220 %
Monotonicity	Yes
Cross-talk between the channels in FSR	0.001 %
Repeat accuracy	<1 mV eff.
Module diagnosis	Yes
Individual channel diagnosis	Yes
Substitute values	Yes
General data	
Weight	94 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

u-remote system bus	48 MBit/s
500 V DC between the current paths	
24 V DC +30 %/ -25 %, via the system bus	
8 mA	
85 mA	
4	
Voltage (0...5 V, 0...10 V, 1...5 V, 2...10 V, ±10 V, ±5 V), Current (0...20 mA or 4...20 mA)	
1 ms / 4 channels	
16 Bit	
±0,1 % FSR max., 0,05 % FSR typ.	
> 1 kΩ (at >50 °C ambient temperature, max. total sensor current = 25 mA)	
<600 Ω	
2-wire (automatic detection), 4-wire	
20 ppm voltage / 31 ppm current measurement / °K	
220 %	
Yes	
0.001 %	
<1 mV eff.	
Yes	
Yes	
Yes	
94 g	
120 mm / 11.5 mm / 76 mm	

#### Ordering data

Module variants	
Analogue output module, 4 channels, 16 Bits, diagnosis functions	
Note	

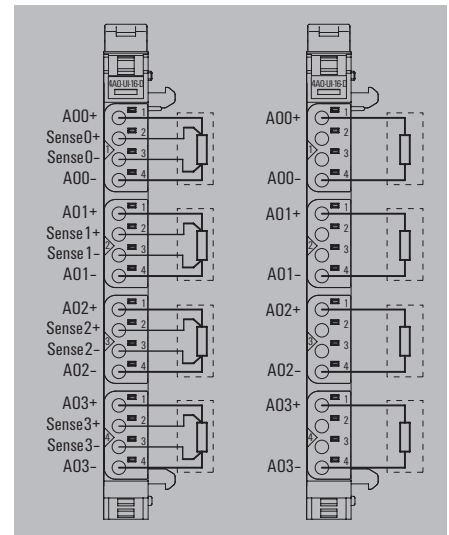
Type	Qty.	Order No.
UR20-4AO-UI-16-M-DIAG	1	2453870000

#### Accessories

Coding elements	
Termination kit	
Swivel marker	
Connection marker for pusher neutral	
Module marker for custom printing	
Module marker for neutral	
Thermotransfer version (material: polyester)	
Replacement parts	
Electronic module	
Basic module	
Plug-in connector unit	
Note	

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
UR20-EM-2453870000-SP	1	2508800000
UR20-BM-SP	5	1350930000
UR20-PK-2453870000-SP	5	2508780000

1 roll = 1000 label = 1 Qty.  
1 sheet = 60 label = 1 Qty.



## I/O system IP20 – Analogue output modules

### 4AO-UI-16-HD

- 4 analogue outputs
- Outputs can be parameterised by channel (voltage, current)
- 16-bit resolution
- 2- and 4-wire connection
- Accuracy typ. 0.05 % FSR
- Replacement values can be set per channel
- Non reactive

### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>OUT</sub> (the respective power segment)	85 mA
Analogue outputs	
Number analogue outputs	4
Output variable	Voltage (0..5 V, 0..10 V, 1..5 V, 2..10 V, ±10 V, ±5 V), Current (0..20 mA or 4..20 mA)
Response time	1 ms / 4 channels
Resolution	16 Bit
Accuracy	±0,1 % FSR max., 0,05 % FSR typ.
load impedance voltage	> 1 kΩ (at >50 °C ambient temperature, max. total sensor current = 25 mA)
Load impedance current	<600 Ω
Actuator connection	2-wire (current and voltage), 3- and 4-wire (voltage), 2-wire (automatic detection)
Temperature coefficient	20 ppm voltage / 31 ppm current measurement / °K
Max. error between T min. and T max. in FSR	220 %
Monotonicity	Yes
Cross-talk between the channels in FSR	0.001 %
Repeat accuracy	<1 mV eff.
Module diagnosis	Yes
Individual channel diagnosis	No
Substitute values	Yes
General data	
Weight	72 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

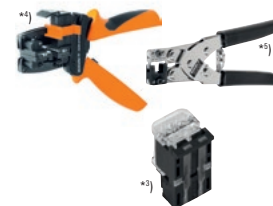
### Ordering data

Module variants	
Analogue output module, 4 channels, 16 Bits, HD-plug	
Note	

### Accessories

Coding elements	KOSM BHZ5.00	100	1483050000
Termination kit	UR20-EBK-ACC	5	1346610000
Swivel marker	UR20-SM-ACC	20	1339920000
Module marker for custom printing	DEK 5/8-11.5 MC SDR	100	1341610000
Module marker for neutral	DEK 5/8-11.5 MC NE WS	500	1341630000
Thermotransfer version (material: polyester)	THM UR20 WS	1	1429420000
Connector and tools			
<sup>*)</sup> HD plug	UR20-PG0.35	8	1469340000
<sup>*)</sup> Stripping tool	MULTI-STRIPAX 6-16	1	9202210000
<sup>*)</sup> Pressing tool	PWZ-UR20-HD	1	1525820000
Replacement parts			
Electronic module	UR20-EM-1510690000-SP	1	1515470000
Basic module	UR20-BM-SP	5	1350930000
Plug-in connector unit	UR20-PK-1510690000-SP	5	1531830000
Note			
Note: please order plug (1469340000) separately.			

### UR20-4AO-UI-16-HD



Note: Please order connector separately





## Digital counter modules

### 100/ 500 kHz, SSI, 32-Bit Counter data width

The precise recording of pulses and positions is essential in highly dynamic automation. Weidmüller's u-remote counter modules are specially designed for these tasks and offer, among other things, a counter width of 32 bits and variants for different requirements.

The UR20-1CNT-100-1DO module processes frequencies up to 100 kHz and has configurable input signal filters as well as latch, gate, and reset inputs. This allows counting processes to be controlled externally. An additional digital output enables an event to be triggered immediately as soon as a preset comparison value is reached.

The UR20-1CNT-500 is available for particularly fast signals, recording frequencies up to 500 kHz. The UR20-2CNT-100 offers a compact solution for applications with two independent counting channels. All modules support the supply of connected sensors (up to 750 mA), feature reverse polarity protection, and offer diagnostic functions for maximum operational reliability.

With these functions, the counter modules enable precise detection of incremental and absolute encoders, support highly dynamic processes, and offer maximum flexibility for control and positioning tasks. They are the ideal solution for mechanical engineering, manufacturing, and all applications where speed and accuracy are crucial.

UR20-1CNT-100-1DO



UR20-2CNT-100



UR20-1CNT-500



UR20-2FCNT-100



### 1CNT-100-1D0

- Removable terminals Latch-, Gate- and Reset input
- Maximum input frequency 100 kHz
- One digital output
- Counter data width 32-Bit
- Operation mode impulse, direction, 1-, 2- or 4-times
- Sensor feed
- Input filter adjustable up to 1 ms

### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/-15 %, via the system bus
Current consumption $I_m$ (power segment of the field bus coupler), typ.	8 mA
Current consumption $I_m$ (the respective power segment)	35 mA (plus output current)
Digital inputs	
Number	1
Input type	for Type 1 and Type 3 sensors as per IEC 61131-2
Input filter	configurable
Input voltage, low	<5 V
Input voltage, high	> 11 V
Sensor supply	Yes
Sensor connection	2-wire, 3-wire
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	Yes
Max. input current per channel	3.5
Counter width	32
Max. input frequency	100 kHz
Latch, gate, reset input	Yes
Mode of operation	Pulse, Direction, 1-, 2-, 4-times
General data	
Weight	85 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

### Ordering data

Module variants	
Digital counter module, 1 channel, 100 kHz	
Note	

### Accessories

Coding elements	KOSM BHZ5.00	100	1483050000
Termination kit	UR20-EBK-ACC	5	1346610000
Swivel marker	UR20-SM-ACC	20	1339920000
Connection marker for pusher neutral	PM 2.7/2.6 MC NE WS	960	1323710000
Module marker for custom printing	DEK 5/8-11.5 MC SDR	100	1341610000
Module marker for neutral	DEK 5/8-11.5 MC NE WS	500	1341630000
Thermotransfer version (material: polyester)	THM UR20 WS	1	1429420000
Replacement parts			
Electronic module	UR20-EM-1315570000-SP	1	1347140000
Basic module	UR20-BM-SP	5	1350930000
Plug-in connector unit	UR20-PK-1315570000-SP	5	1346520000
Note			
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.			

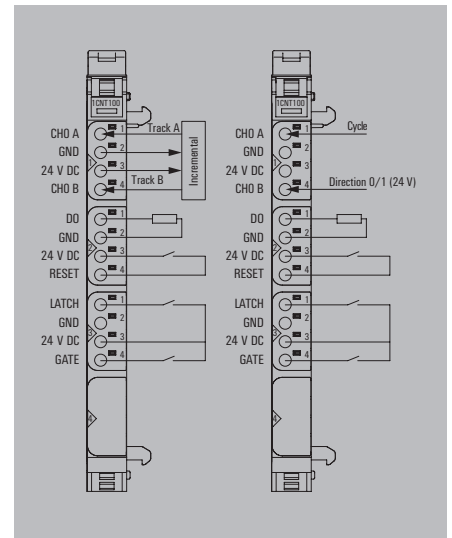
### UR20-1CNT-100-1D0



System data		
Interface	u-remote system bus	
Transmission speed of system bus, max.	48 MBit/s	
Galvanic isolation	500 V DC between the current paths	
Supply		
Supply voltage	24 V DC +20 %/-15 %, via the system bus	
Current consumption $I_m$ (power segment of the field bus coupler), typ.	8 mA	
Current consumption $I_m$ (the respective power segment)	35 mA (plus output current)	
Digital inputs		
Number	1	
Input type	for Type 1 and Type 3 sensors as per IEC 61131-2	
Input filter	configurable	
Input voltage, low	<5 V	
Input voltage, high	> 11 V	
Sensor supply	Yes	
Sensor connection	2-wire, 3-wire	
Reverse polarity protection	Yes	
Module diagnosis	Yes	
Individual channel diagnosis	Yes	
Max. input current per channel	3.5	
Counter width	32	
Max. input frequency	100 kHz	
Latch, gate, reset input	Yes	
Mode of operation	Pulse, Direction, 1-, 2-, 4-times	
General data		
Weight	85 g	
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm	
Note		

Type	Qty.	Order No.
UR20-1CNT-100-1D0	1	1315570000
Note		

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
Replacement parts		
UR20-EM-1315570000-SP	1	1347140000
UR20-BM-SP	5	1350930000
UR20-PK-1315570000-SP	5	1346520000
Note		
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		



## I/O system IP20 – Digital counter modules

### 2CNT-100

- Counter data width 32-Bit
- Maximum input frequency 100 kHz
- Operation mode impulse, direction, 1-, 2- or 4-times
- Sensor feed
- Input filter adjustable up to 1 ms

### UR20-2CNT-100



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/-15 %, via the system bus
Current consumption $I_M$ (power segment of the field bus coupler), typ.	8 mA
Current consumption $I_M$ (the respective power segment)	35 mA (plus output current)
Digital inputs	
Number	2
Input type	for Type 1 and Type 3 sensors as per IEC 61131-2
Input filter	configurable
Input voltage, low	<5 V
Input voltage, high	> 11 V
Sensor supply	Yes
Sensor connection	2-wire, 3-wire
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	Yes
Max. input current per channel	3.5
Counter width	32
Max. input frequency	100 kHz
Mode of operation	Pulse, Direction, 1-, 2-, 4-times
General data	
Weight	85 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

System data		
Interface	u-remote system bus	
Transmission speed of system bus, max.	48 MBit/s	
Galvanic isolation	500 V DC between the current paths	
Supply		
Supply voltage	24 V DC +20 %/-15 %, via the system bus	
Current consumption $I_M$ (power segment of the field bus coupler), typ.	8 mA	
Current consumption $I_M$ (the respective power segment)	35 mA (plus output current)	
Digital inputs		
Number	2	
Input type	for Type 1 and Type 3 sensors as per IEC 61131-2	
Input filter	configurable	
Input voltage, low	<5 V	
Input voltage, high	> 11 V	
Sensor supply	Yes	
Sensor connection	2-wire, 3-wire	
Reverse polarity protection	Yes	
Module diagnosis	Yes	
Individual channel diagnosis	Yes	
Max. input current per channel	3.5	
Counter width	32	
Max. input frequency	100 kHz	
Mode of operation	Pulse, Direction, 1-, 2-, 4-times	
General data		
Weight	85 g	
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm	
Note		

#### Ordering data

Module variants	
	Digital counter module, 2 channel, 100 kHz
Note	

Type	Qty.	Order No.
UR20-2CNT-100	1	1315590000

#### Accessories

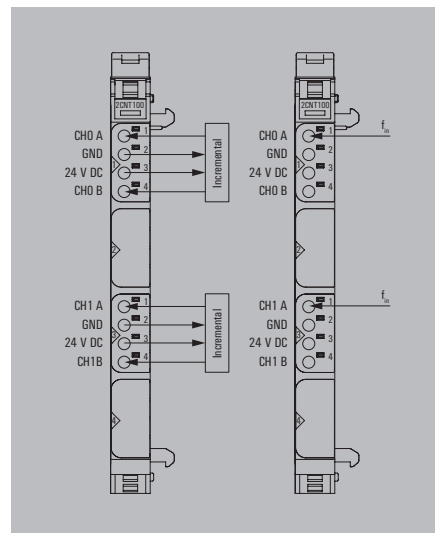
	Coding elements
	Termination kit
	Swivel marker
	Connection marker for pusher neutral
	Module marker for custom printing
	Module marker for neutral
	Thermotransfer version (material: polyester)

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000

Replacement parts	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

Type	Qty.	Order No.
UR20-EM-1315590000-SP	1	1347150000
UR20-BM-SP	5	1350930000
UR20-PK-1315590000-SP	5	1346540000

1 roll = 1000 label = 1 Qty.  
1 sheet = 60 label = 1 Qty.



**1CNT-500**

- Counter data width 32-Bit
- Maximum input frequency 500 kHz
- One digital output
- Operation mode impulse, direction, 1-, 2- or 4-times
- Sensor feed
- Input filter adjustable up to 1 ms

**Technical data**

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/ -15 %, via the system bus
Current consumption $I_M$ (power segment of the field bus coupler), typ.	8 mA
Current consumption $I_M$ (the respective power segment)	<20 mA
Digital inputs	
Number	1
Input filter	configurable
Sensor supply	Yes
Short-circuit-proof	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
Counter width	32 bit
Max. input frequency	500 kHz
Mode of operation	Pulse, Direction, 1-, 2-, 4-times
General data	
Weight	87.6 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

**Ordering data**

Module variants	
	Digital counter module, 1 channel, 500 kHz
Note	

**Accessories**

	Coding elements
	Termination kit
	Swivel marker
	Connection marker for pusher neutral
	Module marker for custom printing
	Module marker for neutral
	Thermotransfer version (material: polyester)
Replacement parts	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

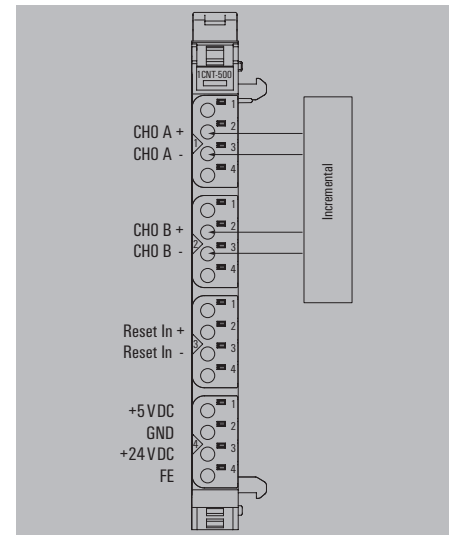
**UR20-1CNT-500**

u-remote system bus	48 MBit/s
500 V DC between the current paths	
24 V DC +20 %/ -15 %, via the system bus	8 mA
	<20 mA
1	configurable
Yes	Yes
Yes	Yes
Yes	Yes
No	No
32 bit	500 kHz
	Pulse, Direction, 1-, 2-, 4-times
	87.6 g
	120 mm / 11.5 mm / 76 mm

Type	Qty.	Order No.
UR20-1CNT-500	1	1315580000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
UR20-EM-1315580000-SP	1	1347170000
UR20-BM-SP	5	1350930000
UR20-PK-1315580000-SP	5	1346530000

1 roll = 1000 label = 1 Qty.  
1 sheet = 60 label = 1 Qty.



## I/O system IP20 – Digital counter modules

### 2FCNT-100

- Counter data width 32-Bit
- Maximum input frequency 100 kHz
- Operation mode impulse
- Sensor feed
- Input filter adjustable up to 1 ms

### UR20-2FCNT-100



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/ -15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	35 mA (plus output current)
Digital inputs	
Number	2
Input filter	configurable
Input voltage, low	<5 V
Input voltage, high	> 11 V
Sensor supply	Yes
Sensor connection	2-wire, 3-wire
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
Max. input current per channel	3.5 mA
Counter width	32 bit
Max. input frequency	100 kHz
Mode of operation	Pulse
General data	
Weight	65 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/ -15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	35 mA (plus output current)
Digital inputs	
Number	2
Input filter	configurable
Input voltage, low	<5 V
Input voltage, high	> 11 V
Sensor supply	Yes
Sensor connection	2-wire, 3-wire
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	No
Max. input current per channel	3.5 mA
Counter width	32 bit
Max. input frequency	100 kHz
Mode of operation	Pulse
General data	
Weight	65 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

#### Ordering data

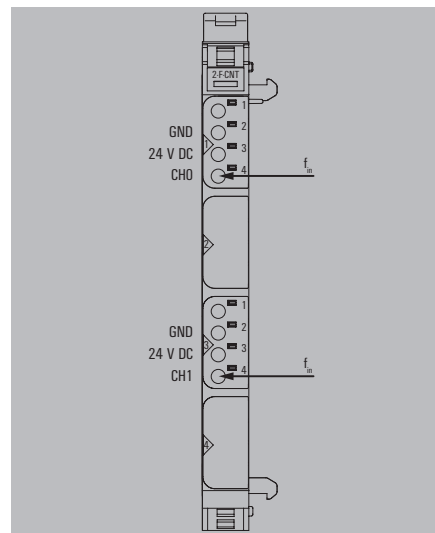
Module variants	
	Digital frequency counter module, 2 channel, 100 kHz
Note	

Type	Qty.	Order No.
UR20-2FCNT-100	1	1508080000
Note		

#### Accessories

	Coding elements
	Termination kit
	Swivel marker
	Connection marker for pusher neutral
	Module marker for custom printing
	Module marker for neutral
	Thermotransfer version (material: polyester)
Replacement parts	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
Note		
UR20-EM-1508080000-SP	1	1515440000
UR20-BM-SP	5	1350930000
UR20-PK-1508080000-SP	5	1518840000
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		





## Communication modules

### Serial, via CAN and CANopen<sup>®</sup>, or smart with IO-Link

Efficient communication is the key to modern automation architectures. Weidmüller's u remote communication modules offer end-to-end connectivity – from classic serial interfaces to modern, decentralized fieldbus solutions.

The UR20 1COM 232 485 422 V2 module allows devices to be integrated via RS232, RS485, or RS422 and optionally supports Modbus RTU master functionality – ideal for established industrial communication.

The UR20 1COM SAI PRO gateway is ideal for use in harsh or decentralized environments: It connects the IP20 world with up to 15 subbus modules in the IP67 standard in a line, which can also be used in the field.

The IO Link Master UR20 4COM IO LINK V2 (according to specification V1.1.4) complements the u remote platform with intelligent sensor technology. With four IO Link channels (short-circuit-proof, with individual channel and module diagnostics) and support from the web-based u mation Configurator, it enables easy parameterization and integration of smart field devices.

Finally, UR20 1COM CANopen (CANopen<sup>®</sup> manager module) and UR20 1COM CAN (CAN device with 29-bit ID) offer the possibility of comprehensive integration of or connection to up to 16 CAN/CANopen<sup>®</sup> participants – made possible by various operating modes such as manager or slave and web-based commissioning and diagnostics with the u-mation Configurator.

Together, these modules enable a flexible, scalable, and future-proof automation architecture: from embedded sensors and decentralized actuators to the control level—with efficient system integration and maximum transparency at all levels.

UR20-1SSI



UR20-1COM-232-485-422



UR20-1COM-232-485-422-V2



UR20-1COM-SAI-PRO



UR20-4COM-IO-LINK-V2



UR20-1COM-CANOPEN



UR20-1COM-CAN



### 1SSI

- Parameterised transfer rate
- Listening- or Master-Mode
- Data width 8 ... 32 bits
- Adjustable delay time

### UR20-1SSI



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>out</sub> (the respective power segment)	25 mA + sensor feed
Serial inputs	
Number of serial interfaces	1
Data format	Binary, Gray-Code
SSI mode	Listening, Master
Sensor supply	Yes
Reverse polarity protection	Yes
Module diagnosis of serial interfaces available	Yes
Individual channel diagnosis of serial interfaces available	No
Cable length	max. 320 m at 125 kHz
General data	
Weight	87 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

Type	Qty.	Order No.
UR20-1SSI	1	1508090000

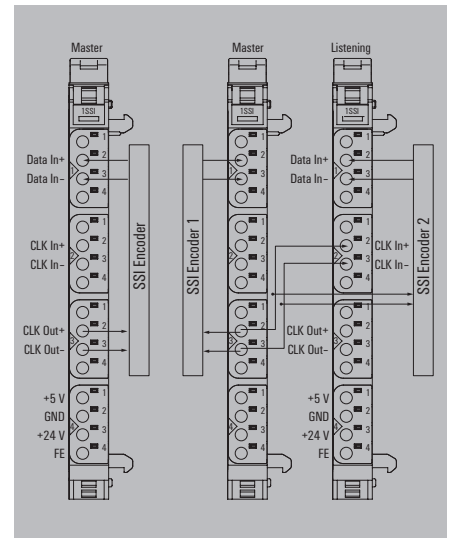
#### Ordering data

Module variants	
	SSI Module 1 channel, 8 - 32 Bit
Note	

#### Accessories

	Coding elements	
	Termination kit	
	Swivel marker	
	Connection marker for pusher neutral	
	Module marker for custom printing	
	Module marker for neutral	
	Thermotransfer version (material: polyester)	
Replacement parts		
	Electronic module	
	Basic module	
	Plug-in connector unit	
Note		

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
UR20-EM-1508090000-SP	1	1515490000
UR20-BM-SP	5	1350930000
UR20-PK-1508090000-SP	5	1559870000
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		



## I/O system IP20 – Communication modules

### 1COM-232-485-422

- Interface for RS232, RS485 and RS422 peripherals
- Adjustable transfer rate
- Galvanic isolation of the signals in the module
- Separate power supply for external peripheral to the module

### UR20-1COM-232-485-422



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/ -15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	16 mA + load
RS interface	
Number of RS interfaces	1
Connection type of RS interfaces	RS232, RS422, RS485
Transmission rate of RS interfaces, min./max.	300...115200 Bit/s
Supply voltage	24 V DC +20 %/ -15 %, via the system bus
Output current, supply voltage	max. 500 mA
Standards RS232	DIN 66020, DIN 66259, EIA-RS 232C, CCITT V.24/V.28
Standards RS485/422	DIN 66259 Part 1 und 3, EIA-RS 422/485, CCITT V.11
Short-circuit-proof of RS interfaces	Yes
Module diagnosis of RS interfaces available	Yes
Individual channel diagnosis of RS interfaces available	Yes
General data	
Weight	87.03 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

#### Ordering data

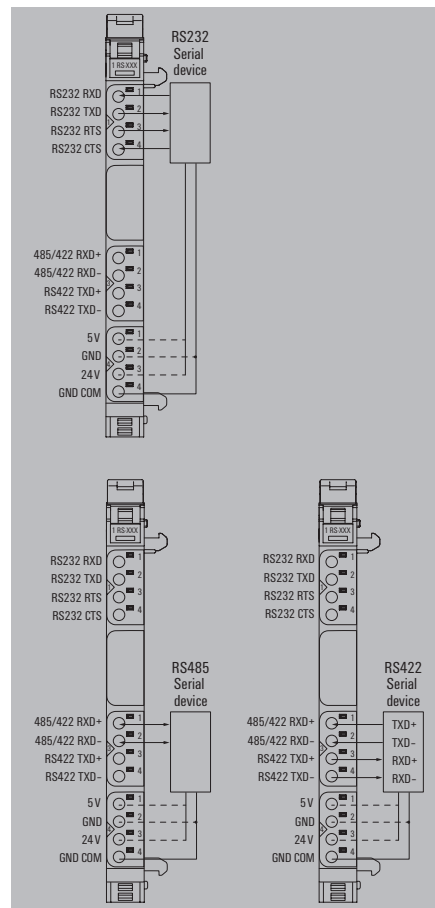
Module variants	
	RS232/RS485/RS422 communication module
Note	

#### Accessories

	Coding elements		
	Termination kit		
	Swivel marker		
	Connection marker for pusher neutral		
	Module marker for custom printing		
	Module marker for neutral		
	Thermotransfer version (material: polyester)		
Replacement parts			
	Electronic module	UR20-EM-1315750000-SP	1 1347350000
	Basic module	UR20-BM-SP	5 1350930000
	Plug-in connector unit	UR20-PK-1315750000-SP	5 2425150000
Note			

Type	Qty.	Order No.
UR20-1COM-232-485-422	1	1315750000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000



**1COM-232-485-422-V2**

- Interface for RS232, RS485 and RS422 peripherals
- Adjustable transfer rate
- Galvanic isolation of the signals in the module
- Separate power supply for external peripheral to the module
- Modbus RTU Master
- DMX512

**Technical data**

<b>System data</b>	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
<b>Supply</b>	
Supply voltage	24 V DC +20 %/ -15 %, via the system bus
Current consumption $I_m$ (power segment of the field bus coupler), typ.	8 mA
Current consumption $I_m$ (the respective power segment)	16 mA + load
<b>RS interface</b>	
Number of RS interfaces	1
Connection type of RS interfaces	RS232, RS422, RS485
Transmission rate of RS interfaces, min./max.	300...230400 Bit/s
Supply voltage	24 V DC +20 %/ -15 %, via the system bus
Output current, supply voltage	max. 400 mA
Standards RS232	DIN 66020, DIN 66259, EIA-RS 232C, CCITT V.24/V.28
Standards RS485/422	DIN 66259 Part 1 und 3, EIA-RS 422/485, CCITT V.11
Short-circuit-proof of RS interfaces	Yes
Module diagnosis of RS interfaces available	Yes
Individual channel diagnosis of RS interfaces available	Yes
<b>General data</b>	
Weight	89 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
<b>Note</b>	

**Ordering data**

<b>Module variants</b>	
	RS232/RS485/RS422 communication module
<b>Note</b>	

**Accessories**

	Coding elements
	Termination kit
	Swivel marker
	Connection marker for pusher neutral
	Module marker for custom printing
	Module marker for neutral
	Thermotransfer version (material: polyester)
<b>Replacement parts</b>	
	Electronic module
	Basic module
	Plug-in connector unit
<b>Note</b>	

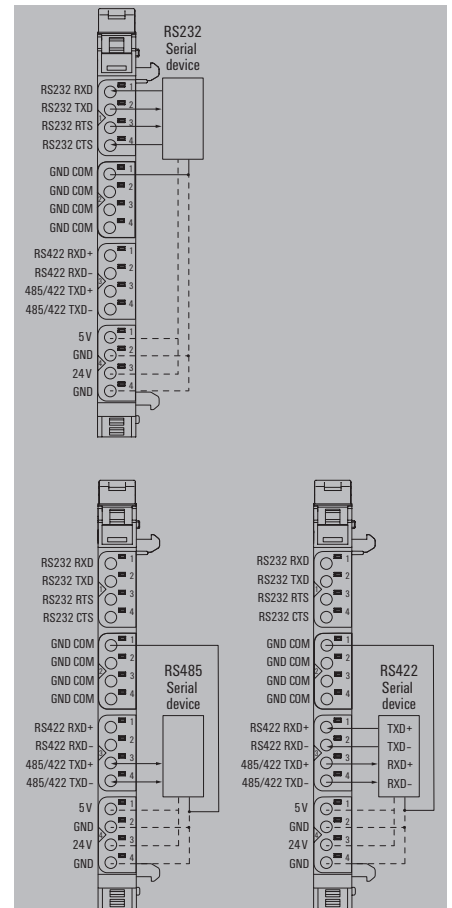
**UR20-1COM-232-485-422-V2**



<b>System data</b>		
Interface	u-remote system bus	
Transmission speed of system bus, max.	48 MBit/s	
Galvanic isolation	500 V DC between the current paths	
<b>Supply</b>		
Supply voltage	24 V DC +20 %/ -15 %, via the system bus	
Current consumption $I_m$ (power segment of the field bus coupler), typ.	8 mA	
Current consumption $I_m$ (the respective power segment)	16 mA + load	
<b>RS interface</b>		
Number of RS interfaces	1	
Connection type of RS interfaces	RS232, RS422, RS485	
Transmission rate of RS interfaces, min./max.	300...230400 Bit/s	
Supply voltage	24 V DC +20 %/ -15 %, via the system bus	
Output current, supply voltage	max. 400 mA	
Standards RS232	DIN 66020, DIN 66259, EIA-RS 232C, CCITT V.24/V.28	
Standards RS485/422	DIN 66259 Part 1 und 3, EIA-RS 422/485, CCITT V.11	
Short-circuit-proof of RS interfaces	Yes	
Module diagnosis of RS interfaces available	Yes	
Individual channel diagnosis of RS interfaces available	Yes	
<b>General data</b>		
Weight	89 g	
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm	
<b>Note</b>		

<b>Type</b>	<b>Qty.</b>	<b>Order No.</b>
UR20-1COM-232-485-422-V2	1	2826800000

<b>Type</b>	<b>Qty.</b>	<b>Order No.</b>
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
<b>Replacement parts</b>		
UR20-EM-2826800000-SP	1	2826860000
UR20-BM-SP	5	1350930000
UR20-PK-2826800000-SP	5	2826870000



## I/O system IP20 – Communication modules

### 1COM-SAI-PRO

- 15 SAI-PRO modules connectable
- Max. 50 m Subbus wire length
- Continuous diagnostics IP20-IP67
- Representation of SAI-PRO modules in web server

### UR20-1COM-SAI-PRO



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/ -15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	17 mA + SAI supply current
IP67 interface	
Number of data interfaces to IP67 modules	1
Transmission rate of data interfaces to IP67 module configurable	Yes
Transmission rate of data interfaces to IP67 modules	250
Supply voltage	24 V DC +20 %/ -15 %, via the system bus
Output current, supply voltage	2.5 A
Short-circuit-proof of data interfaces to IP67 modules	Yes
Module diagnosis of data interfaces to IP67 modules available	Yes
Individual channel diagnosis of data interfaces to IP67 modules available	Yes
General data	
Weight	80.97 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

Type	Qty.	Order No.
UR20-1COM-SAI-PRO	1	2007430000

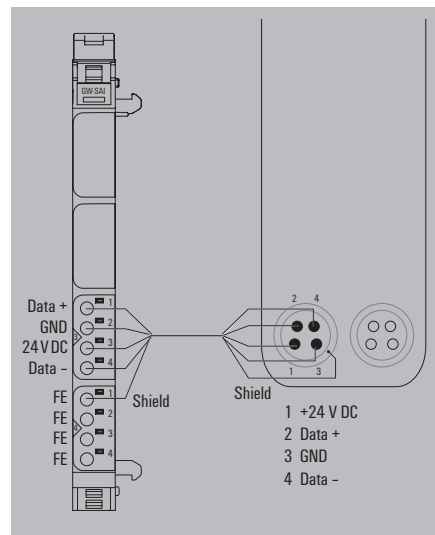
#### Ordering data

Module variants	
	IP20-IP67 communication module
Note	

#### Accessories

	Coding elements	
	Termination kit	
	Swivel marker	
	Connection marker for pusher neutral	
	Module marker for custom printing	
	Module marker for neutral	
	Thermotransfer version (material: polyester)	
Replacement parts		
	Electronic module	
	Basic module	
	Plug-in connector unit	
Note		

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
UR20-EM-2007430000-SP	1	2425350000
UR20-BM-SP	5	1350930000
UR20-PK-2007430000-SP	5	2425160000
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		



### 4COM-IO-LINK-V2

- 4-port IO-Link master
- IO-Link specification V 1.1.4
- Parameterization on the module
- Application-specific function blocks
- Automatic device identification and device replacement

### UR20-4COM-IO-LINK-V2



#### Technical data

##### System data

Interface  
Transmission speed of system bus, max.  
Galvanic isolation

##### Supply

Supply voltage  
Current consumption  $I_M$  (power segment of the field bus coupler), typ.  
Current consumption  $I_M$  (the respective power segment)

##### IO-Link interface

Number of IO-Link interfaces  
Connection type  
Output current  
IO link standard  
Short-circuit-proof  
Module diagnosis  
Individual channel diagnosis  
Class

##### Digital inputs

Type  
Input voltage, low  
Input voltage, high

##### General data

Weight  
Dimensions H x W x D

##### Note

u-remote system bus  
48  
500 V DC between the current paths

24 V DC +20 %/ -15 %, via the system bus  
8 mA  
20 mA + Sensor feed

4  
IO-Link  
0.5 A L+, 0.1 A C/Q (DO MODE)  
IEC 61131-9  
Yes  
Yes  
Yes  
A

Types 1 and 3, EN 61131-2  
<5 V  
> 11 V

89 g  
120 / 11.5 / 76 mm

#### Ordering data

##### Module variants

Type	Qty.	Order No.
UR20-4COM-IO-LINK-V2	1	2819690000

##### Note

#### Accessories

Coding elements  
Termination kit  
Swivel marker  
Connection marker for pusher neutral  
Module marker for custom printing  
Module marker for neutral  
Thermotransfer version (material: polyester)

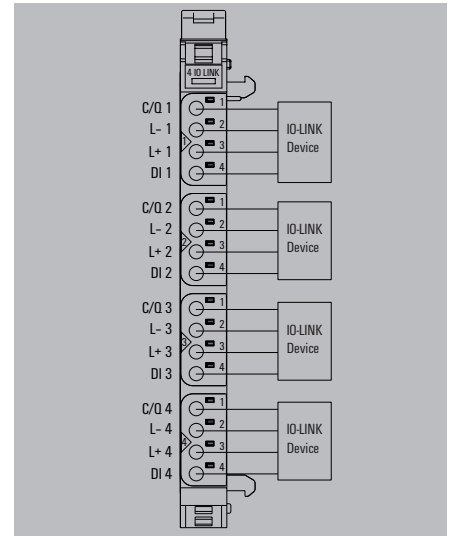
Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000

##### Replacement parts

Electronic module  
Basic module  
Plug-in connector unit

UR20-EM-2819690000-SP	1	2856480000
UR20-BM-SP	5	1350930000
UR20-PK-2819690000-SP	5	2856470000

##### Note



## I/O system IP20 – Communication modules

### 1COM-CANOPEN

- NMT master for up to 16 CANopen devices
- CANopen standard according to CiA DS-301 based on ISO 11898
- Selectable operating modes: CANopen Manager, CANopen Device, Transparent, Listen-Only
- u-mation configurator software for network configuration and monitoring
- Switchable terminating resistor (120 Ω) for flexible network architecture

### UR20-1COM-CANOPEN



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption I <sub>m</sub> (the respective power segment)	30 mA
CANopen interface	
Number	1
Transmission rate	10 / 20 / 50 / 100 / 125 / 250 / 500 / 800 / 1000 kBit/s / Auto baud rate (only device mode)
Type	1x CANopen, CANopen according to CiA DS-301 on the basis of ISO 11898, parametrisable
Module diagnosis	Yes
Individual channel diagnosis	Yes
General data	
Weight	89 g
Dimensions H x W x D	120 / 11.5 / 76 mm
Note	

Type	Qty.	Order No.
UR20-1COM-CANOPEN	1	2489840000

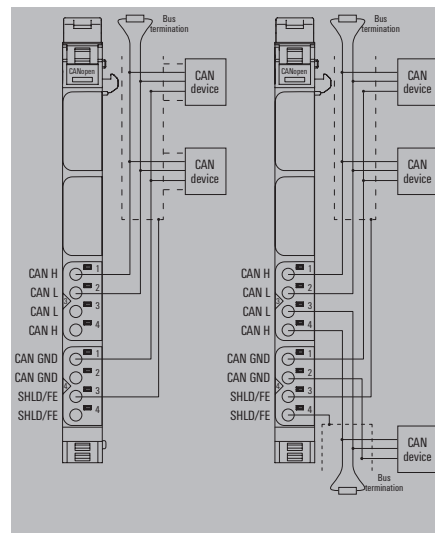
#### Ordering data

Module variants	
None	

#### Accessories

Coding elements	KOSM BHZ5.00	100	1483050000
Termination kit	UR20-EBK-ACC	5	1346610000
Swivel marker	UR20-SM-ACC	20	1339920000
Connection marker for pusher neutral	PM 2.7/2.6 MC NE WS	960	1323710000
Module marker for custom printing	DEK 5/8-11.5 MC SDR	100	1341610000
Module marker for neutral	DEK 5/8-11.5 MC NE WS	500	1341630000
Thermotransfer version (material: polyester)	THM UR20 WS	1	1429420000
Replacement parts			
Electronic module	UR20-EM-2489840000-SP	1	2702550000
Basic module	UR20-BM-SP	5	1350930000
Plug-in connector unit	UR20-PK-2489840000-SP	5	2702530000
Note			

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
UR20-EM-2489840000-SP	1	2702550000
UR20-BM-SP	5	1350930000
UR20-PK-2489840000-SP	5	2702530000



### 1COM-CAN

- CAN frame gateway / CAN interface according to ISO 11898-1
- Selectable operating modes: transparent mode and listen-only mode
- 11-bit identifier (CAN specification 2.0, part A) or 29-bit identifier (CAN specification 2.0, part B)
- Baud rates from 10 kbit/s to 1 Mbit/s are supported
- Seamless integration into existing CAN networks

### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Supply	
Supply voltage	24 V DC +20 %/ -15 %, via the system bus
Current consumption $I_m$ (power segment of the field bus coupler), typ.	8 mA
Current consumption $I_m$ (the respective power segment)	30 mA
CANopen interface	
Number	1
Transmission rate	10 / 20 / 50 / 100 / 125 / 250 / 500 / 800 / 1000 kBit/s / Auto baud rate (only device mode)
Type	1x CAN
Module diagnosis	Yes
Individual channel diagnosis	Yes
General data	
Weight	89 g
Dimensions H x W x D	120 / 11.5 / 76 mm
Note	

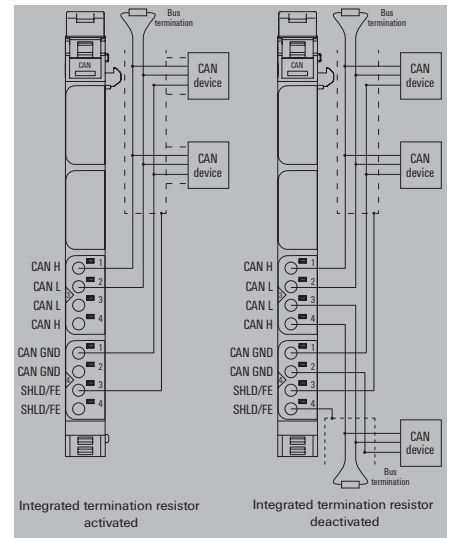
### Ordering data

Module variants	
Note	

### UR20-1COM-CAN



Type		
Type	Qty.	Order No.
UR20-1COM-CAN	1	3040800000
Note		



## Safe I/O modules and safe power-feed modules

### PROFIsafe/FSoE/FSCC, PLe, Kat. 4/SIL 3, OSSD-output, wire breakage and short-circuit detection

Safety technology is of central importance in the automation industry and machine construction. When attempting to reduce risks and avoid putting people and the machine in danger, you need solutions which satisfy stringent requirements and statutory specifications.

**C** Weidmüller offers UR20 modules for functional safety in accordance with the PROFIsafe (FSPS, IEC 61784-3-3), Fail-Safe-over-EtherCAT (FSoE, IEC 61784-3-12), and CC-Link IE Safety (FSCC, IEC 61784-3-8) standards. These modules are providing variable parameterization possibilities and because of this a very high flexibility and adaptability to your application. Due to the standards a use in existing systems is straightforward. The safe I/O-modules with FSPS, FSoE or FSCC are available with digital in- and outputs.

Weidmüller also offers the secure feed-in modules of the u-remote system. These modules UR20-PF-O... have key features such as emergency stop circuits and wire breakage/ short-circuit detection. They satisfy all SIL 3 requirements according to IEC 62061 and EN ISO 13849-1, Category 4, PLe and support the safe operation of your system.

By safely shutting down the downstream output modules, the safety modules attain maximum safety with optimum control. All input sensors are independently supplied via separate voltage paths and report the current machine status to the control unit. The restart is either performed in manual mode or using the autostart function. Safe I/O- and safe power-feed modules from Weidmüller also cut maintenance and service times and improve your response times in an emergency – thanks to a concept of maximum transparency, e.g. using OSSD output. The module electronics supply the connected actuators from the output current path ( $U_{OUT}$ ).

UR20-4DI-4DO-PN-FSoE-V2



UR20-8DI-PN-FSoE-V2



UR20-4DI-4DO-PN-FSPS-V2



UR20-8DI-PN-FSPS-V2



UR20-4DI-4DO-PN-FSCC



UR20-8DI-PN-FSCC



UR20-PF-0-1DI-SIL



UR20-PF-0-2DI-SIL



UR20-PF-0-2DI-DELAY-SIL



**4DI-4DO-PN-FSOE-V2**

- FailSafe over EtherCAT
- 4 digital inputs, two of them are parametrisable P- or N-switching
- 4 digital outputs, two of them are parametrisable P- or N-switching
- Constant current with thermal switch-off

**UR20-4DI-4DO-PN-FSOE-V2**



**Technical data**

<b>System data</b>	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
<b>Supply</b>	
Supply voltage	24 V DC +20 %/-15 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>out</sub> (the respective power segment)	20 mA + load
<b>Safety related data</b>	
Achievable safety level, inputs / outputs	SIL 3, SILCL 3, PLe, category 4 / architecture 1oo2 (2 channels)
Level of diagnostic coverage DC <sub>avg</sub> (IEC 62061)	Input: 0.921, output: 0.969
Level of diagnostic coverage (DIN EN ISO 13849)	Input, single-channel wiring: 90%; dual-channel wiring: 99%
PFH (probability of failure per hour in 1/h), inputs	Single-channel circuit 1oo1: 10 <sup>9</sup> , Dual-channel circuit 1oo2: 2,17*10 <sup>10</sup>
Proportion of safety-related outages (SFF)	98 %
HFT (hardware fault tolerance), inputs	Single-channel circuit 1oo1: 0, Dual-channel circuit 1oo2: 1
HFT (hardware fault tolerance), outputs	1
<b>Inputs</b>	
Number	4
Input filter	configurable
Input voltage, low / high	<5 V / > 11 V
Reverse polarity protection	Yes
<b>Outputs</b>	
Number	4
Output current per channel, max. / Output current per module, max.	0.5 A / 2 A
Actuator connection	2-wire
Short-circuit-proof	Yes
Response time of the protective circuit (current limiting)	<100µs
<b>General data</b>	
Weight	90.2 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
<b>Note</b>	

**Ordering data**

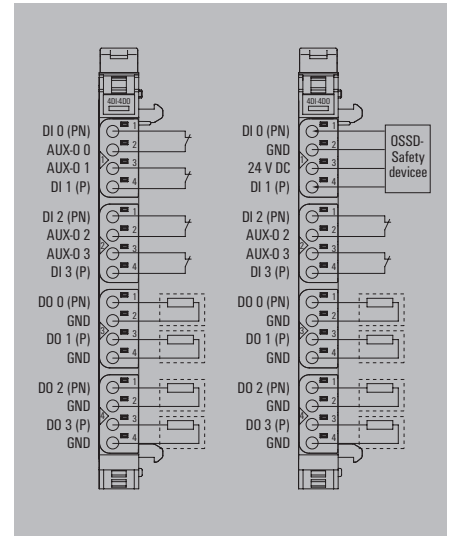
<b>Module variants</b>	
	Safety module FSOE, 4 digital inputs/outputs
<b>Note</b>	

**Accessories**

	Coding elements
	Termination kit
	Swivel marker
	Connection marker for pusher neutral
	Module marker for custom printing
	Module marker for neutral
	Thermotransfer version (material: polyester)
<b>Replacement parts</b>	
	Electronic module
	Basic module
	Plug-in connector unit
<b>Note</b>	

<b>Type</b>		
	<b>Qty.</b>	<b>Order No.</b>
UR20-4DI-4DO-PN-FSOE-V2	1	2464580000
For this and additional technical data, please refer to the manual available at <a href="http://www.weidmueller.de">www.weidmueller.de</a> .		

<b>Type</b>		
	<b>Qty.</b>	<b>Order No.</b>
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
<b>Type</b>		
	<b>Qty.</b>	<b>Order No.</b>
UR20-EM-2464580000-SP	1	2466020000
UR20-BM-SP	5	1350930000
UR20-PK-2464580000-SP	5	2465990000
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		



### 8DI-PN-FSOE-V2

- FailSafe over EtherCAT
- 8 digital inputs, four of them are parametrisable P- or N-switching
- 2-wire, 3-wire, 4-wire connection

### UR20-8DI-PN-FSOE-V2



#### Technical data

<b>System data</b>	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
<b>Safety related data</b>	
Achievable safety level, inputs / Achievable safety level, inputs	Single-channel circuit 1oo1: SILCL 2, Dual-channel circuit 1oo2: SILCL 3 / PLd, category 2 (DIN EN ISO 13849-1) / architecture 1oo1 (1 channel), PLc, category 4 (DIN EN ISO 13849-1) / architecture 1oo2 (2 channels), PLd, category 2 / architecture 1oo1 (1 channel), PLc, category 4 / architecture 1oo2 (2 channels)
PFH (probability of failure per hour in 1/h), inputs	Single-channel circuit 1oo1: 10 <sup>9</sup> , Dual-channel circuit 1oo2: 2,17*10 <sup>10</sup>
Proportion of safety-related outages (SFF)	98 %
<b>Supply</b>	
Supply voltage	24 V DC +20 %/ -15 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>out</sub> (the respective power segment)	30 mA
<b>Inputs</b>	
Number	8
Input type	Type 1 in acc. with IEC 61131-2, Type 3 in acc. with IEC 61131-2 configurable
Input filter	
Input voltage, low	<5 V
Input voltage, high	> 11 V
Sensor supply	Yes
Sensor connection	2-wire, 3-wire, 4-wire
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	Yes
<b>General data</b>	
Weight	89.69 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
<b>Note</b>	

#### Ordering data

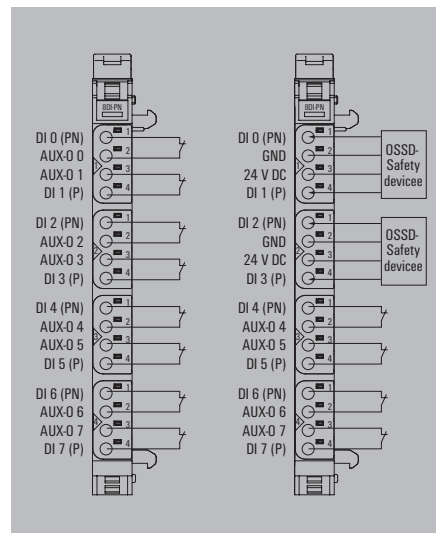
<b>Module variants</b>	
	Safety module FSOE, 8 digital inputs
<b>Note</b>	

Type	Qty.	Order No.
UR20-8DI-PN-FSOE-V2	1	2464600000
For this and additional technical data, please refer to the manual available at <a href="http://www.weidmueller.de">www.weidmueller.de</a> .		

#### Accessories

	Coding elements
	Termination kit
	Swivel marker
	Connection marker for pusher neutral
	Module marker for custom printing
	Module marker for neutral
	Thermotransfer version (material: polyester)
<b>Replacement parts</b>	
	Electronic module
	Basic module
	Plug-in connector unit
<b>Note</b>	

Type	Qty.	Order No.
KDSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
UR20-EM-2464600000-SP	1	2465960000
UR20-BM-SP	5	1350930000
UR20-PK-2464600000-SP	5	2465940000
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		



**4DI-4DO-PN-FSPS-V2**

- PROFIsafe
- 4 digital inputs, two of them are parametrisable P- or N-switching
- 4 digital outputs, two of them are parametrisable P- or N-switching
- Constant current with thermal switch-off

**Technical data**

<b>System data</b>	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
<b>Safety related data</b>	
Achievable safety level, inputs / outputs	SIL 3, SILCL 3, PL, category 4 / architecture 1oo2 (2 channels)
Level of diagnostic coverage DC <sub>AVG</sub> (IEC 62061)	Input: 0.921, output: 0.969
Level of diagnostic coverage (DIN EN ISO 13849)	Input, single-channel wiring: 90%; dual-channel wiring: 99%
PFH (probability of failure per hour in 1/h), inputs	Single-channel circuit 1oo1: 10 <sup>9</sup> , Dual-channel circuit 1oo2: 2,17*10 <sup>10</sup>
Proportion of safety-related outages (SFF)	98 %
HFT (hardware fault tolerance), inputs	Single-channel circuit 1oo1: 0, Dual-channel circuit 1oo2: 1
HFT (hardware fault tolerance), outputs	1
<b>Supply</b>	
Supply voltage	24 V DC +20 %/ -15 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>OUT</sub> (the respective power segment)	20 mA + load
<b>Inputs</b>	
Number	4
Input filter	configurable
Input voltage, low / high	<5 V / > 11 V
Reverse polarity protection	Yes
<b>Outputs</b>	
Number	4
Output current per channel, max. / Output current per module, max.	0.5 A / 2 A
Actuator connection	2-wire
Short-circuit-proof	Yes
Response time of the protective circuit (current limiting)	<100µs
<b>General data</b>	
Weight	89.7 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
<b>Note</b>	

**Ordering data**

<b>Module variants</b>	
	Safety module PROFIsafe, 4 digital inputs/outputs
<b>Note</b>	

**Accessories**

	Coding elements
	Termination kit
	Swivel marker
	Connection marker for pusher neutral
	Module marker for custom printing
	Module marker for neutral
	Thermostransfer version (material: polyester)
<b>Replacement parts</b>	
	Electronic module
	Basic module
	Plug-in connector unit
<b>Note</b>	

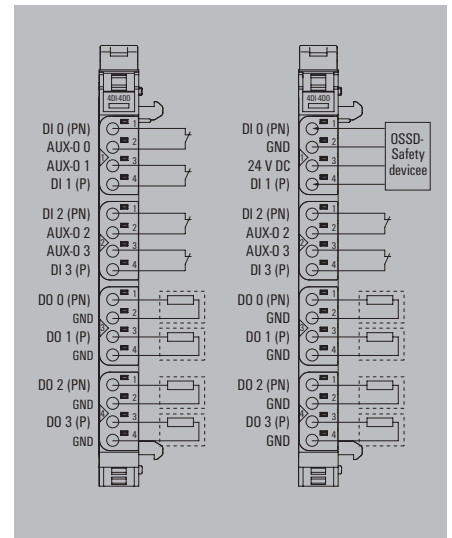
**UR20-4DI-4DO-PN-FSPS-V2**



<b>System data</b>		
Interface	u-remote system bus	
Transmission speed of system bus, max.	48 MBit/s	
Galvanic isolation	500 V DC between the current paths	
<b>Safety related data</b>		
Achievable safety level, inputs / outputs	SIL 3, SILCL 3, PL, category 4 / architecture 1oo2 (2 channels)	
Level of diagnostic coverage DC <sub>AVG</sub> (IEC 62061)	Input: 0.921, output: 0.969	
Level of diagnostic coverage (DIN EN ISO 13849)	Input, single-channel wiring: 90%; dual-channel wiring: 99%	
PFH (probability of failure per hour in 1/h), inputs	Single-channel circuit 1oo1: 10 <sup>9</sup> , Dual-channel circuit 1oo2: 2,17*10 <sup>10</sup>	
Proportion of safety-related outages (SFF)	98 %	
HFT (hardware fault tolerance), inputs	Single-channel circuit 1oo1: 0, Dual-channel circuit 1oo2: 1	
HFT (hardware fault tolerance), outputs	1	
<b>Supply</b>		
Supply voltage	24 V DC +20 %/ -15 %, via the system bus	
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA	
Current consumption from I <sub>OUT</sub> (the respective power segment)	20 mA + load	
<b>Inputs</b>		
Number	4	
Input filter	configurable	
Input voltage, low / high	<5 V / > 11 V	
Reverse polarity protection	Yes	
<b>Outputs</b>		
Number	4	
Output current per channel, max. / Output current per module, max.	0.5 A / 2 A	
Actuator connection	2-wire	
Short-circuit-proof	Yes	
Response time of the protective circuit (current limiting)	<100µs	
<b>General data</b>		
Weight	89.7 g	
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm	
<b>Note</b>		

Type	Qty.	Order No.
UR20-4DI-4DO-PN-FSPS-V2	1	2464570000
For this and additional technical data, please refer to the manual available at <a href="http://www.weidmueller.de">www.weidmueller.de</a> .		

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
<b>Replacement parts</b>		
UR20-EM-2464570000-SP	1	2466030000
UR20-BM-SP	5	1350930000
UR20-PK-2464570000-SP	5	2466000000
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		



### 8DI-PN-FSPS-V2

- PROFI-safe
- 8 digital inputs, four of them are parametrisable P- or N-switching
- 2-wire, 3-wire, 4-wire connection

### UR20-8DI-PN-FSPS-V2



#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Safety related data	
Achievable safety level, inputs / Achievable safety level, inputs	Single-channel circuit 1oo1: SILCL 2, Dual-channel circuit 1oo2: SILCL 3 / PLd, category 2 (DIN EN ISO 13849-1) / architecture 1oo1 (1 channel), PLc, category 4 (DIN EN ISO 13849-1) / architecture 1oo2 (2 channels), PLd, category 2 / architecture 1oo1 (1 channel), PLc, category 4 / architecture 1oo2 (2 channels)
PFH (probability of failure per hour in 1/h), inputs	Single-channel circuit 1oo1: 10 <sup>9</sup> , Dual-channel circuit 1oo2: 2,17*10 <sup>10</sup>
Proportion of safety-related outages (SFF)	98 %
Supply	
Supply voltage	24 V DC +20 % / -15 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>out</sub> (the respective power segment)	30 mA
Inputs	
Number	8
Input type	Type 1 in acc. with IEC 61131-2, Type 3 in acc. with IEC 61131-2
Input filter	configurable
Input voltage, low	<5 V
Input voltage, high	> 11 V
Sensor supply	Yes
Sensor connection	2-wire, 3-wire, 4-wire
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	Yes
General data	
Weight	88.82 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

#### Ordering data

Module variants	
	Safety module PROFI-safe, 8 digital inputs
Note	

Type	Qty.	Order No.
UR20-8DI-PN-FSPS-V2	1	2464590000

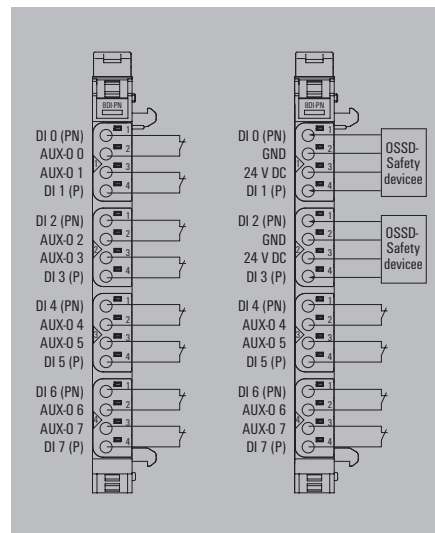
For this and additional technical data, please refer to the manual available at [www.weidmueller.de](http://www.weidmueller.de).

#### Accessories

	Coding elements
	Termination kit
	Swivel marker
	Connection marker for pusher neutral
	Module marker for custom printing
	Module marker for neutral
	Thermotransfer version (material: polyester)
Replacement parts	
	Electronic module
	Basic module
	Plug-in connector unit
Note	

Type	Qty.	Order No.
KDSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
UR20-EM-2464590000-SP	1	2466010000
UR20-BM-SP	5	1350930000
UR20-PK-2464590000-SP	5	2465950000

1 roll = 1000 label = 1 Qty.  
1 sheet = 60 label = 1 Qty.



### 4DI-4DO-PN-FSCC

- CC-Link IE Safety
- 4 digital inputs, 2 configurable as P/N switching
- 4 digital outputs, 2 configurable as P/N switching
- Up to SIL CL 3 (IEC 62061) / SIL 3 (EN 61508) / PL e, Cat. 4 (EN ISO 13849-1)

#### Technical data

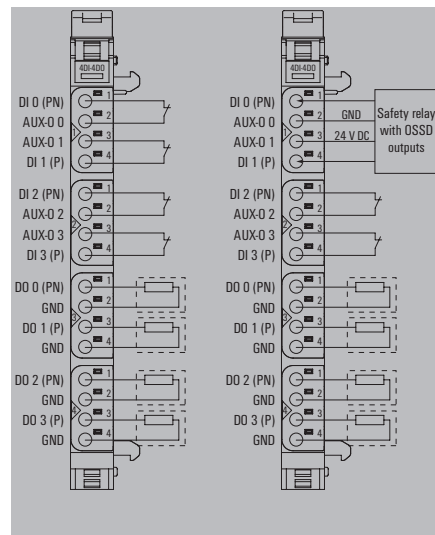
<b>System data</b>	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
<b>Supply</b>	
Supply voltage	24 V DC +20 %/ -15 %, via the system bus
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>out</sub> (the respective power segment)	20 mA + load
<b>Safety related data</b>	
Achievable safety level, inputs / outputs	PLd, category 2 (DIN EN ISO 13849-1) / architecture 1oo1 (1 channel)
Level of diagnostic coverage DC <sub>avg</sub> (IEC 62061)	Input, single-channel wiring: 90%; dual-channel wiring: 99%
Level of diagnostic coverage (DIN EN ISO 13849)	Input, single-channel wiring: 90%; dual-channel wiring: 99%
PFH (probability of failure per hour in 1/h), inputs	Single-channel circuit 1oo1: 10 <sup>9</sup> , Dual-channel circuit 1oo2: 2,17*10 <sup>10</sup>
Proportion of safety-related outages (SFF)	98 %
HFT (hardware fault tolerance), inputs	Single-channel circuit 1oo1: 0, Dual-channel circuit 1oo2: 1
HFT (hardware fault tolerance), outputs	1
<b>Inputs</b>	
Number	4
Input filter	Input delay adjustable from 0 to 40 ms
Input voltage, low / high	<5 V / > 11 V
Reverse polarity protection	Yes
<b>Outputs</b>	
Number	4
Output current per channel, max. / Output current per module, max.	0.5 A / 2 A
Actuator connection	2-wire
Short-circuit-proof	Yes
Response time of the protective circuit (current limiting)	<100µs
<b>General data</b>	
Weight	90.2 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
<b>Note</b>	
<b>Ordering data</b>	
<b>Module variants</b>	
<b>Note</b>	

### UR20-4DI-4DO-PN-FSCC



<b>System data</b>		
Interface	u-remote system bus	
Transmission speed of system bus, max.	48 MBit/s	
Galvanic isolation	500 V DC between the current paths	
<b>Supply</b>		
Supply voltage	24 V DC +20 %/ -15 %, via the system bus	
Current consumption I <sub>in</sub> (power segment of the field bus coupler), typ.	8 mA	
Current consumption from I <sub>out</sub> (the respective power segment)	20 mA + load	
<b>Safety related data</b>		
Achievable safety level, inputs / outputs	PLd, category 2 (DIN EN ISO 13849-1) / architecture 1oo1 (1 channel)	
Level of diagnostic coverage DC <sub>avg</sub> (IEC 62061)	Input, single-channel wiring: 90%; dual-channel wiring: 99%	
Level of diagnostic coverage (DIN EN ISO 13849)	Input, single-channel wiring: 90%; dual-channel wiring: 99%	
PFH (probability of failure per hour in 1/h), inputs	Single-channel circuit 1oo1: 10 <sup>9</sup> , Dual-channel circuit 1oo2: 2,17*10 <sup>10</sup>	
Proportion of safety-related outages (SFF)	98 %	
HFT (hardware fault tolerance), inputs	Single-channel circuit 1oo1: 0, Dual-channel circuit 1oo2: 1	
HFT (hardware fault tolerance), outputs	1	
<b>Inputs</b>		
Number	4	
Input filter	Input delay adjustable from 0 to 40 ms	
Input voltage, low / high	<5 V / > 11 V	
Reverse polarity protection	Yes	
<b>Outputs</b>		
Number	4	
Output current per channel, max. / Output current per module, max.	0.5 A / 2 A	
Actuator connection	2-wire	
Short-circuit-proof	Yes	
Response time of the protective circuit (current limiting)	<100µs	
<b>General data</b>		
Weight	90.2 g	
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm	
<b>Note</b>		
<b>Ordering data</b>		
<b>Module variants</b>		
<b>Note</b>		

Type	Qty.	Order No.
UR20-4DI-4DO-PN-FSCC	1	2742570000



### 8DI-PN-FSCC

- CC-Link IE Safety
- 8 digital inputs, 4 configurable as P/N switching
- Up to SIL CL 3 (IEC 62061) / SIL 3 (EN 61508) / PL e, Cat. 4 (EN ISO 13849-1)

### UR20-8DI-PN-FSCC



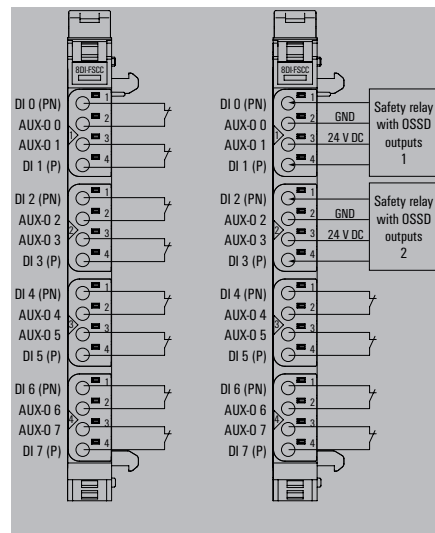
#### Technical data

System data	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
Galvanic isolation	500 V DC between the current paths
Safety related data	
Achievable safety level, inputs / Achievable safety level, inputs	Single-channel circuit 1oo1: SILCL 2, Dual-channel circuit 1oo2: SILCL 3 / PLd, category 2 (DIN EN ISO 13849-1) / architecture 1oo1 (1 channel), PL e, category 4 (DIN EN ISO 13849-1) / architecture 1oo2 (2 channels)
PFH (probability of failure per hour in 1/h), inputs	Single-channel circuit 1oo1: 10 <sup>9</sup> , Dual-channel circuit 1oo2: 2,17*10 <sup>10</sup>
Proportion of safety-related outages (SFF)	98 %
Supply	
Supply voltage	24 V DC +20 %/ -15 %, via the system bus
Current consumption I <sub>m</sub> (power segment of the field bus coupler), typ.	8 mA
Current consumption from I <sub>OUT</sub> (the respective power segment)	30 mA + load
Inputs	
Number	8
Input type	for Type 1 and Type 3 sensors as per IEC 61131-2
Input filter	Input delay adjustable from 0 to 40 ms
Input voltage, low	<5 V
Input voltage, high	> 11 V
Sensor supply	Yes
Sensor connection	2-wire, 3-wire, 4-wire
Reverse polarity protection	Yes
Module diagnosis	Yes
Individual channel diagnosis	Yes
General data	
Weight	89 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
Note	

#### Ordering data

Module variants	
Note	

Type	Qty.	Order No.
UR20-8DI-PN-FSCC	1	2742580000



**PF-O-1DI-SIL**

- SIL 3 safety standard in accordance with IEC 62061 and DIN EN ISO 13849-1, category 4, PL e
- Connection for an emergency stop circuit
- OSSD output reports status to control unit
- Pulsed input circuit for wire breakage and short-circuit detection
- Restart: manual or using autostart

**UR20-PF-O-1DI-SIL**



**Technical data**

<b>System data</b>
Interface
Transmission speed of system bus, max.
<b>Safety related data</b>
Achievable safety level, inputs
Proportion of safety-related outages (SFF)
HFT (hardware fault tolerance), inputs
<b>Supply</b>
Supply voltage for inputs
Supply voltage for outputs
Feed current for I <sub>OUT</sub> (output current path) , max.
Current consumption I <sub>IN</sub> (power segment of the field bus coupler), typ.
<b>Digital inputs</b>
Wire break detection
Short-circuit detection
<b>General data</b>
Weight
Dimensions H x W x D
<b>Note</b>

u-remote system bus	48 MBit/s
SIL 3 (IEC 61508)	
Achievable safety level, inputs	SIL 3 (IEC 61508)
Proportion of safety-related outages (SFF)	98 %
HFT (hardware fault tolerance), inputs	1
Supply voltage for inputs	24 V DC +20 %/ -15 %
Supply voltage for outputs	24 V DC +20 %/ -15 %
Feed current for I <sub>OUT</sub> (output current path) , max.	8050 mA
Current consumption I <sub>IN</sub> (power segment of the field bus coupler), typ.	8 mA
Wire break detection	Yes
Short-circuit detection	Yes
Weight	108 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm

**Ordering data**

<b>Module variants</b>	Safety module, 1 digital input
<b>Note</b>	

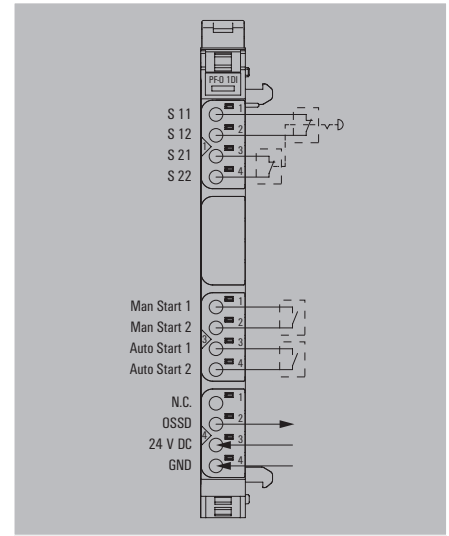
Type	Qty.	Order No.
UR20-PF-O-1DI-SIL	1	1335030000

**Accessories**

Coding elements
Termination kit
Swivel marker
Connection marker for pusher neutral
Module marker for custom printing
Module marker for neutral
Thermotransfer version (material: polyester)
<b>Replacement parts</b>
Electronic module
Basic module
Plug-in connector unit
<b>Note</b>

Type	Qty.	Order No.
KOSM BH25.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
UR20-EM-1335030000-SP	1	1347520000
UR20-BM-PF-O-SIL-SP	5	1350970000
UR20-PK-1335030000-SP	5	1346560000

1 roll = 1000 label = 1 Qty.  
1 sheet = 60 label = 1 Qty.



**PF-O-2DI-SIL**

- SIL 3 safety standard in accordance with IEC 62061 and DIN EN ISO 13849-1, category 4, PL e
- Connection for an emergency stop circuit
- OSSD output reports status to control unit
- Pulsed input circuit for wire breakage and short-circuit detection
- Restart: manual or using autostart

**UR20-PF-O-2DI-SIL**



**Technical data**

<b>System data</b>	
Interface	u-remote system bus
Transmission speed of system bus, max.	48 MBit/s
<b>Safety related data</b>	
Achievable safety level, inputs	SIL 3 (IEC 61508)
Proportion of safety-related outages (SFF)	98 %
HFT (hardware fault tolerance), inputs	1
<b>Supply</b>	
Supply voltage for inputs	24 V DC +20 %/ -15 %
Supply voltage for outputs	24 V DC +20 %/ -15 %
Feed current for I <sub>OUT</sub> (output current path) , max.	8050
Current consumption I <sub>M</sub> (power segment of the field bus coupler), typ.	8 mA
<b>Digital inputs</b>	
Wire break detection	Yes
Short-circuit detection	Yes
<b>General data</b>	
Weight	82 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
<b>Note</b>	

<b>System data</b>		
Interface	u-remote system bus	
Transmission speed of system bus, max.	48 MBit/s	
<b>Safety related data</b>		
Achievable safety level, inputs	SIL 3 (IEC 61508)	
Proportion of safety-related outages (SFF)	98 %	
HFT (hardware fault tolerance), inputs	1	
<b>Supply</b>		
Supply voltage for inputs	24 V DC +20 %/ -15 %	
Supply voltage for outputs	24 V DC +20 %/ -15 %	
Feed current for I <sub>OUT</sub> (output current path) , max.	8050	
Current consumption I <sub>M</sub> (power segment of the field bus coupler), typ.	8 mA	
<b>Digital inputs</b>		
Wire break detection	Yes	
Short-circuit detection	Yes	
<b>General data</b>		
Weight	82 g	
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm	
<b>Note</b>		

**Ordering data**

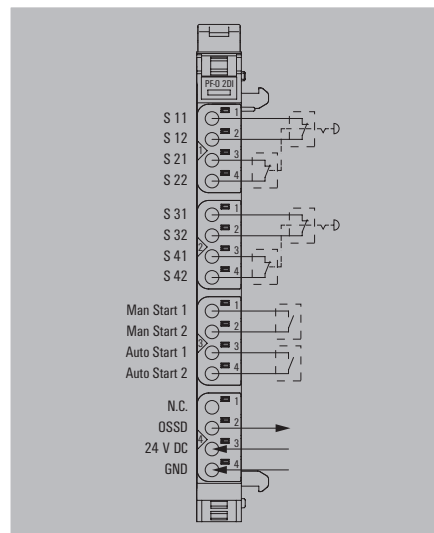
<b>Module variants</b>	
	Safety module, 2 digital inputs
<b>Note</b>	

Type	Qty.	Order No.
UR20-PF-O-2DI-SIL	1	1335050000

**Accessories**

	Coding elements
	Termination kit
	Swivel marker
	Connection marker for pusher neutral
	Module marker for custom printing
	Module marker for neutral
	Thermotransfer version (material: polyester)
<b>Replacement parts</b>	
	Electronic module
	Basic module
	Plug-in connector unit
<b>Note</b>	

Type	Qty.	Order No.
KOSM BH25.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
<b>Replacement parts</b>		
UR20-EM-1335050000-SP	1	1347540000
UR20-BM-PF-O-SIL-SP	5	1350970000
UR20-PK-1335050000-SP	5	1346570000
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		



**PF-O-2DI-DELAY-SIL**

- SIL 3 safety standard in accordance with IEC 62061 and DIN EN ISO 13849-1, category 4, PL e
- Switch-off after adjustable delay
- Connection for an emergency stop circuit
- OSSD output reports status to control unit
- Pulsed input circuit for wire breakage and short-circuit detection
- Restart: manual or using autostart

**UR20-PF-O-2DI-DELAY-SIL**



**Technical data**

<b>System data</b>
Interface
Transmission speed of system bus, max.
<b>Safety related data</b>
Achievable safety level, inputs
Proportion of safety-related outages (SFF)
HFT (hardware fault tolerance), inputs
<b>Supply</b>
Supply voltage for inputs
Supply voltage for outputs
Feed current for I <sub>OUT</sub> (output current path) , max.
Current consumption I <sub>M</sub> (power segment of the field bus coupler), typ.
<b>Digital inputs</b>
Wire break detection
Short-circuit detection
<b>General data</b>
Weight
Dimensions H x W x D
<b>Note</b>

u-remote system bus	48 MBit/s
SIL 3 (IEC 61508)	98 %
HFT (hardware fault tolerance), inputs	1
Supply voltage for inputs	24 V DC +20 %/ -15 %
Supply voltage for outputs	24 V DC +20 %/ -15 %
Feed current for I <sub>OUT</sub> (output current path) , max.	8050
Current consumption I <sub>M</sub> (power segment of the field bus coupler), typ.	8 mA
Wire break detection	Yes
Short-circuit detection	Yes
Weight	101 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm

**Ordering data**

<b>Module variants</b>	Safety module, 2 digital inputs, delayed
<b>Note</b>	

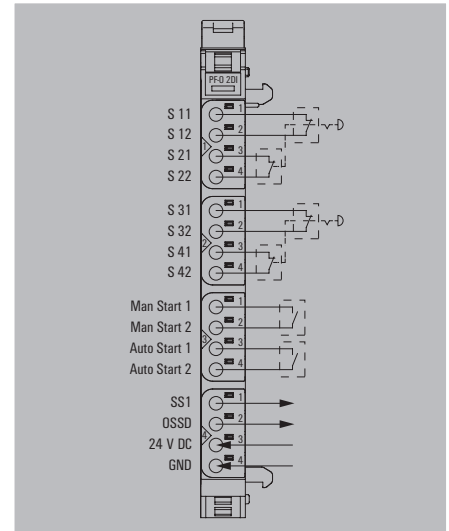
Type	Qty.	Order No.
UR20-PF-O-2DI-DELAY-SIL	1	1335040000

**Accessories**

Coding elements	
Termination kit	
Swivel marker	
Connection marker for pusher neutral	
Module marker for custom printing	
Module marker for neutral	
Thermotransfer version (material: polyester)	
<b>Replacement parts</b>	
Electronic module	
Basic module	
Plug-in connector unit	
<b>Note</b>	

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
UR20-EM-1335040000-SP	1	1347530000
UR20-BM-PF-O-SIL-SP	5	1350970000
UR20-PK-1335040000-SP	5	1484100000

1 roll = 1000 label = 1 Qty.  
1 sheet = 60 label = 1 Qty.



## Power-feed modules

### 10 A feeding, input or output current path, diagnosis visualisation

Weidmüller power-feed modules are available to refresh the power of the input and output current path. These feed 10 A, monitored by the voltage diagnosis display, in the corresponding input or output path. The time-saving commissioning is guaranteed by the standard u-remote plug with proven and tested PUSH IN technology for reliable contacting. The power supply is monitored by a diagnosis display.

C

UR20-PF-I



UR20-PF-0



**PF-I**

- Power supply in input current path
- Power supply current 10 A
- Integrated diagnosis display

**UR20-PF-I****Technical data****Supply**

Supply voltage for inputs  
 Feed current for  $I_{in}$  (input current path) , max.  
 Current consumption  $I_{in}$  (the respective power segment)

**General data**

Weight  
 Dimensions H x W x D

**Note**

24 V DC +20 %/ -15 %  
 10000 mA  
 <10 mA

76 g  
 120 mm / 11.5 mm / 76 mm

**Ordering data****Module variants**

Power supply module, 10 A

**Note**

Type	Qty.	Order No.
UR20-PF-I	1	1334710000

**Accessories**

Coding elements  
 Termination kit  
 Swivel marker  
 Connection marker for pusher neutral  
 Module marker for custom printing  
 Module marker for neutral  
 Thermotransfer version (material: polyester)

Type	Qty.	Order No.
KOSM BH25.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000

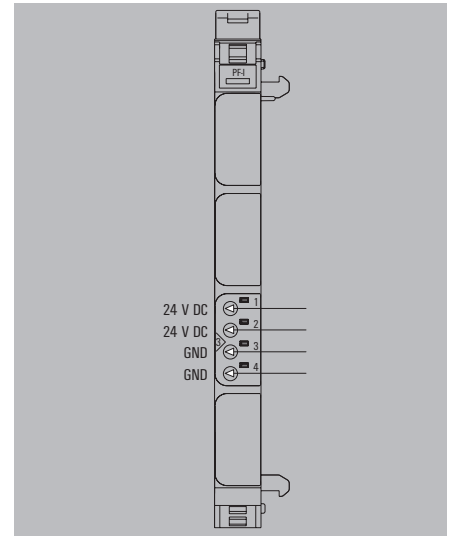
**Replacement parts**

Electronic module  
 Basic module  
 Plug-in connector unit

UR20-EM-1334710000-SP	1	1347380000
UR20-BM-PF-I-SP	5	1350940000
UR20-PK-1334710000-SP	5	1346460000

**Note**

1 roll = 1000 label = 1 Qty.  
 1 sheet = 60 label = 1 Qty.



**I/O system IP20 – Power-feed modules**

**PF-0**

- Power supply in output current path
- Power supply current 10 A
- Integrated diagnosis display

**UR20-PF-0**



**Technical data**

<b>Supply</b>
Supply voltage for outputs
Feed current for I <sub>OUT</sub> (output current path) , max.
Current consumption from I <sub>OUT</sub> (the respective power segment)
<b>General data</b>
Weight
Dimensions H x W x D
<b>Note</b>

24 V DC +20 %/ -15 %
10000 mA
<10 mA
76 g
120 mm / 11.5 mm / 76 mm

**Ordering data**

<b>Module variants</b>	Power supply module, 10 A
<b>Note</b>	

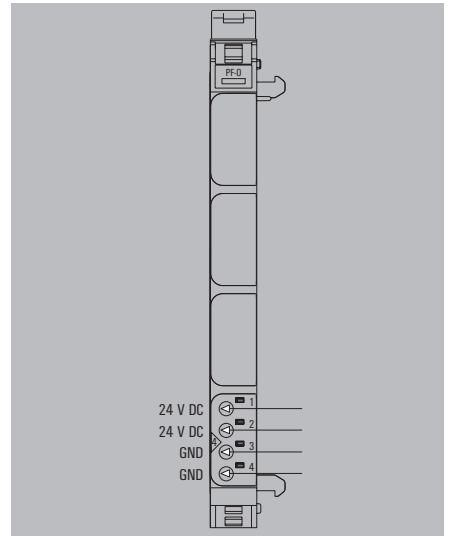
Type	Qty.	Order No.
UR20-PF-0	1	1334740000

**Accessories**

Coding elements
Termination kit
Swivel marker
Connection marker for pusher neutral
Module marker for custom printing
Module marker for neutral
Thermotransfer version (material: polyester)

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000

<b>Replacement parts</b>	Electronic module	UR20-EM-1334740000-SP	1	1347420000
	Basic module	UR20-BM-PF-0-SP	5	1350950000
	Plug-in connector unit	UR20-PK-1334740000-SP	5	1346480000
<b>Note</b>	1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.			





## Accessories

### Potential distribution modules, system accessories

A wide range of accessory modules is provided for the individual requirements of machine and plant construction. Various potential distribution modules are available for directly supplying sensors with 2-wire, 3-wire or 3-wire+FE connection technology from the remote I/O system. These provide 16 “PUSH IN” potential points and supply your application with each auxiliary potential available. An empty module, where the system bus and voltage supply are looped through, allows you to plan expansion slots in a system and to start these up without any interruptions if required.

UR20-ES



UR20-16AUX-I



UR20-16AUX-O



UR20-16AUX-FE



UR20-16AUX-GND-I



UR20-16AUX-GND-O



UR20-AUX-VSYS



## AUX

- Distribution of the various potentials
- Actuator and sensor supply
- 16 "PUSH IN" potential contacts

## UR20-16AUX



## Technical data

## Supply

Supply voltage

## General data

Weight

Dimensions H x W x D

## Note

24 V DC +20 %/-15 %, from input or output current path / FE

84 g

120 mm / 11.5 mm / 76 mm

## Ordering data

## Module variants

Potential distribution module

## Note

## Accessories

Coding elements  
Termination kit  
Swivel marker  
Connection marker for pusher neutral  
Module marker for custom printing  
Module marker for neutral  
Thermotransfer version (material: polyester)  
USB cable (USB A to Micro USB)

## Replacement parts

Electronic module

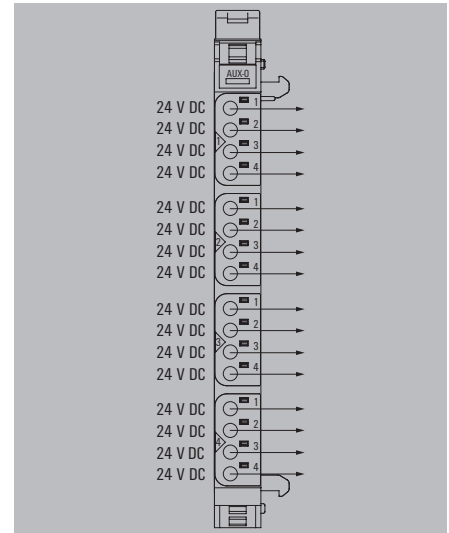
Basic module  
Plug-in connector unit

## Note

Type	Qty.	Order No.
UR20-16AUX-I	1	1334770000
UR20-16AUX-O	1	1334780000
UR20-16AUX-FE	1	1334790000
UR20-16AUX-GND-I	1	1334800000
UR20-16AUX-GND-O	1	1334810000

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-EBK-ACC	5	1346610000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
IE-USB-A-MICRO-1.8M	1	1487980000
UR20-EM-1334770000-SP	1	1347450000
UR20-EM-1334780000-SP	1	1347470000
UR20-EM-1334790000-SP	1	1347480000
UR20-EM-1334800000-SP	1	1347490000
UR20-EM-1334810000-SP	1	1347500000
UR20-BM-SP	5	1350930000
UR20-PK-1334770000-SP	5	1346450000
UR20-PK-1334790000-SP	5	1346490000
UR20-PK-1334800000-SP	5	1346470000
UR20-PK-1334780000-SP	5	1484080000
UR20-PK-1334810000-SP	5	1484090000

1 roll = 1000 label = 1 Qty.  
1 sheet = 60 label = 1 Qty.



## I/O system IP20 – Accessories

## AUX-VSYS

- Optimized hot-swap behaviour by maintaining all output states even if the backplane bus connection is briefly interrupted
- Forwarding of the system bus and the voltage paths
- Passive auxiliary module without fieldbus communication, does not reduce the number of stackable active I/O modules

## Technical data

<b>Supply</b>
Supply voltage
<b>General data</b>
Weight
Dimensions H x W x D
<b>Note</b>

## Ordering data

<b>Module variants</b>
<b>Note</b>

## UR20-AUX-VSYS



Supply voltage	0 V (from output current path)
Weight	70 g
Dimensions H x W x D	120 mm / 11.5 mm / 76 mm
<b>Note</b>	

Type	Qty.	Order No.
UR20-AUX-VSYS	1	2919660000
<b>Note</b>		

## Empty slot module

- Forwarding of system bus and voltage paths
- Space for subsequent expansion
- Basis for all I/O modules

## Technical data

<b>General data</b>
Weight
Dimensions H x W x D
<b>Note</b>

## Ordering data

<b>Module variants</b>	Empty module
<b>Note</b>	

## UR20-ES



Weight	70 g
Dimensions H x W x D	120 / 11.5 / 76
<b>Note</b>	

Type	Qty.	Order No.
UR20-ES	1	1315770000
<b>Note</b>		

## Accessories

Coding elements
Swivel marker
Connection marker for pusher neutral
Module marker for custom printing
Module marker for neutral
Thermotransfer version (material: polyester)
Termination kit
<b>Replacement parts</b>
Electronic module
Basic module
Plug-in connector unit
<b>Note</b>

Type	Qty.	Order No.
KOSM BHZ5.00	100	1483050000
UR20-SM-ACC	20	1339920000
PM 2.7/2.6 MC NE WS	960	1323710000
DEK 5/8-11.5 MC SDR	100	1341610000
DEK 5/8-11.5 MC NE WS	500	1341630000
THM UR20 WS	1	1429420000
UR20-EBK-ACC	5	1346610000
UR20-EM-1315770000-SP	1	1347370000
UR20-BM-SP	5	1350930000
UR20-PK-1315770000-SP	5	1346510000
<b>Note</b>		
1 roll = 1000 label = 1 Qty. 1 sheet = 60 label = 1 Qty.		

**Termination kit**

- Includes an end plate and two end brackets

**UR20-EBK**



**Ordering data**

<b>Module variants</b>	Termination kit
<b>Note</b>	

Type	Qty.	Order No.
UR20-EBK-ACC	5	1346610000

# System overview

## Support for component selection

The following tables will help you to assemble your systems. The exact technical data and descriptions of the products can be found on the respective page here in the catalogue. When selecting, please note the maximum number of 64 active modules and the packaging units for the accessories.

For help in refreshing the power paths, see the calculation example at the bottom right.

### 1. What field bus are you using?

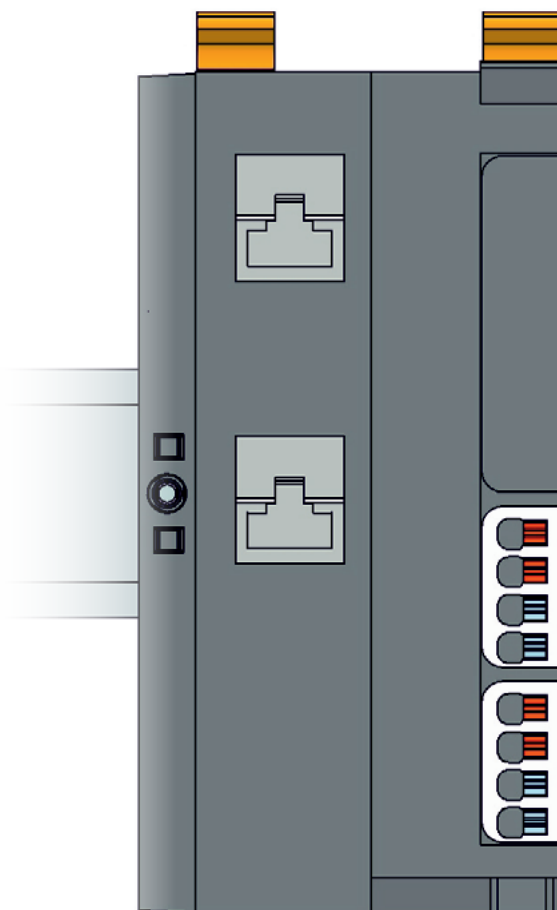
Bus	Type	Order No.	Page
PROFIBUS	UR20-FBC-PB-DP-V2	2614380000	C.5
PROFINET	UR20-FBC-PN-IRT-V2	2566380000	C.7
PROFINET	UR20-FBC-PN-ECO	2659680000	C.9
EtherCAT	UR20-FBC-EC	1334910000	C.11
EtherCAT	UR20-FBC-EC-ECO	2659690000	C.13
Modbus	UR20-FBC-MOD-TCP-V2	2476450000	C.15
Modbus	UR20-FBC-MOD-TCP-ECO	2659700000	C.17
EtherNet/IP	UR20-FBC-EIP	1334920000	C.19
EtherNet/IP	UR20-FBC-EIP-V2	1550550000	C.20
EtherNet/IP	UR20-FBC-EIP-ECO	2799510000	C.23
DeviceNet	UR20-FBC-DN	1334900000	C.25
CANopen	UR20-FBC-CAN	1334890000	C.27
POWERLINK	UR20-FBC-PL	1334940000	C.29
CC-Link V2	UR20-FBC-CC	2625010000	C.31
CC-Link IE TSN	UR20-FBC-CC-TSN	2680260000	C.33
IEC 61162-450	UR20-FBC-IEC61162-450	2661310000	C.35

### 2. What signals do you want to process?

Digital inputs	Order No.	Page
UR20-4DI-P	1315170000	C.37
UR20-4DI-P-3W	2009360000	C.38
UR20-8DI-P-2W	1315180000	C.39
UR20-8DI-P-3W	1394400000	C.40
UR20-8DI-P-3W-HD	1315190000	C.41
UR20-16DI-P	1315200000	C.42
UR20-16DI-P-PLC-INT	1315210000	C.43
UR20-2DI-P-TS	1460140000	C.44
UR20-4DI-P-TS	1460150000	C.45
UR20-4DI-N	1315350000	C.46
UR20-8DI-N-3W	1315370000	C.47
UR20-16DI-N	1315390000	C.48
UR20-16DI-N-PLC-INT	1315400000	C.49
UR20-8DI-HSO-2W	2457240000	C.50
UR20-4DI-2W-230V-AC	1550070000	C.51
Digital outputs		Page
UR20-4DO-P	1315220000	C.53
UR20-4DO-P-2A	1315230000	C.54
UR20-4DO-PN-2A	1394420000	C.55
UR20-8DO-P	1315240000	C.56
UR20-8DO-P-2W-HD	1509830000	C.57
UR20-16DO-P	1315250000	C.58
UR20-16DO-P-PLC-INT	1315270000	C.59
UR20-4DO-N	1315410000	C.60
UR20-4DO-N-2A	1315420000	C.61
UR20-8DO-N	1315430000	C.62
UR20-16DO-N	1315440000	C.63
UR20-16DO-N-PLC-INT	1315450000	C.64
UR20-4DO-ISO-4A	2457250000	C.65
UR20-4RO-SSR-255	1315540000	C.66
UR20-4RO-CO-255	1315550000	C.67
UR20-8DI-P-3W-DIAG	2456530000	C.69
UR20-2PWM-PN-0.5A-V2	3036960000	C.71
UR20-2PWM-PN-2A-V2	3036950000	C.72
UR20-2PWM-M-2.5A-2DI-P	2697910000	C.73
UR20-1SM-50W-6DI2DO-P	2489830000	C.74

### 2. What signals do you want to process?

Analogue inputs	Order No.	Page
UR20-2AI-UI-16	2705620000	C.77
UR20-4AI-UI-12	1394390000	C.78
UR20-4AI-UI-16	1315620000	C.79
UR20-2AI-UI-16-DIAG	2566090000	C.80
UR20-4AI-UI-16-DIAG	1315690000	C.81
UR20-4AI-UHSO-16-DIAG	2566960000	C.82
UR20-8AI-H-16-DIAG	1529370000	C.85
UR20-4AI-UI-16-HD	1506920000	C.83
UR20-4AI-UI-16-DIAG-HD	1506910000	C.84
UR20-8AI-H-16-HD	1315650000	C.86
UR20-8AI-H-16-DIAG-HD	1315720000	C.87
UR20-8AI-PLC-INT	1315670000	C.88
UR20-4AI-UI-DIF-16-DIAG	1993880000	C.89
UR20-4AI-UI-DIF-32-DIAG	2544660000	C.90
UR20-4AI-HART-16-DIAG	2617520000	C.91
UR20-4AI-HART-ISO-16	2828350000	C.92
UR20-15AI-U-16-DIAG	3039320000	C.93
UR20-4AI-RTD-DIAG	1315700000	C.95
UR20-4AI-RTD-HP-DIAG	2456540000	C.96
UR20-8AI-RTD-DIAG-2W	2555940000	C.97
UR20-4AI-TC-DIAG	1315710000	C.98
UR20-4AI-RHS-16-DIAG	2001670000	C.99
UR20-2AI-SG-24-DIAG	1990070000	C.101
UR20-3EM-400V-AC-333MV	2920860000	C.103
UR20-3EM-400V-AC-CT1A	2920830000	C.104
UR20-3EM-400V-AC-CT5A	2920840000	C.105
UR20-3EM-400V-AC-RC	2920850000	C.106
Analogue outputs	Order No.	Page
UR20-2AO-UI-16	2705630000	C.109
UR20-4AO-UI-16	1315680000	C.112
UR20-4AO-UI-16-M	2453880000	C.113
UR20-2AO-UI-16-DIAG	2566100000	C.110
UR20-2AO-UHSO-16-DIAG	2566970000	C.111
UR20-4AO-UI-16-DIAG	1315730000	C.114
UR20-4AO-UI-16-M-DIAG	2453870000	C.115
UR20-4AO-UI-16-HD	1510690000	C.116
Digital counter- and communication modules	Order No.	Page
UR20-1CNT-100-1DO	1315570000	C.119
UR20-2CNT-100	1315590000	C.120
UR20-1CNT-500	1315580000	C.121
UR20-2FCNT-100	1508080000	C.122
UR20-1SSI	1508090000	C.125
UR20-1COM-232-485-422	1315750000	C.126
UR20-1COM-232-485-422-V2	2826800000	C.127
UR20-1COM-SAI-PRO	2007430000	C.128
UR20-4COM-IO-LINK-V2	2819690000	C.129
UR20-1COM-CANOPEN	2489840000	C.130
UR20-1COM-CAN	3040800000	C.131
Further functional modules	Order No.	Page
UR20-4DI-4DO-PN-FSOE-V2	2464580000	C.133
UR20-8DI-PN-FSOE-V2	2464600000	C.134
UR20-4DI-4DO-PN-FSPS-V2	2464570000	C.135
UR20-8DI-PN-FSPS-V2	2464590000	C.136
UR20-4DI-4DO-PN-FSCC	2742570000	C.137
UR20-8DI-PN-FSCC	2742580000	C.138

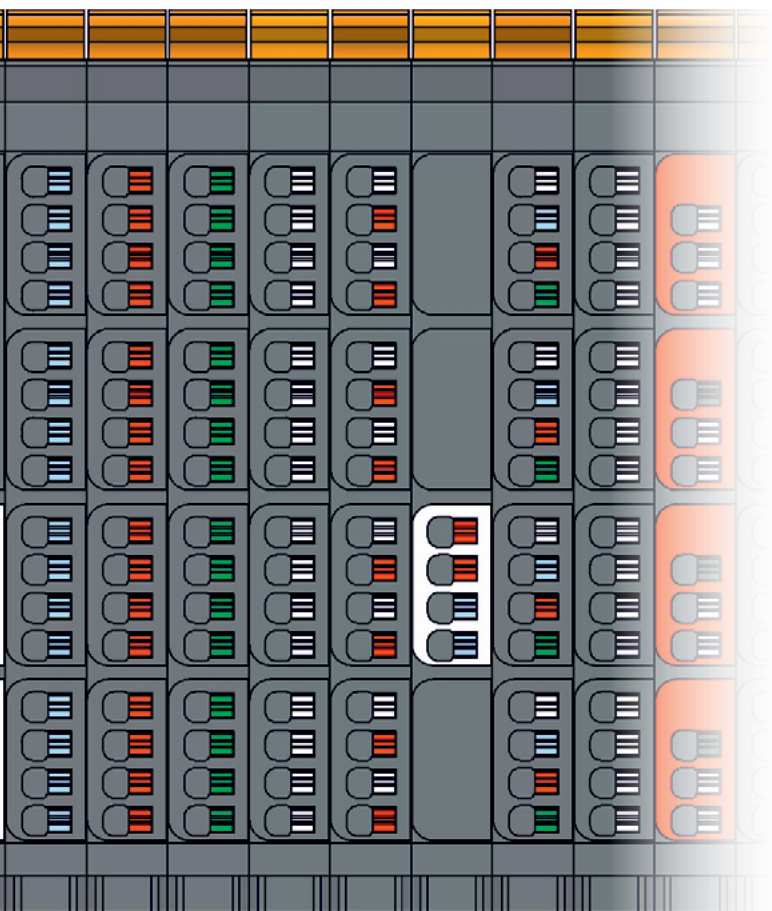


**3. Do you need more than 10 A on the input or output path? Then you will need an additional supply! There is a sample calculation at the bottom of this page.**

	Order No.	Page
UR20-PF-O-1DI-SIL	1335030000	C.139
UR20-PF-O-2DI-SIL	1335050000	C.140
UR20-PF-O-2DI-DELAY-SIL	1335040000	C.141
UR20-PF-I	1334710000	C.143
UR20-PF-O	1334740000	C.144

#### 4. AUX and accessories

AUX	Order No.	Page
UR20-16AUX-I	1334770000	C.147
UR20-16AUX-O	1334780000	C.147
UR20-16AUX-FE	1334790000	C.147
UR20-16AUX-GND-I	1334800000	C.147
UR20-16AUX-GND-O	1334810000	C.147
UR20-AUX-VSYS	2919660000	C.148
Accessories		Page
Termination kit	1346610000	C.141
Swivel marker	1339920000	C.141
Connection marker for pusher custom printing	1323700000	C.141
Connection marker for pusher neutral	1323710000	C.141
Module marker for custom printing	1341610000	C.141
Module marker for neutral	1341630000	C.141
Empty module	1315770000	C.149
Thermotransfer version (Material: Polyester)	1429910000	C.141
Thermotransfer version (material: polyester)	1429420000	C.141
Paper version for Laserprinter	1429430000	C.141



#### Calculation of the power refresh

The additional supply calculation is different for each application. Simultaneity factors and current requirement must be known. The following simplified calculation example serves as an aid. Here, a row consists of 8 DO modules, each of which can accommodate four actuator connections. The actual current demand and therefore the position for a power-feed module for supplying the current path can be calculated from the combination of current demand and simultaneity factor. Please note that u-remote provides you with one input and one output current path. Both must be included in the additional supply calculation. The system voltage doesn't have to be taken into account.

#### Sample calculation

Module no.	Module type	Current requirement of connected devices (A)	Simultaneity factor	Current following calculation of simultaneity factor per module	Current requirement of system – cumulative	Current requirement of system – cumulative with UR20-PF-O
1st module	UR20-8DO-P	0.5	0.5	0.25	0.25	0.25
2nd module	UR20-8DO-P	0.3	0.5	0.15	0.4	0.4
3rd module	UR20-8DO-P	2.0	0.7	1.4	1.8	1.8
4th module	UR20-8DO-P	2.0	0.5	1	2.8	2.8
5th module	UR20-8DO-P	2.0	0.3	2	4.8	4.8
6th module	UR20-8DO-P	0.5	0.2	0.1	4.9	4.9
7th module	UR20-8DO-P	1.0	0.1	0.75	5.65	5.65
8th module	UR20-8DO-P	1.0	0.2	0.2	5.85	5.85
9th module	UR20-8DO-P	1.2	0.5	0.6	6.45	6.45
10th module	UR20-8DO-P	2.0	1.0	2	8.45	8.45
	UR20-PF-O					
11th module	UR20-8DO-P	2.0	1.0	2	10.45	2
12th module	UR20-8DO-P	3.0	1.0	1	11.45	3
13th module	UR20-8DO-P	2.0	1.0	2	13.45	5

#### Current requirement exceeds 10 A!

The output current path therefore needs an additional supply before the 11th module.

10 A are supplied by the UR20-PF-O module. The 1.55 A calculated as remaining after the tenth module must not be added to the 10 A after the UR20-PF-O module!

## Decentralised automation FieldPower® housing for I/O system IP20

Automation located close to the process reduces complexity and increases reliability through shorter and standardised lines. In addition, decentralisation with predefined function modules saves time and money in planning and installation. The wide range of functions of the remote I/O u-remote can be used decentrally in the innovative FieldPower® housing with its unique wiring concept.

C

The modular FieldPower® system offers two housing sizes for a wide variety of u-remote module configurations. Innovative hinged seals or plug-in connectors allow the usage of pre-assembled cables and ensure quick and error-free wiring directly at the point of use.

The required u-remote or u-control modules can be planned in advance on the appropriate terminal rail within the Weidmüller configurator, which significantly simplifies project planning. Further information on the use of u-remote modules in FieldPower® can be found under the QR code at the bottom.

### Your special advantage:

- Easy decentralisation of your individual u-remote combination
- Robust housing with high degree of protection
- Reduced wiring time due to innovative hinged seals or plug-in connectors



For further products, information, technical specifications or additional services, please visit our website: [www.weidmueller.com/fieldpower](http://www.weidmueller.com/fieldpower)





# Remote I/O system in protection class IP67

## Flexible sensor/actuator coupling to control systems in IP67 area in industrial environment

In both machine and plant construction, sensors and actuators from the entire machine have to be connected to the control unit. Depending on the machine, the scope and volume of signals can be very large, so it sometimes makes sense to collect them directly in the field via fieldbuses and I/O systems. The u-remote IP67 product family is particularly suitable for this purpose, as it combines state-of-the-art technology and robustness. Solutions with a subbus system can be used extremely flexibly and in a wide variety of applications.

Direct incorporation in the PLC programming environment, rapid definition of causes in the event of faults and a very narrow and lightweight design are the characteristics which make this system unique on the market.

### Improved Connectivity Technology

With the I-coded M12 connectors the ampacity of the connectors has been increased to 16 A. For a control of significantly more actuators and therefore more decentral remote I/Os are possible. Take advantage of the opportunities for more flexible planning in your system.



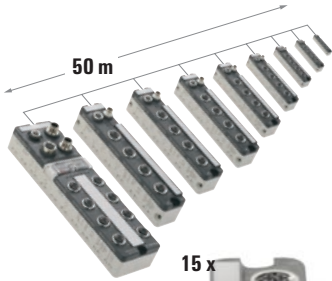
### Efficient engineering

Direct incorporation and configuration in the standard PLC engineering systems with webserver.



**50 % reduced costs through flexible subbus concept**

Subbus length of up to 50 m with up to 15 slaves per subbus enables an extremely flexible setup.



**Advanced diagnostic capabilities**

A channel wise diagnosis based on two-colored LEDs will quickly and clearly shows the state of the individual channels on site.



**Remote I/O system as complete system on the panel**

An extremely wide range of sensor and actuator cables, fieldbus cables and customisable plug-in connectors round off the range.



**Freedom of choice**

Support for all common fieldbus systems.



**PROFINET**

**Remote I/O for digital signal conditioning**



**UR67-PN-HP-8IOL-12-30M**



**UR67-PN-HP-8IOL-12-60M**



**Technical data**

<b>Connections</b>
Fieldbus (BUS-IN)
Fieldbus (BUS-OUT)
Supply voltage (AUX-IN)
Supply voltage (AUX-OUT)
I/O connections
<b>Supply voltage</b>
Operating voltage
Power consumption of module electronics
Module supply
<b>Digital inputs</b>
IO link standard
Galvanic isolation
Input current, low
Input current, high
Status indicator
Diagnostic display
<b>Digital outputs</b>
max. current-carrying capacity per output signal
Output voltage, low
Output voltage, high
Status indicator
Diagnostic display
<b>Fieldbus</b>
Bus system
Transmission rate
Addressing
<b>General data</b>
Length / Width / Height
Earth
Protection degree
Operating temperature
Housing main material / UL 94 flammability rating
<b>Note</b>

1x M12 female 4-pole, D-coded
1x M12 female 4-pole, D-coded
1x M12 plug 5-pole, L-coded
1x M12 socket 5-pole, L-coded
8 x M12 socket 5-pole, A-coded
24 V (18 V DC ... 30 V DC)
160 mA typical
16 A
IO-Link v.1.1, IEC 61131-9
2000 V DC
Type 1 in acc. with IEC 61131-2
Type 1 in acc. with IEC 61131-2
Per channel, via LED, yellow
Per channel, via LED, red
0.5 A, 2 A
- 1 V
max. 2 V
Per channel, via LED, yellow
Per channel, via LED, red
PROFINET V2.3
10/100 MBit/s
DCP
225 mm / 30 mm / 30 mm
480 g
IP67
-20...70 °C
Zinc diecast, UL 94: V-0 /
Download of GSDML-files on <a href="http://www.weidmueller.com">www.weidmueller.com</a>

1x M12 female 4-pole, D-coded
1x M12 female 4-pole, D-coded
1x M12 plug 5-pole, L-coded
1x M12 socket 5-pole, L-coded
8 x M12 socket 5-pole, A-coded
24 V (18 V DC ... 30 V DC)
160 mA typical
16 A
IO-Link v.1.1, IEC 61131-9
2000 V DC
Type 1 in acc. with IEC 61131-2
Type 1 in acc. with IEC 61131-2
Per channel, via LED, yellow
Per channel, via LED, red
0.5 A, 2 A
- 1 V
max. 2 V
Per channel, via LED, yellow
Per channel, via LED, red
PROFINET V2.3
10/100 MBit/s
DCP
200 mm / 59.6 mm / 17.6 mm
500 g
IP67
-20...70 °C
Zinc diecast, UL 94: V-0 /
Download of GSDML-files on <a href="http://www.weidmueller.com">www.weidmueller.com</a>

**Ordering data**

<b>Module variants</b>
IO link, 4 x type A, 4 x type B
<b>Note</b>

Type	Qty.	Order No.
UR67-PN-HP-8IOL-12-30M	1	2426250000

Type	Qty.	Order No.
UR67-PN-HP-8IOL-12-60M	1	2426260000

**Accessories**

M12 sensor cable
M12 sensor cable
Bus cable
Bus cable
Markers
<b>Plug</b>
Metal plug Ethernet, Male M12, D-coded, straight
<b>Note</b>

Type	Qty.	Order No.
SAIL-M12G-5-1.5U	1	9457610150
SAIL-M12W-5-1.5U	1	9457670150
IE-C5DD4UG0015MCSA70-E	1	1044470015
IE-C5DD4UG0015MCSMCS-E	1	1025950015
MF 5/10 MC NE WS	250	1954050000
SAISGS-M4D-6/8-M12	1	1892120000

Further cables can be found at the end of this chapter.

Type	Qty.	Order No.
SAIL-M12G-5-1.5U	1	9457610150
SAIL-M12W-5-1.5U	1	9457670150
IE-C5DD4UG0015MCSA70-E	1	1044470015
IE-C5DD4UG0015MCSMCS-E	1	1025950015
ESG-M 8/20 MC NE WS	200	1027290000
SAISGS-M4D-6/8-M12	1	1892120000

Further cables can be found at the end of this chapter.

## Multiprotocol

Remote I/O for digital signal conditioning



## Technical data

<b>Connections</b>
Fieldbus (BUS-IN)
Fieldbus (BUS-OUT)
Supply voltage (AUX-IN)
Supply voltage (AUX-OUT)
I/O connections
<b>Supply voltage</b>
Operating voltage
Power consumption of module electronics
Module supply
<b>Digital inputs</b>
Input current, low
Input current, high
Status indicator
Diagnostic display
<b>Digital outputs</b>
max. current-carrying capacity per output signal
Output voltage, low
Output voltage, high
Status indicator
Diagnostic display
<b>Fieldbus</b>
Bus system
Transmission rate
Addressing
<b>General data</b>
Length / Width / Height
Earth
Protection degree
Operating temperature
Housing main material / UL 94 flammability rating
<b>Note</b>

## Ordering data

<b>Module variants</b>
16 digital inputs
16 digital out
<b>Note</b>

## Accessories

M12 sensor cable
M12 sensor cable
Bus cable
Bus cable
Markers
<b>Plug</b>
Metal plug Ethernet, Male M12, D-coded, straight
<b>Note</b>

## UR67-MP-HP-16DI-12-60M



1x M12 female 4-pole, D-coded
1x M12 female 4-pole, D-coded
1x M12 plug 5-pole, L-coded
1x M12 socket 5-pole, L-coded
8 x M12 socket 5-pole, A-coded
24 V (18 V DC ... 30 V DC)
100 mA typical
16 A
Type 1 in acc. with IEC 61131-2
Type 1 in acc. with IEC 61131-2
Per channel, via LED, yellow
Per channel, via LED, red
PROFINET V2.3
10/100 MBit/s
Via rotary coding switch, DCP
200 mm / 59.6 mm / 17.6 mm
500 g
IP67
-20...70 °C
Zinc diecast, UL 94: V-0 / UL 94
Download the configuration files from <a href="http://www.weidmueller.com">www.weidmueller.com</a>

Type	Qty.	Order No.
UR67-MP-HP-16DI-12-60M	1	2426270000

Type	Qty.	Order No.
SAIL-M12G-5-1.5U	1	9457610150
SAIL-M12W-5-1.5U	1	9457670150
IE-C5DD4UG0015MCSA70-E	1	1044470015
IE-C5DD4UG0015MCSMCS-E	1	1025950015
ESG-M 8/20 MC NE WS	200	1027290000
SAISGS-M4D-6/8-M12	1	1892120000

Further cables can be found at the end of this chapter.

## UR67-MP-HP-16DO-12-60M



1x M12 female 4-pole, D-coded
1x M12 female 4-pole, D-coded
1x M12 plug 5-pole, L-coded
1x M12 socket 5-pole, L-coded
8 x M12 socket 5-pole, A-coded
24 (18 V DC ... 30 V DC)
100 mA typical
16 A
2 A
min. (UL-1)
max. 2 V
Per channel, via LED, yellow
Per channel, via LED, red
PROFINET V2.3, EtherNet/IP, EtherCAT, Multiprotocol
10/100 MBit/s
Via rotary coding switch, DCP
200 mm / 59.6 mm / 17.6 mm
500 g
IP67
20...70 °C
Zinc diecast, UL 94: V-0 / UL 94
Download the configuration files from <a href="http://www.weidmueller.com">www.weidmueller.com</a>

Type	Qty.	Order No.
UR67-MP-HP-16DO-12-60M	1	2426280000

Type	Qty.	Order No.
SAIL-M12G-5-1.5U	1	9457610150
SAIL-M12W-5-1.5U	1	9457670150
IE-C5DD4UG0015MCSA70-E	1	1044470015
IE-C5DD4UG0015MCSMCS-E	1	1025950015
ESG-M 8/20 MC NE WS	200	1027290000
SAISGS-M4D-6/8-M12	1	1892120000

Further cables can be found at the end of this chapter.

**Multiprotocol**

Remote I/O for digital signal conditioning



**UR67-MP-HP-8DIDO-12-60M**



**UR67-MP-HP-16DIO-12-60M**



**Technical data**

<b>Connections</b>
Fieldbus (BUS-IN)
Fieldbus (BUS-OUT)
Supply voltage (AUX-IN)
Supply voltage (AUX-OUT)
I/O connections
<b>Supply voltage</b>
Operating voltage
Power consumption of module electronics
Module supply
<b>Digital inputs</b>
Input current, low
Input current, high
Status indicator
Diagnostic display
<b>Digital outputs</b>
max. current-carrying capacity per output signal
Output voltage, low
Output voltage, high
Status indicator
Diagnostic display
<b>Fieldbus</b>
Bus system
Transmission rate
Addressing
<b>General data</b>
Length / Width / Height
Earth
Protection degree
Operating temperature
Housing main material / UL 94 flammability rating
<b>Note</b>

1x M12 female 4-pole, D-coded
1x M12 female 4-pole, D-coded
1x M12 plug 5-pole, L-coded
1x M12 socket 5-pole, L-coded
8 x M12 socket 5-pole, A-coded
24 V (18 V DC ... 30 V DC)
100 mA typical
16 A
Type 1 in acc. with IEC 61131-2
Type 1 in acc. with IEC 61131-2
Per channel, via LED, yellow
Per channel, via LED, red
2 A
min. (UL-1)
max. 2 V
Per channel, via LED, yellow
Per channel, via LED, red
PROFINET V2.3, EtherNet/IP, EtherCAT, Multiprotocol
10/100 MBit/s
Via rotary coding switch, DCP
200 mm / 59.6 mm / 17.6 mm
500 g
IP67
-20...70 °C
Zinc diecast, UL 94: V-0 / UL 94
Download the configuration files from <a href="http://www.weidmueller.com">www.weidmueller.com</a>

1x M12 female 4-pole, D-coded
1x M12 female 4-pole, D-coded
1x M12 plug 5-pole, L-coded
1x M12 socket 5-pole, L-coded
8 x M12 socket 5-pole, A-coded
24 V (18 V DC ... 30 V DC)
100 mA typical
16 A
Type 1 in acc. with IEC 61131-2
Type 1 in acc. with IEC 61131-2
Per channel, via LED, yellow
Per channel, via LED, red
2 A
min. (UL-1)
max. 2 V
Per channel, via LED, yellow
Per channel, via LED, red
PROFINET V2.3, EtherNet/IP, EtherCAT, Multiprotocol
10/100 MBit/s
Via rotary coding switch, DCP
200 mm / 59.6 mm / 17.6 mm
500 g
IP67
20...70 °C
Zinc diecast, UL 94: V-0 / UL 94
Download the configuration files from <a href="http://www.weidmueller.com">www.weidmueller.com</a>

**Ordering data**

<b>Module variants</b>	8 digital inputs / 8 digital outputs 16 universal channels
<b>Note</b>	

Type	Qty.	Order No.
UR67-MP-HP-8DIDO-12-60M	1	2426290000

Type	Qty.	Order No.
UR67-MP-HP-16DIO-12-60M	1	2512840000

**Accessories**

M12 sensor cable
M12 sensor cable
Bus cable
Bus cable
Markers
<b>Plug</b>
Metal plug Ethernet, Male M12, D-coded, straight
<b>Note</b>

Type	Qty.	Order No.
SAIL-M12G-5-1.5U	1	9457610150
SAIL-M12W-5-1.5U	1	9457670150
IE-C5DD4UG0015MCSA70-E	1	1044470015
IE-C5DD4UG0015MCSMCS-E	1	1025950015
ESG-M 8/20 MC NE WS	200	1027290000
SAISGS-M4D-6/8-M12	1	1892120000

Further cables can be found at the end of this chapter.

Type	Qty.	Order No.
SAIL-M12G-5-1.5U	1	9457610150
SAIL-M12W-5-1.5U	1	9457670150
IE-C5DD4UG0015MCSA70-E	1	1044470015
IE-C5DD4UG0015MCSMCS-E	1	1025950015
ESG-M 8/20 MC NE WS	200	1027290000
SAISGS-M4D-6/8-M12	1	1892120000

Further cables can be found at the end of this chapter.

## Multiprotocol

Remote I/O for digital signal conditioning



## Technical data

<b>Connections</b>
Fieldbus (BUS-IN)
Fieldbus (BUS-OUT)
Supply voltage (AUX-IN)
Supply voltage (AUX-OUT)
I/O connections
<b>Supply voltage</b>
Operating voltage
Power consumption of module electronics
Module supply
<b>Digital inputs</b>
Input current, low
Input current, high
Status indicator
Diagnostic display
<b>Digital outputs</b>
max. current-carrying capacity per output signal
Output voltage, low
Output voltage, high
Status indicator
Diagnostic display
<b>Fieldbus</b>
Bus system
Transmission rate
Addressing
<b>General data</b>
Length / Width / Height
Earth
Protection degree
Operating temperature
Housing main material / UL 94 flammability rating
<b>Note</b>

## Ordering data

<b>Module variants</b>
16 digital inputs
16 digital out
<b>Note</b>

## Accessories

M12 sensor cable
M12 sensor cable
Bus cable
Markers
<b>Note</b>

## UR67-MP-78-16DI-12-60M



1x M12 female 4-pole, D-coded
1x M12 female 4-pole, D-coded
1x 7/8" plug 5-pole
1x 7/8" socket 5-pole
8 x M12 socket 5-pole, A-coded
24 V (18 V DC ... 30 V DC)
100 mA typical
9 A, 12 A (see manual)
Type 1 in acc. with IEC 61131-2
Type 1 in acc. with IEC 61131-2
Per channel, via LED, yellow
Per channel, via LED, red
PROFINET V2.3, EtherNet/IP, EtherCAT, Multiprotocol
10/100 MBit/s
Via rotary coding switch, DCP
206 mm / 59.6 mm / 17.3 mm
520 g
IP67
-20...70 °C
Zinc diecast, UL 94: V-0 / UL 94
Download the configuration files from <a href="http://www.weidmueller.com">www.weidmueller.com</a>

Type	Qty.	Order No.
UR67-MP-78-16DI-12-60M	1	2426300000

Type	Qty.	Order No.
SAIL-M12G-5-1.5U	1	9457610150
SAIL-M12W-5-1.5U	1	9457670150
IE-C5DD4UG0015MCSMCS-E	1	1025950015
ESG-M 8/20 MC NE WS	200	1027290000

Further cables can be found at the end of this chapter.

## UR67-MP-78-16DO-12-60M



1x M12 female 4-pole, D-coded
1x M12 female 4-pole, D-coded
1x 7/8" plug 5-pole
1x 7/8" socket 5-pole
8 x M12 socket 5-pole, A-coded
24 (18 V DC ... 30 V DC)
100 mA typical
9 A, 12 A (see manual)
2 A
min. (UL-1)
max. 2 V
Per channel, via LED, yellow
Per channel, via LED, red
PROFINET V2.3, EtherNet/IP, EtherCAT, Multiprotocol
10/100 MBit/s
Via rotary coding switch, DCP
206 mm / 59.6 mm / 17.3 mm
520 g
IP67
20...70 °C
Zinc diecast, UL 94: V-0 / UL 94
Download the configuration files from <a href="http://www.weidmueller.com">www.weidmueller.com</a>

Type	Qty.	Order No.
UR67-MP-78-16DO-12-60M	1	2426310000

Type	Qty.	Order No.
SAIL-M12G-5-1.5U	1	9457610150
SAIL-M12W-5-1.5U	1	9457670150
IE-C5DD4UG0015MCSMCS-E	1	1025950015
ESG-M 8/20 MC NE WS	200	1027290000

Further cables can be found at the end of this chapter.

**Multiprotocol**

Remote I/O for digital signal conditioning



**UR67-MP-78-16DIO-12-60M**



**UR67-MP-78-8DIDO-12-60M**



**Technical data**

<b>Connections</b>
Fieldbus (BUS-IN)
Fieldbus (BUS-OUT)
Supply voltage (AUX-IN)
Supply voltage (AUX-OUT)
I/O connections
<b>Supply voltage</b>
Operating voltage
Power consumption of module electronics
Module supply
<b>Digital inputs</b>
Input current, low
Input current, high
Status indicator
Diagnostic display
<b>Digital outputs</b>
max. current-carrying capacity per output signal
Output voltage, low
Output voltage, high
Status indicator
Diagnostic display
<b>Fieldbus</b>
Bus system
Transmission rate
Addressing
<b>General data</b>
Length / Width / Height
Earth
Protection degree
Operating temperature
Housing main material / UL 94 flammability rating
<b>Note</b>

1x M12 female 4-pole, D-coded
1x M12 female 4-pole, D-coded
1x 7/8" plug 5-pole
1x 7/8" socket 5-pole
8 x M12 socket 5-pole, A-coded
24 V (18 V DC ... 30 V DC)
100 mA typical
9 A, 12 A (see manual)
Type 1 in acc. with IEC 61131-2
Type 1 in acc. with IEC 61131-2
Per channel, via LED, yellow
Per channel, via LED, red
2 A
min. (UL -1)
max. 2 V
Per channel, via LED, yellow
Per channel, via LED, red
PROFINET V2.3, EtherNet/IP, EtherCAT, Multiprotocol
10/100 MBit/s
Via rotary coding switch, DCP
206 mm / 59.6 mm / 17.3 mm
500 g
IP67
20...70 °C
Zinc diecast, UL 94: V-0 / UL 94
Download the configuration files from <a href="http://www.weidmueller.com">www.weidmueller.com</a>

1x M12 female 4-pole, D-coded
1x M12 female 4-pole, D-coded
1x 7/8" plug 5-pole
1x 7/8" socket 5-pole
8 x M12 socket 5-pole, A-coded
24 V (18 V DC ... 30 V DC)
100 mA typical
9 A, 12 A (see manual)
Type 1 in acc. with IEC 61131-2
Type 1 in acc. with IEC 61131-2
Per channel, via LED, yellow
Per channel, via LED, red
2 A
min. (UL -1)
max. 2 V
Per channel, via LED, yellow
Per channel, via LED, red
PROFINET V2.3, EtherNet/IP, EtherCAT, Multiprotocol
10/100 MBit/s
Via rotary coding switch, DCP
206 mm / 59.6 mm / 17.3 mm
520 g
IP67
20...70 °C
Zinc diecast, UL 94: V-0 / UL 94
Download the configuration files from <a href="http://www.weidmueller.com">www.weidmueller.com</a>

**Ordering data**

<b>Module variants</b>
16 universal channels
8 digital inputs / 8 digital outputs
<b>Note</b>

Type	Qty.	Order No.
UR67-MP-78-16DIO-12-60M	1	2512830000

Type	Qty.	Order No.
UR67-MP-78-8DIDO-12-60M	1	2426320000

**Accessories**

M12 sensor cable
M12 sensor cable
Bus cable
Markers
<b>Note</b>

Type	Qty.	Order No.
SAIL-M12G-5-1.5U	1	9457610150
SAIL-M12W-5-1.5U	1	9457670150
IE-C5DD4UG0015MCSMCS-E	1	1025950015
ESG-M 8/20 MC NE WS	200	1027290000

Further cables can be found at the end of this chapter.

Type	Qty.	Order No.
SAIL-M12G-5-1.5U	1	9457610150
SAIL-M12W-5-1.5U	1	9457670150
IE-C5DD4UG0015MCSMCS-E	1	1025950015
ESG-M 8/20 MC NE WS	200	1027290000

Further cables can be found at the end of this chapter.



## SAI Active Universal Pro

### Professional versions of the Remote I/O System featuring IP67 protection

The modules in the SAI Active Universal Pro systems provide additional I/O and functional modules for more versatile topologies in the field. The extension modules come in a compact, space-saving design. They can also be mounted on the side because of the additional drilled holes in the side of the housing. Up to 15 extension modules can be connected over a distance of 50 metres using a shielded, standard M8 sensor cable and the IP20 master module UR20-1COM-SAI-PRO.

In addition to the digital input and output modules, we also offer analogue modules. The digital input and output modules are also available in M8 and M12 variants. The analogue modules are available with M12 connections. Markers are included with every SAI Active module for labelling the I/O channels and the entire device. These markers can be printed on using the PrintJet system from Weidmüller.



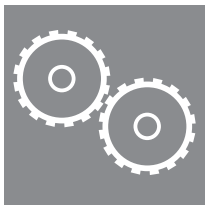
#### Cost-effective Subbus system

Subbus modules are wired up using conventional, shielded, standard M8 or M12 sensor cables. Thus there is no need for expensive custom cables. The extension modules enable versatile expansion and minimise the costs associated with the fieldbus interface. The modules do not, however, detract from the performance of the fieldbus system.



#### Simplified installation

The modules have a compact, space-saving design with additional holes drilled on the side of the housing: this allows them to be installed in a quick and versatile manner. All SAI Active modules with digital inputs or digital outputs are optionally available with standard M8 or M12 connection systems. The outputs are short-circuit-proof and protected against polarity reversal.



#### Efficient engineering

All Pro system modules are described in the standardised fieldbus specific device description files. They can be integrated into any controller unit and corresponding engineering system regardless of the particular manufacturer. The configuration (whether for the input, DESINA input, or output) is carried out without any additional software. Any user can configure directly from the engineering system.

## Subbus modules with digital input/outputs

### Technical data

Connections	
Supply voltage (AUX-IN)	
Connection to Subbus (SUB-IN)	
Connection to Subbus (SUB-OUT)	
I/O connections	
Supply voltage	
Operating voltage	
Contact load	
Max. total current module	
Digital inputs	
Permitted input voltage	
Input voltage, low	
Input voltage, high	
Input current, low	
Input current, high	
Input filter	
Separation of potentials to module electronics	
Digital outputs	
max. current-carrying capacity per output signal	
Separation of potentials to module electronics	
Switching frequency, resistive load	
Switching frequency, inductive load	
Switching frequency, lamp load	
Short-circuit proof	
Output voltage, low	
Output voltage, high	
Max. total current outputs	
Fieldbus	
Bus system	
Addressing	
System integration	
General data	
Length / Width / Height	
Earth	
Protection degree	
Operating temperature	
Storage temperature	
Housing main material / UL 94 flammability rating	
Certificate	
Note	

### Ordering data

Module variants	
	8 digital in; 8 digital in / 8 digital out
	8 digital inputs; 8 digital inputs / 8 digital outputs
	8 digital outputs 2A
	8 digital outputs 2A
Note	

### Accessories

Miscellaneous accessories	
	Marker, transparent
	M12 protective cap
	M8 protective cap
Note	

### SAI-AU Digital



1 x M8 plug 4-pole, A-coded, 1 x M12 plug 5-pole
1 x M8 plug 4-pole, A-coded
1 x M8 female 4-pole, A-coded
8 x M8 socket 3-pole
24 V (18 V DC ... 30 V DC)
Per PIN max. 4 A
8 A
-30 V to +30 V (protected against polarity reversal)
<5 V in accordance with EN 61131-2 Type 1
>15 V in accordance with EN 61131-2 Type 1
<15 mA in accordance with EN 61131-2 Type 1
2 mA to 15 mA in accordance with EN 61131-2 Type 1
1 ms, 3 ms, 5 ms, 10 ms, configurable
none
Subbus
automatic
automatic
155 mm / 30 mm / 32 mm
<200 g
IP67
-40...70 °C acc. to IEC 61131-2
-40...85 °C acc. to IEC 61131-2
Pocan, PBT / 5VA
CE, cULus

Type	Qty.	Order No.
SAI-AU M8 SB 8DI-V2	1	3096500000
SAI-AU M12 SB 8DI-V2	1	3096470000

Type	Qty.	Order No.
ESG 8/13.5/43.3 SAI AU	5	1912130000
SAI-SK-M12-UNI 2029	20	2330260000
SAI-SK M8	50	1802760000

Further cables can be found at the end of this chapter.

### SAI-AU Digital



1 x M8 plug 4-pole, A-coded, 1 x M12 female 5-pole
1 x M8 plug 4-pole, A-coded
1 x M8 female 4-pole, A-coded
8 x M8 socket 3-pole
24 V (18 V DC ... 30 V DC)
Per PIN max. 4 A
8 A
-30 V to +30 V (protected against polarity reversal)
<5 V in accordance with EN 61131-2 Type 1
>15 V in accordance with EN 61131-2 Type 1
<15 mA in accordance with EN 61131-2 Type 1
2 mA to 15 mA in accordance with EN 61131-2 Type 1
1 ms, 3 ms, 5 ms, 10 ms, configurable
none
0.5 A
none
max. 100 Hz
max. 1 Hz
max. 8 Hz
Yes, cut-off for short circuit and error message
0 V DC
Supply voltage less 0.7 V DC
4 A
Subbus
automatic
automatic
180 mm / 30 mm / 32 mm
<200 g
IP67
-40...70 °C acc. to IEC 61131-2
-40...85 °C acc. to IEC 61131-2
Pocan, PBT / 5VA
CE, cULus

Type	Qty.	Order No.
SAI-AU M8 SB 8DIO-V2	1	3096510000
SAI-AU M12 SB 8DIO-V2	1	3096480000
SAI-AU M8 SB 8DO 2A-V2	1	3096630000
SAI-AU M12 SB 8DO 2A-V2	1	3096490000

Type	Qty.	Order No.
ESG 8/13.5/43.3 SAI AU	5	1912130000
SAI-SK-M12-UNI 2029	20	2330260000
SAI-SK M8	50	1802760000

Further cables can be found at the end of this chapter.





## SAI cable

In an increasingly digital environment, the reliable transmission of power, signals and data requires the rapid availability of standardised cabling solutions and the development of individual special cables.

Irrespective of whether you require signal cables for sensor lines or data cables for Ethernet lines with different mating profiles – Weidmüller offers the right solution for every field of application.

**We offer a wide range of products in this category:**

- Standard cables from the catalogue
- Configuration of specialised variants using the online product wizard
- Customer-specific variants with custom cable lengths, connecting plugs, markings or colours

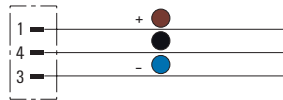


Sensor cables from Weidmüller: shown here with yellow and black cables, together with bus cables

M12 cables with connector at one end only

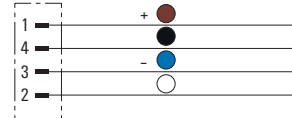
3-pole

Female



4-pole

Female



Technical data

Nominal current
Nominal voltage
Temperature range of housing
Core cross-section
Protection degree
Contact surface
Sheath material
Insulation
<b>Note</b>

4 A
250 V
-25...+85 °C
0.34 mm <sup>2</sup>
IP65, IP66, IP67, IP68, IP69, when screwed in
Gold-plated
PVC
PVC
Further technical data of the cables on <a href="http://eshop.weidmueller.com">eshop.weidmueller.com</a>

4 A
250 V
-25...+85 °C
0.34 mm <sup>2</sup>
IP65, IP66, IP67, IP68, when screwed in
Gold-plated
PVC
PVC
Further technical data of the cables on <a href="http://eshop.weidmueller.com">eshop.weidmueller.com</a>

Ordering data

<b>Female, straight</b>
M12 straight socket, PVC
M12 straight socket, halogen-free PUR
M12 straight socket, halogen-free PUR, yellow
M12 straight socket, halogen-free PUR, resistant to welding beads
<b>Female, angled</b>
M12 angled socket, PVC
M12 angled socket, halogen-free PUR
M12 angled socket, halogen-free PUR, yellow
M12 angled socket, halogen-free PUR, resistant to welding beads
<b>Note</b>

Type	Qty.	Order No.
SAIL-M12BG-3-1.5V	1	1925570150
SAIL-M12BG-3-1.5U	1	9457820150
SAIL-M12BG-3-1.5T	1	1968590150
SAIL-M12BW-3-1.5V	1	1925630150
SAIL-M12BW-3-1.5U	1	9457320150
SAIL-M12BW-3-1.5T	1	1968560150
Other lengths on request		

Type	Qty.	Order No.
SAIL-M12BG-4-1.5T	1	1968580150
SAIL-M12BG-4-1.5U	1	9457730150
SAIL-M12BG-4-1.5UGE	1	1092920150
SAIL-M12BG-4-1.5V	1	1925580150
SAIL-M12BW-4-1.5V	1	1925640150
SAIL-M12BW-4-1.5U	1	9457740150
SAIL-M12BW-4-1.5UGE	1	1092960150
SAIL-M12BW-4-1.5T	1	1968570150
Other lengths on request		

Accessories

<b>Tools</b>
Cutting tool
Sheathing strippers, For UTP and STP data cables
Mounting tool
<b>Marking tags</b>
Transparent sleeves
Insertion label, yellow, 18 mm
<b>Note</b>

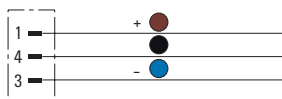
Type	Qty.	Order No.
KT 8	1	9002650000
AM 12	1	9030060000
SCREWTY-M12-DM	1	1900001000
SAI-SCREWTY BOX	1	1939180000
STRIPPER 6-16 RED-LINE	1	9203110000
TM-I 18 MC NE WS	320	1718431044
TM-I 18 MC NE GE	320	1718431687

Type	Qty.	Order No.
KT 8	1	9002650000
AM 12	1	9030060000
SCREWTY-M12-DM	1	1900001000
SAI-SCREWTY BOX	1	1939180000
STRIPPER 6-16 RED-LINE	1	9203110000
TM-I 18 MC NE WS	320	1718431044
TM-I 18 MC NE GE	320	1718431687

### M8 cables with connector at one end only

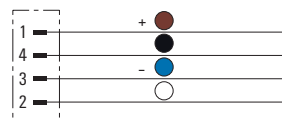
#### 3-pole

Female



#### 4-pole

Female



#### Technical data

Nominal current
Nominal voltage
Temperature range of housing
Core cross-section
Protection degree
Contact surface
Sheath material
Insulation
<b>Note</b>

4 A
60 V
-25...+85 °C
0.25 mm <sup>2</sup>
IP65, IP66, IP67, IP68, IP69, when screwed in
Gold-plated
PVC
PVC
Further technical data of the cables on <a href="http://eshop.weidmueller.com">eshop.weidmueller.com</a>

4 A
30 V
-25...+85 °C
0.25 mm <sup>2</sup>
IP65, IP66, IP67, IP68, IP69, when screwed in
Gold-plated
PVC
PVC
Further technical data of the cables on <a href="http://eshop.weidmueller.com">eshop.weidmueller.com</a>

#### Ordering data

<b>Female, straight</b>
M8 straight socket, PVC
M8 straight socket, halogen-free PUR
M8 straight socket, halogen-free PUR, yellow
<b>Female, angled</b>
M8 angled socket, PVC
M8 angled socket, halogen-free PUR
M8 angled socket, halogen-free PUR, yellow
<b>Note</b>

Type	Qty.	Order No.
SAIL-M8BG-3-1.5V	1	1927240150
SAIL-M8BG-3-1.5U	1	9457450150
SAIL-M8BG-3-1.5UGE	1	1093190150
SAIL-M8BW-3-1.5V	1	1927320150
SAIL-M8BW-3-1.5U	1	9457380150
SAIL-M8BW-3-1.5UGE	1	1093220150
Other lengths on request		

Type	Qty.	Order No.
SAIL-M8BG-4-1.5V	1	1927260150
SAIL-M8BG-4-1.5U	1	9457850150
SAIL-M8BG-4-1.5UGE	1	1093200150
SAIL-M8BW-4-1.5V	1	1927340150
SAIL-M8BW-4-1.5U	1	9456150150
SAIL-M8BW-4-1.5UGE	1	1093240150
Other lengths on request		

#### Accessories

<b>Tools</b>
Cutting tool
Sheathing strippers, For UTP and STP data cables
Mounting tool
<b>Marking tags</b>
Transparent sleeves
Insertion label, yellow, 18 mm
<b>Note</b>

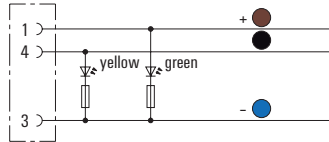
Type	Qty.	Order No.
KT 8	1	9002650000
AM 12	1	9030060000
SCREWTY-M12-DM	1	1900001000
SAI-SCREWTY BOX	1	1939180000
STRIPPER 6-16 RED-LINE	1	9203110000
TM-I 18 MC NE WS	320	1718431044
TM-I 18 MC NE GE	320	1718431687

Type	Qty.	Order No.
KT 8	1	9002650000
AM 12	1	9030060000
SCREWTY-M12-DM	1	1900001000
SAI-SCREWTY BOX	1	1939180000
STRIPPER 6-16 RED-LINE	1	9203110000
TM-I 18 MC NE WS	320	1718431044
TM-I 18 MC NE GE	320	1718431687

**M12 / M8 cables with connector at one end only with LED**

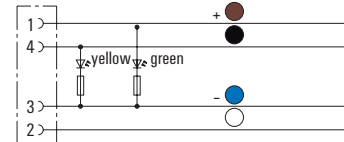
**3-pole / 2 LEDs**

Female



**4-pole / 2 LEDs**

Female



**Technical data**

Nominal current
Nominal voltage
Temperature range of housing
Core cross-section
Protection degree
Contact surface
Sheath material
Insulation
<b>Note</b>

4 A
24 V
-25...+85 °C
0.34 mm <sup>2</sup>
IP65, IP66, IP67, IP68, when screwed in
Gold-plated
PUR
PP
Further technical data of the cables on <a href="http://eshop.weidmueller.com">eshop.weidmueller.com</a>

4 A
24 V
-25...+85 °C
0.34 mm <sup>2</sup>
IP65, IP66, IP67, IP68, when screwed in
Gold-plated
PVC
PVC
Further technical data of the cables on <a href="http://eshop.weidmueller.com">eshop.weidmueller.com</a>

**Ordering data**

<b>Female, angled</b>
M12 angled socket, PVC
M12 angled socket, halogen-free PUR
M12 angled socket, halogen-free PUR, yellow
M12 angled socket, halogen-free PUR, resistant to welding beads
M8 angled socket, PVC
M8 angled socket, halogen-free PUR
M8 angled socket, halogen-free PUR, yellow
<b>Note</b>

Type	Qty.	Order No.
SAIL-M12BW-3L1.5U	1	9457800150
SAIL-M12BW-3L1.5T	1	1004330150
SAIL-M8BW-3L1.5V	1	1927350150
SAIL-M8BW-3L1.5U	1	9457460150
SAIL-M8BW-3L1.5UGE	1	1093210150
Other lengths on request		

Type	Qty.	Order No.
SAIL-M12BW-4-2L1.5V	1	1925470150
SAIL-M12BW-4-2L1.5U	1	9456380150
SAIL-M12BW-4-2L1.5UGE	1	1092950150
SAIL-M12BW-4-2L1.5T	1	1007000150
SAIL-M8BW-4L1.5V	1	1927360150
SAIL-M8BW-4L1.5U	1	1906400150
SAIL-M8BW-4L1.5UGE	1	1093230150
Other lengths on request		

**Accessories**

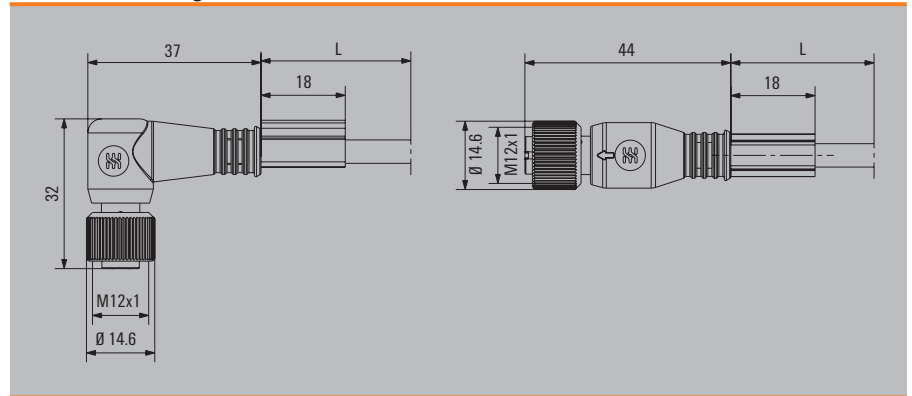
<b>Tools</b>
Cutting tool
Sheathing strippers, For UTP and STP data cables
Mounting tool
<b>Marking tags</b>
Transparent sleeves
Insertion label, yellow, 18 mm
<b>Note</b>

Type	Qty.	Order No.
KT 8	1	9002650000
AM 12	1	9030060000
SCREWTY-M12-DM	1	1900001000
SAI-SCREWTY BOX	1	1939180000
STRIPPER 6-16 RED-LINE	1	9203110000
TM-I 18 MC NE WS	320	1718431044
TM-I 18 MC NE GE	320	1718431687

Type	Qty.	Order No.
KT 8	1	9002650000
AM 12	1	9030060000
SCREWTY-M12-DM	1	1900001000
SAI-SCREWTY BOX	1	1939180000
STRIPPER 6-16 RED-LINE	1	9203110000
TM-I 18 MC NE WS	320	1718431044
TM-I 18 MC NE GE	320	1718431687

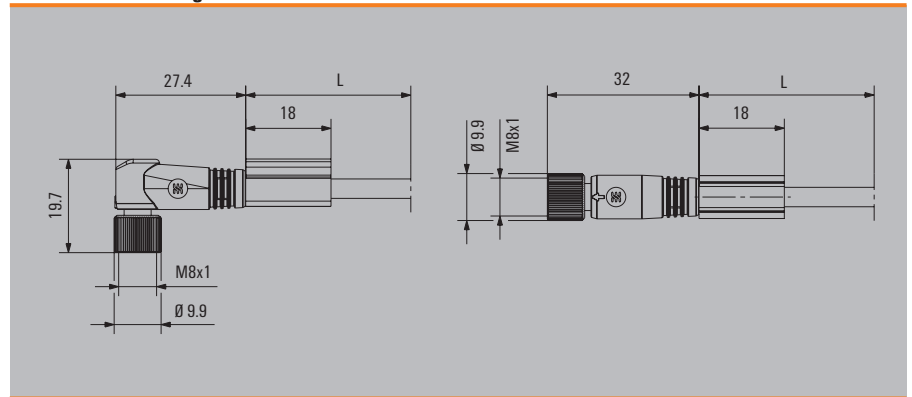
M12 straight/angled socket

Dimensioned drawing



M8 straight/angled socket

Dimensioned drawing



Screwty® set-DM

Contents:

- 1x interchangeable bit
- 1x torque handle
- 1x adjustment aid for Screwty® torque (M8: 0.5 - 0.6 Nm / M12: 0.8 - 1.2 Nm)
- 1x Screwty® M12, M8, M12 F, M8 F attachment

Ordering data

Type	Qty.	Order No.
Screwty®-Set-DM	1	1920000000





Selection table

Order No.	Product designation	Connection system			Communication			
		M8	M12	7/8"	Subbus	PROFIBUS	PROFINET	MP = PN, EIP & EC
<b>u-remote UR67</b>								
2426250000	UR67-PN-HP-8IOL-12-30M		X				X	
2426260000	UR67-PN-HP-8IOL-12-60M		X				X	
2426270000	UR67-MP-HP-16DI-12-60M		X					X
2426280000	UR67-MP-HP-16DO-12-60M		X					X
2512840000	UR67-MP-HP-16DIO-12-60M		X					X
2426290000	UR67-MP-HP-8DIDO-12-60M		X					X
2426320000	UR67-MP-78-8DIDO-12-60M			X				X
2426300000	UR67-MP-78-16DI-12-60M			X				X
2426310000	UR67-MP-78-16DO-12-60M			X				X
2512830000	UR67-MP-78-16DIO-12-60M			X				X
<b>SAI Active Universal Pro</b>								
3096500000	SAI-AU M8 SB 8DI-V2	X			X			
3096630000	SAI-AU M8 SB 8DO 2A-V2	X			X			
3096510000	SAI-AU M8 SB 8DIO-V2	X			X			
3096470000	SAI-AU M12 SB 8DI-V2		X		X			
3096490000	SAI-AU M12 SB 8DO 2A-V2		X		X			
3096480000	SAI-AU M12 SB 8DIO-V2		X		X			
3096450000	SAI-AU M12 SB 4AI-V2		X		X			
3096460000	SAI-AU M12 SB 4AO-V2		X		X			

	Inputs				Outputs				Supply voltage feed circuits	Page
	IO-Link	Digital	Analogue	Counter	Digital	Output current	Analogue	Output range		
	4xType A & 4xType B									C.156
	4xType A & 4xType B									C.156
		16								C.157
		16			16	2 A				C.157
		16			16	2 A				C.158
		8			8	2 A				C.158
		8			8	2 A				C.160
		16								C.159
					16	2 A				C.159
		16			16	2 A				C.160
		8								C.163
					8	2 A			2	C.163
		max. 8, min. 0 (can be configured)			max. 8, min. 0 (can be configured)	0.5 A			2	C.163
		8								C.163
					8	2 A			2	C.163
		max. 8, min. 0 (can be configured)			max. 8, min. 0 (can be configured)	0.5 A			2	C.163
			4							C.164
							4	-10...+10 V, 0...+10 V, 0...20 mA, 4...20 mA		C.164

# Configuration and parameterisation of complex I/O modules

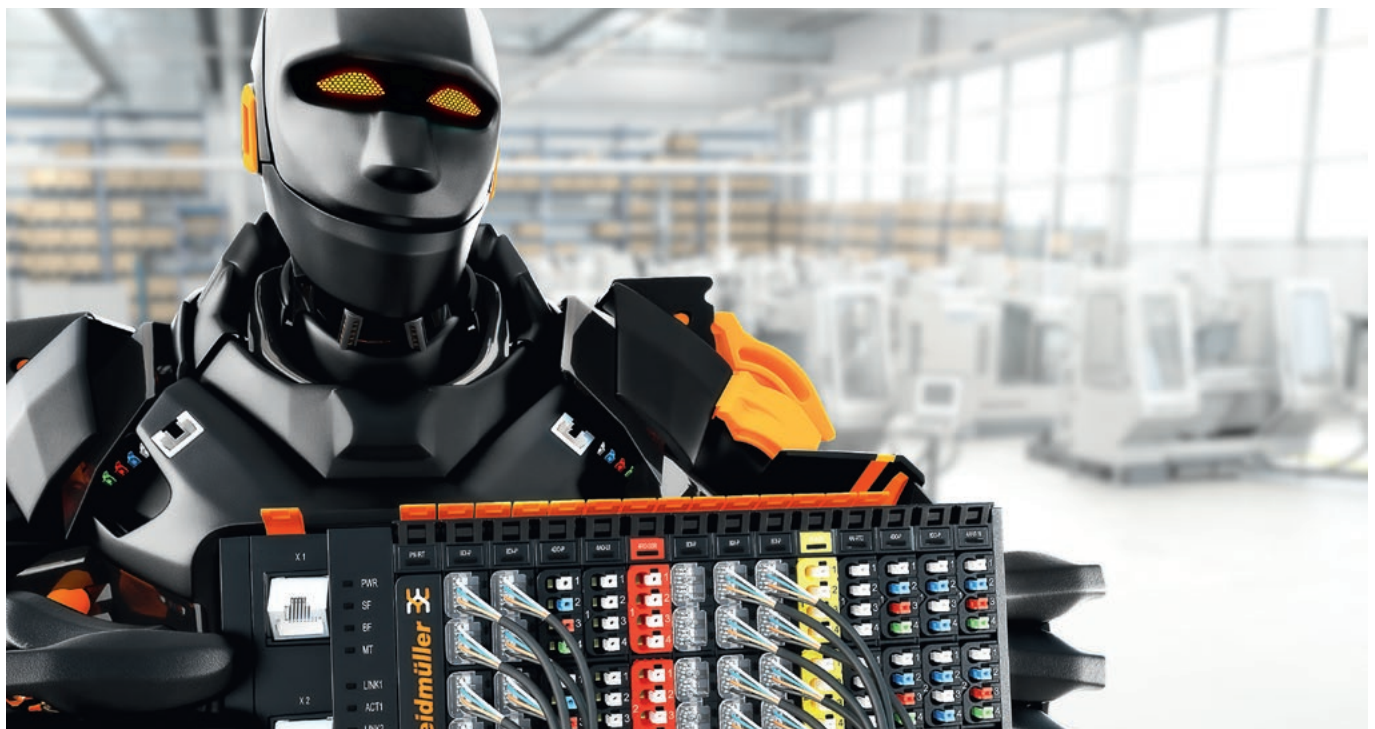
## Maximum flexibility with reduced complexity with the u-mation configurator

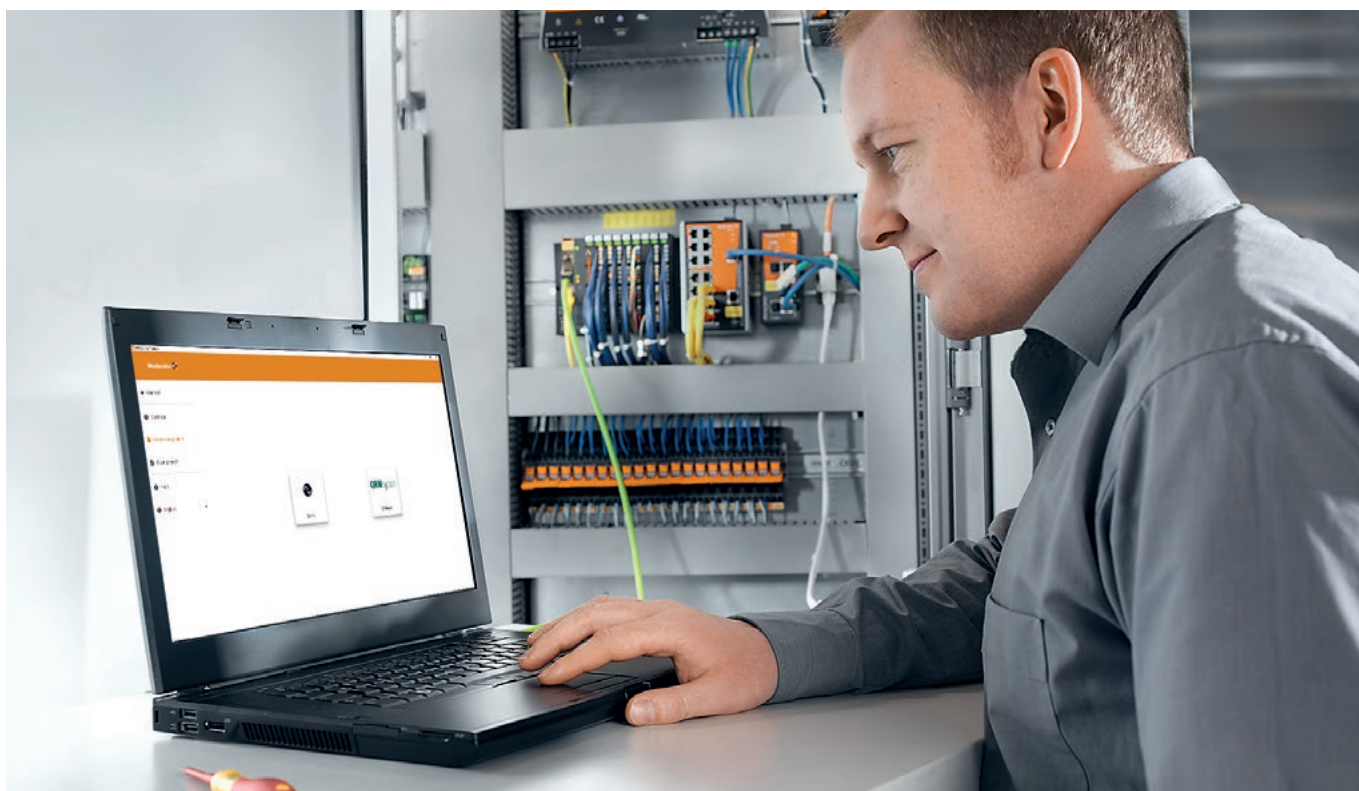
**C** All Weidmüller remote I/O modules can be adapted flexibly to the characteristics of your application with the help of the web server integrated into every fieldbus coupler. For more complex functions, like I/O Link or CANopen, the u-mation configurator is also available to download free of charge from the Weidmüller Support Center. It can be used to easily integrate connected devices from the field level from third party providers that can communicate via u-remote.

Configure and parameterise the specific, technical features of u-remote modules or third party devices from the field level through the user-friendly interface with just a few clicks. Keep an overview of the diverse available setting options. The u-mation configurator is based on standard web technology, and integrates very easily into your existing infrastructure – meaning you are not OS dependent and can freely choose your device.



The u-mation configurator is available for download in our Support Center:  
[www.weidmueller.com/u-mation-configurator](http://www.weidmueller.com/u-mation-configurator)





#### Your advantages for IO-Link:

- Simple configuration: install IIOD data, locally or via the integrated Web-Finder
- Clear parameterisation: Display all setting options using the convenient interface
- Additional support: for instance, display the configured process data bandwidth for IO-Link modules
- Growing configurator support: support planned for additional complex I/O modules

#### Your advantages for CANopen:

- Efficient configuration of the basic settings for the CANopen Manager
- Optional parameterisation of a monitoring and SYNC protocol
- Import EDS files to display, configure and parameterise CANopen devices
- Transparent display of all process data and service data objects



# u-view – Touch Panels

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<b>u-view – Touch Panels</b>	Overview	D.2
	Advanced Line	D.4

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## Optimum visualisation and operation

u-view touch panels: brilliant pictures meet elegant, flat design

Comfortable touch panels simplify the monitoring and control of machines and systems. Web-based u-view HMI from Weidmüller offer excellent image quality and can be used in an industrial environment without any restrictions.

The u-view series comprises:

- Advanced Line (capacitive web panels) in 7", 10.1", 15.6" und 21.5"

All panels feature a particularly flat design, a robust aluminium housing and IP66 protection on the front. In addition, they also offer convenient configuration options for accessing different web servers via modern browsers. This makes them ideally suitable for future-oriented web applications, especially for web-based visualisation solutions with PROCON-WEB.



D



**Comfortable configuration**  
u-view touch panels are quick and easy to configure and can therefore be set up intuitively.

**Attractive design**  
All u-view touch panels come with particularly flat, space-saving and robust housings.



**High compatibility**  
u-view touch panels can be used in a wide variety of applications thanks to their modern web technology based on HTML5.

**Great performance**  
First-class image quality and powerful processors make working with u-view touch panels particularly enjoyable.



**u-view Advanced – robust and high-performance Touch Panels**

The Advanced Line offers extensive connectivity with two independently usable Ethernet interfaces (10/100/1000 Mbit/s), two USB Type-A interfaces for connecting external devices (such as a mouse, keyboard, or storage media), a highly precise capacitive multitouch display with gesture control, and high performance even when displaying complex web content. Additionally, by installing a runtime of the PROCON Web visualization and SCADA system on the devices, the web terminals can be transformed into versatile human-machine interfaces.



**Advanced Line**

**Touch Panels - Advanced Line**

- Capacitive touch with gesture recognition
- 7", 10.1", 15.6" and 21.5"
- 4 GB DDR4 RAM, 16 GB eMMC flash memory
- Chromium browser with different operating modes
- PROCON-Web Runtime installable

**Technical data**

<b>General data</b>	
Protection degree	
Operating temperature	
Humidity	
Depth / Width / Height	
Cut-Out dimension (Height)	
Cut-Out dimension (Width)	
<b>Hardware specification</b>	
Processor	
Memory (Flash)	
Memory (RAM)	
Type of cooling	
<b>Firmware specification</b>	
Operating system	
<b>Display specification</b>	
Size	
Resolution	
Material display	
Touch-Screen	
Number of displayable colours	
Luminance	
Luminance dimmable	
Viewing angle horizontal	
Viewing angle vertical	
Display technology	
<b>Housing specification</b>	
Material frame	
Housing main material	
<b>Interfaces</b>	
Interfaces behind	
<b>Power supply</b>	
Voltage type	
Voltage, min.	
Voltage, max.	
<b>Note</b>	

**Ordering data**

<b>Module variants</b>	
<b>Note</b>	

**UV66-ADV-7-CAP-W-V2**



<b>General data</b>		
Built-in: IP66, Enclosure: IP20		
-20 °C ... 60 °C		
95% relative humidity, non-condensing @ 40°C		
52 / 205 / 146.92 mm		
139 mm		
192.4 mm		
<b>Hardware specification</b>		
NXP® ARM® Cortex™-A53 i.MX 8M Mini		
16 GB		
4 GB		
Passive cooling		
<b>Firmware specification</b>		
Linux Yocto 4.2		
<b>Display specification</b>		
7"		
1024 x 600		
Tempered glass		
Projected capacitive (P-CAP)		
16000000		
425 cd/m²		
Yes		
top 170 ° / bottom 170 °		
left 170 ° / right 170 °		
LCD TFT, LED backlight		
<b>Housing specification</b>		
Aluminium		
Sheet metal coated		
<b>Interfaces</b>		
2x USB 2.0, 2 x Ethernet 10/100/1000 MBit/s (RJ45)		
<b>Power supply</b>		
DC		
19.2V		
28.8V		
<b>Note</b>		

Type	Qty.	Order No.
UV66-ADV-7-CAP-W-V2	1	2932870001

**UV66-ADV-10-CAP-W-V2**



<b>General data</b>		
Built-in: IP66, Enclosure: IP20		
-20 °C ... 60 °C		
95% relative humidity, non-condensing @ 40°C		
52 / 283.1 / 202.3 mm		
193.3 mm		
274.1 mm		
<b>Hardware specification</b>		
NXP® ARM® Cortex™-A53 i.MX 8M Mini		
16 GB		
4 GB		
Passive cooling		
<b>Firmware specification</b>		
Linux Yocto 4.2		
<b>Display specification</b>		
10.1"		
1280 x 800		
Tempered glass		
Projected capacitive (P-CAP)		
16000000		
500 cd/m²		
Yes		
top 170 ° / bottom 170 °		
left 170 ° / right 170 °		
LCD TFT, LED backlight		
<b>Housing specification</b>		
Aluminium		
Sheet metal coated		
<b>Interfaces</b>		
2x USB 2.0, 2 x Ethernet 10/100/1000 MBit/s (RJ45)		
<b>Power supply</b>		
DC		
19.2V		
28.8V		
<b>Note</b>		

Type	Qty.	Order No.
UV66-ADV-10-CAP-W-V2	1	2933040001

## Touch Panels - Advanced Line

- Capacitive touch with gesture recognition
- 7", 10.1", 15.6" and 21.6"
- 4 GB RAM, 16 GB flash memory
- Chromium browser with different operating modes
- PROCON-Web Runtime installable

### Technical data

General data	
Protection degree	
Operating temperature	
Humidity	
Depth / Width / Height	
Cut-Out dimension (Height)	
Cut-Out dimension (Width)	
Hardware specification	
Processor	
Memory (Flash)	
Memory (RAM)	
Type of cooling	
Firmware specification	
Operating system	
Display specification	
Size	
Resolution	
Material display	
Touch-Screen	
Number of displayable colours	
Luminance	
Luminance dimmable	
Viewing angle horizontal	
Viewing angle vertical	
Display technology	
Housing specification	
Material frame	
Housing main material	
Interfaces	
Interfaces behind	
Power supply	
Voltage type	
Voltage, min.	
Voltage, max.	
Note	

### Ordering data

Module variants	
Note	

## UV66-ADV-15-CAP-W-V2



Built-in: IP66, Enclosure: IP20
-20 °C ... 60 °C
95% relative humidity, non-condensing @ 40°C
52 / 419.7 / 269 mm
361.2 mm
411.9 mm
NXP® ARM® Cortex™-A53 i.MX 8M Mini
16 GB
4 GB
Passive cooling
Linux Yocto 4.2
15.6"
1920 x 1080
Tempered glass
Projected capacitive (P-CAP)
16200000
450 cd/m <sup>2</sup>
Yes
top 170 ° / bottom 170 °
left 170 ° / right 170 °
LCD TFT, LED backlight
Aluminium
Sheet metal coated
2x USB 2.0, 2 x Ethernet 10/100/1000 MBit/s (RJ45)
DC
19.2V
28.8V

Type	Qty.	Order No.
UV66-ADV-15-CAP-W-V2	1	2932860001

## UV66-ADV-21-CAP-W-V2



Built-in: IP66, Enclosure: IP20
-20 °C ... 60 °C
95% relative humidity, non-condensing @ 40°C
52 / 558.4 / 349.8 mm
341.3 mm
549.8 mm
NXP® ARM® Cortex™-A53 i.MX 8M Mini
16 GB
4 GB
Passive cooling
Linux Yocto 4.2
21.5 "
1920 x 1080
Tempered glass
Projected capacitive (P-CAP)
16700000
250 cd/m <sup>2</sup>
Yes
top 170 ° / bottom 170 °
left 170 ° / right 170 °
LCD TFT, LED backlight
Aluminium
Sheet metal coated
2x USB 2.0, 2 x Ethernet 10/100/1000 MBit/s (RJ45)
DC
19.2V
28.8V

Type	Qty.	Order No.
UV66-ADV-21-CAP-W-V2	1	2987520001



# Overview Industrial Ethernet

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<b>Overview Industrial Ethernet</b>	Introduction	E.2
	Product overview	E.4

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# Transfer data between devices in the network flexibly and reliably

## Active Industrial Ethernet – the perfect solution for countless applications

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.

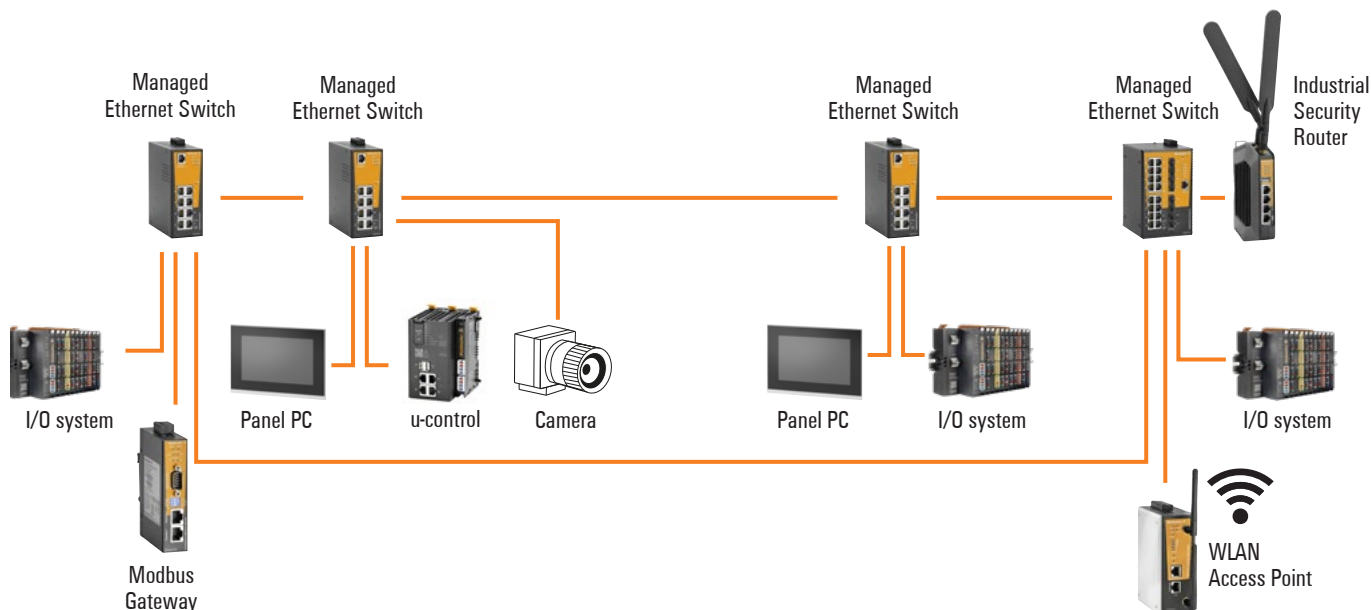
### E

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, 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 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.



**Love at first port**

**Our broad variety. Your perfect match.**



# Active components

## An overview of our portfolio

**Unmanaged Switches**  
Fast Ethernet, Fast / Gigabit Ethernet, Gigabit Ethernet



**Unmanaged Power over Ethernet Switches / Injectors** – Fast Ethernet, Gigabit Ethernet



**Unmanaged SPE Switches**  
10BASE-T1L / Fast Ethernet



**Managed Switches**  
Fast Ethernet, Fast / Gigabit Ethernet, Gigabit Ethernet



**Managed Power over Ethernet Switches**  
Gigabit Ethernet



**Managed Switches IEC 61850-3**  
Fast / Gigabit Ethernet, Gigabit Ethernet



**Modular Managed Switches IEC 61850-3**  
Fast / Gigabit Ethernet, Gigabit Ethernet, 10-Gigabit Ethernet



**Media interface modules for modular switches**  
Fast Ethernet, Gigabit Ethernet, 10-Gigabit Ethernet



**Industrial Security Router**



**u-link Remote Access Service**



**Ethernet media converters (copper/fiber-optic)**



**Serial / Ethernet converters and Modbus TCP / RTU gateway**



# Active components

## An overview of our portfolio

**Industrial WLAN**



**SFP transceiver**

Fast Ethernet, Gigabit Ethernet, 10-Gigabit Ethernet



**Configuration backup and restore module**



**Antennas and antenna accessories**



**Mounting kit for 19" rack**



**Mounting kit for wall mounting**



## All details at a glance: Discover products, services and use cases online

For further products, in-depth information, technical specifications and additional services, please visit our website.

There you will also find variant overviews, accessory information and practical use cases – for quick selection and targeted specification:



[www.weidmueller.com/ie](http://www.weidmueller.com/ie)

Industrial Ethernet

Please also feel free to use our Industrial Ethernet catalogue for further information.



# u-OS – Operating system

<b>u-OS – Operating system</b>	Introduction	F.2
	u-OS Apps	F.4
	u-OS licenses	F.5
	Engineering Software	F.6

# Independence and flexibility for your machines and facilities

## u-OS – The open operating system for Industrial IoT and Automation

The convergence of different classes of device represents a significant development in digitalisation. Within automation, as well, the lines between controllers, routers, and gateways are becoming increasingly blurred. The operating system plays a key role in this context. For only if the latter permits integration of the hardware and software, as well as cloud and on-premises solutions, can the possibilities of automation and the Industrial IoT be united in a single device. u-OS, the open and independent operating system from Weidmüller, takes this approach.

u-OS realises its full potential on the Weidmüller automation hardware u-mation. Our approach is simple: u-OS is not another ecosystem, but rather a platform that connects different ecosystems with one another. This is the only way to integrate the possibilities offered by an Edge application in a versatile yet simple manner. You can benefit, for example, from more efficient data pre-processing and more precise control directly on the machine easily – with u-OS in your individual OT/IT stack.



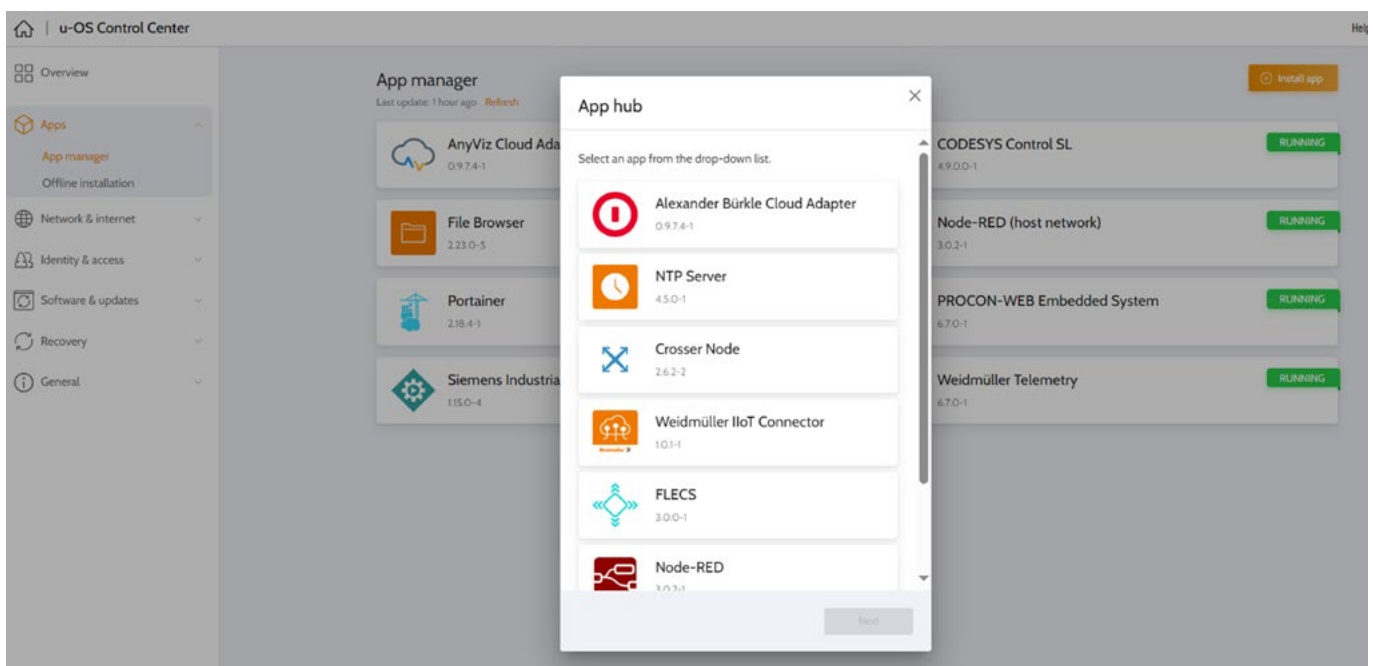


## u-OS Apps

The Linux-based u-OS operating system offers interfaces between customer-specific software solutions, Industrial IoT, and automation technology. The App Manager provides an overview of all installed apps, and the option of installing additional applications on u-OS. In addition to a range of Weidmüller products, solutions from our Weidmüller partners are available – such as CODESYS®, the largest independent ecosystem for automation. The apps work together, without requiring extensive programming. This saves time and lowers costs. In addition, you can adapt your own applications to u-OS via API interfaces.



Discover Weidmüller partners:  
[www.weidmueller.com/u-os-apps](http://www.weidmueller.com/u-os-apps)



**u-OS Datahub**

The u-OS Datahub serves as the foundation for seamless links between applications, and the base for easily exchanging data between the individual apps.



**Open**

With u-OS, open interfaces at all levels guarantee easy integration of your own applications, communication drivers, runtime environments, and cloud connections.

**Flexible**

u-OS can be extended and adapted to individual needs. It covers the requirements of OT and IT applications for an OS in equal measure. The App Manager allows easy use of pre-integrated functions such as CODESYS®.

**Independent**

The use of established open standards such as Linux, containers, or OPC UA makes u-OS independent and future-proof. Dependence on one provider is avoided.

# Weidmüller u-OS target devices – Full scope of functions for your application

u-OS installed  
Open for the future



Select Weidmüller target device and download the appropriate u-OS firmware  
[www.weidmueller.com/u-os-downloads](http://www.weidmueller.com/u-os-downloads)

## u-mation Edition

Target device	u-control WL2000, M3000, M4000 and IoT Gateway
Target group	Machine and plant engineering, power, maritime applications
Target applications	Industrial automation and Industrial IoT, Edge applications
Functional scope	Datahub for easy Exchange of data, User Management, App Manager, Certificate management, Rollout Management, License Management, Developer Kit, Secure Boot, Web-based Workspace, yocto based with linux rt, Container Runtime

## Engineering Software

Just select your CODESYS® package and get in touch with your Weidmüller sales contact.



Current information is available on our website:  
[www.weidmueller.com/u-os-apps](http://www.weidmueller.com/u-os-apps)

### U-OS-CODESYS-BASIC

For applications that solve simple and individual automation tasks.

#### Ordering data

Type	Code size	Max I/O	Order-No.
U-OS-CODESYS-BASIC-S	500 kB	64	2924000000
U-OS-CODESYS-BASIC-M	1 MB	128	2924020000
U-OS-CODESYS-BASIC-L	3 MB	256	2924030000

## F

### U-OS-CODESYS-STANDARD and U-OS-CODESYS-PERFORMANCE

For applications with more complex logic and an increased need for external communication.

#### Ordering data

Type	Code size	Max I/O	Order-No.
<b>Standard</b>			
U-OS-CODESYS-STANDARD-S	3 MB	512	2924040000
U-OS-CODESYS-STANDARD-M	5 MB	1.024	2924050000
U-OS-CODESYS-STANDARD-L	6 MB	2.048	2924060000
<b>Performance</b>			
U-OS-CODESYS-PERFORMANCE-M	8 MB	4.096	2924070000
U-OS-CODESYS-PERFORMANCE-L	10 MB	8.192	2924080000

### Web-Visualisation

#### Ordering data

Type	Number of Tags	Order-No.
U-OS-CODESYS-VISU-M	2.048	2924100000
U-OS-CODESYS-VISU-L	4.096	2924110000
U-OS-CODESYS-VISU-XL	8.192	2924120000
U-OS-CODESYS-VISU-XXL	unlimited	3012570000

### U-OS-CODESYS-COMMUNICATION

The CODESYS Communication M licence enables the use of the symbol configuration, the communication manager and the DataSource Manager.

#### Ordering data

Type	Number of Tags	Order-No.
U-OS-CODESYS-COMMUNICATION M	4.096	2984440000
U-OS-CODESYS-COMMUNICATION XXL	unlimited	2924130000
U-OS-CODESYS-REDUNDANCY		2924090000

# PROCON-Connect – Data acquisition, pre-processing and communication

PROCON-Connect – Data acquisition,  
pre-processing and communication

Overview – PROCON-Connect

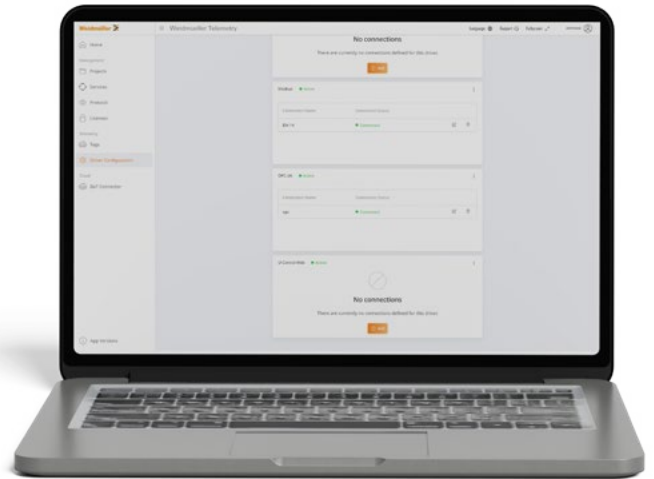
G.2

# PROCON-Connect

## Simple data acquisition, pre-processing and communication

Our PROCON-Connect enables the acquisition of machine data from different control systems and their further utilisation in the Weidmüller solutions ResMa and easyConnect, among others. It also allows local pre-processing and the use of machine data in other software systems through connectors and APIs, among other things.

The PROCON-Connect can be used for a wide range of data- and service-oriented Industrial IoT use cases. The connections to controllers, databases and the interfaces to other software solutions are conveniently configured in the browser. In addition to a comprehensive driver portfolio for connecting controllers, the PROCON-Connect uses industry-appropriate standards (such as InfluxDB or MQTT),



- Drivers with browsing function: OPC-UA, ModbusTCP/RTU, CODESYS®, AllenBradley and drivers for u-mation PLC
- Installation of u-OS App Manager or on industrial PCs via Docker container
- Parameterisation of controller connections, databases and cloud connections via browser

### Platform-independent app

Simple installation under u-OS using the App Manager and on any hardware using Docker containers.

### Open standards and interfaces

Communication drivers, database technologies, APIs and cloud interfaces of the PROCON-Connect are based on open standards (e.g. OPC-UA, InfluxDB or MQTT) and, in addition to our APIs, allow seamless integration into the IIoT infrastructure.

### Intuitive web engineering

Our PROCON-Connect can be configured completely in the browser at run-time. It supports engineering with project import and export functionality as well as extensive feedback for the user.

**Ordering data**

Type	Process variables	Platform for runtime system	Order No.
P-CON IIOT 100	100	Windows, Linux, Docker Container	3161570000
P-CON IIOT 250	250	Windows, Linux, Docker Container	3164730000
P-CON IIOT 500	500	Windows, Linux, Docker Container	3161580000
P-CON IIOT 1000	1000	Windows, Linux, Docker Container	3161590000
P-CON IIOT 2500	25000	Windows, Linux, Docker Container	3161960000
P-CON IIOT 5000	5000	Windows, Linux, Docker Container	3161970000
P-CON IIOT 10000	10000	Windows, Linux, Docker Container	3161980000
P-CON ADD AZURE IOT HUB		Windows, Linux, Docker Container	3162030000
U-OS-P-CON IIOT 100 FREE	100	u-OS	3161430000
U-OS-P-CON IIOT 250	250	u-OS	3161450000
U-OS-P-CON IIOT 500	500	u-OS	3161460000
U-OS-P-CON IIOT 1000	1000	u-OS	3161470000
U-OS-P-CON IIOT 2500	2500	u-OS	3173880000
U-OS-P-CON ADD AZURE IOT HUB		u-OS	3161560000
U-OS-P-CON-DRIVER-PCK ALLENBRADLEY			3161490000
<b>Note</b>	all variants include drivers: CODESYS, Modbus, OPC-UA		





# PROCON-WEB – Visualisation software

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<b>PROCON-WEB – Visualisation software</b>	PROCON-WEB Embedded Systems	H.2
	PROCON-WEB SCADA	H.6

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# Future-proof visualisations for Industrial IoT applications

## PROCON-WEB Embedded Systems – the platform-independent HMI software

In modern Industrial IoT and automation applications, machine data must be available locally and in the cloud for all users. To ensure task-oriented provision and intuitive use, the relevant information needs to be collected and visually prepared.

PROCON-WEB Embedded Systems is a platform-independent visualisation solution ideally suited for use in modern Industrial IoT applications. Thanks to its low system requirements, it can be used on many different devices, and is also available on Weidmüller u-OS family controllers through the App Manager. The HMI is conveniently accessed via HTML5-compatible browsers and can therefore be accessed from a wide variety of end devices.

### Your special advantage:

- Portable and easy-to-parametrise HMI and Industrial IoT solution
- High performance with low resource requirements
- Compatible with devices with OPC-UA server, Modbus interface, CODESYS® and u-OS PLCs
- Dynamic web interface with adaptive design and customisable control elements

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**Many visualisation features**

Predefined control elements, user and rights management, multilingualism, data recording, recipe management, alarm and message processing, and many other features make PROCON-WEB Embedded Systems versatile.

**Maximum flexibility**

PROCON-WEB Embedded Systems can be used independently of hardware and operating system. Web-based visualisation, support for mobile devices, and open communication standards increase flexibility.

**Efficient project planning**

Project management is accelerated through features like a class-instance concept, structural support and automated project generation. Scripting and customisable control elements increase flexibility for complex requirements.

## PROCON-WEB Embedded Systems – Visualisation solutions for your Industrial IoT applications

### Ordering data

Type	Number of process variables, max.	Number of devices	Platform for runtime system	Order No.
<b>PROCON-WEB Embedded Systems runtime licences</b>				
PWEB-ES-RT-100/2	100	2	Windows, Linux, Docker Container	2992810000
PWEB-ES-RT-100/5	100	5	Windows, Linux, Docker Container	2992820000
PWEB-ES-RT-100/10	100	10	Windows, Linux, Docker Container	2992800000
PWEB-ES-RT-500/2	500	2	Windows, Linux, Docker Container	2992930000
PWEB-ES-RT-500/5	500	5	Windows, Linux, Docker Container	2992940000
PWEB-ES-RT-500/10	500	10	Windows, Linux, Docker Container	2992920000
PWEB-ES-RT-1000/2	1000	2	Windows, Linux, Docker Container	2992840000
PWEB-ES-RT-1000/5	1000	5	Windows, Linux, Docker Container	2992850000
PWEB-ES-RT-1000/10	1000	10	Windows, Linux, Docker Container	2992830000
PWEB-ES-RT-2000/2	2000	2	Windows, Linux, Docker Container	2992870000
PWEB-ES-RT-2000/5	2000	5	Windows, Linux, Docker Container	2992880000
PWEB-ES-RT-2000/10	2000	10	Windows, Linux, Docker Container	2992860000
PWEB-ES-RT-5000/2	5000	2	Windows, Linux, Docker Container	2875320000
PWEB-ES-RT-5000/5	5000	5	Windows, Linux, Docker Container	2875330000
PWEB-ES-RT-5000/10	5000	10	Windows, Linux, Docker Container	2875340000
PWEB-ES-DESIGNER-2000_FREE	2000			3037270000
PWEB-DESIGNER-PRO				3206500000
Basic Training				2938790000
Customer Specific Training				2938800000
SLA Technical Support				2938730000
SLA Update (PWEB)				2938760000

### Ordering data

Type	Number of process variables, max.	Number of devices	Platform for runtime system	Order No.
<b>PROCON-WEB Embedded Systems runtime licences for u-OS</b>				
U-OS-PWEB-ES-RT-250/1_free	250	1	u-OS	2987740000
U-OS-PWEB-ES-RT-250/2	250	2	u-OS	3038630000
U-OS-PWEB-ES-RT-500/2	500	2	u-OS	2941960000
U-OS-PWEB-ES-RT-500/5	500	5	u-OS	2941970000
U-OS-PWEB-ES-RT-1000/2	1000	2	u-OS	2941980000
U-OS-PWEB-ES-RT-1000/5	1000	5	u-OS	2941990000
U-OS-PWEB-ES-RT-2000/2	2000	2	u-OS	2942000000
U-OS-PWEB-ES-RT-2000/5	2000	5	u-OS	2942010000
U-OS-PWEB-ES-RT-5000/2	5000	2	u-OS	2942020000
U-OS-PWEB-ES-RT-5000/5	5000	5	u-OS	2942030000
U-OS-PWEB-ES-RT-10000/2	10000	2	u-OS	2942040000
U-OS-PWEB-ES-RT-10000/5	10000	5	u-OS	2942050000
PWEB-DESIGNER-PRO				3206500000
PWEB-ES-DESIGNER-2000_FREE				3037270000
Basic Training				2938790000
Customer Specific Training				2938800000
SLA Technical Support				2938730000
SLA Update (PWEB)				2938760000



# Operate machines and systems via browser interfaces

## PROCON-WEB SCADA – the future-proof visualisation solution

Easily scalable and platform-independent HMI and SCADA solutions can be used flexibly and make relevant machine data available everywhere. They facilitate fault processing as well as data recording and management to support the control of complex processes.

PROCON-WEB SCADA as a Windows application for complex tasks simplifies the project planning of modern multi-touch-capable user interfaces for automation. The integrated web server enables the use of all HTML5-capable browsers without special plug-ins. The comprehensive portfolio of communication drivers facilitates the connection with all common control systems. Standardised open interfaces guarantee problem-free integration into any IT surroundings.

### Your special advantage:

- Easy creation of modern user interfaces without knowledge of web technologies
- Dynamic web interface with adaptive design and customisable control elements
- User and rights management including geographical rights assignment
- Ideal for control technology or complex digitalisation tasks
- Expanded scope of functions for more efficient data processing

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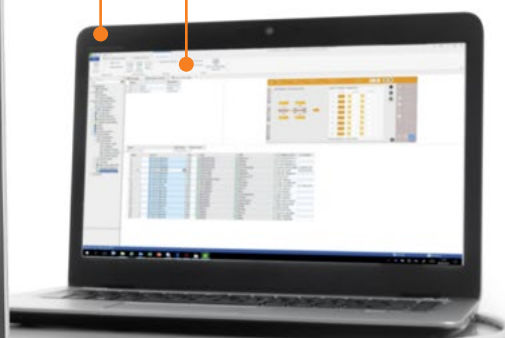


**Future-proof solution**

Intuitive user interfaces, the solutions are especially future-proof with the help of an adaptive UX design and the use of state-of-the-art web technologies.

**Efficient project planning**

The class-instance concept and automation objects with structure support accelerate project planning. Scripting and customisable control elements increase flexibility for special requirements.



**Simple scalability**

From simple HMI applications to complex SCADA applications, PROCON-WEB SCADA is scalable and flexible, and can be integrated into your IT environment through open standards and interfaces.



**PROCON-WEB SCADA**

**PROCON-WEB SCADA – Visualisation solutions for your Industrial IoT applications**

**Ordering data**

Type	Number of process variables, max.	Number of devices	Platform for runtime system	Order No.
<b>SCADA runtime licences</b>				
PWEB-SCADA-RT-500/2	500	2	Windows	3174100000
PWEB-SCADA-RT-500/5	500	5	Windows	3174110000
PWEB-SCADA-RT-500/10	500	10	Windows	3174090000
PWEB-SCADA-RT-1000/2	1000	2	Windows	3173980000
PWEB-SCADA-RT-1000/5	1000	5	Windows	3173990000
PWEB-SCADA-RT-1000/10	1000	10	Windows	3173970000
PWEB-SCADA-RT-2000/2	2000	2	Windows	3174040000
PWEB-SCADA-RT-2000/5	2000	5	Windows	3174050000
PWEB-SCADA-RT-2000/10	2000	10	Windows	3174030000
PWEB-SCADA-RT-5000/2	5000	2	Windows	3174130000
PWEB-SCADA-RT-5000/5	5000	5	Windows	3174140000
PWEB-SCADA-RT-5000/10	5000	10	Windows	3174120000
PWEB-SCADA-RT-10000/2	10000	2	Windows	3174010000
PWEB-SCADA-RT-10000/5	10000	5	Windows	3174020000
PWEB-SCADA-RT-10000/10	10000	10	Windows	3174000000
PWEB-SCADA-RT-30000/2	30000	2	Windows	3174070000
PWEB-SCADA-RT-30000/5	30000	5	Windows	3174080000
PWEB-SCADA-RT-30000/10	30000	10	Windows	3174060000
PWEB-SCADA-RT-60000/2	60000	2	Windows	3174160000
PWEB-SCADA-RT-60000/5	60000	5	Windows	3174170000
PWEB-SCADA-RT-60000/10	60000	10	Windows	3174150000
PWEB-DESIGNER-PRO			Windows	3206500000
PWEB-ES-DESIGNER-2000_FREE			Windows	3037270000
Basic Training				2938790000
Customer Specific Training				2938800000
SLA Technical Support				2938730000
SLA Update (PWEB)				2938760000

# Industrial AI – Data analysis and automated machine learning

<b>Industrial AI – Data analysis and automated machine learning</b>	Industrial AI	1.2
	ModelBuilder	1.3
	edgeML – Easy and flexible ML integration into automation	1.4
	edgeML Runtime	1.6

# Industrial AI

## The most important facts at a glance

**Build and deploy end-to-end machine learning model solutions faster. You only need your domain knowledge.**

With Industrial AI, you can easily use advanced analytic functions to optimise operations, improve product quality and enable new business models. As a machine or process expert, you can build and run machine learning models quickly and easily without expert knowledge in data science. As machine builder, the ModelBuilder enables you to transform your data and domain knowledge into ML models that add value to your business. In manufacturing environments, the models can be used in order to provide machine operators with real-time analysis and insight during operation, for example. The industrial AI product family consists of ModelBuilder and edgeML, which are used to create models, as well as edgeML Runtime for on-premise applications.



### The benefits for you



#### Accelerated innovation

Leverage your existing machine data and domain knowledge and benefit directly from advanced analytics. Maintain sovereignty over your own data.



#### End-to-end solution

Build and continuously improve ML models with ModelBuilder.



#### Build customer relationships and new business models

Increase customer satisfaction with improved products and services. Get a better understanding of your customers' needs.

### Ordering data ModelBuilder

Type	Number of users	License term	Order No.
MB-EC-1Y	3	365 days	2864190000
MB-MA-AZ-03	3	365 days	2819870000
MB-EC-TRIAL-3M	3	90 days	2864180000
MB-AZ-3-Trial	3	90 days	2885120000
MB-OPERATIONS BASIC			2896870000
MB-OPERATIONS PLUS			2896860000
SLA INDUSTRIAL AI			3155670000

# ModelBuilder

## From data to model in just a few steps

### Feature of the ModelBuilder

The ModelBuilder is available as a cloud-based solution. On the basis of prepared data, the user is guided through the following essential building blocks of the tool:



- Import machine and process data and analyse examined
- Data using automatically generated quality criteria (such as missing words)
- Enrich data by creating custom features
- Set data into a context, for instance by determining anomalies and normal behaviour
- Selection of the machine learning model to be created possible (for instance a model to detect or classify anomalies)
- The tool then automates the model creation process, including feature engineering, required preprocessing and post processing operations
- Selection of the created models possible (for instance based on criteria like model performance or plausibility)

# edgeML – Simple and flexible ML integration into automation

## High flexibility: use hardware and OS agnostic ML models

edgeML makes it possible to integrate ML models into automation in a particularly easy and flexible way – regardless of the hardware. And this is completely independent of the hardware. This allows systems or processes to be monitored continuously and efficiently with machine learning.

With edgeML, machine or process experts can quickly and easily put ML models into practical use. The models can be conveniently managed and executed using the integrated web server. The model results provide detailed insight into the condition of the machine. This information can be used, for example, to optimise maintenance intervals and improve product quality. edgeML thus makes an important contribution to increasing production efficiency.



### Simple integration on controllers

edgeML is available as an app for u-OS and can be conveniently installed via the App-Manager. In addition, edgeML is available for Docker and can also be installed as a Linux image on third-party hardware.

### Intuitive operation of ML models

edgeML supports MLOps and can therefore be easily integrated into company processes. In addition, the runtime allows the models to be operated intuitively (e.g. through import and administration functions).

### Supports ML models according to ONNX format

In addition to models created by the Weidmüller ModelBuilder, edgeML also allows the execution of ML models in the open ONNX standard.



Open platform  
(supports the ONNX format)

Intuitive import, parameterisation  
and commissioning of ML models  
on Edge devices

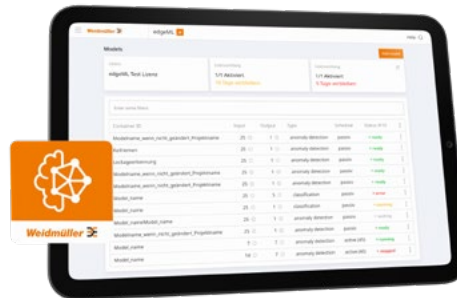
Hardware-independent  
deployment (docker  
containers)

# edgeML Runtime

Machine and process managers who work on-premise use edgeML Runtime

## Features of edgeML Runtime

- Quickly begin operation of ML models on edge devices – importing is simple and parameterisation is intuitive
- Deploy your application on any hardware via docker containers or on u-OS
- Trust in an open platform – we support the ONNX format and MLOps



## Ordering data

Type	Number of models	Platform for runtime system	License term	Order-No.
<b>edgeML</b>				
EML-RT-S	3	Linux	unlimited	2885080000
EML-RT-M	5	Linux	unlimited	2885090000
EML-RT-L	10	Linux	unlimited	2885110000
EML-RT-Trial	10	Linux	90 days	3037000000
SLA INDUSTRIAL AI				3155670000
U-OS-EML-RT-S	3	u-OS		3036820000
U-OS-EML-RT-M	5	u-OS		3036830000
U-OS-EML-RT-L	10	u-OS		3036840000
U-OS-EML-RT-Trial	10	u-OS	90 days	3100520000
SLA INDUSTRIAL AI				3155670000

# ResMa<sup>®</sup> – Energy management software

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<b>ResMa<sup>®</sup> – Energy management software</b>	ResMa <sup>®</sup> Resource and energy management	J.2
	ResMa <sup>®</sup> Basic	J.4
	ResMa <sup>®</sup> Package extensions	J.4
	ResMa <sup>®</sup> Evaluation Kit	J.6
	Order overview	J.7

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# ResMa® Software for process and energy optimization

## Optimize your processes with the intelligent energy management that can be combined to Industrial IoT

The use of energy and resources is a cost factor that grows with increasing automation and is having an increasing impact on industrial production. By linking resource and energy management with Industrial IoT, we create the transparency needed to make your processes more sustainable and economical.

The resource and energy management software ResMa® combines the analysis of energy and process data with Industrial IoT platform solutions and offers an integrated system to merge and analyse comprehensive data centrally and to use the knowledge for the optimisation of processes or for new services.

The modular and preconfigured system variants for the standard ResMa® use cases enable the flexible and fast implementation of your projects, whether in production, industry or distributed infrastructures. In addition, open interfaces allow simple and cost-effective integration into the existing IT environment. We enable you to make optimal use of your data, uncovering potential and increasing your productivity.

### Your benefits at a glance



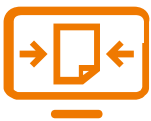
#### Recording of production data

The simple collection of data from different machines and systems enables the collection of production data. Thus, complex key figures can be calculated and plausibility can be configured to optimize production processes.



#### Reduction of costs

With our solutions, energy and process data become meaningful key figures. In this way, you not only reduce costs, but also optimize your processes, increase availability and reduce the use of resources.



#### Automatic reporting

For standardized reporting, individual energy reports or production-relevant evaluations can be sent automatically. In addition, the interactive documentation within the system supports the exchange of information between users.



#### Real-time alerting

States, limit or set values are continuously monitored and show abnormalities in order to avoid downtimes and increase OEE. This information can be conveniently forwarded to users.



#### Simple system integration

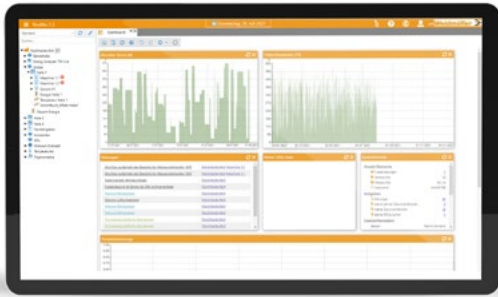
Flexible integration of different measurement systems, industrial controllers or other data sources through communication drivers (like Modbus or OPC-UA) and open interfaces. Data exchange with ERP/MES systems or other databases is also easy to implement.



#### Certified acc. to ISO 50001

DIN EN ISO 50001 compliant energy management certified by the TÜV-Süd (German Technical Inspectorate) and listed at the BAFA. ResMa® allows for simple documentation of energy saving measures with subsequent monitoring and final analysis.

ResMa® offers comprehensive analysis options to identify energy and process-based potentials, document them and derive measures for optimization. Power and production data are collected and prepared in ResMa®. Display options like Sankey diagrams, comprehensive reports or options to compare time periods provide maximum transparency.



### Transparency of production

Simple acquisition of all measured variables

- Electricity, gas, water, heat, air consumption
- Order-related quantities and material input
- Machine and equipment performance

ResMa® delivers comprehensive values for statistical analysis of all recorded measured variables, such as: Min, Max, Mean, Sum etc.

### Simple and efficient process analysis

Detailed analysis via interactive, adaptable charts for optimal display

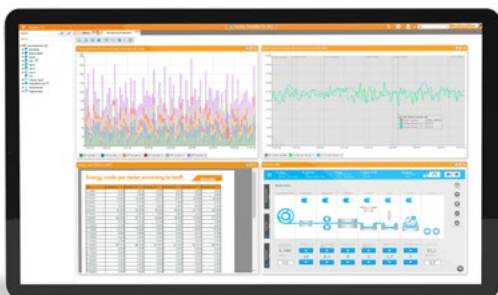
- Generation of meaningful key figures including production parameters
- Specific analyses for energy usage and other production parameters



### Less effort, more control

Automated evaluation

- Representation of energy flows via Sankey diagrams
- Use of mobile devices for fast notifications and status queries
- Central monitoring of all production halls or branches for cross-site benchmarking



## ResMa® Basic

### Evaluate data – plan optimizations

Basic package for the preparation, presentation and analysis of data from the production environment

- Identification of weak points and causes with fluctuating process quality
- Documentation of the entire consumption
- Efficient reporting through automated reports
- Simple operability with high functionality at the same time
- Adjustable dashboards for maximum transparency



## Optionally extend your ResMa® Basic Add-on Packages

Optionally expand your ResMa® Basic. The modular structure allows you to use special and extensive evaluations and analyses. Find the ideal addition to optimise your use case with the ResMa® energy management software and easily gain added value from your data.

### J

#### ResMa® Energy Package

DIN EN ISO 50001 certified energy management system



- Continuous monitoring and optimisation of energy usage
- PDCA cycles and documentation functions
- Calculate meaningful energy KPIs and key data
- Automated reporting with custom reporting templates
- Transparent cost calculation with tariff integration

#### ResMa® Production Package

For a detailed analysis of machines and systems



- Increase process stability to reduce scrap and increase quality
- Reduce use of resources (material and power) to save costs
- Statistics on the causes of downtime as the basis for a cost analysis
- Increase availability and productivity to maximize profits
- Optimize productivity through cross-location benchmarking on the product level and on an order-specific basis

**ResMa® Regression Analysis Package**

Regression analyses for optimisation and investment decisions



- Find dependencies in data via correlation analyses and thereby boost process understanding and transparency
- Determine the type and strength of dependencies as the basis for optimization and investment decisions
- Create regression models based on dependency findings
- Complete regression analyses based on created models for any time period
- Visualise the effects of optimisation measures on energy and processes

**ResMa® Recipe Management Package**

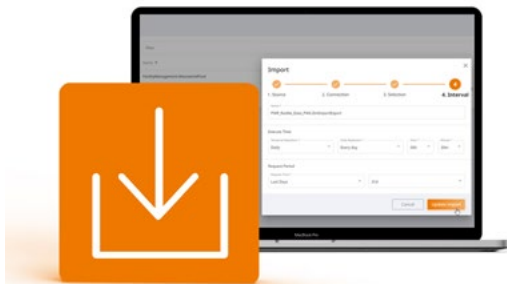
Documentation, representation and analysis of recipes to improve quality



- Standardisation through the use and exchange of recipes
- Document concrete production processes
- Analyse warning and limit value violations
- Visualise unstable processes early on (connection to LiveValueCache)
- Integrate findings into newly developed recipe versions
- Increase production quality for the long-term

**ResMa® Import Package**

Facilitates imports from third-party systems to evaluate all data in a single system



- Browse through external data sources (MS SQL, CSV)
- Map time series data on measurement points
- Configure import jobs
- Automatic cyclical execution
- Automate adoption of time series data from third-party systems



# ResMa® Basic & Add-on Packages

## Order overview

The available functions of ResMa® are divided into different function packages, allowing you to customise configuration to suit your needs. We will be happy to advise you with the selection and demonstrate the corresponding scope of services of the extension packages.

Type	Number of process variables, max.	Platform for runtime system	Order No.
<b>ResMa® Basic</b>			
RESMA-100/5	100	Windows	3036610000
RESMA-200/5	200	Windows	3036620000
RESMA-500/5	500	Windows	3036630000
RESMA-1000/10	1.000	Windows	3036640000
RESMA-3000/20	3.000	Windows	3036650000
RESMA-10000/30	10.000	Windows	3036660000
<b>ResMa® Energy Package</b>			
RESMA-100-ENMS	100	Windows	3036750000
RESMA-200-ENMS	200	Windows	3036760000
RESMA-500-ENMS	500	Windows	3036770000
RESMA-1000-ENMS	1.000	Windows	3036780000
RESMA-3000-ENMS	3.000	Windows	3036790000
RESMA-10000-ENMS	10.000	Windows	3036800000
<b>ResMa® Production Package</b>			
RESMA-100-PROD	100	Windows	3036670000
RESMA-200-PROD	200	Windows	3036690000
RESMA-500-PROD	500	Windows	3036700000
RESMA-1000-PROD	1000	Windows	3118160000
RESMA-3000-PROD	3.000	Windows	3036720000
RESMA-10000-PROD	10.000	Windows	3036710000
<b>ResMa® Import Package</b>			
RESMA-100-IMPORT	100	Windows	3029480000
RESMA-200-IMPORT	200	Windows	3029490000
RESMA-500-IMPORT	500	Windows	3029500000
RESMA-1000-IMPORT	1.000	Windows	3029510000
RESMA-3000-IMPORT	3.000	Windows	3029520000
RESMA-10000-IMPORT	10.000	Windows	3029530000
<b>ResMa® Recipe Management Package</b>			
RESMA-100-REZEPTUR	100	Windows	3029540000
RESMA-200-REZEPTUR	200	Windows	3029550000
RESMA-500-REZEPTUR	500	Windows	3029560000
RESMA-1000-REZEPTUR	1000	Windows	3029570000
RESMA-3000-REZEPTUR	3000	Windows	3029580000
RESMA-10000-REZEPTUR	10000	Windows	3118170000
<b>ResMa® Regression Analysis Package</b>			
RESMA-100-REGRESSION	100	Windows	3118180000
RESMA-200-REGRESSION	200	Windows	3029610000
RESMA-500-REGRESSION	500	Windows	3029620000
RESMA-1000-REGRESSION	1000	Windows	3029630000
RESMA-3000-REGRESSION	3000	Windows	3029640000
RESMA-10000-REGRESSION	10000	Windows	3029650000
RESMA-MODBUS-CONNECTOR		Windows	2854870000
RESMA-PLC-CONNECTOR		Windows	2854120000
Basic Training			2938790000
Engineering / Consulting			2938850000
SLA Technical Support (PWEB/ResMa)			2938730000
SLA Update (ResMa)			3107540000



# u-link – Remote maintenance

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**u-link – Remote maintenance**

u-link Remote Access Service

K.2

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# u-link Remote Access Service – one tool for all cases

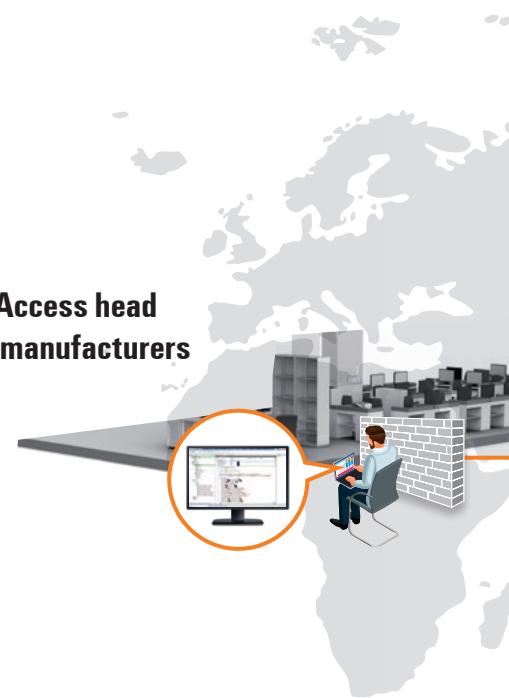
## Advanced functions for convenient remote access management

The remote maintenance of machines and systems is often complex and time-consuming. In addition, users also need a targeted and secure functional connection to the associated IT systems. For many users, these two challenges are a major obstacle to the worldwide connection of systems.

u-link guarantees quick and secure access to machinery and equipment while enabling the efficient management of production facilities, user clients, access rights or firmware versions. You choose: use u-link classic as a web-based portal application, or u-link on easyConect, our cloud-based industrial service platform.

The intuitive u-link web portal can be quickly and easily configured and adapted to specific processes without expert knowledge. Secured servers in Europe and the USA provide an online platform that ensures conformity between different IT systems when performing remote maintenance. easyConnect, in contrast, combines your entire Weidmüller service landscape at a single location. In addition to remote maintenance, realise your use cases easily, consistently and without any relevant prior knowledge, thanks to the perfect interaction of platform, devices and diverse software services. It is your intuitive, future-proof tool for your path to the Industrial IoT.

**Remote Access head office of manufacturers**



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### Individual system management

u-link can manage users and groups as well as their access rights according to individual specifications. These include group allocation and access permission to production facilities.



### Low configuration effort

With the intuitive user interface and without specific IT knowledge, you can easily connect routers and clients to each other. With u-link, you can quickly establish a several systems network.



### Secure remote access and remote diagnosis

Remote access to machines and systems is provided worldwide everywhere via secure VPN connection. The high availability of the servers grants secure access to your systems at all times.



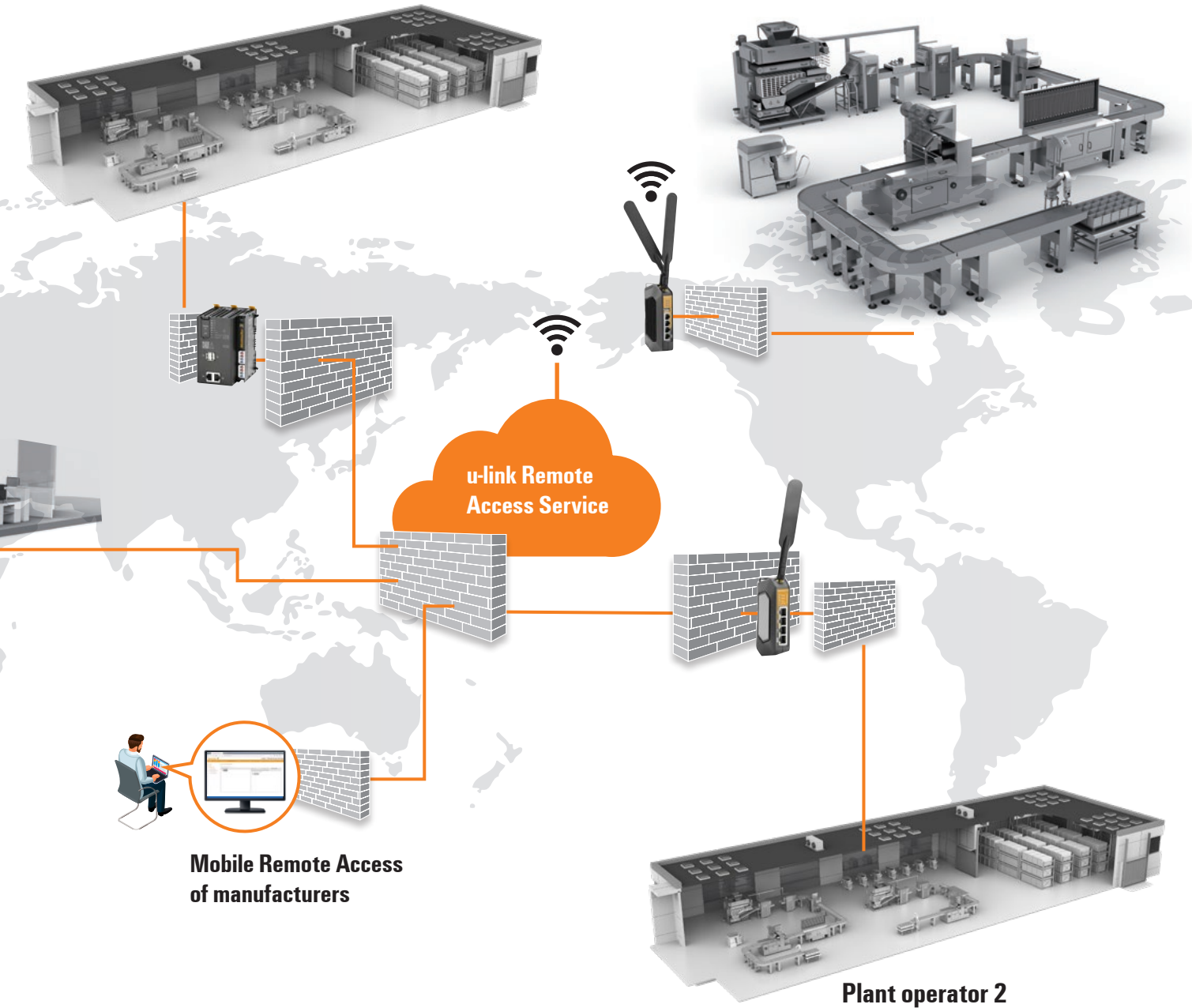
### Status monitoring and status message

Weidmüller Heartbeat can be used to report the availability of a router to u-link. It facilitates status monitoring and enables status messages from the installed router.

[u-link.weidmueller.com](http://u-link.weidmueller.com)

**Plant operator 3**

**Plant operator 1**





# Service and support

<b>Service and support</b>	Service connects - worldwide	V.2
	Engineering services and customised products	V.3
	Support Center	V.4
	Additional support services	V.5
	easyConnect - Your Industrial Service Platform	V.6
	Digital Engineering: Digital planning with Weidmüller product data, interfaces and software solutions	V.8
	Connectivity Consulting: A long-term increase in efficiency through partnership-based exchange	V.9
	Weidmüller Configurator: intuitive, uncomplicated & fast digital engineering	V.10
	Your digital ordering options at Weidmüller	V.12

## 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.

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Your way to our service  
[www.weidmueller.com/service](http://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.

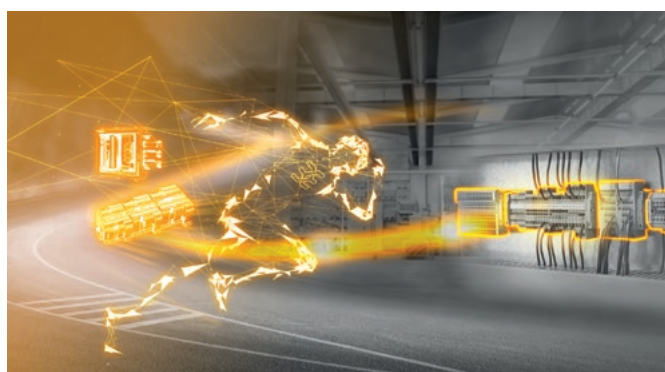


## Consulting and engineering

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.



## Klippon® Assembly Service – Assembled terminal rails and enclosures supplied ready for installation

The Klippon® Assembly Service supplies fully assembled terminal rails and enclosures that can be installed directly in the cabinet or on the machine. It therefore simplifies planning, accelerates production processes, reduces work steps and ensures the reliable delivery of individually assembled products.

## Fast Delivery Service - Your ideas deserve a quick realisation

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!

## Expand the possibilities of our products

### Our Support Center - the answer is just a click away



Receive fast and intuitive support to get the most out of our products in your application. In our new Support Center you can search or navigate to the many application notes, product information, video tutorials or software downloads of our products. It is also possible to create a technical Service Request in the Support Center and check the current status at any time. Use our AI chatbot for u-mation and u-software products and get immediate answers to your questions at any time.

- **Support Center** – the answer is just a click away
- **Everything at a glance** – One central support hub, where all relevant information is available
- **Powerful search** – Provides filter functions for various types of information and products
- **Navigation through product hierarchy** – Navigation to specific products through our product hierarchy
- **More than 40,000 downloads** – Application notes, video tutorials, templates and examples, user documentation, engineering data, ...
- **Personal contact** – Direct access to your personal technical contact in your country
- **Quick help via Service Request** – Create a service request to get quick technical help and check the current status and the solution provided



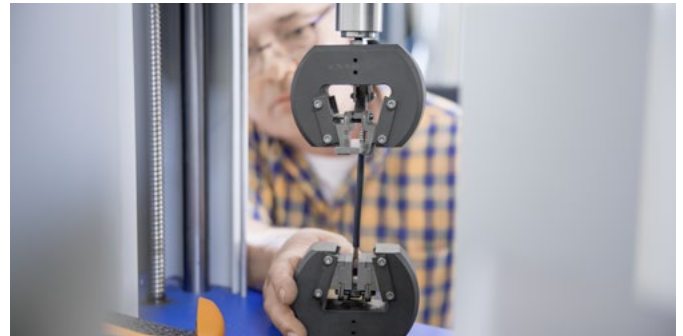
Explore the world of our new Support Center  
[support.weidmueller.com](https://support.weidmueller.com)

## Additional support services



### Training and Webinars

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.



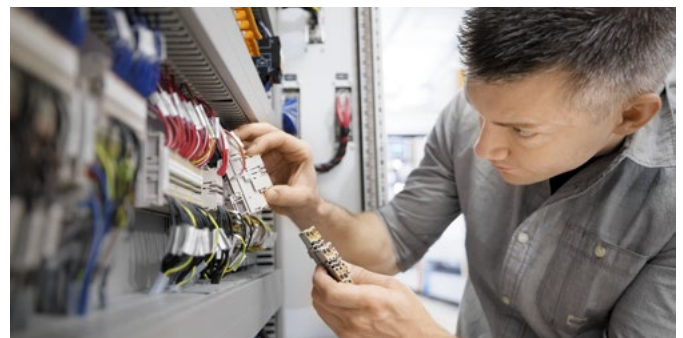
### Repairs and replacement parts

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.



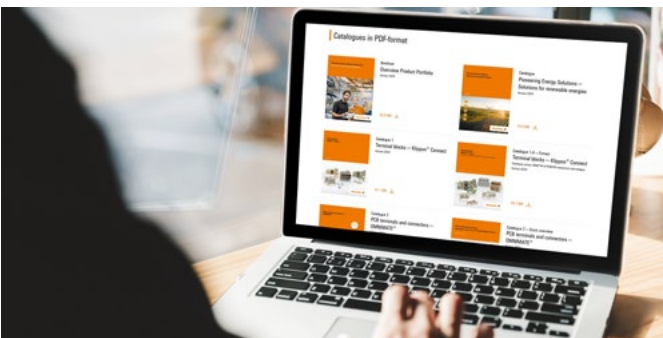
### Security advisory board

Our Product Security Incident Response Team (PSIRT) continuously informs you about possible security-related vulnerabilities of our products.



### 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.

# 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.

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Interested in using easyConnect?  
Learn how to get started with easyConnect step-by-step.  
[www.weidmueller.com/easyconnect](http://www.weidmueller.com/easyconnect)

## Why should you use easyConnect?

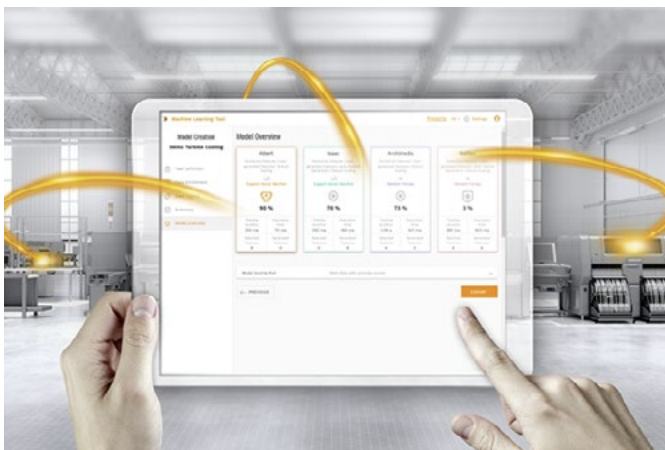
- You want to enter your digital transformation step-by-step?
- You want to make the step into Industrial IOT, but have no or little IT expertise?
- You want to use your digital data for smart & scalable services?
- You want to offer digital services (such as customised dashboard) to your customers?
- 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

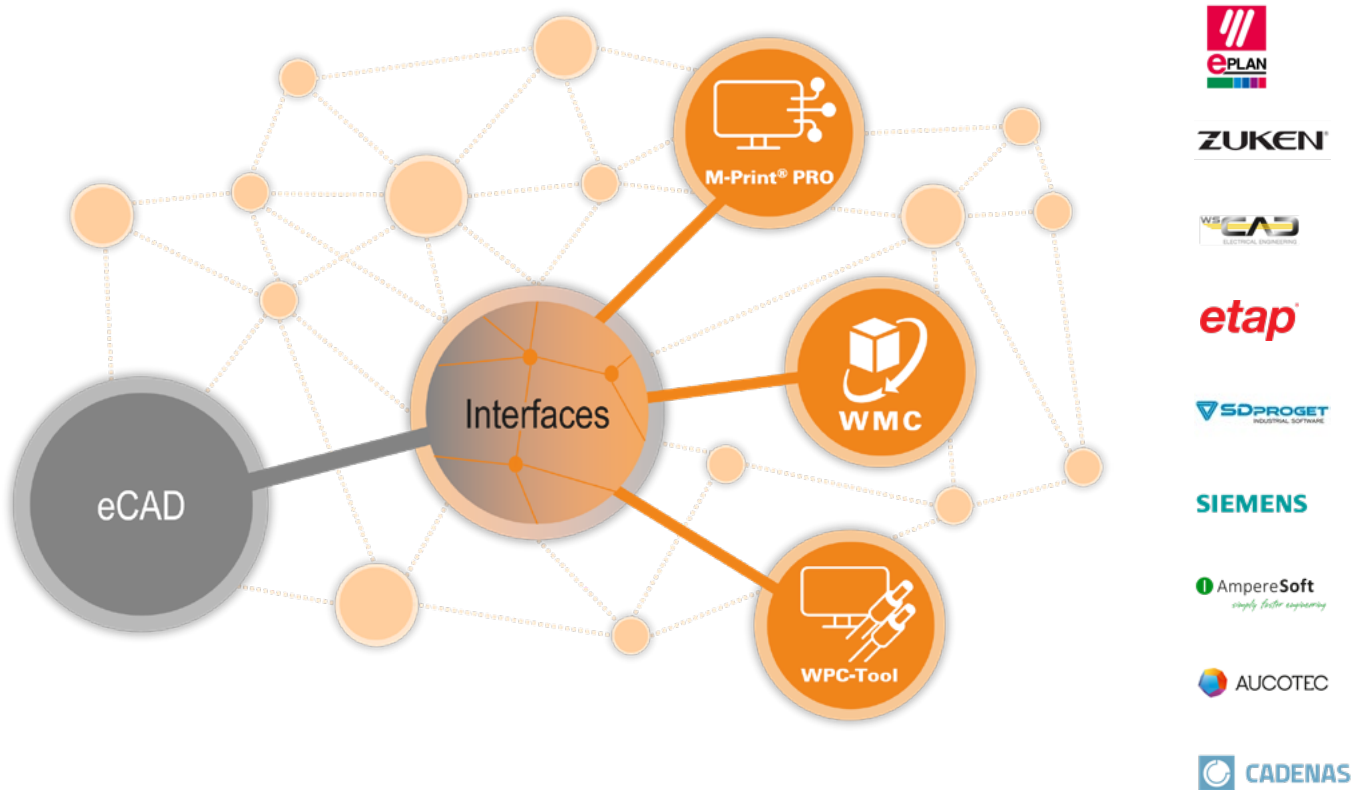
easyConnect data visualisation services enable users to view, monitor and display live and historical data.

### AutoML

With Weidmüller Industrial AutoML, you can optimize operations, increase product quality and develop new business models by benefiting from advanced analytics.

## Digital Engineering

### Digital planning with Weidmüller product data, interfaces and software solutions



You want to be optimally supported in all steps of the electrical design process, from planning to production? Weidmüller offers you support as best as possible!

#### Your advantages:

- **Processes are digitized, time is saved and sources of errors are eliminated** – With Weidmüller software solutions for terminal strip and housing configuration (WMC), component marking (M-Print® PRO) and cable assembly (WPC-Tool), you are perfectly prepared for all project phases in electrical design and control cabinet construction.
- **Potential sources of error are eliminated and your productivity is increased** – High-performance interfaces enable a complete data consistency from the planning to the commissioning process.
- **A simple, safe and fast design process** – Weidmüller provides digital product data for a variety of engineering systems. The data is always compliant with the latest system provider standard.



Find out more about digital engineering  
[www.weidmueller.com/digital\\_engineering](http://www.weidmueller.com/digital_engineering)

# Connectivity Consulting

## Counteracting the shortage of skilled workers with Connectivity Consulting



Are you looking for innovative, sustainable and value-adding solutions for your individual requirements? Weidmüller offers you support with experienced experts for products, solutions and services in the industrial environment of energy, signals and data!

### Your advantages:

- **Increasing efficiency and quality in cabinet building** – Weidmüller offers you customized solutions to make your cabinet building fit for purpose. From design optimization and process automation to digital planning and commissioning. Every single work step offers opportunities for optimization.
- **Benefit from the practical experience of the experts** – Weidmüller’s connectivity consulting experts have acquired practical specialist knowledge in many international projects.
- **Support in the implementation process** – From analysis to implementation: Our experts support you with all measures.



Find out more about Connectivity Consulting  
[www.weidmueller.com/connectivity-consulting](http://www.weidmueller.com/connectivity-consulting)

# Boost Your Efficiency from Engineering to Production

## Weidmüller Configurator: intuitive, uncomplicated & fast digital engineering

Digital engineering can be so easy – with the Weidmüller Configurator!

Discover the Weidmüller Configurator (WMC) – your free software solution that guides you through the entire value chain, all the way to production.

With access to nearly 14,000 digital products, the WMC provides an extensive range for configuring terminal strips, processed empty enclosures, and ready-to-connect terminal boxes. This includes over 10,500 products for terminal strip configurations, approximately 2,200 products for terminal box configurations, and around 1,200 products for configuring our heavy-duty connectors.

### Your Benefits with the Well-Known WMC:

- **Seamless Engineering** – Import your circuit diagrams and terminal strips effortlessly with a single click directly from your engineering system into the WMC. Our interfaces enable continuous data flows, saving you valuable time, minimizing errors, and ensuring smooth project execution.
- **Optimized Production** – The WMC supports you on the shop floor, helping you assemble the required configurations yourself. Especially in times of skilled labor shortages, the WMC makes your production more efficient. With its user-friendly interface, 3D and touch functions, it eases the workload for your employees.



All information about the software can be found here:  
[www.weidmueller.com/wmc](http://www.weidmueller.com/wmc)

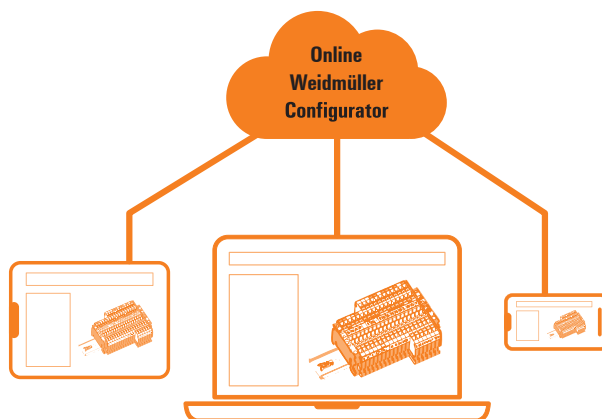
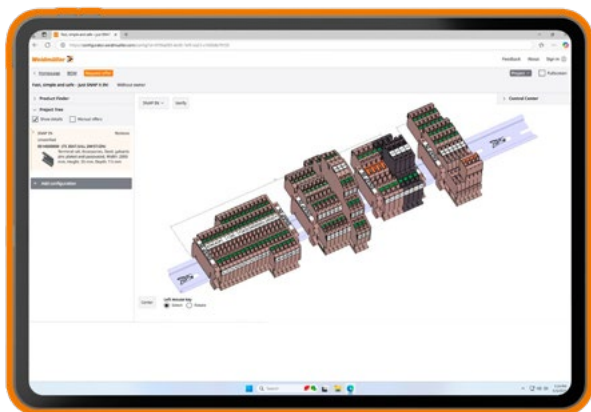
# New Online Configurator – Experience the Future of Digital Engineering

## Configure. Share. Access anywhere.

**Online & Ready to Go:** No installation required – use the Online Configurator directly in your browser. Access it flexibly from any device, whether PC or tablet, in the office or on the go. Your production will have a read-only view mode to ensure the security and consistency of your configurations.

**Intelligent Optimization with a single Click:** Reduce the width of your terminal strip with just one click – no product knowledge needed. Easily switch connection technologies, for example, from screw to PUSH IN or even to our innovative SNAP IN technology. Or take it a step further and transform your configured rail directly for labeling with the Klippon® Automated RailLaser.

**Easy Transition – Seamlessly Integrated:** Thanks to the integrated cloud upload function, you can transfer your existing terminal strip configurations from the WMC with just one click.



Start online now!  
Configure anywhere, anytime and online.  
[configurator.weidmueller.com](http://configurator.weidmueller.com)



### Fast Delivery with Both Configurators:

Whether you use the WMC or the Online Configurator – individually configured mounting rails (and enclosures in the WMC) can be directly transferred to the “Fast Delivery Service.” You will receive ready-to-install solutions in the shortest possible time. This combines maximum customization with minimal delivery time, allowing you to benefit from fast and reliable delivery.

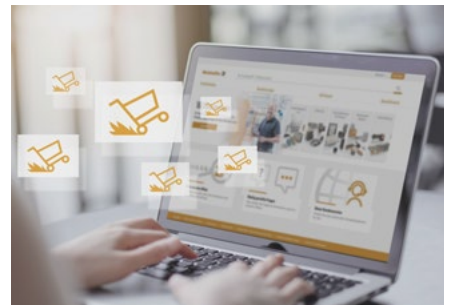
# Digital ordering options

## 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.

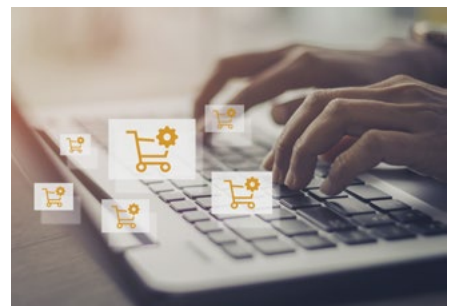
### Order via the Weidmüller onlineshop

Our onlineshop 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.



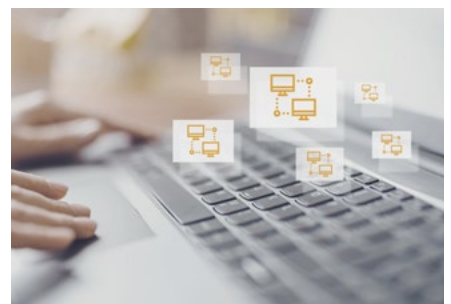
### Order via the OCI interface

The Open Catalogue Interface (OCI) facilitates the exchange of data between your enterprise resource planning system and our onlineshop. This means that our onlineshop 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.



### Order via the EDI interface

Our Electronic Data Interchange (EDI) also offers you the option of ordering our products directly from your enterprise resource planning system. All order data is transmitted automatically to our system and processed immediately. Orders, order confirmations, invoices, and delivery notices are transmitted lightning fast. This helps you make your purchasing processes even more efficient.



We will be glad to advise you on which solutions are suitable for you and how implementation is possible.  
Get in touch with us  
[www.weidmueller.com/digital-order](http://www.weidmueller.com/digital-order)

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THM UR20 WS	1429420000	C.148	UR20-4AI-RTD-DIAG	1315700000	C.95	UR20-BM-SP	1350930000	C.88	UR20-EBK-ACC	1346610000	C.88
TM-1 18 MC NE GE	1718431687	C.167	UR20-4AI-RTD-HP-DIAG	2465640000	C.96	UR20-BM-SP	1350930000	C.89	UR20-EBK-ACC	1346610000	C.89
TM-1 18 MC NE GE	1718431687	C.168	UR20-4AI-TC-DIAG	1315710000	C.98	UR20-BM-SP	1350930000	C.90	UR20-EBK-ACC	1346610000	C.90
TM-1 18 MC NE GE	1718431687	C.169	UR20-4AI-UI-12	1394390000	C.78	UR20-BM-SP	1350930000	C.91	UR20-EBK-ACC	1346610000	C.91
TM-1 18 MC NE WS	1718431044	C.167	UR20-4AI-UI-16	1315620000	C.79	UR20-BM-SP	1350930000	C.92	UR20-EBK-ACC	1346610000	C.92
TM-1 18 MC NE WS	1718431044	C.168	UR20-4AI-UI-16-DIAG	1315690000	C.81	UR20-BM-SP	1350930000	C.93	UR20-EBK-ACC	1346610000	C.93
TM-1 18 MC NE WS	1718431044	C.169	UR20-4AI-UI-16-DIAG-HD	1506910000	C.84	UR20-BM-SP	1350930000	C.95	UR20-EBK-ACC	1346610000	C.95
			UR20-4AI-UI-16-HD	1506920000	C.83	UR20-BM-SP	1350930000	C.96	UR20-EBK-ACC	1346610000	C.96
			UR20-4AI-UI-DIF-16-DIAG	1993880000	C.89	UR20-BM-SP	1350930000	C.97	UR20-EBK-ACC	1346610000	C.97
			UR20-4AI-UI-DIF-32-DIAG	2544660000	C.90	UR20-BM-SP	1350930000	C.98	UR20-EBK-ACC	1346610000	C.98
			UR20-4AI-UI-ISO-16-DIAG	2566960000	C.82	UR20-BM-SP	1350930000	C.99	UR20-EBK-ACC	1346610000	C.99
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			UR20-4AO-UI-16-HD	1510690000	C.116	UR20-BM-SP	1350930000	C.104	UR20-EBK-ACC	1346610000	C.104
			UR20-4AO-UI-16-M	2453880000	C.113	UR20-BM-SP	1350930000	C.105	UR20-EBK-ACC	1346610000	C.105
			UR20-4AO-UI-16-M-DIAG	2453870000	C.115	UR20-BM-SP	1350930000	C.106	UR20-EBK-ACC	1346610000	C.106
			UR20-4COM-IO-LINK-V2	2819690000	C.129	UR20-BM-SP	1350930000	C.109	UR20-EBK-ACC	1346610000	C.109
			UR20-4DI-2W-230V-AC	1550070000	C.51	UR20-BM-SP	1350930000	C.110	UR20-EBK-ACC	1346610000	C.110
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			UR20-4DI-400-PN-FSOE-V2	2464580000	C.133	UR20-BM-SP	1350930000	C.112	UR20-EBK-ACC	1346610000	C.112
			UR20-4DI-400-PN-FSPS-V2	2464570000	C.135	UR20-BM-SP	1350930000	C.113	UR20-EBK-ACC	1346610000	C.113
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			UR20-8DI-PN-FSPS-V2	2464590000	C.136	UR20-EBK-ACC	1346610000	C.15	UR20-EBK-ACC	1346610000	C.149
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1339920000	UR20-SM-ACC	C.13
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1339920000	UR20-SM-ACC	C.66
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1429420000	THM UR20 WS	C.49
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## 2060000000

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2545780000	UR20-EM-2457240000-SP	C.50
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## 2550000000

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2550620000	UR20-PK-2544660000-SP	C.90
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## 2560000000

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## 2570000000

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## 2580000000

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## 2590000000

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## 2790000000

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3174160000	PWEB-SCADA-RT-60000/2	H.8
3174170000	PWEB-SCADA-RT-60000/5	H.8

## 3200000000

3206500000	PWEB-DESIGNER-PRO	H.4
3206500000	PWEB-DESIGNER-PRO	H.8

## 7780000000

7789306010	PAC-UNIV-HE20-LCH-1M	C.43
7789306010	PAC-UNIV-HE20-LCH-1M	C.49
7789306010	PAC-UNIV-HE20-LCH-1M	C.59
7789306010	PAC-UNIV-HE20-LCH-1M	C.64
7789306010	PAC-UNIV-HE20-LCH-1M	C.88

## 9000000000

9002650000	KT 8	C.167
9002650000	KT 8	C.168
9002650000	KT 8	C.169

## 9030000000

9030060000	AM 12	C.167
9030060000	AM 12	C.168
9030060000	AM 12	C.169

## 9200000000

9202210000	MULTI-STRIPAX 6-16	C.41
9202210000	MULTI-STRIPAX 6-16	C.57
9202210000	MULTI-STRIPAX 6-16	C.83
9202210000	MULTI-STRIPAX 6-16	C.84
9202210000	MULTI-STRIPAX 6-16	C.86
9202210000	MULTI-STRIPAX 6-16	C.87
9202210000	MULTI-STRIPAX 6-16	C.116
9203110000	STRIPPER 6-16 RED-LINE	C.167
9203110000	STRIPPER 6-16 RED-LINE	C.168
9203110000	STRIPPER 6-16 RED-LINE	C.169

## 9440000000

9445700000	RS 16IO 1W H S	C.43
9445700000	RS 16IO 1W H S	C.49
9445700000	RS 16IO 1W H S	C.59
9445700000	RS 16IO 1W H S	C.64

## 9450000000

9456150150	SAIL-M8BW-4-1.5U	C.168
9456380150	SAIL-M12BW-4-2L1.5U	C.169
9457320150	SAIL-M12BW-3-1.5U	C.167
9457380150	SAIL-M8BW-3-1.5U	C.168
9457450150	SAIL-M8BG-3-1.5U	C.168
9457460150	SAIL-M8BW-3L1.5U	C.169
9457610150	SAIL-M12G-5-1.5U	C.156
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9457610150	SAIL-M12G-5-1.5U	C.159
9457610150	SAIL-M12G-5-1.5U	C.160
9457610150	SAIL-M12W-5-1.5U	C.156
9457610150	SAIL-M12W-5-1.5U	C.157
9457610150	SAIL-M12W-5-1.5U	C.158
9457610150	SAIL-M12W-5-1.5U	C.159
9457610150	SAIL-M12W-5-1.5U	C.160
9457730150	SAIL-M12BG-4-1.5U	C.167
9457740150	SAIL-M12BW-4-1.5U	C.167
9457800150	SAIL-M12BW-3L1.5U	C.169
9457820150	SAIL-M12BG-3-1.5U	C.167
9457850150	SAIL-M8BG-4-1.5U	C.168



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