

Power supplies

Version 2026



Weidmüller 

Power supplies

Catalogue 4.3

Power supplies

Switched-mode power supply units

Electronic load monitoring

Uninterruptible power supplies

DC/DC converters

Redundancy- and diode modules

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Index Type / Index Order No.

Power supplies – Overview

connectPower 1ph PROtop



- Single-phase switched-mode power supply module
- High MTBF values
- Cl. I Div. 2 + ATEX
- Power category 72...960 W
- Output 12, 24 and 48 V DC

connectPower 3ph PROtop



- Multiphase switched-mode power supply module
- 3× 320...575 V AC or 2× 360...575 V AC
- 450...800 V DC
- UL approval
- Power category 120...960 W

connectPower PROtop DCDC



- DCL technology for excellent dynamic range
- Operating modes: single / parallel operation and adjustable short-circuit behaviour (continuous current or switch-off)
- High durability up to 15 years, MTBF > 1.000.000 hours

connectPower PROtop UW



- DCL technology for excellent dynamic range
- Operating modes: single / parallel operation and adjustable short-circuit behaviour (continuous current or switch-off)
- High durability up to 15 years, MTBF > 1.000.000 hours

connectPower 1ph PROmax



- Single-phase switched-mode power supply module
- Slim design
- High efficiency
- Power category from 70...960 W
- International approvals

connectPower 3ph PROmax



- 3-phase switched-mode power supply module
- Slim design
- High efficiency
- Power category 120...960 W
- Wide range of approvals

connectPower 1ph PROeco



- Single-phase switched-mode power supply modules
- Slim design
- Large temperature range from -25 °C to 70 °C
- Three-coloured LED indicators for simple error detection
- Advanced visual warning at 90 % rated output current
- International approvals
- Optional with SNAP IN connectivity technology

connectPower 3ph PROeco



- 3-phase switched-mode power supply modules
- Slim design
- Large temperature range from -25 °C to 70 °C
- Three-coloured LED indicators for simple error detection
- Advanced visual warning at 90 % rated output current
- International approvals

connectPower PRObas



- Single-phase switched-mode power supply modules
- Compact design
- Flexible mounting
- High efficiency
- Robust & reliable

connectPower PRO-PM



- Wall mounting
- Flat design
- Metal housing
- Power category 25...350 W
- Universal input and output voltages

connectPower 1ph INSTA POWER



- Single-phase switched-mode power supply modules for the distribution board
- Compact form
- Power category 16 and 96 W
- Output voltage 5...48 V
- International approvals

connectPower PRO CP



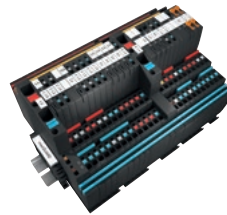
- Low installation depth of only 30 mm
- Protection degree IP 30
- Approval according to IEC/EN 60335-1

topGUARD



- Electronic load monitoring
- Integrated potential distribution
- IO Link capable
- Status notification LEDs

maxGUARD



- Electronic load monitoring
- Status notification LEDs and potential-free contact
- Reset input
- Compact design

connectPower DURAmix DC UPS



- High-cost efficiency and space saving design
- Robust metall housing
- Smart and quick status diagnosis due to LED-bargraph display
- Battery cold restart function
- Save time with PUSH IN connection technology

connectPower Battery modules



- Maintenance-free, lead-acid batteries from 1.3 Ah to 17 Ah
- Integrated temperature sensor for an extended service life
- Integrated fuse for reliable activation
- Buffer times up to 40 A / 30 min or 10 A / 90 min
- Robust metal housing for wall mounting

connectPower Buffer modules



- Buffer time: 320 ms @ 20 A or 230 ms @ 40 A
- Wide-ranging approvals and broad temperature range
- Status indicator via LEDs and signal connections
- Space-saving and maintenance-free
- Suitable for parallel connection

connectPower DC/DC converters



- Compact form
- Metal housing
- International approvals
- High degree of efficiency
- DCL peak load reserve up to 600%

Power supplies – Overview

connectPower Redundancy modules



- Fast status diagnosis via LED display and status relay
- Universally applicable due to wide range of variants (max. up to 80 A output current)
- Wide range of approvals (e.g. cULus, Class I, Div. 2, ATEX and IECEx)

connectPower Diode modules



- Diode module for 100 % decoupling of switching power supplies
- Optimal power doubling
- Max. up to 40 A Output current
- International approvals

Communication modules



- Tool-free assembly
- Protection class IP20
- Flexible to adapt PROtop and topGUARD to different communication protocols
- Available in CANopen and IO-Link

Service and support

Service connects – worldwide



- 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)



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

Digital ordering options



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

Find the perfect product to meet your requirement

Our extensive portfolio of power supplies at a glance





Series / family		Input side			Output side				Additional functions					Recommendation for application						Order No.						
Page	Description	Phases	AC input voltage [V]	DC input voltage [V]	Rated voltage [V]	Rated current [A]	Power rating [W]	Derating at [°C]	Load reserve	Type of contact	Temperature range [°C]	Efficiency [%]	MTBF time [Mh]	Surge category	Approvals	Field cabinets	Small and series machine construction	Machine construction and plant manufacture	Simple process applications	Process industry	Energy technology	Power distribution	Marine engineering			
PROtop A.4	PRO TOP1 72W 24V 3A	1	85...277	80...410	24	3	72	> 60	130 % permanently with ≤ 40 °C	NO	-25...+70	90	> 1	III		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	2466850000		
	PRO TOP1 120W 24V 5A				24	5	120					91				2466870000										
	PRO TOP1 240W 24V 10A				24	10	240					92.5				2466880000										
	PRO TOP1 480W 24V 20A				24	20	480					93.5				2466890000										
	PRO TOP1 960W 24V 40A				24	40	960					94.5				2466900000										
	PRO TOP1 120W 12V 10A				12	10	120					91				2466910000										
	PRO TOP1 480W 48V 10A				48	10	480					93.5				2467030000										
	PRO TOP1 960W 48V 20A				48	20	960					94.5				2466920000										
	PRO TOP1 72W 24V 3A F				24	3	72					90				2568970000										
	PRO TOP1 120W 24V 5A F				24	5	120					91				2568980000										
	PRO TOP1 240W 24V 10A F				24	10	240					92.5				2568990000										
	PRO TOP1 120W 12V 10A F				12	10	120					91				2569000000										
	PRO TOP3 120W 24V 5A				24	5	120					89				2467060000										
	PRO TOP3 240W 24V 10A				24	10	240					93				2467080000										
	PRO TOP3 480W 24V 20A				24	20	480					94				2467100000										
	PRO TOP3 960W 24V 40A				24	40	960					95.3				2467120000										
	PRO TOP3 480W 48V 10A				48	10	480					94				2467150000										
PRO TOP3 960W 48V 20A	48	20	960	95.3	2467170000																					
PROtop A.16	PRO TOP1 120W 24V 5A EX	1	85...277	80...410	24	5	120	> 60	130 % permanently with ≤ 40 °C	NO	-40...+70	91	> 1	III		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	2466980000	
	PRO TOP1 240W 24V 10A EX				24	10	240					92.5				2466990000										
	PRO TOP1 480W 24V 20A EX				24	20	480					93.5				2467000000										
	PRO TOP1 960W 24V 40A EX				24	40	960					94.5				2467010000										
	PRO TOP1 120W 12V 10A EX				12	10	120					91				2467020000										
	PRO TOP1 480W 48V 10A EX				48	10	480					93.5				2467040000										
	PRO TOPDC 24V/24V 5A				24	5	120					89				2627650000										
PROtop DCDC A.20	PRO TOPDC 24V/24V 10A	/	/	14 V...31.2 V (linear Derating from 18 V...14 V, 60% rated load @ Uin 14 V)	24	10	240	> 60	130 % permanently with ≤ 40 °C	NO	-25...+70	91	> 1	I II III		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	2627640000	
	PRO TOPDC 24V/24V 20A				24	20	480					91				2627630000										
	PRO TOPDC 24V/48V 10A				48	10	480					91				2627660000										
	PRO TOPDC 24V/24V 10A EX				24	10	240					91				2467300000										
	PRO TOPDC 24V/24V 20A EX				24	20	480					91				2467310000										
	PRO TOPDC 24V/24V 5A EX				24	5	120					89				2467290000										
	PRO TOPDC 24V/24V 5A				24	5	120					89				2467230000										
PROtop UW A.28	PRO TOP2 120W 24V 5A UW	1/2	85...550 V AC (Derating: 2%/1 V @ 85...100 V AC)	90...800 V DC (Derating: 1%/1 V @ 90...120 V DC)	24	5	120	> 60	130 % permanently with ≤ 40 °C	NO	-40...+70	89	> 1	III		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	2467230000
	PRO TOP2 240W 24V 10A UW				24	10	240					91.5				2467250000										
	PRO TOP2 240W 48V 5A UW				48	5	240					91.5				2467270000										
	PRO TOP2 120W 24V 5A UW EX				24	5	120					89				2467240000										
	PRO TOP2 240W 24V 10A UW EX				24	10	240					91.5				2467260000										

NO = Schließer
 CO = Wechsler
 Start-up @ -40 °C = Im Bereich von -40 bis -25 °C läuft das Gerät an, jedoch können einige technischen Parameter abweichen (z. B. Ripple-Spannung).

Series / family		Input side		Output side				Additional functions				Recommendation for application						Order No.						
Page	Description	Phases	AC input voltage [V]	DC input voltage [V]	Rated voltage [V]	Rated current [A]	Power rating [W]	Derating at [°C]	Load reserve	Type of contact	Temperature range [°C]	Efficiency [%]	MTBF time [Mh]	Surge category	Approvals	Field cabinets	Small and series machine construction	Machine construction and plant manufacture	Simple process applications	Process industry	Energy technology	Power distribution	Marine engineering	
PROmax A.36	PRO MAX 72W 24V 3A	1	85...277	80...370	24	3	72	> 60	130 % permanently with ≤ 40 °C	CO	-25...+70	90	> 0.5	III		●	●	●	●	●	●	●	●	1478100000
	PRO MAX 120W 24V 5A				24	5	120					90												1478110000
	PRO MAX 180W 24V 7.5A				24	7.5	180					90												1478120000
	PRO MAX 240W 24V 10A				24	10	240					91												1478130000
	PRO MAX 480W 24V 20A				24	20	480					91												1478140000
	PRO MAX 960W 24V 40A				24	40	960					91.5												1478150000
	PRO MAX 70W 5V 14A				5	14	70					86												1478210000
	PRO MAX 72W 12V 6A				12	6	72					89												1478220000
	PRO MAX 120W 12V 10A				12	10	120					89												1478230000
	PRO MAX 240W 48V 5A				48	5	240					91												1478240000
	PRO MAX 480W 48V 10A				48	10	480					91.5												1478200000
	PRO MAX 960W 48V 20A				48	20	960					92.5												1478270000
	PRO MAX3 120W 24V 5A				24	5	120					90												1478170000
	PRO MAX3 240W 24V 10A				24	10	240					91												1478180000
PRO MAX3 480W 24V 20A	24	20	480	91.5	1478190000																			
PRO MAX3 960W 24V 40A	24	40	960	92.5	1478200000																			
PROeco A.46	PRO ECO 72W 24V 3A II	1	85...264 (Derating @ 100 V AC)	110...370 V DC (Derating @ < 120 V DC)	24	3	72	> 55	/	NO	-25...+70	87.5	> 0.7	II		●	●	●	●	●	●	●	●	3025560000
	PRO ECO 120W 24V 5A II				24	5	120					90.1												3025570000
	PRO ECO 240W 24V 10A II				24	10	240					94.5												3025580000
	PRO ECO 480W 24V 20A II				24	20	480					94.9												3025590000
	PRO ECO 960W 24V 40A II				24	40	960					93.9												3025600000
	PRO ECO 960W 48V 20A II				48	20	960					94.1												3025610000
	PRO ECO 72W 24V 3A II SI				24	3	72					87.5												3146450000
	PRO ECO 120W 24V 5A II SI				24	5	120					90.1												3146460000
	PRO ECO 240W 24V 10A II SI				24	10	240					94.5												3146470000
	PRO ECO3 120W 24V 5A II				24	5	120					86.6												3025620000
	PRO ECO3 240W 24V 10A II				24	10	240					89.0												3025630000
	PRO ECO3 480W 24V 20A II				24	20	480					92.6												3025640000
	PRO ECO3 480W 48V 10A II				48	10	480					93.2												3025650000
	PRO ECO3 960W 24V 40A II				24	40	960					92.4												3025660000
PRO ECO3 960W 48V 20A II	48	20	960	93.8	3025670000																			
PRObas A.60	PRO BAS 30W 24V 1.3A	1	85...264 (Derating @ 100 V AC)	110...370 V DC (Derating @ < 120 V DC)	24	1.3	30	> 55	/	NO	-25...+70	89	> 0.5	II		●	●	●	●	●	●	●	●	2838500000
	PRO BAS 30W 12V 2.6A				12	2.6	30					89												2838510000
	PRO BAS 30W 5V 6A				5	6	30					87												2838400000
	PRO BAS 60W 24V 2.5A				24	2.5	60					90												2838410000
	PRO BAS 60W 12V 5A				12	5	60					90												2838420000
	PRO BAS 90W 24V 3.8A				24	3.8	90					89.4												2838430000
	PRO BAS 120W 24V 5A				24	5	120					90												2838440000
	PRO BAS 120W 12V 10A				12	10	120					90												2838450000
	PRO BAS 240W 24V 10A				24	10	240					94												2838460000
	PRO BAS 240W 48V 5A				48	5	240					95												2838470000
	PRO BAS 480W 24V 20A				24	20	480					95												2838480000
	PRO BAS 480W 48V 10A				48	10	480					95												2838490000

Find the perfect product to meet your requirement

Our extensive portfolio of power supplies at a glance







Series / family		Input side		Output side				Additional functions				Recommendation for application						Order No.							
Page	Description	Phases	AC input voltage [V]	DC input voltage [V]	Rated voltage [V]	Rated current [A]	Power rating [W]	Derating at [°C]	Load reserve	Type of contact	Temperature range [°C]	Efficiency [%]	MTBF time [Mh]	Surge category	Approvals	Field cabinets	Small and series machine construction	Machine construction and plant manufacture	Simple process applications	Process industry	Energy technology	Power distribution	Marine engineering		
PRO-PM A.70	PRO PM 100W 12V 8.5A	1	90...264	/	12	8.5	100	> 50	/	/	-20...+70	84	/	II	  	●	●	●							2660200285
	PRO PM 100W 24V 4.5A				24	4.5	100					86				2660200286									
	PRO PM 100W 48V 2.3A				48	2.3	100					86				2660200287									
	PRO PM 150W 12V 12.5A				12	12.5	150					84				2660200288									
	PRO PM 150W 24V 6.5A				24	6.5	150					86				2660200289									
	PRO PM 150W 48V 3.3A				48	3.3	150					86				2660200290									
	PRO PM 250W 12V 21A				12	21	250					84				2660200291									
	PRO PM 250W 24V 10.5A				24	10.5	250					86				2660200292									
	PRO PM 250W 48V 5.2A				48	5.2	250					86				2660200293									
	PRO PM 350W 24V 14.6A				24	14.6	350					86				2660200294									
	PRO PM 350W 48V 7.3A				48	7.3	350					86				2660200295									
	PRO PM 35W 12V 3A				12	3	35					84				2660200278									
	PRO PM 35W 24V 1.5A				24	1.5	35					86				2660200279									
	PRO PM 35W 48V 0.75A				48	0.75	35					86				2660200280									
	PRO PM 35W 5V 7A				5	7	35					82				2660200277									
	PRO PM 75W 12V 6A				12	6	75					84				2660200282									
	PRO PM 75W 24V 3.2A				24	3.2	75					86				2660200283									
	PRO PM 75W 48V 1.6A				48	1.6	75					86				2660200284									
	PRO PM 75W 5V 14A				5	14	75					82				2660200281									
	INSTA POWER A.84				PRO INSTA 16W 24V 0.7A	1	85...264 (Derating @ 100 V AC)					95...370				24	0.7	16	> 55	/	/	-25...+70	82.5	750,000	II
PRO INSTA 30W 12V 2.6A		12	2.6	30	85			2580220000																	
PRO INSTA 30W 24V 1.3A		24	1.3	30	86			2580190000																	
PRO INSTA 30W 5V 6A		5	6	30	82			2580210000																	
PRO INSTA 60W 12V 5A		12	5	60	86			2580240000																	
PRO INSTA 60W 24V 2.5A		24	2.5	60	89			2580230000																	
PRO INSTA 90W 24V 3.8A		24	3.8	90	87			2580250000																	
PRO INSTA 96W 24V 4A		24	4	96	87			2580260000																	
PRO INSTA 96W 48V 2A		48	2	96	89			2580270000																	
PRO CP A.94	PRO CP 20W 12V 1.6A	1	100...277	/	12	1.6	20	/	/	/	-35...+50	87	1 Mh	III	 EN 60335-1										3026100000
	PRO CP 20W 24V 0.8A				24	0.8	20					87				3033220000									

Note: Product overview for the maxGUARD product range in chapter B.

Series / family		Input side		Output side			Additional functions					Recommendation for application						Order No.						
Page	Description	DC input voltage [V]	Rated voltage [V]	configurable range [V]	Rated current [A]	Power rating [W]	Type of contact	Parallel connection option	Side-by-side connectivity	Temperature range [°C]	Efficiency [%]	Surge category	Approvals	Field cabinets	Small and series machine construction	Machine construction and plant manufacture	Simple process applications	Process industry	Energy technology	Power distribution	Marine engineering			
USV	C.2	24	Vin-0.5 V DC		5	120	NO	≤ 2		-25 ... +70	> 98	III/ II		●	●	●	●					●	2934940000	
					10	240								●	●	●	●					●	2934950000	
					20	480								●	●	●	●					●	2934960000	
					40	960								●	●	●	●					●	2934970000	
	C.2	24	22	22 V / Vin-1 V DC	20	480	NO	Yes		-25 ... +70	> 98 buffer mode	III		●	●	●	●					●	2786240000	
					40	960								●	●	●	●					●	2786250000	
	C.2	24	24			10 A / 7.8 min	1,2 Ah	/	≤ 2		Charge: -15 ... +50°C, Discharge: -20 ... +60°C	> 98	III		●	●	●	●					●	2789890000
						10 A / 11.3 min	3.4 Ah								●	●	●	●					●	2789900000
						10 A / 26.5 min	7 Ah								●	●	●	●					●	2789910000
						10 A / 51 min	12 Ah								●	●	●	●					●	2789920000
						10 A / 81 min	17 Ah								●	●	●	●					●	2789930000
	DC/DC	D.2	18...31.2	24	22.5...29.5	5	120	NO / SSC			-25 ... +70	> 92	III		●	●	●	●					●	2001800000
						10	240								●	●	●	●					●	2001810000
						20	480								●	●	●	●					●	2001820000
		D.6	12, 24, 48	12, 24, 48	12, 24, 48	9...18, 18...34, 28...58	8	96	NO / SSC	≤ 3		-25 ... +70	> 86,5	III		●	●	●	●					●
8							96	●								●	●	●					●	2869010000
8							96	●								●	●	●					●	2869020000
5							120	●								●	●	●					●	2869030000
5							120	●								●	●	●					●	2869040000
5							240	●								●	●	●					●	2869050000
5							240	●								●	●	●					●	2869060000

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Series / family		Input side		Output side			Additional functions					Recommendation for application						Order No.										
Page	Description	DC input voltage [V]	Rated voltage [V]	configurable range [V]	Rated current [A]	Power rating [W]	Type of contact	Parallel connection option	Side-by-side connectivity	Temperature range [°C]	Efficiency [%]	Surge category	Approvals	Field cabinets	Small and series machine construction	Machine construction and plant manufacture	Simple process applications	Process industry	Energy technology	Power distribution	Marine engineering							
E.4	PRO RM 10	10...32	$U_n - 0.13$ $V_{U_n} - 0.13$ V		2 × 12 A (-40 °C ~ +45 °C), 2 × 10 A (+45 °C ~ +60 °C), 2 × 7.5 A (+70 °C)	480	NO	yes	●	-40 ... +70	> 98	III	   CI1Div2 IECEX ATEX	●	●	●	●	●	●	●	●	●	2486090000					
	PRO RM 20		$U_n - 0.2$ V		2 × 24 A (-40 °C ~ +45 °C), 2 × 20 A (+45 °C ~ +60 °C), 2 × 15 A (+70 °C)	960					●			●	●	●	●	●	●	●	●	●	●	●	●	●	●	2486100000
	PRO RM 40		$U_n - 0.27$ V		3 × 48 A (-40 °C ~ +45 °C), 2 × 40 A (+45 °C ~ +60 °C), 2 × 30 A (+70 °C)	1920					●			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
E.6	PRO DM 10	0...60	$U_n - 0.7$ $V_{U_n} - 0.7$ V		2 × 12 A (-40 °C ~ +45 °C), 2 × 10 A (+45 °C ~ +60 °C), 2 × 7.5 A (+70 °C), 2 × 12 A (-40 °C ~ +45 °C), 2 × 10 A (+45 °C ~ +60 °C), 2 × 7.5 A (+70 °C)	480	/	yes	●	-40 ... +70	> 97	III	  	●	●	●	●	●	●	●	●	●	2486070000					
	PRO DM 20				2 × 24 A (-40 °C ~ +45 °C), 2 × 20 A (+45 °C ~ +60 °C), 2 × 15 A (+70 °C), 2 × 24 A (-40 °C ~ +45 °C), 2 × 20 A (+45 °C ~ +60 °C), 2 × 15 A (+70 °C)	960					●			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

Switched-mode power supply units

Switched-mode power supply units	Overview	A.2
	connectPower PROtop	A.4
	connectPower PROtop DCDC	A.20
	connectPower PROtop UW	A.28
	connectPower PROmax	A.36
	connectPower PROeco	A.48
	connectPower PRObas	A.60
	connectPower PRO-PM	A.70
	connectPower INSTA POWER	A.84
	connectPower PRO CP	A.94

Optimum power supply for automation technology

The switch-mode power supplies feature a high efficiency, compact dimensions and minimal heat generation.

They are an excellent and reliable solution for providing power in all automation applications – safely providing 24 V DC voltage.

The different product series are optimised for the automation industry: they feature Ex approvals for the processing industry, a flat shape perfect for distribution tasks within buildings and provide decentralised control voltages.

All-purpose usage: with a wide range of AC/DC inputs, single-, double- or three-phase versions and a wide temperature range. Additional performance increases

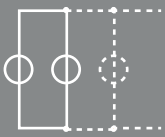
are possible using simple parallel connection. Weidmüller switch-mode power supplies are reliable usable for all applications because of their high efficiency and their resistance to both short circuits and overloads.

Weidmüller offers a system of one- and three-phase switch-mode power supplies especially for the PROtop family. These can be expanded with additional modules to create whole system solutions. The optimal fitting system can be assembled for any type of application: with redundancy circuits containing decoupled outputs, monitoring of the output voltage or triggering of circuit breakers.



AC/DC**International use**

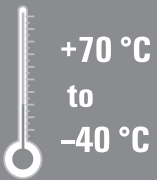
A wide-range input (both DC as well as AC voltages can be used; no switching required) and extensive approvals (UL/CSA and GL (EMC 1 – bridge)).

**Parallel connection**

Module power can be increased by connecting up to five power supplies in parallel without diode module.

**Narrow**

Space-saving configuration in the switching cabinet through very narrow housing construction and side-by-side connectability.

**Robust**

Wide temperature range from -40 °C ... +70 °C.

**Wide choice**

The right power supply for every application: 1-phase 3 A, 5 A, 7.5 A, 10 A, 20 A, 40 A and 3-phase 5 A, 10 A, 20 A, 40 A.

connectPower**connectPower PROtop****connectPower PROtop DCDC****connectPower PROtop UW****connectPower PROmax****connectPower PROeco****connectPower PRObas****connectPower PRO-PM****connectPower INSTA POWER****connectPower PRO CP**

High-end-power supplies and future proofed PROtop: Reliable, powerful, efficient and communication-capable

Production processes constantly need to be made more efficient. As well as performance, energy efficiency and sustainability are also playing an increasingly important role in cutting-edge industry. PROtop power supplies combine excellent performance data with exemplary sustainability, which has a positive impact on the productivity of the entire production facility.

PROtop offers a number of advantages that give you a real competitive edge. These include the permanent reduction of energy costs thanks to high efficiencies as well as the increase in plant availability due to long service life and high MTBF values. In addition, there is a high functional density due to the extremely space-saving designs.

PROtop can achieve significant savings compared to conventional power supply units. Its increased efficiency saves an average of 50 kWh per day in a medium-sized production facility with approx. 100 PROtop power supplies working in three-shift operation. This adds up to over 15,000 kWh a year and also improves the facility's carbon footprint. The service life, which is twice as long as that of standard power supplies, also sustainably reduces the costs of repurchase and exchange.





Direct parallel switching without diode modules thanks to integrated ORing MOSFETs for reduced system costs



Sustainable and innovative device concept

- Optimum efficiency levels (up to 95.3%) for sustainable energy savings
- High MTBF values (> 1,000,000 h) for permanently high system availability

Communication modules can be adapted without tools.



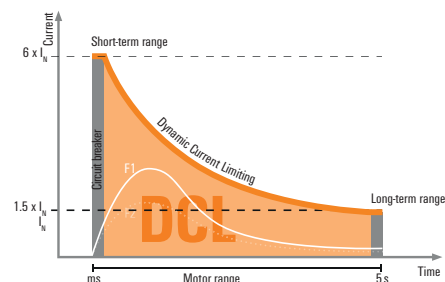
Outstanding peak load reserves

- High dynamic range thanks to unique DCL (dynamic current limiting) technology
- Continuous peak load reserves from millisecond to second range
- Ideal for reliably triggering circuit breakers or for powerful motor starts



Highly future-proof

- Complete data transparency through to the cloud
- Remote controllability for integration into machine control systems
- CANopen and IO-Link communication protocols



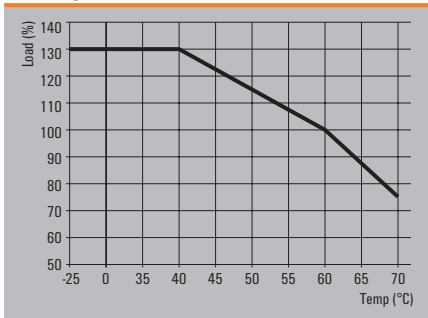
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- DCL technology for an excellent dynamic range
- High energy efficiency (up to 95.4 % efficiency)
- Mode of operation: single or parallel operation and adjustable short-circuit response (continuous current or switch-off)
- Useful life of up to 10 years, MTBF > 1 000 000 h.
- Extremely slim design
- Time-saving PUSH IN connection technology



Derating curve



Technical data

General data	
Insulation voltage input / earth	3.2 kV
Insulation voltage output / earth	0.5 kV
Insulation voltage, input/output	3.5 kV
Earth leakage current, max.	3.5 mA
Series switching capability	Yes
Ambient temperature (operational) / Storage temperature	-25 °C...70 °C / -40 °C...85 °C
Humidity at operating temperature	5...95 %, no condensation
Protection class / Pollution degree	I, with PE connection / 2
Housing version	Metal, corrosion resistant
Conformal coating	No
EMC / shock / vibration	
Interference immunity test acc. to	EN 55032:2015, EN 55024:2010/A1:2015, EN 55035:2017, EN 61000-3-2:2014, EN 61000-6-1:2007, EN 61000-6-2:2005, EN 61000-6-3:2007/A1:2011, EN 61000-6-4:2007/A1:2011
Shock	30 g in all directions
Resistance to vibration	2.3 g (on DIN rail), 4 g (with direct mounting)
Electrical safety (applied standards)	
Electrical machine equipment	Acc. to EN60204
Safety transformers for switch-mode power supplies	According to EN 61558-2-16
Safety extra-low voltage	SELV acc. to IEC 60950-1, PELV according to EN 60204-1

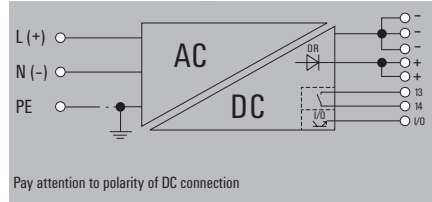
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- 1-phase power supplies

PRO TOP1 72 W 24 V 3 A



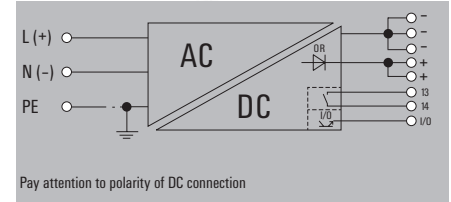
Similar to illustration



PRO TOP1 120 W 24 V 5 A



Similar to illustration



Technical data

Input	
Rated input voltage	100...240 V AC / 120...340 V DC
Input voltage range AC	85...277 V AC
Frequency range AC	45...65 Hz
DC input voltage range	80 ... 410 V DC
Input fuse (internal) / Inrush current	Yes / max. 5 A
Output	
Rated output voltage	24 V DC ± 1 %
Output voltage	22.5...28.8 V adjustable with potentiometer or communication module
DCL - peak load reserve	150 % (5 s); 400 % (15 ms)
Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load
Reserve capacity @ U _{Nominal}	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U _{Nom}	3 A @ 60 °C
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	2300000h
Ambient temperature	25°C
Input voltage	230V
Output power	72W
Duty cycle	100%
General data	
Derating	> 60°C (2.5% / 1°C)
Series switching capability	Yes
Degree of efficiency	89%
Power factor (approx.)	> 0.5
AC failure bridging time @ I _{Nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC
LED green/red	Green: Operation (failure-free), Flashing green: advance warning I>90%, Green/red flashing: output switched off (switch-off mode), Flashing red: overload/error
Parallel connection option	Yes, for redundancy and power increase (with ORing MOSFET)
Depth x width x height	125 / 35 / 130 mm
Net weight	650 g
Approvals	
Approvals	ABS; BURVER; CCS; cULus; cULusEX; DETNORVER; LLOYDSREG; RINA; TUEV
Connection data	
Connection system	PUSH IN with actuator
Number of terminals	3 for L/N/PE
Wire cross-section, rigid min/max	0.5 / 1.5 mm ²
Wire cross-section, flexible min/max	0.5 / 2.5 mm ²
Wire cross-section, AWG/kcmil min/max	20 / 12
Note	

Input	
Rated input voltage	110...240 V AC / 120...340 V DC
Input voltage range AC	85...277 V AC
Frequency range AC	45...65 Hz
DC input voltage range	48...410 V DC (Derating 40% @ 48 V DC)
Input fuse (internal) / Inrush current	Yes / max. 5 A
Output	
Rated output voltage	24 V DC ± 1 %
Output voltage	22.5...28.8 V adjustable with potentiometer or communication module
DCL - peak load reserve	150 % (5 s); 600 % (15 ms)
Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load
Reserve capacity @ U _{Nominal}	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U _{Nom}	5 A @ 60 °C
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	1900000h
Ambient temperature	25°C
Input voltage	230V
Output power	120W
Duty cycle	100%
General data	
Derating	> 60°C (2.5% / 1°C)
Series switching capability	Yes
Degree of efficiency	91%
Power factor (approx.)	> 0.85
AC failure bridging time @ I _{Nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC
LED green/red	Green: Operation (failure-free), Flashing green: advance warning I>90%, Green/red flashing: output switched off (switch-off mode), Flashing red: overload/error
Parallel connection option	Yes, for redundancy and power increase (with ORing MOSFET)
Depth x width x height	125 / 35 / 130 mm
Net weight	850 g
Approvals	
Approvals	ABS; BURVER; CCS; cULus; cULusEX; DETNORVER; LLOYDSREG; RINA; TUEV
Connection data	
Connection system	PUSH IN with actuator
Number of terminals	3 for L/N/PE
Wire cross-section, rigid min/max	0.5 / 1.5 mm ²
Wire cross-section, flexible min/max	0.5 / 2.5 mm ²
Wire cross-section, AWG/kcmil min/max	20 / 12
Note	

Input	
Rated input voltage	110...240 V AC / 120...340 V DC
Input voltage range AC	85...277 V AC
Frequency range AC	45...65 Hz
DC input voltage range	48...410 V DC (Derating 40% @ 48 V DC)
Input fuse (internal) / Inrush current	Yes / max. 5 A
Output	
Rated output voltage	24 V DC ± 1 %
Output voltage	22.5...28.8 V adjustable with potentiometer or communication module
DCL - peak load reserve	150 % (5 s); 600 % (15 ms)
Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load
Reserve capacity @ U _{Nominal}	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U _{Nom}	5 A @ 60 °C
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	1900000h
Ambient temperature	25°C
Input voltage	230V
Output power	120W
Duty cycle	100%
General data	
Derating	> 60°C (2.5% / 1°C)
Series switching capability	Yes
Degree of efficiency	91%
Power factor (approx.)	> 0.85
AC failure bridging time @ I _{Nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC
LED green/red	Green: Operation (failure-free), Flashing green: advance warning I>90%, Green/red flashing: output switched off (switch-off mode), Flashing red: overload/error
Parallel connection option	Yes, for redundancy and power increase (with ORing MOSFET)
Depth x width x height	125 / 35 / 130 mm
Net weight	850 g
Approvals	
Approvals	ABS; BURVER; CCS; cULus; cULusEX; DETNORVER; LLOYDSREG; RINA; TUEV
Connection data	
Connection system	PUSH IN with actuator
Number of terminals	3 for L/N/PE
Wire cross-section, rigid min/max	0.5 / 1.5 mm ²
Wire cross-section, flexible min/max	0.5 / 2.5 mm ²
Wire cross-section, AWG/kcmil min/max	20 / 12
Note	

Ordering data

Type	Qty.	Order No.
PRO TOP1 72W 24V 3A	1	2466850000

Note

Type	Qty.	Order No.
PRO TOP1 72W 24V 3A	1	2466850000

Current technical data at eshop.weidmueller.com

Type	Qty.	Order No.
PRO TOP1 120W 24V 5A	1	2466870000

Current technical data at eshop.weidmueller.com

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- 1-phase power supplies

PRO TOP1 240 W 24 V 10 A

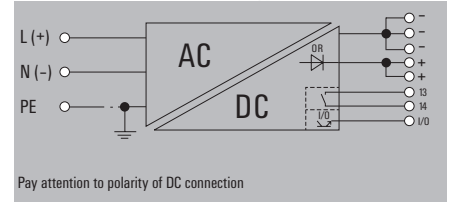
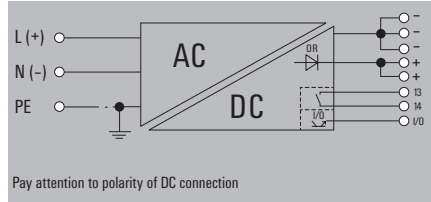
PRO TOP1 480 W 24 V 20 A



Similar to illustration



Similar to illustration



Technical data

Input	
Rated input voltage	110...240 V AC / 120...340 V DC
Input voltage range AC	85...277 V AC
Frequency range AC	45...65 Hz
DC input voltage range	80 ... 410 V DC
Input fuse (internal) / Inrush current	Yes / max. 5 A
Output	
Rated output voltage	24 V DC ± 1 %
Output voltage	22.5...28.8 V adjustable with potentiometer or communication module
DCL - peak load reserve	150 % (5 s); 600 % (15 ms)
Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load
Reserve capacity @ U _{Nominal}	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U _{Nom}	10 A @ 60 °C
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	1600000h
Ambient temperature	25°C
Input voltage	230V
Output power	240W
Duty cycle	100%
General data	
Derating	> 60°C (2.5% / 1°C)
Series switching capability	Yes
Degree of efficiency	92 %
Power factor (approx.)	> 0.9
AC failure bridging time @ I _{Nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC
LED green/red	Green: Operation (failure-free), Flashing green: advance warning >90%, Green/red flashing: output switched off (switch-off mode), Flashing red: overload/error
Parallel connection option	Yes, for redundancy and power increase (with ORing MOSFET)
Depth x width x height	125 / 39 / 130 mm
Net weight	1050 g
Approvals	
Approvals	ABS; BURVER; CCS; cULus; cULusEX; DETNORVER; LLOYDSREG; RINA; TUEV
Connection data	
Connection system	PUSH IN with actuator
Number of terminals	3 for L/N/PE
Wire cross-section, rigid min/max	0.5 / 1.5 mm ²
Wire cross-section, flexible min/max	0.5 / 2.5 mm ²
Wire cross-section, AWG/kcmil min/max	20 / 12
Note	

Input	
Rated input voltage	110...240 V AC / 120...340 V DC
Input voltage range AC	85...277 V AC
Frequency range AC	45...65 Hz
DC input voltage range	80 ... 410 V DC
Input fuse (internal) / Inrush current	Yes / max. 5 A
Output	
Rated output voltage	24 V DC ± 1 %
Output voltage	22.5...28.8 V adjustable with potentiometer or communication module
DCL - peak load reserve	150 % (5 s); 500 % (15 ms)
Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load
Reserve capacity @ U _{Nominal}	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U _{Nom}	20 A @ 60 °C
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	1200000h
Ambient temperature	25°C
Input voltage	230V
Output power	480W
Duty cycle	100%
General data	
Derating	> 60°C (2.5% / 1°C)
Series switching capability	Yes
Degree of efficiency	93%
Power factor (approx.)	> 0.9
AC failure bridging time @ I _{Nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC
LED green/red	Green: Operation (failure-free), Flashing green: advance warning >90%, Green/red flashing: output switched off (switch-off mode), Flashing red: overload/error
Parallel connection option	Yes, for redundancy and power increase (with ORing MOSFET)
Depth x width x height	125 / 68 / 130 mm
Net weight	1520 g
Approvals	
Approvals	ABS; BURVER; CCS; cULus; cULusEX; DETNORVER; LLOYDSREG; RINA; TUEV
Connection data	
Connection system	PUSH IN with actuator
Number of terminals	5 (+ + / - -)
Wire cross-section, rigid min/max	0.5 / 1.5
Wire cross-section, flexible min/max	0.2 / 2.5
Wire cross-section, AWG/kcmil min/max	26 / 12
Note	

Input	
Rated input voltage	110...240 V AC / 120...340 V DC
Input voltage range AC	85...277 V AC
Frequency range AC	45...65 Hz
DC input voltage range	80 ... 410 V DC
Input fuse (internal) / Inrush current	Yes / max. 5 A
Output	
Rated output voltage	24 V DC ± 1 %
Output voltage	22.5...28.8 V adjustable with potentiometer or communication module
DCL - peak load reserve	150 % (5 s); 500 % (15 ms)
Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load
Reserve capacity @ U _{Nominal}	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U _{Nom}	20 A @ 60 °C
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	1200000h
Ambient temperature	25°C
Input voltage	230V
Output power	480W
Duty cycle	100%
General data	
Derating	> 60°C (2.5% / 1°C)
Series switching capability	Yes
Degree of efficiency	93%
Power factor (approx.)	> 0.9
AC failure bridging time @ I _{Nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC
LED green/red	Green: Operation (failure-free), Flashing green: advance warning >90%, Green/red flashing: output switched off (switch-off mode), Flashing red: overload/error
Parallel connection option	Yes, for redundancy and power increase (with ORing MOSFET)
Depth x width x height	125 / 68 / 130 mm
Net weight	1520 g
Approvals	
Approvals	ABS; BURVER; CCS; cULus; cULusEX; DETNORVER; LLOYDSREG; RINA; TUEV
Connection data	
Connection system	PUSH IN
Number of terminals	5 (+ + / - -)
Wire cross-section, rigid min/max	0.2 / 10
Wire cross-section, flexible min/max	0.2 / 6
Wire cross-section, AWG/kcmil min/max	20 / 8
Note	

Ordering data

Type	Qty.	Order No.
PRO TOP1 240W 24V 10A	1	2466880000
Note		
Current technical data at eshop.weidmueller.com		

Type	Qty.	Order No.
PRO TOP1 480W 24V 20A	1	2466890000
Note		
Current technical data at eshop.weidmueller.com		

Type	Qty.	Order No.
PRO TOP1 480W 24V 20A	1	2466890000
Note		
Current technical data at eshop.weidmueller.com		

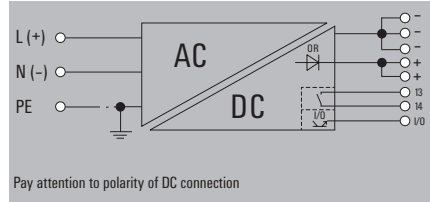
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- 1-phase power supplies

PRO TOP1 960 W 24 V 40 A



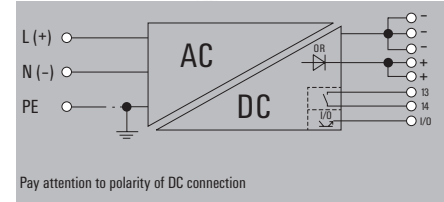
Similar to illustration



PRO TOP1 120 W 12 V 10 A



Similar to illustration



Technical data

Input	
Rated input voltage	110...240 V AC / 120...340 V DC
Input voltage range AC	85...277 V AC
Frequency range AC	45...65 Hz
DC input voltage range	80 ... 410 V DC
Input fuse (internal) / Inrush current	Yes / max. 15 A
Output	
Rated output voltage	24 V DC ± 1 %
Output voltage	22.5...28.8 V adjustable with potentiometer or communication module
DCL - peak load reserve	150 % (5 s); 400 % (15 ms)
Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load
Reserve capacity @ U _{Nominal}	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U _{nom}	40 A @ 60 °C
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	1000000h
Ambient temperature	25°C
Input voltage	230V
Output power	960W
Duty cycle	100%
General data	
Derating	> 60°C (2.5% / 1°C)
Series switching capability	Yes
Degree of efficiency	94%
Power factor (approx.)	> 0.9
AC failure bridging time @ I _{nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC
LED green/red	Green: Operation (failure-free), Flashing green: advance warning I>90%, Green/red flashing: output switched off (switch-off mode), Flashing red: overload/error
Parallel connection option	Yes, for redundancy and power increase (with ORing MOSFET)
Depth x width x height	125 / 124 / 130 mm
Net weight	3080 g
Approvals	
Approvals	ABS; BURVER; CCS; cULus; cULusEX; DETNORVER; LLOYDSREG; RINA; TUEV
Connection data	
Connection system	PUSH IN
Number of terminals	3 for L/N/PE
Wire cross-section, rigid min/max	0.75 / 16 mm ²
Wire cross-section, flexible min/max	0.75 / 16 mm ²
Wire cross-section, AWG/kcmil min/max	20 / 4
Note	

Input	
Rated input voltage	110...240 V AC / 120...340 V DC
Input voltage range AC	85...277 V AC
Frequency range AC	45...65 Hz
DC input voltage range	80 ... 410 V DC
Input fuse (internal) / Inrush current	Yes / max. 15 A
Output	
Rated output voltage	24 V DC ± 1 %
Output voltage	22.5...28.8 V adjustable with potentiometer or communication module
DCL - peak load reserve	150 % (5 s); 400 % (15 ms)
Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load
Reserve capacity @ U _{Nominal}	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U _{nom}	40 A @ 60 °C
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	1000000h
Ambient temperature	25°C
Input voltage	230V
Output power	960W
Duty cycle	100%
General data	
Derating	> 60°C (2.5% / 1°C)
Series switching capability	Yes
Degree of efficiency	94%
Power factor (approx.)	> 0.9
AC failure bridging time @ I _{nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC
LED green/red	Green: Operation (failure-free), Flashing green: advance warning I>90%, Green/red flashing: output switched off (switch-off mode), Flashing red: overload/error
Parallel connection option	Yes, for redundancy and power increase (with ORing MOSFET)
Depth x width x height	125 / 124 / 130 mm
Net weight	3080 g
Approvals	
Approvals	ABS; BURVER; CCS; cULus; cULusEX; DETNORVER; LLOYDSREG; RINA; TUEV
Connection data	
Connection system	PUSH IN
Number of terminals	3 for L/N/PE
Wire cross-section, rigid min/max	0.75 / 16 mm ²
Wire cross-section, flexible min/max	0.75 / 16 mm ²
Wire cross-section, AWG/kcmil min/max	20 / 4
Note	

Input	
Rated input voltage	110...240 V AC / 120...340 V DC
Input voltage range AC	85...277 V AC
Frequency range AC	45...65 Hz
DC input voltage range	80 ... 410 V DC
Input fuse (internal) / Inrush current	Yes / max. 5 A
Output	
Rated output voltage	12 V DC ± 1 %
Output voltage	11...15 V adjustable with potentiometer or communication module
DCL - peak load reserve	150 % (5 s); 400 % (15 ms)
Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load
Reserve capacity @ U _{Nominal}	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U _{nom}	10 A @ 60 °C
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	1500000h
Ambient temperature	25°C
Input voltage	230V
Output power	120W
Duty cycle	100%
General data	
Derating	> 60°C (2.5% / 1°C)
Series switching capability	Yes
Degree of efficiency	90%
Power factor (approx.)	> 0.85
AC failure bridging time @ I _{nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC
LED green/red	Green: Operation (failure-free), Flashing green: advance warning I>90%, Green/red flashing: output switched off (switch-off mode), Flashing red: overload/error
Parallel connection option	Yes, for redundancy and power increase (with ORing MOSFET)
Depth x width x height	125 / 35 / 130 mm
Net weight	850 g
Approvals	
Approvals	ABS; BURVER; CCS; cULus; cULusEX; DETNORVER; LLOYDSREG; RINA; TUEV
Connection data	
Connection system	PUSH IN with actuator
Number of terminals	3 for L/N/PE
Wire cross-section, rigid min/max	0.5 / 1.5 mm ²
Wire cross-section, flexible min/max	0.5 / 2.5 mm ²
Wire cross-section, AWG/kcmil min/max	20 / 12
Note	

Ordering data

Type	Qty.	Order No.
PRO TOP1 960W 24V 40A	1	246690000

Type	Qty.	Order No.
PRO TOP1 960W 24V 40A	1	246690000

Type	Qty.	Order No.
PRO TOP1 120W 12V 10A	1	2466910000

Note

Current technical data at eshop.weidmueller.com

Current technical data at eshop.weidmueller.com

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- 1-phase power supplies

PRO TOP1 480 W 48 V 10 A

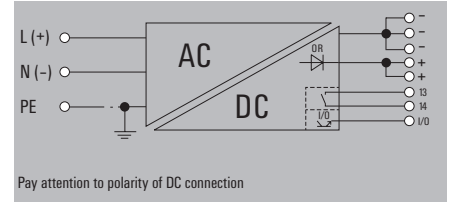
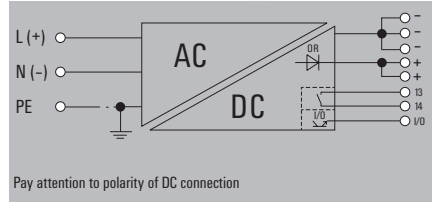
PRO TOP1 960 W 48 V 20 A



Similar to illustration



Similar to illustration



Technical data

Input	
Rated input voltage	110...240 V AC / 120...340 V DC
Input voltage range AC	85...277 V AC
Frequency range AC	45...65 Hz
DC input voltage range	80 ... 410 V DC
Input fuse (internal) / Inrush current	Yes / max. 5 A
Output	
Rated output voltage	48 V DC ± 1 %
Output voltage	45...56 V adjustable with potentiometer or communication module
DCL - peak load reserve	150 % (5 s); 500 % (15 ms)
Residual ripple, breaking spikes	<100 mV _{pp}
Reserve capacity @ U _{Nominal}	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U _{nom}	10 A @ 60 °C
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	1100000h
Ambient temperature	25°C
Input voltage	230V
Output power	480W
Duty cycle	100%
General data	
Derating	> 60°C (2.5% / 1°C)
Series switching capability	No
Degree of efficiency	93%
Power factor (approx.)	> 0.9
AC failure bridging time @ I _{nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC
LED green/red	Green: Operation (failure-free), Flashing green: advance warning >90%, Green/red flashing: output switched off (switch-off mode), Flashing red: overload/error
Parallel connection option	Yes, for redundancy and power increase (with ORing MOSFET)
Depth x width x height	125 / 68 / 130 mm
Net weight	1520 g
Approvals	
Approvals	ABS; BURVER; CCS; cULus; cULusEX; DETNORVER; LLOYDSREG; RINA; TUEV
Connection data	
Connection system	PUSH IN
Number of terminals	3 for L/N/PE
Wire cross-section, rigid min/max	0.2 / 10 mm ²
Wire cross-section, flexible min/max	0.2 / 6 mm ²
Wire cross-section, AWG/kcmil min/max	20 / 8
Note	

Input	
Rated input voltage	110...240 V AC / 120...340 V DC
Input voltage range AC	85...277 V AC
Frequency range AC	45...65 Hz
DC input voltage range	80 ... 410 V DC
Input fuse (internal) / Inrush current	Yes / max. 15 A
Output	
Rated output voltage	48 V DC ± 1 %
Output voltage	45...56 V adjustable with potentiometer or communication module
DCL - peak load reserve	150 % (5 s); 400 % (15 ms)
Residual ripple, breaking spikes	<100 mV _{pp}
Reserve capacity @ U _{Nominal}	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U _{nom}	20 A @ 60 °C
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	1000000h
Ambient temperature	25°C
Input voltage	230V
Output power	960W
Duty cycle	100%
General data	
Derating	> 60°C (2.5% / 1°C)
Series switching capability	No
Degree of efficiency	94%
Power factor (approx.)	> 0.9
AC failure bridging time @ I _{nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC
LED green/red	Green: Operation (failure-free), Flashing green: advance warning >90%, Green/red flashing: output switched off (switch-off mode), Flashing red: overload/error
Parallel connection option	Yes, for redundancy and power increase (with ORing MOSFET)
Depth x width x height	125 / 124 / 130 mm
Net weight	3000 g
Approvals	
Approvals	ABS; BURVER; CCS; cULus; cULusEX; DETNORVER; LLOYDSREG; RINA; TUEV
Connection data	
Connection system	PUSH IN
Number of terminals	3 for L/N/PE
Wire cross-section, rigid min/max	0.2 / 10 mm ²
Wire cross-section, flexible min/max	0.2 / 6 mm ²
Wire cross-section, AWG/kcmil min/max	20 / 8
Note	

Input	
Rated input voltage	110...240 V AC / 120...340 V DC
Input voltage range AC	85...277 V AC
Frequency range AC	45...65 Hz
DC input voltage range	80 ... 410 V DC
Input fuse (internal) / Inrush current	Yes / max. 15 A
Output	
Rated output voltage	48 V DC ± 1 %
Output voltage	45...56 V adjustable with potentiometer or communication module
DCL - peak load reserve	150 % (5 s); 400 % (15 ms)
Residual ripple, breaking spikes	<100 mV _{pp}
Reserve capacity @ U _{Nominal}	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U _{nom}	20 A @ 60 °C
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	1000000h
Ambient temperature	25°C
Input voltage	230V
Output power	960W
Duty cycle	100%
General data	
Derating	> 60°C (2.5% / 1°C)
Series switching capability	No
Degree of efficiency	94%
Power factor (approx.)	> 0.9
AC failure bridging time @ I _{nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC
LED green/red	Green: Operation (failure-free), Flashing green: advance warning >90%, Green/red flashing: output switched off (switch-off mode), Flashing red: overload/error
Parallel connection option	Yes, for redundancy and power increase (with ORing MOSFET)
Depth x width x height	125 / 124 / 130 mm
Net weight	3000 g
Approvals	
Approvals	ABS; BURVER; CCS; cULus; cULusEX; DETNORVER; LLOYDSREG; RINA; TUEV
Connection data	
Connection system	PUSH IN
Number of terminals	3 for L/N/PE
Wire cross-section, rigid min/max	0.2 / 10 mm ²
Wire cross-section, flexible min/max	0.2 / 6 mm ²
Wire cross-section, AWG/kcmil min/max	20 / 8
Note	

Ordering data

Type	Qty.	Order No.
PRO TOP1 480W 48V 10A	1	2467030000

Note

Type	Qty.	Order No.
PRO TOP1 480W 48V 10A	1	2467030000

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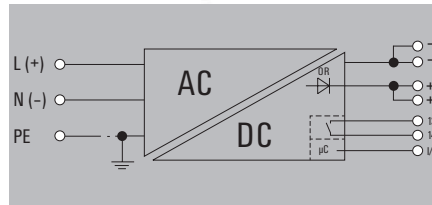
Type	Qty.	Order No.
PRO TOP1 960W 48V 20A	1	2466920000

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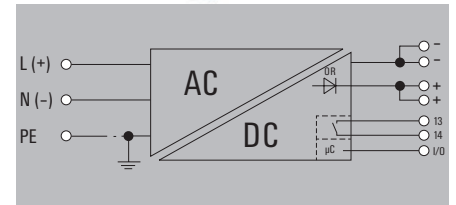
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- 1-phase power supplies with output-side screw flange

PRO TOP1 72W 24V 3A F



PRO TOP1 120W 12V 10A F



Technical data

Input	
Rated input voltage	110...240 V AC / 120...340 V DC
Input voltage range AC	85...277 V AC
Frequency range AC	45...65 Hz
DC input voltage range	80 ... 410 V DC
Input fuse (internal) / Inrush current	Yes / max. 5 A
Output	
Rated output voltage	24 V DC ± 1 %
Output voltage	22.5...28.8 V adjustable with potentiometer or communication module
DCL - peak load reserve	150 % (5 s); 400 % (15 ms)
Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load
Reserve capacity @ U _{Nominal}	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U _{Nom}	3 A @ 60 °C
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	2300000h
Ambient temperature	25°C
Input voltage	230V
Output power	72W
Duty cycle	100%
General data	
Derating	> 60°C (2.5% / 1°C)
Series switching capability	Yes
Degree of efficiency	89%
Power factor (approx.)	> 0.5
AC failure bridging time @ I _{Nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC
LED green/red	Green: Operation (failure-free), Flashing green: advance warning >90%, Green/red flashing: output switched off (switch-off mode), Flashing red: overload/error
Parallel connection option	Yes, for redundancy and power increase (with ORing MOSFET)
Depth x width x height	125 / 35 / 130 mm
Net weight	650 g
Approvals	
Approvals	ABS; BURVER; CCS; cULus; cULusEX; DETNORVER; LLOYDSREG; RINA; TUEV
Connection data	
Connection system	PUSH IN with actuator
Number of terminals	3 for L/N/PE
Wire cross-section, rigid min/max	0.5 / 1.5 mm ²
Wire cross-section, flexible min/max	0.5 / 2.5 mm ²
Wire cross-section, AWG/kcmil min/max	20 / 12
Note	

Input	
Rated input voltage	110...240 V AC / 120...340 V DC
Input voltage range AC	85...277 V AC
Frequency range AC	45...65 Hz
DC input voltage range	80 ... 410 V DC
Input fuse (internal) / Inrush current	Yes / max. 5 A
Output	
Rated output voltage	12 V DC ± 1 %
Output voltage	11...15 V adjustable with potentiometer or communication module
DCL - peak load reserve	150 % (5 s); 400 % (15 ms)
Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load
Reserve capacity @ U _{Nominal}	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U _{Nom}	10 A @ 60 °C
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	1500000h
Ambient temperature	25°C
Input voltage	230V
Output power	120W
Duty cycle	100%
General data	
Derating	> 60°C (2.5% / 1°C)
Series switching capability	Yes
Degree of efficiency	90%
Power factor (approx.)	> 0.85
AC failure bridging time @ I _{Nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC
LED green/red	Green: Operation (failure-free), Flashing green: advance warning >90%, Green/red flashing: output switched off (switch-off mode), Flashing red: overload/error
Parallel connection option	Yes, for redundancy and power increase (with ORing MOSFET)
Depth x width x height	125 / 35 / 130 mm
Net weight	850 g
Approvals	
Approvals	ABS; BURVER; CCS; cULus; cULusEX; DETNORVER; LLOYDSREG; RINA; TUEV
Connection data	
Connection system	PUSH IN with actuator
Number of terminals	3 for L/N/PE
Wire cross-section, rigid min/max	0.5 / 1.5 mm ²
Wire cross-section, flexible min/max	0.5 / 2.5 mm ²
Wire cross-section, AWG/kcmil min/max	20 / 12
Note	

Input	
Rated input voltage	110...240 V AC / 120...340 V DC
Input voltage range AC	85...277 V AC
Frequency range AC	45...65 Hz
DC input voltage range	80 ... 410 V DC
Input fuse (internal) / Inrush current	Yes / max. 5 A
Output	
Rated output voltage	12 V DC ± 1 %
Output voltage	11...15 V adjustable with potentiometer or communication module
DCL - peak load reserve	150 % (5 s); 400 % (15 ms)
Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load
Reserve capacity @ U _{Nominal}	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U _{Nom}	10 A @ 60 °C
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	1500000h
Ambient temperature	25°C
Input voltage	230V
Output power	120W
Duty cycle	100%
General data	
Derating	> 60°C (2.5% / 1°C)
Series switching capability	Yes
Degree of efficiency	90%
Power factor (approx.)	> 0.85
AC failure bridging time @ I _{Nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC
LED green/red	Green: Operation (failure-free), Flashing green: advance warning >90%, Green/red flashing: output switched off (switch-off mode), Flashing red: overload/error
Parallel connection option	Yes, for redundancy and power increase (with ORing MOSFET)
Depth x width x height	125 / 35 / 130 mm
Net weight	850 g
Approvals	
Approvals	ABS; BURVER; CCS; cULus; cULusEX; DETNORVER; LLOYDSREG; RINA; TUEV
Connection data	
Connection system	PUSH IN with actuator
Number of terminals	3 for L/N/PE
Wire cross-section, rigid min/max	0.5 / 1.5 mm ²
Wire cross-section, flexible min/max	0.5 / 2.5 mm ²
Wire cross-section, AWG/kcmil min/max	20 / 12
Note	

Ordering data

Type	Qty.	Order No.
PRO TOP1 72W 24V 3A F	1	2568970000

Type	Qty.	Order No.
PRO TOP1 120W 12V 10A F	1	2569000000

Type	Qty.	Order No.
PRO TOP1 120W 12V 10A F	1	2569000000

Note

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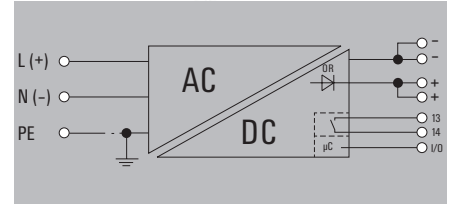
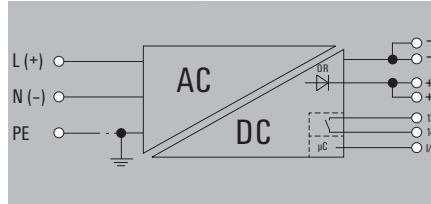
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- 1-phase power supplies with output-side screw flange

PRO TOP1 120W 24V 5A F

PRO TOP1 240W 24V 10A F



Technical data

Input	
Rated input voltage	110...240 V AC / 120...340 V DC
Input voltage range AC	85...277 V AC
Frequency range AC	45...65 Hz
DC input voltage range	48...410 V DC (Derating 40% @ 48 V DC)
Input fuse (internal) / Inrush current	Yes / max. 5 A
Output	
Rated output voltage	24 V DC ± 1 %
Output voltage	22.5...28.8 V adjustable with potentiometer or communication module
DCL - peak load reserve	150 % (5 s); 600 % (15 ms)
Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load
Reserve capacity @ U _{Nom}	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U _{Nom}	5 A @ 60 °C
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	1900000h
Ambient temperature	25°C
Input voltage	230V
Output power	120W
Duty cycle	100%
General data	
Derating	> 60°C (2.5% / 1°C)
Series switching capability	Yes
Degree of efficiency	91%
Power factor (approx.)	> 0.85
AC failure bridging time @ I _{Nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC
LED green/red	Green: Operation (failure-free), Flashing green: advance warning >90%, Green/red flashing: output switched off (switch-off mode), Flashing red: overload/error
Parallel connection option	Yes, for redundancy and power increase (with ORing MOSFET)
Depth x width x height	125 / 35 / 130 mm
Net weight	850 g
Approvals	
Approvals	ABS; BURVER; CCS; cULus; cULusEX; DETNORVER; LLOYDSREG; RINA; TUEV
Connection data	
Connection system	PUSH IN with actuator
Number of terminals	3 for L/N/PE
Wire cross-section, rigid min/max	0.5 / 1.5 mm ²
Wire cross-section, flexible min/max	0.5 / 2.5 mm ²
Wire cross-section, AWG/kcmil min/max	20 / 12
Note	

Rated input voltage	110...240 V AC / 120...340 V DC		
Input voltage range AC	85...277 V AC		
Frequency range AC	45...65 Hz		
DC input voltage range	48...410 V DC (Derating 40% @ 48 V DC)		
Input fuse (internal) / Inrush current	Yes / max. 5 A		
Output			
Rated output voltage	24 V DC ± 1 %		
Output voltage	22.5...28.8 V adjustable with potentiometer or communication module		
DCL - peak load reserve	150 % (5 s); 600 % (15 ms)		
Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load		
Reserve capacity @ U _{Nom}	130% permanent at ≤ 40°C, 150 % (5 s)		
Nominal output current for U _{Nom}	5 A @ 60 °C		
MTBF			
According to Standard	SN 29500		
Operating time (hours), min.	1900000h		
Ambient temperature	25°C		
Input voltage	230V		
Output power	120W		
Duty cycle	100%		
General data			
Derating	> 60°C (2.5% / 1°C)		
Series switching capability	Yes		
Degree of efficiency	91%		
Power factor (approx.)	> 0.85		
AC failure bridging time @ I _{Nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC		
LED green/red	Green: Operation (failure-free), Flashing green: advance warning >90%, Green/red flashing: output switched off (switch-off mode), Flashing red: overload/error		
Parallel connection option	Yes, for redundancy and power increase (with ORing MOSFET)		
Depth x width x height	125 / 35 / 130 mm		
Net weight	850 g		
Approvals			
Approvals	ABS; BURVER; CCS; cULus; cULusEX; DETNORVER; LLOYDSREG; RINA; TUEV		
Input		Output	
PUSH IN with actuator		PUSH IN with actuator	
3 for L/N/PE		4 (++ / --)	
0.5 / 1.5		0.2 / 2.5	
0.5 / 2.5		0.2 / 2.5	
20 / 12		26 / 12	

Rated input voltage	110...240 V AC / 120...340 V DC		
Input voltage range AC	85...277 V AC		
Frequency range AC	45...65 Hz		
DC input voltage range	80 ... 410 V DC		
Input fuse (internal) / Inrush current	Yes / max. 5 A		
Output			
Rated output voltage	24 V DC ± 1 %		
Output voltage	22.5...28.8 V adjustable with potentiometer or communication module		
DCL - peak load reserve	150 % (5 s); 600 % (15 ms)		
Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load		
Reserve capacity @ U _{Nom}	130% permanent at ≤ 40°C, 150 % (5 s)		
Nominal output current for U _{Nom}	10 A @ 60 °C		
MTBF			
According to Standard	SN 29500		
Operating time (hours), min.	1600000h		
Ambient temperature	25°C		
Input voltage	230V		
Output power	240W		
Duty cycle	100%		
General data			
Derating	> 60°C (2.5% / 1°C)		
Series switching capability	Yes		
Degree of efficiency	92 %		
Power factor (approx.)	> 0.9		
AC failure bridging time @ I _{Nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC		
LED green/red	Green: Operation (failure-free), Flashing green: advance warning >90%, Green/red flashing: output switched off (switch-off mode), Flashing red: overload/error		
Parallel connection option	Yes, for redundancy and power increase (with ORing MOSFET)		
Depth x width x height	125 / 39 / 130 mm		
Net weight	1050 g		
Approvals			
Approvals	ABS; BURVER; CCS; cULus; cULusEX; DETNORVER; LLOYDSREG; RINA; TUEV		
Input		Output	
PUSH IN with actuator		PUSH IN with actuator	
3 for L/N/PE		4 (++ / --)	
0.5 / 1.5		0.2 / 2.5	
0.5 / 2.5		0.2 / 2.5	
20 / 12		26 / 12	

Ordering data

Type	Qty.	Order No.
PRO TOP1 120W 24V 5A F	1	2568980000

Type	Qty.	Order No.
PRO TOP1 240W 24V 10A F	1	2568990000

Type	Qty.	Order No.
PRO TOP1 240W 24V 10A F	1	2568990000

Note

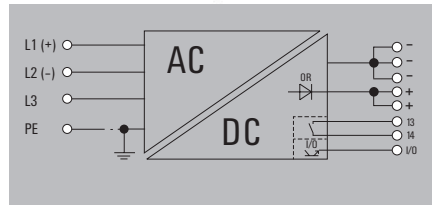
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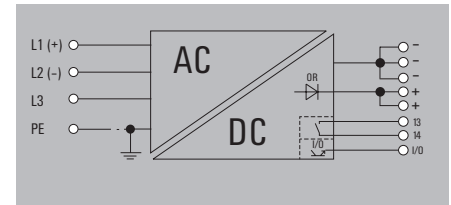
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- 3-phase power supplies

PRO TOP3 120 W 24 V 5 A



PRO TOP3 240 W 24 V 10 A



Technical data

Input	
Rated input voltage	3x 400...3x 500 V AC (wide-range input)
Input voltage range AC	3 x 320...3 x 575 V AC / 2 x 360...2 x 575 V AC
Frequency range AC	45...65 Hz
DC input voltage range	450...800 V DC
Input fuse (internal) / Inrush current	No / Max. 10 A
Output	
Rated output voltage	24 V DC ± 1 %
Output voltage	22.5...28.8 V adjustable with potentiometer or communication module
DCL - peak load reserve	150 % (5 s); 600 % (15 ms)
Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load
Reserve capacity @ U _{Nominal}	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U _{Nom}	5 A @ 60 °C
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	2000000h
Ambient temperature	25°C
Input voltage	400V
Output power	120W
Duty cycle	100%
General data	
Derating	> 60°C (2.5% / 1°C)
Series switching capability	Yes
Degree of efficiency	89%
Power factor (approx.)	> 0.4 @ 3x400 V AC
AC failure bridging time @ I _{Nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC
LED green/red	Green: Operation (failure-free), Flashing green: advance warning >90%, Green/red flashing: output switched off (switch-off mode), Flashing red: overload/error
Parallel connection option	Yes, for redundancy and power increase (with ORing MOSFET)
Depth x width x height	125 / 39 / 130 mm
Net weight	840 g
Approvals	
Approvals	ABS; BURVER; CCS; cULus; cULusEX; DETNORVER; LLOYDSREG; RINA; TUEV
Connection data	
Connection system	PUSH IN with actuator
Number of terminals	4 for L1/L2/L3/PE
Wire cross-section, rigid min/max	0.5 / 1.5 mm ²
Wire cross-section, flexible min/max	0.5 / 2.5 mm ²
Wire cross-section, AWG/kcmil min/max	20 / 12
Note	

Input	
Rated input voltage	3x 400...3x 500 V AC (wide-range input)
Input voltage range AC	3 x 320...3 x 575 V AC / 2 x 360...2 x 575 V AC
Frequency range AC	45...65 Hz
DC input voltage range	450...800 V DC
Input fuse (internal) / Inrush current	No / Max. 10 A
Output	
Rated output voltage	24 V DC ± 1 %
Output voltage	22.5...28.8 V adjustable with potentiometer or communication module
DCL - peak load reserve	150 % (5 s); 600 % (15 ms)
Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load
Reserve capacity @ U _{Nominal}	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U _{Nom}	5 A @ 60 °C
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	2000000h
Ambient temperature	25°C
Input voltage	400V
Output power	120W
Duty cycle	100%
General data	
Derating	> 60°C (2.5% / 1°C)
Series switching capability	Yes
Degree of efficiency	89%
Power factor (approx.)	> 0.4 @ 3x400 V AC
AC failure bridging time @ I _{Nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC
LED green/red	Green: Operation (failure-free), Flashing green: advance warning >90%, Green/red flashing: output switched off (switch-off mode), Flashing red: overload/error
Parallel connection option	Yes, for redundancy and power increase (with ORing MOSFET)
Depth x width x height	125 / 39 / 130 mm
Net weight	840 g
Approvals	
Approvals	ABS; BURVER; CCS; cULus; cULusEX; DETNORVER; LLOYDSREG; RINA; TUEV
Connection data	
Connection system	PUSH IN with actuator
Number of terminals	4 for L1/L2/L3/PE
Wire cross-section, rigid min/max	0.5 / 1.5 mm ²
Wire cross-section, flexible min/max	0.5 / 2.5 mm ²
Wire cross-section, AWG/kcmil min/max	20 / 12
Note	

Input	
Rated input voltage	3x 400...3x 500 V AC (wide-range input)
Input voltage range AC	3 x 320...3 x 575 V AC / 2 x 360...2 x 575 V AC
Frequency range AC	45...65 Hz
DC input voltage range	450...800 V DC
Input fuse (internal) / Inrush current	No / Max. 10 A
Output	
Rated output voltage	24 V DC ± 1 %
Output voltage	22.5...28.8 V adjustable with potentiometer or communication module
DCL - peak load reserve	150 % (5 s); 600 % (15 ms)
Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load
Reserve capacity @ U _{Nominal}	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U _{Nom}	10 A @ 60 °C
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	1400000h
Ambient temperature	25°C
Input voltage	400V
Output power	240W
Duty cycle	100%
General data	
Derating	> 60°C (2.5% / 1°C)
Series switching capability	Yes
Degree of efficiency	93%
Power factor (approx.)	> 0.75 @ 3x400 V AC
AC failure bridging time @ I _{Nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC
LED green/red	Green: Operation (failure-free), Flashing green: advance warning >90%, Green/red flashing: output switched off (switch-off mode), Flashing red: overload/error
Parallel connection option	Yes, for redundancy and power increase (with ORing MOSFET)
Depth x width x height	125 / 50 / 130 mm
Net weight	990 g
Approvals	
Approvals	ABS; BURVER; CCS; cULus; cULusEX; DETNORVER; LLOYDSREG; RINA; TUEV
Connection data	
Connection system	PUSH IN with actuator
Number of terminals	4 for L1/L2/L3/PE
Wire cross-section, rigid min/max	0.5 / 1.5 mm ²
Wire cross-section, flexible min/max	0.5 / 2.5 mm ²
Wire cross-section, AWG/kcmil min/max	20 / 12
Note	

Ordering data

Type	Qty.	Order No.
PRO TOP3 120W 24V 5A	1	2467060000

Type	Qty.	Order No.
PRO TOP3 240W 24V 10A	1	2467080000

Type	Qty.	Order No.
PRO TOP3 240W 24V 10A	1	2467080000

Note

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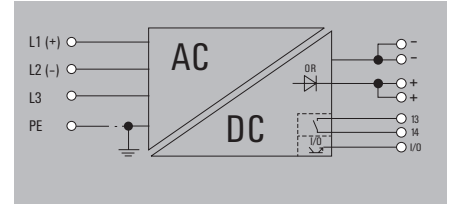
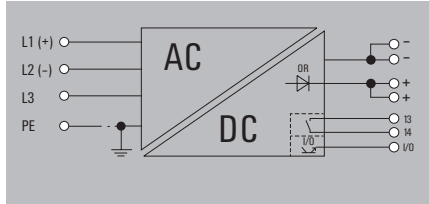
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connectPower PROtop

- 3-phase power supplies

PRO TOP3 480 W 24 V 20 A

PRO TOP3 960 W 24 V 40 A



Technical data

Input	
Rated input voltage	3x 400...3x 500 V AC (wide-range input)
Input voltage range AC	3 x 320...3 x 575 V AC / 2 x 360...2 x 575 V AC
Frequency range AC	45...65 Hz
DC input voltage range	450...800 V DC
Input fuse (internal) / Inrush current	No / Max. 10 A
Output	
Rated output voltage	24 V DC ± 1 %
Output voltage	22.5...28.8 V adjustable with potentiometer or communication module
DCL - peak load reserve	150 % (5 s); 500 % (15 ms)
Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load
Reserve capacity @ U _{Nominal}	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U _{Nom}	20 A @ 60 °C
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	1000000h
Ambient temperature	25°C
Input voltage	400V
Output power	480W
Duty cycle	100%
General data	
Derating	> 60°C (2.5% / 1°C)
Series switching capability	Yes
Degree of efficiency	94%
Power factor (approx.)	> 0.75 @ 3x400 V AC
AC failure bridging time @ I _{Nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC
LED green/red	Green: Operation (failure-free), Flashing green: advance warning I>90%, Green/red flashing: output switched off (switch-off mode), Flashing red: overload/error
Parallel connection option	Yes, for redundancy and power increase (with ORing MOSFET)
Depth x width x height	125 / 68 / 130 mm
Net weight	1650 g
Approvals	
Approvals	ABS; BURVER; CCS; cULus; cULusEX; DETNORVER; LLOYDSREG; RINA; TUEV
Connection data	
Connection system	PUSH IN
Number of terminals	4 for L1/L2/L3/PE
Wire cross-section, rigid min/max	0.2 / 10 mm ²
Wire cross-section, flexible min/max	0.2 / 6 mm ²
Wire cross-section, AWG/kcmil min/max	20 / 8
Note	

Rated input voltage	3x 400...3x 500 V AC (wide-range input)
Input voltage range AC	3 x 320...3 x 575 V AC / 2 x 360...2 x 575 V AC
Frequency range AC	45...65 Hz
DC input voltage range	450...800 V DC
Input fuse (internal) / Inrush current	No / Max. 10 A
Rated output voltage	24 V DC ± 1 %
Output voltage	22.5...28.8 V adjustable with potentiometer or communication module
DCL - peak load reserve	150 % (5 s); 500 % (15 ms)
Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load
Reserve capacity @ U _{Nominal}	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U _{Nom}	20 A @ 60 °C
According to Standard	SN 29500
Operating time (hours), min.	1000000h
Ambient temperature	25°C
Input voltage	400V
Output power	480W
Duty cycle	100%
Derating	> 60°C (2.5% / 1°C)
Series switching capability	Yes
Degree of efficiency	94%
Power factor (approx.)	> 0.75 @ 3x400 V AC
AC failure bridging time @ I _{Nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC
LED green/red	Green: Operation (failure-free), Flashing green: advance warning I>90%, Green/red flashing: output switched off (switch-off mode), Flashing red: overload/error
Parallel connection option	Yes, for redundancy and power increase (with ORing MOSFET)
Depth x width x height	125 / 68 / 130 mm
Net weight	1650 g
Approvals	ABS; BURVER; CCS; cULus; cULusEX; DETNORVER; LLOYDSREG; RINA; TUEV
Input	Output
PUSH IN	PUSH IN
4 for L1/L2/L3/PE	4 (++ / --)
0.2 / 10	0.2 / 10
0.2 / 6	0.2 / 6
20 / 8	20 / 8

Rated input voltage	3x 400...3x 500 V AC (wide-range input)
Input voltage range AC	3 x 320...3 x 575 V AC / 2 x 360...2 x 575 V AC
Frequency range AC	45...65 Hz
DC input voltage range	450...800 V DC
Input fuse (internal) / Inrush current	No / Max. 10 A
Rated output voltage	24 V DC ± 1 %
Output voltage	22.5...28.8 V adjustable with potentiometer or communication module
DCL - peak load reserve	150 % (5 s); 400 % (15 ms)
Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load
Reserve capacity @ U _{Nominal}	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U _{Nom}	40 A @ 60 °C
According to Standard	SN 29500
Operating time (hours), min.	1000000h
Ambient temperature	25°C
Input voltage	400V
Output power	960W
Duty cycle	100%
Derating	> 60°C (2.5% / 1°C)
Series switching capability	Yes
Degree of efficiency	95,3 %
Power factor (approx.)	> 0.75 @ 3x400 V AC
AC failure bridging time @ I _{Nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC
LED green/red	Green: Operation (failure-free), Flashing green: advance warning I>90%, Green/red flashing: output switched off (switch-off mode), Flashing red: overload/error
Parallel connection option	Yes, for redundancy and power increase (with ORing MOSFET)
Depth x width x height	175 / 89 / 130 mm
Net weight	2490 g
Approvals	ABS; BURVER; CCS; cULus; cULusEX; DETNORVER; LLOYDSREG; RINA; TUEV
Input	Output
PUSH IN	PUSH IN
4 for L1/L2/L3/PE	4 (++ / --)
0.75 / 16	0.75 / 16
0.75 / 16	0.75 / 16
20 / 4	20 / 4

Ordering data

Type	Qty.	Order No.
PRO TOP3 480W 24V 20A	1	2467100000

Type	Qty.	Order No.
PRO TOP3 480W 24V 20A	1	2467100000

Type	Qty.	Order No.
PRO TOP3 960W 24V 40A	1	2467120000

Note

Current technical data at eshop.weidmueller.com

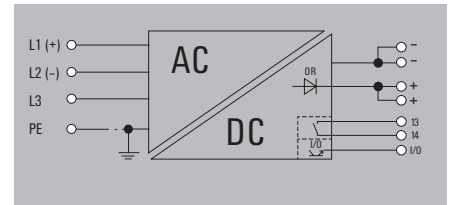
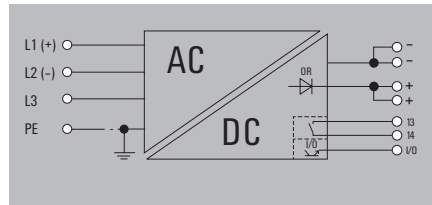
Current technical data at eshop.weidmueller.com

connectPower PROtop

- 3-phase power supplies

PRO TOP3 480 W 48 V 10 A

PRO TOP3 960 W 48 V 20 A



Technical data

Input	
Rated input voltage	3x 400...3x 500 V AC (wide-range input)
Input voltage range AC	3 x 320...3 x 575 V AC / 2 x 360...2 x 575 V AC
Frequency range AC	45...65 Hz
DC input voltage range	450...800 V DC
Input fuse (internal) / Inrush current	No / Max. 10 A
Output	
Rated output voltage	48 V DC ± 1 %
Output voltage	45...56 V adjustable with potentiometer or communication module
DCL - peak load reserve	150 % (5 s); 500 % (15 ms)
Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load
Reserve capacity @ U _{Nominal}	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U _{Nom}	10 A @ 60 °C
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	1100000h
Ambient temperature	25°C
Input voltage	400V
Output power	480W
Duty cycle	100%
General data	
Derating	> 60°C (2.5% / 1°C)
Series switching capability	No
Degree of efficiency	94%
Power factor (approx.)	> 0.75 @ 3x400 V AC
AC failure bridging time @ I _{Nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC
LED green/red	Green: Operation (failure-free), Flashing green: advance warning I>90%, Green/red flashing: output switched off (switch-off mode), Flashing red: overload/error
Parallel connection option	Yes, for redundancy and power increase (with ORing MOSFET)
Depth x width x height	125 / 68 / 130 mm
Net weight	1460 g
Approvals	
Approvals	ABS; BURVER; CCS; cULus; cULusEX; DETNORVER; LLOYDSREG; RINA; TUEV
Connection data	
Connection system	PUSH IN
Number of terminals	4 for L1/L2/L3/PE
Wire cross-section, rigid min/max	0.2 / 10 mm ²
Wire cross-section, flexible min/max	0.2 / 6 mm ²
Wire cross-section, AWG/kcmil min/max	20 / 8
Note	

Rated input voltage	3x 400...3x 500 V AC (wide-range input)		
Input voltage range AC	3 x 320...3 x 575 V AC / 2 x 360...2 x 575 V AC		
Frequency range AC	45...65 Hz		
DC input voltage range	450...800 V DC		
Input fuse (internal) / Inrush current	No / Max. 10 A		
Rated output voltage	48 V DC ± 1 %		
Output voltage	45...56 V adjustable with potentiometer or communication module		
DCL - peak load reserve	150 % (5 s); 500 % (15 ms)		
Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load		
Reserve capacity @ U _{Nominal}	130% permanent at ≤ 40°C, 150 % (5 s)		
Nominal output current for U _{Nom}	10 A @ 60 °C		
According to Standard	SN 29500		
Operating time (hours), min.	1100000h		
Ambient temperature	25°C		
Input voltage	400V		
Output power	480W		
Duty cycle	100%		
Derating	> 60°C (2.5% / 1°C)		
Series switching capability	No		
Degree of efficiency	94%		
Power factor (approx.)	> 0.75 @ 3x400 V AC		
AC failure bridging time @ I _{Nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC		
LED green/red	Green: Operation (failure-free), Flashing green: advance warning I>90%, Green/red flashing: output switched off (switch-off mode), Flashing red: overload/error		
Parallel connection option	Yes, for redundancy and power increase (with ORing MOSFET)		
Depth x width x height	125 / 68 / 130 mm		
Net weight	1460 g		
Approvals	ABS; BURVER; CCS; cULus; cULusEX; DETNORVER; LLOYDSREG; RINA; TUEV		
Input		Output	
PUSH IN	PUSH IN	4 (++) / (--)	4 (++) / (--)
4 for L1/L2/L3/PE	4 (++) / (--)	0.2 / 10	0.2 / 10
0.2 / 10	0.2 / 10	0.2 / 6	0.2 / 6
0.2 / 6	0.2 / 6	20 / 8	20 / 8

Rated input voltage	3x 400...3x 500 V AC (wide-range input)		
Input voltage range AC	3 x 320...3 x 575 V AC / 2 x 360...2 x 575 V AC		
Frequency range AC	45...65 Hz		
DC input voltage range	450...800 V DC		
Input fuse (internal) / Inrush current	No / Max. 10 A		
Rated output voltage	48 V DC ± 1 %		
Output voltage	45...56 V adjustable with potentiometer or communication module		
DCL - peak load reserve	150 % (5 s); 400 % (15 ms)		
Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load		
Reserve capacity @ U _{Nominal}	130% permanent at ≤ 40°C, 150 % (5 s)		
Nominal output current for U _{Nom}	20 A @ 60 °C		
According to Standard	SN 29500		
Operating time (hours), min.	1200000h		
Ambient temperature	25°C		
Input voltage	400V		
Output power	960W		
Duty cycle	100%		
Derating	> 60°C (2.5% / 1°C)		
Series switching capability	No		
Degree of efficiency	95,3 %		
Power factor (approx.)	> 0.75 @ 3x400 V AC		
AC failure bridging time @ I _{Nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC		
LED green/red	Green: Operation (failure-free), Flashing green: advance warning I>90%, Green/red flashing: output switched off (switch-off mode), Flashing red: overload/error		
Parallel connection option	Yes, for redundancy and power increase (with ORing MOSFET)		
Depth x width x height	175 / 89 / 130 mm		
Net weight	2490 g		
Approvals	ABS; BURVER; CCS; cULus; cULusEX; DETNORVER; LLOYDSREG; RINA; TUEV		
Input		Output	
PUSH IN	PUSH IN	4 (++) / (--)	4 (++) / (--)
4 for L1/L2/L3/PE	4 (++) / (--)	0.75 / 16	0.75 / 16
0.75 / 16	0.75 / 16	0.75 / 16	0.75 / 16
0.75 / 16	0.75 / 16	20 / 4	20 / 4

Ordering data

Type	Qty.	Order No.
PRO TOP3 480W 48V 10A	1	2467150000

Type	Qty.	Order No.
PRO TOP3 960W 48V 20A	1	2467170000

Type	Qty.	Order No.
PRO TOP3 960W 48V 20A	1	2467170000

Note

Current technical data at eshop.weidmueller.com

Current technical data at eshop.weidmueller.com

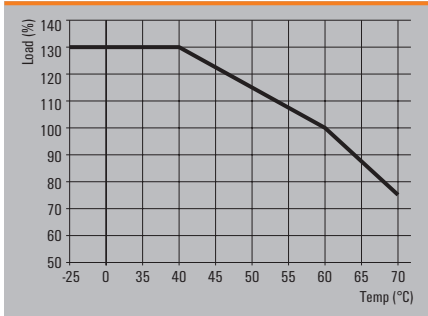
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connectPower PROtop

- DCL technology for an excellent dynamic range
- High energy efficiency (up to 95.4 % efficiency)
- Mode of operation: single or parallel operation and adjustable short-circuit response (continuous current or switch-off)
- Useful life of up to 10 years, MTBF > 1 000 000 h.
- Extremely slim design
- Time-saving PUSH IN connection technology



Derating curve



Technical data

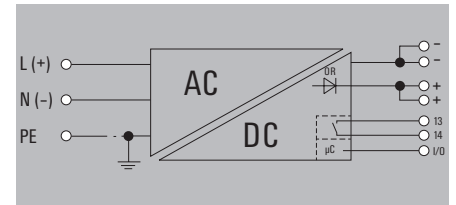
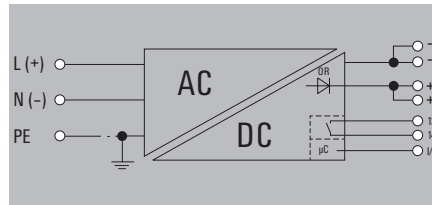
General data	
Insulation voltage input / earth	3.2 kV
Insulation voltage output / earth	0.5 kV
Insulation voltage, input/output	3.5 kV
Earth leakage current, max.	3.5 mA
Series switching capability	Yes
Ambient temperature (operational) / Storage temperature	-40 °C...70 °C / -40 °C...85 °C
Humidity at operating temperature	5...100 % no condensation
Protection class / Pollution degree	I, with PE connection / 2
Housing version	Metal, corrosion resistant
Conformal coating	Yes
EMC / shock / vibration	
Interference immunity test acc. to	EN 55032:2015, EN 55024:2010/A1:2015, EN 55035:2017, EN 61000-3-2:2014, EN 61000-6-1:2007, EN 61000-6-2:2005, EN 61000-6-3:2007/A1:2011, EN 61000-6-4:2007/A1:2011
Shock	30 g in all directions
Resistance to vibration	2.3 g (on DIN rail), 4 g (with direct mounting)
Electrical safety (applied standards)	
Electrical machine equipment	Acc. to EN60204
Safety transformers for switch-mode power supplies	According to EN 61558-2-16
Safety extra-low voltage	SELV acc. to IEC 60950-1, PELV according to EN 60204-1

connectPower PROtop

- 1-phase power supplies

PRO TOP1 120W 24V 5A EX

PRO TOP1 240W 24V 10A EX



Technical data

Input	
Rated input voltage	110...240 V AC / 120...340 V DC
Input voltage range AC	85...277 V AC
Frequency range AC	45...65 Hz
DC input voltage range	48...410 V DC (Derating 40% @ 48 V DC)
Input fuse (internal) / Inrush current	Yes / max. 5 A
Output	
Rated output voltage	24 V DC ± 1 %
Output voltage	22.5...28.8 V adjustable with potentiometer or communication module
DCL - peak load reserve	150 % (5 s); 600 % (15 ms)
Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load
Reserve capacity @ U _{Nominal}	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U _{Nom}	5 A @ 60 °C
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	1900000h
Ambient temperature	25°C
Input voltage	230V
Output power	120W
Duty cycle	100%
General data	
Derating	> 60°C (2.5% / 1°C)
Series switching capability	Yes
Degree of efficiency	91%
Power factor (approx.)	> 0.85
AC failure bridging time @ I _{Nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC
LED green/red	Green: Operation (failure-free), Flashing green: advance warning >90%, Green/red flashing: output switched off (switch-off mode), Flashing red: overload/error
Parallel connection option	Yes, for redundancy and power increase (with ORing MOSFET)
Depth x width x height	125 / 35 / 130 mm
Net weight	850 g
Approvals	
Approvals	ABS; BURVER; CCS; cULus; cULusEX; DETNORVER; IECEXTUEV; LLOYDSREG; RINA; TUEV; TUEVSATEX
Connection data	
Connection system	Clamping yoke
Number of terminals	3 for L/N/PE
Wire cross-section, rigid min/max	0.2 / 4 mm ²
Wire cross-section, flexible min/max	0.2 / 4 mm ²
Wire cross-section, AWG/kcmil min/max	30 / 12
Note	

Input		Output	
Clamping yoke	Clamping yoke connection		
3 for L/N/PE	4 (++ / --)		
0.2 / 4	0.2 / 4		
0.2 / 4	0.2 / 4		
30 / 12	30 / 12		

Input		Output	
Clamping yoke	Clamping yoke connection		
3 for L/N/PE	5 (++ / ---)		
0.2 / 4	0.2 / 4		
0.2 / 4	0.2 / 4		
30 / 12	30 / 12		

Ordering data

Type	Qty.	Order No.
PRO TOP1 120W 24V 5A EX	1	2466980000

Type	Qty.	Order No.
PRO TOP1 240W 24V 10A EX	1	2466990000

Type	Qty.	Order No.
PRO TOP1 240W 24V 10A EX	1	2466990000

Note

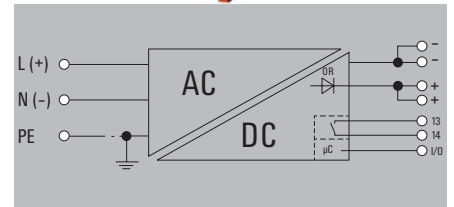
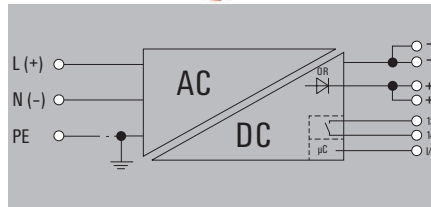
connectPower PROtop

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- 1-phase power supplies

PRO TOP1 480W 24V 20A EX

PRO TOP1 480W 48V 10A EX



Technical data

Input	
Rated input voltage	110...240 V AC / 120...340 V DC
Input voltage range AC	85...277 V AC
Frequency range AC	45...65 Hz
DC input voltage range	80 ... 410 V DC
Input fuse (internal) / Inrush current	Yes / max. 5 A
Output	
Rated output voltage	24 V DC ± 1 %
Output voltage	22.5...28.8 V adjustable with potentiometer or communication module
DCL - peak load reserve	150 % (5 s); 500 % (15 ms)
Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load
Reserve capacity @ U _{Nominal}	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U _{Nom}	20 A @ 60 °C
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	1220000h
Ambient temperature	25°C
Input voltage	230V
Output power	480W
Duty cycle	100%
General data	
Derating	> 60°C (2.5% / 1°C)
Series switching capability	Yes
Degree of efficiency	93%
Power factor (approx.)	> 0.9
AC failure bridging time @ I _{Nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC
LED green/red	Green: Operation (failure-free), Flashing green: advance warning >90%, Green/red flashing: output switched off (switch-off mode), Flashing red: overload/error
Parallel connection option	Yes, for redundancy and power increase (with ORing MOSFET)
Depth x width x height	125 / 68 / 130 mm
Net weight	1520 g
Approvals	
Approvals	ABS; BURVER; CCS; cULus; cULusEX; DETNORVER; IECEXTUEV; LLOYDSREG; RINA; TUEV; TUEVSATEX
Connection data	
Connection system	Clamping yoke
Number of terminals	3 for L/N/PE
Wire cross-section, rigid min/max	0.18 / 6 mm ²
Wire cross-section, flexible min/max	0.22 / 4 mm ²
Wire cross-section, AWG/kcmil min/max	26 / 10
Note	

Input		Output	
Clamping yoke		Clamping yoke connection	
3 for L/N/PE		5 (+ + / - -)	
0.18 / 6		0.2 / 6	
0.22 / 4		0.5 / 6	
26 / 10		24 / 8	

Input		Output	
Clamping yoke		Clamping yoke connection	
3 for L/N/PE		5 (+ + / - -)	
0.18 / 6		0.2 / 6	
0.22 / 4		0.5 / 6	
26 / 10		24 / 8	

Ordering data

Type	Qty.	Order No.
PRO TOP1 480W 24V 20A EX	1	2467000000

Type	Qty.	Order No.
PRO TOP1 480W 48V 10A EX	1	2467040000

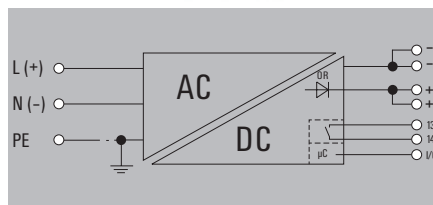
Type	Qty.	Order No.
PRO TOP1 480W 48V 10A EX	1	2467040000

Note

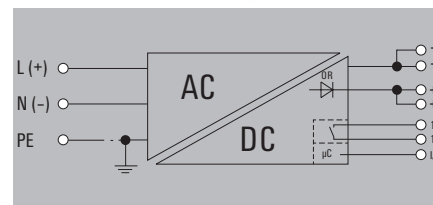
connectPower PROtop

- 1-phase power supplies

PRO TOP1 960W 24V 40A EX



PRO TOP1 120W 12V 10A EX



Technical data

Input	
Rated input voltage	110...240 V AC / 120...340 V DC
Input voltage range AC	85...277 V AC
Frequency range AC	45...65 Hz
DC input voltage range	80 ... 410 V DC
Input fuse (internal) / Inrush current	Yes / max. 15 A
Output	
Rated output voltage	24 V DC ± 1 %
Output voltage	22.5...28.8 V adjustable with potentiometer or communication module
DCL - peak load reserve	150 % (5 s); 400 % (15 ms)
Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load
Reserve capacity @ U _{Nominal}	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U _{nom}	40 A @ 60 °C
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	1040000h
Ambient temperature	25°C
Input voltage	230V
Output power	960W
Duty cycle	100%
General data	
Derating	> 60°C (2.5% / 1°C)
Series switching capability	Yes
Degree of efficiency	94%
Power factor (approx.)	> 0.9
AC failure bridging time @ I _{nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC
LED green/red	Green: Operation (failure-free), Flashing green: advance warning I>90%, Green/red flashing: output switched off (switch-off mode), Flashing red: overload/error
Parallel connection option	Yes, for redundancy and power increase (with ORing MOSFET)
Depth x width x height	125 / 139 / 130 mm
Net weight	3382 g
Approvals	
Approvals	ABS; BURVER; CCS; cULus; cULusEX; DETNORVER; IECEXTUEV; LLOYDSREG; RINA; TUEV; TUEVSATEX
Connection data	
Connection system	Clamping yoke
Number of terminals	3 for L/N/PE
Wire cross-section, rigid min/max	0.18 / 6 mm ²
Wire cross-section, flexible min/max	0.22 / 4 mm ²
Wire cross-section, AWG/kcmil min/max	26 / 10
Note	

Input		Output	
Clamping yoke		Clamping yoke connection	
3 for L/N/PE		5 (+ + / - -)	
0.18 / 6		0.2 / 16	
0.22 / 4		6 / 16	
26 / 10		22 / 6	

Input		Output	
Clamping yoke		Clamping yoke connection	
3 for L/N/PE		5 (+ + / - -)	
0.2 / 4		0.2 / 4	
0.2 / 4		0.2 / 4	
30 / 12		30 / 12	

Ordering data

Type	Qty.	Order No.
PRO TOP1 960W 24V 40A EX	1	2467010000

Type	Qty.	Order No.
PRO TOP1 120W 12V 10A EX	1	2467020000

Type	Qty.	Order No.
PRO TOP1 120W 12V 10A EX	1	2467020000

Note

PROtop DCDC converter with IoT connection – fit for digitalisation

Powerful, efficient, and reliable isolation

A PROtop DCDC converters are used for safe electrical isolation to avoid ground loops that can occur when supplying field devices in production or process plants. DCDC converters can be used on long supply lines to refresh the supply voltage.

The integrated ORing MOSFET reliably decouples possible internal short circuits. It allows direct parallel connection of ACDC and DCDC converters of the PROtop series for redundancy purposes or to increase power. This makes the use of the otherwise common diode or redundancy modules obsolete. Furthermore, PROtop DCDC converters feature the powerful DCL technology – and their communication module allows full data transparency and remote control.

Your special advantages:

- Integrated ORing MOSFET for direct parallel connection for redundancy purposes or to increase power
- Thanks to DCL technology, very high peak current reserves for fuse tripping or for powerful motor starts
- Communication interface for complete data transparency and remote control





Fit for the future thanks to IO-LINK
 The optional communication modules, which can be retrofitted at any time, create data transparency, and enable automated parameterisation and remote control.



Redundancy without diode modules
 The integrated ORing MOSFET allows direct parallel connection for redundancy purposes or to increase power. Diode and redundancy modules are thus obsolete.



Peak current reserves thanks to DCL
 The high peak current reserves of up to 600 % nominal current reliably trigger miniature circuit breakers. In addition, the dynamic current limitation DCL offers high peak currents for powerful motor starting

Optimal for:



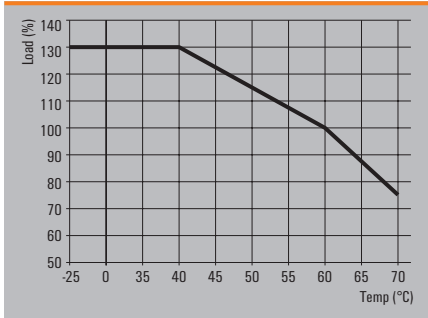
connectPower PROtop DCDC

connectPower PROtop DCDC

- DCL technology for an excellent dynamic range
- High energy efficiency
- Mode of operation: single or parallel operation and adjustable short-circuit response (continuous current or switch-off)
- Useful life of up to 10 years, MTBF > 1 000 000 h.
- Extremely slim design
- Time-saving PUSH IN connection technology



Derating curve



Technical data

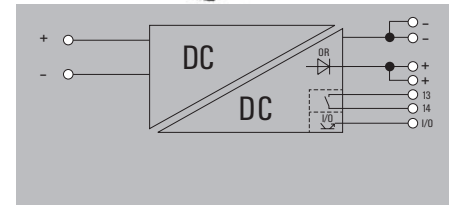
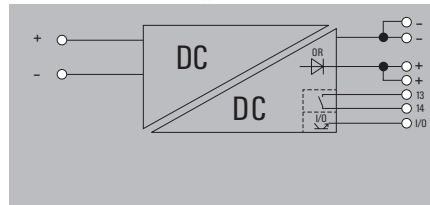
General data	
Insulation voltage input / earth	1.41 kV
Insulation voltage output / earth	0.7 kV
Insulation voltage, input/output	1.41 kV
Ambient temperature (operational) / Storage temperature	-25 °C...70 °C / -40 °C...85 °C
Humidity at operating temperature	5...95 %, no condensation
Protection class / Pollution degree	III, with no ground connection, for SELV
Housing version	Metal, corrosion resistant
Conformal coating	No
EMC / shock / vibration	
Interference immunity test acc. to	EN 55032:2015, EN 55035:2017, EN 61000-6-1:2007, EN 61000-6-2:2005, EN 61000-6-3:2007/A1:2011, EN 61000-6-4:2007/A1:2011, IEC 61000-4-2, IEC 61000-4-3, DIN EN 61000-4-4, EN 61000-4-5:2005, EN 61000-4-6:2008, IEC 61000-4-8
Shock	30 g in all directions
Resistance to vibration	2.3 g (on DIN rail), 4 g (with direct mounting)
Electrical safety (applied standards)	
Electrical machine equipment	Acc. to EN60204
Safety transformers for switch-mode power supplies	According to EN 61558-2-16
Safety extra-low voltage	SELV acc. to IEC 60950-1, PELV according to EN 60204-1

connectPower PROtop DCDC

- DC/DC-Wandler

PRO TOPDC 24V/24V 5A

PRO TOPDC 24V/24V 10A



Technical data

Input	
Rated input voltage	24 V DC
Input current	5.7A @ 24V / 7.6A @ 18V
DC input voltage range	14 V...31.2 V (linear Derating from 18 V...14 V, 60% rated load @ U _{in} 14 V)
Input fuse (internal) / Inrush current	Yes / max. 5 A
Output	
Rated output voltage	24 V DC ± 1 %
Output voltage	22.5...28.8 V adjustable with potentiometer or communication module
DCL - peak load reserve	600 % (15 ms); 200 % (5 s)
Residual ripple, breaking spikes	<40 mV _{pp} @25 °C
Reserve capacity @ U _{Nominal}	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U _{nom}	5 A @ 60 °C
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	1018000h
Ambient temperature	25°C
Input voltage	24V
Output power	480W
Duty cycle	100%
General data	
Derating	> 60°C (2.5% / 1°C)
Series switching capability	Yes
Degree of efficiency	89%
Mains failure bridge-over time	10ms
LED green/red	Green: Operation (failure-free), Flashing green: advance warning >90%, Green/red flashing: output switched off (switch-off mode), Flashing red: overload/error
Parallel connection option	yes, max 10
Depth x width x height	125 / 35 / 130 mm
Net weight	800 g
Approvals	
Approvals	ABS; BURVER; CSA; CSAEX; DETNORVER; LLOYDSREG; RINA; TUEV

Input	
Rated input voltage	24 V DC
Input current	11A @ 24V / 15A @ 18V
DC input voltage range	14 V...31.2 V (linear Derating from 18 V...14 V, 60% rated load @ U _{in} 14 V)
Input fuse (internal) / Inrush current	Yes / Max. 10 A
Output	
Rated output voltage	24 V DC ± 1 %
Output voltage	22.5...28.8 V adjustable with potentiometer or communication module
DCL - peak load reserve	600 % (15 ms); 200 % (5 s)
Residual ripple, breaking spikes	<40 mV _{pp} @25 °C
Reserve capacity @ U _{Nominal}	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U _{nom}	10 A @ 60 °C
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	1322000h
Ambient temperature	25°C
Input voltage	24V
Output power	240W
Duty cycle	100%
General data	
Derating	> 60°C (2.5% / 1°C)
Series switching capability	Yes
Degree of efficiency	91%
Mains failure bridge-over time	10ms
LED green/red	Green: Operation (failure-free), Flashing green: advance warning >90%, Green/red flashing: output switched off (switch-off mode), Flashing red: overload/error
Parallel connection option	yes, max 10
Depth x width x height	125 / 43 / 130 mm
Net weight	1000 g
Approvals	
Approvals	ABS; BURVER; CSA; CSAEX; DETNORVER; LLOYDSREG; RINA; TUEV

Input	Output
PUSH IN with actuator	PUSH IN with actuator
2 for (+, -)	4 (++ / --)
0.5 / 1.5 mm ²	0.2 / 2.5 mm ²
0.5 / 2.5 mm ²	0.2 / 2.5 mm ²
20 / 12	26 / 12

Connection data

Connection system	
Number of terminals	
Wire cross-section, rigid min/max	mm ²
Wire cross-section, flexible min/max	mm ²
Wire cross-section, AWG/kcmil min/max	

Note

Ordering data

Type	Qty.	Order No.
PRO TOPDC 24V/24V 5A	1	2627650000

Note

Current technical data at eshop.weidmueller.com

Connection data

Input	Output
PUSH IN with actuator	PUSH IN with actuator
2 for (+, -)	4 (++ / --)
0.5 / 1.5 mm ²	0.2 / 2.5 mm ²
0.5 / 2.5 mm ²	0.2 / 2.5 mm ²
20 / 12	26 / 12

Note

Type	Qty.	Order No.
PRO TOPDC 24V/24V 10A	1	2627640000

Current technical data at eshop.weidmueller.com

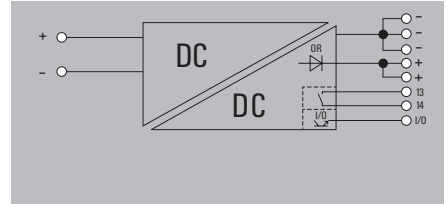
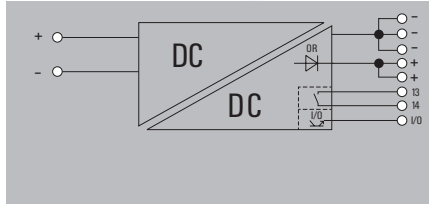
connectPower PROtop DCDC

connectPower PROtop DCDC

- DC/DC converter

PRO TOPDC 24V/24V 20A

PRO TOPDC 24V/48V 10A



Technical data

Input	
Rated input voltage	24 V DC
Input current	22A @ 24V / 30A @ 18V
DC input voltage range	14 V...31.2 V (linear Derating from 18 V...14 V, 60% rated load @ U _{in} 14 V)
Input fuse (internal) / Inrush current	Yes / max. 15 A
Output	
Rated output voltage	24 V DC ± 1 %
Output voltage	22.5...28.8 V adjustable with potentiometer or communication module
DCL - peak load reserve	500 % (15 ms); 200 % (5 s)
Residual ripple, breaking spikes	<40 mV _{pp} @25 °C
Reserve capacity @ U _{Nominal}	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U _{nom}	20 A @ 60 °C
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	1018000h
Ambient temperature	25°C
Input voltage	24V
Output power	480W
Duty cycle	100%
General data	
Derating	> 60°C (2.5% / 1°C)
Series switching capability	Yes
Degree of efficiency	91%
Mains failure bridge-over time	10ms
LED green/red	Green: Operation (failure-free), Flashing green: advance warning >90%, Green/red flashing: output switched off (switch-off mode), Flashing red: overload/error
Parallel connection option	yes, max 10
Depth x width x height	125 / 75 / 130 mm
Net weight	1746 g
Approvals	
Approvals	ABS; BURVER; CSA; CSAEX; DETNORVER; LLOYDSREG; RINA; TUEV

Input	
Rated input voltage	24 V DC
Input current	22A @ 24V / 30A @ 18V
DC input voltage range	14 V...31.2 V (linear Derating from 18 V...14 V, 60% rated load @ U _{in} 14 V)
Input fuse (internal) / Inrush current	Yes / max. 15 A
Output	
Rated output voltage	48 V DC ± 1 %
Output voltage	45...56 V adjustable with potentiometer or communication module
DCL - peak load reserve	500 % (15 ms); 200 % (5 s)
Residual ripple, breaking spikes	<40 mV _{pp} @25 °C
Reserve capacity @ U _{Nominal}	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U _{nom}	10 A @ 60 °C
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	1017000h
Ambient temperature	25°C
Input voltage	24V
Output power	480W
Duty cycle	100%
General data	
Derating	> 60°C (2.5% / 1°C)
Series switching capability	No
Degree of efficiency	91%
Mains failure bridge-over time	10ms
LED green/red	Green: Operation (failure-free), Flashing green: advance warning >90%, Green/red flashing: output switched off (switch-off mode), Flashing red: overload/error
Parallel connection option	yes, max 10
Depth x width x height	125 / 75 / 130 mm
Net weight	1746 g
Approvals	
Approvals	ABS; BURVER; CSA; CSAEX; DETNORVER; LLOYDSREG; RINA; TUEV

Input	
Rated input voltage	24 V DC
Input current	22A @ 24V / 30A @ 18V
DC input voltage range	14 V...31.2 V (linear Derating from 18 V...14 V, 60% rated load @ U _{in} 14 V)
Input fuse (internal) / Inrush current	Yes / max. 15 A
Output	
Rated output voltage	48 V DC ± 1 %
Output voltage	45...56 V adjustable with potentiometer or communication module
DCL - peak load reserve	500 % (15 ms); 200 % (5 s)
Residual ripple, breaking spikes	<40 mV _{pp} @25 °C
Reserve capacity @ U _{Nominal}	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U _{nom}	10 A @ 60 °C
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	1017000h
Ambient temperature	25°C
Input voltage	24V
Output power	480W
Duty cycle	100%
General data	
Derating	> 60°C (2.5% / 1°C)
Series switching capability	No
Degree of efficiency	91%
Mains failure bridge-over time	10ms
LED green/red	Green: Operation (failure-free), Flashing green: advance warning >90%, Green/red flashing: output switched off (switch-off mode), Flashing red: overload/error
Parallel connection option	yes, max 10
Depth x width x height	125 / 75 / 130 mm
Net weight	1746 g
Approvals	
Approvals	ABS; BURVER; CSA; CSAEX; DETNORVER; LLOYDSREG; RINA; TUEV

Connection data	
Connection system	PUSH IN with actuator
Number of terminals	5 (+ + / - -)
Wire cross-section, rigid min/max	0.2 / 10 mm ²
Wire cross-section, flexible min/max	0.2 / 6 mm ²
Wire cross-section, AWG/kcmil min/max	20 / 8
Note	

Input	Output
PUSH IN with actuator	PUSH IN with actuator
2 for (+, -)	5 (+ + / - -)
0.2 / 10	0.2 / 10
0.2 / 6	0.2 / 6
20 / 8	20 / 8

Input	Output
PUSH IN with actuator	PUSH IN with actuator
2 for (+, -)	5 (+ + / - -)
0.2 / 10	0.2 / 10
0.2 / 6	0.2 / 6
20 / 8	20 / 8

Ordering data

Type	Qty.	Order No.
PRO TOPDC 24V/24V 20A	1	2627630000
Note		
Current technical data at eshop.weidmueller.com		

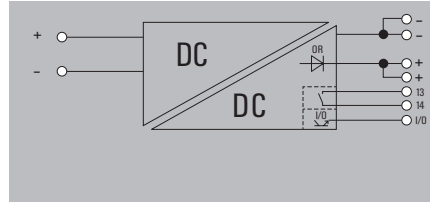
Type	Qty.	Order No.
PRO TOPDC 24V/48V 10A	1	2627660000
Note		
Current technical data at eshop.weidmueller.com		

Type	Qty.	Order No.
PRO TOPDC 24V/48V 10A	1	2627660000
Note		
Current technical data at eshop.weidmueller.com		

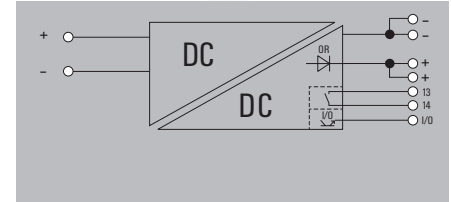
connectPower PROtop DCDC

- DC/DC converter

PRO TOPDC 24V/24V 5A EX



PRO TOPDC 24V/24V 10A EX



Technical data

Input	
Rated input voltage	24 V DC
Input current	5.7A @ 24V / 7.6A @ 18V
DC input voltage range	14 V...31.2 V (linear Derating from 18 V...14 V, 60% rated load @ U _{in} 14 V)
Input fuse (internal) / Inrush current	Yes / max. 5 A
Output	
Rated output voltage	24 V DC ± 1 %
Output voltage	22.5...28.8 V adjustable with potentiometer or communication module
DCL - peak load reserve	600 % (15 ms); 200 % (5 s)
Residual ripple, breaking spikes	<40 mV _{pp} @25 °C
Reserve capacity @ U _{Nominal}	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U _{nom}	5 A @ 60 °C
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	2209000h
Ambient temperature	25°C
Input voltage	24V
Output power	120W
Duty cycle	100%
General data	
Derating	> 60°C (2.5% / 1°C)
Series switching capability	Yes
Degree of efficiency	89%
Mains failure bridge-over time	10ms
LED green/red	Green: Operation (failure-free), Flashing green: advance warning >90%, Green/red flashing: output switched off (switch-off mode), Flashing red: overload/error
Parallel connection option	yes, max 10
Depth x width x height	125 / 35 / 130 mm
Net weight	800 g
Approvals	
Approvals	ABS; BURVER; CSA; CSAEX; DETNORVER; IECEXSIR; LLOYDSREG; RINA; TUEV; UKEX
Connection data	
Connection system	Screw connection
Number of terminals	2 for (+, -)
Wire cross-section, rigid min/max	0.2 / 4 mm ²
Wire cross-section, flexible min/max	0.2 / 4 mm ²
Wire cross-section, AWG/kcmil min/max	30 / 12
Note	

Rated input voltage	24 V DC
Input current	5.7A @ 24V / 7.6A @ 18V
DC input voltage range	14 V...31.2 V (linear Derating from 18 V...14 V, 60% rated load @ U _{in} 14 V)
Input fuse (internal) / Inrush current	Yes / max. 5 A
Rated output voltage	24 V DC ± 1 %
Output voltage	22.5...28.8 V adjustable with potentiometer or communication module
DCL - peak load reserve	600 % (15 ms); 200 % (5 s)
Residual ripple, breaking spikes	<40 mV _{pp} @25 °C
Reserve capacity @ U _{Nominal}	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U _{nom}	5 A @ 60 °C
According to Standard	SN 29500
Operating time (hours), min.	2209000h
Ambient temperature	25°C
Input voltage	24V
Output power	120W
Duty cycle	100%
Derating	> 60°C (2.5% / 1°C)
Series switching capability	Yes
Degree of efficiency	89%
Mains failure bridge-over time	10ms
LED green/red	Green: Operation (failure-free), Flashing green: advance warning >90%, Green/red flashing: output switched off (switch-off mode), Flashing red: overload/error
Parallel connection option	yes, max 10
Depth x width x height	125 / 35 / 130 mm
Net weight	800 g
Approvals	ABS; BURVER; CSA; CSAEX; DETNORVER; IECEXSIR; LLOYDSREG; RINA; TUEV; UKEX
Input	Output
Screw connection	Clamping yoke connection
2 for (+, -)	4 (++, --)
0.2 / 4	0.2 / 4
0.2 / 4	0.2 / 4
30 / 12	30 / 12

Rated input voltage	24 V DC
Input current	11A @ 24V / 15A @ 18V
DC input voltage range	14 V...31.2 V (linear Derating from 18 V...14 V, 60% rated load @ U _{in} 14 V)
Input fuse (internal) / Inrush current	Yes / Max. 10 A
Rated output voltage	24 V DC ± 1 %
Output voltage	22.5...28.8 V adjustable with potentiometer or communication module
DCL - peak load reserve	600 % (15 ms); 200 % (5 s)
Residual ripple, breaking spikes	<40 mV _{pp} @25 °C
Reserve capacity @ U _{Nominal}	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U _{nom}	10 A @ 60 °C
According to Standard	SN 29500
Operating time (hours), min.	1322000h
Ambient temperature	25°C
Input voltage	24V
Output power	240W
Duty cycle	100%
Derating	> 60°C (2.5% / 1°C)
Series switching capability	Yes
Degree of efficiency	91%
Mains failure bridge-over time	10ms
LED green/red	Green: Operation (failure-free), Flashing green: advance warning >90%, Green/red flashing: output switched off (switch-off mode), Flashing red: overload/error
Parallel connection option	yes, max 10
Depth x width x height	125 / 43 / 130 mm
Net weight	1000 g
Approvals	ABS; BURVER; CSA; CSAEX; DETNORVER; IECEXSIR; LLOYDSREG; RINA; TUEV; UKEX
Input	Output
Screw connection	Clamping yoke connection
2 for (+, -)	4 (++, --)
0.2 / 4	0.2 / 4
0.2 / 4	0.2 / 4
30 / 12	30 / 12

Ordering data

Type	Qty.	Order No.
PRO TOPDC 24V/24V 5A EX	1	2467290000

Type	Qty.	Order No.
PRO TOPDC 24V/24V 5A EX	1	2467290000

Type	Qty.	Order No.
PRO TOPDC 24V/24V 10A EX	1	2467300000

Note

Current technical data at eshop.weidmueller.com

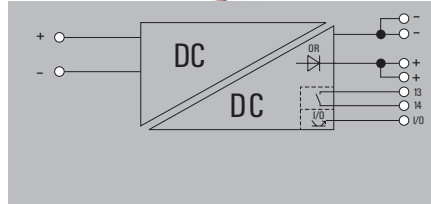
Current technical data at eshop.weidmueller.com

connectPower PROtop DCDC

connectPower PROtop DCDC

- DC/DC converter

PRO TOPDC 24V/24V 20A EX



Technical data

Input

Rated input voltage
Input current
DC input voltage range

Input fuse (internal) / Inrush current

Output

Rated output voltage
Output voltage

DCL - peak load reserve
Residual ripple, breaking spikes
Reserve capacity @ $U_{Nominal}$
Nominal output current for U_{nom}

MTBF

According to Standard
Operating time (hours), min.
Ambient temperature
Input voltage
Output power
Duty cycle

General data

Derating
Series switching capability
Degree of efficiency
Mains failure bridge-over time
LED green/red

Parallel connection option
Depth x width x height
Net weight

Approvals

Approvals

Connection data

Connection system
Number of terminals
Wire cross-section, rigid min/max mm²
Wire cross-section, flexible min/max mm²
Wire cross-section, AWG/kcmil min/max

Note

Ordering data

Type

Note

24 V DC

22A @ 24V / 30A @ 18V
14 V...31.2 V (linear Derating from 18 V...14 V, 60% rated load @ U_{in} 14 V)
Yes / max. 15 A

24 V DC \pm 1 %
22.5...28.8 V adjustable with potentiometer or communication module

500 % (15 ms); 200 % (5 s)
<40 mV_{pp}@25 °C
130% permanent at \leq 40°C, 150 % (5 s)
20 A @ 60 °C

SN 29500
1019000h
25°C
24V
480W
100%

> 60°C (2.5% / 1°C)
Yes
91%
10ms
Green: Operation (failure-free), Flashing green: advance warning
>90%, Green/red flashing: output switched off (switch-off mode),
Flashing red: overload/error

yes, max 10
125 / 75 / 130 mm
1746 g

ABS; BURVER; CSA; CSAEX; DETNORVER; IECEXSIR; LLOYDSREG;
RINA; TUEV; UKEX

Input	Output
Screw connection	Clamping yoke connection
2 for (+, -)	4 (++ / --)
0.18 / 6	0.2 / 6
0.22 / 4	0.5 / 6
26 / 10	24 / 8

Type	Qty.	Order No.
PRO TOPDC 24V/24V 20A EX	1	2467310000

Current technical data at eshop.weidmueller.com

PROtop UW power supplies with ultra wide input voltage range

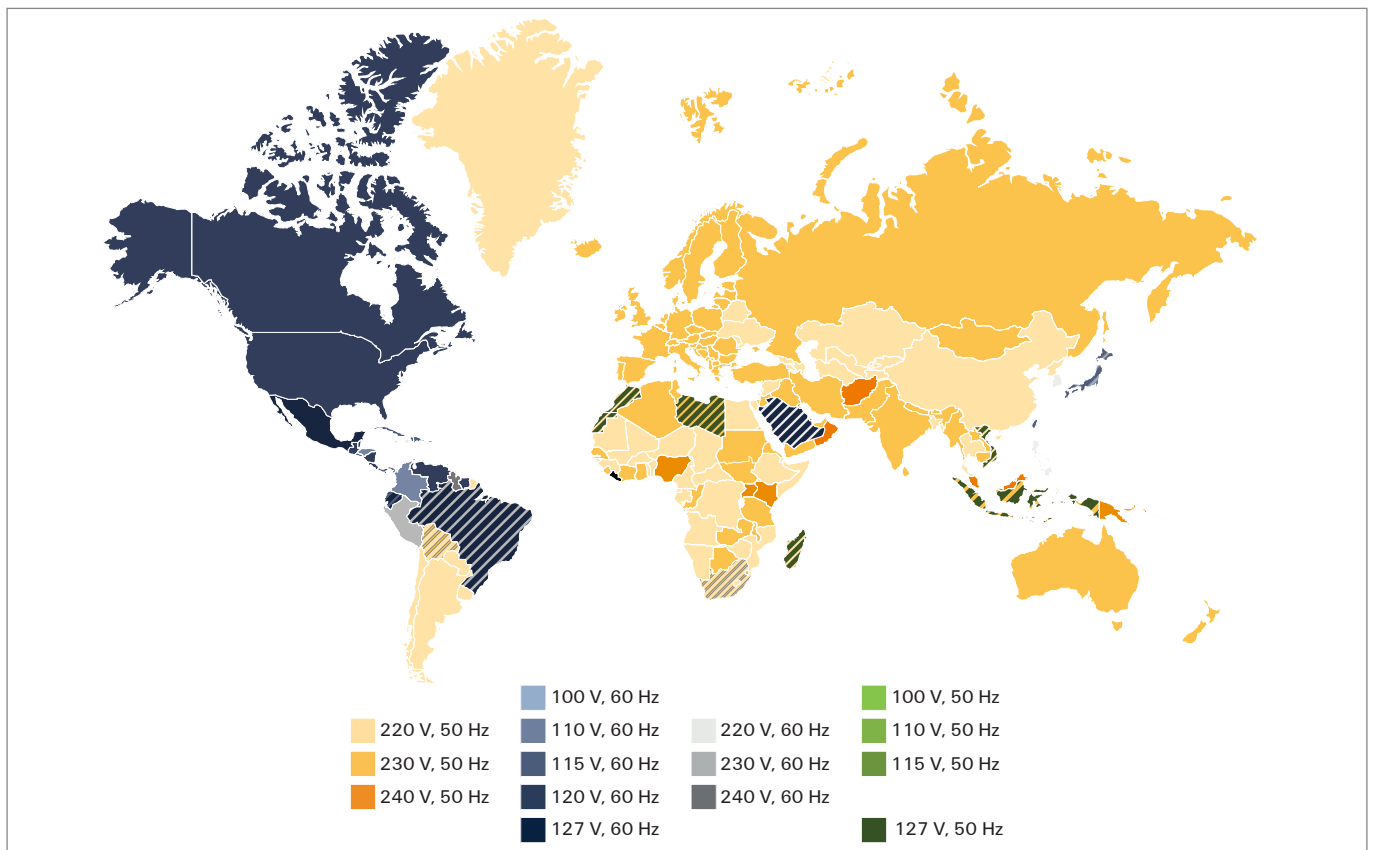
Use only one device for all the mains voltages

An increasing number of machines are being used worldwide. PROtop UW power supply units can be operated on all mains voltages in the world – both on single- and three-phase mains and DC supply networks. The units allow direct parallel connection for redundancy or power increase.

The fully electronic input circuit of our UW power supplies with an ultra-wide input voltage range of 85 – 550 V AC or 90 – 800 V DC allows operation on all supply networks in the world. Device classes up to 240 W ensure the basic supply of small to medium control systems. The integrated ORing MOSFETs of the PROtop family allow direct parallel connection to increase performance as well as the design of redundant power supply systems.

Your special advantages:

- Ultra-wide input voltage range for operation in supply networks worldwide
- Integrated ORing MOSFETs for direct parallel connection for redundancy purposes or to increase power
- DCL technology for high peak current reserves for fuse tripping or motor starts
- Communication interface for data transparency and remote control



Countries with a cross-hatched colour pattern have different supply voltages between the colour-coded voltage supplies.



Operation on all networks worldwide
 The fully electronic input stage of the UW power supply units enables continuous operation on single- and three-phase mains supplies of 85 – 550 V AC as well as operation on DC mains supplies of 90 – 800 V DC.



Direct parallel connection
 The integrated ORing MOSFETs enable direct parallel connection for power increase or redundancy without any diode modules.

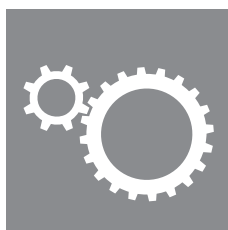


Fit for the future thanks to IO-LINK
 The optional communication modules, which can be retrofitted at any time, ensure data transparency, allow automated parameterization, and enable remote control.



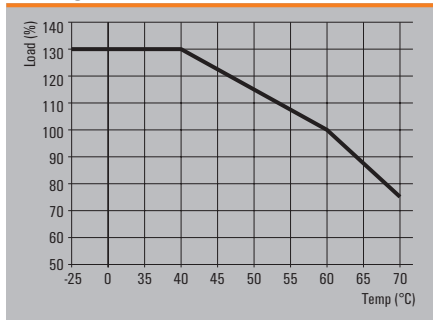
Peak current reserves thanks to DCL
 High peak current reserves of up to 600 % nominal current reliably trigger miniature circuit breakers. In addition, the dynamic current limitation DCL enables high peak currents for powerful motor starts.

Optimal for:



connectPower PROtop UW**connectPower PROtop2 UW**

- DCL technology for an excellent dynamic range
- High energy efficiency
- Mode of operation: single or parallel operation and adjustable short-circuit response (continuous current or switch-off)
- Useful life of up to 10 years, MTBF > 1 000 000 h.
- Extremely slim design

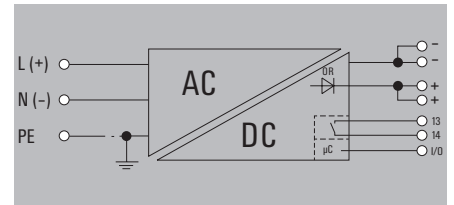
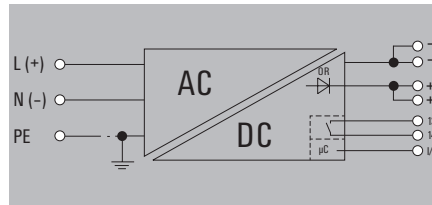
**Derating curve****Technical data**

General data	
Insulation voltage input / earth	3.2 kV
Insulation voltage output / earth	0.5 kV
Insulation voltage, input/output	3.5 kV
Earth leakage current, max.	3.5 mA
Ambient temperature (operational) / Storage temperature	-40 °C...75 °C / -40 °C...85 °C
Humidity at operating temperature	5...100 % no condensation
Protection class / Pollution degree	I, with PE connection / 2
Housing version	Metal, corrosion resistant
EMC / shock / vibration	
Interference immunity test acc. to	EN 55032:2015, EN 61000-3-2:2019, EN 61000-6-3:2007/A1:2011, EN 61000-6-4:2007/A1:2011, EN 61000-3-3:2013+A1:2019, EN 55035:2017, EN 61000-6-1:2019, EN 61000-6-2:2019, IEC 61000-4-2:2008, IEC 61000-4-3:2006+A1:2007+A2:2010, IEC 61000-4-4:2012, IEC 61000-4-5:2014, IEC 61000-4-6:2013, IEC 61000-4-8:2009, IEC 61000-4-11:2004
Shock	30 g in all directions
Resistance to vibration	2.3 g (on DIN rail), 4 g (with direct mounting)
Electrical safety (applied standards)	
Electrical machine equipment	Acc. to EN60335-1
Safety transformers for switch-mode power supplies	According to EN 61558-2-16
Safety extra-low voltage	SELV acc. to IEC 60950-1, PELV according to EN 60204-1

connectPower PROtop2 UW

PRO TOP2 120W 24V 5A UW

PRO TOP2 240W 24V 10A UW



Technical data

Input	
Rated input voltage	100 - 500 V AC / 120 - 500 V DC
Input voltage range AC	85...550 V AC
Frequency range AC	45...65 Hz
DC input voltage range	90...800 V DC
Input fuse (internal) / Inrush current	Yes / max. 5 A
Output	
Rated output voltage	24 V DC ± 1 %
Output voltage	22.5...28.8 V adjustable with potentiometer or communication module
DCL - peak load reserve	600 % (15 ms)
Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load
Reserve capacity @ U _{Nominal}	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U _{Nom}	5 A @ 60 °C
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	1583000h
Ambient temperature	25°C
Input voltage	230V
Output power	120W
Duty cycle	100%
General data	
Derating	> 60°C (2.5% / 1°C)
Series switching capability	Yes
Degree of efficiency	89%
Power factor	0.4 @ 400V @ 25°C @ 120W
Mains failure bridge-over time, min.	20ms
LED green/red	Green: Operation (failure-free), Flashing green: advance warning I>90%, Green/red flashing: output switched off (switch-off mode), Flashing red: overload/error
Parallel connection option	Yes, for redundancy and power increase (with ORing MOSFET)
Depth x width x height	125 / 39 / 130 mm
Net weight	920 g
Conformal coating	No
Approvals	
Approvals	ABS; BURVER; CSA; CSAEX; DETNORVER; LLOYDSREG; RINA; TUEV
Connection data	
Connection system	PUSH IN
Number of terminals	3 for L/N/PE
Wire cross-section, rigid min/max	0.5 / 2.5 mm ²
Wire cross-section, flexible min/max	0.5 / 2.5 mm ²
Wire cross-section, AWG/kcmil min/max	26 / 12
Note	

Input	Output
PUSH IN	PUSH IN with actuator
3 for L/N/PE	4 (++ / --)
0.5 / 2.5	0.2 / 2.5
0.5 / 2.5	0.2 / 2.5
26 / 12	20 / 12

Input	
Rated input voltage	100 - 500 V AC / 120 - 500 V DC
Input voltage range AC	85...550 V AC
Frequency range AC	45...65 Hz
DC input voltage range	90...800 V DC
Input fuse (internal) / Inrush current	Yes / Max. 10 A
Output	
Rated output voltage	24 V DC ± 1 %
Output voltage	22.5...28.8 V adjustable with potentiometer or communication module
DCL - peak load reserve	600 % (15 ms)
Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load
Reserve capacity @ U _{Nominal}	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U _{Nom}	10 A @ 60 °C
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	1399000h
Ambient temperature	25°C
Input voltage	230V
Output power	240W
Duty cycle	100%
General data	
Derating	> 60°C (2.5% / 1°C)
Series switching capability	Yes
Degree of efficiency	91.5%
Power factor	0.75 @ 400V @ 25°C @ 120W
Mains failure bridge-over time, min.	20ms
LED green/red	Green: Operation (failure-free), Flashing green: advance warning I>90%, Green/red flashing: output switched off (switch-off mode), Flashing red: overload/error
Parallel connection option	Yes, for redundancy and power increase (with ORing MOSFET)
Depth x width x height	125 / 50 / 130 mm
Net weight	1050 g
Conformal coating	No
Approvals	
Approvals	ABS; BURVER; CSA; CSAEX; DETNORVER; LLOYDSREG; RINA; TUEV
Connection data	
Connection system	PUSH IN
Number of terminals	3 for L/N/PE
Wire cross-section, rigid min/max	0.5 / 2.5
Wire cross-section, flexible min/max	0.5 / 2.5
Wire cross-section, AWG/kcmil min/max	26 / 12
Note	

Input	Output
PUSH IN	PUSH IN with actuator
3 for L/N/PE	4 (++ / --)
0.5 / 2.5	0.2 / 2.5
0.5 / 2.5	0.2 / 2.5
26 / 12	20 / 12

Ordering data

Type	Qty.	Order No.
PRO TOP2 120W 24V 5A UW	1	2467230000

Type	Qty.	Order No.
PRO TOP2 120W 24V 5A UW	1	2467230000

Type	Qty.	Order No.
PRO TOP2 240W 24V 10A UW	1	2467250000

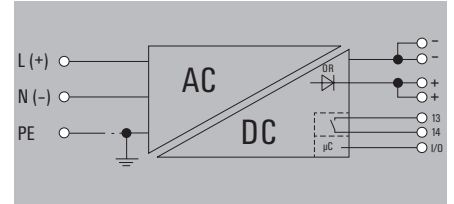
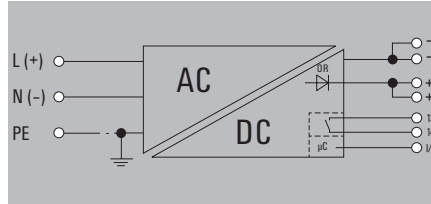
connectPower PROtop UW

connectPower PROtop2 UW

- 1-phase power supplies with wide voltage input

PRO TOP2 120W 24V 5A UW EX

PRO TOP2 240W 24V 10A UW EX



Technical data

Input	
Rated input voltage	100 - 500 V AC / 120 - 500 V DC
Input voltage range AC	85...550 V AC
Frequency range AC	45...65 Hz
DC input voltage range	90...800 V DC
Input fuse (internal) / Inrush current	Yes / max. 5 A
Output	
Rated output voltage	24 V DC ± 1 %
Output voltage	22.5...28.8 V adjustable with potentiometer or communication module
DCL - peak load reserve	600 % (15 ms)
Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load
Reserve capacity @ U _{Nominal}	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U _{Nom}	5 A @ 60 °C
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	1583000h
Ambient temperature	25°C
Input voltage	230V
Output power	120W
Duty cycle	100%
General data	
Derating	> 60°C (2.5% / 1°C)
Series switching capability	Yes
Degree of efficiency	89%
Power factor	0.4 @ 400V @ 25°C @ 120W
Mains failure bridge-over time, min.	20ms
LED green/red	Green: Operation (failure-free), Flashing green: advance warning >90%, Green/red flashing: output switched off (switch-off mode), Flashing red: overload/error
Parallel connection option	Yes, for redundancy and power increase (with ORing MOSFET)
Depth x width x height	125 / 39 / 130 mm
Net weight	892 g
Conformal coating	Yes
Approvals	
Approvals	ABS; BURVER; CSA; CSAEX; DETNORVER; IECEXSIR; LLOYDSREG; RINA; TUEV; UKEX
Connection data	
Connection system	Clamping yoke
Number of terminals	3 for L/N/PE
Wire cross-section, rigid min/max	0.2 / 4 mm ²
Wire cross-section, flexible min/max	0.2 / 4 mm ²
Wire cross-section, AWG/kcmil min/max	30 / 12
Note	

Input		Output			
Clamping yoke		Clamping yoke connection			
3 for L/N/PE		4 (++ / --)			
0.2 / 4		0.2 / 4			
0.2 / 4		0.2 / 4			
30 / 12		30 / 12			
Type		Qty.		Order No.	
PRO TOP2 120W 24V 5A UW EX	1	2467240000			
Current technical data at esthop.weidmueller.com					

Input		Output	
Rated input voltage	100 - 500 V AC / 120 - 500 V DC		
Input voltage range AC	85...550 V AC		
Frequency range AC	45...65 Hz		
DC input voltage range	90...800 V DC		
Input fuse (internal) / Inrush current	Yes / Max. 10 A		
Output			
Rated output voltage	24 V DC ± 1 %		
Output voltage	22.5...28.8 V adjustable with potentiometer or communication module		
DCL - peak load reserve	600 % (15 ms)		
Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load		
Reserve capacity @ U _{Nominal}	130% permanent at ≤ 40°C, 150 % (5 s)		
Nominal output current for U _{Nom}	10 A @ 60 °C		
MTBF			
According to Standard	SN 29500		
Operating time (hours), min.	1399000h		
Ambient temperature	25°C		
Input voltage	230V		
Output power	240W		
Duty cycle	100%		
General data			
Derating	> 60°C (2.5% / 1°C)		
Series switching capability	Yes		
Degree of efficiency	91.5%		
Power factor	0.75 @ 400V @ 25°C @ 120W		
Mains failure bridge-over time, min.	20ms		
LED green/red	Green: Operation (failure-free), Flashing green: advance warning >90%, Green/red flashing: output switched off (switch-off mode), Flashing red: overload/error		
Parallel connection option	Yes, for redundancy and power increase (with ORing MOSFET)		
Depth x width x height	125 / 50 / 130 mm		
Net weight	1060 g		
Conformal coating	Yes		
Approvals			
Approvals	ABS; BURVER; CSA; CSAEX; DETNORVER; IECEXSIR; LLOYDSREG; RINA; TUEV; UKEX		
Connection data			
Connection system	Clamping yoke		
Number of terminals	4 (++ / --)		
Wire cross-section, rigid min/max	0.2 / 4 mm ²		
Wire cross-section, flexible min/max	0.2 / 4 mm ²		
Wire cross-section, AWG/kcmil min/max	30 / 12		
Note			

Type		Qty.		Order No.	
PRO TOP2 240W 24V 10A UW EX	1	2467260000			
Note					

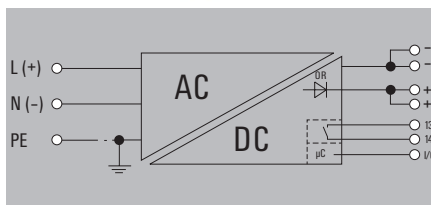
Ordering data

Type		Qty.		Order No.	
PRO TOP2 120W 24V 5A UW EX	1	2467240000			
Note					

connectPower PROtop2 UW

- 1-phase power supplies with wide voltage input

PRO TOP2 240W 48V 5A UW



Technical data

Input	
Rated input voltage	100 - 500 V AC / 120 - 500 V DC
Input voltage range AC	85...550 V AC
Frequency range AC	45...65 Hz
DC input voltage range	90...800 V DC
Input fuse (internal) / Inrush current	Yes / Max. 10 A

Rated output voltage	48 V DC ± 1 %
Output voltage	45...56 V adjustable with potentiometer or communication module

Output	
DCL - peak load reserve	600 % (15 ms)
Residual ripple, breaking spikes	<100 mVss @ U _{Nominal} , Full Load
Reserve capacity @ U _{Nominal}	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U _{Nom}	5 A @ 60 °C

MTBF	Telcordia SR-332
According to Standard	2597h
Operating time (hours), min.	25°C
Ambient temperature	230V
Input voltage	240W
Output power	100%
Duty cycle	> 60°C (2.5% / 1°C)

General data	
Derating	No
Series switching capability	94%
Degree of efficiency	0.75 @ 400V @ 25°C @ 120W
Power factor	20ms
Mains failure bridge-over time, min.	Green: Operation (failure-free), Flashing green: advance warning
LED green/red	I>90%, Green/red flashing: output switched off (switch-off mode), Flashing red: overload/error

Parallel connection option	Yes, for redundancy and power increase (with ORing MOSFET)
Depth x width x height	125 / 50 / 130 mm
Net weight	892 g
Conformal coating	No

Approvals	
Approvals	ABS; BURVER; CSA; CSAEX; DETNORVER; LLOYDSREG; RINA; TUEV

Input	Output
PUSH IN	PUSH IN with actuator
3 for L/N/PE	4 (++ / --)
0.5 / 2.5 mm ²	0.2 / 2.5 mm ²
0.5 / 2.5 mm ²	0.2 / 2.5 mm ²
26 / 12 mm ²	20 / 12 mm ²

Connection data	
Connection system	
Number of terminals	
Wire cross-section, rigid min/max	mm ²
Wire cross-section, flexible min/max	mm ²
Wire cross-section, AWG/kcmil min/max	

Approvals	
Approvals	ABS; BURVER; CSA; CSAEX; DETNORVER; LLOYDSREG; RINA; TUEV

Approvals	
Approvals	ABS; BURVER; CSA; CSAEX; DETNORVER; LLOYDSREG; RINA; TUEV

Connection data	
Connection system	
Number of terminals	
Wire cross-section, rigid min/max	mm ²
Wire cross-section, flexible min/max	mm ²
Wire cross-section, AWG/kcmil min/max	

Approvals	
Approvals	ABS; BURVER; CSA; CSAEX; DETNORVER; LLOYDSREG; RINA; TUEV

Ordering data

Type	Qty.	Order No.
PRO TOP2 240W 48V 5A UW	1	2467270000

Type	Qty.	Order No.
PRO TOP2 240W 48V 5A UW	1	2467270000

Small metal foot



Type	Order No.
MTA 30 MF	1251320000

Large metal foot



Type	Order No.
MTA 45 MF	1251310000

Small plastic foot



Type	Order No.
MTA 30 BK	1168970000

Large plastic foot



Type	Order No.
MTA 45 BK	1962250000

Small wall mounting



Type	Order No.
CP A WALLADAPTER 30 MM	1461870000

Large wall mounting



Type	Order No.
CP A WALLADAPTER 45 MM	1461850000

Small screwdriver



Type	Size/AF	a	b	c	Order No.
SDIK PH 1 X 80				80	2749890000
SDIS 0.5X3.0X100		0,5	3	100	2749800000

Markers



Type	Colour	Qty.	Order No.
SM 18/9.5 K MC NE WS	white	200	1248580000

End bracket

For DIN rail TS 35



Polyamide with fibre glass, screwable	Colour	Torque	Qty.	Order No.
WEW 35/1 SW	black	1.2 Nm	50	1162600000

Powerful power supply for machines and systems

PROmax offers flexible solutions for ambitious automation

Power supplies for large systems and machines are particularly challenging. Failures caused by device defects impact the entire production line and can result in high costs.

Our high performance and durable PROmax switched-mode power supply units are designed for demanding requirements. Continuous overload of up to 120 % or transient peak loads of 300 % are easy for PROmax to handle.

High boost capability and full power are also enabled over a wide temperature range. Our switched-mode power supply units can be used around the world and are also suitable for tight spaces thanks to their narrow width.

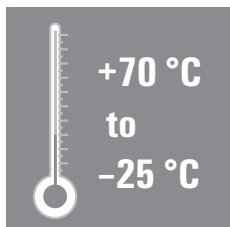


High boost capability for all industrial systems

Whether in large machines and plants, in power engineering or even in light process systems: Thanks to their high boost capability, the space-saving housing geometries, the wide temperature range and the numerous approvals, our PROmax switched-mode power supply units can be used for universal applications and anywhere in the world.

Robust and reliable supply

MTBF values exceeding 500,000 hours and a wide temperature range of -25 °C to +70 °C ensure reliable supply of the systems. Start-up temperatures of -40 °C make the PROmax particularly robust.



Space-saving width

With extremely small width and direct side-by-side fitting, minimal space is required on the DIN rail.



Universal application

Variants with 3 A to 40 A output current, output voltages of 5 V DC to 48 V DC and numerous approvals (e.g. GL, UL, Class I, Div. 2) enable universal application solutions the world over.



Powerful

Continuous output power of up to 120 % at temperatures up to +45 °C and high output peaks up to 300 % ensure safe operation, also at the limits.

Robust Input

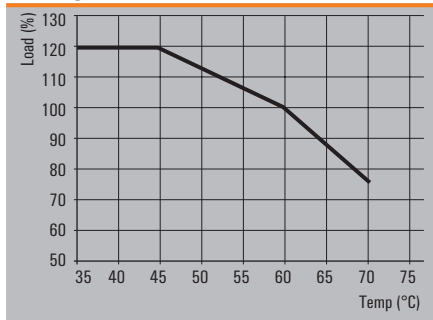
With an AC input voltage range of up to 277 V in single-phase devices and SEMI F47, PROmax is extremely robust.

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Derating curve



Permitted continuous limit currents [A]

Typ \ Temp.	45 °C	50 °C	55 °C	60 °C	65 °C	70 °C
1ph 24 V / 3 A	3,6	3,3	3,2	3	2,6	2,2
1ph 24 V / 5 A	6	5,7	5,4	5	4,4	3,8
1ph 24 V / 7,5 A	9	8,5	8	7,5	6,6	5,6
1ph 24 V / 10 A	12	11,3	10,7	10	8,8	7,5
1ph 24 V / 20 A	24	22,6	21,4	20	17,6	15
1ph 24 V / 40 A	48	45,2	42,8	40	35,2	30
1ph 5 V / 14 A	16,8	15,8	15	14	12,3	10,5
1ph 12 V / 6 A	7,2	6,8	6,4	6	5,3	4,5
1ph 12 V / 10 A	12	11,3	10,7	10	8,8	7,5
1ph 48 V / 5 A	6	5,7	5,4	5	4,4	3,8
1ph 48 V / 10 A	12	11,3	10,7	10	8,8	7,5
1ph 48 V / 20 A	24	22,6	21,4	20	17,6	15
3ph 24 V / 5 A	6	5,7	5,4	5	4,4	3,8
3ph 24 V / 10 A	12	11,3	10,7	10	8,8	7,5
3ph 24 V / 20 A	24	22,6	21,4	20	17,6	15
3ph 24 V / 40 A	48	45,2	42,8	40	35,2	30

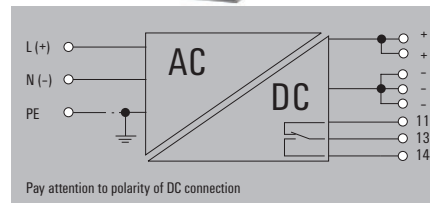
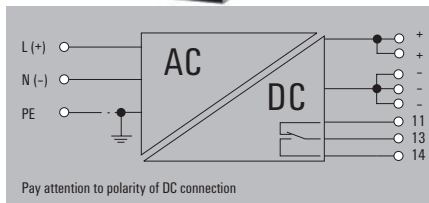
Technical data

General data	
Current limiting	> 120% I _n
Insulation voltage input / earth	3.5 kV
Insulation voltage output / earth	0.5 kV
Insulation voltage, input/output	4 kV
Earth leakage current, max.	3.5 mA
Series switching capability	Yes
Ambient temperature (operational) / Storage temperature / Start-up	-25 °C...70 °C / -40 °C...85 °C / ≥ -40 °C
Humidity at operating temperature	5...95 %, no condensation
Protection class / Pollution degree	I, with PE connection / 2
Housing version	Metal, corrosion resistant
Status indication	LED red/green and relay (≥21.6 V DC LED green, relay on/ ≤20.6 LED red, relay off)
Mounting position, installation notice	Horizontal on TS35 mounting rail. 50 mm of clearance at top & bottom for air circ. Can mount side by side with no space in between.
EMC / shock / vibration	
Interference immunity test acc. to	EN 55024, EN 55032, IEC61000-3-2,-3, IEC61000-4-2,-3,-4,-5,-6,-8,-11
Shock	30 g in all directions
Resistance to vibration	2.3 g
Electrical safety (applied standards)	
Electrical machine equipment	Acc. to EN60204
Safety transformers for switch-mode power supplies	According to EN 61558-2-16

connectPower PROmax

PRO MAX 72W 24V 3A

PRO MAX 120W 24V 5A



Technical data

Input	
Rated input voltage	100...240 V AC
Input voltage range AC	85...277 V AC
Frequency range AC	45...65 Hz
DC input voltage range	80...370 V DC
AC current consumption	1A @ 230VAC
DC current consumption	1.5A @ 120VDC
Input fuse (internal) / Inrush current	Yes / max. 15 A
Recommended back-up fuse	6 A, Char. B, circuit breaker, 3 - 5 A, char. C, circuit breaker

Output	
Rated output voltage	24 V DC ± 1 %
Output voltage	22.5...29.5 V (adjustable via potentiometer)
Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load
Nominal output current for U _{nom}	3 A @ 60 °C
Continuous output current @ U _{Nominal}	3,6 A @ 45°C, 2,25 A @ 70°C
Reserve capacity @ U _{Nominal}	3,6 A (1 min), 4,5 A (4s)
Current capacity (pulse) @ U _{Nominal}	9 A (2ms)

MTBF	
According to Standard	SN 29500
Operating time (hours), min.	1700000h
Ambient temperature	25°C
Input voltage	230V
Output power	72W
Duty cycle	100%

General data	
Degree of efficiency	89%
Power factor	0.9 @ 230V @ 25°C @ 72W
AC failure bridging time @ I _{nom}	min. 20 ms
Protection against reverse voltages from the load	30...35 V DC
Parallel connection option	yes, max. 5
Depth x width x height	125 / 32 / 130 mm
Net weight	650 g

Approvals	
Approvals	CE; cULus; cULusEX; cURus; DETNORVER; TUEV

Connection data	
Connection system	Screw connection
Number of terminals	8 (++,--,11,13,14)
Wire cross-section, rigid min/max	0.18 / 6
Wire cross-section, flexible min/max	0.22 / 4
Wire cross-section, AWG/kcmil min/max	26 / 10
Screwdriver blade	0.8 x 4.0, PZ 1

Note	

Ordering data

Type	Qty.	Order No.
PRO MAX 72W 24V 3A	1	1478100000

Note	
The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.	

Permitted continuous limit currents [A]

Input	
Rated input voltage	100...240 V AC
Input voltage range AC	85...277 V AC
Frequency range AC	45...65 Hz
DC input voltage range	80...370 V DC
AC current consumption	1A @ 230VAC
DC current consumption	1.5A @ 120VDC
Input fuse (internal) / Inrush current	Yes / max. 15 A
Recommended back-up fuse	6 A, Char. B, circuit breaker, 3 - 5 A, char. C, circuit breaker

Output	
Rated output voltage	24 V DC ± 1 %
Output voltage	22.5...29.5 V (adjustable via potentiometer)
Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load
Nominal output current for U _{nom}	3 A @ 60 °C
Continuous output current @ U _{Nominal}	3,6 A @ 45°C, 2,25 A @ 70°C
Reserve capacity @ U _{Nominal}	3,6 A (1 min), 4,5 A (4s)
Current capacity (pulse) @ U _{Nominal}	9 A (2ms)

MTBF	
According to Standard	SN 29500
Operating time (hours), min.	1700000h
Ambient temperature	25°C
Input voltage	230V
Output power	72W
Duty cycle	100%

General data	
Degree of efficiency	89%
Power factor	0.9 @ 230V @ 25°C @ 72W
AC failure bridging time @ I _{nom}	min. 20 ms
Protection against reverse voltages from the load	30...35 V DC
Parallel connection option	yes, max. 5
Depth x width x height	125 / 32 / 130 mm
Net weight	650 g

Approvals	
Approvals	CE; cULus; cULusEX; cURus; DETNORVER; TUEV

Connection data	
Connection system	Screw connection
Number of terminals	8 (++,--,11,13,14)
Wire cross-section, rigid min/max	0.18 / 6
Wire cross-section, flexible min/max	0.22 / 4
Wire cross-section, AWG/kcmil min/max	26 / 10
Screwdriver blade	0.8 x 4.0, PZ 1

Note	

Ordering data

Type	Qty.	Order No.
PRO MAX 72W 24V 3A	1	1478100000

Note	
The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.	

Input	
Rated input voltage	100...240 V AC
Input voltage range AC	85...277 V AC
Frequency range AC	45...65 Hz
DC input voltage range	80...370 V DC
AC current consumption	1A @ 230VAC
DC current consumption	2.5A @ 120VDC
Input fuse (internal) / Inrush current	Yes / max. 15 A
Recommended back-up fuse	6 A, Char. B, circuit breaker, 6 A, char. C circuit breaker

Output	
Rated output voltage	24 V DC ± 1 %
Output voltage	22.5...29.5 V (adjustable via potentiometer)
Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load
Nominal output current for U _{nom}	5 A @ 60 °C
Continuous output current @ U _{Nominal}	6.0 A @ 45 °C, 3,75 A @ 70 °C
Reserve capacity @ U _{Nominal}	6 A (1 min), 7,5 A (4s)
Current capacity (pulse) @ U _{Nominal}	15 A (2ms)

MTBF	
According to Standard	SN 29500
Operating time (hours), min.	1500000h
Ambient temperature	25°C
Input voltage	230V
Output power	120W
Duty cycle	100%

General data	
Degree of efficiency	89%
Power factor	0.9 @ 230V @ 25°C @ 120W
AC failure bridging time @ I _{nom}	min. 20 ms
Protection against reverse voltages from the load	30...35 V DC
Parallel connection option	yes, max. 5
Depth x width x height	125 / 40 / 130 mm
Net weight	858 g

Approvals	
Approvals	CE; cULus; cULusEX; cURus; DETNORVER; TUEV

Connection data	
Connection system	Screw connection
Number of terminals	8 (++,--,11,13,14)
Wire cross-section, rigid min/max	0.18 / 6
Wire cross-section, flexible min/max	0.22 / 4
Wire cross-section, AWG/kcmil min/max	26 / 10
Screwdriver blade	0.8 x 4.0, PZ 1

Note	

Ordering data

Type	Qty.	Order No.
PRO MAX 120W 24V 5A	1	1478110000

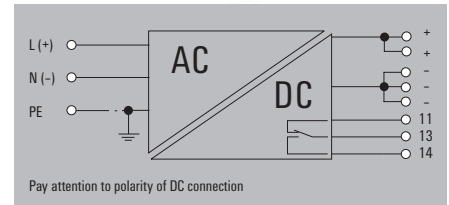
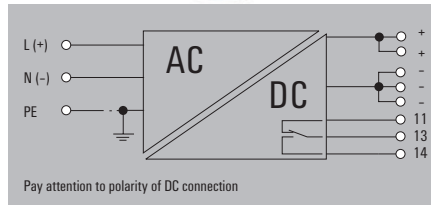
Note	
The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.	

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PRO MAX 180W 24V 7,5A

PRO MAX 240W 24V 10A



Technical data

Input	
Rated input voltage	100...240 V AC
Input voltage range AC	85...277 V AC
Frequency range AC	45...65 Hz
DC input voltage range	80...370 V DC
AC current consumption	1A @ 230VAC
DC current consumption	2A @ 120VDC
Input fuse (internal) / Inrush current	Yes / max. 15 A
Recommended back-up fuse	10 A, Char. B circuit breaker, 6...8 A, char. C circuit breaker

Rated output voltage	24 V DC ± 1 %
Output voltage	22.5...29.5 V (adjustable via potentiometer)
Residual ripple, breaking spikes	<50 mV _{rms} @ U _{Nom} , Full Load
Nominal output current for U _{Nom}	7,5 A @ 60 °C
Continuous output current @ U _{Nominal}	9 A @ 45°C, 5,6 A @ 70°C
Reserve capacity @ U _{Nominal}	9 A (1 min), 11.25 A (4s)
Current capacity (pulse) @ U _{Nominal}	22,5 A (2ms)

Rated output voltage	24 V DC ± 1 %
Output voltage	22.5...29.5 V (adjustable via potentiometer)
Residual ripple, breaking spikes	<50 mV _{rms} @ U _{Nom} , Full Load
Nominal output current for U _{Nom}	10 A @ 60 °C
Continuous output current @ U _{Nominal}	12 A @ 45°C, 7,5 A @ 70°C
Reserve capacity @ U _{Nominal}	12 A (1 min), 15 A (4s)
Current capacity (pulse) @ U _{Nominal}	30 A (2ms)

Output	
Rated output voltage	24 V DC ± 1 %
Output voltage	22.5...29.5 V (adjustable via potentiometer)
Residual ripple, breaking spikes	<50 mV _{rms} @ U _{Nom} , Full Load
Nominal output current for U _{Nom}	10 A @ 60 °C
Continuous output current @ U _{Nominal}	12 A @ 45°C, 7,5 A @ 70°C
Reserve capacity @ U _{Nominal}	12 A (1 min), 15 A (4s)
Current capacity (pulse) @ U _{Nominal}	30 A (2ms)

MTBF	
According to Standard	SN 29500
Operating time (hours), min.	1400000h
Ambient temperature	25°C
Input voltage	230V
Output power	180W
Duty cycle	100%

MTBF	
According to Standard	SN 29500
Operating time (hours), min.	1100000h
Ambient temperature	25°C
Input voltage	230V
Output power	240W
Duty cycle	100%

General data	
Degree of efficiency	91.5%
Power factor	0.95 @ 230V @ 25°C @ 180W
AC failure bridging time @ I _{nom}	min. 20 ms
Protection against reverse voltages from the load	30...35 V DC
Parallel connection option	yes, max. 5
Depth x width x height	125 / 50 / 130 mm
Net weight	950 g

Degree of efficiency	91.5%
Power factor	0.95 @ 230V @ 25°C @ 180W
AC failure bridging time @ I _{nom}	min. 20 ms
Protection against reverse voltages from the load	30...35 V DC
Parallel connection option	yes, max. 5
Depth x width x height	125 / 50 / 130 mm
Net weight	950 g

Degree of efficiency	91.5%
Power factor	0.95 @ 230V @ 25°C @ 240W
AC failure bridging time @ I _{nom}	min. 20 ms
Protection against reverse voltages from the load	30...35 V DC
Parallel connection option	yes, max. 5
Depth x width x height	125 / 60 / 130 mm
Net weight	1050 g

Approvals	
Approvals	CE; cULus; cULusEX; cURus; DETNORVER; TUEV

Approvals	CE; cULus; cULusEX; cURus; DETNORVER; TUEV
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Approvals	CE; cULus; cULusEX; cURus; DETNORVER; TUEV
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Connection data	
Connection system	Screw connection
Number of terminals	3 for L/N/PE
Wire cross-section, rigid min/max	0.18 / 6 mm ²
Wire cross-section, flexible min/max	0.22 / 4 mm ²
Wire cross-section, AWG/kcmil min/max	26 / 10
Screwdriver blade	0.8 x 4.0, PZ 1

Input	Output
Screw connection	Screw connection
3 for L/N/PE	8 (++,-,-,11,13,14)
0.18 / 6	0.5 / 6
0.22 / 4	0.5 / 4
26 / 10	26 / 12
0.8 x 4.0, PZ 1	0.6 x 3.5

Input	Output
Screw connection	Screw connection
3 for L/N/PE	8 (++,-,-,11,13,14)
0.18 / 6	0.18 / 6
0.22 / 4	0.22 / 4
26 / 10	26 / 10
0.8 x 4.0, PZ 1	0.8 x 4.0, PZ 1

Note	

Note	

Note	

Ordering data

Type	Qty.	Order No.
PRO MAX 180W 24V 7,5A	1	1478120000

Type	Qty.	Order No.
PRO MAX 180W 24V 7,5A	1	1478120000

Type	Qty.	Order No.
PRO MAX 240W 24V 10A	1	1478130000

Note	
The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.	

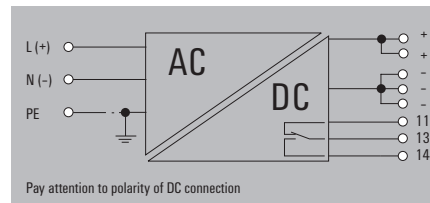
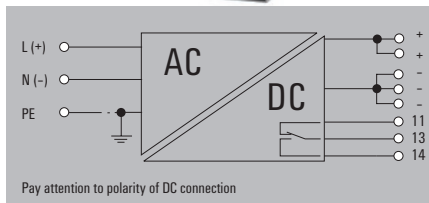
Note	
The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.	

Note	
The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.	

connectPower PROmax

PRO MAX 480W 24V 20A

PRO MAX 960W 24V 40A



Technical data

Input	
Rated input voltage	100...240 V AC
Input voltage range AC	85...277 V AC
Frequency range AC	45...65 Hz
DC input voltage range	80...370 V DC
AC current consumption	2.3A @ 230VAC
DC current consumption	4.8A @ 120VDC
Input fuse (internal) / Inrush current	Yes / max. 15 A
Recommended back-up fuse	16 A, char. B circuit breaker, 10 A, Char. C circuit breaker

Rated input voltage	100...240 V AC
Input voltage range AC	85...277 V AC
Frequency range AC	45...65 Hz
DC input voltage range	80...370 V DC
AC current consumption	2.3A @ 230VAC
DC current consumption	4.8A @ 120VDC
Input fuse (internal) / Inrush current	Yes / max. 15 A
Recommended back-up fuse	16 A, char. B circuit breaker, 10 A, Char. C circuit breaker

Rated input voltage	100...240 V AC
Input voltage range AC	85...277 V AC
Frequency range AC	45...65 Hz
DC input voltage range	80...370 V DC
AC current consumption	4.52A @ 230VAC
DC current consumption	10A @ 120VDC
Input fuse (internal) / Inrush current	Yes / max. 15 A
Recommended back-up fuse	20 A, char. B circuit breaker, 16 A, char. C, circuit breaker

Output	
Rated output voltage	24 V DC ± 1 %
Output voltage	22.5...29.5 V (adjustable via potentiometer)
Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load
Nominal output current for U _{Nom}	20 A @ 60 °C
Continuous output current @ U _{Nominal}	24 A @ 45°C, 15 A @ 70°C
Reserve capacity @ U _{Nominal}	24 A (1 min), 30 A (4s), 100...240 V AC
Current capacity (pulse) @ U _{Nominal}	60 A (2ms)

Rated output voltage	24 V DC ± 1 %
Output voltage	22.5...29.5 V (adjustable via potentiometer)
Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load
Nominal output current for U _{Nom}	20 A @ 60 °C
Continuous output current @ U _{Nominal}	24 A @ 45°C, 15 A @ 70°C
Reserve capacity @ U _{Nominal}	24 A (1 min), 30 A (4s), 100...240 V AC
Current capacity (pulse) @ U _{Nominal}	60 A (2ms)

Rated output voltage	24 V DC ± 1 %
Output voltage	22.5...29.5 V (adjustable via potentiometer)
Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load
Nominal output current for U _{Nom}	40 A @ 60 °C
Continuous output current @ U _{Nominal}	48 A @ 45°C, 30 A @ 70°C
Reserve capacity @ U _{Nominal}	48 A (1 min), 60 A (4s), 100...240 V AC
Current capacity (pulse) @ U _{Nominal}	120 A (2ms)

MTBF	
According to Standard	SN 29500
Operating time (hours), min.	827000h
Ambient temperature	25°C
Input voltage	230V
Output power	480W
Duty cycle	100%

According to Standard	SN 29500
Operating time (hours), min.	827000h
Ambient temperature	25°C
Input voltage	230V
Output power	480W
Duty cycle	100%

According to Standard	SN 29500
Operating time (hours), min.	539000h
Ambient temperature	25°C
Input voltage	230V
Output power	960W
Duty cycle	100%

General data	
Degree of efficiency	92 %
Power factor	0.95 @ 230V @ 25°C @ 480W
AC failure bridging time @ I _{nom}	min. 20 ms
Protection against reverse voltages from the load	30...35 V DC
Parallel connection option	yes, max. 3
Depth x width x height	150 / 90 / 130 mm
Net weight	2000 g

Degree of efficiency	92 %
Power factor	0.95 @ 230V @ 25°C @ 480W
AC failure bridging time @ I _{nom}	min. 20 ms
Protection against reverse voltages from the load	30...35 V DC
Parallel connection option	yes, max. 3
Depth x width x height	150 / 90 / 130 mm
Net weight	2000 g

Degree of efficiency	93%
Power factor	0.95 @ 230V @ 25°C @ 960W
AC failure bridging time @ I _{nom}	min. 20 ms
Protection against reverse voltages from the load	30...35 V DC
Parallel connection option	yes, max. 3
Depth x width x height	150 / 140 / 130 mm
Net weight	3900 g

Approvals	
Approvals	CE; cULus; cULusEX; cURus; DETNORVER; TUEV

Approvals	CE; cULus; cULusEX; cURus; DETNORVER; TUEV
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Approvals	CE; cULus; cULusEX; cURus; DETNORVER; TUEV
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Connection data	
Connection system	Screw connection
Number of terminals	3 for L/N/PE
Wire cross-section, rigid min/max	0.18 / 6 mm ²
Wire cross-section, flexible min/max	0.22 / 4 mm ²
Wire cross-section, AWG/kcmil min/max	26 / 10
Screwdriver blade	0.8 x 4.0, PZ 1

Input	Output
Screw connection	Screw connection
3 for L/N/PE	8 (++,-,-,11,13,14)
0.18 / 6	0.18 / 6
0.22 / 4	0.22 / 4
26 / 10	26 / 10
0.8 x 4.0, PZ 1	0.8 x 4.0, PZ 1

Input	Output
Screw connection	Screw connection
3 for L/N/PE	8 (++,-,-,11,13,14)
0.18 / 6	0.5 / 16
0.22 / 4	0.5 / 16
26 / 10	22 / 8
0.8 x 4.0, PZ 1	1.0 x 5.5

Note	

Ordering data

Type	Qty.	Order No.
PRO MAX 480W 24V 20A	1	1478140000

Type	Qty.	Order No.
PRO MAX 480W 24V 20A	1	1478140000

Type	Qty.	Order No.
PRO MAX 960W 24V 40A	1	1478150000

Note	
The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.	

The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.	
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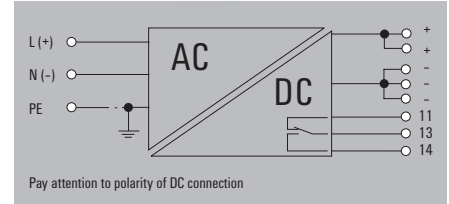
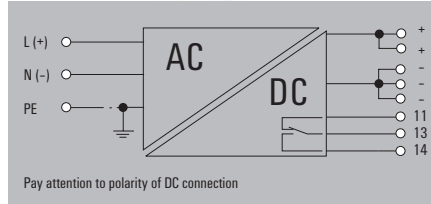
The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.	
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connectPower PROmax

connectPower PROmax

PRO MAX 70W 5V 14A

PRO MAX 72W 12V 6A



Technical data

Input	
Rated input voltage	100...240 V AC
Input voltage range AC	85...277 V AC
Frequency range AC	45...65 Hz
DC input voltage range	80...370 V DC
AC current consumption	1A @ 230VAC
DC current consumption	1.5A @ 120VDC
Input fuse (internal) / Inrush current	Yes / max. 15 A
Recommended back-up fuse	6 A, Char. B, circuit breaker, 3 - 5 A, char. C, circuit breaker

Output	
Rated output voltage	5 V DC
Output voltage	4.5...7 V (adjustable via potentiometer)
Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load
Nominal output current for U _{Nom}	14 A @ 60°C
Continuous output current @ U _{Nominal}	16,8 A @ 45°C, 10,5 A @ 70°C
Reserve capacity @ U _{Nominal}	16,8 A (1 min), 21 A (4s)
Current capacity (pulse) @ U _{Nominal}	42 A (2ms)

MTBF	
According to Standard	SN 29500
Operating time (hours), min.	1400000h
Ambient temperature	25°C
Input voltage	230V
Output power	70W
Duty cycle	100%

General data	
Degree of efficiency	86%
Power factor	0.9 @ 230V @ 25°C @ 70W
AC failure bridging time @ I _{nom}	min. 20 ms
Protection against reverse voltages from the load	> 7.5 V DC
Parallel connection option	yes, max. 5
Depth x width x height	125 / 32 / 130 mm
Net weight	650 g

Approvals	
Approvals	CE; cULus; cULusEX; cURus; DETNORVER; TUEV

Connection data	
Connection system	Screw connection
Number of terminals	3 for L/N/PE
Wire cross-section, rigid min/max	0.18 / 6 mm ²
Wire cross-section, flexible min/max	0.22 / 4 mm ²
Wire cross-section, AWG/kcmil min/max	26 / 10
Screwdriver blade	0.8 x 4.0, PZ 1

Note	

Ordering data

Type	Qty.	Order No.
PRO MAX 70W 5V 14A	1	1478210000

Note	
The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.	

Input	
Rated input voltage	100...240 V AC
Input voltage range AC	85...277 V AC
Frequency range AC	45...65 Hz
DC input voltage range	80...370 V DC
AC current consumption	1A @ 230VAC
DC current consumption	1.5A @ 120VDC
Input fuse (internal) / Inrush current	Yes / max. 15 A
Recommended back-up fuse	6 A, Char. B, circuit breaker, 3 - 5 A, char. C, circuit breaker

Output	
Rated output voltage	12 V DC
Output voltage	10...15 V (adjustable via potentiometer)
Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load
Nominal output current for U _{Nom}	6 A @ 60°C
Continuous output current @ U _{Nominal}	7.2 A @ 45°C, 4.5 A @ 70°C
Reserve capacity @ U _{Nominal}	7.2 A (1 min), 9 A (4s)
Current capacity (pulse) @ U _{Nominal}	18 A (2ms)

MTBF	
According to Standard	SN 29500
Operating time (hours), min.	1500000h
Ambient temperature	25°C
Input voltage	230V
Output power	72W
Duty cycle	100%

General data	
Degree of efficiency	89%
Power factor	0.9 @ 230V @ 25°C @ 72W
AC failure bridging time @ I _{nom}	min. 20 ms
Protection against reverse voltages from the load	> 18 V DC
Parallel connection option	yes, max. 5
Depth x width x height	125 / 32 / 130 mm
Net weight	650 g

Approvals	
Approvals	CE; cULus; cULusEX; cURus; DETNORVER; TUEV

Connection data	
Connection system	Screw connection
Number of terminals	8 (++,--,11,13,14)
Wire cross-section, rigid min/max	0.18 / 6 mm ²
Wire cross-section, flexible min/max	0.22 / 4 mm ²
Wire cross-section, AWG/kcmil min/max	26 / 10
Screwdriver blade	0.8 x 4.0, PZ 1

Note	

Type	Qty.	Order No.
PRO MAX 72W 12V 6A	1	1478220000

Note	
The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.	

Input	
Rated input voltage	100...240 V AC
Input voltage range AC	85...277 V AC
Frequency range AC	45...65 Hz
DC input voltage range	80...370 V DC
AC current consumption	1A @ 230VAC
DC current consumption	1.5A @ 120VDC
Input fuse (internal) / Inrush current	Yes / max. 15 A
Recommended back-up fuse	6 A, Char. B, circuit breaker, 3 - 5 A, char. C, circuit breaker

Output	
Rated output voltage	12 V DC ± 1 %
Output voltage	10...15 V (adjustable via potentiometer)
Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load
Nominal output current for U _{Nom}	6 A @ 60°C
Continuous output current @ U _{Nominal}	7.2 A @ 45°C, 4.5 A @ 70°C
Reserve capacity @ U _{Nominal}	7.2 A (1 min), 9 A (4s)
Current capacity (pulse) @ U _{Nominal}	18 A (2ms)

MTBF	
According to Standard	SN 29500
Operating time (hours), min.	1500000h
Ambient temperature	25°C
Input voltage	230V
Output power	72W
Duty cycle	100%

General data	
Degree of efficiency	89%
Power factor	0.9 @ 230V @ 25°C @ 72W
AC failure bridging time @ I _{nom}	min. 20 ms
Protection against reverse voltages from the load	> 18 V DC
Parallel connection option	yes, max. 5
Depth x width x height	125 / 32 / 130 mm
Net weight	650 g

Approvals	
Approvals	CE; cULus; cULusEX; cURus; DETNORVER; TUEV

Connection data	
Connection system	Screw connection
Number of terminals	8 (++,--,11,13,14)
Wire cross-section, rigid min/max	0.18 / 6 mm ²
Wire cross-section, flexible min/max	0.22 / 4 mm ²
Wire cross-section, AWG/kcmil min/max	26 / 10
Screwdriver blade	0.8 x 4.0, PZ 1

Note	

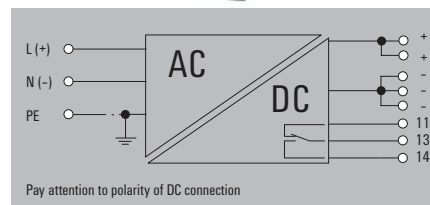
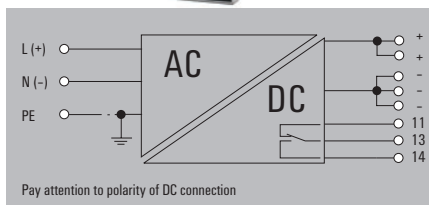
Type	Qty.	Order No.
PRO MAX 72W 12V 6A	1	1478220000

Note	
The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.	

connectPower PROmax

PRO MAX 120W 12V 10A

PRO MAX 240W 48V 5A



Technical data

Input	
Rated input voltage	100...240 V AC
Input voltage range AC	85...277 V AC
Frequency range AC	45...65 Hz
DC input voltage range	80...370 V DC
AC current consumption	1A @ 230VAC
DC current consumption	1.5A @ 120VDC
Input fuse (internal) / Inrush current	Yes / max. 15 A
Recommended back-up fuse	6 A, Char. B, circuit breaker, 6 A, char. C circuit breaker
Output	
Rated output voltage	12 V DC ± 1 %
Output voltage	10...15 V (adjustable via potentiometer)
Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load
Nominal output current for U _{Nom}	10 A @ 60 °C
Continuous output current @ U _{Nom}	12 A @ 45°C, 7,5 A @ 70°C
Reserve capacity @ U _{Nom}	12 A (1 min), 15 A (4s)
Current capacity (pulse) @ U _{Nom}	30 A (2ms)
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	1500000h
Ambient temperature	25°C
Input voltage	230V
Output power	120W
Duty cycle	100%
General data	
Degree of efficiency	89%
Power factor	0.9 @ 230V @ 25°C @ 120W
AC failure bridging time @ I _{nom}	min. 20 ms
Protection against reverse voltages from the load	> 18 V DC
Parallel connection option	yes, max. 5
Depth x width x height	125 / 40 / 130 mm
Net weight	850 g
Approvals	
Approvals	CE; cULus; cULusEX; cURus; DETNORVER; TUEV
Connection data	
Connection system	Screw connection
Number of terminals	3 for L/N/PE
Wire cross-section, rigid min/max	0.18 / 6 mm ²
Wire cross-section, flexible min/max	0.22 / 4 mm ²
Wire cross-section, AWG/kcmil min/max	26 / 10
Screwdriver blade	0.8 x 4.0, PZ 1
Note	

Input		Output			
Screw connection		Screw connection			
3 for L/N/PE		8 (++,--,11,13,14)			
0.18 / 6		0.5 / 6			
0.22 / 4		0.5 / 4			
26 / 10		26 / 12			
0.8 x 4.0, PZ 1		0.6 x 3.5			
Type		Qty.		Order No.	
PRO MAX 120W 12V 10A		1		1478230000	
Note					
The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.					

Input		Output			
Rated input voltage	100...240 V AC	Rated output voltage	48 V DC ± 1 %		
Input voltage range AC	85...277 V AC	Output voltage	30...56 V (adjustable via potentiometer)		
Frequency range AC	45...65 Hz	Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load		
DC input voltage range	80...370 V DC	Nominal output current for U _{Nom}	5 A @ 60 °C		
AC current consumption	1.5A @ 230VAC	Continuous output current @ U _{Nom}	6.0 A @ 45 °C, 3,75 A @ 70 °C		
DC current consumption	3A @ 120VDC	Reserve capacity @ U _{Nom}	5 A (1 min), 7,5 A (4s)		
Input fuse (internal) / Inrush current	Yes / max. 15 A	Current capacity (pulse) @ U _{Nom}	15 A (2ms)		
Recommended back-up fuse	10 A, Char. B circuit breaker, 6...8 A, char. C circuit breaker				
Input		Output			
Screw connection		Screw connection			
3 for L/N/PE		8 (++,--,11,13,14)			
0.18 / 6		0.18 / 6			
0.22 / 4		0.22 / 4			
26 / 10		26 / 10			
0.8 x 4.0, PZ 1		0.8 x 4.0, PZ 1			
Type		Qty.		Order No.	
PRO MAX 240W 48V 5A		1		1478240000	
Note					
The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.					

Ordering data

Type	Qty.	Order No.
PRO MAX 120W 12V 10A	1	1478230000

Type	Qty.	Order No.
PRO MAX 240W 48V 5A	1	1478240000

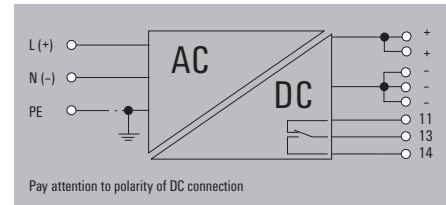
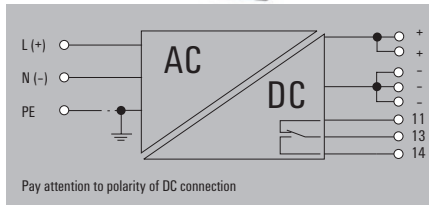
Type	Qty.	Order No.
PRO MAX 240W 48V 5A	1	1478240000

connectPower PROmax

connectPower PROmax

PRO MAX 480W 48V 10A

PRO MAX 960W 48V 20A



Technical data

Input		
Rated input voltage	100...240 V AC	
Input voltage range AC	85...277 V AC	
Frequency range AC	45...65 Hz	
DC input voltage range	80...370 V DC	
AC current consumption	2.3A @ 230VAC	
DC current consumption	4.8A @ 120VDC	
Input fuse (internal) / Inrush current	Yes / max. 15 A	
Recommended back-up fuse	16 A, char. B circuit breaker, 10 A, Char. C circuit breaker	
Output		
Rated output voltage	48 V DC ± 1 %	
Output voltage	30...56 V (adjustable via potentiometer)	
Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load	
Nominal output current for U _{Nom}	10 A @ 60 °C	
Continuous output current @ U _{Nominal}	12 A @ 45°C, 7,5 A @ 70°C	
Reserve capacity @ U _{Nominal}	12 A (1 min), 15 A (4s), 100...240 V AC	
Current capacity (pulse) @ U _{Nominal}	60 A (2ms)	
MTBF		
According to Standard	SN 29500	
Operating time (hours), min.	857000h	
Ambient temperature	25°C	
Input voltage	230V	
Output power	480W	
Duty cycle	100%	
General data		
Degree of efficiency	93%	
Power factor	0.9 @ 230V @ 25°C @ 480W	
AC failure bridging time @ I _{nom}	min. 20 ms	
Protection against reverse voltages from the load	58...65 V DC	
Parallel connection option	yes, max. 5	
Depth x width x height	150 / 90 / 130 mm	
Net weight	2000 g	
Approvals		
Approvals	CE; cULus; cULusEX; cURus; DETNORVER; TUEV	
Connection data		
Connection system	Screw connection	
Number of terminals	3 for L/N/PE	
Wire cross-section, rigid min/max	0.18 / 6 mm ²	
Wire cross-section, flexible min/max	0.22 / 4 mm ²	
Wire cross-section, AWG/kcmil min/max	26 / 10	
Screwdriver blade	0.8 x 4.0, PZ 1	
Note		
The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.		
Ordering data		
Type	Qty.	Order No.
PRO MAX 480W 48V 10A	1	1478250000
Note		
The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.		

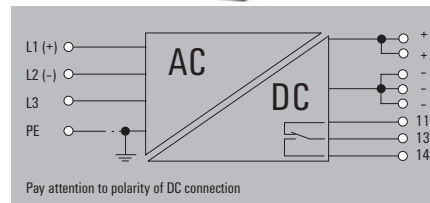
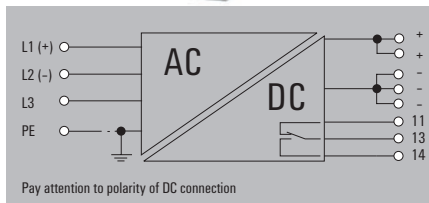
Input		
Rated input voltage	100...240 V AC	
Input voltage range AC	85...277 V AC	
Frequency range AC	45...65 Hz	
DC input voltage range	80...370 V DC	
AC current consumption	2.3A @ 230VAC	
DC current consumption	4.8A @ 120VDC	
Input fuse (internal) / Inrush current	Yes / max. 15 A	
Recommended back-up fuse	16 A, char. B circuit breaker, 10 A, Char. C circuit breaker	
Output		
Rated output voltage	48 V DC ± 1 %	
Output voltage	30...56 V (adjustable via potentiometer)	
Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load	
Nominal output current for U _{Nom}	10 A @ 60 °C	
Continuous output current @ U _{Nominal}	12 A @ 45°C, 7,5 A @ 70°C	
Reserve capacity @ U _{Nominal}	12 A (1 min), 15 A (4s), 100...240 V AC	
Current capacity (pulse) @ U _{Nominal}	60 A (2ms)	
MTBF		
According to Standard	SN 29500	
Operating time (hours), min.	857000h	
Ambient temperature	25°C	
Input voltage	230V	
Output power	480W	
Duty cycle	100%	
General data		
Degree of efficiency	93%	
Power factor	0.9 @ 230V @ 25°C @ 480W	
AC failure bridging time @ I _{nom}	min. 20 ms	
Protection against reverse voltages from the load	58...65 V DC	
Parallel connection option	yes, max. 5	
Depth x width x height	150 / 90 / 130 mm	
Net weight	2000 g	
Approvals		
Approvals	CE; cULus; cULusEX; cURus; DETNORVER; TUEV	
Connection data		
Connection system	Screw connection	
Number of terminals	3 for L/N/PE	
Wire cross-section, rigid min/max	0.18 / 6 mm ²	
Wire cross-section, flexible min/max	0.22 / 4 mm ²	
Wire cross-section, AWG/kcmil min/max	26 / 10	
Screwdriver blade	0.8 x 4.0, PZ 1	
Note		
The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.		
Ordering data		
Type	Qty.	Order No.
PRO MAX 480W 48V 10A	1	1478250000
Note		
The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.		

Input		
Rated input voltage	100...240 V AC	
Input voltage range AC	85...277 V AC	
Frequency range AC	45...65 Hz	
DC input voltage range	80...370 V DC	
AC current consumption	4.52A @ 230VAC	
DC current consumption	10A @ 120VDC	
Input fuse (internal) / Inrush current	Yes / max. 15 A	
Recommended back-up fuse	20 A, char. B circuit breaker, 16 A, char. C, circuit breaker	
Output		
Rated output voltage	48 V DC ± 1 %	
Output voltage	30...56 V (adjustable via potentiometer)	
Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load	
Nominal output current for U _{Nom}	20 A @ 60 °C	
Continuous output current @ U _{Nominal}	24 A @ 45°C, 15 A @ 70°C	
Reserve capacity @ U _{Nominal}	24 A (1 min), 30 A (4s), 100...240 V AC	
Current capacity (pulse) @ U _{Nominal}	60 A (2ms)	
MTBF		
According to Standard	SN 29500	
Operating time (hours), min.	651000h	
Ambient temperature	25°C	
Input voltage	230V	
Output power	960W	
Duty cycle	100%	
General data		
Degree of efficiency	94%	
Power factor	0.95 @ 230V @ 25°C @ 960W	
AC failure bridging time @ I _{nom}	min. 20 ms	
Protection against reverse voltages from the load	58...65 V DC	
Parallel connection option	yes, max. 5	
Depth x width x height	150 / 140 / 130 mm	
Net weight	3950 g	
Approvals		
Approvals	CE; cULus; cULusEX; cURus; DETNORVER; TUEV	
Connection data		
Connection system	Screw connection	
Number of terminals	3 for L/N/PE	
Wire cross-section, rigid min/max	0.18 / 6 mm ²	
Wire cross-section, flexible min/max	0.22 / 4 mm ²	
Wire cross-section, AWG/kcmil min/max	26 / 10	
Screwdriver blade	0.8 x 4.0, PZ 1	
Note		
The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.		
Ordering data		
Type	Qty.	Order No.
PRO MAX 960W 48V 20A	1	1478270000
Note		
The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.		

connectPower PROmax

PRO MAX3 120W 24V 5A

PRO MAX3 240W 24V 10A



Technical data

Input	
Rated input voltage	
Input voltage range AC	
Frequency range AC	
DC input voltage range	
AC current consumption	
DC current consumption	
Input fuse (internal) / Inrush current	
Recommended back-up fuse	
Output	
Rated output voltage	
Output voltage	
Residual ripple, breaking spikes	
Nominal output current for U_{nom}	
Continuous output current @ $U_{Nominal}$	
Reserve capacity @ $U_{Nominal}$	
Current capacity (pulse) @ $U_{Nominal}$	
MTBF	
According to Standard	
Operating time (hours), min.	
Ambient temperature	
Input voltage	
Output power	
Duty cycle	
General data	
Degree of efficiency	
Power factor	
AC failure bridging time @ I_{nom}	
Protection against reverse voltages from the load	
Parallel connection option	
Depth x width x height	
Net weight	
Approvals	
Approvals	
Connection data	
Connection system	
Number of terminals	
Wire cross-section, rigid min/max	mm ²
Wire cross-section, flexible min/max	mm ²
Wire cross-section, AWG/kcmil min/max	
Screwdriver blade	
Note	

3x 400...3x 500 V AC (wide-range input)	
3 x 320...3 x 575 V AC / 2 x 360...2 x 575 V AC	
45...65 Hz	
450...800 V DC	
0.3A @ 400V3-phase AC	
0.18, 0.3A, A @ 800, 450V, VDC, DC	
Yes / max. 15 A	
2...3 A, char. C circuit breaker	
24 V DC ± 1 %	
22.5...29.5 V (adjustable via potentiometer)	
<50 mVss @ U_{Nemo} , Full Load	
5 A @ 60 °C	
6.0 A @ 45 °C, 3,75 A @ 70 °C	
6 A (1 min), 7.5 A (4s), 400...500 V AC	
15 A (2ms)	
SN 29500	
1700000h	
25°C	
400V	
120W	
100%	
90%	
0.5 @ 400V @ 25°C @ 120W	
min. 20 ms	
30...35 V DC	
yes, max. 5	
125 / 40 / 130 mm	
783 g	
CE; cULus; cULusEX; cURus; DETNORVER; TUEV	
Input	Output
Screw connection	Screw connection
4 for L1/L2/L3/PE	8 (++,-,-,11,13,14)
0.18 / 6	0.5 / 6
0.22 / 4	0.5 / 4
26 / 10	26 / 12
0.8 x 4.0, PZ 1	0.6 x 3.5

3x 400...3x 500 V AC (wide-range input)	
3 x 320...3 x 575 V AC / 2 x 360...2 x 575 V AC	
45...65 Hz	
450...800 V DC	
0.4A @ 400V3-phase AC	
0.35, 0.6A, A @ 800, 450V, VDC, DC	
Yes / max. 15 A	
3 - 5 A, char. C, circuit breaker	
24 V DC ± 1 %	
22.5...29.5 V (adjustable via potentiometer)	
<50 mVss @ U_{Nemo} , Full Load	
10 A @ 60 °C	
12 A @ 45°C, 7,5 A @ 70°C	
12 A (1 min), 15 A (4s)	
30 A (2ms)	
SN 29500	
865000h	
25°C	
400V	
240W	
100%	
91.5%	
0.85 @ 400V @ 25°C @ 240W	
min. 20 ms	
30...35 V DC	
yes, max. 5	
125 / 60 / 130 mm	
1322 g	
CE; cULus; cULusEX; cURus; DETNORVER; TUEV	
Input	Output
Screw connection	Screw connection
4 for L1/L2/L3/PE	8 (++,-,-,11,13,14)
0.18 / 6	0.18 / 6
0.22 / 4	0.22 / 4
26 / 10	26 / 10
0.8 x 4.0, PZ 1	0.8 x 4.0, PZ 1

Ordering data

Type	Qty.	Order No.
PRO MAX3 120W 24V 5A	1	1478170000

The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.

Type	Qty.	Order No.
PRO MAX3 240W 24V 10A	1	1478180000

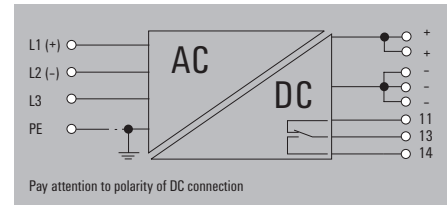
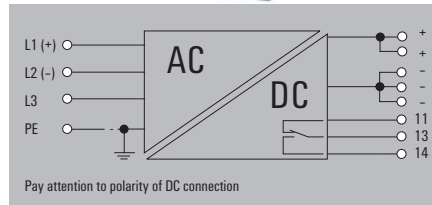
The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.

connectPower PROmax

connectPower PROmax

PRO MAX3 480W 24V 20A

PRO MAX3 960W 24V 40A



Technical data

Input	
Rated input voltage	3x 400...3x 500 V AC (wide-range input)
Input voltage range AC	3 x 320...3 x 575 V AC / 2 x 360...2 x 575 V AC
Frequency range AC	45...65 Hz
DC input voltage range	450...800 V DC
AC current consumption	0.85A @ 400V3-phase AC
DC current consumption	0.7, 1.2A, A @ 800, 450V, VDC, DC
Input fuse (internal) / Inrush current	Yes / max. 15 A
Recommended back-up fuse	3 - 5 A, char. C, circuit breaker

Rated output voltage	24 V DC ± 1 %
Output voltage	22.5...29.5 V (adjustable via potentiometer)
Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load
Nominal output current for U _{Nom}	20 A @ 60 °C
Continuous output current @ U _{Nom}	24 A @ 45°C, 15 A @ 70°C
Reserve capacity @ U _{Nom}	24 A (1 min), 30 A (4s)
Current capacity (pulse) @ U _{Nom}	60 A (2ms)

Rated output voltage	24 V DC ± 1 %
Output voltage	22.5...29.5 V (adjustable via potentiometer)
Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load
Nominal output current for U _{Nom}	40 A @ 60 °C
Continuous output current @ U _{Nom}	48 A @ 45°C, 30 A @ 70°C
Reserve capacity @ U _{Nom}	48 A (1 min), 60 A (4s), 400...500 V AC
Current capacity (pulse) @ U _{Nom}	120 A (2ms)

Output	
Rated output voltage	24 V DC ± 1 %
Output voltage	22.5...29.5 V (adjustable via potentiometer)
Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load
Nominal output current for U _{Nom}	20 A @ 60 °C
Continuous output current @ U _{Nom}	24 A @ 45°C, 15 A @ 70°C
Reserve capacity @ U _{Nom}	24 A (1 min), 30 A (4s)
Current capacity (pulse) @ U _{Nom}	60 A (2ms)

Rated output voltage	24 V DC ± 1 %
Output voltage	22.5...29.5 V (adjustable via potentiometer)
Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load
Nominal output current for U _{Nom}	40 A @ 60 °C
Continuous output current @ U _{Nom}	48 A @ 45°C, 30 A @ 70°C
Reserve capacity @ U _{Nom}	48 A (1 min), 60 A (4s), 400...500 V AC
Current capacity (pulse) @ U _{Nom}	120 A (2ms)

Rated output voltage	24 V DC ± 1 %
Output voltage	22.5...29.5 V (adjustable via potentiometer)
Residual ripple, breaking spikes	<50 mVss @ U _{Nom} , Full Load
Nominal output current for U _{Nom}	40 A @ 60 °C
Continuous output current @ U _{Nom}	48 A @ 45°C, 30 A @ 70°C
Reserve capacity @ U _{Nom}	48 A (1 min), 60 A (4s), 400...500 V AC
Current capacity (pulse) @ U _{Nom}	120 A (2ms)

MTBF	
According to Standard	SN 29500
Operating time (hours), min.	642000h
Ambient temperature	25°C
Input voltage	400V
Output power	480W
Duty cycle	100%

According to Standard	SN 29500
Operating time (hours), min.	642000h
Ambient temperature	25°C
Input voltage	400V
Output power	480W
Duty cycle	100%

According to Standard	SN 29500
Operating time (hours), min.	642000h
Ambient temperature	25°C
Input voltage	400V
Output power	960W
Duty cycle	100%

General data	
Degree of efficiency	91.5%
Power factor	0.8 @ 400V @ 25°C @ 480W
AC failure bridging time @ I _{nom}	min. 20 ms
Protection against reverse voltages from the load	30...35 V DC
Parallel connection option	yes, max. 3
Depth x width x height	150 / 70 / 130 mm
Net weight	1600 g

Degree of efficiency	91.5%
Power factor	0.8 @ 400V @ 25°C @ 480W
AC failure bridging time @ I _{nom}	min. 20 ms
Protection against reverse voltages from the load	30...35 V DC
Parallel connection option	yes, max. 3
Depth x width x height	150 / 70 / 130 mm
Net weight	1600 g

Degree of efficiency	93.5%
Power factor	0.75 @ 400V @ 25°C @ 960W
AC failure bridging time @ I _{nom}	min. 20 ms
Protection against reverse voltages from the load	30...35 V DC
Parallel connection option	yes, max. 3
Depth x width x height	150 / 140 / 130 mm
Net weight	3400 g

Approvals	
Approvals	CE; cULus; cULusEX; cURus; DETNORVER; TUEV

Approvals	CE; cULus; cULusEX; cURus; DETNORVER; TUEV
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Approvals	CE; cULus; cULusEX; cURus; DETNORVER; TUEV
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Connection data	
Connection system	Screw connection
Number of terminals	4 for L1/L2/L3/PE
Wire cross-section, rigid min/max	0.18 / 6 mm ²
Wire cross-section, flexible min/max	0.22 / 4 mm ²
Wire cross-section, AWG/kcmil min/max	26 / 10
Screwdriver blade	0.8 x 4.0, PZ 1

Input	Output
Screw connection	Screw connection
4 for L1/L2/L3/PE	8 (++,--,11,13,14)
0.18 / 6	0.18 / 6
0.22 / 4	0.22 / 4
26 / 10	26 / 10
0.8 x 4.0, PZ 1	0.8 x 4.0, PZ 1

Input	Output
Screw connection	Screw connection
4 for L1/L2/L3/PE	8 (++,--,11,13,14)
0.18 / 6	0.5 / 16
0.22 / 4	0.5 / 16
26 / 10	22 / 8
0.8 x 4.0, PZ 1	1.0 x 5.5

Note

Ordering data

Type	Qty.	Order No.
PRO MAX3 480W 24V 20A	1	1478190000

Type	Qty.	Order No.
PRO MAX3 480W 24V 20A	1	1478190000

Type	Qty.	Order No.
PRO MAX3 960W 24V 40A	1	1478200000

Note

The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.

The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.

Small metal foot



Type	Order No.
MTA 30 MF	1251320000

Large metal foot



Type	Order No.
MTA 45 MF	1251310000

Small plastic foot



Type	Order No.
MTA 30 BK	1168970000

Large plastic foot



Type	Order No.
MTA 45 BK	1962250000

Small wall mounting



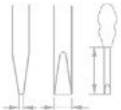
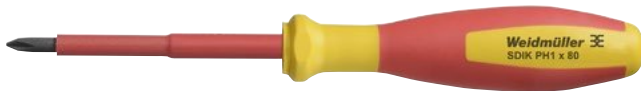
Type	Order No.
CP A WALLADAPTER 30 MM	1461870000

Large wall mounting



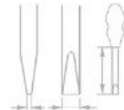
Type	Order No.
CP A WALLADAPTER 45 MM	1461850000

Small screwdriver



Type	Size/AF	a	b	c	Order No.
SDIK PH 1 X 80				80	2749890000
SDIS 0.5X3.0X100		0.5	3	100	2749800000

Large screwdriver



Type	Size/AF	a	b	c	Order No.
SDIS 1.0X5.5X125		1	5.5	125	2749850000

Markers



Type	Colour	Qty.	Order No.
SM 18/9.5 K MC NE WS	white	200	1248580000

Endwinkel

For DIN rail TS 35



Type	Colour	Torque	Qty.	Order No.
Polyamide with fibre glass, screwable WEW 35/1 SW	black	1.2 Nm	50	1162600000

Find the cost-effective solution for your power supply PROeco – reliable and optimised power supplies

The new PROeco 2nd generation power supplies maximise the availability of automation applications. The twelve-part series offers standard functions: with high performance, efficiency and suitability for many systems. The three-colour LED makes service activities and the integration of PROeco devices particularly easy. The series is compatible with DC UPS, electronic load monitoring and diode modules and is suitable for setting up power management systems. The compact design suits space-constrained applications, such as flat control cabinets in the field.

Your advantages at a glance:

- Robust and durable
- Space- and energy-saving
- Smart and rapid status diagnosis
- International approvals



SNAP IN
Invented by Weidmüller.

Machinery



Renewable energies



Infrastructure



Rapid status diagnosis

The tricolour LED display and an integrated status relay make it easier to analyse statuses and errors during commissioning and operation.



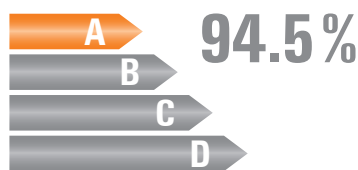
Extremely compact

With a depth from 100 mm, PROeco power supplies even fit into small cabinets. The compact design also saves up to 50 % space in the cabinet.



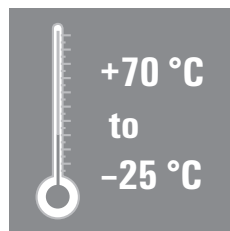
Noticeably energy-saving

A high degree of efficiency of up to 94.5 % and minimal no-load losses ensure low energy consumption and a long service life.



Robust and reliable

PROeco power packs work reliably in a wide temperature range from -25 °C to +70 °C and boast a high MTBF value of more than 700,000 hours.



Power supply solution

Together with the uninterruptible DC UPS, the diode modules or CAP modules, you can create a power supply solution that is tailored to your requirements.



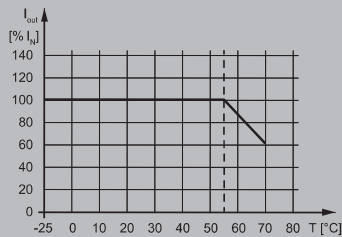
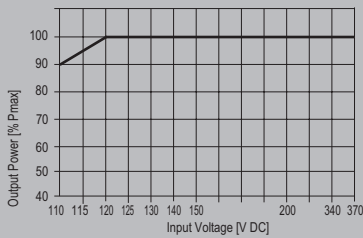
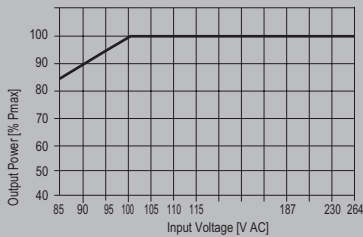
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PROeco power supplies with basic functionality and a high level of reliability

- Single- and three-phase switched-mode power supply units
- Slim design
- Large temperature range from -25 °C to 70 °C
- The output voltage can be precisely adjusted via the potentiometer on the front
- Remote monitoring via integrated status relay
- Three-coloured LED indicators for simple error detection
- Advanced visual warning at 90 % rated output current
- International approvals



Derating curve



Technical data

General data

Ambient temperature (operational)	-25 °C...70 °C
Storage temperature	-40 °C...85 °C
Humidity	5...95 % rel. humidity, no condensation
Protection degree	IP20
Protection class	I, with PE connection
Pollution degree	2
Insulation voltage, input/output	4 kV
Insulation voltage input / earth	3 kV
Insulation voltage output / earth	0.5 kV
Parallel connection option	yes, max. 3
Housing version	Metal, corrosion resistant
Mounting position, installation notice	on terminal rail TS 35
Short-circuit protection	Yes
Overload protection	Yes
Protection against over-heating	Yes

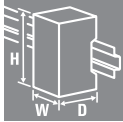
EMC / shock / vibration

Noise emission in accordance with EN55032	Class B
Interference immunity test acc. to	EN 61000-4-2 (ESD), EN 61000-4-3 (RS), EN 61000-4-4 (burst), EN 61000-4-5 (surge), EN 61000-4-6 (conducted), EN 61000-4-8 (Fields), EN 61000-4-11 (Dips), IEC 61000-6-1, IEC 61000-6-2, IEC 61000-6-3, IEC 61000-6-4
Limiting of mains voltage harmonic currents	According to EN 61000-3-2
Resistance to vibration / Shock	0.7 g / 30 g in all directions

Electrical safety (applied standards)

Electrical machine equipment	Acc. to EN60204
Safety transformers for switch-mode power supplies	According to EN 61558-2-16

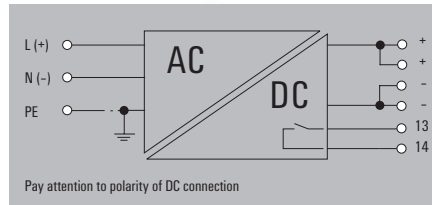
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PRO ECO 72W 24V 3A II



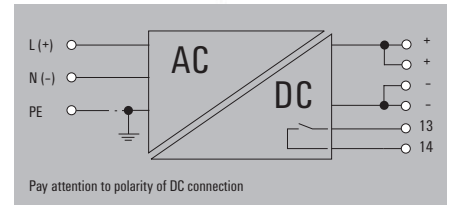
Similar to illustration



PRO ECO 120W 24V 5A II



Similar to illustration



Technical data

Input	
Rated input voltage	100...240 V AC / 120...340 V DC
Input voltage range AC	85...264 V AC (derating at 100 V AC)
Frequency range AC	45...65 Hz
DC input voltage range	110...370 V DC (derating at 120 V DC)
Current consumption in relation to the input voltage	1.33A @ 100VAC 0.69A @ 240VAC 0.73A @ 120VDC 0.26A @ 370VDC
Input fuse / Inrush current (typ.)	internal / 35 A
Output	
Rated output voltage	24 V DC
Output voltage	22...28 V (adjustable via potentiometer)
Ramp-up time / Max. residual ripple	≤ 100 ms / <50 mV _{pp} / bandwidth 20 MHz
Nominal output current for U _{nom}	3 A at 55 °C
Continuous output current @ U _{Nominal}	1.875 A @ 70 °C
Capacitive load / Protection against inverse voltage	unrestricted / Yes
Signalling	
LED green	Operating voltage OK
Floating contact / Contact load	Yes / max. 30 V DC / 1 A
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	3300000h
Ambient temperature	25 °C
Input voltage	230V
Output power	72W
Duty cycle	100%
General data	
Degree of efficiency	Typ.: 83,5% @ 120 V AC, Typ.: 87,5% @ 230 V AC
Power loss, idling	3 W / 12 W
Earth leakage current, max.	3.5 mA
Power factor	Power factor typical : 0.45 Input voltage : 230V Ambient temperature : 25 °C Output power : 72W
Protection against reverse voltages from the load	30...35 V DC
Parallel connection option	yes, max. 3
Depth x width x height / Net weight	100 / 32 / 130 mm / 420 g
Approvals	
Approvals	CE; cULus; cURus
Connection data	
Connection system	Screw connection
Number of terminals	3 for L/N/PE
Wire cross-section, rigid min/max	0.5 / 6 mm ²
Wire cross-section, flexible min/max	0.5 / 4 mm ²
Wire cross-section, AWG/kcmil min/max	26 / 12
Note	

Input	
Rated input voltage	100...240 V AC / 120...340 V DC
Input voltage range AC	85...264 V AC (derating at 100 V AC)
Frequency range AC	45...65 Hz
DC input voltage range	110...370 V DC (derating at 120 V DC)
Current consumption in relation to the input voltage	1.33A @ 100VAC 0.69A @ 240VAC 0.73A @ 120VDC 0.26A @ 370VDC
Input fuse / Inrush current (typ.)	internal / 35 A
Output	
Rated output voltage	24 V DC
Output voltage	22...28 V (adjustable via potentiometer)
Ramp-up time / Max. residual ripple	≤ 100 ms / <50 mV _{pp} / bandwidth 20 MHz
Nominal output current for U _{nom}	3 A at 55 °C
Continuous output current @ U _{Nominal}	1.875 A @ 70 °C
Capacitive load / Protection against inverse voltage	unrestricted / Yes
Signalling	
LED green	Operating voltage OK
Floating contact / Contact load	Yes / max. 30 V DC / 1 A
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	3300000h
Ambient temperature	25 °C
Input voltage	230V
Output power	72W
Duty cycle	100%
General data	
Degree of efficiency	Typ.: 83,5% @ 120 V AC, Typ.: 87,5% @ 230 V AC
Power loss, idling	3 W / 12 W
Earth leakage current, max.	3.5 mA
Power factor	Power factor typical : 0.45 Input voltage : 230V Ambient temperature : 25 °C Output power : 72W
Protection against reverse voltages from the load	30...35 V DC
Parallel connection option	yes, max. 3
Depth x width x height / Net weight	100 / 32 / 130 mm / 420 g
Approvals	
Approvals	CE; cULus; cURus
Connection data	
Connection system	Screw connection
Number of terminals	3 for L/N/PE
Wire cross-section, rigid min/max	0.5 / 6 mm ²
Wire cross-section, flexible min/max	0.5 / 4 mm ²
Wire cross-section, AWG/kcmil min/max	26 / 12
Note	

Input	
Rated input voltage	100...240 V AC / 120...340 V DC
Input voltage range AC	85...264 V AC (derating at 100 V AC)
Frequency range AC	45...65 Hz
DC input voltage range	110...370 V DC (derating at 120 V DC)
Current consumption in relation to the input voltage	2.17A @ 100VAC 1.08A @ 240VAC 1.15A @ 120VDC 0.41A @ 370VDC
Input fuse / Inrush current (typ.)	internal / 40 A
Output	
Rated output voltage	24 V DC
Output voltage	22...28 V (adjustable via potentiometer)
Ramp-up time / Max. residual ripple	≤ 100 ms / <50 mV _{pp} / bandwidth 20 MHz
Nominal output current for U _{nom}	5 A @ 55 °C
Continuous output current @ U _{Nominal}	3.125 A @ 70 °C
Capacitive load / Protection against inverse voltage	unrestricted / Yes
Signalling	
LED green	Operating voltage OK
Floating contact / Contact load	Yes / max. 30 V DC / 1 A
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	3300000h
Ambient temperature	25 °C
Input voltage	230V
Output power	120W
Duty cycle	100%
General data	
Degree of efficiency	Typ.: 88,4% @ 120 V AC, Typ.: 90,1% @ 230 V AC
Power loss, idling	1 W / 15 W
Earth leakage current, max.	3.5 mA
Power factor	Power factor typical : 0.5 Input voltage : 230V Ambient temperature : 25 °C Output power : 120W
Protection against reverse voltages from the load	30...35 V DC
Parallel connection option	yes, max. 3
Depth x width x height / Net weight	100 / 35 / 130 mm / 510 g
Approvals	
Approvals	CE; cULus; cURus
Connection data	
Connection system	Screw connection
Number of terminals	3 for L/N/PE
Wire cross-section, rigid min/max	0.5 / 6 mm ²
Wire cross-section, flexible min/max	0.5 / 4 mm ²
Wire cross-section, AWG/kcmil min/max	26 / 12
Note	

Ordering data

Type	Qty.	Order No.
PRO ECO 72W 24V 3A II	1	3025560000

Note: The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.

Type	Qty.	Order No.
PRO ECO 120W 24V 5A II	1	3025570000

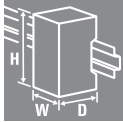
Note: The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.

Type	Qty.	Order No.
PRO ECO 120W 24V 5A II	1	3025570000

Note: The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.

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PRO ECO 240W 24V 10A II

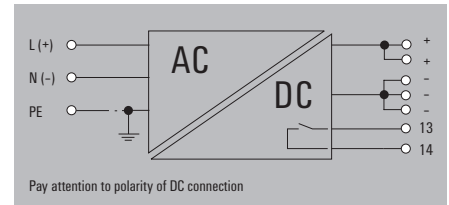
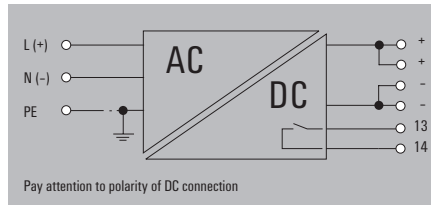


Similar to illustration

PRO ECO 480W 24V 20A II



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Technical data

Input	
Rated input voltage	
Input voltage range AC	
Frequency range AC	
DC input voltage range	
Current consumption in relation to the input voltage	
Input fuse / Inrush current (typ.)	
Output	
Rated output voltage	
Output voltage	
Ramp-up time / Max. residual ripple	
Nominal output current for U_{nom}	
Continuous output current @ $U_{Nominale}$	
Capacitive load / Protection against inverse voltage	
Signalling	
LED green	
Floating contact / Contact load	
MTBF	
According to Standard	
Operating time (hours), min.	
Ambient temperature	
Input voltage	
Output power	
Duty cycle	
General data	
Degree of efficiency	
Power loss, idling	
Earth leakage current, max.	
Power factor	
Protection against reverse voltages from the load	
Parallel connection option	
Depth x width x height / Net weight	
Approvals	
Approvals	
Connection data	
Connection system	
Number of terminals	
Wire cross-section, rigid min/max	mm ²
Wire cross-section, flexible min/max	mm ²
Wire cross-section, AWG/kcmil min/max	
Note	

100...240 V AC / 120...340 V DC	
85...264 V AC (derating at 100 V AC)	
45...65 Hz	
110...370 V DC (derating at 120 V DC)	
2.58A @ 100VAC	
1.07A @ 240VAC	
2.2A @ 120VDC	
0.74A @ 370VDC	
internal / 10 A	
24 V DC	
22...28 V (adjustable via potentiometer)	
≤ 100 ms / <50 mV _{pp} / bandwidth 20 MHz	
10 A @ 55 °C	
6.25 A @ 70 °C	
unrestricted / Yes	
Operating voltage OK	
Yes / max. 30 V DC / 1 A	
SN 29500	
3000000h	
25°C	
230V	
240W	
100%	
Typ.: 92,7% @ 120 V AC, Typ.: 94,5% @ 230 V AC	
4 W / 20 W	
3.5 mA	
Power factor typical : 0.95	
Input voltage : 230V	
Ambient temperature : 25°C	
Output power : 240W	
30...35 V DC	
yes, max. 3	
100 / 52 / 130 mm / 695 g	
CE; cULus; cURus	
Input	Output
Screw connection	Screw connection
3 for L/N/PE	4 (++ / --)
0.5 / 6	0.5 / 6
0.5 / 4	0.5 / 4
26 / 12	26 / 12

100...240 V AC / 120...340 V DC	
85...264 V AC (derating at 100 V AC)	
45...65 Hz	
110...370 V DC (derating at 120 V DC)	
5.23A @ 100VAC	
2.13A @ 240VAC	
4.3A @ 120VDC	
1.36A @ 370VDC	
internal / 10 A	
24 V DC	
22...28 V (adjustable via potentiometer)	
≤ 100 ms / <50 mV _{pp} / bandwidth 20 MHz	
20 A @ 55 °C	
12.5 A @ 70 °C	
unrestricted / Yes	
Operating voltage OK	
Yes / max. 30 V DC / 1 A	
SN 29500	
2600000h	
25°C	
230V	
480W	
100%	
Typ.: 93,1% @ 120 V AC, Typ.: 94,9% @ 230 V AC	
4.5 W / 35 W	
3.5 mA	
Power factor typical : 0.95	
Input voltage : 230V	
Ambient temperature : 25°C	
Output power : 480W	
30...35 V DC	
yes, max. 3	
125 / 59 / 130 mm / 1230 g	
CE; cULus; cURus	
Input	Output
Screw connection	Screw connection
3 for L/N/PE	5 (+ + / - -)
0.5 / 6	0.5 / 6
0.5 / 4	0.5 / 4
26 / 12	26 / 12

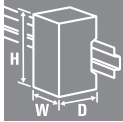
Ordering data

Type	Qty.	Order No.
PRO ECO 240W 24V 10A II	1	3025580000
Note		
The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.		

Type	Qty.	Order No.
PRO ECO 480W 24V 20A II	1	3025590000
Note		
The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.		

Type	Qty.	Order No.
PRO ECO 480W 24V 20A II	1	3025590000
Note		
The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.		

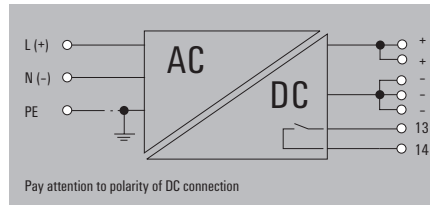
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PRO ECO 960W 24V 40A II



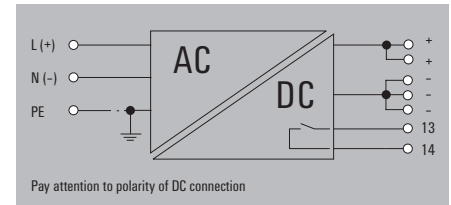
Similar to illustration



PRO ECO 960W 48V 20A II



Similar to illustration



Technical data

Input	
Rated input voltage	100...240 V AC / 120...340 V DC
Input voltage range AC	85...264 V AC (derating at 100 V AC)
Frequency range AC	45...65 Hz
DC input voltage range	110...370 V DC (derating at 120 V DC)
Current consumption in relation to the input voltage	10.78A @ 100VAC 4.28A @ 240VAC 8.7A @ 120VDC 2.75A @ 370VDC
Input fuse / Inrush current (typ.)	internal / 10 A
Output	
Rated output voltage	24 V DC
Output voltage	22...28 V (adjustable via potentiometer)
Ramp-up time / Max. residual ripple	≤ 100 ms / <50 mV _{pp} / bandwidth 20 MHz
Nominal output current for U _{nom}	40 A @ 55 °C
Continuous output current @ U _{Nominal}	25 A @ 70 °C
Capacitive load / Protection against inverse voltage	unrestricted / Yes
Signalling	
LED green	Operating voltage OK
Floating contact / Contact load	Yes / max. 30 V DC / 1 A
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	700000h
Ambient temperature	25°C
Input voltage	230V
Output power	960W
Duty cycle	100%
General data	
Degree of efficiency	Typ.: 91,6% @ 120 V AC, Typ.: 93,9% @ 230 V AC
Power loss, idling	5 W / 70 W
Earth leakage current, max.	3.5 mA
Power factor	Power factor typical : 0.95 Input voltage : 230V Ambient temperature : 25°C Output power : 960W
Protection against reverse voltages from the load	30...35 V DC
Parallel connection option	yes, max. 3
Depth x width x height / Net weight	150 / 112 / 130 mm / 3110 g
Approvals	
Approvals	CE; cULus; cURus
Connection data	
Connection system	Screw connection
Number of terminals	3 for L/N/PE
Wire cross-section, rigid min/max	0.18 / 6
Wire cross-section, flexible min/max	0.22 / 4
Wire cross-section, AWG/kcmil min/max	20 / 10
Note	

Input	
Rated input voltage	100...240 V AC / 120...340 V DC
Input voltage range AC	85...264 V AC (derating at 100 V AC)
Frequency range AC	45...65 Hz
DC input voltage range	110...370 V DC (derating at 120 V DC)
Current consumption in relation to the input voltage	10.78A @ 100VAC 4.28A @ 240VAC 8.7A @ 120VDC 2.75A @ 370VDC
Input fuse / Inrush current (typ.)	internal / 10 A
Output	
Rated output voltage	48 V DC
Output voltage	36...56 V (adjustable via potentiometer)
Ramp-up time / Max. residual ripple	≤ 100 ms / <100 mV _{ss} / 20 MHz bandwidth
Nominal output current for U _{nom}	20 A @ 55 °C
Continuous output current @ U _{Nominal}	12.5 A @ 70°C
Capacitive load / Protection against inverse voltage	unrestricted / Yes
Signalling	
LED green	Operating voltage OK
Floating contact / Contact load	Yes / max. 30 V DC / 1 A
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	1000000h
Ambient temperature	25°C
Input voltage	230V
Output power	960W
Duty cycle	100%
General data	
Degree of efficiency	Typ.: 91,7% @ 120 V AC, Typ.: 94,1% @ 230 V AC
Power loss, idling	5 W / 60 W
Earth leakage current, max.	3.5 mA
Power factor	Power factor typical : 0.95 Input voltage : 230V Ambient temperature : 25°C Output power : 960W
Protection against reverse voltages from the load	60 V DC
Parallel connection option	yes, max. 3
Depth x width x height / Net weight	150 / 112 / 130 mm / 3110 g
Approvals	
Approvals	CE; cULus; cURus
Connection data	
Connection system	Screw connection
Number of terminals	3 for L/N/PE
Wire cross-section, rigid min/max	0.18 / 6
Wire cross-section, flexible min/max	0.22 / 4
Wire cross-section, AWG/kcmil min/max	20 / 10
Note	

Input	
Rated input voltage	100...240 V AC / 120...340 V DC
Input voltage range AC	85...264 V AC (derating at 100 V AC)
Frequency range AC	45...65 Hz
DC input voltage range	110...370 V DC (derating at 120 V DC)
Current consumption in relation to the input voltage	10.69A @ 100VAC 4.3A @ 240VAC 8.79A @ 120VDC 2.78A @ 370VDC
Input fuse / Inrush current (typ.)	internal / 10 A
Output	
Rated output voltage	48 V DC
Output voltage	36...56 V (adjustable via potentiometer)
Ramp-up time / Max. residual ripple	≤ 100 ms / <100 mV _{ss} / 20 MHz bandwidth
Nominal output current for U _{nom}	20 A @ 55 °C
Continuous output current @ U _{Nominal}	12.5 A @ 70°C
Capacitive load / Protection against inverse voltage	unrestricted / Yes
Signalling	
LED green	Operating voltage OK
Floating contact / Contact load	Yes / max. 30 V DC / 1 A
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	1000000h
Ambient temperature	25°C
Input voltage	230V
Output power	960W
Duty cycle	100%
General data	
Degree of efficiency	Typ.: 91,7% @ 120 V AC, Typ.: 94,1% @ 230 V AC
Power loss, idling	5 W / 60 W
Earth leakage current, max.	3.5 mA
Power factor	Power factor typical : 0.95 Input voltage : 230V Ambient temperature : 25°C Output power : 960W
Protection against reverse voltages from the load	60 V DC
Parallel connection option	yes, max. 3
Depth x width x height / Net weight	150 / 112 / 130 mm / 3110 g
Approvals	
Approvals	CE; cULus; cURus
Connection data	
Connection system	Screw connection
Number of terminals	3 for L/N/PE
Wire cross-section, rigid min/max	0.18 / 6
Wire cross-section, flexible min/max	0.22 / 4
Wire cross-section, AWG/kcmil min/max	20 / 10
Note	

Ordering data

Type	Qty.	Order No.
PRO ECO 960W 24V 40A II	1	3025600000

Note

Type	Qty.	Order No.
PRO ECO 960W 24V 40A II	1	3025600000

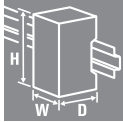
The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.

Type	Qty.	Order No.
PRO ECO 960W 48V 20A II	1	3025610000

The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.

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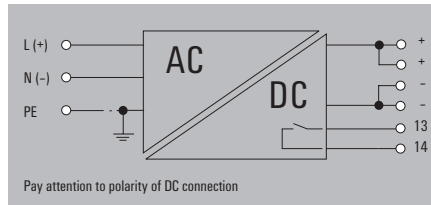


PRO ECO 72W 24V 3A II SI

SNAP IN



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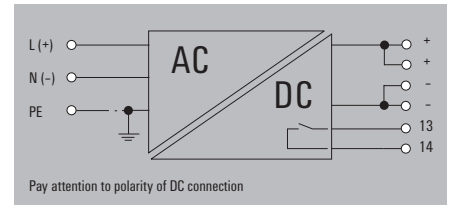


PRO ECO 120W 24V 5A II SI

SNAP IN



Similar to illustration



Technical data

Input	
Rated input voltage	
Input voltage range AC	
Frequency range AC	
DC input voltage range	
Current consumption in relation to the input voltage	
Input fuse / Inrush current (typ.)	
Output	
Rated output voltage	
Output voltage	
Ramp-up time / Max. residual ripple	
Nominal output current for U_{nom}	
Continuous output current @ $U_{Nominale}$	
Capacitive load / Protection against inverse voltage	
Signalling	
LED green	
Floating contact / Contact load	
MTBF	
According to Standard	
Operating time (hours), min.	
Ambient temperature	
Input voltage	
Output power	
Duty cycle	
General data	
Degree of efficiency	
Power loss, idling	
Earth leakage current, max.	
Power factor	
Protection against reverse voltages from the load	
Parallel connection option	
Depth x width x height / Net weight	
Approvals	
Approvals	
Connection data	
Connection system	
Number of terminals	
Wire cross-section, rigid min/max	mm ²
Wire cross-section, flexible min/max	mm ²
Wire cross-section, AWG/kcmil min/max	
Note	

100...240 V AC / 120...340 V DC	
85...264 V AC (derating at 100 V AC)	
45...65 Hz	
110...370 V DC (derating at 120 V DC)	
1.33A @ 100VAC	
0.69A @ 240VAC	
0.73A @ 120VDC	
0.26A @ 370VDC	
internal / 35 A	
24 V DC	
22...28 V (adjustable via potentiometer)	
≤ 100 ms / <50 mV _{pp} / bandwidth 20 MHz	
3 A at 55 °C	
1.875 A @ 70 °C	
unrestricted / Yes	
Operating voltage OK	
Yes / max. 30 V DC / 1 A	
SN 29500	
3300000h	
25°C	
230V	
72W	
100%	
Typ.: 83,5% @ 120 V AC, Typ.: 87,5% @ 230 V AC	
3 W / 12 W	
3.5 mA	
Power factor typical : 0.45	
Input voltage : 230V	
Ambient temperature : 25°C	
Output power : 72W	
30...35 V DC	
yes, max. 3	
100 / 32 / 130 mm / 420 g	
CE; cULus; cURus	
Input	Output
SNAP IN	SNAP IN
3 for L/N/PE	4 (+ / -)
0.5 / 2.5	0.5 / 2.5
0.5 / 4	0.5 / 4
20 / 12	20 / 12

100...240 V AC / 120...340 V DC	
85...264 V AC (derating at 100 V AC)	
45...65 Hz	
110...370 V DC (derating at 120 V DC)	
2.17A @ 100VAC	
1.08A @ 240VAC	
1.15A @ 120VDC	
0.41A @ 370VDC	
internal / 40 A	
24 V DC	
22...28 V (adjustable via potentiometer)	
≤ 100 ms / <50 mV _{pp} / bandwidth 20 MHz	
5 A @ 55 °C	
3.125 A @ 70 °C	
unrestricted / Yes	
Operating voltage OK	
Yes / max. 30 V DC / 1 A	
SN 29500	
3300000h	
25°C	
230V	
120W	
100%	
Typ.: 88,4% @ 120 V AC, Typ.: 90,1% @ 230 V AC	
1 W / 15 W	
3.5 mA	
Power factor typical : 0.5	
Input voltage : 230V	
Ambient temperature : 25°C	
Output power : 120W	
30...35 V DC	
yes, max. 3	
100 / 35 / 130 mm / 510 g	
CE; cULus; cURus	
Input	Output
SNAP IN	SNAP IN
3 for L/N/PE	4 (+ / -)
0.5 / 2.5	0.5 / 2.5
0.5 / 4	0.5 / 4
20 / 12	20 / 12

Ordering data

Type	Qty.	Order No.
PRO ECO 72W 24V 3A II SI	1	3146450000
Note		
The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.		

Type	Qty.	Order No.
PRO ECO 120W 24V 5A II SI	1	3146460000
Note		
The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.		

Type	Qty.	Order No.
PRO ECO 120W 24V 5A II SI	1	3146460000
Note		
The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.		

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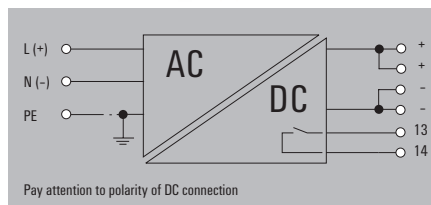
PRO ECO 240W 24V 10A II SI



SNAP IN



Similar to illustration



Technical data

Input	
Rated input voltage	100...240 V AC / 120...340 V DC
Input voltage range AC	85...264 V AC (derating at 100 V AC)
Frequency range AC	45...65 Hz
DC input voltage range	110...370 V DC (derating at 120 V DC)
Current consumption in relation to the input voltage	2.58A @ 100VAC 1.07A @ 240VAC 2.2A @ 120VDC 0.74A @ 370VDC
Input fuse / Inrush current (typ.)	internal / 10 A
Output	
Rated output voltage	24 V DC
Output voltage	22...28 V (adjustable via potentiometer)
Ramp-up time / Max. residual ripple	≤ 100 ms / <50 mV _{pp} / bandwidth 20 MHz
Nominal output current for U _{nom}	10 A @ 55 °C
Continuous output current @ U _{Nominal}	6.25 A @ 70 °C
Capacitive load / Protection against inverse voltage	unrestricted / Yes
Signalling	
LED green	Operating voltage OK
Floating contact / Contact load	Yes / max. 30 V DC / 1 A
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	3000000h
Ambient temperature	25°C
Input voltage	230V
Output power	240W
Duty cycle	100%
General data	
Degree of efficiency	Typ.: 92,7% @ 120 V AC, Typ.: 94,5% @ 230 V AC
Power loss, idling	4 W / 20 W
Earth leakage current, max.	3.5 mA
Power factor	Power factor typical : 0.95 Input voltage : 230V Ambient temperature : 25°C Output power : 240W
Protection against reverse voltages from the load	30...35 V DC
Parallel connection option	yes, max. 3
Depth x width x height / Net weight	100 / 52 / 130 mm / 695 g
Approvals	
Approvals	CE; cULus; cURus
Connection data	
Connection system	SNAP IN
Number of terminals	3 for L/N/PE
Wire cross-section, rigid min/max	0.5 / 2.5
Wire cross-section, flexible min/max	0.5 / 4
Wire cross-section, AWG/kcmil min/max	20 / 12
Note	

Input	Output
SNAP IN	SNAP IN
3 for L/N/PE	4 (++ / --)
0.5 / 2.5	0.5 / 2.5
0.5 / 4	0.5 / 4
20 / 12	20 / 12

Ordering data

Type	Qty.	Order No.
PRO ECO 240W 24V 10A II SI	1	3146470000

The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.		
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PRO ECO3 120W 24V 5A II

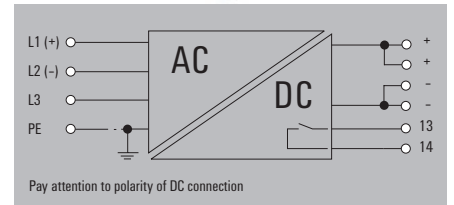
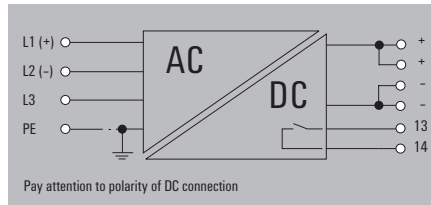
PRO ECO3 240W 24V 10A II



Similar to illustration



Similar to illustration



Technical data

Input	
Rated input voltage	3 x 400...3 x 500 V AC (wide-range input)
Input voltage range AC	3 x 320...3 x 575 V AC / 2 x 360...2 x 575 V AC
Frequency range AC	45...65 Hz
DC input voltage range	450...800 V DC
Current consumption in relation to the input voltage	0.37A @ 400V3-phase AC 0.32A @ 500V3-phase AC 0.31A @ 450VDC 0.18A @ 800VDC
Input fuse / Inrush current (typ.)	internal / 30 A
Output	
Rated output voltage	24 V DC
Output voltage	22...28 V (adjustable via potentiometer)
Ramp-up time / Max. residual ripple	≤ 100 ms / <50 mV _{pp} / bandwidth 20 MHz
Nominal output current for U _{nom}	5 A @ 55 °C
Continuous output current @ U _{Nominal}	3.125 A @ 70 °C
Capacitive load / Protection against inverse voltage	unrestricted / Yes
Signalling	
LED green	Operating voltage OK
Floating contact / Contact load	Yes / max. 30 V DC / 1 A
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	320000h
Ambient temperature	25 °C
Input voltage	400V
Output power	120W
Duty cycle	100%
General data	
Degree of efficiency	Typ.: 87,8% @ 400 V AC, Typ.: 86,6% @ 480 V AC
Power loss, idling	4.5 W / 16 W
Earth leakage current, max.	3.5 mA
Power factor	Power factor typical : 0.45 Input voltage : 400V Ambient temperature : 25 °C Output power : 120W
Protection against reverse voltages from the load	30...35 V DC
Parallel connection option	yes, max. 3
Depth x width x height / Net weight	125 / 31 / 130 mm / 570 g
Approvals	
Approvals	CE; cULus; cURus
Connection data	
Connection system	Screw connection
Number of terminals	4 for L1/L2/L3/PE
Wire cross-section, rigid min/max	0.18 / 6 mm ²
Wire cross-section, flexible min/max	0.22 / 4 mm ²
Wire cross-section, AWG/kcmil min/max	20 / 10
Note	

Input	
Rated input voltage	3 x 400...3 x 500 V AC (wide-range input)
Input voltage range AC	3 x 320...3 x 575 V AC / 2 x 360...2 x 575 V AC
Frequency range AC	45...65 Hz
DC input voltage range	450...800 V DC
Current consumption in relation to the input voltage	0.37A @ 400V3-phase AC 0.32A @ 500V3-phase AC 0.31A @ 450VDC 0.18A @ 800VDC
Input fuse / Inrush current (typ.)	internal / 30 A
Output	
Rated output voltage	24 V DC
Output voltage	22...28 V (adjustable via potentiometer)
Ramp-up time / Max. residual ripple	≤ 100 ms / <50 mV _{pp} / bandwidth 20 MHz
Nominal output current for U _{nom}	5 A @ 55 °C
Continuous output current @ U _{Nominal}	3.125 A @ 70 °C
Capacitive load / Protection against inverse voltage	unrestricted / Yes
Signalling	
LED green	Operating voltage OK
Floating contact / Contact load	Yes / max. 30 V DC / 1 A
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	320000h
Ambient temperature	25 °C
Input voltage	400V
Output power	120W
Duty cycle	100%
General data	
Degree of efficiency	Typ.: 87,8% @ 400 V AC, Typ.: 86,6% @ 480 V AC
Power loss, idling	4.5 W / 16 W
Earth leakage current, max.	3.5 mA
Power factor	Power factor typical : 0.45 Input voltage : 400V Ambient temperature : 25 °C Output power : 120W
Protection against reverse voltages from the load	30...35 V DC
Parallel connection option	yes, max. 3
Depth x width x height / Net weight	125 / 31 / 130 mm / 570 g
Approvals	
Approvals	CE; cULus; cURus
Connection data	
Connection system	Screw connection
Number of terminals	4 for L1/L2/L3/PE
Wire cross-section, rigid min/max	0.18 / 6 mm ²
Wire cross-section, flexible min/max	0.22 / 4 mm ²
Wire cross-section, AWG/kcmil min/max	20 / 10
Note	

Input	
Rated input voltage	3 x 400...3 x 500 V AC (wide-range input)
Input voltage range AC	3 x 320...3 x 575 V AC / 2 x 360...2 x 575 V AC
Frequency range AC	45...65 Hz
DC input voltage range	450...800 V DC
Current consumption in relation to the input voltage	0.71A @ 400V3-phase AC 0.61A @ 500V3-phase AC 0.58A @ 450VDC 0.34A @ 800VDC
Input fuse / Inrush current (typ.)	internal / 35 A
Output	
Rated output voltage	24 V DC
Output voltage	22...28 V (adjustable via potentiometer)
Ramp-up time / Max. residual ripple	≤ 100 ms / <50 mV _{pp} / bandwidth 20 MHz
Nominal output current for U _{nom}	10 A @ 55 °C
Continuous output current @ U _{Nominal}	6.25 A @ 70 °C
Capacitive load / Protection against inverse voltage	unrestricted / Yes
Signalling	
LED green	Operating voltage OK
Floating contact / Contact load	Yes / max. 30 V DC / 1 A
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	210000h
Ambient temperature	25 °C
Input voltage	400V
Output power	240W
Duty cycle	100%
General data	
Degree of efficiency	Typ.: 89,6% @ 400 V AC, Typ.: 89% @ 480 V AC
Power loss, idling	5.5 W / 30 W
Earth leakage current, max.	3.5 mA
Power factor	Power factor typical : 0.45 Input voltage : 400V Ambient temperature : 25 °C Output power : 240W
Protection against reverse voltages from the load	30...35 V DC
Parallel connection option	yes, max. 3
Depth x width x height / Net weight	125 / 48 / 130 mm / 770 g
Approvals	
Approvals	CE; cULus; cURus
Connection data	
Connection system	Screw connection
Number of terminals	4 for L1/L2/L3/PE
Wire cross-section, rigid min/max	0.18 / 6 mm ²
Wire cross-section, flexible min/max	0.22 / 4 mm ²
Wire cross-section, AWG/kcmil min/max	20 / 10
Note	

Ordering data

Type	Qty.	Order No.
PRO ECO3 120W 24V 5A II	1	3025620000
Note		
The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.		

Type	Qty.	Order No.
PRO ECO3 240W 24V 10A II	1	3025630000
Note		
The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.		

Type	Qty.	Order No.
PRO ECO3 240W 24V 10A II	1	3025630000
Note		
The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.		

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PRO ECO3 480W 24V 20A II

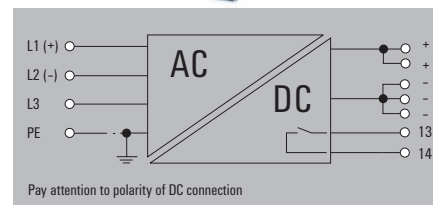
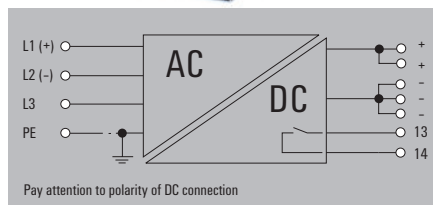
PRO ECO3 480W 48V 10A II



Similar to illustration



Similar to illustration



Technical data

Input	
Rated input voltage	3 x 400...3 x 500 V AC (wide-range input)
Input voltage range AC	3 x 320...3 x 575 V AC / 2 x 360...2 x 575 V AC
Frequency range AC	45...65 Hz
DC input voltage range	450...800 V DC
Current consumption in relation to the input voltage	0.8A @ 400V3-phase AC 0.65A @ 500V3-phase AC 1.15A @ 450VDC 0.65A @ 800VDC
Input fuse / Inrush current (typ.)	internal / 7 A
Output	
Rated output voltage	24 V DC
Output voltage	22...28 V (adjustable via potentiometer)
Ramp-up time / Max. residual ripple	≤ 100 ms / <50 mV _{pp} / bandwidth 20 MHz
Nominal output current for U _{nom}	20 A @ 55 °C
Continuous output current @ U _{Nominal}	12.5 A @ 70°C
Capacitive load / Protection against inverse voltage	unrestricted / Yes
Signalling	
LED green	Operating voltage OK
Floating contact / Contact load	Yes / max. 30 V DC / 1 A
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	1700000h
Ambient temperature	25°C
Input voltage	400V
Output power	480W
Duty cycle	100%
General data	
Degree of efficiency	Typ.: 92,6% @ 400 V AC, Typ.: 92,2% @ 480 V AC
Power loss, idling	4 W / 40 W
Earth leakage current, max.	3.5 mA
Power factor	Power factor typical : 0.93 Input voltage : 400V Ambient temperature : 25°C Output power : 480W
Protection against reverse voltages from the load	30...35 V DC
Parallel connection option	yes, max. 3
Depth x width x height / Net weight	125 / 60 / 130 mm / 1165 g
Approvals	
Approvals	CE; cULus; cURus
Connection data	
Connection system	Screw connection
Number of terminals	4 for L1/L2/L3/PE
Wire cross-section, rigid min/max	0.18 / 6
Wire cross-section, flexible min/max	0.22 / 4
Wire cross-section, AWG/kcmil min/max	20 / 10
Note	

Input	
Rated input voltage	3 x 400...3 x 500 V AC (wide-range input)
Input voltage range AC	3 x 320...3 x 575 V AC / 2 x 360...2 x 575 V AC
Frequency range AC	45...65 Hz
DC input voltage range	450...800 V DC
Current consumption in relation to the input voltage	0.8A @ 400V3-phase AC 0.65A @ 500V3-phase AC 1.15A @ 450VDC 0.65A @ 800VDC
Input fuse / Inrush current (typ.)	internal / 7 A
Output	
Rated output voltage	48 V DC
Output voltage	36...56 V (adjustable via potentiometer)
Ramp-up time / Max. residual ripple	≤ 100 ms / <100 mV _{ss} / 20 MHz bandwidth
Nominal output current for U _{nom}	10 A @ 55 °C
Continuous output current @ U _{Nominal}	6.25 A @ 70°C
Capacitive load / Protection against inverse voltage	unrestricted / Yes
Signalling	
LED green	Operating voltage OK
Floating contact / Contact load	Yes / max. 30 V DC / 1 A
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	2000000h
Ambient temperature	25°C
Input voltage	400V
Output power	480W
Duty cycle	100%
General data	
Degree of efficiency	Typ.: 93,7% @ 400 V AC, Typ.: 93,2% @ 480 V AC
Power loss, idling	4 W / 35 W
Earth leakage current, max.	3.5 mA
Power factor	Power factor typical : 0.94 Input voltage : 400V Ambient temperature : 25°C Output power : 480W
Protection against reverse voltages from the load	60 V DC
Parallel connection option	yes, max. 3
Depth x width x height / Net weight	125 / 60 / 130 mm / 1165 g
Approvals	
Approvals	CE; cULus; cURus
Connection data	
Connection system	Screw connection
Number of terminals	4 for L1/L2/L3/PE
Wire cross-section, rigid min/max	0.18 / 6
Wire cross-section, flexible min/max	0.22 / 4
Wire cross-section, AWG/kcmil min/max	20 / 10
Note	

Input	
Rated input voltage	3 x 400...3 x 500 V AC (wide-range input)
Input voltage range AC	3 x 320...3 x 575 V AC / 2 x 360...2 x 575 V AC
Frequency range AC	45...65 Hz
DC input voltage range	450...800 V DC
Current consumption in relation to the input voltage	0.79A @ 400V3-phase AC 0.64A @ 500V3-phase AC 1.13A @ 450VDC 0.65A @ 800VDC
Input fuse / Inrush current (typ.)	internal / 7 A
Output	
Rated output voltage	48 V DC
Output voltage	36...56 V (adjustable via potentiometer)
Ramp-up time / Max. residual ripple	≤ 100 ms / <100 mV _{ss} / 20 MHz bandwidth
Nominal output current for U _{nom}	10 A @ 55 °C
Continuous output current @ U _{Nominal}	6.25 A @ 70°C
Capacitive load / Protection against inverse voltage	unrestricted / Yes
Signalling	
LED green	Operating voltage OK
Floating contact / Contact load	Yes / max. 30 V DC / 1 A
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	2000000h
Ambient temperature	25°C
Input voltage	400V
Output power	480W
Duty cycle	100%
General data	
Degree of efficiency	Typ.: 93,7% @ 400 V AC, Typ.: 93,2% @ 480 V AC
Power loss, idling	4 W / 35 W
Earth leakage current, max.	3.5 mA
Power factor	Power factor typical : 0.94 Input voltage : 400V Ambient temperature : 25°C Output power : 480W
Protection against reverse voltages from the load	60 V DC
Parallel connection option	yes, max. 3
Depth x width x height / Net weight	125 / 60 / 130 mm / 1165 g
Approvals	
Approvals	CE; cULus; cURus
Connection data	
Connection system	Screw connection
Number of terminals	4 for L1/L2/L3/PE
Wire cross-section, rigid min/max	0.18 / 6
Wire cross-section, flexible min/max	0.22 / 4
Wire cross-section, AWG/kcmil min/max	20 / 10
Note	

Ordering data

Type	Qty.	Order No.
PRO ECO3 480W 24V 20A II	1	3025640000
Note		
The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.		

Type	Qty.	Order No.
PRO ECO3 480W 48V 10A II	1	3025650000
Note		
The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.		

Type	Qty.	Order No.
PRO ECO3 480W 48V 10A II	1	3025650000
Note		
The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.		

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PRO ECO3 960W 24V 40A II

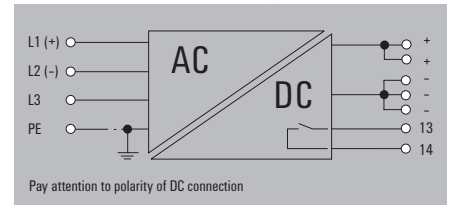
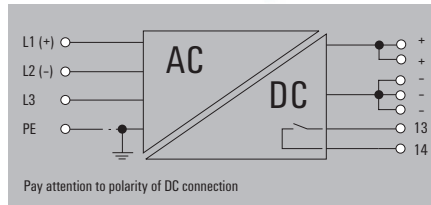
PRO ECO3 960W 48V 20A II



Similar to illustration



Similar to illustration



Technical data

Input	
Rated input voltage	3 x 400...3 x 500 V AC (wide-range input)
Input voltage range AC	3 x 320...3 x 575 V AC / 2 x 360...2 x 575 V AC
Frequency range AC	45...65 Hz
DC input voltage range	450...800 V DC
Current consumption in relation to the input voltage	1.59A @ 400V3-phase AC 1.29A @ 500V3-phase AC 2.28A @ 450VDC 1.29A @ 800VDC
Input fuse / Inrush current (typ.)	internal / 12 A
Output	
Rated output voltage	24 V DC
Output voltage	22...28 V (adjustable via potentiometer)
Ramp-up time / Max. residual ripple	≤ 100 ms / <50 mV _{pp} / bandwidth 20 MHz
Nominal output current for U _{nom}	40 A @ 55 °C
Continuous output current @ U _{Nominal}	25 A @ 70 °C
Capacitive load / Protection against inverse voltage	unrestricted / Yes
Signalling	
LED green	Operating voltage OK
Floating contact / Contact load	Yes / max. 30 V DC / 1 A
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	1500000h
Ambient temperature	25 °C
Input voltage	400V
Output power	960W
Duty cycle	100%
General data	
Degree of efficiency	Typ.: 92,6% @ 400 V AC, Typ.: 92,4% @ 480 V AC
Power loss, idling	5 W / 82 W
Earth leakage current, max.	3.5 mA
Power factor	Power factor typical : 0.94 Input voltage : 400V Ambient temperature : 25 °C Output power : 960W
Protection against reverse voltages from the load	30...35 V DC
Parallel connection option	yes, max. 3
Depth x width x height / Net weight	150 / 110 / 130 mm / 2490 g
Approvals	
Approvals	CE; cULus; cURus
Connection data	
Connection system	Screw connection
Number of terminals	5 (+ + / - -)
Wire cross-section, rigid min/max	0.18 / 6
Wire cross-section, flexible min/max	0.22 / 4
Wire cross-section, AWG/kcmil min/max	20 / 10
Note	

Input	
Rated input voltage	3 x 400...3 x 500 V AC (wide-range input)
Input voltage range AC	3 x 320...3 x 575 V AC / 2 x 360...2 x 575 V AC
Frequency range AC	45...65 Hz
DC input voltage range	450...800 V DC
Current consumption in relation to the input voltage	1.59A @ 400V3-phase AC 1.29A @ 500V3-phase AC 2.28A @ 450VDC 1.29A @ 800VDC
Input fuse / Inrush current (typ.)	internal / 12 A
Output	
Rated output voltage	48 V DC
Output voltage	36...56 V (adjustable via potentiometer)
Ramp-up time / Max. residual ripple	≤ 100 ms / <100 mV _{pp} / 20 MHz bandwidth
Nominal output current for U _{nom}	20 A @ 55 °C
Continuous output current @ U _{Nominal}	12.5 A @ 70 °C
Capacitive load / Protection against inverse voltage	unrestricted / Yes
Signalling	
LED green	Operating voltage OK
Floating contact / Contact load	Yes / max. 30 V DC / 1 A
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	1200000h
Ambient temperature	25 °C
Input voltage	400V
Output power	960W
Duty cycle	100%
General data	
Degree of efficiency	Typ.: 94,1% @ 400 V AC, Typ.: 93,8% @ 480 V AC
Power loss, idling	5 W / 65 W
Earth leakage current, max.	3.5 mA
Power factor	Power factor typical : 0.94 Input voltage : 400V Ambient temperature : 25 °C Output power : 960W
Protection against reverse voltages from the load	60 V DC
Parallel connection option	yes, max. 3
Depth x width x height / Net weight	150 / 110 / 130 mm / 2540 g
Approvals	
Approvals	CE; cULus; cURus
Connection data	
Connection system	Screw connection
Number of terminals	5 (+ + / - -)
Wire cross-section, rigid min/max	0.18 / 6
Wire cross-section, flexible min/max	0.22 / 4
Wire cross-section, AWG/kcmil min/max	20 / 10
Note	

Input	
Rated input voltage	3 x 400...3 x 500 V AC (wide-range input)
Input voltage range AC	3 x 320...3 x 575 V AC / 2 x 360...2 x 575 V AC
Frequency range AC	45...65 Hz
DC input voltage range	450...800 V DC
Current consumption in relation to the input voltage	1.55A @ 400V3-phase AC 1.26A @ 500V3-phase AC 2.26A @ 450VDC 1.28A @ 800VDC
Input fuse / Inrush current (typ.)	internal / 12 A
Output	
Rated output voltage	48 V DC
Output voltage	36...56 V (adjustable via potentiometer)
Ramp-up time / Max. residual ripple	≤ 100 ms / <100 mV _{pp} / 20 MHz bandwidth
Nominal output current for U _{nom}	20 A @ 55 °C
Continuous output current @ U _{Nominal}	12.5 A @ 70 °C
Capacitive load / Protection against inverse voltage	unrestricted / Yes
Signalling	
LED green	Operating voltage OK
Floating contact / Contact load	Yes / max. 30 V DC / 1 A
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	1200000h
Ambient temperature	25 °C
Input voltage	400V
Output power	960W
Duty cycle	100%
General data	
Degree of efficiency	Typ.: 94,1% @ 400 V AC, Typ.: 93,8% @ 480 V AC
Power loss, idling	5 W / 65 W
Earth leakage current, max.	3.5 mA
Power factor	Power factor typical : 0.94 Input voltage : 400V Ambient temperature : 25 °C Output power : 960W
Protection against reverse voltages from the load	60 V DC
Parallel connection option	yes, max. 3
Depth x width x height / Net weight	150 / 110 / 130 mm / 2540 g
Approvals	
Approvals	CE; cULus; cURus
Connection data	
Connection system	Screw connection
Number of terminals	5 (+ + / - -)
Wire cross-section, rigid min/max	0.18 / 6
Wire cross-section, flexible min/max	0.22 / 4
Wire cross-section, AWG/kcmil min/max	20 / 10
Note	

Ordering data

Type	Qty.	Order No.
PRO ECO3 960W 24V 40A II	1	3025660000
Note		
The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.		

Type	Qty.	Order No.
PRO ECO3 960W 48V 20A II	1	3025670000
Note		
The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.		

Type	Qty.	Order No.
PRO ECO3 960W 48V 20A II	1	3025670000
Note		
The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.		

Small metal foot



Type	Order No.
MTA 30 MF	1251320000

Large metal foot



Type	Order No.
MTA 45 MF	1251310000

Small plastic foot



Type	Order No.
MTA 30 BK	1168970000

Large plastic foot



Type	Order No.
MTA 45 BK	1962250000

Small wall mounting



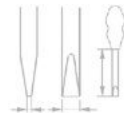
Type	Order No.
CP A WALLADAPTER 30 MM	1461870000

Large wall mounting



Type	Order No.
CP A WALLADAPTER 45 MM	1461850000

Small screwdriver



Type	Size/AF	a	b	c	Order No.
SDIK PH 1 X 80				80	2749890000
SDIS 0.5X3.0X100		0.5	3	100	2749800000
SDIS 0.6X3.5X100		0.6	3.5	100	2749810000

Markers



Type	Colour	Qty.	Order No.
SM 18/9.5 K MC NE WS	white	200	1248580000

End bracket

For DIN rail TS 35



Polyamide with fibre glass, screwable	Colour	Torque	Qty.	Order No.
WEW 35/1 SW	black	1.2 Nm	50	1162600000

Basic functionality at the highest level

PRObas – highly efficient, reliable, affordable

A

A safe and stable DC supply voltage is at the heart of many automation applications. The single-phase switched-mode power supply units of the PRObas series were developed to meet high mechanical engineering standards in a cost-effective way. The expertise behind the successful PROeco, PROMax and PROtop series has been incorporated into this attractive product series.

High performance, compact design and a good price-performance ratio are the main characteristics of the new PRObas power supplies. The product family comprises 12 variants with 5V, 12V, 24V or 48V DC output voltage and a wide-range input.

Due to compatibility with our electronic fuses, DC UPS and diode modules, they are also suitable for setting up power management systems.

Your benefits at a glance

- High cost efficiency with strong performance and compact design
- Reliable start-up at -40°C for extreme external conditions
- Universal use due to wide range of variants and international approvals



Flexible mounting

PRObas switching power supply units can either be snapped onto DIN rails or screwed directly to the cabinet wall.

Space- and energy-saving

With a max. width of 23 to 59 mm, PRObas switching power supply units fit into even the smallest control cabinets. Their high efficiency of up to 95 % and an extremely low idle power loss ensure maximum efficiency.

**Robust and reliable**

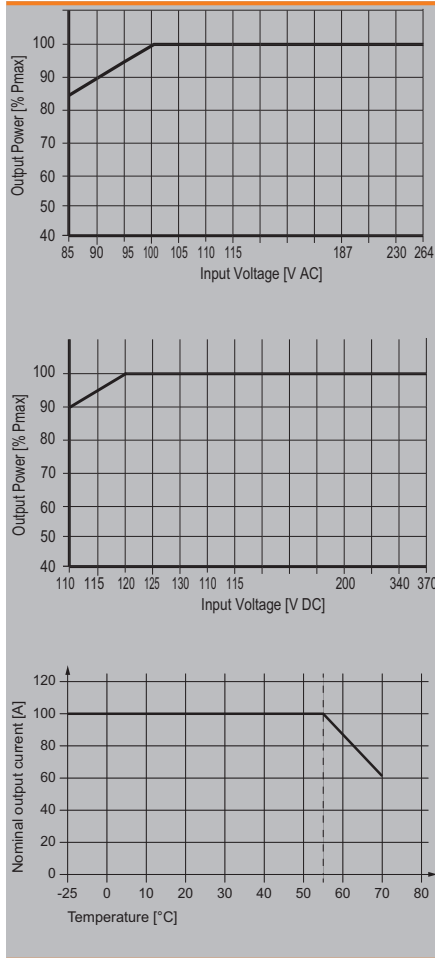
PRObas switching power supplies operate reliably in the temperature range from $-25\text{ }^{\circ}\text{C}$ to $+70\text{ }^{\circ}\text{C}$ and have an MTBF value of over one million hours.

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Derating curve



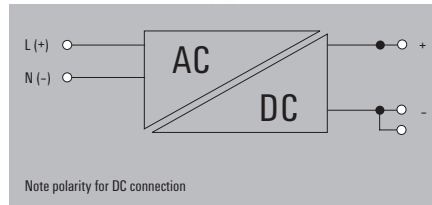
Technical data

General data	
Ambient temperature (operational)	-25 °C...70 °C
Storage temperature	-40 °C...85 °C
Humidity	5...95 % rel. humidity, no condensation
Protection degree	IP20
Protection class	II
Pollution degree	2
Insulation voltage, input/output	3.5 kV
Parallel connection option	yes, max. 3
Housing version	Plastic, protective insulation
Mounting position, installation notice	Horizontal on TS35 mounting rail. 50 mm of clearance at top & bottom for air circ. Can mount side by side with no space in between., Horizontal on DIN rail TS 35, top and bottom 50 mm clearance for free air flow, 10 mm clearance to neighbouring subassemblies., 50 mm clearance at top and bottom for free air circulation, mountable side by side without clearance, On TS 35 mounting rail, 50 mm clearance above and below for free air supply.
Short-circuit protection	Yes
Overload protection	Yes
Protection against over-heating	Yes
EMC / shock / vibration	
Noise emission in accordance with EN55032	Class B
Resistance to vibration / Shock	0.7 g according to EN 50178 / 30 g in all directions
Electrical safety (applied standards)	
Safety extra-low voltage	SELV acc. to IEC 61010-1, PELV acc. to IEC 61010-2-201
Safety transformers for switch-mode power supplies	According to EN 61558-2-16

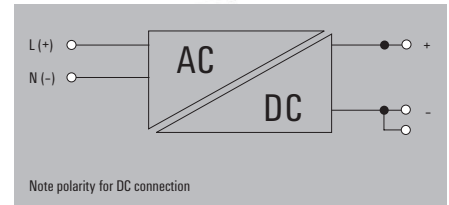
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PRO BAS 30W 24V 1.3A

PRO BAS 30W 12V 2.6A



Note polarity for DC connection



Note polarity for DC connection

Technical data

Input	
Rated input voltage	110...240 V AC / 120...340 V DC
Input voltage range AC	85...264 V AC (derating at 100 V AC)
Frequency range AC	45...65 Hz
DC input voltage range	110...370 V DC (derating at <120 V DC)
Current consumption in relation to the input voltage	0.33A @ 230VAC; 0.55A @ 115VAC; 0.29A @ 120V
Input fuse (internal) / Inrush current	Yes / 40 A @ 230 V AC, 25 °C
Output	
Rated output voltage	24 V DC
Output voltage	22...28 V adjustable via potentiometer
Residual ripple, breaking spikes	≤ 50 mVpp @ full load
Nominal output current for U_{nom}	1.3 A @ 55 °C
Continuous output current @ $U_{Nominal}$	1.3 A @ 55 °C, 0.8 A @ 70 °C
Capacitive load	5.5mF
Protection against inverse voltage	Yes
Signalling	
Status indication	Green LED
Floating contact / Contact load	No /
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	950000h
Ambient temperature	40°C
Input voltage	230V
Output power	30W
Duty cycle	100%
General data	
Degree of efficiency	89% @ 230 V AC
Power loss, idling / Power loss, nominal load	0.5 W / 3.3 W
Earth leakage current, max.	
Power factor (approx.)	0.45 @ 120 V AC, 0.47 @ 230 V AC
AC failure bridging time @ I_{nom}	> 80 ms @ 230 V AC / > 20 ms @ 115 V AC
Parallel connection option	yes, max. 3
Depth x width x height / Net weight	85 / 23 / 90 mm / 163 g
Approvals	
Approvals	cCSAus; CE; cULus
Connection data	
Connection system	Screw connection
Number of terminals	2 (L,N)
Wire cross-section, rigid min/max	0.5 / 6 mm ²
Wire cross-section, flexible min/max	0.5 / 6 mm ²
Wire cross-section, AWG/kcmil min/max	26 / 12
Tightening torque range	/
Note	

Input		Output	
Connection system	Screw connection	Connection system	Screw connection
Number of terminals	2 (L,N)	Number of terminals	3 (+ / -)
Wire cross-section, rigid min/max	0.5 / 6 mm ²	Wire cross-section, rigid min/max	0.5 / 6 mm ²
Wire cross-section, flexible min/max	0.5 / 6 mm ²	Wire cross-section, flexible min/max	0.5 / 6 mm ²
Wire cross-section, AWG/kcmil min/max	26 / 12	Wire cross-section, AWG/kcmil min/max	26 / 12
Tightening torque range	/	Tightening torque range	0.5 / 0.6

Input		Output	
Connection system	Screw connection	Connection system	Screw connection
Number of terminals	2 (L,N)	Number of terminals	3 (+ / -)
Wire cross-section, rigid min/max	0.5 / 6 mm ²	Wire cross-section, rigid min/max	0.5 / 6 mm ²
Wire cross-section, flexible min/max	0.5 / 6 mm ²	Wire cross-section, flexible min/max	0.5 / 6 mm ²
Wire cross-section, AWG/kcmil min/max	26 / 12	Wire cross-section, AWG/kcmil min/max	26 / 12
Tightening torque range	/	Tightening torque range	0.5 / 0.6

Ordering data

Type	Qty.	Order No.
PRO BAS 30W 24V 1.3A	1	2838500000

Type	Qty.	Order No.
PRO BAS 30W 24V 1.3A	1	2838500000

Type	Qty.	Order No.
PRO BAS 30W 12V 2.6A	1	2838510000

Note

Current technical data at eshop.weidmueller.com

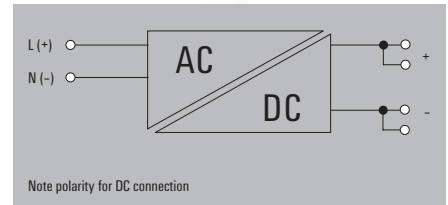
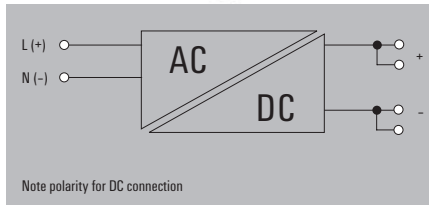
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PRO BAS 30W 5V 6A

PRO BAS 60W 24V 2.5A



Technical data

Input	
Rated input voltage	110...240 V AC / 120...340 V DC
Input voltage range AC	85...264 V AC (derating at 100 V AC)
Frequency range AC	45...65 Hz
DC input voltage range	110...370 V DC (derating at <120 V DC)
Current consumption in relation to the input voltage	0.34A @ 230VAC; 0.56A @ 115VAC; 0.28A @ 120V
Input fuse (internal) / Inrush current	Yes / 40 A @ 230 V AC, 25 °C
Output	
Rated output voltage	5 V DC
Output voltage	3...8 V adjustable via potentiometer
Residual ripple, breaking spikes	≤ 50 mVpp @ full load
Nominal output current for U _{nom}	6 A @ 55 °C
Continuous output current @ U _{Nominal}	6 A @ 55 °C, 3.75 A @ 70 °C
Capacitive load	5.5mF
Protection against inverse voltage	Yes
Signalling	
Status indication	Green LED
Floating contact / Contact load	No /
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	1200000h
Ambient temperature	40°C
Input voltage	230V
Output power	30W
Duty cycle	100%
General data	
Degree of efficiency	87% @ 230 V AC
Power loss, idling / Power loss, nominal load	0.5 W / 3.9 W
Earth leakage current, max.	0.45 @ 120 V AC, 0.45 @ 230 V AC
Power factor (approx.)	> 80 ms @ 230 V AC / > 20 ms @ 115 V AC
AC failure bridging time @ I _{nom}	yes, max. 3
Parallel connection option	85 / 36 / 90 mm / 245 g
Depth x width x height / Net weight	
Approvals	
Approvals	cCSAus; CE
Connection data	
Connection system	Screw connection
Number of terminals	2 (L,N)
Wire cross-section, rigid min/max	0.5 / 6 mm ²
Wire cross-section, flexible min/max	0.5 / 6 mm ²
Wire cross-section, AWG/kcmil min/max	26 / 12
Tightening torque range	/
Note	

Input		Output	
Screw connection	Screw connection	Screw connection	Screw connection
2 (L,N)	4 (++) / (-)	2 (L,N)	4 (++) / (-)
0.5 / 6	0.5 / 6	0.5 / 6	0.5 / 6
0.5 / 6	0.5 / 6	0.5 / 6	0.5 / 6
26 / 12	26 / 12	26 / 12	26 / 12
/	0.5 / 0.6	/	0.5 / 0.6

Input		Output	
Screw connection	Screw connection	Screw connection	Screw connection
2 (L,N)	4 (++) / (-)	2 (L,N)	4 (++) / (-)
0.5 / 6	0.5 / 6	0.5 / 6	0.5 / 6
0.5 / 6	0.5 / 6	0.5 / 6	0.5 / 6
26 / 12	26 / 12	26 / 12	26 / 12
/	0.5 / 0.6	/	0.5 / 0.6

Ordering data

Type	Qty.	Order No.
PRO BAS 30W 5V 6A	1	2838400000

Type	Qty.	Order No.
PRO BAS 30W 5V 6A	1	2838400000

Type	Qty.	Order No.
PRO BAS 60W 24V 2.5A	1	2838410000

Note

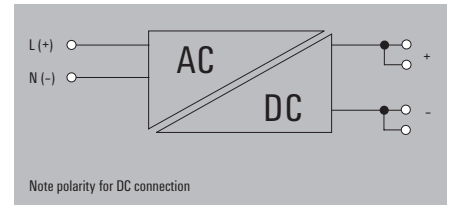
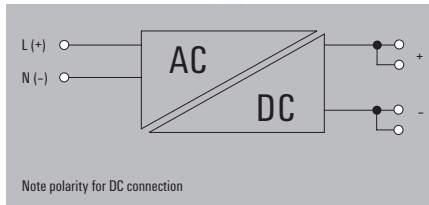
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connectPower PRObas

PRO BAS 60W 12V 5A

PRO BAS 90W 24V 3.8A



Technical data

Input	
Rated input voltage	110...240 V AC / 120...340 V DC
Input voltage range AC	85...264 V AC (derating at 100 V AC)
Frequency range AC	45...65 Hz
DC input voltage range	110...370 V DC (derating at <120 V DC)
Current consumption in relation to the input voltage	0.62A @ 230VAC; 1.04A @ 115VAC; 0.55A @ 120V
Input fuse (internal) / Inrush current	Yes / 40 A @ 230 V AC, 25 °C
Output	
Rated output voltage	12 V DC
Output voltage	9...16 V adjustable via potentiometer
Residual ripple, breaking spikes	≤ 50 mVpp @ full load
Nominal output current for U_{nom}	5 A @ 55 °C
Continuous output current @ $U_{Nominal}$	5 A @ 55 °C, 3.125 A @ 70°C
Capacitive load	5,5mF
Protection against inverse voltage	Yes
Signalling	
Status indication	Green LED
Floating contact / Contact load	No /
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	850000h
Ambient temperature	40°C
Input voltage	230V
Output power	60W
Duty cycle	100%
General data	
Degree of efficiency	90% @ 230 V AC
Power loss, idling / Power loss, nominal load	0.5 W / 6 W
Earth leakage current, max.	
Power factor (approx.)	0.45 @ 120 V AC, 0.47 @ 230 V AC
AC failure bridging time @ I_{nom}	> 80 ms @ 230 V AC / > 20 ms @ 115 V AC
Parallel connection option	yes, max. 3
Depth x width x height / Net weight	85 / 36 / 90 mm / 259 g
Approvals	
Approvals	cCSAus; CE; cULus
Connection data	
Connection system	Screw connection
Number of terminals	2 (L,N)
Wire cross-section, rigid min/max	0.5 / 6 mm ²
Wire cross-section, flexible min/max	0.5 / 6 mm ²
Wire cross-section, AWG/kcmil min/max	26 / 12
Tightening torque range	/
Note	

Input		Output	
Rated input voltage	110...240 V AC / 120...340 V DC	Rated output voltage	12 V DC
Input voltage range AC	85...264 V AC (derating at 100 V AC)	Output voltage	9...16 V adjustable via potentiometer
Frequency range AC	45...65 Hz	Residual ripple, breaking spikes	≤ 50 mVpp @ full load
DC input voltage range	110...370 V DC (derating at <120 V DC)	Nominal output current for U_{nom}	5 A @ 55 °C
Current consumption in relation to the input voltage	0.62A @ 230VAC; 1.04A @ 115VAC; 0.55A @ 120V	Continuous output current @ $U_{Nominal}$	5 A @ 55 °C, 3.125 A @ 70°C
Input fuse (internal) / Inrush current	Yes / 40 A @ 230 V AC, 25 °C	Capacitive load	5,5mF
		Protection against inverse voltage	Yes
Signalling			
Status indication	Green LED	Floating contact / Contact load	No /
Floating contact / Contact load	No /		
MTBF			
According to Standard	SN 29500	Operating time (hours), min.	850000h
Operating time (hours), min.	850000h	Ambient temperature	40°C
Ambient temperature	40°C	Input voltage	230V
Input voltage	230V	Output power	60W
Output power	60W	Duty cycle	100%
Duty cycle	100%		
General data			
Degree of efficiency	90% @ 230 V AC	Degree of efficiency	89,4% @ 230 V AC
Power loss, idling / Power loss, nominal load	0.5 W / 6 W	Power loss, idling / Power loss, nominal load	0.5 W / 9.5 W
Earth leakage current, max.		Earth leakage current, max.	
Power factor (approx.)	0.45 @ 120 V AC, 0.47 @ 230 V AC	Power factor (approx.)	0.45 @ 120 V AC, 0.47 @ 230 V AC
AC failure bridging time @ I_{nom}	> 80 ms @ 230 V AC / > 20 ms @ 115 V AC	AC failure bridging time @ I_{nom}	> 80 ms @ 230 V AC / > 20 ms @ 115 V AC
Parallel connection option	yes, max. 3	Parallel connection option	yes, max. 3
Depth x width x height / Net weight	85 / 36 / 90 mm / 259 g	Depth x width x height / Net weight	85 / 47 / 90 mm / 376 g
Approvals			
Approvals	cCSAus; CE; cULus	Approvals	cCSAus; CE; cULus
Connection data			
Connection system	Screw connection	Connection system	Screw connection
Number of terminals	2 (L,N)	Number of terminals	4 (++, --)
Wire cross-section, rigid min/max	0.5 / 6 mm ²	Wire cross-section, rigid min/max	0.5 / 6 mm ²
Wire cross-section, flexible min/max	0.5 / 6 mm ²	Wire cross-section, flexible min/max	0.5 / 6 mm ²
Wire cross-section, AWG/kcmil min/max	26 / 12	Wire cross-section, AWG/kcmil min/max	26 / 12
Tightening torque range	/	Tightening torque range	0.5 / 0.6
Note			

Input		Output	
Rated input voltage	110...240 V AC / 120...340 V DC	Rated output voltage	24 V DC
Input voltage range AC	85...264 V AC (derating at 100 V AC)	Output voltage	22...25 V adjustable via potentiometer
Frequency range AC	45...65 Hz	Residual ripple, breaking spikes	≤ 50 mVpp @ full load
DC input voltage range	110...370 V DC (derating at <120 V DC)	Nominal output current for U_{nom}	3.8 A @ 55 °C
Current consumption in relation to the input voltage	0.89A @ 230VAC; 1.54A @ 115VAC; 0.83A @ 120V	Continuous output current @ $U_{Nominal}$	3.8 A @ 55 °C, 2.375 A @ 70°C
Input fuse (internal) / Inrush current	Yes / 40 A @ 230 V AC, 25 °C	Capacitive load	5.5mF
		Protection against inverse voltage	Yes
Signalling			
Status indication	Green LED	Floating contact / Contact load	No /
Floating contact / Contact load	No /		
MTBF			
According to Standard	SN 29500	Operating time (hours), min.	750000h
Operating time (hours), min.	750000h	Ambient temperature	40°C
Ambient temperature	40°C	Input voltage	230V
Input voltage	230V	Output power	90W
Output power	90W	Duty cycle	100%
Duty cycle	100%		
General data			
Degree of efficiency	90% @ 230 V AC	Degree of efficiency	89,4% @ 230 V AC
Power loss, idling / Power loss, nominal load	0.5 W / 6 W	Power loss, idling / Power loss, nominal load	0.5 W / 9.5 W
Earth leakage current, max.		Earth leakage current, max.	
Power factor (approx.)	0.45 @ 120 V AC, 0.47 @ 230 V AC	Power factor (approx.)	0.45 @ 120 V AC, 0.47 @ 230 V AC
AC failure bridging time @ I_{nom}	> 80 ms @ 230 V AC / > 20 ms @ 115 V AC	AC failure bridging time @ I_{nom}	> 80 ms @ 230 V AC / > 20 ms @ 115 V AC
Parallel connection option	yes, max. 3	Parallel connection option	yes, max. 3
Depth x width x height / Net weight	85 / 36 / 90 mm / 259 g	Depth x width x height / Net weight	85 / 47 / 90 mm / 376 g
Approvals			
Approvals	cCSAus; CE; cULus	Approvals	cCSAus; CE; cULus
Connection data			
Connection system	Screw connection	Connection system	Screw connection
Number of terminals	2 (L,N)	Number of terminals	4 (++, --)
Wire cross-section, rigid min/max	0.5 / 6 mm ²	Wire cross-section, rigid min/max	0.5 / 6 mm ²
Wire cross-section, flexible min/max	0.5 / 6 mm ²	Wire cross-section, flexible min/max	0.5 / 6 mm ²
Wire cross-section, AWG/kcmil min/max	26 / 12	Wire cross-section, AWG/kcmil min/max	26 / 12
Tightening torque range	/	Tightening torque range	0.5 / 0.6
Note			

Ordering data

Type	Qty.	Order No.
PRO BAS 60W 12V 5A	1	2838420000
Note		
Current technical data at eshop.weidmueller.com		

Type	Qty.	Order No.
PRO BAS 90W 24V 3.8A	1	2838430000
Note		
Current technical data at eshop.weidmueller.com		

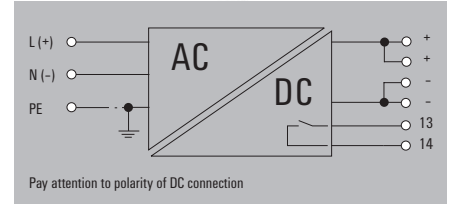
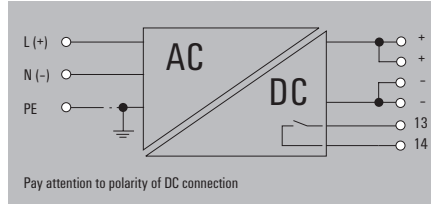
Type	Qty.	Order No.
PRO BAS 90W 24V 3.8A	1	2838430000
Note		
Current technical data at eshop.weidmueller.com		

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PRO BAS 120W 24V 5A

PRO BAS 120W 12V 10A



Technical data

Input	
Rated input voltage	110...240 V AC / 120...340 V DC
Input voltage range AC	85...264 V AC (derating at 100 V AC)
Frequency range AC	45...65 Hz
DC input voltage range	110...370 V DC (derating at <120 V DC)
Current consumption in relation to the input voltage	1.13A @ 230VAC; 2.02A @ 115VAC; 1.11A @ 120V
Input fuse (internal) / Inrush current	Yes / 40 A @ 230 V AC, 25 °C
Output	
Rated output voltage	24 V DC
Output voltage	22...28 V adjustable via potentiometer
Residual ripple, breaking spikes	≤ 50 mVpp @ full load
Nominal output current for U _{nom}	5 A @ 55 °C
Continuous output current @ U _{Nominal}	5 A @ 55 °C, 3.125 A @ 70°C
Capacitive load	5.5mF
Protection against inverse voltage	Yes
Signalling	
Status indication	Green LED
Floating contact / Contact load	Yes / max. 30 V DC / 1 A
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	600000h
Ambient temperature	40°C
Input voltage	230V
Output power	120W
Duty cycle	100%
General data	
Degree of efficiency	90% @ 230 V AC
Power loss, idling / Power loss, nominal load	1.5 W / 14.5 W
Earth leakage current, max.	3.5 mA
Power factor (approx.)	0.5 @ 120 V AC, 0.51 @ 230 V AC
AC failure bridging time @ I _{nom}	> 80 ms @ 230 V AC / > 20 ms @ 115 V AC
Parallel connection option	yes, max. 3
Depth x width x height / Net weight	100 / 40 / 130 mm / 490 g
Approvals	
Approvals	cCSAus; CE; cULus
Connection data	
Connection system	Screw connection
Number of terminals	3 for L/N/PE
Wire cross-section, rigid min/max	0.5 / 6 mm ²
Wire cross-section, flexible min/max	0.5 / 6 mm ²
Wire cross-section, AWG/kcmil min/max	26 / 12
Tightening torque range	/
Note	

Input	
Rated input voltage	110...240 V AC / 120...340 V DC
Input voltage range AC	85...264 V AC (derating at 100 V AC)
Frequency range AC	45...65 Hz
DC input voltage range	110...370 V DC (derating at <120 V DC)
Current consumption in relation to the input voltage	1.13A @ 230VAC; 2.02A @ 115VAC; 1.11A @ 120V
Input fuse (internal) / Inrush current	Yes / 40 A @ 230 V AC, 25 °C
Output	
Rated output voltage	24 V DC
Output voltage	22...28 V adjustable via potentiometer
Residual ripple, breaking spikes	≤ 50 mVpp @ full load
Nominal output current for U _{nom}	5 A @ 55 °C
Continuous output current @ U _{Nominal}	5 A @ 55 °C, 3.125 A @ 70°C
Capacitive load	5.5mF
Protection against inverse voltage	Yes
Signalling	
Status indication	Green LED
Floating contact / Contact load	Yes / max. 30 V DC / 1 A
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	600000h
Ambient temperature	40°C
Input voltage	230V
Output power	120W
Duty cycle	100%
General data	
Degree of efficiency	90% @ 230 V AC
Power loss, idling / Power loss, nominal load	1.5 W / 14.5 W
Earth leakage current, max.	3.5 mA
Power factor (approx.)	0.5 @ 120 V AC, 0.51 @ 230 V AC
AC failure bridging time @ I _{nom}	> 80 ms @ 230 V AC / > 20 ms @ 115 V AC
Parallel connection option	yes, max. 3
Depth x width x height / Net weight	100 / 40 / 130 mm / 490 g
Approvals	
Approvals	cCSAus; CE; cULus
Connection data	
Input	Output
Screw connection	Screw connection
3 for L/N/PE	4 (++) / (-)
0.5 / 6	0.5 / 6
0.5 / 6	0.5 / 6
26 / 12	26 / 12
/	0.5 / 0.6
Note	

Input	
Rated input voltage	110...240 V AC / 120...340 V DC
Input voltage range AC	85...264 V AC (derating at 100 V AC)
Frequency range AC	45...65 Hz
DC input voltage range	110...370 V DC (derating at <120 V DC)
Current consumption in relation to the input voltage	1.14A @ 230VAC; 2.04A @ 115VAC; 1.12A @ 120V
Input fuse (internal) / Inrush current	Yes / 40 A @ 230 V AC, 25 °C
Output	
Rated output voltage	12 V DC
Output voltage	9...16 V adjustable via potentiometer
Residual ripple, breaking spikes	≤ 50 mVpp @ full load
Nominal output current for U _{nom}	10 A @ 55 °C
Continuous output current @ U _{Nominal}	10 A @ 55 °C, 6.25 A @ 70°C
Capacitive load	5.5mF
Protection against inverse voltage	Yes
Signalling	
Status indication	Green LED
Floating contact / Contact load	Yes / max. 30 V DC / 1 A
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	600000h
Ambient temperature	40°C
Input voltage	230V
Output power	120W
Duty cycle	100%
General data	
Degree of efficiency	90% @ 230 V AC
Power loss, idling / Power loss, nominal load	1.2 W / 15.4 W
Earth leakage current, max.	3.5 mA
Power factor (approx.)	0.5 @ 120 V AC, 0.51 @ 230 V AC
AC failure bridging time @ I _{nom}	> 80 ms @ 230 V AC / > 20 ms @ 115 V AC
Parallel connection option	yes, max. 3
Depth x width x height / Net weight	100 / 40 / 130 mm / 490 g
Approvals	
Approvals	cCSAus; CE; cULus
Connection data	
Input	Output
Screw connection	Screw connection
3 for L/N/PE	4 (++) / (-)
0.5 / 6	0.5 / 6
0.5 / 6	0.5 / 6
26 / 12	26 / 12
/	0.5 / 0.6
Note	

Ordering data

Type	Qty.	Order No.
PRO BAS 120W 24V 5A	1	2838440000
Note		
Current technical data at eshop.weidmueller.com		

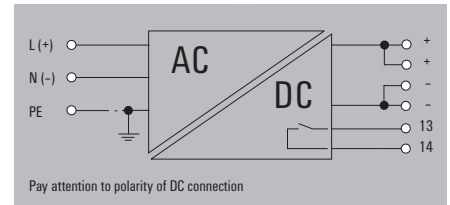
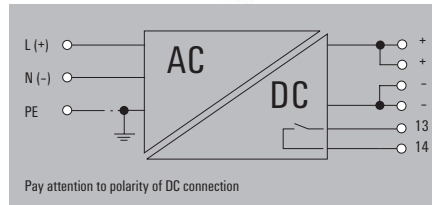
Type	Qty.	Order No.
PRO BAS 120W 24V 5A	1	2838440000
Note		
Current technical data at eshop.weidmueller.com		

Type	Qty.	Order No.
PRO BAS 120W 12V 10A	1	2838450000
Note		
Current technical data at eshop.weidmueller.com		

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PRO BAS 240W 24V 10A

PRO BAS 240W 48V 5A



Technical data

Input	
Rated input voltage	110...240 V AC / 120...340 V DC
Input voltage range AC	85...264 V AC (derating at 100 V AC)
Frequency range AC	45...65 Hz
DC input voltage range	110...370 V DC (derating at <120 V DC)
Current consumption in relation to the input voltage	1.13A @ 230VAC; 2.29A @ 115VAC; 2.3A @ 120V
Input fuse (internal) / Inrush current	Yes / 20 A @ 230 V AC, 25 °C
Output	
Rated output voltage	24 V DC
Output voltage	22...28 V adjustable via potentiometer
Residual ripple, breaking spikes	≤ 100 mVpp @ full Load
Nominal output current for U _{nom}	10 A @ 55 °C
Continuous output current @ U _{Nominal}	10 A @ 55 °C, 6.25 A @ 70°C
Capacitive load	5.5mF
Protection against inverse voltage	Yes
Signalling	
Status indication	Green LED
Floating contact / Contact load	Yes / max. 30 V DC / 1 A
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	590000h
Ambient temperature	40°C
Input voltage	230V
Output power	240W
Duty cycle	100%
General data	
Degree of efficiency	94% @ 230 V AC
Power loss, idling / Power loss, nominal load	2 W / 19.5 W
Earth leakage current, max.	3.5 mA
Power factor (approx.)	0.95 @ 230 V AC, nominal load
AC failure bridging time @ I _{nom}	> 80 ms @ 230 V AC / > 20 ms @ 115 V AC
Parallel connection option	yes, max. 3
Depth x width x height / Net weight	100 / 52 / 130 mm / 693 g
Approvals	
Approvals	cCSAus; CE; cULus
Connection data	
Connection system	Screw connection
Number of terminals	3 for L/N/PE
Wire cross-section, rigid min/max	0.5 / 6 mm ²
Wire cross-section, flexible min/max	0.5 / 6 mm ²
Wire cross-section, AWG/kcmil min/max	26 / 12
Tightening torque range	/
Note	

Input		Output	
Rated input voltage	110...240 V AC / 120...340 V DC	Rated output voltage	24 V DC
Input voltage range AC	85...264 V AC (derating at 100 V AC)	Output voltage	22...28 V adjustable via potentiometer
Frequency range AC	45...65 Hz	Residual ripple, breaking spikes	≤ 100 mVpp @ full Load
DC input voltage range	110...370 V DC (derating at <120 V DC)	Nominal output current for U _{nom}	10 A @ 55 °C
Current consumption in relation to the input voltage	1.13A @ 230VAC; 2.29A @ 115VAC; 2.3A @ 120V	Continuous output current @ U _{Nominal}	10 A @ 55 °C, 6.25 A @ 70°C
Input fuse (internal) / Inrush current	Yes / 20 A @ 230 V AC, 25 °C	Capacitive load	5.5mF
		Protection against inverse voltage	Yes
Signalling			
Status indication	Green LED	Floating contact / Contact load	Yes / max. 30 V DC / 1 A
Floating contact / Contact load	Yes / max. 30 V DC / 1 A		
MTBF			
According to Standard	SN 29500	Operating time (hours), min.	590000h
Operating time (hours), min.	590000h	Ambient temperature	40°C
Ambient temperature	40°C	Input voltage	230V
Input voltage	230V	Output power	240W
Output power	240W	Duty cycle	100%
Duty cycle	100%		
General data			
Degree of efficiency	94% @ 230 V AC	Degree of efficiency	95% @ 230 V AC
Power loss, idling / Power loss, nominal load	2 W / 19.5 W	Power loss, idling / Power loss, nominal load	2 W / 19.2 W
Earth leakage current, max.	3.5 mA	Earth leakage current, max.	3.5 mA
Power factor (approx.)	0.95 @ 230 V AC, nominal load	Power factor (approx.)	0.95 @ 230 V AC, nominal load
AC failure bridging time @ I _{nom}	> 80 ms @ 230 V AC / > 20 ms @ 115 V AC	AC failure bridging time @ I _{nom}	> 80 ms @ 230 V AC / > 20 ms @ 115 V AC
Parallel connection option	yes, max. 3	Parallel connection option	yes, max. 3
Depth x width x height / Net weight	100 / 52 / 130 mm / 693 g	Depth x width x height / Net weight	100 / 52 / 130 mm / 693 g
Approvals			
Approvals	cCSAus; CE; cULus	Approvals	cCSAus; CE; cULus
Connection data			
Connection system	Screw connection	Connection system	Screw connection
Number of terminals	3 for L/N/PE	Number of terminals	4 (++ / --)
Wire cross-section, rigid min/max	0.5 / 6 mm ²	Wire cross-section, rigid min/max	0.5 / 6 mm ²
Wire cross-section, flexible min/max	0.5 / 6 mm ²	Wire cross-section, flexible min/max	0.5 / 6 mm ²
Wire cross-section, AWG/kcmil min/max	26 / 12	Wire cross-section, AWG/kcmil min/max	26 / 12
Tightening torque range	/	Tightening torque range	0.5 / 0.6
Note			

Input		Output	
Rated input voltage	110...240 V AC / 120...340 V DC	Rated output voltage	48 V DC
Input voltage range AC	85...264 V AC (derating at 100 V AC)	Output voltage	36...56 V adjustable via potentiometer
Frequency range AC	45...65 Hz	Residual ripple, breaking spikes	≤ 100 mVpp @ full Load
DC input voltage range	110...370 V DC (derating at <120 V DC)	Nominal output current for U _{nom}	5 A @ 55 °C
Current consumption in relation to the input voltage	1.14A @ 230VAC; 2.3A @ 115VAC; 2.22A @ 120V	Continuous output current @ U _{Nominal}	5 A @ 55 °C, 3.125 A @ 70°C
Input fuse (internal) / Inrush current	Yes / 20 A @ 230 V AC, 25 °C	Capacitive load	5.5mF
		Protection against inverse voltage	Yes
Signalling			
Status indication	Green LED	Floating contact / Contact load	Yes / max. 30 V DC / 1 A
Floating contact / Contact load	Yes / max. 30 V DC / 1 A		
MTBF			
According to Standard	SN 29500	Operating time (hours), min.	610000h
Operating time (hours), min.	610000h	Ambient temperature	40°C
Ambient temperature	40°C	Input voltage	230V
Input voltage	230V	Output power	240W
Output power	240W	Duty cycle	100%
Duty cycle	100%		
General data			
Degree of efficiency	95% @ 230 V AC	Degree of efficiency	95% @ 230 V AC
Power loss, idling / Power loss, nominal load	2 W / 19.2 W	Power loss, idling / Power loss, nominal load	2 W / 19.2 W
Earth leakage current, max.	3.5 mA	Earth leakage current, max.	3.5 mA
Power factor (approx.)	0.95 @ 230 V AC, nominal load	Power factor (approx.)	0.95 @ 230 V AC, nominal load
AC failure bridging time @ I _{nom}	> 80 ms @ 230 V AC / > 20 ms @ 115 V AC	AC failure bridging time @ I _{nom}	> 80 ms @ 230 V AC / > 20 ms @ 115 V AC
Parallel connection option	yes, max. 3	Parallel connection option	yes, max. 3
Depth x width x height / Net weight	100 / 52 / 130 mm / 693 g	Depth x width x height / Net weight	100 / 52 / 130 mm / 693 g
Approvals			
Approvals	cCSAus; CE; cULus	Approvals	cCSAus; CE; cULus
Connection data			
Connection system	Screw connection	Connection system	Screw connection
Number of terminals	3 for L/N/PE	Number of terminals	4 (++ / --)
Wire cross-section, rigid min/max	0.5 / 6 mm ²	Wire cross-section, rigid min/max	0.5 / 6 mm ²
Wire cross-section, flexible min/max	0.5 / 6 mm ²	Wire cross-section, flexible min/max	0.5 / 6 mm ²
Wire cross-section, AWG/kcmil min/max	26 / 12	Wire cross-section, AWG/kcmil min/max	26 / 12
Tightening torque range	/	Tightening torque range	0.5 / 0.6
Note			

Ordering data

Type	Qty.	Order No.
PRO BAS 240W 24V 10A	1	2838460000
Note		
Current technical data at eshop.weidmueller.com		

Type	Qty.	Order No.
PRO BAS 240W 48V 5A	1	2838470000
Note		
Current technical data at eshop.weidmueller.com		

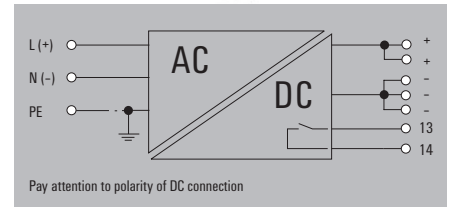
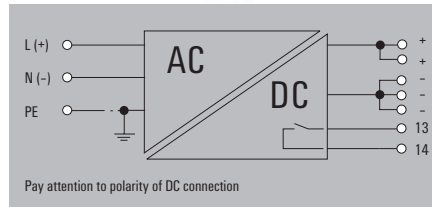
Type	Qty.	Order No.
PRO BAS 240W 48V 5A	1	2838470000
Note		
Current technical data at eshop.weidmueller.com		

connectPower PRObas

connectPower PRObas

PRO BAS 480W 24V 20A

PRO BAS 480W 48V 10A



Technical data

Input	
Rated input voltage	110...240 V AC / 120...340 V DC
Input voltage range AC	85...264 V AC (derating at 100 V AC)
Frequency range AC	45...65 Hz
DC input voltage range	110...370 V DC (derating at <120 V DC)
Current consumption in relation to the input voltage	2.23A @ 230VAC; 4.58A @ 115VAC; 4.39A @ 120V
Input fuse (internal) / Inrush current	Yes / 20 A @ 230 V AC, 25 °C
Output	
Rated output voltage	24 V DC
Output voltage	22...28 V adjustable via potentiometer
Residual ripple, breaking spikes	≤ 100 mVpp @ full Load
Nominal output current for U _{nom}	20 A @ 55 °C
Continuous output current @ U _{Nominal}	20 A @ 55 °C, 12.5 A @ 70°C
Capacitive load	5.5mF
Protection against inverse voltage	Yes
Signalling	
Status indication	Green LED
Floating contact / Contact load	Yes / max. 30 V DC / 1 A
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	540000h
Ambient temperature	40°C
Input voltage	230V
Output power	480W
Duty cycle	100%
General data	
Degree of efficiency	95% @ 230 V AC
Power loss, idling / Power loss, nominal load	2 W / 30 W
Earth leakage current, max.	3.5 mA
Power factor (approx.)	0.95 @ 230 V AC, nominal load
AC failure bridging time @ I _{nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC
Parallel connection option	yes, max. 3
Depth x width x height / Net weight	125 / 59 / 130 mm / 1380 g
Approvals	
Approvals	cCSAus; CE; cULus
Connection data	
Connection system	Screw connection
Number of terminals	3 for L/N/PE
Wire cross-section, rigid min/max	0.18 / 6 mm ²
Wire cross-section, flexible min/max	0.18 / 6 mm ²
Wire cross-section, AWG/kcmil min/max	26 / 10
Tightening torque range	/
Note	

Input		Output	
Rated input voltage	110...240 V AC / 120...340 V DC	Rated output voltage	24 V DC
Input voltage range AC	85...264 V AC (derating at 100 V AC)	Output voltage	22...28 V adjustable via potentiometer
Frequency range AC	45...65 Hz	Residual ripple, breaking spikes	≤ 100 mVpp @ full Load
DC input voltage range	110...370 V DC (derating at <120 V DC)	Nominal output current for U _{nom}	20 A @ 55 °C
Current consumption in relation to the input voltage	2.23A @ 230VAC; 4.58A @ 115VAC; 4.39A @ 120V	Continuous output current @ U _{Nominal}	20 A @ 55 °C, 12.5 A @ 70°C
Input fuse (internal) / Inrush current	Yes / 20 A @ 230 V AC, 25 °C	Capacitive load	5.5mF
		Protection against inverse voltage	Yes
Signalling			
Status indication	Green LED	Floating contact / Contact load	Yes / max. 30 V DC / 1 A
Floating contact / Contact load	Yes / max. 30 V DC / 1 A		
MTBF			
According to Standard	SN 29500	Operating time (hours), min.	540000h
Operating time (hours), min.	540000h	Ambient temperature	40°C
Ambient temperature	40°C	Input voltage	230V
Input voltage	230V	Output power	480W
Output power	480W	Duty cycle	100%
Duty cycle	100%		
General data			
Degree of efficiency	95% @ 230 V AC	Power loss, idling / Power loss, nominal load	2 W / 30 W
Power loss, idling / Power loss, nominal load	2 W / 30 W	Earth leakage current, max.	3.5 mA
Earth leakage current, max.	3.5 mA	Power factor (approx.)	0.95 @ 230 V AC, nominal load
Power factor (approx.)	0.95 @ 230 V AC, nominal load	AC failure bridging time @ I _{nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC
AC failure bridging time @ I _{nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC	Parallel connection option	yes, max. 3
Parallel connection option	yes, max. 3	Depth x width x height / Net weight	125 / 59 / 130 mm / 1380 g
Depth x width x height / Net weight	125 / 59 / 130 mm / 1380 g		
Approvals			
Approvals	cCSAus; CE; cULus		
Connection data			
Connection system	Screw connection	Connection system	Screw connection
Number of terminals	3 for L/N/PE	Number of terminals	5 (+ + / - -)
Wire cross-section, rigid min/max	0.18 / 6 mm ²	Wire cross-section, rigid min/max	0.18 / 6 mm ²
Wire cross-section, flexible min/max	0.18 / 6 mm ²	Wire cross-section, flexible min/max	0.18 / 6 mm ²
Wire cross-section, AWG/kcmil min/max	26 / 10	Wire cross-section, AWG/kcmil min/max	26 / 10
Tightening torque range	/	Tightening torque range	0.5 / 0.6
Note			

Input		Output	
Rated input voltage	110...240 V AC / 120...340 V DC	Rated output voltage	48 V DC
Input voltage range AC	85...264 V AC (derating at 100 V AC)	Output voltage	36...56 V adjustable via potentiometer
Frequency range AC	45...65 Hz	Residual ripple, breaking spikes	≤ 100 mVpp @ full Load
DC input voltage range	110...370 V DC (derating at <120 V DC)	Nominal output current for U _{nom}	10 A @ 55 °C
Current consumption in relation to the input voltage	2.26A @ 230VAC; 4.58A @ 115VAC; 4.42A @ 120V	Continuous output current @ U _{Nominal}	10 A @ 55 °C, 6.25 A @ 70°C
Input fuse (internal) / Inrush current	Yes / 20 A @ 230 V AC, 25 °C	Capacitive load	5.5mF
		Protection against inverse voltage	Yes
Signalling			
Status indication	Green LED	Floating contact / Contact load	Yes / max. 30 V DC / 1 A
Floating contact / Contact load	Yes / max. 30 V DC / 1 A		
MTBF			
According to Standard	SN 29500	Operating time (hours), min.	520000h
Operating time (hours), min.	520000h	Ambient temperature	40°C
Ambient temperature	40°C	Input voltage	230V
Input voltage	230V	Output power	480W
Output power	480W	Duty cycle	100%
Duty cycle	100%		
General data			
Degree of efficiency	95% @ 230 V AC	Power loss, idling / Power loss, nominal load	2 W / 30 W
Power loss, idling / Power loss, nominal load	2 W / 30 W	Earth leakage current, max.	3.5 mA
Earth leakage current, max.	3.5 mA	Power factor (approx.)	0.95 @ 230 V AC, nominal load
Power factor (approx.)	0.95 @ 230 V AC, nominal load	AC failure bridging time @ I _{nom}	> 80 ms @ 230 V AC / > 20 ms @ 115 V AC
AC failure bridging time @ I _{nom}	> 80 ms @ 230 V AC / > 20 ms @ 115 V AC	Parallel connection option	yes, max. 3
Parallel connection option	yes, max. 3	Depth x width x height / Net weight	125 / 59 / 130 mm / 1380 g
Depth x width x height / Net weight	125 / 59 / 130 mm / 1380 g		
Approvals			
Approvals	cCSAus; CE; cULus		
Connection data			
Connection system	Screw connection	Connection system	Screw connection
Number of terminals	3 for L/N/PE	Number of terminals	5 (+ + / - -)
Wire cross-section, rigid min/max	0.18 / 6 mm ²	Wire cross-section, rigid min/max	0.18 / 6 mm ²
Wire cross-section, flexible min/max	0.18 / 6 mm ²	Wire cross-section, flexible min/max	0.18 / 6 mm ²
Wire cross-section, AWG/kcmil min/max	26 / 10	Wire cross-section, AWG/kcmil min/max	26 / 10
Tightening torque range	/	Tightening torque range	0.5 / 0.6
Note			

Ordering data

Type	Qty.	Order No.
PRO BAS 480W 24V 20A	1	2838480000
Note		
Current technical data at eshop.weidmueller.com		

Type	Qty.	Order No.
PRO BAS 480W 48V 10A	1	2838490000
Note		
Current technical data at eshop.weidmueller.com		

Type	Qty.	Order No.
PRO BAS 480W 48V 10A	1	2838490000
Note		
Current technical data at eshop.weidmueller.com		

PRO-PM – the efficient plate mounted power supply solution

Powering simple automation applications

A

Simple machines and automation applications require standard power supply solutions with basic functionalities. The new power supplies of the PRO-PM series offer an excellent price/performance ratio and are designed for reliable DC control voltage.

Due to the wide range of variants with output voltages of 5, 12, 24, and 48 V and extensive international approvals, they are suitable for use in many applications. The power range extends from 35 W to 350 W. The individual adaptability makes PRO-PM the right choice for many standard machines.

Your special advantages:

- Especially compact and robust metal housing
- Wide temperature range from -20°C to +70°C – for almost all industrial applications
- Certified according to CE, CCC, and cURus for universal worldwide use



Compact design

The low height of only 30 mm saves space and reduces overall system costs

Wide range of applications

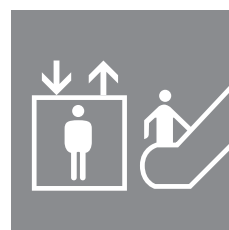
The wide temperature range from - 20°C to +70°C as well as international certificates such as CE, cURus, CCC etc. ensure reliable operation worldwide.



Especially economic

Thanks to the new „Design-to-Cost“ concept, PRO-PM power supplies offer a particularly favourable price/performance ratio.

Optimal for:

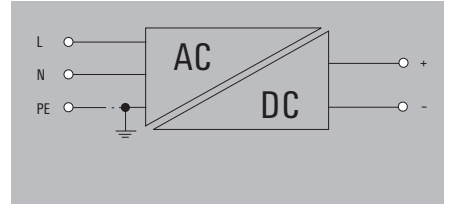
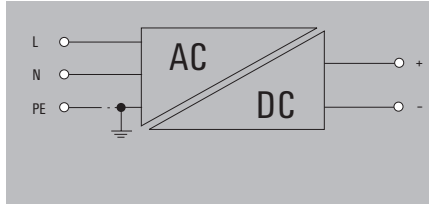
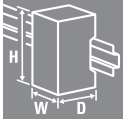


connectPower PRO-PM

connectPower PRO-PM

PRO PM 35W 5V 7A

PRO PM 35W 12V 3A



Technical data

Input	
Input voltage range AC	90...264 V AC
Frequency range AC	47...63 Hz
Rated input voltage	100...240 V AC
Recommended back-up fuse	2 A at 230 V AC, characteristic curve C
Output	
Output voltage	5 V DC
Output voltage adjustment	± 10% nominal output voltage tolerance, adjustable with potentiometer
Output current	7
Output power	35 W
Derating	> 50°C (2% / 1°C)
Residual ripple, breaking spikes	< 100 mV _{pp}
Overload protection	120%...180% I _{nominal} , hiccup mode with automatic recovery
Surge protection	5.6...6.8 V @ 5 V DC
Mains failure bridge-over time	20 ms
Parallel connection option	Yes, with diode module
General data	
Ambient temperature (operational)	-20 °C...70 °C
Storage temperature	-40 °C...85 °C
Humidity	5...95 % RH
Degree of efficiency	82 %
Status indication	LED green: ready
Mounting position, installation notice	Panel mount, screw fix
Net weight	223 g
Approvals	CE
Screw connection	
Connection cross-section, solid, min. / max.	0.34 / 4 mm ²
Depth x width x height	99 / 82 / 30 mm

Input voltage range AC	90...264 V AC
Frequency range AC	47...63 Hz
Rated input voltage	100...240 V AC
Recommended back-up fuse	2 A at 230 V AC, characteristic curve C
Output voltage	12 V DC
Output voltage adjustment	± 10% nominal output voltage tolerance, adjustable with potentiometer
Output current	3
Output power	35 W
Derating	> 50°C (2% / 1°C)
Residual ripple, breaking spikes	< 100 mV _{pp}
Overload protection	120%...180% I _{nominal} , hiccup mode with automatic recovery
Surge protection	13.5...16.2 V @ 12 V DC
Mains failure bridge-over time	20 ms
Parallel connection option	Yes, with diode module
Ambient temperature (operational)	-20 °C...70 °C
Storage temperature	-40 °C...85 °C
Humidity	5...95 % RH
Degree of efficiency	84%
Status indication	LED green: ready
Mounting position, installation notice	Panel mount, screw fix
Net weight	220 g
Approvals	CE
Connection cross-section, solid, min. / max.	0.34 / 4 mm ²
Depth x width x height	99 / 82 / 30 mm

Input voltage range AC	90...264 V AC
Frequency range AC	47...63 Hz
Rated input voltage	100...240 V AC
Recommended back-up fuse	2 A at 230 V AC, characteristic curve C
Output voltage	12 V DC
Output voltage adjustment	± 10% nominal output voltage tolerance, adjustable with potentiometer
Output current	3
Output power	35 W
Derating	> 50°C (2% / 1°C)
Residual ripple, breaking spikes	< 100 mV _{pp}
Overload protection	120%...180% I _{nominal} , hiccup mode with automatic recovery
Surge protection	13.5...16.2 V @ 12 V DC
Mains failure bridge-over time	20 ms
Parallel connection option	Yes, with diode module
Ambient temperature (operational)	-20 °C...70 °C
Storage temperature	-40 °C...85 °C
Humidity	5...95 % RH
Degree of efficiency	84%
Status indication	LED green: ready
Mounting position, installation notice	Panel mount, screw fix
Net weight	220 g
Approvals	CE
Connection cross-section, solid, min. / max.	0.34 / 4 mm ²
Depth x width x height	99 / 82 / 30 mm

Note

Ordering data

Type	Qty.	Order No.
PRO PM 35W 5V 7A	1	2660200277

The internal varistor found in a switch-mode power supply does not replace the necessary surge protection in a system.		
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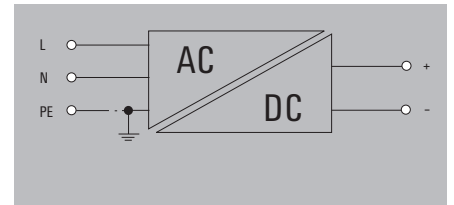
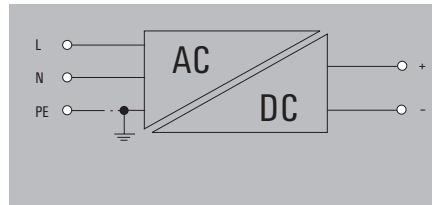
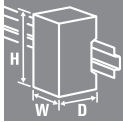
Type	Qty.	Order No.
PRO PM 35W 12V 3A	1	2660200278

The internal varistor found in a switch-mode power supply does not replace the necessary surge protection in a system.

connectPower PRO-PM

PRO PM 35W 24V 1.5A

PRO PM 35W 48V 0.75A



Technical data

Input	
Input voltage range AC	90...264 V AC
Frequency range AC	47...63 Hz
Rated input voltage	100...240 V AC
Recommended back-up fuse	2 A at 230 V AC, characteristic curve C
Output	
Output voltage	24 V DC
Output voltage adjustment	± 10% nominal output voltage tolerance, adjustable with potentiometer
Output current	1.5
Output power	35 W
Derating	> 50°C (2% / 1°C)
Residual ripple, breaking spikes	< 100 mV _{pp}
Overload protection	120%...180% I _{nominal} , hiccup mode with automatic recovery
Surge protection	28...32 V @ 24 V DC
Mains failure bridge-over time	20 ms
Parallel connection option	Yes, with diode module
General data	
Ambient temperature (operational)	-20 °C...70 °C
Storage temperature	-40 °C...85 °C
Humidity	5...95 % RH
Degree of efficiency	86%
Status indication	LED green: ready
Mounting position, installation notice	Panel mount, screw fix
Net weight	223 g
Approvals	CE
Screw connection	
Connection cross-section, solid, min. / max.	0.34 / 4 mm ²
Depth x width x height	99 / 82 / 30 mm

Input voltage range AC	90...264 V AC
Frequency range AC	47...63 Hz
Rated input voltage	100...240 V AC
Recommended back-up fuse	2 A at 230 V AC, characteristic curve C
Output voltage	48 V DC
Output voltage adjustment	± 10% nominal output voltage tolerance, adjustable with potentiometer
Output current	0.75
Output power	35 W
Derating	> 50°C (2% / 1°C)
Residual ripple, breaking spikes	< 150 mV _{pp}
Overload protection	120%...180% I _{nominal} , hiccup mode with automatic recovery
Surge protection	55...62 V @ 48 V DC
Mains failure bridge-over time	20 ms
Parallel connection option	Yes, with diode module
Ambient temperature (operational)	-20 °C...70 °C
Storage temperature	-40 °C...85 °C
Humidity	5...95 % RH
Degree of efficiency	86%
Status indication	LED green: ready
Mounting position, installation notice	Panel mount, screw fix
Net weight	223 g
Approvals	CE
Connection cross-section, solid, min. / max.	0.34 / 4 mm ²
Depth x width x height	99 / 82 / 30 mm

Input voltage range AC	90...264 V AC
Frequency range AC	47...63 Hz
Rated input voltage	100...240 V AC
Recommended back-up fuse	2 A at 230 V AC, characteristic curve C
Output voltage	48 V DC
Output voltage adjustment	± 10% nominal output voltage tolerance, adjustable with potentiometer
Output current	0.75
Output power	35 W
Derating	> 50°C (2% / 1°C)
Residual ripple, breaking spikes	< 150 mV _{pp}
Overload protection	120%...180% I _{nominal} , hiccup mode with automatic recovery
Surge protection	55...62 V @ 48 V DC
Mains failure bridge-over time	20 ms
Parallel connection option	Yes, with diode module
Ambient temperature (operational)	-20 °C...70 °C
Storage temperature	-40 °C...85 °C
Humidity	5...95 % RH
Degree of efficiency	86%
Status indication	LED green: ready
Mounting position, installation notice	Panel mount, screw fix
Net weight	223 g
Approvals	CE
Connection cross-section, solid, min. / max.	0.34 / 4 mm ²
Depth x width x height	99 / 82 / 30 mm

Note

Ordering data

Type	Qty.	Order No.
PRO PM 35W 24V 1.5A	1	2660200279

Note

Type	Qty.	Order No.
PRO PM 35W 24V 1.5A	1	2660200279

The internal varistor found in a switch-mode power supply does not replace the necessary surge protection in a system.

Type	Qty.	Order No.
PRO PM 35W 48V 0.75A	1	2660200280

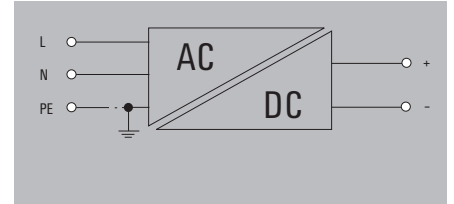
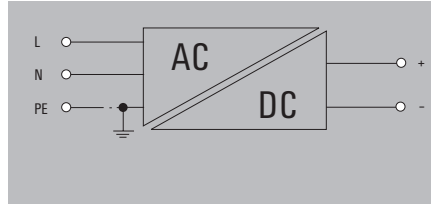
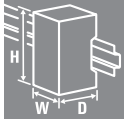
The internal varistor found in a switch-mode power supply does not replace the necessary surge protection in a system.

connectPower PRO-PM

connectPower PRO-PM

PRO PM 75W 5V 14A

PRO PM 75W 12V 6A



Technical data

Input	PRO PM 75W 5V 14A	PRO PM 75W 12V 6A
Input voltage range AC	90...264 V AC	90...264 V AC
Frequency range AC	47...63 Hz	47...63 Hz
Rated input voltage	100...240 V AC	100...240 V AC
Recommended back-up fuse	4 A at 230 V AC, characteristic curve C	4 A at 230 V AC, characteristic curve C
Output		
Output voltage	5 V DC	12 V DC
Output voltage adjustment	± 10% nominal output voltage tolerance, adjustable with potentiometer	± 10% nominal output voltage tolerance, adjustable with potentiometer
Output current	14	6
Output power	75 W	75 W
Derating	> 50°C (2% / 1°C)	> 50°C (2% / 1°C)
Residual ripple, breaking spikes	< 100 mV _{pp}	< 100 mV _{pp}
Overload protection	120%...180% I _{nominal} , hiccup mode with automatic recovery	120%...180% I _{nominal} , hiccup mode with automatic recovery
Surge protection	5.6...6.8 V @ 5 V DC	13.5...16.2 V @ 12 V DC
Mains failure bridge-over time	20 ms	20 ms
Parallel connection option	Yes, with diode module	Yes, with diode module
General data		
Ambient temperature (operational)	-20 °C...70 °C	-20 °C...70 °C
Storage temperature	-40 °C...85 °C	-40 °C...85 °C
Humidity	5...95 % RH	5...95 % RH
Degree of efficiency	82 %	84 %
Status indication	LED green: ready	LED green: ready
Mounting position, installation notice	Panel mount, screw fix	Panel mount, screw fix
Net weight	240 g	240 g
Approvals	CE	CE
Screw connection		
Connection cross-section, solid, min. / max.	0.34 / 4 mm ²	0.34 / 4 mm ²
Depth x width x height	99 / 97 / 30 mm	99 / 97 / 30 mm

Note

Ordering data

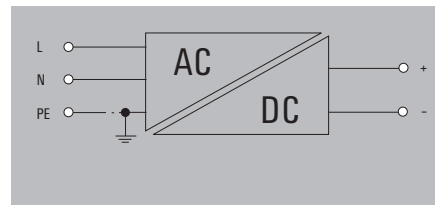
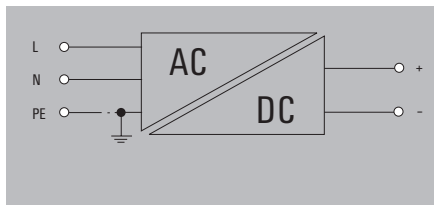
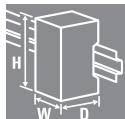
Type	Qty.	Order No.
PRO PM 75W 5V 14A	1	2660200281
The internal varistor found in a switch-mode power supply does not replace the necessary surge protection in a system.		
PRO PM 75W 12V 6A	1	2660200282
The internal varistor found in a switch-mode power supply does not replace the necessary surge protection in a system.		

Note

connectPower PRO-PM

PRO PM 75W 24V 3.2A

PRO PM 75W 48V 1.6A



Technical data

Input	
Input voltage range AC	90...264 V AC
Frequency range AC	47...63 Hz
Rated input voltage	100...240 V AC
Recommended back-up fuse	4 A at 230 V AC, characteristic curve C
Output	
Output voltage	24 V DC
Output voltage adjustment	± 10% nominal output voltage tolerance, adjustable with potentiometer
Output current	3.2
Output power	75 W
Derating	> 50°C (2% / 1°C)
Residual ripple, breaking spikes	< 100 mV _{pp}
Overload protection	120%...180% I _{nominal} , hiccup mode with automatic recovery
Surge protection	28...32 V @ 24 V DC
Mains failure bridge-over time	20 ms
Parallel connection option	Yes, with diode module
General data	
Ambient temperature (operational)	-20 °C...70 °C
Storage temperature	-40 °C...85 °C
Humidity	5...95 % RH
Degree of efficiency	86%
Status indication	LED green: ready
Mounting position, installation notice	Panel mount, screw fix
Net weight	18.27 g
Approvals	CE
Screw connection	
Connection cross-section, solid, min. / max.	0.34 / 4 mm ²
Depth x width x height	99 / 97 / 30 mm

Input voltage range AC	90...264 V AC
Frequency range AC	47...63 Hz
Rated input voltage	100...240 V AC
Recommended back-up fuse	4 A at 230 V AC, characteristic curve C
Output voltage	48 V DC
Output voltage adjustment	± 10% nominal output voltage tolerance, adjustable with potentiometer
Output current	1.6
Output power	75 W
Derating	> 50°C (2% / 1°C)
Residual ripple, breaking spikes	< 150 mV _{pp}
Overload protection	120%...180% I _{nominal} , hiccup mode with automatic recovery
Surge protection	55...62 V @ 48 V DC
Mains failure bridge-over time	20 ms
Parallel connection option	Yes, with diode module
Ambient temperature (operational)	-20 °C...70 °C
Storage temperature	-40 °C...85 °C
Humidity	5...95 % RH
Degree of efficiency	86%
Status indication	LED green: ready
Mounting position, installation notice	Panel mount, screw fix
Net weight	240 g
Approvals	CE
Connection cross-section, solid, min. / max.	0.34 / 4 mm ²
Depth x width x height	99 / 97 / 30 mm

Input voltage range AC	90...264 V AC
Frequency range AC	47...63 Hz
Rated input voltage	100...240 V AC
Recommended back-up fuse	4 A at 230 V AC, characteristic curve C
Output voltage	48 V DC
Output voltage adjustment	± 10% nominal output voltage tolerance, adjustable with potentiometer
Output current	1.6
Output power	75 W
Derating	> 50°C (2% / 1°C)
Residual ripple, breaking spikes	< 150 mV _{pp}
Overload protection	120%...180% I _{nominal} , hiccup mode with automatic recovery
Surge protection	55...62 V @ 48 V DC
Mains failure bridge-over time	20 ms
Parallel connection option	Yes, with diode module
Ambient temperature (operational)	-20 °C...70 °C
Storage temperature	-40 °C...85 °C
Humidity	5...95 % RH
Degree of efficiency	86%
Status indication	LED green: ready
Mounting position, installation notice	Panel mount, screw fix
Net weight	240 g
Approvals	CE
Connection cross-section, solid, min. / max.	0.34 / 4 mm ²
Depth x width x height	99 / 97 / 30 mm

Note

Ordering data

Type	Qty.	Order No.
PRO PM 75W 24V 3.2A	1	2660200283

Note

Type	Qty.	Order No.
PRO PM 75W 24V 3.2A	1	2660200283

The internal varistor found in a switch-mode power supply does not replace the necessary surge protection in a system.

Type	Qty.	Order No.
PRO PM 75W 48V 1.6A	1	2660200284

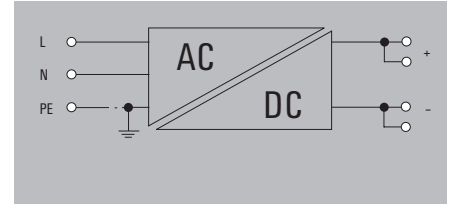
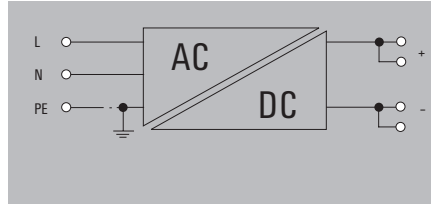
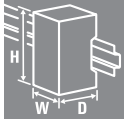
The internal varistor found in a switch-mode power supply does not replace the necessary surge protection in a system.

connectPower PRO-PM

connectPower PRO-PM

PRO PM 100W 12V 8.5A

PRO PM 100W 24V 4.5A



Technical data

Input	
Input voltage range AC	90...264 V AC
Frequency range AC	47...63 Hz
Rated input voltage	100...240 V AC
Recommended back-up fuse	4 A at 230 V AC, characteristic curve C
Output	
Output voltage	12 V DC
Output voltage adjustment	± 10% nominal output voltage tolerance, adjustable with potentiometer
Output current	8.5
Output power	100 W
Derating	> 50°C (2% / 1°C)
Residual ripple, breaking spikes	< 100 mV _{pp}
Overload protection	120%...180% I _{nominal} , hiccup mode with automatic recovery
Surge protection	13.5...16.2 V @ 12 V DC
Mains failure bridge-over time	20 ms
Parallel connection option	Yes, with diode module
General data	
Ambient temperature (operational)	-20 °C...70 °C
Storage temperature	-40 °C...85 °C
Humidity	5...95 % RH
Degree of efficiency	84%
Status indication	LED green: ready
Mounting position, installation notice	Panel mount, screw fix
Net weight	330 g
Approvals	CE
Screw connection	
Connection cross-section, solid, min. / max.	0.34 / 4 mm ²
Depth x width x height	129 / 97 / 30 mm

Input	
Input voltage range AC	90...264 V AC
Frequency range AC	47...63 Hz
Rated input voltage	100...240 V AC
Recommended back-up fuse	4 A at 230 V AC, characteristic curve C
Output	
Output voltage	24 V DC
Output voltage adjustment	± 10% nominal output voltage tolerance, adjustable with potentiometer
Output current	4.5
Output power	100 W
Derating	> 50°C (2% / 1°C)
Residual ripple, breaking spikes	< 100 mV _{pp}
Overload protection	120%...180% I _{nominal} , hiccup mode with automatic recovery
Surge protection	28...32 V @ 24 V DC
Mains failure bridge-over time	20 ms
Parallel connection option	Yes, with diode module
General data	
Ambient temperature (operational)	-20 °C...70 °C
Storage temperature	-40 °C...85 °C
Humidity	5...95 % RH
Degree of efficiency	86%
Status indication	LED green: ready
Mounting position, installation notice	Panel mount, screw fix
Net weight	330 g
Approvals	CE
Screw connection	
Connection cross-section, solid, min. / max.	0.34 / 4 mm ²
Depth x width x height	129 / 97 / 30 mm

Input	
Input voltage range AC	90...264 V AC
Frequency range AC	47...63 Hz
Rated input voltage	100...240 V AC
Recommended back-up fuse	4 A at 230 V AC, characteristic curve C
Output	
Output voltage	24 V DC
Output voltage adjustment	± 10% nominal output voltage tolerance, adjustable with potentiometer
Output current	4.5
Output power	100 W
Derating	> 50°C (2% / 1°C)
Residual ripple, breaking spikes	< 100 mV _{pp}
Overload protection	120%...180% I _{nominal} , hiccup mode with automatic recovery
Surge protection	28...32 V @ 24 V DC
Mains failure bridge-over time	20 ms
Parallel connection option	Yes, with diode module
General data	
Ambient temperature (operational)	-20 °C...70 °C
Storage temperature	-40 °C...85 °C
Humidity	5...95 % RH
Degree of efficiency	86%
Status indication	LED green: ready
Mounting position, installation notice	Panel mount, screw fix
Net weight	330 g
Approvals	CE
Screw connection	
Connection cross-section, solid, min. / max.	0.34 / 4 mm ²
Depth x width x height	129 / 97 / 30 mm

Note

Note

Note

Ordering data

Type	Qty.	Order No.
PRO PM 100W 12V 8.5A	1	2660200285

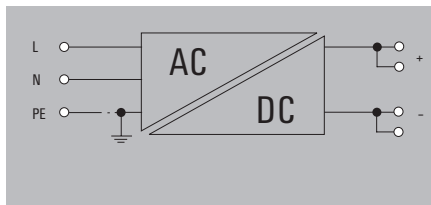
Type	Qty.	Order No.
PRO PM 100W 12V 8.5A	1	2660200285
The internal varistor found in a switch-mode power supply does not replace the necessary surge protection in a system.		

Type	Qty.	Order No.
PRO PM 100W 24V 4.5A	1	2660200286
The internal varistor found in a switch-mode power supply does not replace the necessary surge protection in a system.		

Note

connectPower PRO-PM

PRO PM 100W 48V 2.3A



Technical data

Input	
Input voltage range AC	90...264 V AC
Frequency range AC	47...63 Hz
Rated input voltage	100...240 V AC
Recommended back-up fuse	4 A at 230 V AC, characteristic curve C
Output	
Output voltage	48 V DC
Output voltage adjustment	± 10% nominal output voltage tolerance, adjustable with potentiometer
Output current	2.3
Output power	100 W
Derating	> 50°C (2% / 1°C)
Residual ripple, breaking spikes	< 150 mV _{pp}
Overload protection	120%...180% I _{nominal} , hiccup mode with automatic recovery
Surge protection	55...62 V @ 48 V DC
Mains failure bridge-over time	20 ms
Parallel connection option	Yes, with diode module
General data	
Ambient temperature (operational)	-20 °C...70 °C
Storage temperature	-40 °C...85 °C
Humidity	5...95 % RH
Degree of efficiency	86%
Status indication	LED green: ready
Mounting position, installation notice	Panel mount, screw fix
Net weight	330 g
Approvals	CE
Screw connection	
Connection cross-section, solid, min. / max.	0.34 / 4 mm ²
Depth x width x height	129 / 97 / 30 mm

Note

Ordering data

Type	Qty.	Order No.
PRO PM 100W 48V 2.3A	1	2660200287

Note

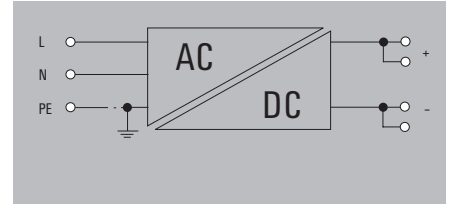
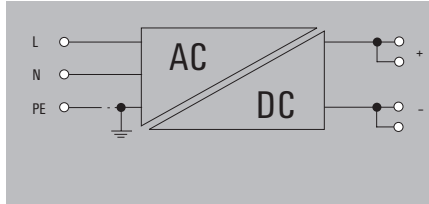
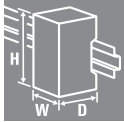
The internal varistor found in a switch-mode power supply does not replace the necessary surge protection in a system.

connectPower PRO-PM

connectPower PRO-PM

PRO PM 150W 12V 12.5A

PRO PM 150W 24V 6.5A



Technical data

Input	
Input voltage range AC	90...264 V AC
Frequency range AC	47...63 Hz
Rated input voltage	100...240 V AC
Recommended back-up fuse	4 A at 230 V AC, characteristic curve C
Output	
Output voltage	12 V DC
Output voltage adjustment	± 10% nominal output voltage tolerance, adjustable with potentiometer
Output current	12.5
Output power	150 W
Derating	> 50°C (2% / 1°C)
Residual ripple, breaking spikes	< 100 mV _{pp}
Overload protection	120%...180% I _{nominal} , hiccup mode with automatic recovery
Surge protection	13.5...16.2 V @ 12 V DC
Mains failure bridge-over time	20 ms
Parallel connection option	Yes, with diode module
General data	
Ambient temperature (operational)	-20 °C...70 °C
Storage temperature	-40 °C...85 °C
Humidity	5...95 % RH
Degree of efficiency	84%
Status indication	LED green: ready
Mounting position, installation notice	Panel mount, screw fix
Net weight	394 g
Approvals	CE
Screw connection	
Connection cross-section, solid, min. / max.	0.34 / 4 mm ²
Depth x width x height	159 / 97 / 30 mm

Input	
Input voltage range AC	90...264 V AC
Frequency range AC	47...63 Hz
Rated input voltage	100...240 V AC
Recommended back-up fuse	4 A at 230 V AC, characteristic curve C
Output	
Output voltage	24 V DC
Output voltage adjustment	± 10% nominal output voltage tolerance, adjustable with potentiometer
Output current	6.5
Output power	150 W
Derating	> 50°C (2% / 1°C)
Residual ripple, breaking spikes	< 100 mV _{pp}
Overload protection	120%...180% I _{nominal} , hiccup mode with automatic recovery
Surge protection	28...32 V @ 24 V DC
Mains failure bridge-over time	20 ms
Parallel connection option	Yes, with diode module
General data	
Ambient temperature (operational)	-20 °C...70 °C
Storage temperature	-40 °C...85 °C
Humidity	5...95 % RH
Degree of efficiency	86%
Status indication	LED green: ready
Mounting position, installation notice	Panel mount, screw fix
Net weight	394 g
Approvals	CE
Screw connection	
Connection cross-section, solid, min. / max.	0.34 / 4 mm ²
Depth x width x height	159 / 97 / 30 mm

Input	
Input voltage range AC	90...264 V AC
Frequency range AC	47...63 Hz
Rated input voltage	100...240 V AC
Recommended back-up fuse	4 A at 230 V AC, characteristic curve C
Output	
Output voltage	24 V DC
Output voltage adjustment	± 10% nominal output voltage tolerance, adjustable with potentiometer
Output current	6.5
Output power	150 W
Derating	> 50°C (2% / 1°C)
Residual ripple, breaking spikes	< 100 mV _{pp}
Overload protection	120%...180% I _{nominal} , hiccup mode with automatic recovery
Surge protection	28...32 V @ 24 V DC
Mains failure bridge-over time	20 ms
Parallel connection option	Yes, with diode module
General data	
Ambient temperature (operational)	-20 °C...70 °C
Storage temperature	-40 °C...85 °C
Humidity	5...95 % RH
Degree of efficiency	86%
Status indication	LED green: ready
Mounting position, installation notice	Panel mount, screw fix
Net weight	394 g
Approvals	CE
Screw connection	
Connection cross-section, solid, min. / max.	0.34 / 4 mm ²
Depth x width x height	159 / 97 / 30 mm

Note

Ordering data

Note	
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Type	Qty.	Order No.
PRO PM 150W 12V 12.5A	1	2660200288

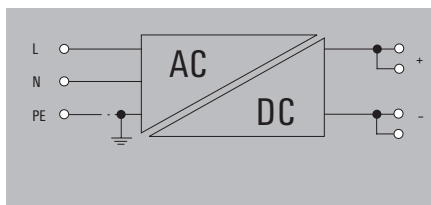
The internal varistor found in a switch-mode power supply does not replace the necessary surge protection in a system.

Type	Qty.	Order No.
PRO PM 150W 24V 6.5A	1	2660200289

The internal varistor found in a switch-mode power supply does not replace the necessary surge protection in a system.

connectPower PRO-PM

PRO PM 150W 48V 3.3A



Technical data

Input	
Input voltage range AC	90...264 V AC
Frequency range AC	47...63 Hz
Rated input voltage	100...240 V AC
Recommended back-up fuse	4 A at 230 V AC, characteristic curve C
Output	
Output voltage	48 V DC
Output voltage adjustment	± 10% nominal output voltage tolerance, adjustable with potentiometer
Output current	3.3
Output power	150 W
Derating	> 50°C (2% / 1°C)
Residual ripple, breaking spikes	< 150 mV _{pp}
Overload protection	120%...180% I _{nominal} , hiccup mode with automatic recovery
Surge protection	55...62 V @ 48 V DC
Mains failure bridge-over time	20 ms
Parallel connection option	Yes, with diode module
General data	
Ambient temperature (operational)	-20 °C...70 °C
Storage temperature	-40 °C...85 °C
Humidity	5...95 % RH
Degree of efficiency	86%
Status indication	LED green: ready
Mounting position, installation notice	Panel mount, screw fix
Net weight	394 g
Approvals	CE
Screw connection	
Connection cross-section, solid, min. / max.	0.34 / 4 mm ²
Depth x width x height	159 / 97 / 30 mm

Note

Ordering data

Note

Type	Qty.	Order No.
PRO PM 150W 48V 3.3A	1	2660200290

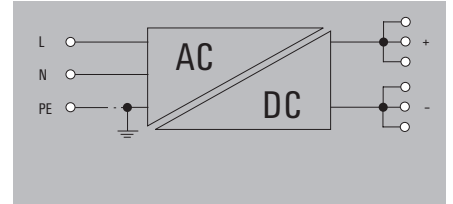
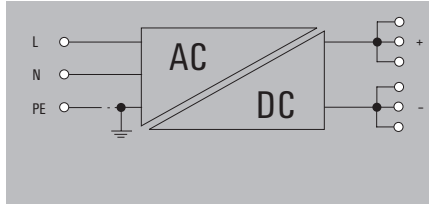
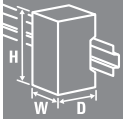
The internal varistor found in a switch-mode power supply does not replace the necessary surge protection in a system.

connectPower PRO-PM

connectPower PRO-PM

PRO PM 250W 12V 21A

PRO PM 250W 24V 10.5A



Technical data

Input	
Input voltage range AC	90...264 V AC
Frequency range AC	47...63 Hz
Rated input voltage	100...240 V AC
Recommended back-up fuse	6 A at 230 V AC, characteristic curve C
Output	
Output voltage	12 V DC
Output voltage adjustment	± 10% nominal output voltage tolerance, adjustable with potentiometer
Output current	21
Output power	250 W
Derating	> 50°C (2% / 1°C)
Residual ripple, breaking spikes	< 100 mV _{pp}
Overload protection	120%...180% I _{nominal} , hiccup mode with automatic recovery
Surge protection	13.5...16.2 V @ 12 V DC
Mains failure bridge-over time	20 ms
Parallel connection option	Yes, with diode module
General data	
Ambient temperature (operational)	-20 °C...70 °C
Storage temperature	-40 °C...85 °C
Humidity	5...95 % RH
Degree of efficiency	84%
Status indication	LED green: ready
Mounting position, installation notice	Panel mount, screw fix
Net weight	736 g
Approvals	CE
Screw connection	
Connection cross-section, solid, min. / max.	0.34 / 4 mm ²
Depth x width x height	215 / 115 / 30 mm

Input	
Input voltage range AC	90...264 V AC
Frequency range AC	47...63 Hz
Rated input voltage	100...240 V AC
Recommended back-up fuse	6 A at 230 V AC, characteristic curve C
Output	
Output voltage	24 V DC
Output voltage adjustment	± 10% nominal output voltage tolerance, adjustable with potentiometer
Output current	10.5
Output power	250 W
Derating	> 50°C (2% / 1°C)
Residual ripple, breaking spikes	< 100 mV _{pp}
Overload protection	120%...180% I _{nominal} , hiccup mode with automatic recovery
Surge protection	28...32 V @ 24 V DC
Mains failure bridge-over time	20 ms
Parallel connection option	Yes, with diode module
General data	
Ambient temperature (operational)	-20 °C...70 °C
Storage temperature	-40 °C...85 °C
Humidity	5...95 % RH
Degree of efficiency	86%
Status indication	LED green: ready
Mounting position, installation notice	Panel mount, screw fix
Net weight	736 g
Approvals	CE
Screw connection	
Connection cross-section, solid, min. / max.	0.34 / 4 mm ²
Depth x width x height	215 / 115 / 30 mm

Input	
Input voltage range AC	90...264 V AC
Frequency range AC	47...63 Hz
Rated input voltage	100...240 V AC
Recommended back-up fuse	6 A at 230 V AC, characteristic curve C
Output	
Output voltage	24 V DC
Output voltage adjustment	± 10% nominal output voltage tolerance, adjustable with potentiometer
Output current	10.5
Output power	250 W
Derating	> 50°C (2% / 1°C)
Residual ripple, breaking spikes	< 100 mV _{pp}
Overload protection	120%...180% I _{nominal} , hiccup mode with automatic recovery
Surge protection	28...32 V @ 24 V DC
Mains failure bridge-over time	20 ms
Parallel connection option	Yes, with diode module
General data	
Ambient temperature (operational)	-20 °C...70 °C
Storage temperature	-40 °C...85 °C
Humidity	5...95 % RH
Degree of efficiency	86%
Status indication	LED green: ready
Mounting position, installation notice	Panel mount, screw fix
Net weight	736 g
Approvals	CE
Screw connection	
Connection cross-section, solid, min. / max.	0.34 / 4 mm ²
Depth x width x height	215 / 115 / 30 mm

Note

Ordering data

Type	Qty.	Order No.
PRO PM 250W 12V 21A	1	2660200291

Note
The internal varistor found in a switch-mode power supply does not replace the necessary surge protection in a system.

Note

Type	Qty.	Order No.
PRO PM 250W 24V 10.5A	1	2660200292

Note
The internal varistor found in a switch-mode power supply does not replace the necessary surge protection in a system.

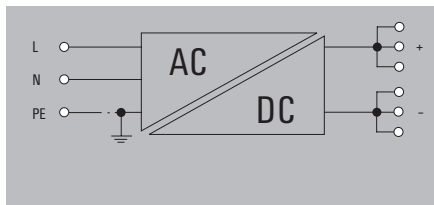
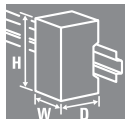
Note

Type	Qty.	Order No.
PRO PM 250W 24V 10.5A	1	2660200292

Note
The internal varistor found in a switch-mode power supply does not replace the necessary surge protection in a system.

connectPower PRO-PM

PRO PM 250W 48V 5.2A



Technical data

Input	
Input voltage range AC	90...264 V AC
Frequency range AC	47...63 Hz
Rated input voltage	100...240 V AC
Recommended back-up fuse	6 A at 230 V AC, characteristic curve C
Output	
Output voltage	48 V DC
Output voltage adjustment	± 10% nominal output voltage tolerance, adjustable with potentiometer
Output current	5.2
Output power	250 W
Derating	> 50°C (2% / 1°C)
Residual ripple, breaking spikes	< 150 mV _{pp}
Overload protection	120%...180% I _{nominal} , hiccup mode with automatic recovery
Surge protection	55...62 V @ 48 V DC
Mains failure bridge-over time	20 ms
Parallel connection option	Yes, with diode module
General data	
Ambient temperature (operational)	-20 °C...70 °C
Storage temperature	-40 °C...85 °C
Humidity	5...95 % RH
Degree of efficiency	86%
Status indication	LED green: ready
Mounting position, installation notice	Panel mount, screw fix
Net weight	736 g
Approvals	CE
Screw connection	
Connection cross-section, solid, min. / max.	0.34 / 4 mm ²
Depth x width x height	215 / 115 / 30 mm

Note

Ordering data

Type	Qty.	Order No.
PRO PM 250W 48V 5.2A	1	2660200293

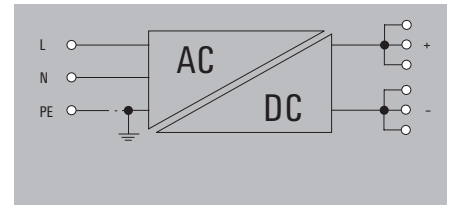
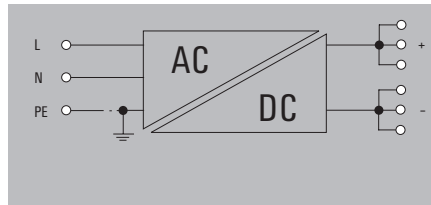
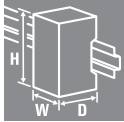
Note
The internal varistor found in a switch-mode power supply does not replace the necessary surge protection in a system.

connectPower PRO-PM

connectPower PRO-PM

PRO PM 350W 24V 14.6A

PRO PM 350W 48V 7.3A



Technical data

Input	
Input voltage range AC	90...264 V AC
Frequency range AC	47...63 Hz
Rated input voltage	100...240 V AC
Recommended back-up fuse	6 A at 230 V AC, characteristic curve C
Output	
Output voltage	24 V DC
Output voltage adjustment	± 10% nominal output voltage tolerance, adjustable with potentiometer
Output current	14.6
Output power	350 W
Derating	> 50°C (2% / 1°C)
Residual ripple, breaking spikes	< 100 mV _{pp}
Overload protection	120%...180% I _{nominal} , hiccup mode with automatic recovery
Surge protection	28...32 V @ 24 V DC
Mains failure bridge-over time	20 ms
Parallel connection option	Yes, with diode module
General data	
Ambient temperature (operational)	-20 °C...70 °C
Storage temperature	-40 °C...85 °C
Humidity	5...95 % RH
Degree of efficiency	86%
Status indication	LED green: ready
Mounting position, installation notice	Panel mount, screw fix
Net weight	750 g
Approvals	CE
Screw connection	
Connection cross-section, solid, min. / max.	0.34 / 4 mm ²
Depth x width x height	215 / 115 / 30 mm

Input voltage range AC	90...264 V AC
Frequency range AC	47...63 Hz
Rated input voltage	100...240 V AC
Recommended back-up fuse	6 A at 230 V AC, characteristic curve C
Output voltage	48 V DC
Output voltage adjustment	± 10% nominal output voltage tolerance, adjustable with potentiometer
Output current	7.3
Output power	350 W
Derating	> 50°C (2% / 1°C)
Residual ripple, breaking spikes	< 150 mV _{pp}
Overload protection	120%...180% I _{nominal} , hiccup mode with automatic recovery
Surge protection	55...62 V @ 48 V DC
Mains failure bridge-over time	20 ms
Parallel connection option	Yes, with diode module
Ambient temperature (operational)	-20 °C...70 °C
Storage temperature	-40 °C...85 °C
Humidity	5...95 % RH
Degree of efficiency	86%
Status indication	LED green: ready
Mounting position, installation notice	Panel mount, screw fix
Net weight	750 g
Approvals	CE
Connection cross-section, solid, min. / max.	0.34 / 4 mm ²
Depth x width x height	215 / 115 / 30 mm

Input voltage range AC	90...264 V AC
Frequency range AC	47...63 Hz
Rated input voltage	100...240 V AC
Recommended back-up fuse	6 A at 230 V AC, characteristic curve C
Output voltage	48 V DC
Output voltage adjustment	± 10% nominal output voltage tolerance, adjustable with potentiometer
Output current	7.3
Output power	350 W
Derating	> 50°C (2% / 1°C)
Residual ripple, breaking spikes	< 150 mV _{pp}
Overload protection	120%...180% I _{nominal} , hiccup mode with automatic recovery
Surge protection	55...62 V @ 48 V DC
Mains failure bridge-over time	20 ms
Parallel connection option	Yes, with diode module
Ambient temperature (operational)	-20 °C...70 °C
Storage temperature	-40 °C...85 °C
Humidity	5...95 % RH
Degree of efficiency	86%
Status indication	LED green: ready
Mounting position, installation notice	Panel mount, screw fix
Net weight	750 g
Approvals	CE
Connection cross-section, solid, min. / max.	0.34 / 4 mm ²
Depth x width x height	215 / 115 / 30 mm

Note

Note

Note

Ordering data

Type	Qty.	Order No.
PRO PM 350W 24V 14.6A	1	2660200294

Note

Type	Qty.	Order No.
PRO PM 350W 24V 14.6A	1	2660200294

The internal varistor found in a switch-mode power supply does not replace the necessary surge protection in a system.

Type	Qty.	Order No.
PRO PM 350W 48V 7.3A	1	2660200295

The internal varistor found in a switch-mode power supply does not replace the necessary surge protection in a system.

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With its unique combination of particularly slim design, proven PUSH IN connection technology and high cost efficiency, INSTA POWER has decisive advantages over competitive products on the market.



Building automation with the compact power package.

The new INSTA POWER is optimal for the use in building automation. Due to the standardized design with small width, this power supply also finds sufficient space in sub-distribution boards and small distribution boards. Furthermore, the extensive power spectrum of INSTA POWER is an additional advantage for compact applications.

Extremely space- and energy-saving

With a basic depth of only 60 mm, INSTA POWER fits into the smallest control cabinets. The high efficiency of up to 91 % and the extremely low no-load power loss of max. 0.5 W ensure minimum energy costs.

**Robust and reliable**

INSTA POWER operates reliably in a temperature range from -25 °C to +70 °C (start-up: -40 °C) and have a high MTBF value of more than 1,000,000 hours.

**Easy and quick to install**

The INSTA POWER devices can either be snapped onto a DIN rail or screwed to the control cabinet wall. The maintenance work and measurements can be carried out conveniently via the PUSH IN connections.

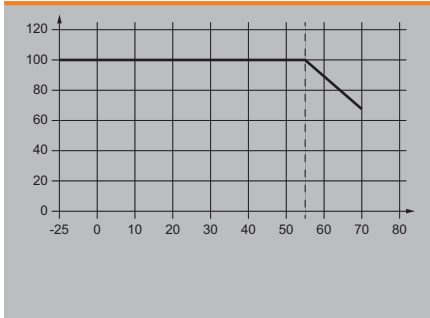


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Derating curve



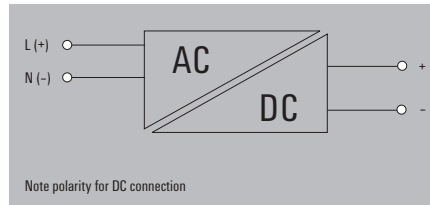
Technical data

General data	
Ambient temperature (operational)	-25 °C...70 °C
Protection degree	IP20
Housing version	Plastic, protective insulation
Mounting position, installation notice	Horizontal on DIN rail TS 35, top and bottom 50 mm clearance for free air flow, 10 mm clearance to neighbouring active subassemblies with full load, 5 mm with passive neighbouring subassemblies, direct row mounting with 90% rated load
Signalling	
LED green	Operating voltage OK
EMC / shock / vibration	
Limiting of mains voltage harmonic currents	According to EN 61000-3-2
Noise emission in accordance with EN55032	Class B
Interference immunity test acc. to	EN 61000-4-2 (ESD)/EN 61000-4-3 and EN 61000-4-8 (fields)/EN 61000-4-4 (burst)/EN 61000-4-5 (surge)/EN 61000-4-6 (conducted)/EN 61000-4-11 (dips), EN 61000-4-11 (Dips)
Shock	15 g In all directions
Insulation coordination	
Insulation voltage output / earth	0.5 kV
Insulation voltage, input/output	4 kV
Insulation voltage input / earth	3.5 kV
Protection class	II
Pollution degree	2
Electrical safety (applied standards)	
Electrical machine equipment	Acc. to EN60204
Safety transformers for switch-mode power supplies	According to EN 61558-2-16

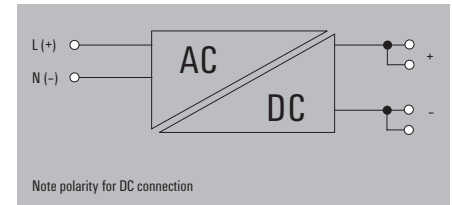
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- 1-phase power supplies

PRO INSTA 16 W 24 V 0.7 A



PRO INSTA 30 W 5 V 6 A



Technical data

Input	
Rated input voltage	110...240 V AC / 120...340 V DC
Input voltage range AC	85...264 V AC (derating at 100 V AC)
AC current consumption	0.25 A @ 230 V AC / 0.45 A @ 100 V AC
Frequency range AC	45...65 Hz
DC input voltage range	95...370 V DC
DC current consumption	0.08 A @ 370V DC / 0.22 A @ 120 V DC
Inrush current	max. 40 A
Output	
Rated output voltage	24 V DC ± 1 %
Nominal output current for U _{nom}	0.7 A @ 55 °C
Output voltage	22...28 V (adjustable via potentiometer on front)
Continuous output current @ U _{Nominal}	0.7 A @ 55 °C, 0.43 A @ 70 °C
Residual ripple, breaking spikes	<50 mV _{rms} @ U _{Nom} , Full Load
Capacitive load	unrestricted
MTBF	
According to Standard	Telcordia SR-332
Operating time (hours), min.	810000h
Ambient temperature	25°C
Input voltage	230V
Output power	16W
Duty cycle	100%
General data	
Degree of efficiency	82.5 %
Power loss, idling	0.4 W
Power loss, nominal load	3.6 W
Protection against reverse voltages from the load	30...35 V DC
Depth x width x height	60 / 22.5 / 90.5 mm
Net weight	82 g
Approvals	
Approvals	cCSAus; CE; cULus; TUEV

Rated input voltage	110...240 V AC / 120...340 V DC
Input voltage range AC	85...264 V AC (derating at 100 V AC)
AC current consumption	0.25 A @ 230 V AC / 0.45 A @ 100 V AC
Frequency range AC	45...65 Hz
DC input voltage range	95...370 V DC
DC current consumption	0.08 A @ 370V DC / 0.22 A @ 120 V DC
Inrush current	max. 40 A
Output	
Rated output voltage	24 V DC ± 1 %
Nominal output current for U _{nom}	0.7 A @ 55 °C
Output voltage	22...28 V (adjustable via potentiometer on front)
Continuous output current @ U _{Nominal}	0.7 A @ 55 °C, 0.43 A @ 70 °C
Residual ripple, breaking spikes	<50 mV _{rms} @ U _{Nom} , Full Load
Capacitive load	unrestricted
MTBF	
According to Standard	Telcordia SR-332
Operating time (hours), min.	810000h
Ambient temperature	25°C
Input voltage	230V
Output power	16W
Duty cycle	100%
General data	
Degree of efficiency	82.5 %
Power loss, idling	0.4 W
Power loss, nominal load	3.6 W
Protection against reverse voltages from the load	30...35 V DC
Depth x width x height	60 / 22.5 / 90.5 mm
Net weight	82 g
Approvals	
Approvals	cCSAus; CE; cULus; TUEV

Rated input voltage	110...240 V AC / 120...340 V DC
Input voltage range AC	85...264 V AC (derating at 100 V AC)
AC current consumption	0.5 A @ 230 V AC / 1.0 A @ 100 V AC
Frequency range AC	45...65 Hz
DC input voltage range	95...370 V DC
DC current consumption	0.2 A @ 370 V DC / 0.5 A @ 120 V DC
Inrush current	max. 40 A
Output	
Rated output voltage	5 V DC ± 2 %
Nominal output current for U _{nom}	6 A @ 55 °C
Output voltage	4...7 V (adjustable via potentiometer on front)
Continuous output current @ U _{Nominal}	6 A @ 55 °C, 3.75 A @ 70 °C
Residual ripple, breaking spikes	<50 mV _{rms} @ U _{Nom} , Full Load
Capacitive load	unrestricted
MTBF	
According to Standard	Telcordia SR-332
Operating time (hours), min.	896000h
Ambient temperature	25°C
Input voltage	230V
Output power	30W
Duty cycle	100%
General data	
Degree of efficiency	82 %
Power loss, idling	0.45 W
Power loss, nominal load	5.4 W
Protection against reverse voltages from the load	8...10 V DC
Depth x width x height	60 / 72 / 90 mm
Net weight	256 g
Approvals	
Approvals	cCSAus; CE; cULus; TUEV

Connection data	
Connection system	PUSH IN with actuator
Number of terminals	2 (L,N)
Wire cross-section, rigid min/max	0.25 / 2.5 mm ²
Wire cross-section, flexible min/max	0.25 / 2.5 mm ²
Wire cross-section, AWG/kcmil min/max	24 / 12
Note	

Input	Output
PUSH IN with actuator	PUSH IN
2 (L,N)	2 (+ / -)
0.25 / 2.5	0.25 / 2.5
0.25 / 2.5	0.25 / 2.5
24 / 12	24 / 12

Input	Output
PUSH IN with actuator	PUSH IN
2 (L,N)	4 (++ / --)
0.25 / 2.5	0.25 / 2.5
0.25 / 2.5	0.25 / 2.5
24 / 12	24 / 12

Ordering data

Type	Qty.	Order No.
PRO INSTA 16W 24V 0.7A	1	2580180000

Type	Qty.	Order No.
PRO INSTA 16W 24V 0.7A	1	2580180000

Type	Qty.	Order No.
PRO INSTA 30W 5V 6A	1	2580210000

Note

Note

Note

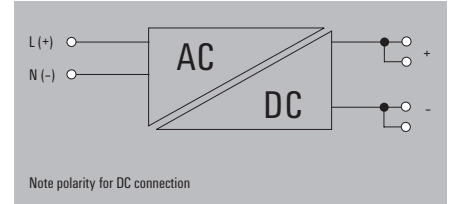
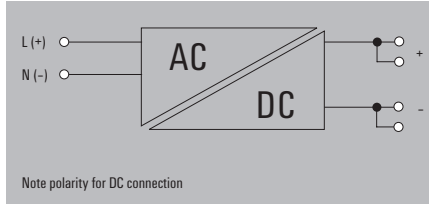
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- 1-phase power supplies

PRO INSTA 30 W 12 V 2.6 A

PRO INSTA 30 W 24 V 1.3 A



Technical data

Input	
Rated input voltage	110...240 V AC / 120...340 V DC
Input voltage range AC	85...264 V AC (derating at 100 V AC)
AC current consumption	0.5 A @ 230 V AC / 1.0 A @ 100 V AC
Frequency range AC	45...65 Hz
DC input voltage range	95...370 V DC
DC current consumption	0.2 A @ 370 V DC / 0.5 A @ 120 V DC
Inrush current	max. 40 A
Output	
Rated output voltage	12 V DC ± 1 %
Nominal output current for U _{nom}	2.6 A @ 55 °C
Output voltage	9...16 V (adjustable via potentiometer on front)
Continuous output current @ U _{Nominal}	2.6 A @ 55 °C, 1.625 A @ 55 °C
Residual ripple, breaking spikes	<50 mV _{rms} @ U _{Nom} , Full Load
Capacitive load	unrestricted
MTBF	
According to Standard	Telcordia SR-332
Operating time (hours), min.	896000h
Ambient temperature	25°C
Input voltage	230V
Output power	30W
Duty cycle	100%
General data	
Degree of efficiency	85 %
Power loss, idling	0.45 W
Power loss, nominal load	5.29 W
Protection against reverse voltages from the load	18...25 V DC
Depth x width x height	60 / 54 / 90 mm
Net weight	192 g
Approvals	
Approvals	cCSAus; CE; cULus; TUEV

Rated input voltage	110...240 V AC / 120...340 V DC
Input voltage range AC	85...264 V AC (derating at 100 V AC)
AC current consumption	0.5 A @ 230 V AC / 1.0 A @ 100 V AC
Frequency range AC	45...65 Hz
DC input voltage range	95...370 V DC
DC current consumption	0.2 A @ 370 V DC / 0.5 A @ 120 V DC
Inrush current	max. 40 A
Output	
Rated output voltage	12 V DC ± 1 %
Nominal output current for U _{nom}	2.6 A @ 55 °C
Output voltage	9...16 V (adjustable via potentiometer on front)
Continuous output current @ U _{Nominal}	2.6 A @ 55 °C, 1.625 A @ 55 °C
Residual ripple, breaking spikes	<50 mV _{rms} @ U _{Nom} , Full Load
Capacitive load	unrestricted
MTBF	
According to Standard	Telcordia SR-332
Operating time (hours), min.	896000h
Ambient temperature	25°C
Input voltage	230V
Output power	30W
Duty cycle	100%
General data	
Degree of efficiency	85 %
Power loss, idling	0.45 W
Power loss, nominal load	5.29 W
Protection against reverse voltages from the load	18...25 V DC
Depth x width x height	60 / 54 / 90 mm
Net weight	192 g
Approvals	
Approvals	cCSAus; CE; cULus; TUEV

Rated input voltage	110...240 V AC / 120...340 V DC
Input voltage range AC	85...264 V AC (derating at 100 V AC)
AC current consumption	0.5 A @ 230 V AC / 1.0 A @ 100 V AC
Frequency range AC	45...65 Hz
DC input voltage range	95...370 V DC
DC current consumption	0.2 A @ 370 V DC / 0.5 A @ 120 V DC
Inrush current	max. 40 A
Output	
Rated output voltage	24 V DC ± 1 %
Nominal output current for U _{nom}	1.3 A @ 55 °C
Output voltage	22...28 V (adjustable via potentiometer on front)
Continuous output current @ U _{Nominal}	1.3 A @ 55 °C, 0.8 A @ 70 °C
Residual ripple, breaking spikes	<50 mV _{rms} @ U _{Nom} , Full Load
Capacitive load	unrestricted
MTBF	
According to Standard	Telcordia SR-332
Operating time (hours), min.	1143000h
Ambient temperature	25°C
Input voltage	230V
Output power	30W
Duty cycle	100%
General data	
Degree of efficiency	86%
Power loss, idling	0.45 W
Power loss, nominal load	4.88 W
Protection against reverse voltages from the load	30...35 V DC
Depth x width x height	60 / 54 / 90 mm
Net weight	192 g
Approvals	
Approvals	cCSAus; CE; cULus; TUEV

Connection data	
Connection system	PUSH IN with actuator
Number of terminals	4 (++, --)
Wire cross-section, rigid min/max	0.25 / 2.5 mm ²
Wire cross-section, flexible min/max	0.25 / 2.5 mm ²
Wire cross-section, AWG/kcmil min/max	24 / 12
Note	

Input	Output
PUSH IN with actuator	PUSH IN
2 (L,N)	4 (++, --)
0.25 / 2.5	0.25 / 2.5
0.25 / 2.5	0.25 / 2.5
24 / 12	24 / 12

Input	Output
PUSH IN with actuator	PUSH IN
2 (L,N)	4 (++, --)
0.25 / 2.5	0.25 / 2.5
0.25 / 2.5	0.25 / 2.5
24 / 12	24 / 12

Ordering data

Type	Qty.	Order No.
PRO INSTA 30W 12V 2.6A	1	2580220000
Note		

Type	Qty.	Order No.
PRO INSTA 30W 24V 1.3A	1	2580190000
Note		

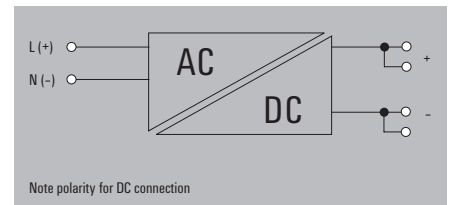
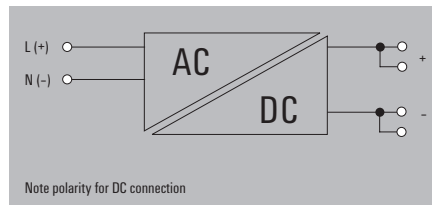
Type	Qty.	Order No.
PRO INSTA 30W 24V 1.3A	1	2580190000
Note		

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- 1-phase power supplies

PRO INSTA 60 W 12 V 5 A

PRO INSTA 60 W 24 V 2.5 A



Technical data

Input	
Rated input voltage	110...240 V AC / 120...340 V DC
Input voltage range AC	85...264 V AC (derating at 100 V AC)
AC current consumption	0.7 A @ 230 V AC / 1.5 A @ 100 V AC
Frequency range AC	45...65 Hz
DC input voltage range	95...370 V DC
DC current consumption	0.25 A @ 370 V DC / 0.8 A @ 120 V DC
Inrush current	max. 40 A
Output	
Rated output voltage	12 V DC ± 1 %
Nominal output current for U _{nom}	5 A @ 55 °C
Output voltage	9...16 V (adjustable via potentiometer on front)
Continuous output current @ U _{Nominal}	5 A @ 55 °C, 3.75 A @ 70 °C
Residual ripple, breaking spikes	<50 mV _{rms} @ U _{Nom} , Full Load
Capacitive load	unrestricted
MTBF	
According to Standard	Telcordia SR-332
Operating time (hours), min.	792000h
Ambient temperature	25°C
Input voltage	230V
Output power	60W
Duty cycle	100%
General data	
Degree of efficiency	86%
Power loss, idling	0.42 W
Power loss, nominal load	8.4 W
Protection against reverse voltages from the load	18...25 V DC
Depth x width x height	60 / 72 / 90 mm
Net weight	258 g
Approvals	
Approvals	cCSAus; CE; cULus; TUEV

Rated input voltage	110...240 V AC / 120...340 V DC
Input voltage range AC	85...264 V AC (derating at 100 V AC)
AC current consumption	0.7 A @ 230 V AC / 1.5 A @ 100 V AC
Frequency range AC	45...65 Hz
DC input voltage range	95...370 V DC
DC current consumption	0.25 A @ 370 V DC / 0.8 A @ 120 V DC
Inrush current	max. 40 A
Output	
Rated output voltage	24 V DC ± 1 %
Nominal output current for U _{nom}	2.5 A @ 55 °C
Output voltage	22...28 V (adjustable via potentiometer on front)
Continuous output current @ U _{Nominal}	2.5 A @ 55 °C, 1.56 A @ 70 °C
Residual ripple, breaking spikes	<50 mV _{rms} @ U _{Nom} , Full Load
Capacitive load	unrestricted
MTBF	
According to Standard	Telcordia SR-332
Operating time (hours), min.	1014000h
Ambient temperature	25°C
Input voltage	230V
Output power	60W
Duty cycle	100%
General data	
Degree of efficiency	89%
Power loss, idling	0.44 W
Power loss, nominal load	6.6 W
Protection against reverse voltages from the load	30...35 V DC
Depth x width x height	60 / 72 / 90 mm
Net weight	258 g
Approvals	
Approvals	cCSAus; CE; cULus; TUEV

Input	Output
PUSH IN with actuator	PUSH IN
2 (L,N)	4 (+/ -)
0.25 / 2.5 mm ²	0.25 / 2.5 mm ²
0.25 / 2.5 mm ²	0.25 / 2.5 mm ²
24 / 12	24 / 12

Connection data	
Connection system	PUSH IN with actuator
Number of terminals	4 (+/ -)
Wire cross-section, rigid min/max	0.25 / 2.5 mm ²
Wire cross-section, flexible min/max	0.25 / 2.5 mm ²
Wire cross-section, AWG/kcmil min/max	24 / 12
Note	

Ordering data

Type	Qty.	Order No.
PRO INSTA 60W 12V 5A	1	2580240000
Note		

Input	Output
PUSH IN with actuator	PUSH IN
2 (L,N)	4 (+/ -)
0.25 / 2.5 mm ²	0.25 / 2.5 mm ²
0.25 / 2.5 mm ²	0.25 / 2.5 mm ²
24 / 12	24 / 12

Input	Output
PUSH IN with actuator	PUSH IN
2 (L,N)	4 (+/ -)
0.25 / 2.5 mm ²	0.25 / 2.5 mm ²
0.25 / 2.5 mm ²	0.25 / 2.5 mm ²
24 / 12	24 / 12

Type	Qty.	Order No.
PRO INSTA 60W 24V 2.5A	1	2580230000
Note		

Type	Qty.	Order No.
PRO INSTA 60W 24V 2.5A	1	2580230000
Note		

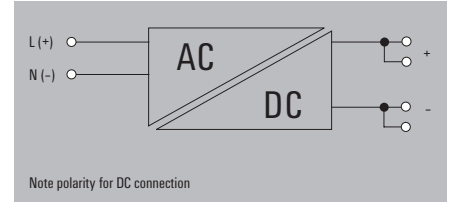
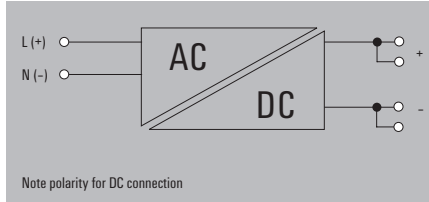
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- 1-phase power supplies

PRO INSTA 90 W 24 V 3.8 A

PRO INSTA 96 W 24 V 4 A



Technical data

Input	
Rated input voltage	110...240 V AC / 120...340 V DC
Input voltage range AC	85...264 V AC (derating at 100 V AC)
AC current consumption	1.2 A @ 230 V AC / 2.4 A @ 100 V AC
Frequency range AC	45...65 Hz
DC input voltage range	95...370 V DC
DC current consumption	0.4 A @ 370 V DC / 1.3 A @ 120 V DC
Inrush current	max. 40 A
Output	
Rated output voltage	24 V DC ± 1 %
Nominal output current for U _{nom}	3.8 A @ 55 °C
Output voltage	22...25 V (adjustable via potentiometer on front)
Continuous output current @ U _{Nominal}	3.8 A @ 55 °C, 2.38 A @ 70 °C
Residual ripple, breaking spikes	<50 mV _{rms} @ U _{Nom} , Full Load
Capacitive load	unrestricted
MTBF	
According to Standard	Telcordia SR-332
Operating time (hours), min.	619000h
Ambient temperature	25°C
Input voltage	230V
Output power	90W
Duty cycle	100%
General data	
Degree of efficiency	87 %
Power loss, idling	0.45 W
Power loss, nominal load	11.7 W
Protection against reverse voltages from the load	30...35 V DC
Depth x width x height	60 / 90 / 90 mm
Net weight	352 g
Approvals	
Approvals	cCSAus; CE; cULus; TUEV

Rated input voltage	110...240 V AC / 120...340 V DC
Input voltage range AC	85...264 V AC (derating at 100 V AC)
AC current consumption	1.2 A @ 230 V AC / 2.4 A @ 100 V AC
Frequency range AC	45...65 Hz
DC input voltage range	95...370 V DC
DC current consumption	0.4 A @ 370 V DC / 1.3 A @ 120 V DC
Inrush current	max. 40 A
Output	
Rated output voltage	24 V DC ± 1 %
Nominal output current for U _{nom}	3.8 A @ 55 °C
Output voltage	22...25 V (adjustable via potentiometer on front)
Continuous output current @ U _{Nominal}	3.8 A @ 55 °C, 2.38 A @ 70 °C
Residual ripple, breaking spikes	<50 mV _{rms} @ U _{Nom} , Full Load
Capacitive load	unrestricted
MTBF	
According to Standard	Telcordia SR-332
Operating time (hours), min.	619000h
Ambient temperature	25°C
Input voltage	230V
Output power	90W
Duty cycle	100%
General data	
Degree of efficiency	87 %
Power loss, idling	0.45 W
Power loss, nominal load	11.7 W
Protection against reverse voltages from the load	30...35 V DC
Depth x width x height	60 / 90 / 90 mm
Net weight	352 g
Approvals	
Approvals	cCSAus; CE; cULus; TUEV

Rated input voltage	110...240 V AC / 120...340 V DC
Input voltage range AC	85...264 V AC (derating at 100 V AC)
AC current consumption	1.2 A @ 230 V AC / 2.5 A @ 100 V AC
Frequency range AC	45...65 Hz
DC input voltage range	95...370 V DC
DC current consumption	0.4 A @ 370 V DC / 1.35 A @ 120 V DC
Inrush current	max. 40 A
Output	
Rated output voltage	24 V DC ± 1 %
Nominal output current for U _{nom}	4 A @ 55 °C
Output voltage	22...28 V (adjustable via potentiometer on front)
Continuous output current @ U _{Nominal}	4 A @ 55 °C, 2.5 A @ 70 °C
Residual ripple, breaking spikes	<50 mV _{rms} @ U _{Nom} , Full Load
Capacitive load	unrestricted
MTBF	
According to Standard	Telcordia SR-332
Operating time (hours), min.	613000h
Ambient temperature	25°C
Input voltage	230V
Output power	96W
Duty cycle	100%
General data	
Degree of efficiency	87 %
Power loss, idling	0.45 W
Power loss, nominal load	12.48 W
Protection against reverse voltages from the load	30...35 V DC
Depth x width x height	60 / 90 / 90 mm
Net weight	352 g
Approvals	
Approvals	cCSAus; CE; cULus; TUEV

Connection data	
Connection system	PUSH IN with actuator
Number of terminals	2 (L,N)
Wire cross-section, rigid min/max	0.25 / 2.5 mm ²
Wire cross-section, flexible min/max	0.25 / 2.5 mm ²
Wire cross-section, AWG/kcmil min/max	24 / 12
Note	

Input	Output
PUSH IN with actuator	PUSH IN
2 (L,N)	4 (+/+ / -/-)
0.25 / 2.5	0.25 / 2.5
0.25 / 2.5	0.25 / 2.5
24 / 12	24 / 12

Input	Output
PUSH IN with actuator	PUSH IN
2 (L,N)	4 (+/+ / -/-)
0.25 / 2.5	0.25 / 2.5
0.25 / 2.5	0.25 / 2.5
24 / 12	24 / 12

Ordering data

Type	Qty.	Order No.
PRO INSTA 90W 24V 3.8A	1	2580250000
Note		

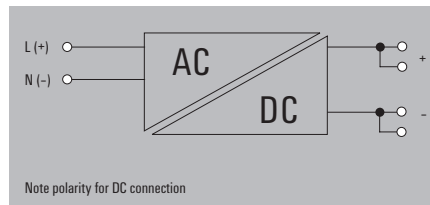
Type	Qty.	Order No.
PRO INSTA 90W 24V 3.8A	1	2580250000

Type	Qty.	Order No.
PRO INSTA 96W 24V 4A	1	2580260000
Note		

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- 1-phase power supplies

PRO INSTA 96 W 48 V 2 A



Technical data

Input	
Rated input voltage	110...240 V AC / 120...340 V DC
Input voltage range AC	85...264 V AC (derating at 100 V AC)
AC current consumption	1.2 A @ 230 V AC / 2.5 A @ 100 V AC
Frequency range AC	45...65 Hz
DC input voltage range	95...370 V DC
DC current consumption	0.4 A @ 370 V DC / 1.35 A @ 120 V DC
Inrush current	max. 40 A
Output	
Rated output voltage	48 V DC ± 1 %
Nominal output current for U _{nom}	2 A @ 55 °C
Output voltage	35...56 V (adjustable via potentiometer on front)
Continuous output current @ U _{Nominal}	2 A @ 55 °C, 1.25 A @ 70 °C
Residual ripple, breaking spikes	<50 mVss @ U _{Nominal} Full Load
Capacitive load	unrestricted
MTBF	
According to Standard	Telcordia SR-332
Operating time (hours), min.	648000h
Ambient temperature	25°C
Input voltage	230V
Output power	96W
Duty cycle	100%
General data	
Degree of efficiency	89%
Power loss, idling	0.45 W
Power loss, nominal load	10.56 W
Protection against reverse voltages from the load	58...62 V DC
Depth x width x height	60 / 90 / 90 mm
Net weight	361 g
Approvals	
Approvals	cCSAus; CE; cULus; TUEV

Rated input voltage	110...240 V AC / 120...340 V DC
Input voltage range AC	85...264 V AC (derating at 100 V AC)
AC current consumption	1.2 A @ 230 V AC / 2.5 A @ 100 V AC
Frequency range AC	45...65 Hz
DC input voltage range	95...370 V DC
DC current consumption	0.4 A @ 370 V DC / 1.35 A @ 120 V DC
Inrush current	max. 40 A
Rated output voltage	48 V DC ± 1 %
Nominal output current for U _{nom}	2 A @ 55 °C
Output voltage	35...56 V (adjustable via potentiometer on front)
Continuous output current @ U _{Nominal}	2 A @ 55 °C, 1.25 A @ 70 °C
Residual ripple, breaking spikes	<50 mVss @ U _{Nominal} Full Load
Capacitive load	unrestricted
According to Standard	Telcordia SR-332
Operating time (hours), min.	648000h
Ambient temperature	25°C
Input voltage	230V
Output power	96W
Duty cycle	100%
Degree of efficiency	89%
Power loss, idling	0.45 W
Power loss, nominal load	10.56 W
Protection against reverse voltages from the load	58...62 V DC
Depth x width x height	60 / 90 / 90 mm
Net weight	361 g
Approvals	cCSAus; CE; cULus; TUEV

Connection data	
Connection system	
Number of terminals	
Wire cross-section, rigid min/max	mm ²
Wire cross-section, flexible min/max	mm ²
Wire cross-section, AWG/kcmil min/max	
Note	

Input	Output
PUSH IN with actuator	PUSH IN
2 (L,N)	4 (++ / --)
0.25 / 2.5	0.25 / 2.5
0.25 / 2.5	0.25 / 2.5
24 / 12	24 / 12

Ordering data

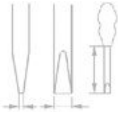
Type	Qty.	Order No.
PRO INSTA 96W 48V 2A	1	2580270000

Type	Qty.	Order No.
PRO INSTA 96W 48V 2A	1	2580270000

Note

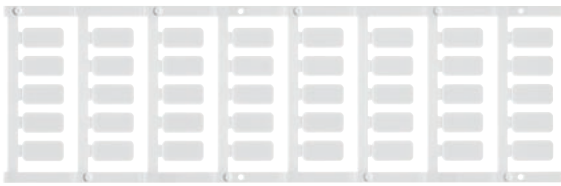
connectPower INSTAPOW^{ER} - Accessories

Small screwdriver



Type	Size/AF	a	b	c	Order No.
SDIS 0.5X3.0X100		0.5	3	100	2749800000

Markers



Type	Colour	Qty.	Order No.
SM 18/9.5 K MC NE WS	white	200	1248580000

End bracket

For DIN rail TS 35



Polyamide with fibre glass, screwable	Colour	Torque	Qty.	Order No.
WEW 35/1 SW	black	1.2 Nm	50	1162600000

Power supply PRO CP 20 W for smart meter applications

Small, compact & reliable

A

Weidmüller offers solutions for power and data transmission that comply with the relevant FNN standard (Forum Netztechnik / Netzbetriebe im VDE) and DIN VDE 0603-100. The PRO CP 20 W reliably supplies the gateways, controllers and meters.

The new PRO CP 20 W power supply unit was developed for use in buildings applications. It supplies devices that are connected to the smart meter with voltage in the 12 V or 24 V ranges. These include e.g. routers and LMN-distributors. The IP 30 protection rating and EN 60335-1 approval guarantee safe use without unauthorised persons coming into contact with the device. Thanks to the particularly small size of 30 millimetres, the power supply is completely hidden in the space for additional applications.

Your benefits at a glance:

- Powerful: For smart meter applications, the middle of the 3 poles remains unpopulated to achieve the desired surge voltage resistance
- Perfect fit: The power supply unit has an output power of 20 W (max. 1.6 A)
- Flexible: The input voltage range is wide at 100 - 277 volts AC
- Fused: The DIN rail distributor has an integrated 1.6 A fuse
- Safe: Complies with IP 30 protection class when plugged in (protected against solid foreign objects 2.5 mm in diameter and larger)



EN60335-1
For Domestic applications



Low installation depth of only 30 mm

With an installation depth of 30 mm, the PRO CP 20 W is unique on the market. It is well below the place for additional applications in the cabinet maximum depth of 45 mm for public buildings and private homes.



Protection degree IP 30

The power supply is completely concealed behind the protective additional application in control cabinets of buildings and therefore fulfils protection class IP 30, meaning that private individuals do not run the risk of coming into contact with dangerous voltages.



IEC/EN 60335-1 approved

With this approval, the PRO CP 20 W fulfils all the requirements necessary for devices in the distribution cabinet and in the building.



connectPower PRO CP**connectPower PRO CP**

- Powerful: For smart meter applications, the middle of the 3 poles remains unpopulated to achieve the desired surge voltage resistance
- Perfect fit: The power supply unit has an output power of 20 W (max. 1.6 A)
- Flexible: The input voltage range is wide at 100 - 277 V AC
- Fused: The DIN rail distributor has an integrated 1.6 A fuse
- Safe: Complies with IP 30 protection class when plugged in (protected against solid foreign objects 2.5 mm in diameter and larger)

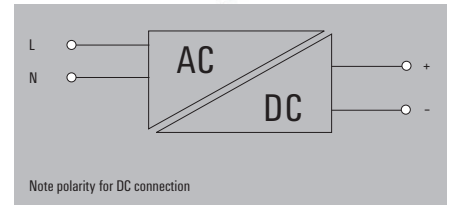
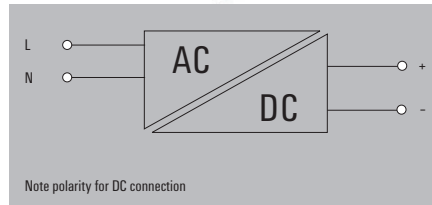
**Technical data**

General data	
Ambient temperature (operational)	-35 °C...50 °C
Protection degree	IP30
Mounting position, installation notice	Horizontal on DIN rail TS 35, top and bottom 50 mm clearance for free air flow, 10 mm clearance to neighbouring subassemblies., On TS 35 mounting rail, 50 mm clearance above and below for free air supply.
Signalling	
LED green	Operating voltage OK
EMC / shock / vibration	
EMC standards	EN IEC 61204-3
Insulation coordination	
Insulation voltage, input/output	4 kV
Protection class	II
Electrical safety (applied standards)	
Safety transformers for switch-mode power supplies	According to EN 61558-2-16

connectPower PRO CP

PRO CP 20W 12V 1.6A

PRO CP 20W 24V 0.8A



Technical data

Input	
Rated input voltage	100...277 V AC
Input voltage range AC	85 ... 305 V AC
Input current	450 mA
Frequency range AC	47...63 Hz
Nominal power consumption	22.99 VA
Input fuse	2 A time-lag fuse (internal)
Inrush current (typ.)	40 A
Output	
Rated output voltage	12 V DC ± 3 %
Output current, max.	1667 mA
Output voltage	11.64...12.36 V
Overload protection	120 ... 180 %, switch off mode
Max. residual ripple	120 mV _{ss}
Capacitive load	6.000 µF
MTBF	
According to Standard	MLT-HDBK-217F
Operating time (hours), min.	1000000h
Ambient temperature	25°C
Input voltage	230V
Output power	20W
Duty cycle	100%
General data	
Degree of efficiency (typ.)	87 %
Power loss, idling	100 mW
Short-circuit protection	Yes
Overvoltage category	III
Depth x width x height	29.5 / 26.5 / 83 mm
Net weight	79 g
Approvals	
Approvals	CE

Rated input voltage	100...277 V AC
Input voltage range AC	85 ... 305 V AC
Input current	450 mA
Frequency range AC	47...63 Hz
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Overvoltage category	III
Depth x width x height	29.5 / 26.5 / 83 mm
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Approvals	CE

Rated input voltage	100...277 V AC
Input voltage range AC	85 ... 305 V AC
Input current	450 mA
Frequency range AC	47...63 Hz
Nominal power consumption	22.99 VA
Input fuse	2 A time-lag fuse (internal)
Inrush current (typ.)	40 A
Rated output voltage	24 V DC ± 3 %
Output current, max.	833 mA
Output voltage	23.28...24.72 V
Overload protection	120 ... 180 %, switch off mode
Max. residual ripple	240 mV _{ss}
Capacitive load	3.000 µF
According to Standard	MLT-HDBK-217F
Operating time (hours), min.	1000000h
Ambient temperature	25°C
Input voltage	230V
Output power	20W
Duty cycle	100%
Degree of efficiency (typ.)	87 %
Power loss, idling	100 mW
Short-circuit protection	Yes
Overvoltage category	III
Depth x width x height	29.5 / 26.5 / 83 mm
Net weight	79 g
Approvals	CE

Connection data	
Connection system	PUSH IN with actuator
Number of terminals	2 (L,N)
Wire cross-section, rigid min/max	0.2 / 2.5 mm ²
Wire cross-section, flexible min/max	0.2 / 2.5 mm ²
Wire cross-section, AWG/kcmil min/max	26 / 12
Note	

Input	Output
PUSH IN with actuator	PUSH IN with actuator
2 (L,N)	2 (+ / -)
0.2 / 2.5	0.2 / 1.5
0.2 / 2.5	0.14 / 1.5
26 / 12	28 / 14

Input	Output
PUSH IN with actuator	PUSH IN with actuator
2 (L,N)	2 (+ / -)
0.2 / 2.5	0.2 / 1.5
0.2 / 2.5	0.14 / 1.5
26 / 12	28 / 14

Ordering data

Type	Qty.	Order No.
PRO CP 20W 12V 1.6A	1	3026100000

Type	Qty.	Order No.
PRO CP 20W 12V 1.6A	1	3026100000

Type	Qty.	Order No.
PRO CP 20W 24V 0.8A	1	3033220000

Note

Note

Note

Electronic load monitoring

Electronic load monitoring	topGUARD	B.2
	maxGUARD	B.8

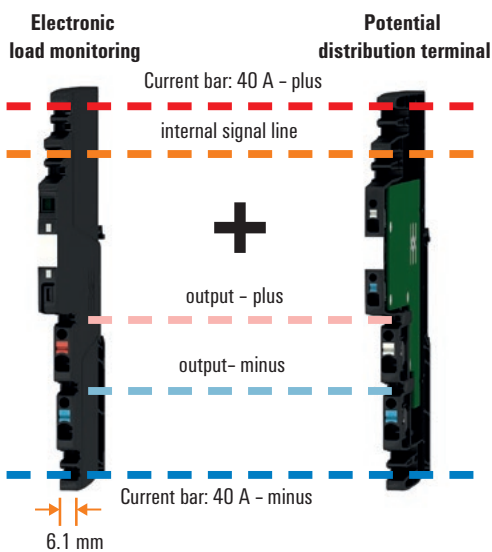
Intelligent protection of DC loads

topGUARD load monitoring system with communication via IO-LINK

Modern machines and plants require load monitoring systems capable of communication. The IO-Link-capable load monitoring system topGUARD offers remote control options, full data transparency, and reliable protection of the 24 V system voltage.

topGUARD is an outstanding supplement to the IO-LINK-capable PROtop power supplies for innovative power management systems. It saves space and time during device installation through an innovative approach to integrated distribution of potential. Parameterisation, control, and provision of all operating data are carried out by plugging in the IO-Link module and integrating an IO-Link file. The module can be used for PROtop power supplies as well as for topGUARD load monitoring.

Combination of load monitoring and potential distribution



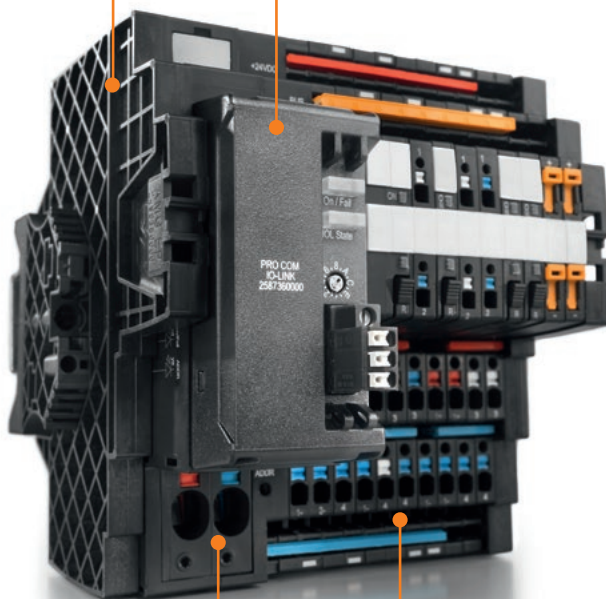
- Three main connection channels: positive, negative and internal signals
- Simple to increase the number of contacts thanks to crossconnection option in the potential distribution terminals



IO-LINK capable

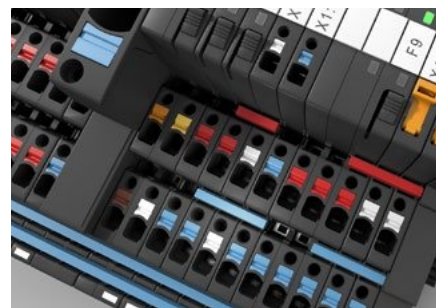
The IO-Link-capable load monitoring system topGUARD offers remote control options, provides operating data for optimal condition monitoring, and enables entirely new control solutions.

Data transparency and remote control thanks to IO-Link.



Modular and innovative

The modular concept enables custom-fit solutions. The first of its kind, voltage-adaptive class 2 load monitoring allows the continued use of 18 to 30 V DC operating voltage.



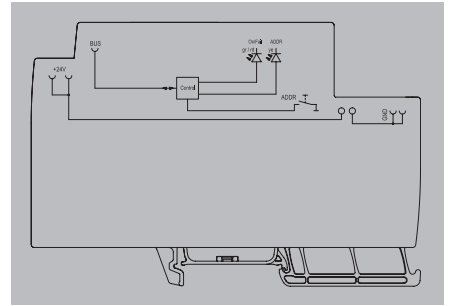
Integrated distribution of potential

The integrated distribution of potential, well known from the maxGUARD concept, takes up significantly less space and saves valuable time during installation.

topGUARD

topGUARD – power-feed module

TGD FIM-C



B

Technical data

Input
Input fuse (internal)
DC input voltage range
Rated input voltage
max. admissible residual ripple at the input
General data
Protection degree
Surge protection input, bus
Overvoltage category
Signalling
Yellow LED
LED green/red
Connection data
Number of terminals
Wire cross-section, AWG/kcmil min/max
Wire cross-section, flexible min/max
Wire cross-section, rigid min/max
Screwdriver blade
Approvals
Approvals
Note

No
18...30 V DC
24 V DC
100 mVpp
IP20
Suppressor diode
III
Address is assigned, Addresses being assigned (slow flashing, 1.5 Hz), Address error (fast flashing, 13 Hz)
Station ok (slow flashing green, 1.5 Hz), Device ok (fast flashing green, 13 Hz), Station error (slow flashing red, 1.5 Hz), Device error (fast flashing red, 13 Hz)
2 (+,-)
18..6
0.75...16 mm ²
0.75...10 mm ²
1.2 x 6.5
CE; cULus

Ordering data

Rated current
Note

Type	Qty.	Order No.
TGD FIM-C	1	2625000000

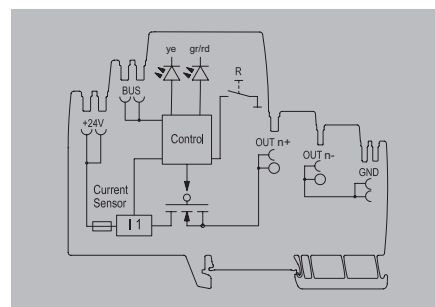
Accessories

Note

Type	Qty.	Order No.
PRO COM IO-LINK	1	2587360000

topGUARD – load monitoring adjustable

TGD ELM-12



Technical data

Input
Input fuse (internal)
DC input voltage range
Rated input voltage
max. admissible residual ripple at the input
Output
Connection system
Triggering characteristic
Adjustable range
Adjustable rated current
Capacitive load
Function key
Function key
General data
Relay to activate the output
Protection degree
Surge protection input, output, bus
Overvoltage category
Signalling
Yellow LED
LED green
Red LED
Connection data
Number of terminals
Wire cross-section, AWG/kcmil min/max
Wire cross-section, flexible min/max
Wire cross-section, rigid min/max
Screwdriver blade
Approvals
Approvals
Note

Yes
18...30 V DC
24 V DC
100 mVpp
PUSH IN
see characteristic curve
4-12 A
Yes
20,000 µF
Activation time < 3s, Reset, ON
No
IP20
Suppressor diode
III
Address is assigned, Address is being assigned (flashing)
Operation (failure-free), Early warning: I Out > 90% I Rated (flashing)
Load monitoring has disconnected, Load monitoring has triggered (flashing), Internal error (rapid flashing)
4 (++ / -)
26...12
0.14...2.5 mm ²
0.14...2.5 mm ²
0.6 x 3.5
CE; cULus

Ordering data

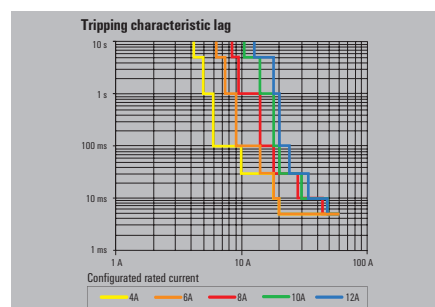
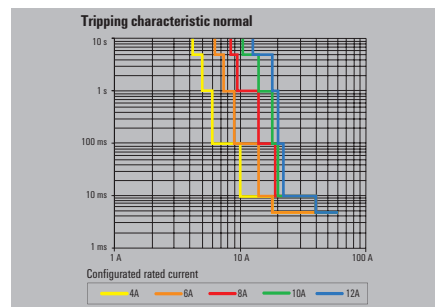
Rated current	12
Note	

Type	Qty.	Order No.
TGD ELM-12	1	2624990000

Accessories

Note

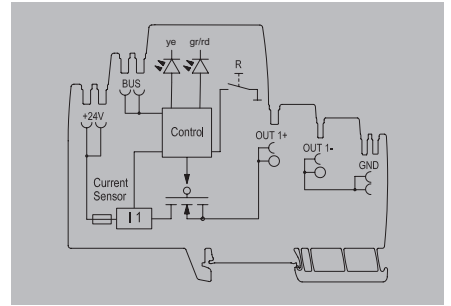
Type	Qty.	Order No.
AMG DIS	10	2123050000
AMG MD	10	2122930000
AMG OD	10	2122910000
AMG PD	10	2122920000



topGUARD

topGUARD – Adjustable load monitoring

TGD ELM-6



B

Technical data

Input
Input fuse (internal)
DC input voltage range
Rated input voltage
max. admissible residual ripple at the input
Output
Connection system
Triggering characteristic
Adjustable range
Capacitive load
Adjustable rated current
Function key
Function key
General data
Relay to activate the output
Protection degree
Surge protection input, output, bus
Overvoltage category
Signalling
Yellow LED
LED green
Red LED
Connection data
Number of terminals
Wire cross-section, AWG/kcmil min/max
Wire cross-section, flexible min/max
Wire cross-section, rigid min/max
Screwdriver blade
Approvals
Approvals
Note

Yes
18...30 V DC
24 V DC
100 mVpp
PUSH IN
see characteristic curve
1- 6 A
15,000 µF
Yes
Activation time < 3s, Reset, ON
No
IP20
Suppressor diode
III
Address is assigned, Address is being assigned (flashing)
Operation (failure-free), Early warning: I Out > 90% I Rated (flashing)
Load monitoring has disconnected, Load monitoring has triggered (flashing), Internal error (rapid flashing)
2 (+ / -)
26...12
0.14... 2.5 mm ²
0.14... 2.5 mm ²
0.6 x 3.5
CE; cULus

Ordering data

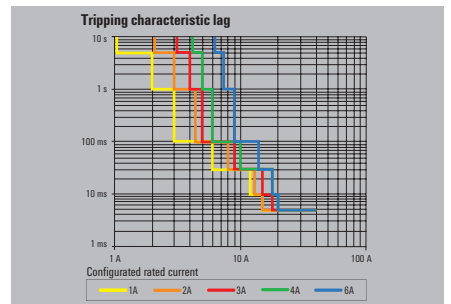
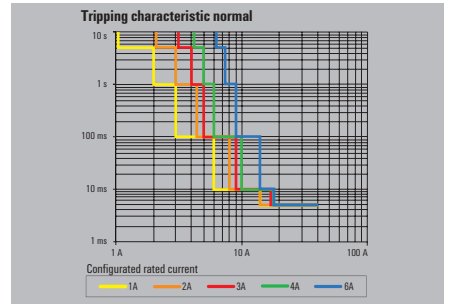
Rated current	6
Note	

Type	Qty.	Order No.
TGD ELM-6	1	2624980000

Accessories

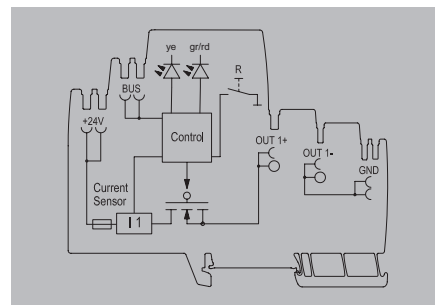
Note

Type	Qty.	Order No.
AMG DIS	10	2123050000
AMG MD	10	2122930000
AMG OD	10	2122910000
AMG PD	10	2122920000



topGUARD – Load monitoring class2

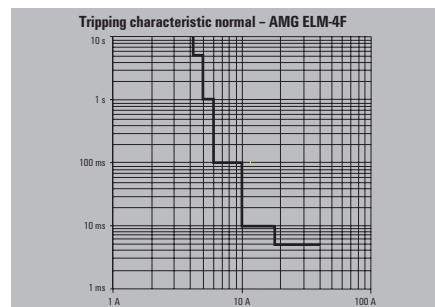
TGD ELM-4 CL2



Technical data

Input
Input fuse (internal)
DC input voltage range
Rated input voltage
max. admissible residual ripple at the input
Output
Connection system
Triggering characteristic
Capacitive load
Adjustable rated current
Function key
Function key
General data
Relay to activate the output
Protection degree
Surge protection input, output, bus
Overvoltage category
Signalling
Yellow LED
LED green
Red LED
Connection data
Number of terminals
Wire cross-section, AWG/kcmil min/max
Wire cross-section, flexible min/max
Wire cross-section, rigid min/max
Screwdriver blade
Approvals
Approvals
Note

Yes
18...30 V DC
24 V DC
100 mVpp
PUSH IN
see characteristic curve
4.700 µF
Yes
Activation time < 3s, Reset, ON
No
IP20
Suppressor diode
III
Address is assigned, Address is being assigned (flashing)
Operation (failure-free), Early warning: I Out > 90% I Rated (flashing)
Load monitoring has disconnected, Load monitoring has triggered (flashing), Internal error (rapid flashing)
2 (+ / -)
26...12
0.14...2.5 mm ²
0.14...2.5 mm ²
0.6 x 3.5
CE; cULus



Ordering data

Rated current	4
Note	

Type	Qty.	Order No.
TGD ELM-4 CL2	1	2656670000

Accessories

Note

Type	Qty.	Order No.
AMG DIS	10	2123050000
AMG MD	10	2122930000
AMG OD	10	2122910000
AMG PD	10	2122920000

Load monitoring and potential distribution in one complete solution

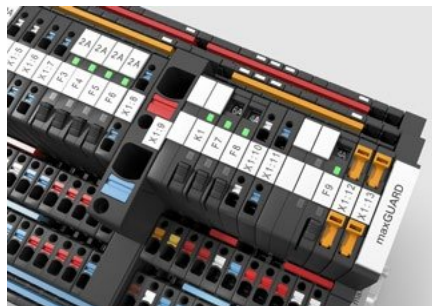
maxGUARD – taking control voltage distribution to a new level

Fail-safe and maintenance-friendly control voltage distributions that can be installed in a time- and space-saving manner are a must for efficient machine and facility operation. With the new maxGUARD system, the terminal blocks (previously installed separately) for distributing potential to the outputs of the electronic load monitors become an integral part of a 24 V DC control voltage distribution solution. The new combination of load monitoring and potential distribution saves time during installation, increases safety against failure and reduces the amount of space required on the terminal rail by 50 %.



Extreme ease of servicing

Sophisticated operating, testing and connection elements permit safe access to all voltage potentials and load circuits during commissioning and maintenance.



Particularly space-saving

Electronic load monitors and potential distributors with a 6.1 mm pitch.



Integrated test point

Consistently integrated test points in the maxGUARD control voltage distribution's input and output speed up troubleshooting operations.



now up to
70°C
usable

Practical disconnecting lever

Potential distributor with a disconnecting lever for simple galvanic isolation of the load circuit for testing and checking purposes.

**Unique cross-connectors**

Less time and effort needed for wiring due to cross-connections between load monitoring and potential distribution terminals.



Time saving
of up to
20%

Can be used in a customised way

The sheer range of variants and the very different potential distribution terminals and additional components enable customised solutions at all times.

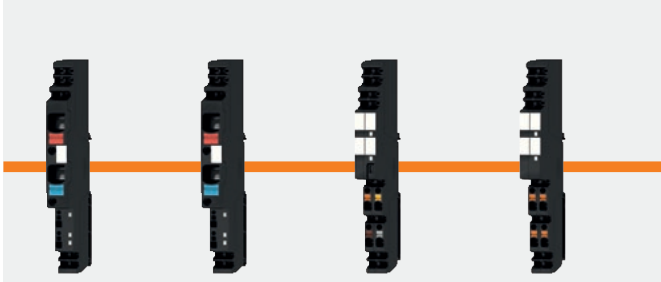
maxGUARD – product overview

Flexible and modular design

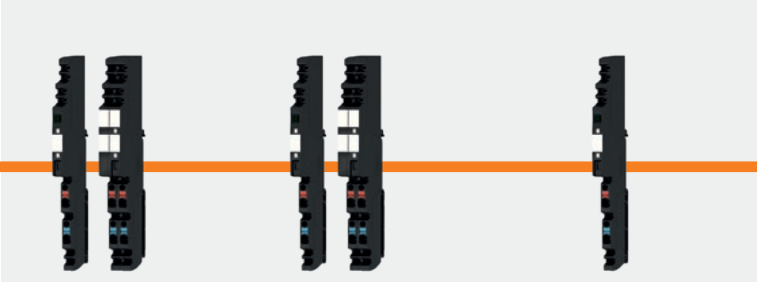
B

Supply terminals, control and alarm modules

Electronic load monitoring



Supply terminal 16 mm ² Passive	Supply terminal 16 mm ² With alarm and reset function	Control module Alarm Reset I > 90 % ON/OFF	Alarm module Potential-free contacts for alarm I > 90 %
---	---	---	--



Fixed-value modules 1 / 2 / 4 / 6 A 6.1 mm housing 8 A / 10 A 12.2 mm housing	Adjustable module 1 - 2 - 3 - 4 - 6 A 6,1 mm housing 4 - 6 - 8 - 10 - 12 A 12,2 mm housing 10 - 12 - 14 - 16 - 18 A 12.2 mm housing	Adjustable module 0.1...1A 6.1 mm housing with current limiting function
--	--	--

Power-feed, control and alarm module

Alarm module with potential-free contacts for the "Alarm" and "I > 90 %" signals.
Control module with extended control function.
Passive or active power-feed module with reset and alarm function

Load monitoring (fixed value)

Electronic load monitoring with fixed current (without I > 90 % function)

Load monitoring adjustable

Electronic load monitoring with adjustable tripping current and triggering characteristic (with I > 90 % function)

Load monitoring adjustable

Load monitoring device with adjustable tripping current und current limiting function (with I > 90 % function)

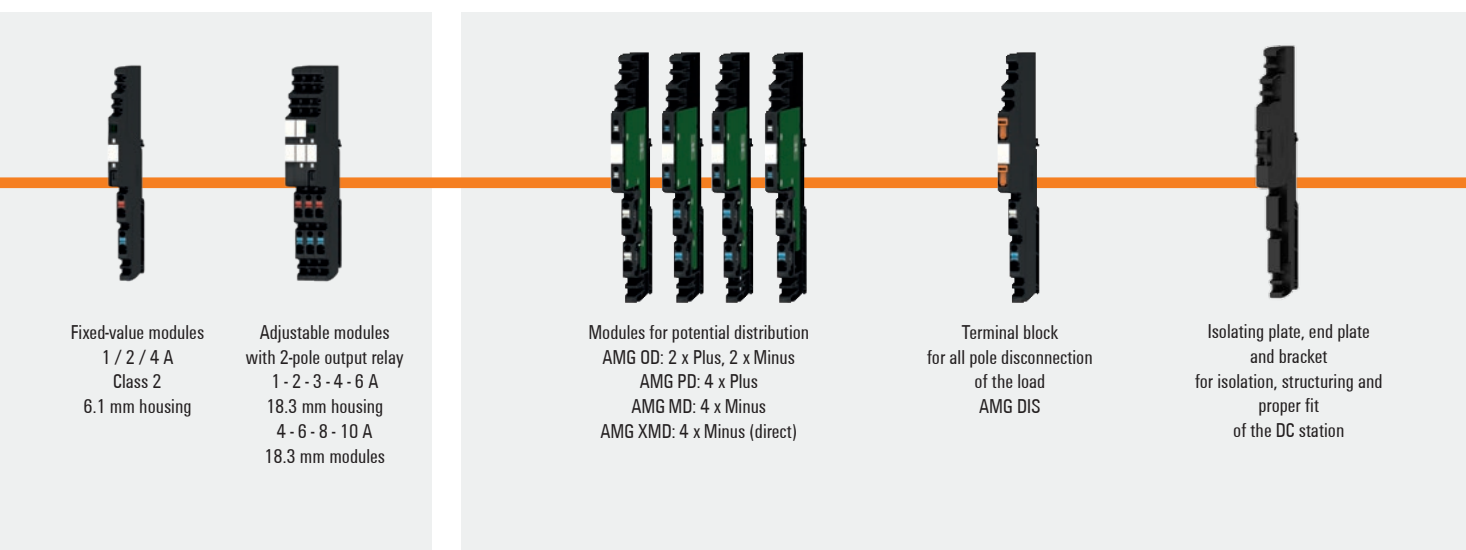
Type	Order No.
AMG FIM-O	2081870000
AMG FIM-C	2081880000
AMG FIM-O EX	2082530000
AMG FIM-C EX	2082540000
AMG CM	2081900000
AMG CM EX	2083360000
AMG AM	2081890000
AMG AM CO	2082770000

Type	Order No.
AMG ELM-1F	2080420000
AMG ELM-1F EX	2082040000
AMG ELM-2F	2080480000
AMG ELM-2F EX	2082050000
AMG ELM-4F	2080490000
AMG ELM-4F EX	2082060000
AMG ELM-6F	2080500000
AMG ELM-6F EX	2082310000
AMG ELM-8F	2080600000
AMG ELM-8F EX	2082320000
AMG ELM-10F	2080650000
AMG ELM-10F EX	2082430000

Type	Order No.
AMG ELM-6	2080360000
AMG ELM-6 EX	2082000000
AMG ELM-12	2080410000
AMG ELM-12 EX	2082010000
AMG ELM-18	2859800000
AMG ELM-18 EX	2838520000

Type	Order No.
AMG ELM-1 LIM CL2 EX	2838530000

Potential distribution and accessories



Fixed-value modules
1 / 2 / 4 A
Class 2
6.1 mm housing

Adjustable modules
with 2-pole output relay
1 - 2 - 3 - 4 - 6 A
18.3 mm housing
4 - 6 - 8 - 10 A
18.3 mm modules

Modules for potential distribution
AMG OD: 2 x Plus, 2 x Minus
AMG PD: 4 x Plus
AMG MD: 4 x Minus
AMG XMD: 4 x Minus (direct)

Terminal block
for all pole disconnection
of the load
AMG DIS

Isolating plate, end plate
and bracket
for isolation, structuring and
proper fit
of the DC station

**Load monitoring (fixed value)
Class 2**

Electronic load monitoring with fixed rated current (without I > 90 % pre warning)
Class 2 Approval

Load monitoring with relay

Electronic load monitoring with 2-pole output relay for allpole load disconnection; triggering current and triggering characteristic adjustable (with I > 90 % function)

Potential distributor

Flexible application through various potential distributor.

End plate and Separation plate

End plate for mechanical stabilization. Separation plate for logical subdivision.

Type	Order No.
AMG ELM-1F CL2	2491270000
AMG ELM-2F CL2	2491280000
AMG ELM-4F CL2	2491290000

Type	Order No.
AMG ELM-6D CO	2082440000
AMG ELM-10D CO	2082470000

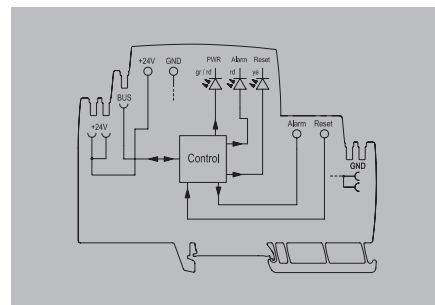
Type	Order No.
AMG MD	2122930000
AMG MD EX	2495040000
AMG OD	2122910000
AMG OD EX	2495090000
AMG PD	2122920000
AMG PD EX	2495070000
AMG XMD	2122940000
AMG XMD EX	2495080000
AMG DIS	2123050000
AMG DIS EX	2495100000

Type	Order No.
AMG PP	2123000000
AMG EP	2495380000
AMG EP KIT	2500760000

maxGUARD – power-feed module

Active power-feed module with reset and alarm function

AMG FIM-C



Technical data

Input	
Input fuse (internal)	No
DC input voltage range	18...30 V DC
Rated input voltage	24 V DC
Current consumption (idle)	20 mA
Current consumption (full load)	120 mA
max. admissible residual ripple at the input	100 mVpp
General data	
Protection degree	IP20
Control inputs	Reset
Surge protection input, output, bus	Suppressor diode
Overtoltage category	III
Signalling	
Yellow LED	External reset is signalled, Alarm is signalled
LED green	Operating voltage OK
Red LED	Alarm
Transistor output, positive-switching	Alarm
Connection data	
Number of terminals	2 (+,-)
Wire cross-section, AWG/kcmil min/max	18...6 AWG
Wire cross-section, flexible min/max	0.75...16 mm ²
Wire cross-section, rigid min/max	0.75...10 mm ²
Screwdriver blade	1.2 x 6.5
Approvals	
Approvals	CE; cULus; TUEV
Note	

Input		
	No	
General data		
	IP20	
	Reset	
	Suppressor diode	
	III	
Signalling		
	External reset is signalled, Alarm is signalled	
	Operating voltage OK	
	Alarm	
	Alarm	
Connection data		
	2 (+,-)	
	18...6 AWG	
	0.75...16 mm ²	
	0.75...10 mm ²	
	1.2 x 6.5	
Approvals		
	CE; cULus; TUEV	
Note		

Ordering data

Rated current	
Note	

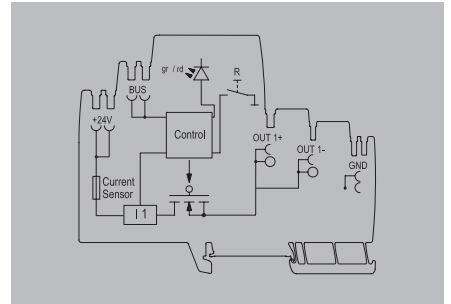
Type	Qty.	Order No.
AMG FIM-C	1	2081880000

maxGUARD

maxGUARD – load monitoring (fixed value)

Electronic load monitoring with fixed current (without I > 90% function > 90 %)

AMG ELM - xF



B

Technical data

Input	
Input fuse (internal)	Yes
DC input voltage range	18...30 V DC
Rated input voltage	24 V DC
Current consumption (idle) / Current consumption (full load)	25 mA / I _{OUT} +30 mA
max. admissible residual ripple at the input	100 mVpp
Output	
Connection system	PUSH IN
Triggering characteristic	see characteristic curve
Switch-on delay	1 s
Capacitive load	2080420000: 10,000 µF; 2080480000: 10,000 µF; 2080490000: 10,000 µF; 2080500000: 15,000 µF
Function key	
LED initial state	LED green, in operation LED flashing red, load monitoring has triggered (disconnected) LED red (permanently lit)
Pressing the button	> 0.1 to 2 s (manual disconnect) > 0.1 to 2 s (confirm and reset) > 0.1 to 2 s (restart)
LED, subsequent state	Red LED switched off Red LED switched off LED green switched on
General data	
Relay to activate the output	No
Surge protection input, output, bus	Suppressor diode
Protection degree / Overvoltage category	IP20 / III
Signalling	
LED green	Operation (failure-free)
Red LED	Load monitoring has disconnected, Load monitoring has triggered (flashing), Internal error (rapid flashing)
Connection data	
Number of terminals	2 (+ / -)
Wire cross-section, AWG/kcmil min/max	26...12 AWG
Wire cross-section, flexible min/max	0.14...2.5 mm ²
Wire cross-section, rigid min/max	0.14...2.5 mm ²
Screwdriver blade	0.6 x 3.5
Approvals	
Approvals	CE; cULus; TUEV
Note	

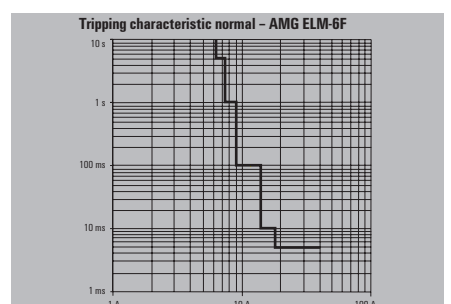
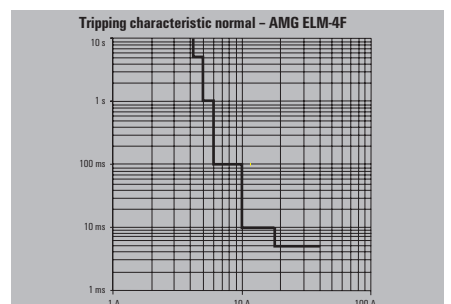
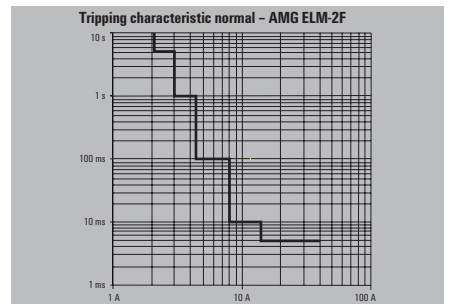
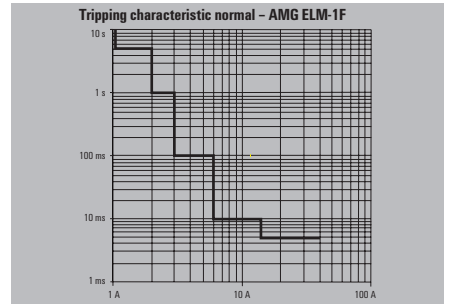
Ordering data

Rated current	1 A
	2 A
	4 A
	6 A
Note	

Accessories

Type	Qty.	Order No.
AMG DIS	10	2123050000
AMG MD	10	2122930000
AMG OD	10	2122910000
AMG PD	10	2122920000
Note		

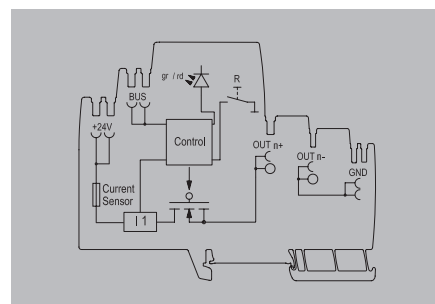
Type	Qty.	Order No.
AMG ELM-1F	1	2080420000
AMG ELM-2F	1	2080480000
AMG ELM-4F	1	2080490000
AMG ELM-6F	1	2080500000



maxGUARD – load monitoring (fixed value)

Electronic load monitoring with fixed rated current
(without I > 90 % pre warning > 90 %)

AMG ELM - xF



Technical data

Input	
Input fuse (internal)	Yes
DC input voltage range	18...30 V DC
Rated input voltage	24 V DC
Current consumption (idle)	25 mA
Current consumption (full load)	I _{OUT} +30 mA
max. admissible residual ripple at the input	100 mVpp
Output	
Connection system	PUSH IN
Triggering characteristic	see characteristic curve
Switch-on delay	1 s
Capacitive load	208060000: 15,000 µF; 208065000: 20,000 µF
Function key	
LED initial state	LED green, in operation
Pressing the button	> 0.1 to 2 s (manual disconnect)
LED, subsequent state	LED flashing red, load monitoring has triggered (disconnected)
Output, subsequent state	LED red (permanently lit)
General data	
Relay to activate the output	No
Protection degree	IP20
Surge protection input, output, bus	Suppressor diode
Oversvoltage category	III
Signalling	
LED green	Operation (failure-free)
Red LED	Load monitoring has disconnected, Load monitoring has triggered (flashing), Internal error (rapid flashing)
Connection data	
Number of terminals	4 (++ / -)
Wire cross-section, AWG/kcmil min/max	26...12 AWG
Wire cross-section, flexible min/max	0.14...2.5 mm ²
Wire cross-section, rigid min/max	0.14...2.5 mm ²
Screwdriver blade	0.6 x 3.5
Approvals	
Approvals	CE; cULus; TUEV
Note	

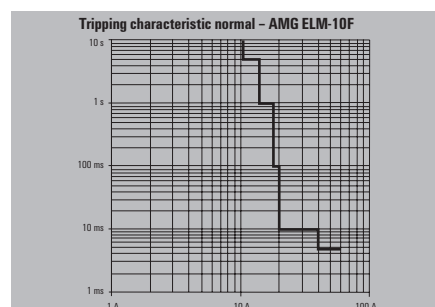
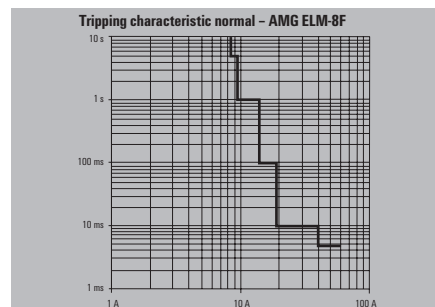
Type	Qty.	Order No.
AMG ELM-8F	1	2080600000
AMG ELM-10F	1	2080650000

Ordering data

Rated current	
	8 A
	10 A
Note	

Accessories

Type	Qty.	Order No.
AMG DIS	10	2123050000
AMG MD	10	2122930000
AMG OD	10	2122910000
AMG PD	10	2122920000
Note		



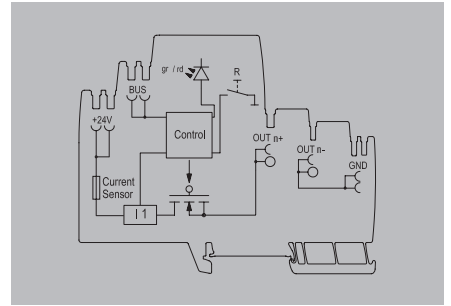
maxGUARD

maxGUARD – load monitoring (fixed value), Class 2

Electronic load monitoring with fixed rated current (without I > 90 % pre warning)

- Class 2 Approval

AMG ELM - xF CL2



Technical data

Input	
Input fuse (internal)	Yes
DC input voltage range	18...30 V DC
Rated input voltage	24 V DC
Current consumption (idle)	25 mA
Current consumption (full load)	I _{OUT} +30 mA
max. admissible residual ripple at the input	100 mVpp
Output	
Connection system	PUSH IN
Triggering characteristic	see characteristic curve
Switch-on delay	1 s
Capacitive load	2491270000: 4.700 µF; 2491280000: 4.700 µF; 2491290000: 4.700 µF
Function key	
LED initial state	LED green, in operation LED flashing red, load monitoring has triggered (disconnected) LED red (permanently lit)
Pressing the button	> 0.1 to 2 s (manual disconnect) > 0.1 to 2 s (confirm and reset) > 0.1 to 2 s (restart)
LED, subsequent state	Red LED switched off Red LED switched off LED green switched on
General data	
Relay to activate the output	No
Protection degree	IP20
Surge protection input, output, bus	Suppressor diode
Overvoltage category	III
Signalling	
LED green	Operation (failure-free)
Red LED	Load monitoring has disconnected, Load monitoring has triggered (flashing), Internal error (rapid flashing)
Connection data	
Number of terminals	2 (+ / -)
Wire cross-section, AWG/kcmil min/max	26...12 AWG
Wire cross-section, flexible min/max	0.14...2.5 mm ²
Wire cross-section, rigid min/max	0.14...2.5 mm ²
Screwdriver blade	0.6 x 3.5
Approvals	
Approvals	CE; cULus; TUEV
Note	

Ordering data

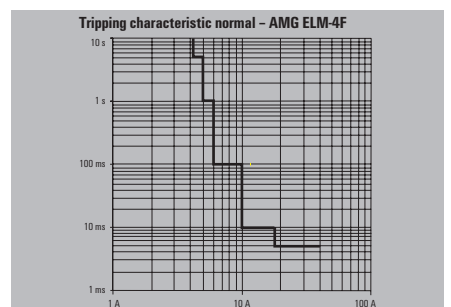
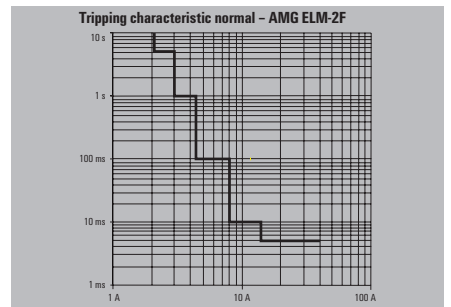
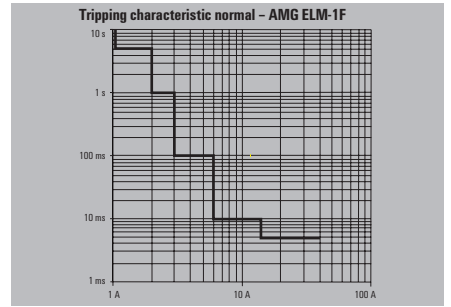
	1 A
	2 A
	4 A
Note	

Accessories

Note	
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Type	Qty.	Order No.
AMG ELM-1F CL2	1	2491270000
AMG ELM-2F CL2	1	2491280000
AMG ELM-4F CL2	1	2491290000

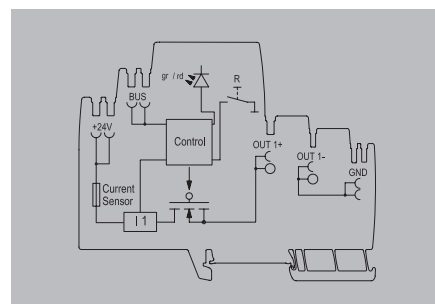
Type	Qty.	Order No.
AMG DIS	10	2123050000
AMG MD	10	2122930000
AMG OD	10	2122910000
AMG PD	10	2122920000



maxGUARD – load monitoring adjustable

Electronic load monitoring with adjustable triggering current and triggering characteristic

AMG ELM-6



Technical data

Input	
Input fuse (internal)	Yes
DC input voltage range	18...30 V DC
Rated input voltage	24 V DC
Current consumption (idle)	25 mA
Current consumption (full load)	I _{OUT} +30 mA
max. admissible residual ripple at the input	100 mVpp
Output	
Connection system	PUSH IN
Triggering characteristic	see characteristic curve
Adjustable range	1, 2, 3, 4, 6 A
Switch-on delay	1 s
Capacitive load	15,000 µF
Adjustable rated current	Yes
Function key	
LED initial state	LED green, in operation
Pressing the button	> 0.1 to 2 s (manual disconnect)
LED, subsequent state	LED flashing red, load monitoring has triggered (disconnected)
Output, subsequent state	Red LED switched off
General data	
Relay to activate the output	No
Protection degree	IP20
Surge protection input, output, bus	Suppressor diode
Oversvoltage category	III
Signalling	
LED green	Operation (failure-free), Early warning: I _{Out} > 90% I _{Rated} (flashing)
Red LED	Load monitoring has disconnected, Load monitoring has triggered (flashing), Internal error (rapid flashing)
Connection data	
Number of terminals	2 (+ / -)
Wire cross-section, AWG/kcmil min/max	26...12 AWG
Wire cross-section, flexible min/max	0.14...2.5 mm ²
Wire cross-section, rigid min/max	0.14...2.5 mm ²
Screwdriver blade	0.6 x 3.5
Approvals	
Approvals	CE; cULus; TUEV
Note	

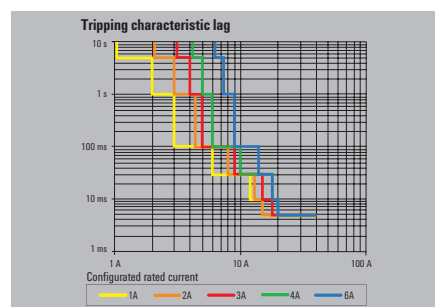
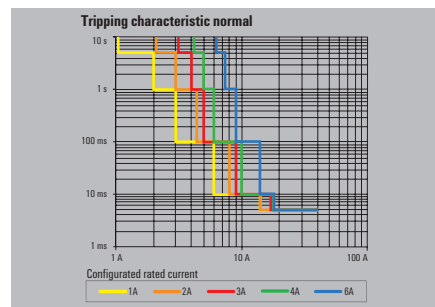
LED green, in operation	LED flashing red, load monitoring has triggered (disconnected)	LED red (permanently lit)
> 0.1 to 2 s (manual disconnect)	> 0.1 to 2 s (confirm and reset)	> 0.1 to 2 s (restart)
Red LED switched off	Red LED switched off	LED green switched on
Operation (failure-free), Early warning: I _{Out} > 90% I _{Rated} (flashing)		
Load monitoring has disconnected, Load monitoring has triggered (flashing), Internal error (rapid flashing)		
Type		
AMG ELM-6	Qty. 1	Order No. 2080360000

Ordering data

Rated current	6 A
Note	

Accessories

Type	Qty.	Order No.
AMG DIS	10	2123050000
AMG MD	10	2122930000
AMG OD	10	2122910000
AMG PD	10	2122920000
Note		

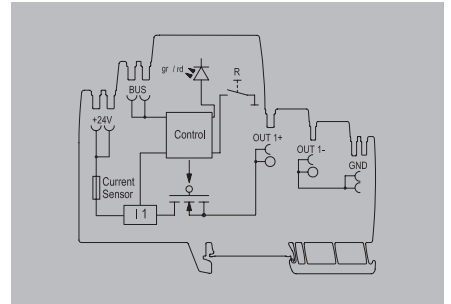


maxGUARD

maxGUARD – load monitoring adjustable

Electronic load monitoring with adjustable trigger current and characteristic (with I > 90 % pre warning > 90 %)

AMG ELM-12



Technical data

Input	
Input fuse (internal)	Yes
DC input voltage range	18...30 V DC
Rated input voltage	24 V DC
Current consumption (idle)	25 mA
Current consumption (full load)	I _{OUT} +30 mA
max. admissible residual ripple at the input	100 mVpp
Output	
Connection system	PUSH IN
Triggering characteristic	see characteristic curve
Adjustable range	4, 6, 8, 10, 12 A
Switch-on delay	1 s
Adjustable rated current	Yes
Capacitive load	20,000 µF
Function key	
LED initial state	LED green, in operation LED flashing red, load monitoring has triggered (disconnected) LED red (permanently lit)
Pressing the button	> 0.1 to 2 s (manual disconnect) > 0.1 to 2 s (confirm and reset) > 0.1 to 2 s (restart)
LED, subsequent state	Red LED switched off Red LED switched off LED green switched on
General data	
Relay to activate the output	No
Protection degree	IP20
Surge protection input, output, bus	Suppressor diode
Overvoltage category	III
Signalling	
LED green	Operation (failure-free), Early warning: I Out > 90% I Rated (flashing)
Red LED	Load monitoring has disconnected, Load monitoring has triggered (flashing), Internal error (rapid flashing)
Connection data	
Number of terminals	4 (++ / -)
Wire cross-section, AWG/kcmil min/max	26...12 AWG
Wire cross-section, flexible min/max	0.14...2.5 mm ²
Wire cross-section, rigid min/max	0.14...2.5 mm ²
Screwdriver blade	0.6 x 3.5
Approvals	
Approvals	CE; cULus; TUEV
Note	

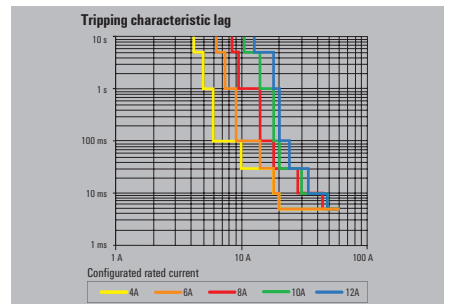
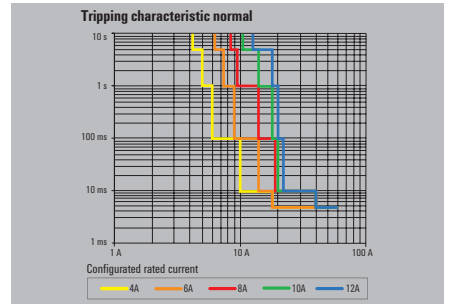
Ordering data

Rated current	12 A
Note	

Accessories

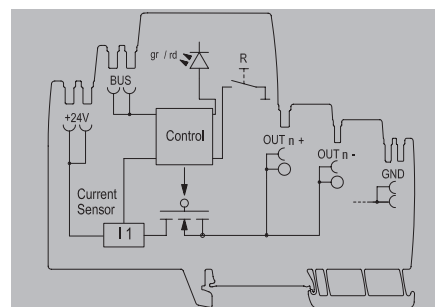
Type	Qty.	Order No.
AMG DIS	10	2123050000
AMG MD	10	2122930000
AMG OD	10	2122910000
AMG PD	10	2122920000
Note		

Type	Qty.	Order No.
AMG ELM-12	1	2080410000



maxGUARD – load monitoring adjustable

AMG ELM-18



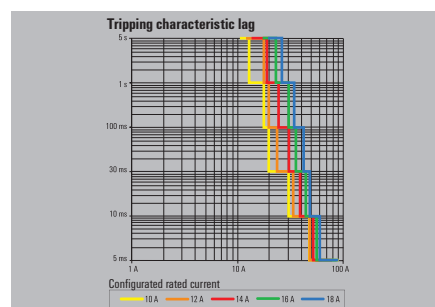
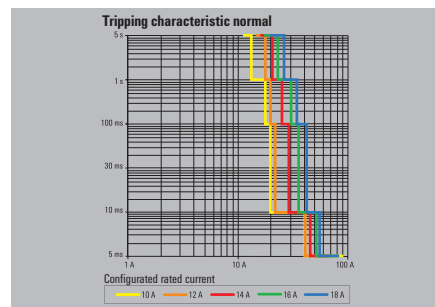
Technical data

Input	
Input fuse (internal)	Yes
DC input voltage range	18...30 V DC
Rated input voltage	24 V DC
Current consumption (idle)	25 mA
Current consumption (full load)	I _{OUT} +30 mA
max. admissible residual ripple at the input	100 mVpp
Output	
Connection system	PUSH IN
Triggering characteristic	see characteristic curve
Adjustable range	11, 12, 14, 16, 18 A
Switch-on delay	1 s
Adjustable rated current	Yes
Capacitive load	50 mF
Function key	
LED initial state	LED green, in operation
Pressing the button	> 0.1 to 2 s (manual disconnect)
LED, subsequent state	LED flashing red, load monitoring has triggered (disconnected)
Output, subsequent state	Red LED switched off
General data	
Relay to activate the output	No
Protection degree	IP20
Surge protection input, output, bus	Suppressor diode
Overvoltage category	III
Signalling	
LED green	Operation (failure-free), Early warning: I _{Out} > 90% I _{Rated} (flashing)
Red LED	Load monitoring has disconnected, Load monitoring has triggered (flashing), Internal error (rapid flashing)
Connection data	
Number of terminals	4 (++ / -)
Wire cross-section, AWG/kcmil min/max	26...12 AWG
Wire cross-section, flexible min/max	0.14...2.5 mm ²
Wire cross-section, rigid min/max	0.14...2.5 mm ²
Screwdriver blade	0.6 x 3.5
Approvals	
Approvals	CE, cULus
Note	

LED flashing red, load monitoring has triggered (disconnected)	LED red (permanently lit)
> 0.1 to 2 s (confirm and reset)	> 0.1 to 2 s (restart)
Red LED switched off	LED green switched on
Operation (failure-free), Early warning: I _{Out} > 90% I _{Rated} (flashing)	
Load monitoring has disconnected, Load monitoring has triggered (flashing), Internal error (rapid flashing)	
Type	
AMG ELM-18	Qty. 1
Order No.	
285980000	

Ordering data

Rated current	
	18 A
Note	



maxGUARD

maxGUARD – load monitoring with relay

Electronic load monitoring with 2-pole output relay for all-pole load disconnection; triggering current and triggering characteristic adjustable.

Technical data

Input	
Input fuse (internal)	Yes
DC input voltage range	18...30 V DC
Rated input voltage	24 V DC
Current consumption (idle)	40 mA
max. admissible residual ripple at the input	100 mVpp
Output	
Connection system	PUSH IN
Triggering characteristic	see characteristic curve
Adjustable range	2082470000: 4- 10 A 2082440000: 1- 6 A
Switch-on delay	1 s
Adjustable rated current	Yes
Capacitive load	2082470000: 20,000 µF 2082440000: 15,000 µF
Function key	
LED initial state	LED green, in operation LED flashing red, load monitoring has triggered (disconnected) LED red (permanently lit)
Pressing the button	> 0.1 to 2 s (manual disconnect) > 0.1 to 2 s (confirm and reset) > 0.1 to 2 s (restart)
LED, subsequent state	Red LED switched off Red LED switched off LED green switched on
Output, subsequent state	
General data	
Relay to activate the output	Yes
Protection degree / Surge protection	IP20 / Suppressor diode
Conformal coating	Yes
Surge protection input, output, bus	Suppressor diode
Signalling	
LED green	Operation (failure-free), Early warning: I Out > 90% I Rated (flashing)
Red LED	Load monitoring has disconnected, Load monitoring has triggered (flashing), Internal error (rapid flashing)
Connection data	
Number of terminals	6 (3x + / 3x -)
Wire cross-section, AWG/kcmil min/max	26 AWG...12 AWG
Wire cross-section, flexible min/max	0.14...2.5 mm ²
Wire cross-section, rigid min/max	0.14...2.5 mm ²
Screwdriver blade	0.6 x 3.5
Approvals	
Approvals	ABS; BURVER; CE; cULus; DETNORVER; LLOYDSREG; RINA; TUEV

Note

Ordering data

Rated current	
	6 A
	10 A
Note	

Accessories

Note	
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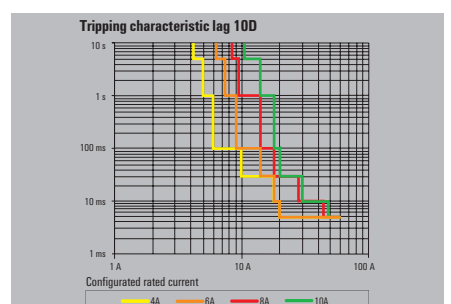
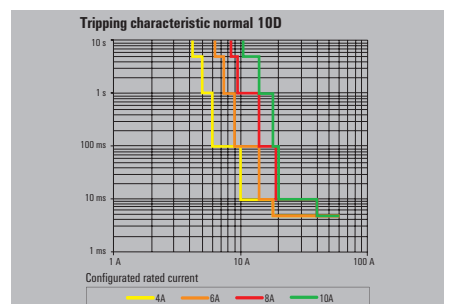
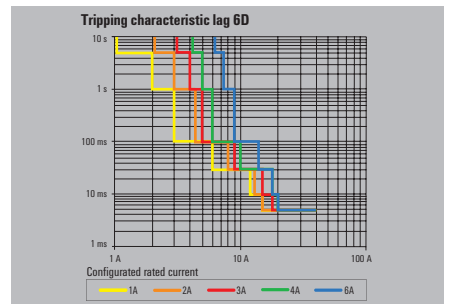
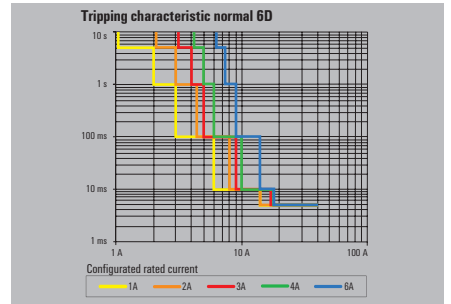
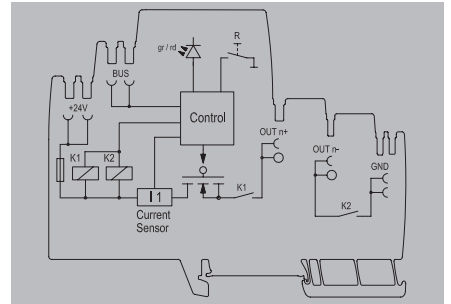
AMG ELM – adjustable with output relay



Input		
Yes		
18...30 V DC		
24 V DC		
40 mA		
100 mVpp		
Output		
PUSH IN		
see characteristic curve		
2082470000: 4- 10 A 2082440000: 1- 6 A		
1 s		
Yes		
2082470000: 20,000 µF 2082440000: 15,000 µF		
LED green, in operation	LED flashing red, load monitoring has triggered (disconnected)	LED red (permanently lit)
> 0.1 to 2 s (manual disconnect)	> 0.1 to 2 s (confirm and reset)	> 0.1 to 2 s (restart)
Red LED switched off	Red LED switched off	LED green switched on
General data		
Yes		
IP20 / Suppressor diode		
Yes		
Suppressor diode		
Signalling		
Operation (failure-free), Early warning: I Out > 90% I Rated (flashing)		
Load monitoring has disconnected, Load monitoring has triggered (flashing), Internal error (rapid flashing)		
Connection data		
6 (3x + / 3x -)		
26 AWG...12 AWG		
0.14...2.5 mm ²		
0.14...2.5 mm ²		
0.6 x 3.5		
Approvals		
ABS; BURVER; CE; cULus; DETNORVER; LLOYDSREG; RINA; TUEV		

Type	Qty.	Order No.
AMG ELM-6D CO	1	2082440000
AMG ELM-10D CO	1	2082470000

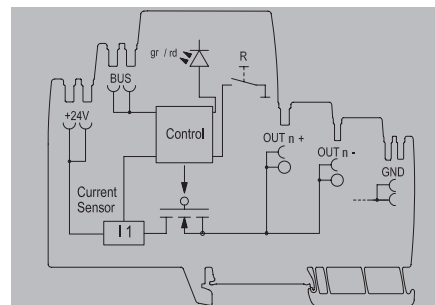
Type	Qty.	Order No.
AMG DIS	10	2123050000
AMG MD	10	2122930000
AMG OD	10	2122910000
AMG PD	10	2122920000



maxGUARD – load monitoring adjustable with current limitation

Electronic load monitoring with current-limited characteristic curve, tripping current and tripping characteristic adjustable (with I > 90 % function).

AMG ELM – adjustable with current limitation



Technical data

Input	
Input fuse (internal)	Yes
DC input voltage range	18...30 V DC
Rated input voltage	24 V DC
Current consumption (idle)	25 mA
max. admissible residual ripple at the input	100 mVpp
Output	
Connection system	PUSH IN
Triggering characteristic	see characteristic curve
Adjustable range	2838530000: 0.1, 0.2, 0.5, 0.8, 1.0 A
Switch-on delay	1 s
Adjustable rated current	Yes
Capacitive load	2838530000: max. 3000 µF
Function key	
LED initial state	LED green, in operation
Pressing the button	LED flashing red, load monitoring has triggered (disconnected)
LED, subsequent state	LED red (permanently lit)
Output, subsequent state	> 0.1 to 2 s (manual disconnect)
General data	
Relay to activate the output	> 0.1 to 2 s (confirm and reset)
Protection degree / Surge protection	> 0.1 to 2 s (restart)
Conformal coating	Red LED
Surge protection input, output, bus	Red LED
Signalling	
LED green	LED green
Red LED	LED green
Connection data	
Number of terminals	2 (+ / -)
Wire cross-section, AWG/kcmil min/max	26 AWG...12 AWG
Wire cross-section, flexible min/max	0.14...2.5 mm ²
Wire cross-section, rigid min/max	0.14...2.5 mm ²
Screwdriver blade	0.6 x 3.5
Approvals	
Approvals	CE; cULus; DEMKOATEX; IECEXULD
Note	

Ordering data

Rated current	
	1 A
Note	

LED status		
LED green, in operation	LED flashing red, load monitoring has triggered (disconnected)	LED red (permanently lit)
Red LED switched off	Red LED switched off	LED green switched on
General data		
No		
IP20 / Suppressor diode		
No		
Suppressor diode		
Signalling		
Operation (failure-free)		
Load monitoring has disconnected, Load monitoring has triggered (flashing), Internal error (rapid flashing)		
Connection data		
2 (+ / -)		
26 AWG...12 AWG		
0.14...2.5 mm ²		
0.14...2.5 mm ²		
0.6 x 3.5		
Approvals		
CE; cULus; DEMKOATEX; IECEXULD		
Note		

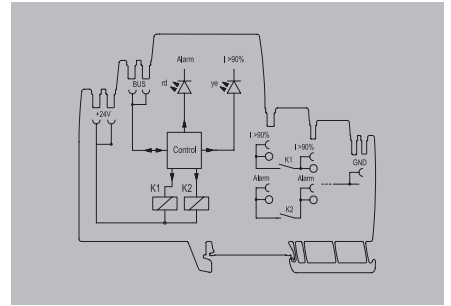
Type	Qty.	Order No.
AMG ELM-1 LIM CL2 EX	1	2838530000

maxGUARD

maxGUARD – Alarm module

Alarm module with potential-free contacts for the “Alarm” and “I>90%” signals > 90 %.

AMG AM



Technical data

Input	
Input fuse (internal)	No
DC input voltage range	18...30 V DC
Rated input voltage	24 V DC
Current consumption (idle)	25 mA
Current consumption (full load)	30 mA
max. admissible residual ripple at the input	100 mVpp
General data	
Protection degree	IP20
Surge protection input, bus	Suppressor diode
Overvoltage category	III
Signalling	
Yellow LED	Current > 90% Inom (flashing)
Red LED	Alarm
Floating contact	Yes
Status relay (max. load)	Alarm (24 V / 0.1 A), I > 90 % (24 V / 0.1 A)
Connection data	
Number of terminals	4 (2 x NO)
Wire cross-section, AWG/kcmil min/max	26...12 AWG
Wire cross-section, flexible min/max	0.14...2.5 mm ²
Wire cross-section, rigid min/max	0.14...2.5 mm ²
Screwdriver blade	0.6 x 3.5
Approvals	
Approvals	CE; cULus; TUEV
Note	

Input		
	No	
	18...30 V DC	
	24 V DC	
	25 mA	
	30 mA	
	100 mVpp	
General data		
	IP20	
	Suppressor diode	
	III	
Signalling		
	Current > 90% Inom (flashing)	
	Alarm	
	Yes	
	Alarm (24 V / 0.1 A), I > 90 % (24 V / 0.1 A)	
Connection data		
	4 (2 x NO)	
	26...12 AWG	
	0.14...2.5 mm ²	
	0.14...2.5 mm ²	
	0.6 x 3.5	
Approvals		
	CE; cULus; TUEV	
Note		

Ordering data

Rated current	
Note	

Type	Qty.	Order No.
AMG AM	1	2081890000

Accessories

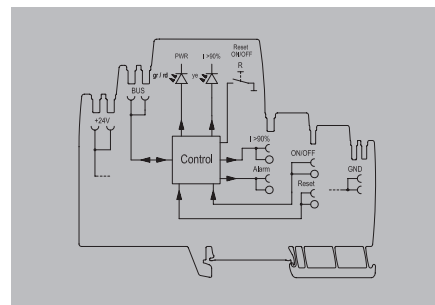
Plug-in cross-connection	
	50-pole
	50-pole / red
	50-pole / blue
	2-pole
	2-pole / red
	2-pole / blue
Note	

Type	Qty.	Order No.
ZQV 4N/50	5	1528130000
ZQV 4N/50 RD	5	2460730000
ZQV 4N/50 BL	5	1528240000
ZQV 4N/2	60	1527930000
ZQV 4N/2 RD	60	2460450000
ZQV 4N/2 BL	60	1528040000

maxGUARD – control module

Control module with extended control function: alarm, reset, I >90% connection/disconnection

AMG CM



Technical data

Input	
DC input voltage range	18...30 V DC
Rated input voltage	24 V DC
Current consumption (idle)	25 mA
Current consumption (full load)	225 mA
max. admissible residual ripple at the input	100 mVpp
Output	
Connection system	PUSH IN
General data	
Relay to activate the output	No
Protection degree	IP20
Control inputs	ON/ OFF, Reset
Surge protection input, output, bus	Suppressor diode
Overvoltage category	III
Signalling	
LED green	Operation (failure-free), Early warning: I Out > 90% I Rated (flashing)
Red LED	Load monitoring has disconnected, Load monitoring has triggered (flashing), Internal error (rapid flashing)
Transistor output, positive-switching	Pre-warning, Alarm
Connection data	
Number of terminals	2 (Reset / ON)
Wire cross-section, AWG/kcmil min/max	26...12 AWG
Wire cross-section, flexible min/max	0.14...2.5 mm ²
Wire cross-section, rigid min/max	0.14...2.5 mm ²
Screwdriver blade	0.6 x 3.5
Approvals	
Approvals	CE; cULus; TUEV
Note	

Ordering data

Rated current	
Note	

Type	Qty.	Order No.
AMG CM	1	2081900000

Accessories

Plug-in cross-connection	
50-pole	ZQV 4N/50
50-pole / red	ZQV 4N/50 RD
50-pole / blue	ZQV 4N/50 BL
2-pole	ZQV 4N/2
2-pole/ red	ZQV 4N/2 RD
2-pole / blue	ZQV 4N/2 BL
Note	

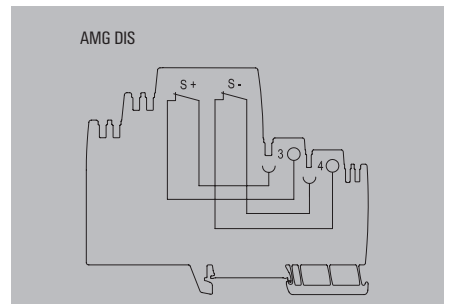
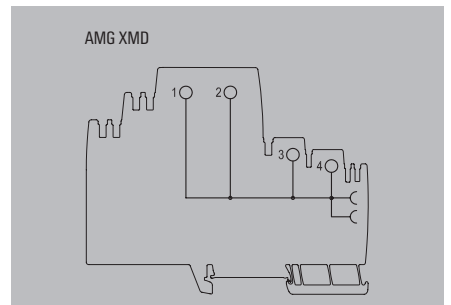
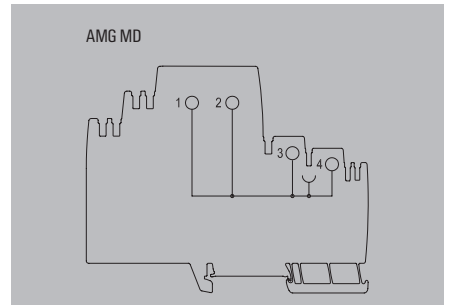
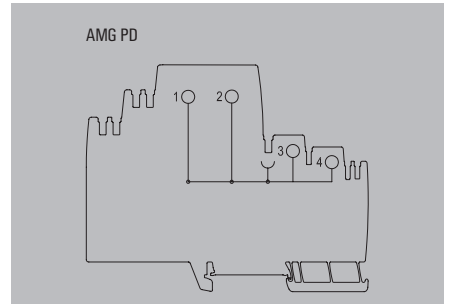
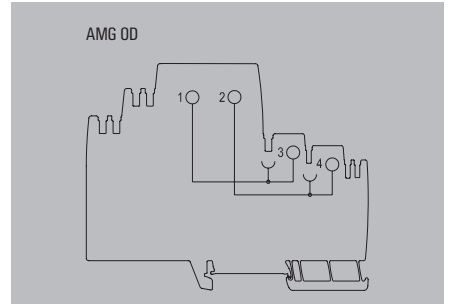
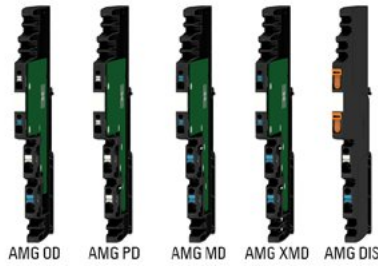
Type	Qty.	Order No.
ZQV 4N/50	5	1528130000
ZQV 4N/50 RD	5	2460730000
ZQV 4N/50 BL	5	1528240000
ZQV 4N/2	60	1527930000
ZQV 4N/2 RD	60	2460450000
ZQV 4N/2 BL	60	1528040000

maxGUARD

maxGUARD – Potential distributor

Potential distribution in combination with the electronic load monitoring.

AMG



Technical data

General data

Protection degree
Total current load per potential

Current load per contact point

Connection data

Connection system
Number of terminals
Wire cross-section, AWG/kcmil min/max
Wire cross-section, flexible min/max
Wire cross-section, rigid min/max
Screwdriver blade

Approvals

Approvals

Note

IP20

2122910000: 12 A;
2122920000: 12 A;
2122930000: 12 A;
2122940000: 24 A;
2123050000: 12 A

12 A

PUSH IN

4 (++) / -, 2 x 1.5 mm², 2 x 2.5 mm²

26...12 AWG

0.14...2.5 mm²

0.14...2.5 mm²

0.6 x 3.5

CE; cULus; TUEV

Ordering data

Type	Qty.	Order No.
AMG OD	10	2122910000
AMG PD	10	2122920000
AMG MD	10	2122930000
AMG XMD	10	2122940000
AMG DIS	10	2123050000

Note

Accessories

Plug-in cross-connection

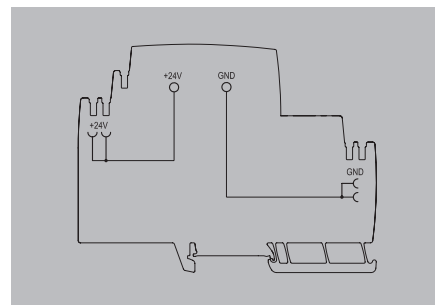
50-pole
50-pole / red
50-pole / blue
2-pole
2-pole/ red
2-pole / blue

Type	Qty.	Order No.
ZQV 4N/50	5	1528130000
ZQV 4N/50 RD	5	2460730000
ZQV 4N/50 BL	5	1528240000
ZQV 4N/2	60	1527930000
ZQV 4N/2 RD	60	2460450000
ZQV 4N/2 BL	60	1528040000

Note

maxGUARD – power-feed module

Passive power-feed module

AMG FIM-0 Ex**Technical data**

Input
Input fuse (internal)
DC input voltage range
Rated input voltage
max. admissible residual ripple at the input
General data
Protection degree
Control inputs
Overvoltage category
Connection data
Number of terminals
Wire cross-section, AWG/kcmil min/max
Wire cross-section, flexible min/max
Wire cross-section, rigid min/max
Screwdriver blade
Approvals
Approvals
Note

No
18...30 V DC
24 V DC
100 mVpp
IP20
No
III
2 (+,-)
18...6 AWG
0.75...16 mm ²
0.75...10 mm ²
1.2 x 6.5
ABS; BURVER; CCCEX; CE; cULus; cULusEX; DEMKOATEX; DETNORVER; IECEXULD; LLOYDSREG; RINA; TUEV

Ordering data

Rated current
Note

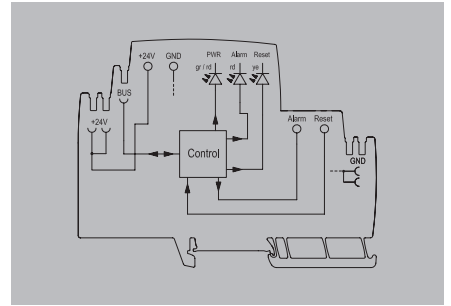
Type	Qty.	Order No.
AMG FIM-0 EX	1	2082530000

maxGUARD

maxGUARD – power-feed module

Active power-feed module with reset and alarm function

AMG FIM-C Ex



B

Technical data

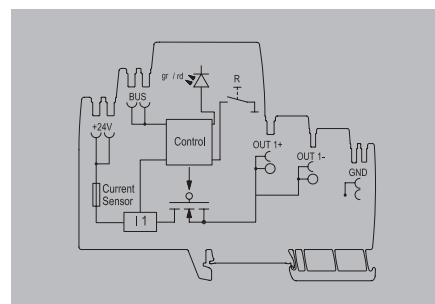
Input	
Input fuse (internal)	No
DC input voltage range	18...30 V DC
Rated input voltage	24 V DC
Current consumption (idle)	20 mA
Current consumption (full load)	120 mA
max. admissible residual ripple at the input	100 mVpp
General data	
Protection degree	IP20
Control inputs	Reset
Surge protection input, output, bus	Suppressor diode
Overtoltage category	III
Signalling	
Yellow LED	External reset is signalled, Alarm is signalled
LED green	Operating voltage OK
Red LED	Alarm
Transistor output, positive-switching	Alarm
Connection data	
Number of terminals	2 (+,-)
Wire cross-section, AWG/kcmil min/max	18...6 AWG
Wire cross-section, flexible min/max	0.75...16 mm ²
Wire cross-section, rigid min/max	0.75...10 mm ²
Screwdriver blade	1.2 x 6.5
Approvals	
Approvals	ABS; BURVER; CCCEX; CE; cULus; cULusEX; DEMKOATEX; DETNORVER; IECEXULD; LLOYDSREG; RINA; TUEV
Note	
Ordering data	
Rated current	
Note	

Type	Qty.	Order No.
AMG FIM-C EX	1	2082540000

maxGUARD – load monitoring (fixed value)

Electronic load monitoring with fixed current (without I > 90% function)

AMG ELM - xF Ex



Technical data

Input

Input fuse (internal)
DC input voltage range
Rated input voltage
Current consumption (idle) / Current consumption (full load)
max. admissible residual ripple at the input

Output

Connection system
Triggering characteristic
Switch-on delay
Capacitive load

Function key

LED initial state

Pressing the button

LED, subsequent state
Output, subsequent state

General data

Relay to activate the output
Surge protection input, output, bus
Protection degree / Overvoltage category

Signalling

LED green
Red LED

Connection data

Number of terminals
Wire cross-section, AWG/kcmil min/max
Wire cross-section, flexible min/max
Wire cross-section, rigid min/max
Screwdriver blade

Approvals

Approvals

Note

Ordering data

Rated current

1 A
2 A
4 A
6 A

Note

Accessories

Type

AMG OD EX
AMG PD EX
AMG MD EX
AMG XMD EX
AMG DIS EX

Note

Yes

18...30 V DC
24 V DC
25 mA / I _{out} +30 mA
100 mVpp

PUSH IN

see characteristic curve

1 s

2082040000: 10,000 µF;
2082050000: 10,000 µF;
2082060000: 10,000 µF;
2082310000: 15,000 µF

LED green, in operation

LED flashing red, load monitoring has triggered (disconnected)

> 0.1 to 2 s (manual disconnect)

Red LED switched off

No

Suppressor diode
IP20 / III

Operation (failure-free)

Load monitoring has disconnected, Load monitoring has triggered (flashing), Internal error (rapid flashing)

2 (+ / -)

26...12 AWG
0.14...2.5 mm ²
0.14...2.5 mm ²
0.6 x 3.5

ABS; BURVER; CCCEX; CE; cULus; cULusEX; DEMKOATEX; DETNORVER; IECEXULD; LLOYDSREG; RINA; TUEV

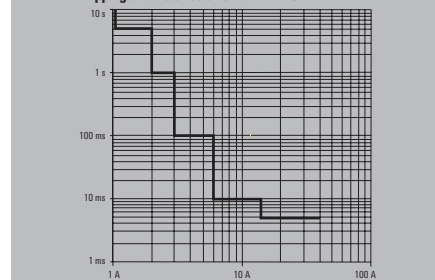
Type Qty. Order No.

AMG ELM-1F EX	1	2082040000
AMG ELM-2F EX	1	2082050000
AMG ELM-4F EX	1	2082060000
AMG ELM-6F EX	1	2082310000

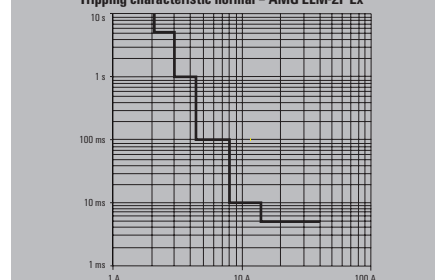
Type Qty. Order No.

AMG OD EX	10	2495090000
AMG PD EX	10	2495070000
AMG MD EX	10	2495040000
AMG XMD EX	10	2495080000
AMG DIS EX	10	2495100000

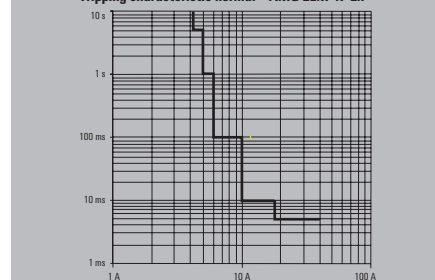
Tripping characteristic normal – AMG ELM-1F Ex



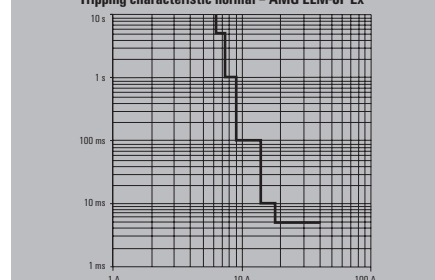
Tripping characteristic normal – AMG ELM-2F Ex



Tripping characteristic normal – AMG ELM-4F Ex



Tripping characteristic normal – AMG ELM-6F Ex

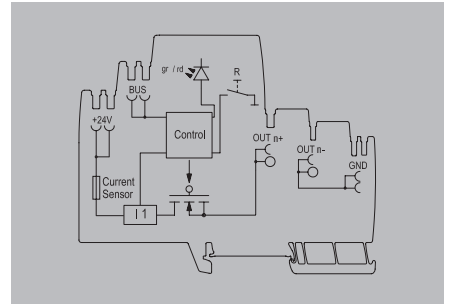


maxGUARD

maxGUARD – load monitoring (fixed value)

Electronic load monitoring with fixed rated current (without I > 90 % pre warning)

AMG ELM - xF Ex



B

Technical data

Input	
Input fuse (internal)	Yes
DC input voltage range	18...30 V DC
Rated input voltage	24 V DC
Current consumption (idle)	25 mA
Current consumption (full load)	I _{OUT} +30 mA
max. admissible residual ripple at the input	100 mVpp
Output	
Connection system	PUSH IN
Triggering characteristic	see characteristic curve
Switch-on delay	1 s
Capacitive load	2082320000: 15,000 µF; 2082430000: 20,000 µF
Function key	
LED initial state	LED green, in operation
Pressing the button	> 0.1 to 2 s (manual disconnect)
LED, subsequent state	LED flashing red, load monitoring has triggered (disconnected)
Output, subsequent state	LED red (permanently lit)
General data	
Relay to activate the output	> 0.1 to 2 s (confirm and reset)
Protection degree	> 0.1 to 2 s (restart)
Surge protection input, output, bus	Red LED switched off
Overvoltage category	Red LED switched off
Signalling	
LED green	LED green
Red LED	LED green
Connection data	
Number of terminals	4 (++ / -)
Wire cross-section, AWG/kcmil min/max	26...12 AWG
Wire cross-section, flexible min/max	0.14...2.5 mm ²
Wire cross-section, rigid min/max	0.14...2.5 mm ²
Screwdriver blade	0.6 x 3.5
Approvals	
Approvals	ABS; BURVER; CCCEX; CE; cULus; cULusEX; DEMKOATEX; DETNORVER; IECEXULD; LLOYDSREG; RINA; TUEV
Note	

Ordering data

Rated current	
	8 A
	10 A
Note	

Accessories

Note	
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Tripping characteristic normal – AMG ELM-8F Ex		
10 s	10 A	100 A
1 s		
100 ms		
10 ms		
1 ms		
1 A	10 A	100 A
Tripping characteristic normal – AMG ELM-10F Ex		
10 s	10 A	100 A
1 s		
100 ms		
10 ms		
1 ms		
1 A	10 A	100 A

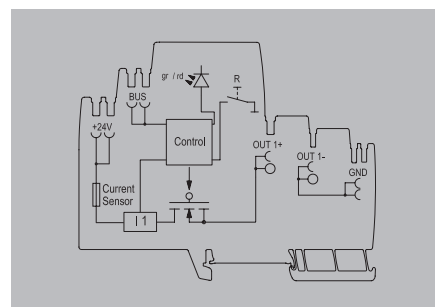
Type	Qty.	Order No.
AMG ELM-8F EX	1	2082320000
AMG ELM-10F EX	1	2082430000

Type	Qty.	Order No.
AMG OD EX	10	2495090000
AMG PD EX	10	2495070000
AMG MD EX	10	2495040000
AMG XMD EX	10	2495080000
AMG DIS EX	10	2495100000

maxGUARD – load monitoring adjustable

Electronic load monitoring with adjustable triggering current and triggering characteristic

AMG ELM-6 Ex



Technical data

Input

Input fuse (internal)
DC input voltage range
Rated input voltage
Current consumption (idle)
Current consumption (full load)
max. admissible residual ripple at the input

Output

Connection system
Triggering characteristic
Adjustable range
Switch-on delay
Capacitive load
Adjustable rated current

Function key

LED initial state

Pressing the button

LED, subsequent state
Output, subsequent state

General data

Relay to activate the output
Protection degree
Surge protection input, output, bus
Overvoltage category

Signalling

LED green
Red LED

Connection data

Number of terminals
Wire cross-section, AWG/kcmil min/max
Wire cross-section, flexible min/max
Wire cross-section, rigid min/max
Screwdriver blade

Approvals

Approvals

Note

Ordering data

Rated current	6 A
---------------	-----

Note

Accessories

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Note

Input

Yes
18...30 V DC
24 V DC
25 mA
I _{OUT} +30 mA
100 mVpp

Output

PUSH IN
see characteristic curve
1, 2, 3, 4, 6 A
1 s
15,000 µF
Yes

LED

LED green, in operation	LED flashing red, load monitoring has triggered (disconnected)	LED red (permanently lit)
-------------------------	--	---------------------------

> 0.1 to 2 s (manual disconnect)	> 0.1 to 2 s (confirm and reset)	> 0.1 to 2 s (restart)
----------------------------------	----------------------------------	------------------------

Red LED switched off	Red LED switched off	LED green switched on
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Relay

No

Protection

IP20

Suppression

Suppressor diode

III

Operation (failure-free), Early warning: I_{Out} > 90% I_{Rated} (flashing)

Load monitoring has disconnected, Load monitoring has triggered (flashing), Internal error (rapid flashing)

2 (+ / -)

26...12 AWG

0.14...2.5 mm ²

0.14...2.5 mm ²

0.6 x 3.5

Approvals

ABS; BURVER; CCCEX; CE; cULus; cULusEX; DEMKOATEX; DETNORVER; IECEXULD; LLOYDSREG; RINA; TUEV

Type	Qty.	Order No.
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AMG ELM-6 EX	1	2082000000
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Type	Qty.	Order No.
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AMG OD EX	10	2495090000
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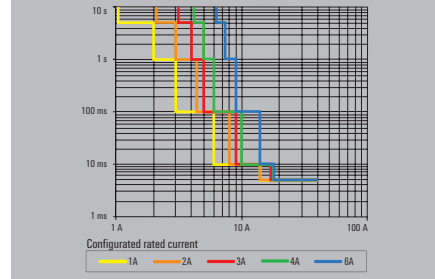
AMG PD EX	10	2495070000
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AMG MD EX	10	2495040000
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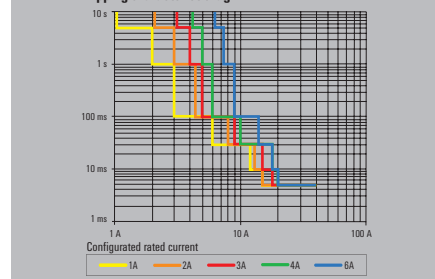
AMG XMD EX	10	2495080000
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AMG DIS EX	10	2495100000
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Tripping characteristic normal



Tripping characteristic lag

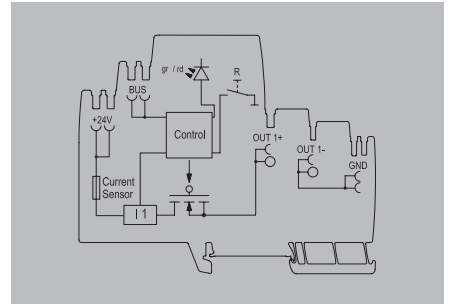


maxGUARD

maxGUARD – load monitoring adjustable

Electronic load monitoring with adjustable trigger current and characteristic (with I > 90 % pre warning)

AMG ELM-12 Ex



Technical data

Input	
Input fuse (internal)	Yes
DC input voltage range	18...30 V DC
Rated input voltage	24 V DC
Current consumption (idle)	25 mA
Current consumption (full load)	I _{OUT} +30 mA
max. admissible residual ripple at the input	100 mVpp
Output	
Connection system	PUSH IN
Triggering characteristic	see characteristic curve
Adjustable range	4, 6, 8, 10, 12 A
Switch-on delay	1 s
Adjustable rated current	Yes
Capacitive load	20,000 µF
Function key	
LED initial state	LED green, in operation LED flashing red, load monitoring has triggered (disconnected) LED red (permanently lit)
Pressing the button	> 0.1 to 2 s (manual disconnect) > 0.1 to 2 s (confirm and reset) > 0.1 to 2 s (restart)
LED, subsequent state	Red LED switched off Red LED switched off LED green switched on
General data	
Relay to activate the output	No
Protection degree	IP20
Surge protection input, output, bus	Suppressor diode
Overvoltage category	III
Signalling	
LED green	Operation (failure-free), Early warning: I Out > 90% I Rated (flashing)
Red LED	Load monitoring has disconnected, Load monitoring has triggered (flashing), Internal error (rapid flashing)
Connection data	
Number of terminals	4 (++) / (-)
Wire cross-section, AWG/kcmil min/max	26...12 AWG
Wire cross-section, flexible min/max	0.14...2.5 mm ²
Wire cross-section, rigid min/max	0.14...2.5 mm ²
Screwdriver blade	0.6 x 3.5
Approvals	
Approvals	ABS; BURVER; CCCEX; CE; cULus; cULusEX; DEMKOATEX; DETNORVER; IECEXULD; LLOYDSREG; RINA; TUEV
Note	

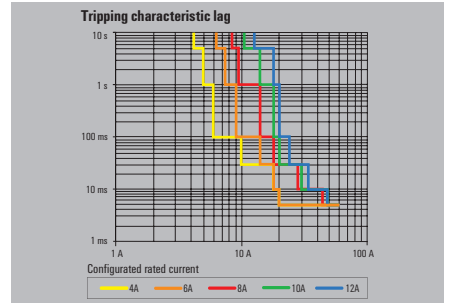
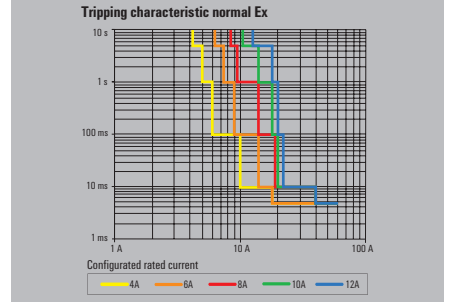
Ordering data

Rated current	12 A
Note	

Accessories

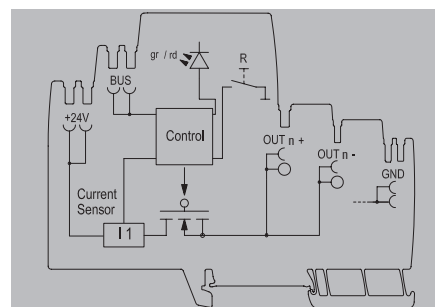
Type	Qty.	Order No.
AMG OD EX	10	2495090000
AMG PD EX	10	2495070000
AMG MD EX	10	2495040000
AMG XMD EX	10	2495080000
AMG DIS EX	10	2495100000
Note		

Type	Qty.	Order No.
AMG ELM-12 EX	1	2082010000



maxGUARD – load monitoring adjustable

AMG ELM-18 Ex



Technical data

Input

- Input fuse (internal)
- DC input voltage range
- Rated input voltage
- Current consumption (idle)
- Current consumption (full load)
- max. admissible residual ripple at the input

Output

- Connection system
- Triggering characteristic
- Adjustable range
- Switch-on delay
- Adjustable rated current
- Capacitive load

Function key

LED initial state

Pressing the button

LED, subsequent state
Output, subsequent state

General data

- Relay to activate the output
- Protection degree
- Surge protection input, output, bus
- Overvoltage category

Signalling

- LED green
- Red LED

Connection data

- Number of terminals
- Wire cross-section, AWG/kcmil min/max
- Wire cross-section, flexible min/max
- Wire cross-section, rigid min/max
- Screwdriver blade

Approvals

Approvals

Note

Ordering data

Rated current 18 A

Note

Accessories

Note

Yes

18...30 V DC

24 V DC

25 mA

I_{OUT} +30 mA

100 mVpp

PUSH IN

see characteristic curve

11, 12, 14, 16, 18 A

1 s

Yes

50 mF

LED green, in operation

LED flashing red, load monitoring has triggered (disconnected)

LED red (permanently lit)

> 0.1 to 2 s (manual disconnect)

> 0.1 to 2 s (confirm and reset)

> 0.1 to 2 s (restart)

Red LED switched off

Red LED switched off

LED green switched on

No

IP20

Suppressor diode

III

Operation (failure-free), Early warning: I_{Out} > 90% I_{Rated} (flashing)

Load monitoring has disconnected, Load monitoring has triggered (flashing), Internal error (rapid flashing)

4 (++) / -)

26...12 AWG

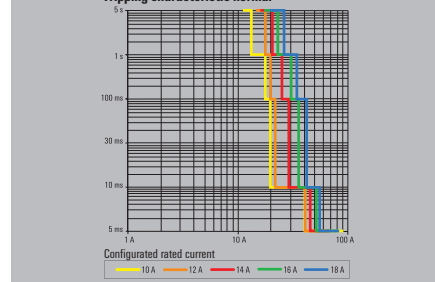
0.14...2.5 mm²

0.14...2.5 mm²

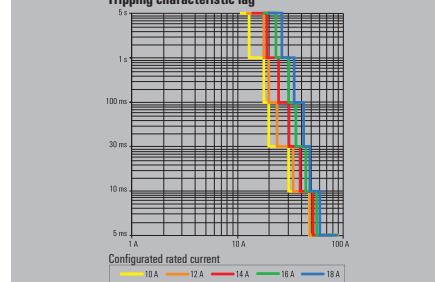
0.6 x 3.5

CE; cULus; DEMKOATEX; IECEXULD

Tripping characteristic normal



Tripping characteristic lag

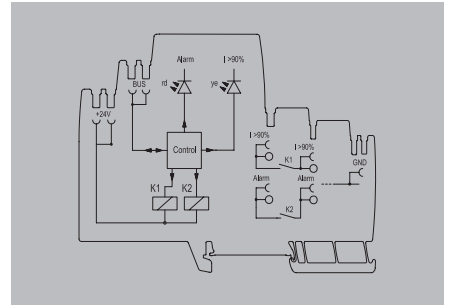


maxGUARD

maxGUARD – Alarm module

Alarm module with potential-free contacts for the “Alarm” and “I>90%” signals.

AMG AM CO



Technical data

Input	
Input fuse (internal)	No
DC input voltage range	18...30 V DC
Rated input voltage	24 V DC
Current consumption (idle)	25 mA
Current consumption (full load)	30 mA
max. admissible residual ripple at the input	100 mVpp
General data	
Protection degree	IP20
Surge protection input, bus	Suppressor diode
Overtoltage category	III
Signalling	
Yellow LED	Current > 90% Inom (flashing)
Red LED	Alarm
Floating contact	Yes
Status relay (max. load)	Alarm (24 V / 0.1 A), I > 90 % (24 V / 0.1 A)
Connection data	
Number of terminals	4 (2 x NO)
Wire cross-section, AWG/kcmil min/max	26...12 AWG
Wire cross-section, flexible min/max	0.14...2.5 mm ²
Wire cross-section, rigid min/max	0.14...2.5 mm ²
Screwdriver blade	0.6 x 3.5
Approvals	
Approvals	ABS; BURVER; CE; cULus; DETNORVER; LLOYDSREG; RINA; TUEV

Note

Ordering data

Rated current	Type	Qty.	Order No.
	AMG AM CO	1	2082770000

Accessories

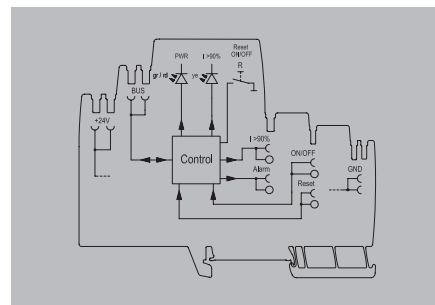
Plug-in cross-connection	Type	Qty.	Order No.
50-pole	ZQV 4N/50	5	1528130000
50-pole / red	ZQV 4N/50 RD	5	2460730000
50-pole / blue	ZQV 4N/50 BL	5	1528240000
2-pole	ZQV 4N/2	60	1527930000
2-pole/ red	ZQV 4N/2 RD	60	2460450000
2-pole / blue	ZQV 4N/2 BL	60	1528040000

Note

maxGUARD – control module

Control module with extended control function: Alarm, Reset, I>90%, ON/OFF

AMG CM Ex



Technical data

Input	
DC input voltage range	18...30 V DC
Rated input voltage	24 V DC
Current consumption (idle)	25 mA
Current consumption (full load)	225 mA
max. admissible residual ripple at the input	100 mVpp
Output	
Connection system	PUSH IN
General data	
Relay to activate the output	No
Protection degree	IP20
Surge protection input, output, bus	Suppressor diode
Control inputs	ON/ OFF, Reset
Overtoltage category	III
Signalling	
LED green	Operation (failure-free), Early warning: I Out > 90% I Rated (flashing)
Red LED	Load monitoring has disconnected, Load monitoring has triggered (flashing), Internal error (rapid flashing)
Transistor output, positive-switching	Pre-warning, Alarm
Connection data	
Number of terminals	2 (Reset / ON)
Wire cross-section, AWG/kcmil min/max	26...12 AWG
Wire cross-section, flexible min/max	0.14...2.5 mm ²
Wire cross-section, rigid min/max	0.14...2.5 mm ²
Screwdriver blade	0.6 x 3.5
Approvals	
Approvals	ABS; BURVER; CCCEX; CE; cULus; cULusEX; DEMKOATEX; DETNORVER; IECEXULD; LLOYDSREG; RINA; TUEV
Note	

Ordering data

Rated current	
Note	

Type	Qty.	Order No.
AMG CM EX	1	2083360000

Accessories

Plug-in cross-connection	
	50-pole
	50-pole / red
	50-pole / blue
	2-pole
	2-pole/ red
	2-pole / blue
Note	

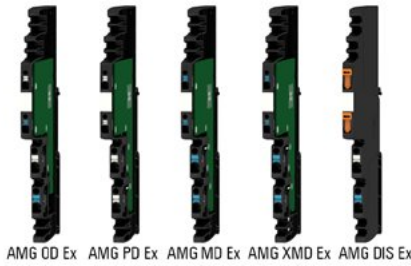
Type	Qty.	Order No.
ZQV 4N/50	5	1528130000
ZQV 4N/50 RD	5	2460730000
ZQV 4N/50 BL	5	1528240000
ZQV 4N/2	60	1527930000
ZQV 4N/2 RD	60	2460450000
ZQV 4N/2 BL	60	1528040000

maxGUARD

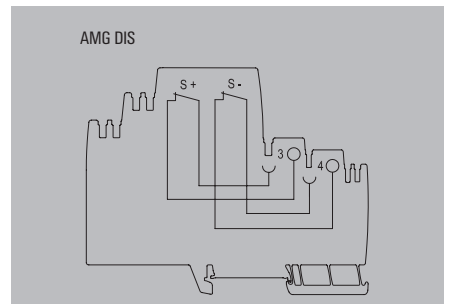
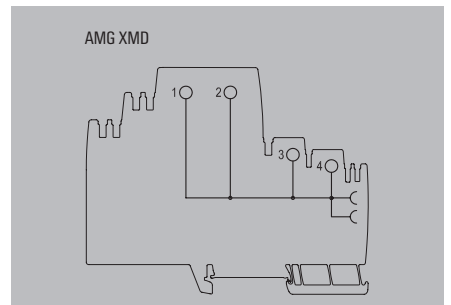
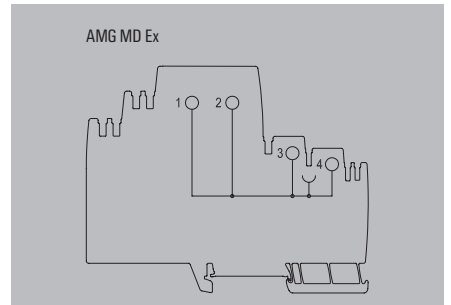
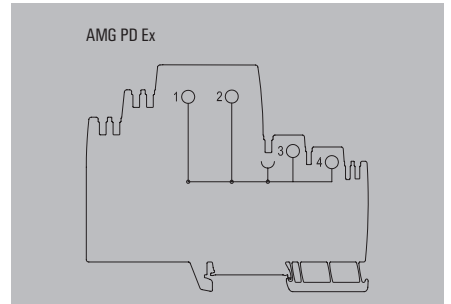
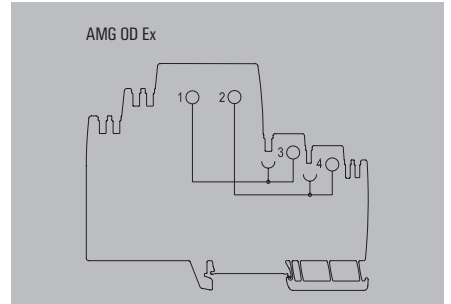
maxGUARD – Potential distributor

Potential distribution in combination with the electronic load monitoring.

AMG



AMG OD Ex AMG PD Ex AMG MD Ex AMG XMD Ex AMG DIS Ex



Technical data

General data

Protection degree
Total current load per potential

Current load per contact point

Connection data

Connection system
Number of terminals
Wire cross-section, AWG/kcmil min/max
Wire cross-section, flexible min/max
Wire cross-section, rigid min/max
Screwdriver blade

Approvals

Approvals

Note

Ordering data

Note

Accessories

Plug-in cross-connection

50-pole
50-pole / red
50-pole / blue
2-pole
2-pole/ red
2-pole / blue

Note

IP20

2495090000: 12 A;
2495070000: 12 A;
2495040000: 12 A;
2495080000: 24 A;
2495100000: 12 A

12 A

PUSH IN

4 (++) / -, 2 x 1.5 mm², 2 x 2.5 mm²

26...12 AWG

0.14...2.5 mm²

0.14...2.5 mm²

0.6 x 3.5

ABS; BURVER; CCCEX; CE; cULus; cULusEX; DEMKOATEX;
DETNRORVER; IECEXULD; LLOYDSREG; RINA; TUEV

Type	Qty.	Order No.
AMG OD EX	10	2495090000
AMG PD EX	10	2495070000
AMG MD EX	10	2495040000
AMG XMD EX	10	2495080000
AMG DIS EX	10	2495100000

Type	Qty.	Order No.
ZQV 4N/50	5	1528130000
ZQV 4N/50 RD	5	2460730000
ZQV 4N/50 BL	5	1528240000
ZQV 4N/2	60	1527930000
ZQV 4N/2 RD	60	2460450000
ZQV 4N/2 BL	60	1528040000

GUARD Series – accessories

Cross-connector orange



Type	Qty.	Order No.
ZQV 4N/2	60	1527930000
ZQV 4N/3	60	1527940000
ZQV 4N/4	60	1527970000
ZQV 4N/5	60	1527980000
ZQV 4N/6	20	1527990000
ZQV 4N/7	20	1528020000
ZQV 4N/8	20	1528030000
ZQV 4N/9	20	1528070000
ZQV 4N/10	20	1528090000
ZQV 4N/50	5	1528130000

Cross-connector blue



Type	Qty.	Order No.
ZQV 4N/2 BL	60	1528040000
ZQV 4N/3 BL	60	1528080000
ZQV 4N/4 BL	60	1528120000
ZQV 4N/5 BL	60	1528140000
ZQV 4N/6 BL	20	1528170000
ZQV 4N/7 BL	20	1528180000
ZQV 4N/8 BL	20	1528190000
ZQV 4N/9 BL	20	1528220000
ZQV 4N/10 BL	20	1528230000
ZQV 4N/50 BL	5	1528240000

Cross-connector red



Type	Qty.	Order No.
ZQV 4N/2 RD	60	2460450000
ZQV 4N/3 RD	60	2460810000
ZQV 4N/4 RD	60	2460800000
ZQV 4N/5 RD	60	2460790000
ZQV 4N/6 RD	20	2460780000
ZQV 4N/7 RD	20	2460770000
ZQV 4N/8 RD	20	2460760000
ZQV 4N/9 RD	20	2460750000
ZQV 4N/10 RD	20	2460740000
ZQV 4N/50 RD	5	2460730000

GUARD Series – accessories

End brackets



Type	Qty.	Order No.
WEW 35/2 SW	50	1061210000
WEW 35/2 VO GF SW	50	1479000000

Cutting tool for ZQV



Type	Qty.	Order No.
KT 14	1	1157820000

Endplate and separation plate



Type	Qty.	Order No.
AMG PP	40	2123000000
AMG EP 2010	30	2495380000
AMG EP KIT	1	2500760000

topGUARD – accessories

Communication module



Type	Qty.	Order No.
PRO COM IO-LINK	1	2587360000

Uninterruptible power supplies

Uninterruptible power supplies	Overview	C.2
	UPS control unit	C.4
	connectPower Battery modules	C.8
	connectPower Buffer modules	C.12

Uninterruptible Power Supply DURAmox DC UPS

Reliable and robust

The new compact DURAmox DC UPS fits into tightest spaces in control cabinets in various industries. There it supplies PLCs, sensors and other consumers with 24 V voltage safely and without interruption. If the DC UPS detects a mains failure, it switches to battery operation without the system coming to a downtime.

Users can parameterise the new DURAmox DC UPS using the free software. A USB C port is available for this purpose on the devices.

Your special advantages:

- High-cost efficiency and space saving design
- Robust metall housing
- Smart and quick status diagnosis due to LED-bargraph display
- Battery cold restart function
- Save time with PUSH IN connection technology



Protection against machine downtime and data loss

DURAmox is the DC UPS control for secure and reliable 24 V power supply in automation systems. The use of our DURAeco battery modules enables energy storage times of up to several hours.

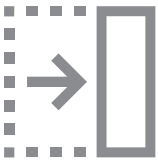
Buffer modules: Maintenance-free buffer storage with 20 A/40 A for short voltage drops.

Battery modules: Capacities from 1.2Ah to 17Ah allow ideal scaling of the buffer time in your application.



Compact design

The compact design of the 10A version with a width of just 30 mm saves space in the control cabinet without compromising on performance. Thanks to PUSH IN connection technology and clear terminal labelling, Users can wire quickly and save time.



Robust and reliable

The DC UPS reliably detects power peaks or power failures and bridges them up in seconds to hours – depending on the energy storage device. A possible parallel connection of the battery modules extends the buffer time.



Easily to configure

The DURAMAX DC UPS Manager software tool enables the customer to configure the DC UPS and the battery modules via a USB C interface.



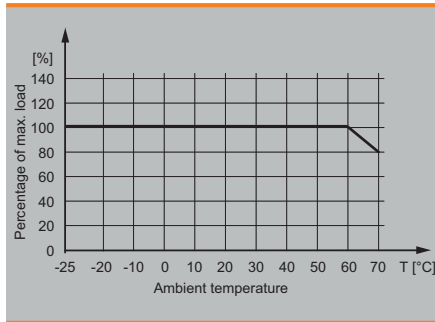
UPS control unit

UPS control unit

- Four 24 V models in 5 A, 10 A, 20 A and 40 A
- High-cost efficiency and space saving design
- Robust metall housing
- Smart and quick status diagnosis due to LED-bargraph display
- Battery cold restart function
- Save time with PUSH IN connection technology

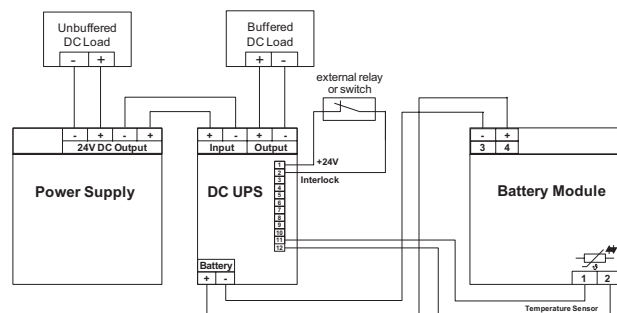
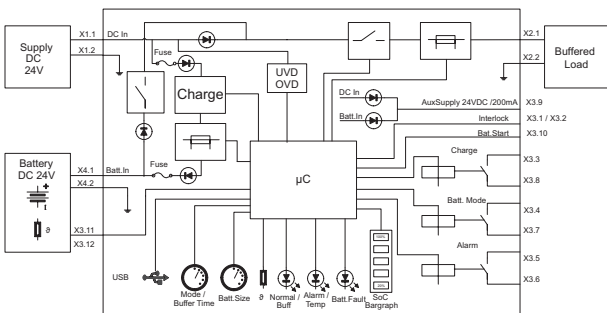


C



Technical data

Signalling	
Status relay (max. load)	Output voltage OK (30 V DC / 1 A)
Status indicator	LED red: Battery fault, LED yellow: Alarm/ Temperature Sensor fault, LED green: Normal mode, LED green flashing: Buffer mode, LED off: no error
General data	
Ambient temperature (operational)	-25 °C...70 °C
Storage temperature	-40 °C...85 °C
Humidity	5...95 %, no condensation
Protection degree	IP20
Protection class	III
Pollution degree	2
Overvoltage category	III
Insulation voltage	1 kV DC
Protection against reverse voltages from the load	≤ 35 V DC
Parallel connection option	yes, max. 2
Housing version	Metal, corrosion resistant
Mounting position, installation notice	On TS 35 mounting rail, 50 mm clearance above and below for free air supply.
Overload protection	Yes
Short-circuit protection	Yes
EMC / shock / vibration	
Noise emission in accordance with EN55032	Class B
Interference immunity test acc. to	EN 61000-4-2 (ESD)/EN 61000-4-3 and EN 61000-4-8 (fields)/EN 61000-4-4 (burst)/EN 61000-4-5 (surge)/EN 61000-4-6 (conducted)/EN 61000-4-11 (dips)
Resistance to vibration / Shock	2.3 g, 4 g / 30 g in all directions
Electrical safety (applied standards)	
Electrical machine equipment	Acc. to EN60204
Safety transformers for switch-mode power supplies	According to EN 61558-2-16
For use with electronic equipment	Acc. to EN50178



UPS control unit

DURA MAX DC UPS 24V 5A

DURA MAX DC UPS 24V 10A



Technical data

Input	
Rated input voltage	24 V DC
DC input voltage range	18...30 V DC
Input current	<5.2 A
Input fuse (internal)	Yes
DC current consumption	<0.2 A @ no load
Reverse polarity protection	Yes
Output	
Rated output voltage	24 V DC
Output voltage	17.5-29.5 V DC, Vin -0.5 V DC at nominal output current
Output current, max.	5 A
Integrated battery charger	
Charging feature	IU characteristic curve
Charging voltage (temperature compensated)	27, 48 V @ 20°C
Temperature coefficient	-48 mV / °C
Charging current	1.2 Ah = 0.2 A / 3.4 Ah = 0.5 A / 7 Ah = 1.0 A / 12 Ah = 1.5 A / 17 Ah = 2.0 A / 26 Ah = 3.0 A / 38 Ah = 4.0 A all: +/- 0.100 A every minute
Battery availability test	every minute
Battery module	
Nominal voltage	24 V
Storage medium	3.4 Ah, 12 Ah, Selectable with rotary switch, 1.2 Ah, 7 Ah
Parallel connection option	yes, max. 2
Operating elements and control inputs	
Selector switch battery	3.4 Ah, 12 Ah, 1.2 Ah, 7 Ah
Selector switch buffer times	0.5 min, 1 min, 3 min, 10 min, 20 min, 30 min, Service
Remote disconnection (Interlock)	Yes
Temperature probe	NTC 100 kΩ
General data	
Buffer times	Depending on the connected battery
Degree of efficiency	> 98%
Power loss	<10 W
Depth x width x height / Net weight	125 / 30 / 130 mm / 500 g
Approvals	
Approvals	

Input	
Rated input voltage	24 V DC
DC input voltage range	18...30 V DC
Input current	<5.2 A
Input fuse (internal)	Yes
DC current consumption	<0.2 A @ no load
Reverse polarity protection	Yes
Output	
Rated output voltage	24 V DC
Output voltage	17.5-29.5 V DC, Vin -0.5 V DC at nominal output current
Output current, max.	5 A
Integrated battery charger	
Charging feature	IU characteristic curve
Charging voltage (temperature compensated)	27, 48 V @ 20°C
Temperature coefficient	-48 mV / °C
Charging current	1.2 Ah = 0.2 A / 3.4 Ah = 0.5 A / 7 Ah = 1.0 A / 12 Ah = 1.5 A / 17 Ah = 2.0 A / 26 Ah = 3.0 A / 38 Ah = 4.0 A all: +/- 0.100 A every minute
Battery availability test	every minute
Battery module	
Nominal voltage	24 V
Storage medium	3.4 Ah, 12 Ah, Selectable with rotary switch, 1.2 Ah, 7 Ah
Parallel connection option	yes, max. 2
Operating elements and control inputs	
Selector switch battery	3.4 Ah, 12 Ah, 1.2 Ah, 7 Ah
Selector switch buffer times	0.5 min, 1 min, 3 min, 10 min, 20 min, 30 min, Service
Remote disconnection (Interlock)	Yes
Temperature probe	NTC 100 kΩ
General data	
Buffer times	Depending on the connected battery
Degree of efficiency	> 98%
Power loss	<10 W
Depth x width x height / Net weight	125 / 30 / 130 mm / 500 g
Approvals	
Approvals	

Input	
Rated input voltage	24 V DC
DC input voltage range	18...30 V DC
Input current	<10.2 A
Input fuse (internal)	Yes
DC current consumption	<0.2 A @ no load
Reverse polarity protection	Yes
Output	
Rated output voltage	24 V DC
Output voltage	17.5-29.5 V DC, Vin -0.5 V DC at nominal output current
Output current, max.	10 A
Integrated battery charger	
Charging feature	IU characteristic curve
Charging voltage (temperature compensated)	27, 48 V @ 20°C
Temperature coefficient	-48 mV / °C
Charging current	1.2 Ah = 0.2 A / 3.4 Ah = 0.5 A / 7 Ah = 1.0 A / 12 Ah = 1.5 A / 17 Ah = 2.0 A / 26 Ah = 3.0 A / 38 Ah = 4.0 A all: +/- 0.100 A every minute
Battery availability test	every minute
Battery module	
Nominal voltage	24 V
Storage medium	3.4 Ah, 12 Ah, Selectable with rotary switch, 1.2 Ah, 7 Ah
Parallel connection option	yes, max. 2
Operating elements and control inputs	
Selector switch battery	3.4 Ah, 12 Ah, 7 Ah, 1.2 Ah
Selector switch buffer times	0.5 min, 1 min, 3 min, 10 min, 20 min, 30 min, Service
Remote disconnection (Interlock)	Yes
Temperature probe	NTC 100 kΩ
General data	
Buffer times	Depending on the connected battery
Degree of efficiency	> 98%
Power loss	<10 W
Depth x width x height / Net weight	125 / 30 / 130 mm / 500 g
Approvals	
Approvals	

Connection data	
Wire connection method	
Wire cross-section, rigid min/max	mm ²
Wire cross-section, flexible min/max	mm ²
Wire cross-section, AWG/kcmil min/max	

Input/output/battery	Signal
PUSH IN	PUSH IN
1 / 2.5	0.2 / 1.5
1 / 2.5	0.2 / 1.5
18 / 14	25 / 16

Input/output/battery	Signal
PUSH IN	PUSH IN
1.5 / 2.5	0.2 / 1.5
1.5 / 2.5	0.2 / 1.5
16 / 14	25 / 16

Note

Note

Note

Ordering data

Type	Qty.	Order No.
DURA MAX DC UPS 24V 5A	1	2934940000

Type	Qty.	Order No.
DURA MAX DC UPS 24V 5A	1	2934940000

Type	Qty.	Order No.
DURA MAX DC UPS 24V 10A	1	2934950000

Note

Note

Note

UPS control unit

UPS control unit

DURA MAX DC UPS 24V 20A

DURA MAX DC UPS 24V 40A



Technical data

Input	
Rated input voltage	24 V DC
DC input voltage range	18...30 V DC
Input current	<20.2 A
Input fuse (internal)	Yes
DC current consumption	<0.2 A @ no load
Reverse polarity protection	Yes
Output	
Rated output voltage	24 V DC
Output voltage	17.5-29.5 V DC, Vin -0.5 V DC at nominal output current
Output current, max.	20 A
Integrated battery charger	
Charging feature	IU characteristic curve
Charging voltage (temperature compensated)	27, 48 V @ 20°C
Temperature coefficient	-48 mV / °C
Charging current	1.2 Ah = 0.2 A / 3.4 Ah = 0.5 A / 7 Ah = 1.0 A / 12 Ah = 1.5 A / 17 Ah = 2.0 A / 26 Ah = 3.0 A / 38 Ah = 4.0 A all: +/- 0.100 A every minute
Battery availability test	every minute
Battery module	
Nominal voltage	24 V
Storage medium	3.4 Ah, 12 Ah, Selectable with rotary switch, 1.2 Ah, 7 Ah
Parallel connection option	Yes, max. 2
Operating elements and control inputs	
Selector switch battery	3.4 Ah, 12 Ah, 1.2 Ah, 7 Ah
Selector switch buffer times	0.5 min, 1 min, 3 min, 10 min, 20 min, 30 min, Service
Remote disconnection (Interlock)	Yes
Temperature probe	NTC 100 kΩ
General data	
Buffer times	Depending on the connected battery
Degree of efficiency	> 98%
Power loss	<10 W
Depth x width x height / Net weight	125 / 38 / 130 mm / 600 g
Approvals	
Approvals	

Rated input voltage	24 V DC
DC input voltage range	18...30 V DC
Input current	<20.2 A
Input fuse (internal)	Yes
DC current consumption	<0.2 A @ no load
Reverse polarity protection	Yes
Rated output voltage	24 V DC
Output voltage	17.5-29.5 V DC, Vin -0.5 V DC at nominal output current
Output current, max.	20 A
Charging feature	IU characteristic curve
Charging voltage (temperature compensated)	27, 48 V @ 20°C
Temperature coefficient	-48 mV / °C
Charging current	1.2 Ah = 0.2 A / 3.4 Ah = 0.5 A / 7 Ah = 1.0 A / 12 Ah = 1.5 A / 17 Ah = 2.0 A / 26 Ah = 3.0 A / 38 Ah = 4.0 A all: +/- 0.100 A every minute
Battery availability test	every minute
Nominal voltage	24 V
Storage medium	3.4 Ah, 12 Ah, Selectable with rotary switch, 1.2 Ah, 7 Ah
Parallel connection option	Yes, max. 2
Selector switch battery	3.4 Ah, 12 Ah, 1.2 Ah, 7 Ah
Selector switch buffer times	0.5 min, 1 min, 3 min, 10 min, 20 min, 30 min, Service
Remote disconnection (Interlock)	Yes
Temperature probe	NTC 100 kΩ
Buffer times	Depending on the connected battery
Degree of efficiency	> 98%
Power loss	<10 W
Depth x width x height / Net weight	125 / 38 / 130 mm / 600 g

Rated input voltage	24 V DC
DC input voltage range	18...30 V DC
Input current	<40.2 A
Input fuse (internal)	Yes
DC current consumption	<0.2 A @ no load
Reverse polarity protection	Yes
Rated output voltage	24 V DC
Output voltage	17.5-29.5 V DC, Vin -0.5 V DC at nominal output current
Output current, max.	40 A
Charging feature	IU characteristic curve
Charging voltage (temperature compensated)	27, 48 V @ 20°C
Temperature coefficient	-48 mV / °C
Charging current	1.2 Ah = 0.2 A / 3.4 Ah = 0.5 A / 7 Ah = 1.0 A / 12 Ah = 1.5 A / 17 Ah = 2.0 A / 26 Ah = 3.0 A / 38 Ah = 4.0 A all: +/- 0.100 A every minute
Battery availability test	every minute
Nominal voltage	24 V
Storage medium	3.4 Ah, 12 Ah, Selectable with rotary switch, 1.2 Ah, 7 Ah
Parallel connection option	Yes, max. 2
Selector switch battery	3.4 Ah, 12 Ah, 1.2 Ah, 7 Ah
Selector switch buffer times	0.5 min, 1 min, 3 min, 10 min, 20 min, 30 min, Service
Remote disconnection (Interlock)	Yes
Temperature probe	NTC 100 kΩ
Buffer times	Depending on the connected battery
Degree of efficiency	> 98%
Power loss	<10 W
Depth x width x height / Net weight	125 / 50 / 130 mm / 700 g

Connection data	
Wire connection method	
Wire cross-section, rigid min/max	mm ²
Wire cross-section, flexible min/max	mm ²
Wire cross-section, AWG/kcmil min/max	

Input/output/battery	Signal
PUSH IN	PUSH IN
4 / 6	0.2 / 1.5
4 / 2.5	0.2 / 1.5
12 / 10	25 / 16

Input/output/battery	Signal
PUSH IN	PUSH IN
10 / 16	0.2 / 1.5
10 / 16	0.2 / 1.5
8 / 6	25 / 16

Note

Note

Note

Ordering data

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Type	Qty.	Order No.
DURA MAX DC UPS 24V 20A	1	2934960000

Type	Qty.	Order No.
DURA MAX DC UPS 24V 40A	1	2934970000

Note

Note

Note

Small metal foot



Type	Order No.
MTA 30 MF	1251320000

Large metal foot



Type	Order No.
MTA 45 MF	1251310000

Small plastic foot



Type	Order No.
MTA 30 BK	1168970000

Large plastic foot



Type	Order No.
MTA 45 BK	1962250000

Small wall mounting



Type	Order No.
CP A WALLADAPTER 30 MM	1461870000

Large wall mounting



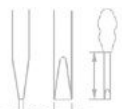
Type	Order No.
CP A WALLADAPTER 45 MM	1461850000

Temperature probe



Type	Kabellänge	Order No.
CP DC UPS TF25	2.5 m	1444540000
CP DC UPS TF05	0.5 m	1444480000

Small screwdriver



Type	Size/AF	a	b	c	Order No.
SDIS 0.5X3.0X100		0.5	3	100	2749800000

Large screwdriver



Type	Size/AF	a	b	c	Order No.
SDIS 1.0X5.5X125		1	5.5	125	2749850000

Markers



Type	Colour	Qty.	Order No.
SM 18/9.5 K MC NE WS	white	200	1248580000

End bracket

For DIN rail TS 35



Type	Colour	Torque	Qty.	Order No.
Polyamide with fibre glass, screwable WEW 35/1 SW	black	1.2 Nm	50	1162600000

Flexible and easy to use uninterruptible power supplies

Bridge network failures of up to 30 hours with our DC-UPS systems

C If sensitive process have to run reliably in a 24/7 operation, then the automation components need an everlasting supply. Using our uninterruptible power supply units in conjunction with the suitable battery modules ensure a reliable operation even in case of network failures.

The 5 DURAEco battery modules with capacities from 1,2 Ah to 17 Ah can supply up to 40 A for 30 minutes or 1 A for 30 hours and are fully compatible with the new DURAmx DC UPS control units. DURAEco series is a flexible & ease of use solution in a cost-effective design

Your benefits

- Sealed and maintenance-free VRLA batteries with 3 ... 5 years design lifetime
- Trouble-free exchange of existing batteries in running machineries due to the same footprint & drilling dimensions in comparison to the previous models
- Compatible with DURAmx DC UPS series
- Economical design



Integrated temperature measurement
Integrated temperature sensor for optimum charging and a long service life

Quick and easy mounting
DIN rail and 4-hole mounting for fast installation

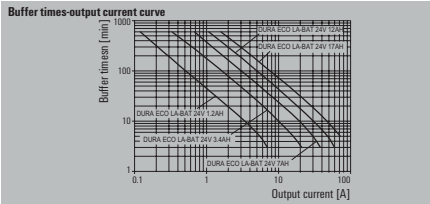


Universally applicable
Comprehensive approval and test marks for use in the international field and in many industries

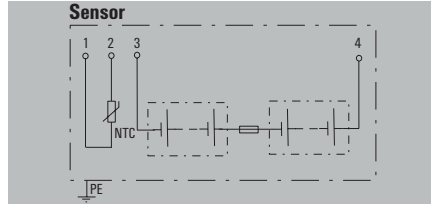
connectPower Battery modules

Battery modules

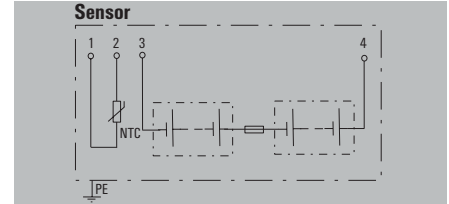
- Maintenance-free lead-acid batteries from 1.2 Ah to 17 Ah
- Integrated temperature sensor for optimal battery charging
- Capacity up to 40 A / 30 min or 1 A / 30 hrs
- Robust metal housing for wall mounting



DURA ECO LA-BAT 24V 1.2AH



DURA ECO LA-BAT 24V 3.4AH



Technical data

Rated input voltage	24 V DC
Nominal capacity	1.3 Ah
Charging current, max.	0.2 A
Overload and short circuit protection	10 A fuse
Buffer time depending on current =	6A = 3min / 4.5A = 5min / 1.4A = 30min
Output current, max.	15 A
Parallel connection option	Yes
Series switching capability	No
Temperature probe	NTC 100 kΩ
General data	
Battery type	VRLA Lead-Acid
Life expectancy	5.650000
Ambient temperature	-15 °C...+50 °C
Storage temperature	-15 °C...50 °C
Latest commissioning	9 months
Humidity	5...95 % RH
Protection class	III, with no ground connection, for SELV
Protection degree	IP20
Vibration DIN rail/wall in accordance with IEC 68-2-6	0.7 / 0.7 g
Shock wall acc. to IEC 68227	30 g
Depth x width x height / Net weight	124 / 52 / 149.5 mm / 1750 g
Approvals	
Approvals	ABS; BURVER; CE; cULus; DETNORVER; TUEV

Rated input voltage	24 V DC
Nominal capacity	3.4 Ah
Charging current, max.	0.51 A
Overload and short circuit protection	25 A fuse
Buffer time depending on current =	17A = 3min / 13A = 5min / 3.7A = 30min
Output current, max.	25 A
Parallel connection option	Yes
Series switching capability	No
Temperature probe	NTC 100 kΩ
General data	
Battery type	VRLA Lead-Acid
Life expectancy	5.650000
Ambient temperature	-15 °C...+50 °C
Storage temperature	-15 °C...50 °C
Latest commissioning	9 months
Humidity	5...95 % RH
Protection class	III, with no ground connection, for SELV
Protection degree	IP20
Vibration DIN rail/wall in accordance with IEC 68-2-6	0.7 / 0.7 g
Shock wall acc. to IEC 68227	30 g
Depth x width x height / Net weight	166 / 108 / 141 mm / 3900 g
Approvals	
Approvals	ABS; BURVER; CE; cULus; DETNORVER; TUEV

Rated input voltage	24 V DC
Nominal capacity	3.4 Ah
Charging current, max.	0.51 A
Overload and short circuit protection	25 A fuse
Buffer time depending on current =	17A = 3min / 13A = 5min / 3.7A = 30min
Output current, max.	25 A
Parallel connection option	Yes
Series switching capability	No
Temperature probe	NTC 100 kΩ
General data	
Battery type	VRLA Lead-Acid
Life expectancy	5.650000
Ambient temperature	-15 °C...+50 °C
Storage temperature	-15 °C...50 °C
Latest commissioning	9 months
Humidity	5...95 % RH
Protection class	III, with no ground connection, for SELV
Protection degree	IP20
Vibration DIN rail/wall in accordance with IEC 68-2-6	0.7 / 0.7 g
Shock wall acc. to IEC 68227	30 g
Depth x width x height / Net weight	166 / 108 / 141 mm / 3900 g
Approvals	
Approvals	ABS; BURVER; CE; cULus; DETNORVER; TUEV

Connection data	
Wire connection method	
Wire cross-section, rigid min/max	mm ²
Wire cross-section, flexible min/max	mm ²
Wire cross-section, AWG/kcmil min/max	
Note	

Input/output/battery	Signal
	Pluggable screw connection
0.2 / 4	0.2 / 4
0.2 / 4	0.2 / 4
24 / 12	24 / 12
Note	

Input/output/battery	Signal
	Pluggable screw connection
0.5 / 16	0.2 / 1.5
0.5 / 10	0.2 / 1.5
24 / 6	24 / 16
Note	

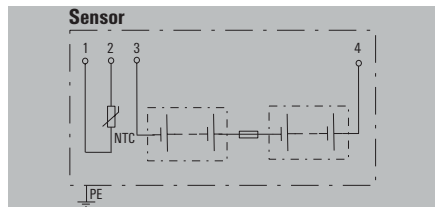
Ordering data

Note	
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Type	Qty.	Order No.
DURA ECO LA-BAT 24V 1.2AH	1	2789890000
Note		

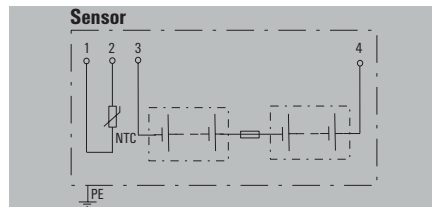
Type	Qty.	Order No.
DURA ECO LA-BAT 24V 3.4AH	1	2789900000
Note		

DURA ECO LA-BAT 24V 7AH



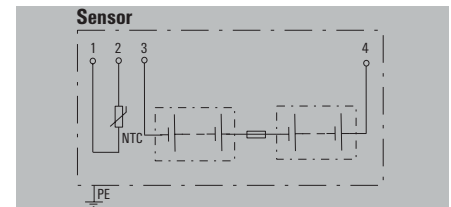
24 V DC
7 Ah
1.08 A
2x25 A fuse
35A = 3min / 27A = 5min / 8.5A = 30min
50 A
Yes
No
NTC 100 kΩ
VRLA Lead-Acid
5.650000
-15 °C...+50 °C
-15 °C...50 °C
9 months
5...95 % RH
III, with no ground connection, for SELV
IP20
- / 0.7 g
30 g
135 / 162 / 158 mm / 6120 g
ABS; BURVER; CE; cULus; DETNORVER; TUEV

DURA ECO LA-BAT 24V 12AH



24 V DC
12 Ah
1.8 A
2x25 A fuse
46A = 5min / 30A = 10min / 8.1A = 60min
50 A
Yes
No
NTC 100 kΩ
VRLA Lead-Acid
5.650000
-15 °C...+50 °C
-15 °C...50 °C
9 months
5...95 % RH
III, with no ground connection, for SELV
IP20
- / 0.7 g
30 g
135 / 229 / 158 mm / 9700 g
ABS; BURVER; CE; cULus; DETNORVER; TUEV

DURA ECO LA-BAT 24V 17AH



24 V DC
17 Ah
2 A
2x25 A fuse
42A = 10min / 21A = 30min / 12A = 60min
50 A
Yes
No
NTC 100 kΩ
VRLA Lead-Acid
5.650000
-15 °C...+50 °C
-15 °C...50 °C
9 months
5...95 % RH
III, with no ground connection, for SELV
IP20
- / 0.7 g
30 g
189 / 242 / 178 mm / 13100 g
ABS; BURVER; CE; cULus; DETNORVER; TUEV

Input/output/battery	Signal
	Pluggable screw connection
0.5 / 16	0.2 / 1.5
0.5 / 10	0.2 / 1.5
24 / 6	24 / 16

Input/output/battery	Signal
	Pluggable screw connection
0.5 / 16	0.2 / 1.5
0.5 / 10	0.2 / 1.5
24 / 6	24 / 16

Input/output/battery	Signal
	Pluggable screw connection
0.5 / 16	0.2 / 1.5
0.5 / 10	0.2 / 1.5
24 / 6	24 / 16

Type	Qty.	Order No.
DURA ECO LA-BAT 24V 7AH	1	2789910000

Type	Qty.	Order No.
DURA ECO LA-BAT 24V 12AH	1	2789920000

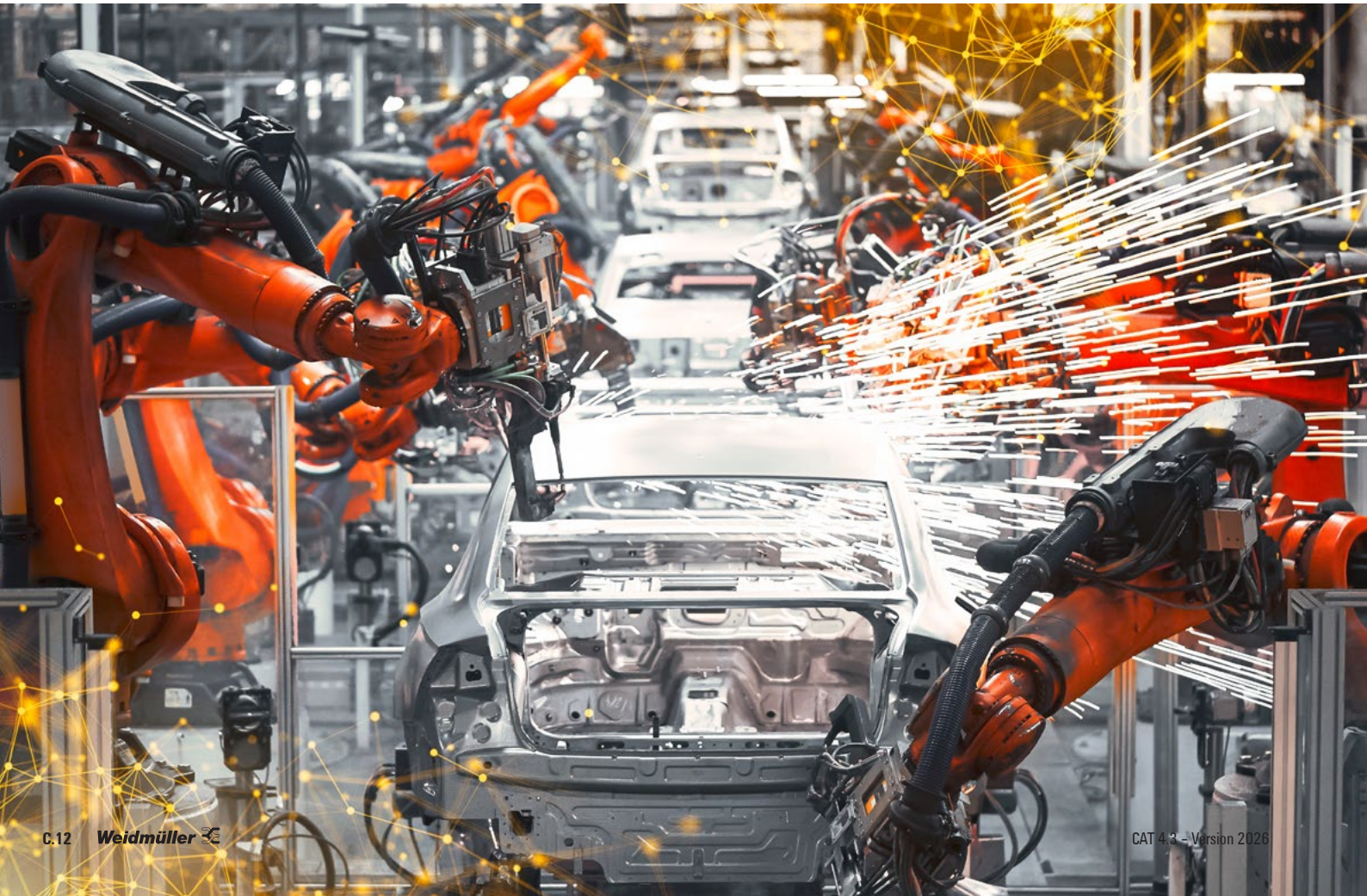
Type	Qty.	Order No.
DURA ECO LA-BAT 24V 17AH	1	2789930000

Operate automation applications with maximum reliability maxSHIELD DC buffer modules for the uninterrupted 24 V systems

Voltage interruptions of several 100 ms in automation applications can lead to cost-intensive machine and system downtimes. These can be avoided with an uninterruptible 24 V power supply.

Weidmüller's maintenance-free maxSHIELD DC buffer modules guarantee an uninterruptible power supply and are therefore an important basis for 24 V systems. They supply the required voltage to the electronic load to bridge outages. The maintenance-free electrolytic capacitors enable continuous operation at ambient temperatures of up to +70°C. Optionally, a parallel connection is possible to bridge longer failures or to increase the output power.

C



Simple and flexible combination

The DC buffer modules provide flexible limit selection between 22.5V DC and VIN-1 V. They can also be operated in parallel to increase bridging time or output power.

Space-saving and maintenance-free

Due to the compact design, with only 55 or 65 mm width, the DC buffer module can be placed directly next to power supplies in the control cabinet.



Universally applicable

International approvals such as cULus, ATEX, and IECex as well as a wide operating temperature range enable use in a wide variety of applications worldwide.

connectPower Buffer modules

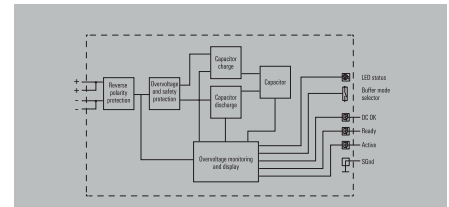
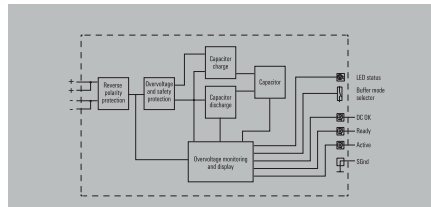
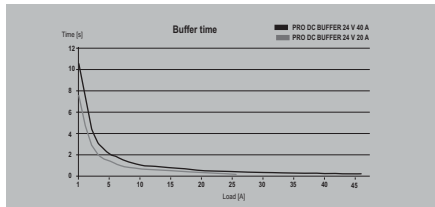
Buffer modules

- Buffer time: 320ms @ 20 A or 230 ms @ 40 A
- Extensive approvals and wide temperature range
- Status display by LEDs and signal connections
- Space-saving and maintenance-free
- Parallel switchable

PRO DC BUFFER 24V 20A



PRO DC BUFFER 24V 40A



Technical data

Input	
Rated input voltage	24 V DC
Input current	0...21 A
DC current consumption	<0.2 A @ no load, <1 A @ charging process for typ. 10s
DC input voltage range	22.5 - 30 V DC
Output	
Mains failure bridge-over time, min.	200ms
Output voltage	22.2 ± 0.4 V DC / Vin-1 V(± 0.4 V)
Output voltage	Corresponds to the input voltage
Output current at 40 °C	25 A
Rated current	20 A
Parallel connection option	Yes
Overload and short circuit protection	Yes
Surge protection	33 V...35 V
Display	
Status indicator	Green LED
MTBF	
According to Standard	SN 29500
Operating time (hours), min.	2500000h
Ambient temperature	25°C
Input voltage	24V
Output power	480W
Duty cycle	100%
Mains failure bridge-over time	
Mains failure bridge-over time, min.	200ms
Output current	20A
Output voltage	22.2V
General data	
Degree of efficiency	≥ 98% buffer mode
Storage medium	Internal condenser
Ambient temperature (operational)	-25 °C...70 °C
Humidity	5...95 %, no condensation
Depth x width x height / Net weight	130 / 55 / 125 mm / 1043 g
Approvals	
Approvals	CE; CSAEX; cULus; TUEV
Connection data	
Connection system	Screw connection
Number of terminals	4 (++) / (-)
Wire cross-section, rigid min/max	0.18 / 6 mm ²
Wire cross-section, flexible min/max	0.22 / 4 mm ²
Wire cross-section, AWG/kcmil min/max	26 / 10 AWG
Note	

Input / Output		Signal	
Screw connection		PUSH IN	
4 (++) / (-)		4	
0.18 / 6		0.2 / 1.5	
0.22 / 4		0.2 / 1.5	
26 / 10		28 / 14	

Input / Output		Signal	
Screw connection		PUSH IN	
4 (++) / (-)		4	
0.5 / 16		0.2 / 1.5	
0.5 / 16		0.2 / 1.5	
22 / 8		28 / 14	

Ordering data

Type	Qty.	Order No.
PRO DC BUFFER 24V 20A	1	2786240000
Note		

Type	Qty.	Order No.
PRO DC BUFFER 24V 40A	1	2786250000
Note		

Type	Qty.	Order No.
PRO DC BUFFER 24V 40A	1	2786250000
Note		

DC/DC converters

DC/DC converters	Overview	D.2
	connectPower DC/DC converter	D.4

Stabilise control voltages in 24 V DC systems

Compact and powerful DC/DC converters for an everlasting supply

Maximum supply reliability and minimum downtimes indicate a good power supply system. However, the increasing complexity of supply solutions and the increased use of battery back-up systems can have a negative impact on the stability of the DC control voltage. Supply disruptions, e. g. voltage fluctuations as a result of different potentials or voltage drops as a result of long cables may occur as a result. These issues can often lead to cost-intensive production disruptions.

D

The DC/DC converter balances out voltage fluctuations, such as those arising as a result of unregulated voltage supplies. Voltage drops at the end of long cables are also balanced out. With protection class III for floating systems and galvanic isolation, the DC/DC converters are particularly well-suited for use with independent supply systems.

As well as having above-average performance characteristics, the DC/DC converter also stands out thanks to its slim design, ease of servicing and high degree of efficiency of up to 94 %. It also has a wide range of safety functions and can be combined with PROtop, PROeco or PROmax power supplies. It is also possible to combine UPS components, diode and redundancy modules with the DC/DC converter in order to establish a redundant power supply. All of these features make the DC converter a real all-rounder when it comes to 24 V DC supply voltages.

Your special advantages:

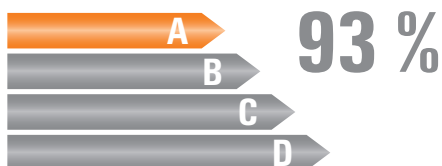
- Reliable and powerful
- The long-lasting Power Boost of up to 120 % and high peak currents of up to 600 % of the rated current for 16 ms guarantee reliable starting and safe operation even within limit ranges.



In floating voltage systems, e. g. with emergency power battery systems in marine engineering, the control voltage needs to be galvanically isolated from the battery voltage

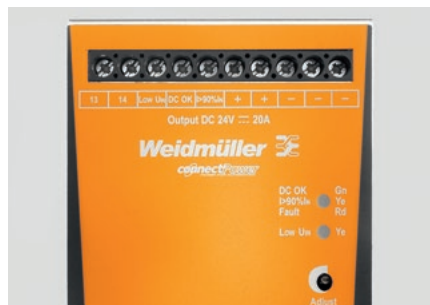
Extremely compact and energy-efficient

The compact design saves up to 30 % space in the control cabinet. The high degree of efficiency of up to 93 % ensures low energy costs.



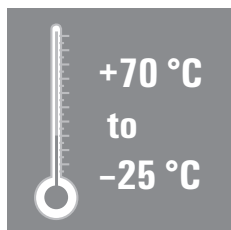
Quick status diagnostics and maintenance

The preventative function monitoring via LED display, the status relay and transistor outputs make it easier to carry out status and error analyses during commissioning and operation.



Robust and reliable

Weidmüller DC/DC converters function reliably over a large temperature range of between -25 °C and +70 °C (start-up: -40 °C), and with a high MTBF value of over 1,000,000 hours.



All-purpose usage

Variants from 5 to 20 A, various voltage combinations and international international approvals (e.g. cULus, Class I, Div. 2, ATEX, GL, DNV) allow for global use in a range of different applications.



ConnectPower DC/DC converter



Signal states

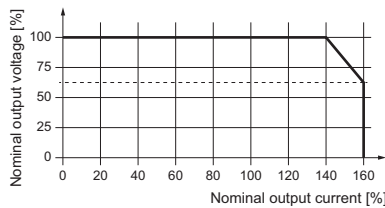
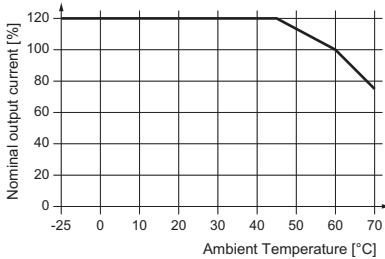
Event	LED (Gr/Ye/Rd)	LED (Ye)	Transistor status outputs	Status relay
Input	gr = "DC OK" Ye = "i > 90% I _N " Rd = "FAul T"	"i low u _N "	DC OK i > 90% I _N low u _N	
U _N < 14 V	OFF	ON	Low Low Low	OFF
U _N = 14...19.2 V *)	i < 90% I _N	Gr	ON High Low	ON
	i > 90% I _N	Ye	ON High High	ON
U _N > 19.2 V	U < 20.4 V	Rd	ON Low Low	OFF
	i < 90% I _N	Gr	OFF High Low	ON
U _N > 19.2 V	i > 90% I _N	Ye	OFF High High	ON
	U < 20.4 V	Rd	OFF Low Low	OFF

Gr = grün / green / verde / verde / verde / 绿色
Ye = gelb / yellow / jaune / giallo / amarillo / 黄色
Rd = rot / red / rouge / rosso / rojo / vermelho / 红色
*) während des Betriebes / during operations / en cours de fonctionnement / durante l'esercizio / durante el servicio / durante a operação / 运行过程中

Technical data

General data	
Current limiting	150% I _{out}
Insulation voltage input / earth	1.5 kV
Insulation voltage output / earth	0.5 kV
Insulation voltage, input/output	1.5 kV
Ambient temperature (operational) / Storage temperature / Start-up	-25 °C...70 °C / -40 °C...85 °C / ≥ -40 °C
Humidity at operating temperature	5...95 %, no condensation
Protection class / Pollution degree	III / 2
Housing version	Metal, corrosion resistant
Mounting position, installation notice	Horizontal on TS35 mounting rail. 50 mm of clearance at top & bottom for air circ. Can mount side by side with no space in between., 50 mm clearance at top and bottom for free air circulation, mountable side by side without clearance, On TS 35 mounting rail, 50 mm clearance above and below for free air supply, Horizontal on DIN rail TS 35, top and bottom 50 mm clearance for free air flow, 10 mm clearance to neighbouring active subassemblies with full load, 5 mm with passive neighbouring subassemblies, direct row mounting with 90% rated load

Derating curve



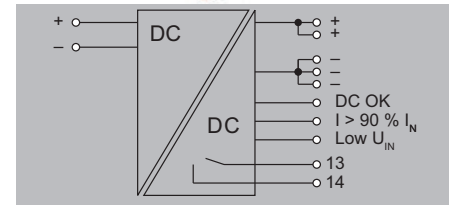
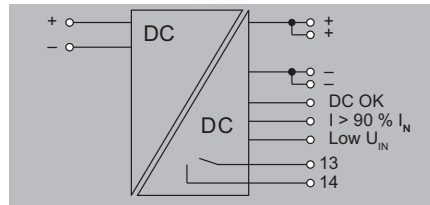
EMC / shock / vibration

Interference immunity test acc. to	EN 61000-4-2 (ESD), EN 61000-4-4 (burst), EN 61000-4-5 (surge), EN 61000-4-6 (conducted), EN 61000-4-3 (HF field), EN 61000-6-1:2019, EN 61000-6-2:2019, EN 61000-6-3, EN 61000-6-4, EN 55032, EN 55035
Shock	30 g in all directions
Resistance to vibration	2.3 g (15 Hz...150 Hz)
Electrical safety (applied standards)	
Electrical machine equipment	Acc. to EN60204
Safety transformers for switch-mode power supplies	According to EN 61558-2-16

ConnectPower DC/DC converter

PRO DCDC 120W 24V 5A

PRO DCDC 240W 24V 10A



Technical data

Input	
Rated input voltage	24 V DC
DC input voltage range	14...32 V (during operation), 18...32 V (commissioning)
Input fuse (internal)	Yes
Inrush current / Inrush Current Limitation	Max. 10 A / Yes
Recommended back-up fuse	10 A, Char. B circuit breaker, 10 A, Char. C circuit breaker
Output	
Rated output voltage	24 V DC ± 1 %
Output voltage	22.5...29.5 V (adjustable via potentiometer on front)
Continuous output current @ U _{Nominal}	5 A @ 40 °C, 6 A @ 45°C, 3,75 A @ 70°C
Output power	120 W
Ramp-up time	≤ 9 ms (U _{out} : 10%...90%)
Capacitive load	unrestricted
Parallel connection option	yes, max. 5 (without diode module)
Reserve capacity @ U _{Nominal}	600% IN for 16 ms
Residual ripple, breaking spikes	≤ 20 mVPP @full load
Protection against inverse voltage / Overload protection	Yes / Yes
General data	
Mains failure bridge-over time	10ms @ 24V DC / 5A
Protection against reverse voltages from the load	33...34 V DC
Current limiting	150% I _{out}
Power loss, idling	2 W / 11 W
Degree of efficiency	Typ.: 92 %
MTBF	
According to Standard	SN 29500 / SN 29500
Operating time (hours), min.	3000000h / 1450000h
Ambient temperature	25°C / 40°C
Input voltage	24V / 24V
Output power	120W / 120W
Duty cycle	100% / 100%
Signalling	
Transistor output, positive-switching	DC OK: 20 mA max., short-circuit-proof, I > 90%: 20 mA max., short-circuit-proof, Low U _{IN} : 20 mA max., short-circuit-proof
Floating contact	/
Relay on/off / Contact load	/
Approvals	
Approvals	ABS; BURVER; CE; cULus; cULusEX; DETNORVER; LLOYDSREG; RINA; TUEV
Connection data	
Connection system	Screw connection
Number of terminals	2 (+,-) / 8 (+ / - / signal)
Wire cross-section, rigid min/max	0.2 / 4 mm ²
Wire cross-section, flexible min/max	0.2 / 4 mm ²
Wire cross-section, AWG/kcmil min/max	30 / 12 / 24 / 14
Note	

Ordering data

Type	Qty.	Order No.
PRO DCDC 120W 24V 5A	1	2001800000
Note		

Input	
Rated input voltage	24 V DC
DC input voltage range	14...32 V (during operation), 18...32 V (commissioning)
Input fuse (internal)	Yes
Inrush current / Inrush Current Limitation	Max. 15 A / Yes
Recommended back-up fuse	25 A, Char.B circuit breaker, 25 A, Char.C circuit breaker
Output	
Rated output voltage	24 V DC ± 1 %
Output voltage	22.5...29.5 V (adjustable via potentiometer on front)
Continuous output current @ U _{Nominal}	10 A @ 40 °C, 12 A @ 45°C, 7,5 A @ 70°C
Output power	240 W
Ramp-up time	≤ 9 ms (U _{out} : 10%...90%)
Capacitive load	unrestricted
Parallel connection option	yes, max. 5 (without diode module)
Reserve capacity @ U _{Nominal}	600% IN for 16 ms
Residual ripple, breaking spikes	≤ 20 mVPP @full load
Protection against inverse voltage / Overload protection	Yes / Yes
General data	
Mains failure bridge-over time	12ms @ 24V DC / 10A
Protection against reverse voltages from the load	33...34 V DC
Current limiting	150% I _{out}
Power loss, idling	2 W / 22 W
Degree of efficiency	Typ.: 92 %
MTBF	
According to Standard	SN 29500 / SN 29500
Operating time (hours), min.	1880000h / 810000h
Ambient temperature	25°C / 40°C
Input voltage	24V / 24V
Output power	120W / 120W
Duty cycle	100% / 100%
Signalling	
Transistor output, positive-switching	DC OK: 20 mA max., short-circuit-proof, I > 90%: 20 mA max., short-circuit-proof, Low U _{IN} : 20 mA max., short-circuit-proof
Floating contact	/
Relay on/off / Contact load	/
Approvals	
Approvals	ABS; BURVER; CE; cULus; cULusEX; DETNORVER; LLOYDSREG; RINA; TUEV
Connection data	
Connection system	Screw connection
Number of terminals	2 (+,-) / 10 (+ / - / signal)
Wire cross-section, rigid min/max	0.08 / 4 mm ²
Wire cross-section, flexible min/max	0.08 / 4 mm ²
Wire cross-section, AWG/kcmil min/max	30 / 12 / 24 / 14
Note	

Type	Qty.	Order No.
PRO DCDC 240W 24V 10A	1	2001810000
Note		

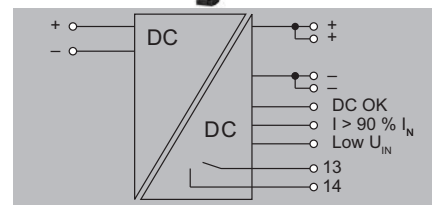
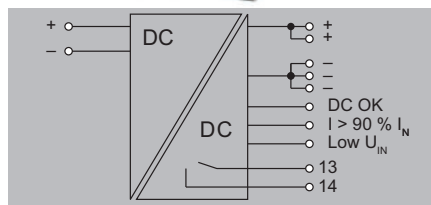
Input	
Rated input voltage	24 V DC
DC input voltage range	14...32 V (during operation), 18...32 V (commissioning)
Input fuse (internal)	Yes
Inrush current / Inrush Current Limitation	Max. 15 A / Yes
Recommended back-up fuse	25 A, Char.B circuit breaker, 25 A, Char.C circuit breaker
Output	
Rated output voltage	24 V DC ± 1 %
Output voltage	22.5...29.5 V (adjustable via potentiometer on front)
Continuous output current @ U _{Nominal}	10 A @ 40 °C, 12 A @ 45°C, 7,5 A @ 70°C
Output power	240 W
Ramp-up time	≤ 9 ms (U _{out} : 10%...90%)
Capacitive load	unrestricted
Parallel connection option	yes, max. 5 (without diode module)
Reserve capacity @ U _{Nominal}	600% IN for 16 ms
Residual ripple, breaking spikes	≤ 20 mVPP @full load
Protection against inverse voltage / Overload protection	Yes / Yes
General data	
Mains failure bridge-over time	12ms @ 24V DC / 10A
Protection against reverse voltages from the load	33...34 V DC
Current limiting	150% I _{out}
Power loss, idling	2 W / 22 W
Degree of efficiency	Typ.: 92 %
MTBF	
According to Standard	SN 29500 / SN 29500
Operating time (hours), min.	1880000h / 810000h
Ambient temperature	25°C / 40°C
Input voltage	24V / 24V
Output power	120W / 120W
Duty cycle	100% / 100%
Signalling	
Transistor output, positive-switching	DC OK: 20 mA max., short-circuit-proof, I > 90%: 20 mA max., short-circuit-proof, Low U _{IN} : 20 mA max., short-circuit-proof
Floating contact	Yes
Relay on/off / Contact load	Output voltage > 21.6 V / <20.4 V / max. 30 V DC / 0.5 A, max. 50 V AC / 0.3 A
Approvals	
Approvals	ABS; BURVER; CE; cULus; cULusEX; DETNORVER; LLOYDSREG; RINA; TUEV
Connection data	
Connection system	Screw connection
Number of terminals	2 (+,-) / 10 (+ / - / signal)
Wire cross-section, rigid min/max	0.08 / 4 mm ²
Wire cross-section, flexible min/max	0.08 / 4 mm ²
Wire cross-section, AWG/kcmil min/max	30 / 12 / 24 / 14
Note	

Type	Qty.	Order No.
PRO DCDC 240W 24V 10A	1	2001810000
Note		

ConnectPower DC/DC converter

PRO DCDC 480W 24V 20A

PRO DCDC 96W 12V/12V 8A



Technical data

Input	
Rated input voltage	24 V DC
DC input voltage range	14...32 V (during operation), 18...32 V (commissioning)
Input fuse (internal)	Yes
Inrush current / Inrush Current Limitation	max. 30 A / Yes
Recommended back-up fuse	40 A, Char. B circuit breaker, 40 A, Char. C circuit breaker
Output	
Rated output voltage	24 V DC ± 1 %
Output voltage	22.5...29.5 V (adjustable via potentiometer on front)
Continuous output current @ U _{Nominal}	20 A @ 60 °C, 24 A @ 45°C, 15 A @ 70°C
Output power	480 W
Ramp-up time	≤ 9 ms (U _{out} : 10%...90%)
Capacitive load	unrestricted
Parallel connection option	yes, max. 3
Reserve capacity @ U _{Nominal}	600% IN for 16 ms
Residual ripple, breaking spikes	≤ 20 mVPP @full load
Protection against inverse voltage / Overload protection	Yes / Yes
General data	
Mains failure bridge-over time	10ms @ 24V DC / 20A
Protection against reverse voltages from the load	33...34 V DC
Current limiting	150% I _{out}
Power loss, idling	3 W / 40 W
Degree of efficiency	typ. > 93%
MTBF	
According to Standard	SN 29500 / SN 29500
Operating time (hours), min.	1480000h / 683000h
Ambient temperature	25°C / 40°C
Input voltage	24V / 24V
Output power	120W / 120W
Duty cycle	100% / 100%
Signalling	
Transistor output, positive-switching	DC OK: 20 mA max., short-circuit-proof, I > 90%: 20 mA max., short-circuit-proof, Low U _{IN} : 20 mA max., short-circuit-proof
Floating contact	Yes
Relay on/off / Contact load	Output voltage > 21.6 V / <20.4 V / max. 30 V DC / 0.5 A, max. 50 V AC / 0.3 A
Approvals	
Approvals	ABS; BURVER; CE; cULus; cULusEX; DETNORVER; LLOYDSREG; RINA; TUEV
Connection data	
Connection system	Screw connection
Number of terminals	2 (+, -) / 10 (+ / - / signal)
Wire cross-section, rigid min/max	0.5 / 16 mm ²
Wire cross-section, flexible min/max	0.5 / 16 mm ²
Wire cross-section, AWG/kcmil min/max	22 / 8
Note	

Input	
Rated input voltage	12 V DC
DC input voltage range	9 ... 18 V DC
Input fuse (internal)	30A T
Inrush current / Inrush Current Limitation	<4 A @ Nominal input voltage / 20 A (DI) / 16 A ... 20 A (Char. B, C)
Recommended back-up fuse	
Output	
Rated output voltage	12 V DC
Output voltage	5...15 V (adjustable via potentiometer on front)
Continuous output current @ U _{Nominal}	8 A @ 60°C, 10 A @ 45°C, 6 A @ 70°C
Output power	96 W
Ramp-up time	≤ 100 ms
Capacitive load	unrestricted
Parallel connection option	yes, max. 3
Reserve capacity @ U _{Nominal}	600% IN for 15 ms
Residual ripple, breaking spikes	≤ 20 mVPP @full load
Protection against inverse voltage / Overload protection	Yes / Yes
General data	
Mains failure bridge-over time	3ms @ 12V DC / 8A
Protection against reverse voltages from the load	18 V DC
Current limiting	150% I _{out}
Power loss, idling	/
Degree of efficiency	> 86.5 %
MTBF	
According to Standard	SN 29500 / SN 29500
Operating time (hours), min.	1200000h / 750000h
Ambient temperature	25°C / 40°C
Input voltage	12V / 12V
Output power	96W / 96W
Duty cycle	100% / 100%
Signalling	
Transistor output, positive-switching	DC OK: 20 mA max., short-circuit-proof, I > 90%: 20 mA max., short-circuit-proof, Low U _{IN} : 20 mA max., short-circuit-proof
Floating contact	Yes
Relay on/off / Contact load	/ max. 30 V DC / 0.5 A, max. 50 V AC / 0.3 A
Approvals	
Approvals	CE; cULus; DEMKOATEX; IECEXULD
Connection data	
Connection system	Screw connection
Number of terminals	2 (+, -) / 4 (++) / -
Wire cross-section, rigid min/max	0.2 / 4
Wire cross-section, flexible min/max	0.2 / 2.5
Wire cross-section, AWG/kcmil min/max	30 / 12
Note	

Input	
Rated input voltage	24 V DC
DC input voltage range	14...32 V (during operation), 18...32 V (commissioning)
Input fuse (internal)	Yes
Inrush current / Inrush Current Limitation	max. 30 A / Yes
Recommended back-up fuse	40 A, Char. B circuit breaker, 40 A, Char. C circuit breaker
Output	
Rated output voltage	24 V DC ± 1 %
Output voltage	22.5...29.5 V (adjustable via potentiometer on front)
Continuous output current @ U _{Nominal}	20 A @ 60 °C, 24 A @ 45°C, 15 A @ 70°C
Output power	480 W
Ramp-up time	≤ 9 ms (U _{out} : 10%...90%)
Capacitive load	unrestricted
Parallel connection option	yes, max. 3
Reserve capacity @ U _{Nominal}	600% IN for 16 ms
Residual ripple, breaking spikes	≤ 20 mVPP @full load
Protection against inverse voltage / Overload protection	Yes / Yes
General data	
Mains failure bridge-over time	10ms @ 24V DC / 20A
Protection against reverse voltages from the load	33...34 V DC
Current limiting	150% I _{out}
Power loss, idling	3 W / 40 W
Degree of efficiency	typ. > 93%
MTBF	
According to Standard	SN 29500 / SN 29500
Operating time (hours), min.	1480000h / 683000h
Ambient temperature	25°C / 40°C
Input voltage	24V / 24V
Output power	120W / 120W
Duty cycle	100% / 100%
Signalling	
Transistor output, positive-switching	DC OK: 20 mA max., short-circuit-proof, I > 90%: 20 mA max., short-circuit-proof, Low U _{IN} : 20 mA max., short-circuit-proof
Floating contact	Yes
Relay on/off / Contact load	Output voltage > 21.6 V / <20.4 V / max. 30 V DC / 0.5 A, max. 50 V AC / 0.3 A
Approvals	
Approvals	ABS; BURVER; CE; cULus; cULusEX; DETNORVER; LLOYDSREG; RINA; TUEV
Connection data	
Connection system	Screw connection
Number of terminals	2 (+, -) / 10 (+ / - / signal)
Wire cross-section, rigid min/max	0.5 / 16 mm ²
Wire cross-section, flexible min/max	0.5 / 16 mm ²
Wire cross-section, AWG/kcmil min/max	22 / 8
Note	

Ordering data

Type	Qty.	Order No.
PRO DCDC 480W 24V 20A	1	2001820000
Note		

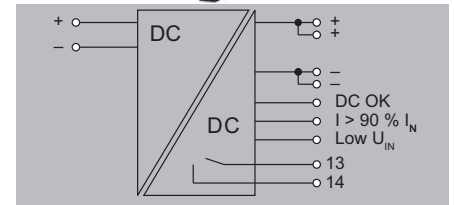
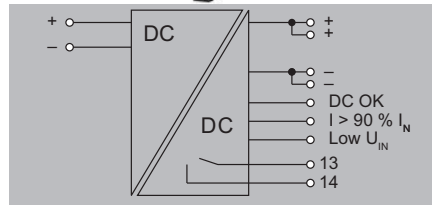
Type	Qty.	Order No.
PRO DCDC 96W 12V/12V 8A	1	2869000000
Note		

Type	Qty.	Order No.
PRO DCDC 96W 12V/12V 8A	1	2869000000
Note		

ConnectPower DC/DC converter

PRO DCDC 96W 24V/12V 8A

PRO DCDC 96W 48V/12V 8A



Technical data

Input		
Rated input voltage	24 V DC	
DC input voltage range	18 ... 34 V DC	
Input fuse (internal)	15A T	
Inrush current / Inrush Current Limitation	<4 A @ Nominal input voltage / 10 A (DI) / 6A...10A (Char. B, C)	
Recommended back-up fuse		
Output		
Rated output voltage	12 V DC	
Output voltage	5...15 V (adjustable via potentiometer on front)	
Continuous output current @ U _{Nominal}	8 A @ 60°C, 10 A @ 45°C, 6 A @ 70°C	
Output power	96 W	
Ramp-up time	≤ 100 ms	
Capacitive load	unrestricted	
Parallel connection option	yes, max. 3	
Reserve capacity @ U _{Nominal}	600 % IN for 15 ms	
Residual ripple, breaking spikes	≤ 20 mVPP @full load	
Protection against inverse voltage / Overload protection	Yes / Yes	
General data		
Mains failure bridge-over time	5ms @ 24V DC / 8A	
Protection against reverse voltages from the load	18 V DC	
Current limiting	150% I _{out}	
Power loss, idling	/	
Degree of efficiency	> 89 %	
MTBF		
According to Standard	SN 29500 / SN 29500	
Operating time (hours), min.	1200000h / 850000h	
Ambient temperature	25°C / 40°C	
Input voltage	24V / 24V	
Output power	96W / 96W	
Duty cycle	100% / 100%	
Signalling		
Transistor output, positive-switching	DC OK: 20 mA max., short-circuit-proof, I > 90%: 20 mA max., short-circuit-proof, Low U _{IN} : 20 mA max., short-circuit-proof	
Floating contact	Yes	
Relay on/off / Contact load	/ max. 30 V DC / 0.5 A, max. 50 V AC / 0.3 A	
Approvals		
Approvals	CE; cULus; DEMKOATEX; IECEXULD	
Connection data		
Connection system	Screw connection	
Number of terminals	2 (+, -) / 4 (++, -)	
Wire cross-section, rigid min/max	0.2 / 4 mm ²	
Wire cross-section, flexible min/max	0.2 / 4 mm ²	
Wire cross-section, AWG/kcmil min/max	30 / 12 / 24 / 14	
Note		
Ordering data		
Type	Qty.	Order No.
PRO DCDC 96W 24V/12V 8A	1	2869010000
Note		

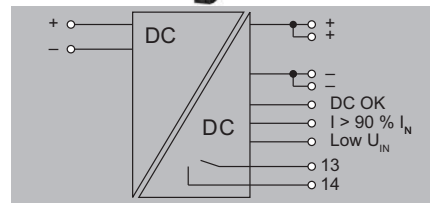
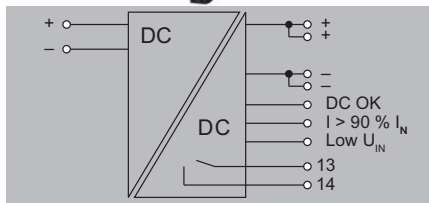
Input		
Rated input voltage	48 V DC	
DC input voltage range	28 ... 58 V DC	
Input fuse (internal)	15A T	
Inrush current / Inrush Current Limitation	<4 A @ Nominal input voltage / 10 A (DI) / 6A...10A (Char. B, C)	
Recommended back-up fuse		
Output		
Rated output voltage	12 V DC	
Output voltage	5...15 V (adjustable via potentiometer on front)	
Continuous output current @ U _{Nominal}	8 A @ 60°C, 10 A @ 45°C, 6 A @ 70°C	
Output power	96 W	
Ramp-up time	≤ 100 ms	
Capacitive load	unrestricted	
Parallel connection option	yes, max. 3	
Reserve capacity @ U _{Nominal}	600 % IN for 15 ms	
Residual ripple, breaking spikes	≤ 50 mVPP @full load	
Protection against inverse voltage / Overload protection	Yes / Yes	
General data		
Mains failure bridge-over time	10ms @ 48V DC / 8A	
Protection against reverse voltages from the load	18 V DC	
Current limiting	150% I _{out}	
Power loss, idling	/	
Degree of efficiency	> 89 %	
MTBF		
According to Standard	SN 29500 / SN 29500	
Operating time (hours), min.	1200000h / 850000h	
Ambient temperature	25°C / 40°C	
Input voltage	48V / 48V	
Output power	96W / 96W	
Duty cycle	100% / 100%	
Signalling		
Transistor output, positive-switching	DC OK: 20 mA max., short-circuit-proof, I > 90%: 20 mA max., short-circuit-proof, Low U _{IN} : 20 mA max., short-circuit-proof	
Floating contact	Yes	
Relay on/off / Contact load	/ max. 30 V DC / 0.5 A, max. 50 V AC / 0.3 A	
Approvals		
Approvals	CE; cULus; DEMKOATEX; IECEXULD	
Connection data		
Connection system	Screw connection	
Number of terminals	2 (+, -) / 4 (++, -)	
Wire cross-section, rigid min/max	0.2 / 4 mm ²	
Wire cross-section, flexible min/max	0.2 / 4 mm ²	
Wire cross-section, AWG/kcmil min/max	30 / 12 / 24 / 14	
Note		
Ordering data		
Type	Qty.	Order No.
PRO DCDC 96W 48V/12V 8A	1	2869020000
Note		

Input		
Rated input voltage	48 V DC	
DC input voltage range	28 ... 58 V DC	
Input fuse (internal)	15A T	
Inrush current / Inrush Current Limitation	<4 A @ Nominal input voltage / 10 A (DI) / 6A...10A (Char. B, C)	
Recommended back-up fuse		
Output		
Rated output voltage	12 V DC	
Output voltage	5...15 V (adjustable via potentiometer on front)	
Continuous output current @ U _{Nominal}	8 A @ 60°C, 10 A @ 45°C, 6 A @ 70°C	
Output power	96 W	
Ramp-up time	≤ 100 ms	
Capacitive load	unrestricted	
Parallel connection option	yes, max. 3	
Reserve capacity @ U _{Nominal}	600 % IN for 15 ms	
Residual ripple, breaking spikes	≤ 50 mVPP @full load	
Protection against inverse voltage / Overload protection	Yes / Yes	
General data		
Mains failure bridge-over time	10ms @ 48V DC / 8A	
Protection against reverse voltages from the load	18 V DC	
Current limiting	150% I _{out}	
Power loss, idling	/	
Degree of efficiency	> 89 %	
MTBF		
According to Standard	SN 29500 / SN 29500	
Operating time (hours), min.	1200000h / 850000h	
Ambient temperature	25°C / 40°C	
Input voltage	48V / 48V	
Output power	96W / 96W	
Duty cycle	100% / 100%	
Signalling		
Transistor output, positive-switching	DC OK: 20 mA max., short-circuit-proof, I > 90%: 20 mA max., short-circuit-proof, Low U _{IN} : 20 mA max., short-circuit-proof	
Floating contact	Yes	
Relay on/off / Contact load	/ max. 30 V DC / 0.5 A, max. 50 V AC / 0.3 A	
Approvals		
Approvals	CE; cULus; DEMKOATEX; IECEXULD	
Connection data		
Connection system	Screw connection	
Number of terminals	2 (+, -) / 4 (++, -)	
Wire cross-section, rigid min/max	0.2 / 4 mm ²	
Wire cross-section, flexible min/max	0.2 / 4 mm ²	
Wire cross-section, AWG/kcmil min/max	30 / 12 / 24 / 14	
Note		
Ordering data		
Type	Qty.	Order No.
PRO DCDC 96W 48V/12V 8A	1	2869020000
Note		

ConnectPower DC/DC converter

PRO DCDC 120W 12V/24V 5A

PRO DCDC 120W 48V/24V 5A



Technical data

Input		
Rated input voltage	12 V DC	
DC input voltage range	9 ... 18 V DC	
Input fuse (internal)	40A T	
Inrush current / Inrush Current Limitation	<4 A @ Nominal input voltage /	
Recommended back-up fuse	20 A (DI) / 16 A ... 20 A (Char. B, C)	
Output		
Rated output voltage	24 V DC	
Output voltage	22...29.5 V (adjustable via potentiometer on front)	
Continuous output current @ U _{Nominal}	5 A @ 60°C, 6.25 A @ 45°C, 3.75 A @ 70°C	
Output power	120 W	
Ramp-up time	≤ 100 ms	
Capacitive load	unrestricted	
Parallel connection option	yes, max. 3	
Reserve capacity @ U _{Nominal}	600 % IN for 15 ms	
Residual ripple, breaking spikes	≤ 20 mVPP @full load	
Protection against inverse voltage / Overload protection	Yes / Yes	
General data		
Mains failure bridge-over time	10ms @ 12V DC / 5A	
Protection against reverse voltages from the load	32 V DC	
Current limiting	150% I _{out}	
Power loss, idling	/	
Degree of efficiency	> 86 %	
MTBF		
According to Standard	SN 29500 / SN 29500	
Operating time (hours), min.	1000000h / 650000h	
Ambient temperature	25°C / 40°C	
Input voltage	12V / 12V	
Output power	120W / 120W	
Duty cycle	100% / 100%	
Signalling		
Transistor output, positive-switching	DC OK: 20 mA max., short-circuit-proof, I > 90%: 20 mA max., short-circuit-proof, Low U _{IN} : 20 mA max., short-circuit-proof	
Floating contact	Yes	
Relay on/off / Contact load	/ max. 30 V DC / 0.5 A, max. 50 V AC / 0.3 A	
Approvals		
Approvals	CE; cULus; DEMKOATEX; IECEXULD	
Connection data		
Connection system	Screw connection	
Number of terminals	2 (+, -) / 4 (++, -)	
Wire cross-section, rigid min/max	0.2 / 4 mm ²	
Wire cross-section, flexible min/max	0.2 / 4 mm ²	
Wire cross-section, AWG/kcmil min/max	30 / 12 / 24 / 14	
Note		
Ordering data		
Type	Qty.	Order No.
PRO DCDC 120W 12V/24V 5A	1	2869030000
Note		

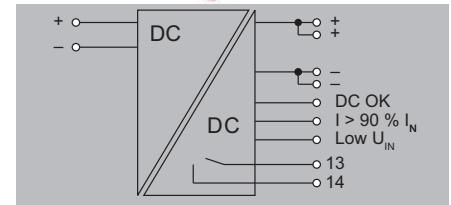
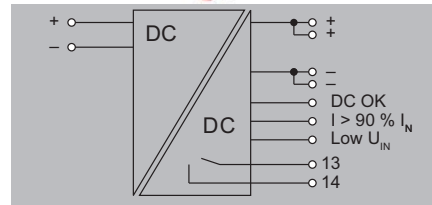
Input		
Rated input voltage	48 V DC	
DC input voltage range	28 ... 58 V DC	
Input fuse (internal)	15A T	
Inrush current / Inrush Current Limitation	<4 A @ Nominal input voltage /	
Recommended back-up fuse	10 A (DI) / 6A...10A (Char. B, C)	
Output		
Rated output voltage	24 V DC	
Output voltage	22...29.5 V (adjustable via potentiometer on front)	
Continuous output current @ U _{Nominal}	5 A @ 60°C, 6.25 A @ 45°C, 3.75 A @ 70°C	
Output power	120 W	
Ramp-up time	≤ 100 ms	
Capacitive load	unrestricted	
Parallel connection option	yes, max. 3	
Reserve capacity @ U _{Nominal}	600 % IN for 15 ms	
Residual ripple, breaking spikes	≤ 20 mVPP @full load	
Protection against inverse voltage / Overload protection	Yes / Yes	
General data		
Mains failure bridge-over time	10ms @ 48V DC / 5A	
Protection against reverse voltages from the load	32 V DC	
Current limiting	150% I _{out}	
Power loss, idling	/	
Degree of efficiency	> 90 %	
MTBF		
According to Standard	SN 29500 / SN 29500	
Operating time (hours), min.	1200000h / 800000h	
Ambient temperature	25°C / 40°C	
Input voltage	48V / 48V	
Output power	120W / 120W	
Duty cycle	100% / 100%	
Signalling		
Transistor output, positive-switching	DC OK: 20 mA max., short-circuit-proof, I > 90%: 20 mA max., short-circuit-proof, Low U _{IN} : 20 mA max., short-circuit-proof	
Floating contact	Yes	
Relay on/off / Contact load	/ max. 30 V DC / 0.5 A, max. 50 V AC / 0.3 A	
Approvals		
Approvals	CE; cULus; DEMKOATEX; IECEXULD	
Connection data		
Connection system	Screw connection	
Number of terminals	2 (+, -) / 4 (++, -)	
Wire cross-section, rigid min/max	0.2 / 4 mm ²	
Wire cross-section, flexible min/max	0.2 / 4 mm ²	
Wire cross-section, AWG/kcmil min/max	30 / 12 / 24 / 14	
Note		
Ordering data		
Type	Qty.	Order No.
PRO DCDC 120W 48V/24V 5A	1	2869040000
Note		

Input		
Rated input voltage	48 V DC	
DC input voltage range	28 ... 58 V DC	
Input fuse (internal)	15A T	
Inrush current / Inrush Current Limitation	<4 A @ Nominal input voltage /	
Recommended back-up fuse	10 A (DI) / 6A...10A (Char. B, C)	
Output		
Rated output voltage	24 V DC	
Output voltage	22...29.5 V (adjustable via potentiometer on front)	
Continuous output current @ U _{Nominal}	5 A @ 60°C, 6.25 A @ 45°C, 3.75 A @ 70°C	
Output power	120 W	
Ramp-up time	≤ 100 ms	
Capacitive load	unrestricted	
Parallel connection option	yes, max. 3	
Reserve capacity @ U _{Nominal}	600 % IN for 15 ms	
Residual ripple, breaking spikes	≤ 20 mVPP @full load	
Protection against inverse voltage / Overload protection	Yes / Yes	
General data		
Mains failure bridge-over time	10ms @ 48V DC / 5A	
Protection against reverse voltages from the load	32 V DC	
Current limiting	150% I _{out}	
Power loss, idling	/	
Degree of efficiency	> 90 %	
MTBF		
According to Standard	SN 29500 / SN 29500	
Operating time (hours), min.	1200000h / 800000h	
Ambient temperature	25°C / 40°C	
Input voltage	48V / 48V	
Output power	120W / 120W	
Duty cycle	100% / 100%	
Signalling		
Transistor output, positive-switching	DC OK: 20 mA max., short-circuit-proof, I > 90%: 20 mA max., short-circuit-proof, Low U _{IN} : 20 mA max., short-circuit-proof	
Floating contact	Yes	
Relay on/off / Contact load	/ max. 30 V DC / 0.5 A, max. 50 V AC / 0.3 A	
Approvals		
Approvals	CE; cULus; DEMKOATEX; IECEXULD	
Connection data		
Connection system	Screw connection	
Number of terminals	2 (+, -) / 4 (++, -)	
Wire cross-section, rigid min/max	0.2 / 4 mm ²	
Wire cross-section, flexible min/max	0.2 / 4 mm ²	
Wire cross-section, AWG/kcmil min/max	30 / 12 / 24 / 14	
Note		
Ordering data		
Type	Qty.	Order No.
PRO DCDC 120W 48V/24V 5A	1	2869040000
Note		

ConnectPower DC/DC converter

PRO DCDC 240W 24V/48V 5A

PRO DCDC 240W 48V/48V 5A



Technical data

Input		
Rated input voltage	24 V DC	
DC input voltage range	18 ... 34 V DC	
Input fuse (internal)	20A T	
Inrush current / Inrush Current Limitation	<4 A @ Nominal input voltage /	
Recommended back-up fuse	15 A (DI) / 10A...16A (Char. B, C)	
Output		
Rated output voltage	48 V DC	
Output voltage	28.5...56 V (adjustable via potentiometer on front)	
Continuous output current @ $U_{Nominal}$	5 A @ 60°C, 6.25 A @ 45°C, 3.75 A @ 70°C	
Output power	240 W	
Ramp-up time	≤ 100 ms	
Capacitive load	unrestricted	
Parallel connection option	yes, max. 3	
Reserve capacity @ $U_{Nominal}$	600 % IN for 15 ms	
Residual ripple, breaking spikes	≤ 50 mVPP @full load	
Protection against inverse voltage / Overload protection	Yes / Yes	
General data		
Mains failure bridge-over time	10ms @ 24V DC / 5A	
Protection against reverse voltages from the load	60 V DC	
Current limiting	150% I_{out}	
Power loss, idling	/	
Degree of efficiency	> 90 %	
MTBF		
According to Standard	SN 29500 / SN 29500	
Operating time (hours), min.	1100000h / 700000h	
Ambient temperature	25°C / 40°C	
Input voltage	24V / 24V	
Output power	240W / 240W	
Duty cycle	100% / 100%	
Signalling		
Transistor output, positive-switching	DC OK: 20 mA max., short-circuit-proof, I > 90%: 20 mA max., short-circuit-proof, Low U_{IN} : 20 mA max., short-circuit-proof	
Floating contact	Yes	
Relay on/off / Contact load	/ max. 30 V DC / 0.5 A, max. 50 V AC / 0.3 A	
Approvals		
Approvals	CE; cULus; DEMKOATEX; IECEXULD	
Connection data		
Connection system	Screw connection	
Number of terminals	2 (+, -) / 4 (++, -)	
Wire cross-section, rigid min/max	0.08 / 4 mm ²	
Wire cross-section, flexible min/max	0.08 / 4 mm ²	
Wire cross-section, AWG/kcmil min/max	28 / 12 / 24 / 14	
Note		
Ordering data		
Type	Qty.	Order No.
2R0 DCDC 240W 24V/48V 5A	1	2869050000
Note		

Input		
Rated input voltage	48 V DC	
DC input voltage range	28 ... 58 V DC	
Input fuse (internal)	20A T	
Inrush current / Inrush Current Limitation	<4 A @ Nominal input voltage /	
Recommended back-up fuse	15 A (DI) / 10A...16A (Char. B, C)	
Output		
Rated output voltage	48 V DC	
Output voltage	28.5...56 V (adjustable via potentiometer on front)	
Continuous output current @ $U_{Nominal}$	5 A @ 60°C, 6.25 A @ 45°C, 3.75 A @ 70°C	
Output power	240 W	
Ramp-up time	≤ 100 ms	
Capacitive load	unrestricted	
Parallel connection option	yes, max. 3	
Reserve capacity @ $U_{Nominal}$	600 % IN for 15 ms	
Residual ripple, breaking spikes	≤ 50 mVPP @full load	
Protection against inverse voltage / Overload protection	Yes / Yes	
General data		
Mains failure bridge-over time	10ms @ 48V DC / 5A	
Protection against reverse voltages from the load	60 V DC	
Current limiting	150% I_{out}	
Power loss, idling	/	
Degree of efficiency	> 92 %	
MTBF		
According to Standard	SN 29500 / SN 29500	
Operating time (hours), min.	1100000h / 750000h	
Ambient temperature	25°C / 40°C	
Input voltage	48V / 48V	
Output power	240W / 240W	
Duty cycle	100% / 100%	
Signalling		
Transistor output, positive-switching	DC OK: 20 mA max., short-circuit-proof, I > 90%: 20 mA max., short-circuit-proof, Low U_{IN} : 20 mA max., short-circuit-proof	
Floating contact	Yes	
Relay on/off / Contact load	/ max. 30 V DC / 0.5 A, max. 50 V AC / 0.3 A	
Approvals		
Approvals	CE; cULus; DEMKOATEX; IECEXULD	
Connection data		
Connection system	Screw connection	
Number of terminals	2 (+, -) / 4 (++, -)	
Wire cross-section, rigid min/max	0.08 / 4 mm ²	
Wire cross-section, flexible min/max	0.08 / 4 mm ²	
Wire cross-section, AWG/kcmil min/max	28 / 12 / 24 / 14	
Note		
Ordering data		
Type	Qty.	Order No.
PRO DCDC 240W 48V/48V 5A	1	2869060000
Note		

Input		
Rated input voltage	48 V DC	
DC input voltage range	28 ... 58 V DC	
Input fuse (internal)	20A T	
Inrush current / Inrush Current Limitation	<4 A @ Nominal input voltage /	
Recommended back-up fuse	15 A (DI) / 10A...16A (Char. B, C)	
Output		
Rated output voltage	48 V DC	
Output voltage	28.5...56 V (adjustable via potentiometer on front)	
Continuous output current @ $U_{Nominal}$	5 A @ 60°C, 6.25 A @ 45°C, 3.75 A @ 70°C	
Output power	240 W	
Ramp-up time	≤ 100 ms	
Capacitive load	unrestricted	
Parallel connection option	yes, max. 3	
Reserve capacity @ $U_{Nominal}$	600 % IN for 15 ms	
Residual ripple, breaking spikes	≤ 50 mVPP @full load	
Protection against inverse voltage / Overload protection	Yes / Yes	
General data		
Mains failure bridge-over time	10ms @ 48V DC / 5A	
Protection against reverse voltages from the load	60 V DC	
Current limiting	150% I_{out}	
Power loss, idling	/	
Degree of efficiency	> 92 %	
MTBF		
According to Standard	SN 29500 / SN 29500	
Operating time (hours), min.	1100000h / 750000h	
Ambient temperature	25°C / 40°C	
Input voltage	48V / 48V	
Output power	240W / 240W	
Duty cycle	100% / 100%	
Signalling		
Transistor output, positive-switching	DC OK: 20 mA max., short-circuit-proof, I > 90%: 20 mA max., short-circuit-proof, Low U_{IN} : 20 mA max., short-circuit-proof	
Floating contact	Yes	
Relay on/off / Contact load	/ max. 30 V DC / 0.5 A, max. 50 V AC / 0.3 A	
Approvals		
Approvals	CE; cULus; DEMKOATEX; IECEXULD	
Connection data		
Connection system	Screw connection	
Number of terminals	2 (+, -) / 4 (++, -)	
Wire cross-section, rigid min/max	0.08 / 4 mm ²	
Wire cross-section, flexible min/max	0.08 / 4 mm ²	
Wire cross-section, AWG/kcmil min/max	28 / 12 / 24 / 14	
Note		
Ordering data		
Type	Qty.	Order No.
PRO DCDC 240W 48V/48V 5A	1	2869060000
Note		

Redundancy- and diode modules

Redundancy- and diode modules	Overview	E.2
	connectPower redundancy modules	E.4
	connectPower diode modules	E.6

Reliable protection of sensitive system components

Redundancy- and diode modules

In many automation applications, power supply systems are required that function reliably even if a power supply unit fails. With our optimally coordinated supplementary modules, a permanent supply concept is created. Weidmüller's diodes and redundancy modules connect two power supplies to each other in order to compensate for the failure of one device.

Diode modules

The diode modules allow with 20 A or 40 A output current to the construction of safe power supply systems.



Redundancy modules

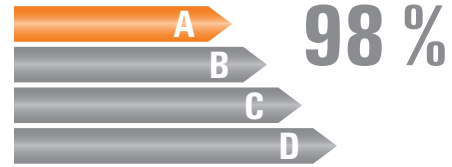
Redundancy modules increase system availability is decisive. Each redundant branch is able to supply full output load. The 24-V control voltage remains stable in the event of a power supply failure. The use of MOSFETs in our redundancy modules allows for a optimum efficiency.

Redundancy module

- Up to 40 A per input
- Individually adjustable current warning for Overload directly at the device
- Suitable for EX areas

The space- and energy-saving system solution

- The compact design saves up to 30 % space in the switch cabinet
- The high degree of efficiency of up to 98 % ensures for low energy costs



Diode module

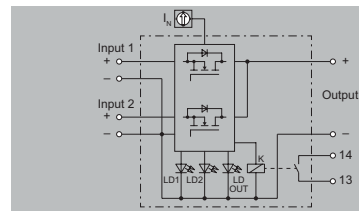
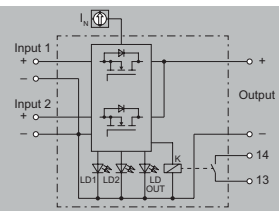
- Ideal for setting up trouble-free systems
- In versions with 20 or 40 A output current obtainable
- Also suitable for small systems

connectPower redundancy modules

connectPower redundancy modules

PRO RM 10

PRO RM 20



Technical data

Input	
DC input voltage range	
Input current	
Output	
Rated output voltage	
Continuous output current @ $U_{Nominal}$	
General data	
Ambient temperature (operational)	
Storage temperature	
Derating	
Degree of efficiency	
Mounting position, installation notice	
Depth x width x height / Net weight	
Approvals	

10 ... 32 V DC
2 × 12 A (-40 °C ~ +45 °C), 2 × 10 A (+45 °C ~ +60 °C), 2 × 7.5 A (+70 °C)
$V_{INPUT-typ. 0.13 V}$
1 × 24 A (-40 °C ~ +45 °C), 1 × 20 A (+45 °C ~ +60 °C), 1 × 15 A (+70 °C)
-40 °C...70 °C
-40 °C...85 °C
> 60°C / 75% @ 70°C
> 98%
Horizontal on TS35 mounting rail. 50 mm of clearance at top & bottom for air circ. Can mount side by side with no space in between.
125 / 30 / 130 mm / 497 g
cULus; DETNORVER; TUEV

10 ... 32 V DC
2 × 24 A (-40 °C ~ +45 °C), 2 × 20 A (+45 °C ~ +60 °C), 2 × 15 A (+70 °C)
$V_{INPUT-typ. 0.2 V}$
1 × 48 A (-40 °C ~ +45 °C), 1 × 40 A (+45 °C ~ +60 °C), 1 × 30 A (+70 °C)
-40 °C...70 °C
-40 °C...85 °C
> 60°C / 75% @ 70°C
> 98%
Horizontal on TS35 mounting rail. 50 mm of clearance at top & bottom for air circ. Can mount side by side with no space in between.
125 / 38 / 130 mm / 558 g
cULus; DETNORVER; TUEV

Connection data	
Connection system	
Number of terminals	
Wire cross-section, rigid min/max	mm ²
Wire cross-section, flexible min/max	mm ²
Wire cross-section, AWG/kcmil min/max	
Note	

Input	Output
PUSH IN	PUSH IN
4 (+, +, -, -)	2 (+ / -)
0.2 / 2.5	0.2 / 10
0.2 / 2.5	0.2 / 6
26 / 12	24 / 8

Input	Output
PUSH IN	PUSH IN
4 (+, +, -, -)	2 (+ / -)
0.2 / 10	0.75 / 16
0.2 / 6	0.75 / 16
24 / 8	20 / 4

Ordering data

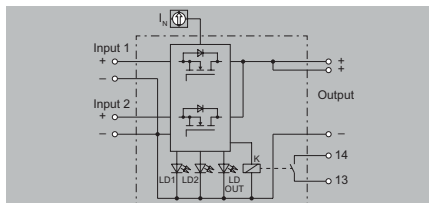
Screw connection	
Note	

Type	Qty.	Order No.
PRO RM 10	1	2486090000

Type	Qty.	Order No.
PRO RM 20	1	2486100000

connectPower redundancy modules

PRO RM 40



Technical data

Input	
DC input voltage range	10 ... 32 V DC
Input current	2 × 48 A (-40 °C ~ +45 °C), 2 × 40 A (+45 °C ~ +60 °C), 2 × 30 A (+70 °C)
Output	
Rated output voltage	$V_{NOUT} \text{ typ. } 0.16 \text{ V}$
Continuous output current @ $U_{Nominale}$	1 × 96 A (-40 °C ~ +45 °C), 1 × 80 A (+45 °C ~ +60 °C), 1 × 60 A (+70 °C)
General data	
Ambient temperature (operational)	-40 °C...70 °C
Storage temperature	-40 °C...85 °C
Derating	> 60 °C / 75% @ 70 °C
Degree of efficiency	> 98%
Mounting position, installation notice	Horizontal on TS35 mounting rail. 50 mm of clearance at top & bottom for air circ. Can mount side by side with no space in between.
Depth x width x height / Net weight	125 / 52 / 130 mm /
Approvals	cULus; DETNORVER; TUEV

Connection data		Input	Output
Connection system		Pluggable screw connection	Screw connection
Number of terminals		4 (+, +, -, -)	2 (+ / -)
Wire cross-section, rigid min/max	mm ²	0.2 / 16	0.5 / 16
Wire cross-section, flexible min/max	mm ²	0.5 / 16	0.5 / 35
Wire cross-section, AWG/kcmil min/max		22 / 6	20 / 1
Note			

Ordering data

Type	Qty.	Order No.
PRO RM 40	1	2486110000

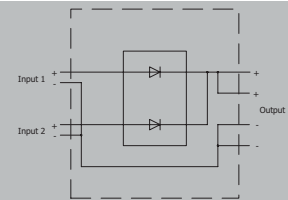
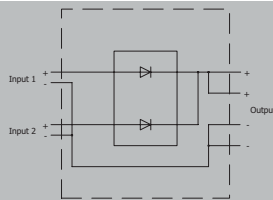
Note

connectPower diode modules

connectPower diode modules

PRO DM 10

PRO DM 20



Technical data

Input	
DC input voltage range	
Input current	
Output	
Rated output voltage	
Continuous output current @ $U_{Nominal}$	
General data	
Ambient temperature (operational)	
Storage temperature	
Derating	
Degree of efficiency	
Mounting position, installation notice	
Depth x width x height / Net weight	
Approvals	

0...60 V DC
2 × 12 A (-40 °C ~ +45 °C), 2 × 10 A (+45 °C ~ +60 °C), 2 × 7.5 A (+70 °C)
$V_{INPUT-typ. 0.7 V}$
1 × 24 A (-40 °C ~ +45 °C), 1 × 20 A (+45 °C ~ +60 °C), 1 × 15 A (+70 °C)
-40 °C...70 °C
-40 °C...85 °C
> 60 °C / 75% load @ 70 °C
> 97% @ 24 V Input voltage
Horizontal on TS35 mounting rail. 50 mm of clearance at top & bottom for air circ. Can mount side by side with no space in between.
125 / 32 / 125 mm / 332 g
cULus; TUEV

0...60 V DC
2 × 24 A (-40 °C ~ +45 °C), 2 × 20 A (+45 °C ~ +60 °C), 2 × 15 A (+70 °C)
$V_{INPUT-typ. 0.7 V}$
1 × 48 A (-40 °C ~ +45 °C), 1 × 40 A (+45 °C ~ +60 °C), 1 × 30 A (+70 °C)
-40 °C...70 °C
-40 °C...85 °C
> 60 °C / 75% load @ 70 °C
> 97% @ 24 V Input voltage
Horizontal on TS35 mounting rail. 50 mm of clearance at top & bottom for air circ. Can mount side by side with no space in between.
125 / 32 / 125 mm / 441 g
cULus; TUEV

Connection data	
Connection system	
Number of terminals	
Wire cross-section, rigid min/max	mm ²
Wire cross-section, flexible min/max	mm ²
Wire cross-section, AWG/kcmil min/max	
Note	

Input	Output
Screw connection	Screw connection
4 (1+, 2+, 1-, 2-)	4 (++ / --)
0.18 / 6	0.18 / 6
0.22 / 4	0.22 / 6
26 / 10	26 / 10

Input	Output
Screw connection	Screw connection
4 (1+, 2+, 1-, 2-)	4 (++ / --)
0.18 / 6	0.5 / 16
0.22 / 4	0.5 / 16
26 / 10	22 / 8

Ordering data

Screw connection	
Note	

Type	Qty.	Order No.
PRO DM 10	1	2486070000
Note		

Type	Qty.	Order No.
PRO DM 20	1	2486080000
Note		

Communication modules

Communication modules	Overview	F.2
	CANopen module	F.4
	IO-link module	F.5
	Display module	F.6

Exploiting the potential of industry 4.0

Communication modules for continuous networking of your components

The communication capability of machines, plant components and IT systems is a basic prerequisite for exploiting the potential of industry 4.0 and increasing the future security of plants.

Weidmüller's plug-in communication modules enable individual components to exchange relevant data with the cloud. This lays the foundation for targeted process optimization using condition monitoring and remote controllability - factors that play a decisive role in increasing efficiency, quality, process stability and availability can contribute.

The communication modules are designed according to IP20 protected, can be operated without tools and can be flexibly adapted to different customisable communication protocols.



PRO COM CANopen

PRO COM CANopen connects the device-internal interface of a Weidmüller basic unit (e.g. PROtop) with the CAN bus system of a plant control system. The CANopen fieldbus protocol is used for this purpose. The communication module is equipped with two RJ45-sockets (CAN 1-1 and 1-2) and is connected via the Basic unit supplied with power.

Range of functions:

- Read out device data and identification
- Read out process data and process alarms
- Reading event and status data
- Configuring the Base Device
- Specify operating modes and setpoints
- Display operating states



PRO COM IO-Link

PRO COM IO-Link connects the device-internal interface of a Weidmüller basic device (e.g. PROtop or topGUARD) to the communication system of a plant control system using the IO-Link communication protocol. The communication module has a three-pole connection socket for the communication cable and is supplied with power via IO-Link Master.

Range of functions:

- Read out device data and identification
- Read out process data and process alarms
- Reading event and status data
- Configuring the Base Device
- Specify operating modes and setpoints
- Display operating states

PRO COM Display

The display module enables service technicians to sporadically check output voltage and current without the aid of a multimeter. During initial commissioning, the output voltage can be conveniently adjusted using buttons, whereby the current voltage is displayed continuously. If the display module is permanently attached to the PROtop power supply, the remaining service life can easily be determined and displayed.

- Ideal for quick testing of output voltage and current by the service technician
- Tool-free voltage adjustment at the touch of a button with simultaneous voltage display
- Simple service life prediction with programmable pre-warning and signal output



CANopen Modul

PRO COM CANopen

PRO COM CAN OPEN



Technical data

System data

Connection type
Field bus protocol
Module type
Interface

General data

Ambient temperature (operational)
Protection degree
Weight
Depth x width x height

Approvals

Approvals

2 x RJ45 plug-in connectors

CANopen

plug-on module

PROtop interconnection interface

-25 °C...70 °C

IP20

36 g

33.6 / 35 / 74.4 mm

ABS; BURVER; CCS; cULus; cULusEX; DETNORVER; LLOYDSREG; RINA

Note

Ordering data

Type	Qty.	Order No.
PRO COM CAN OPEN	1	2467320000

Note

PRO COM IO-LINK

PRO COM IO-LINK



Technical data

System data	
Connection type	IO-Link
IO link standard	IEC 61131-9
Compatible IO-Link Master	Beckhoff, GE, Rockwell, Siemens, Weidmüller
Module type	plug-on module
Interface	topGUARD interconnection interface, PROtop interconnection interface
General data	
Ambient temperature (operational)	-25 °C...70 °C
Protection degree	IP20
Weight	29 g
Depth x width x height	33.6 / 35 / 74.4 mm
Approvals	
Approvals	ABS; BURVER; CE; cULus; cULusEX; DETNORVER; LLOYDSREG; RINA

IO-Link		
IEC 61131-9		
Beckhoff, GE, Rockwell, Siemens, Weidmüller		
plug-on module		
topGUARD interconnection interface, PROtop interconnection interface		
-25 °C...70 °C		
IP20		
29 g		
33.6 / 35 / 74.4 mm		
ABS; BURVER; CE; cULus; cULusEX; DETNORVER; LLOYDSREG; RINA		

Note

Ordering data

Type	Qty.	Order No.
PRO COM IO-LINK	1	2587360000

Note

Display Modul

PRO COM Display 7S

PRO COM Display 7S



Technical data

General data

Ambient temperature (operational)
 Protection degree
 Depth x width x height
 Weight

Approvals

Approvals

-25 °C...70 °C

IP20

33.6 / 34 / 74.4 mm

36 g

cULus; cULusEX

Note

Ordering data

Type	Qty.	Order No.
PRO COM DISPLAY 7S	1	2466960000

Note

Service and support

Service and support	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.

V



Your way to our service
www.weidmueller.com/service

Engineering services and customised products

Automation engineering and connectivity consulting belongs to our services as well as assembly of engineered products. We also support the process from the idea to the product with our Weidmüller Configurator and the Configure-to-Order process.

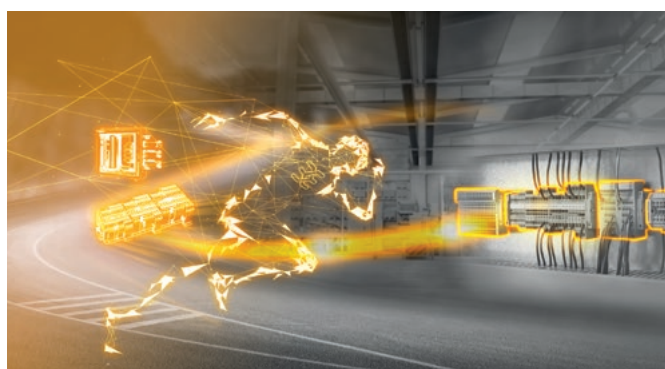


Consulting and engineering

The challenge for you is reducing costs and increasing efficiency. This requires intelligent, individual solutions. Whether it is modified products, pre-fitted mounting rails or complete small cabinets – our application centres provide a highly qualified custom-made engineering and production service.

Connectivity Consulting

Increase your competitiveness - supported by our experts. Our drive is to optimise your competitiveness. That's why our team of experts supports you in significantly increasing your efficiency in electrical machine design and control cabinet construction. With proven products and services from the Weidmüller portfolio – and with the experience gained from over 300 projects worldwide.



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



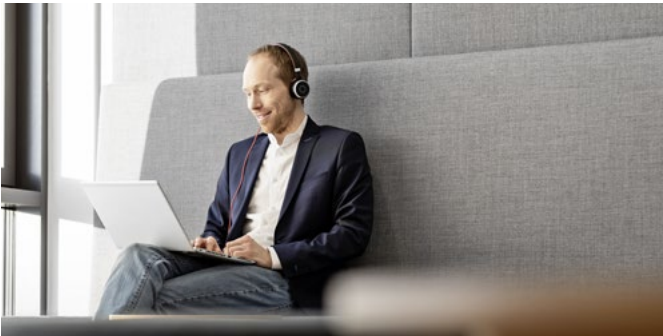
Receive fast and intuitive support to get the most out of our products in your application. In our new Support Center you can search or navigate to the many application notes, product information, video tutorials or software downloads of our products. It is also possible to create a technical Service 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



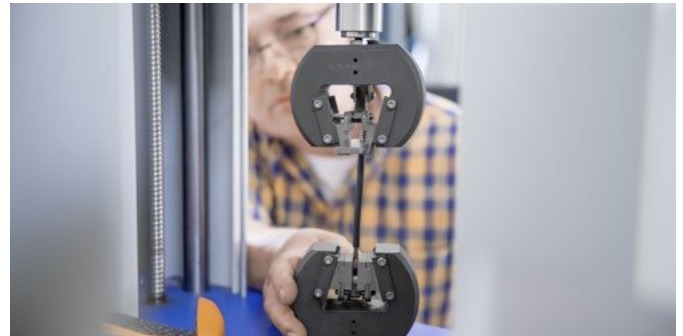
Explore the world of our new Support Center
support.weidmueller.com

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.



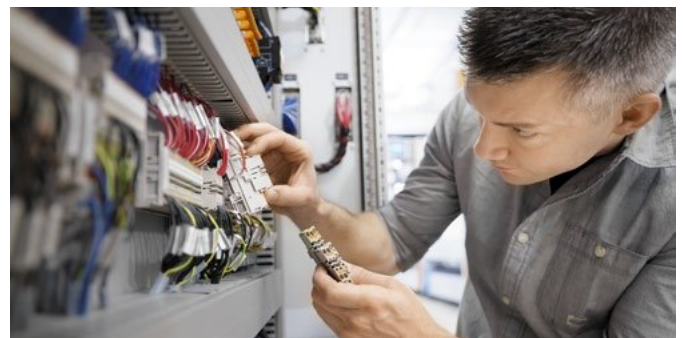
Repairs and replacement parts

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.

V



Interested in using easyConnect?
Learn how to get started with easyConnect step-by-step.
www.weidmueller.com/easyconnect

Why should you use easyConnect?

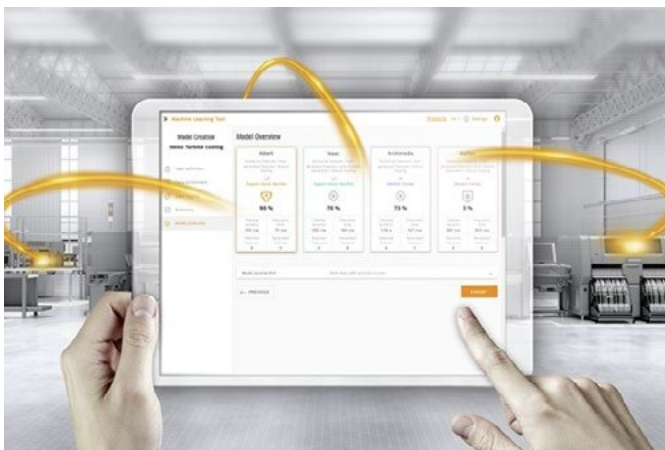
- You want to enter your digital transformation step-by-step?
- You want to make the step into Industrial IOT, but have no or little IT expertise?
- You want to use your digital data for smart & scalable services?
- You want to offer digital services (such as customised dashboard) to your customers?
- You want to improve your service offering and efficiency, e.g. through remote access?
- You feel Weidmüller's digital services are interesting, but you have „your cloud“ already?



Weidmüller comes up with the solution: easyConnect, the new digitalisation platform. It bundles Weidmüller's digital services at one place in the cloud and connects them with various Weidmüller devices.

With easyConnect you start digitalising your application step-by-step without ballast in a secure way.

The following services are initially available on easyConnect:



Device management

Adding and managing cloud-connected devices is typically the first step in any Industrial IoT use case.

Asset management

The asset management service is a modelling tool that allows users to model their assets and processes and link them to relevant time series data.

Remote access (u-link)

u-link guarantees a quick and secure access to machines and plants while also allowing for efficient management.

Data visualisation

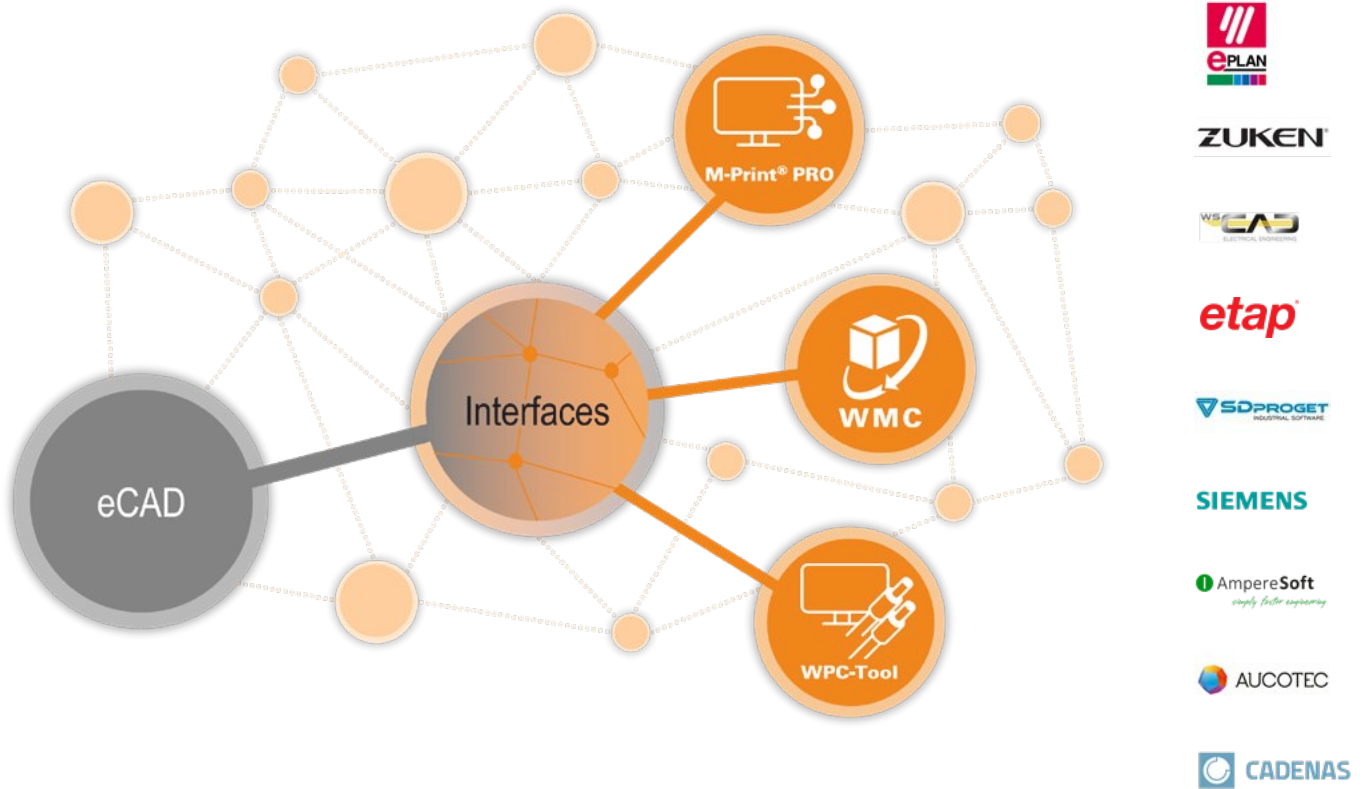
easyConnect data visualisation services enable users to view, monitor and display live and historical data.

AutoML

With Weidmüller Industrial AutoML, you can optimize operations, increase product quality and develop new business models by benefiting from advanced analytics.

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

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

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

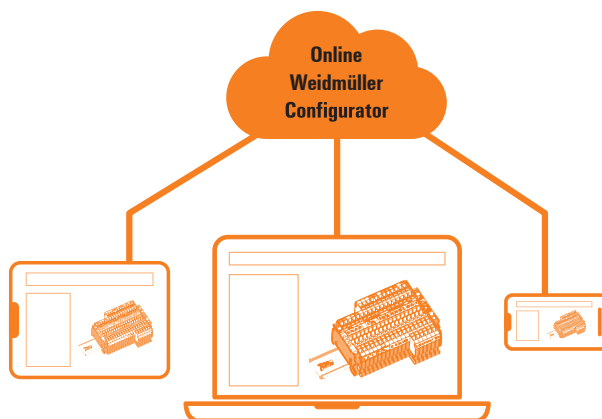
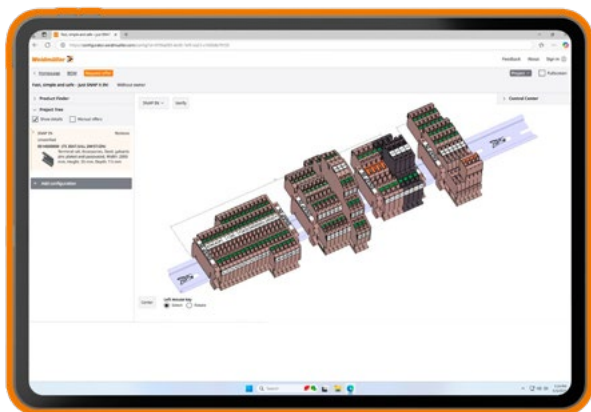
New Online Configurator – Experience the Future of Digital Engineering

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



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.

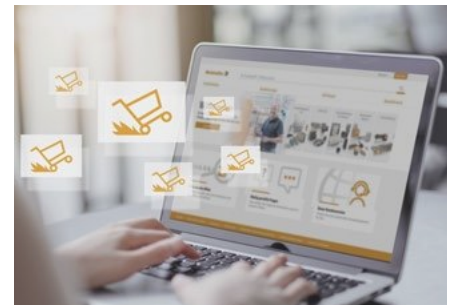
Digital ordering options

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.

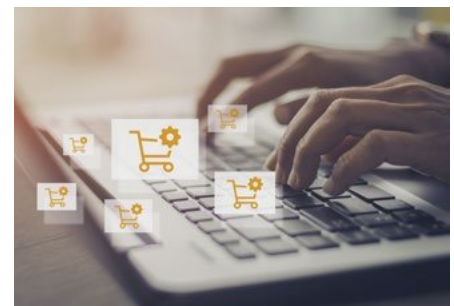
Order via the Weidmüller eShop

Our eShop offers you access to the complete Weidmüller product range around the clock – directly from a PC, tablet, or smartphone. The intuitive user guidance supports you as you select from over 50,000 products. Technical data, prices, and availabilities are available at any time. The shopping basket with check out function lets you place an order in seconds. Convenient additional functions like CSV upload, order history, reports, or custom order templates make your ordering processes even more efficient.



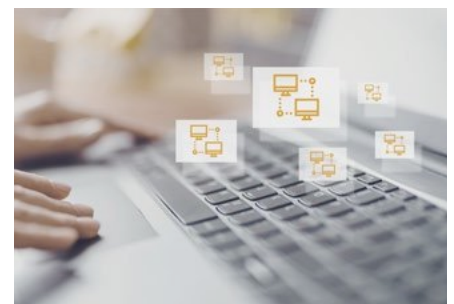
Order via the OCI interface

The Open Catalogue Interface (OCI) facilitates the exchange of data between your enterprise resource planning system and our eShop. This means that our eShop is integrated into your system via an OCI interface, so you have access to our complete product catalogue from your enterprise resource planning system. You can filter and select products, place them in your shopping basket and place direct orders without changing your software application. The open OCI standard is supported worldwide from a variety of software providers.



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

Glossary/Technical appendix

Glossary/Technical appendix	Power Supplies - Overview	W.2
	Standards and approvals	W.4
	Glossary	W.6

Power Supplies – Overview

Power supplies are important links in the energy supply chain of automation systems. Unregulated power supplies or regulated switched-mode power supplies are at the heart of every electrical cabinet. 24 V DC has emerged as the standard control voltage for the supply of electrical sub-assemblies and systems. But other control voltages are also required. The correct power supply is a critical factor for the reliable operation of the supplied components. Thus it must be chosen with particular attention.

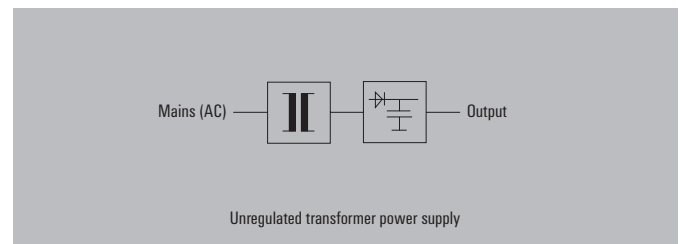
Regulated power supplies from Weidmüller have proven themselves reliable over many years in the supply of electrical sub-assemblies and systems. They perform reliably and safely – even under harsh industrial conditions – in all sectors of machine construction, industrial automation, and the power and process industries.

Weidmüller offers custom-fit solutions for practically all of your requirements:

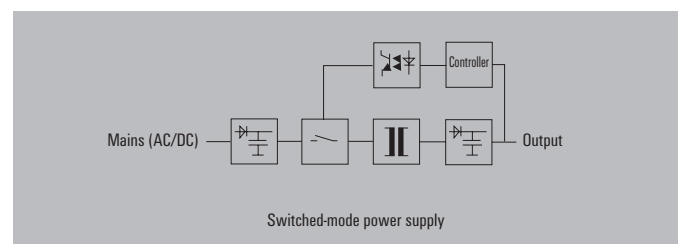
- Switch-mode power supplies
- DC/DC converters
- Diode and redundancy modules
- UPS control modules
- Electronic load monitoring

How they work

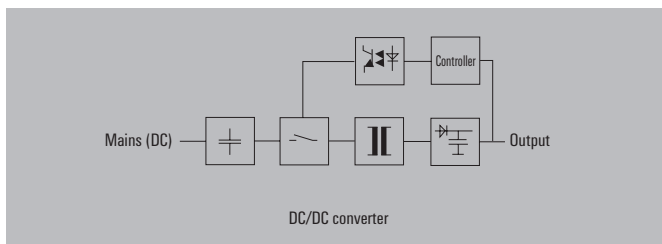
Unregulated power supply units consist of a mains power transformer that transforms the input voltage into a different AC voltage. The units then make use of a rectifier and a filter circuit to smooth out the DC output voltage.



Regulated power supply units in the range up to 1,000 W are usually designed as primary switched-mode power units. The mains AC voltage is then rectified and transformed in high frequency to the secondary side using switching transistors and power transformers. This is followed by the rectifier and filter circuit in order to generate the DC output voltage. A control circuit compares the current and voltage on the output side to the specified target values and then generates a control signal for the switching transistors. This permits compensation for load changes and mains voltage fluctuations. As a result, the output voltage remains stable. These power supply units are increasingly being operated with DC input voltages (e.g. the Weidmüller PROtop, PROeco, PROMax, etc.).



A DC/DC converter is a variation of the classic switched mode power supply. The switching strategy is similar but there is no input rectifier. Starting with a specified DC input voltage, DC/DC converters generate a different DC voltage at a similar or different level. They are used to adapt different voltage levels and also for isolating potentials.



In use around the globe

Weidmüller's power supply units have been designed for use around the world. They can be used in practically all applications throughout the world because of their CE label and many other national and international approvals. Their wide input voltage ranges and compatibility with various mains power connections increases their global appeal.

Temperature range

During operation, power supply units generate power losses. In Weidmüller's switched-mode power supplies, the resulting heat is dispersed using natural air currents only. The design, which does not make use of a ventilation fan, is an example of our uncompromised durability standard. Weidmüller's power supply units, depending on the model, can be used in temperatures ranging from -40 °C to +70 °C.

Compact and efficient design

Weidmüller's switched-mode power supplies are extra small because they take advantage of the above-average degree of efficiency offered by the latest technologies. The power supplies from Weidmüller – whether they are book-shaped with minimised base surface, or variants with reduced height for use in distributor boxes – always provide the proper cost-saving solution.

Standards and approvals

Standard/Approval	Description
DIN EN 50178 (VDE 0160)	Electronic equipment for use in power installations
DIN EN 60950-1 (VDE 0805-1)	IT Equipment – Safety – Part 1: General requirements
DIN EN 61558-1 (VDE 0570-1)	Safety of transformers, power supply units, throttles and similar devices Part 1: General requirements and tests
DIN EN 61558-2-17 (VDE 0570 Part 2-17)	Safety of transformers, power supply units and similar devices Part 2-17: Special requirements for switch-mode power supply transformers
DIN EN 60204-1 (VDE 0113-1)	Safety of machinery – Electrical equipment of machinery – Part 1: General requirements
DIN VDE 0100-410	Construction of power installations with rated voltages up to 1,000 V Part 4: Protective measures Chapter 41: Protection against electrical shock
DIN EN 61204-1	Power supply units for low voltages, with direct-current-output – properties
DIN EN 60947-1	Low-voltage switching devices – Part 1: General definitions
DIN EN 61140	Protection against electrical shock - common requirements for facilities and operating equipment
IEC 38	Supplementary notes relating to status of international standards and European harmonisation of mains voltages 230/400 V
2014/35/EU	Electrical equipment for use within specific voltage limits (Low Voltage Directive)
2014/30/EU	Electromagnetic compatibility (EMC Directive)
2006/42/EG (98/37 EG)	Safety of machines (directive covering mechanical equipment)
UL	Safety approval for the United States market
CSA	Safety approval for the Canadian market
DNV	Testing requirements for marine engineering and offshore units.
UL1310	Class 2 power supplies (limited energy)
IECEx/ATEX	An international certification system that ensures equipment and services intended for use in explosive atmospheres comply with IEC standards.

Standard/Approval	Description
SEMI F47	Resistance of electronic devices against voltage drops
2014/35/EU	Low Voltage Directive
EN 60721-3-2	Classification of surrounding conditions
EN 60664-1 (VDE0110-1)	Insulation coordination for electrical equipment
C22.2 No. 107.1	General standards for power supplies (Canadian standard)
EN 61000-3-2	Limiting of mains voltage harmonic currents
EN 61000-4-x	Interference immunity tests

Glossary

A

AC/DC converter	Conventional switched-mode power supplies generate a DC voltage from an AC voltage. For this reason they are sometimes also called AC/DC converters. Such devices are increasingly compatible for use with DC input voltages. The primary and secondary sides are typically electrically isolated.
Ambient temperature (operational)	The ambient operating temperature (the min. and max. values) together with the output current and voltage ratings can be used to describe the power capabilities of a power supply unit.

B

Burst	A burst is a quick low-power burst pulse which can, for example, simulate welding equipment phenomena. Similar phenomena can also result from switching operations on the mains supply. This test can be used to demonstrate immunity against quick transients.
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C

Class of protection	Electrical equipment is classified according to varying classes of protection. These classes define the particular safety measures that are required to avoid an electrical shock. The most widely used power supplies correspond with protection class I. The basic requirement of protection class I is for a basic insulation and for the earthing of all conductive housing parts. If the basic insulation fails, then the earthed conductive housing serves to prevent an electrical shock. For this reason, devices in protection class I are equipped with an earth (PE) connection.
Connecting power supply units in parallel	Power supplies can only be connected in parallel when this is clearly permitted by the manufacturer. Parallel connections are then normally tied to certain conditions. This is a typical way to increase the output power (for example, when extending a facility). Power supplies are also wired in parallel in order to design in redundant power supply systems. The parallel circuit is not wired straight though but connects using decoupling diodes. → Redundancy
Cooling	Cooling is used by components or devices to prevent them from overheating. A variety of cooling strategies are available – two of the most common are natural and forced-air cooling. Natural (convection-based) cooling takes advantage of the natural air currents. Manufacturers must then ensure that there is sufficient air flow by specifying the clearance gaps and mounting positions that are required above and below the ventilation openings. Forced-air cooling normally uses a fan to dissipate any heat that has been generated. When fans are used in a device, they have the effect of increasing the likelihood of device outages. For this reason, a power supply with natural cooling methods is generally preferred.

D

<p>DC/DC converter</p>	<p>DC/DC converters are switched-mode power supplies that convert a specific DC voltage into another voltage. They are a variant of the AC/DC converter. DC/DC converters, in their simplest implementation, do not isolate voltage potentials. They are used only for adapting voltages. Improved DC/DC converters have isolated voltages. A safety isolating transformer in the power element ensures the required electrical isolation. Besides the voltage adaptation, the isolation of the voltage potentials is an important factor.</p>																																
<p>Derating</p>	<p>For power supply devices, derating generally refers to the reduction in power as influenced by the surrounding temperature and the input voltage. A temperature derating often occurs starting at a surrounding temperature of 50 °C. The rated power is guaranteed up to this temperature. The available power continually declines as the temperature heats up above this level. This is typically specified in %/K. A voltage-dependent specification is another form of derating For switched-mode power supplies, the derating begins below a specific input voltage. So a switched-mode power supply with a wide input range can typically work under full power with 115 V AC input voltage. However at 85 V AC it can only produce 60 % of the power rating. The coefficient is usually specified in %/V.</p> <div style="display: flex; justify-content: space-around;"> <div data-bbox="624 1115 978 1361"> <p style="text-align: center;">Temperature derating</p> <table border="1"> <caption>Temperature Derating Data</caption> <thead> <tr> <th>Temperature [°C]</th> <th>Max. current [%IN]</th> </tr> </thead> <tbody> <tr><td>40</td><td>100</td></tr> <tr><td>50</td><td>100</td></tr> <tr><td>60</td><td>100</td></tr> <tr><td>70</td><td>80</td></tr> </tbody> </table> </div> <div data-bbox="1066 1115 1434 1361"> <p style="text-align: center;">Voltage derating</p> <table border="1"> <caption>Voltage Derating Data</caption> <thead> <tr> <th>Main voltage [V]</th> <th>Max. current [%IN]</th> </tr> </thead> <tbody> <tr><td>85</td><td>60</td></tr> <tr><td>115</td><td>100</td></tr> <tr><td>130</td><td>100</td></tr> <tr><td>150</td><td>100</td></tr> <tr><td>170</td><td>100</td></tr> <tr><td>190</td><td>100</td></tr> <tr><td>210</td><td>100</td></tr> <tr><td>230</td><td>100</td></tr> <tr><td>250</td><td>100</td></tr> <tr><td>270</td><td>100</td></tr> </tbody> </table> </div> </div>	Temperature [°C]	Max. current [%IN]	40	100	50	100	60	100	70	80	Main voltage [V]	Max. current [%IN]	85	60	115	100	130	100	150	100	170	100	190	100	210	100	230	100	250	100	270	100
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<p>Diode modules</p>	<p>Diode modules are used to construct a redundant power supply system. They are important for decoupling the power supply unit. Thus, a short circuit that occurs on the output of a power supply unit will not influence the output voltage.</p>																																

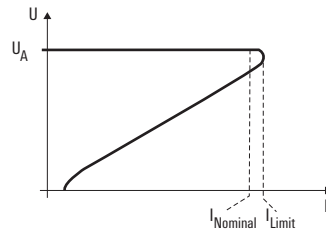
E

<p>Efficiency</p>	<p>The degree of efficiency is equal to the ratio of output power to input power and is expressed in percent. The degree of efficiency can be between 70 and 90 %, depending on the dimensions and type of technology in use.</p>
<p>EMC (electromagnetic compatibility)</p>	<p>Electromagnetic compatibility describes the interference emissions caused by an electronic device and the level of immunity against external electrical influences. Interference emissions can be caused by cabling and wires or by radiated emissions. Immunity measures the resistance against such wire-based emissions and against radiated emissions such as electrostatic fields and magnetic fields. Electric devices must also be protected against electrostatic discharges.</p>

F

Foldback characteristic curve

The foldback characteristic curve is a special type of output curve that protects the power supply unit from overloads. When a specific current limit is exceeded (for example, by 110 or 120 % of the nominal level), the current is limited electronically and lowered to a very low, safe value. This downward-sloping characteristic curve means that it is not sufficient to simply eliminate the overload. The load must be reduced significantly more so that the adjustment control can return to the normal voltage control. Thus this solution is not suitable for many applications and is becoming less popular.



G

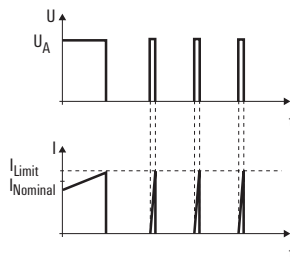
Galvanic isolation

Galvanic (electrical) isolation ensures that no electrical connections can exist between the primary and the secondary sides. Opto modules and transformers are the typical components used.

H

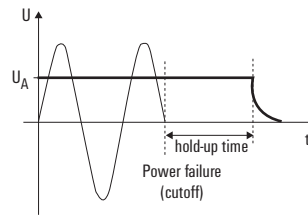
Hiccup mode

The hiccup mode is a special output characteristic curve that protects power supply units from overloads and short circuits. The unit switches off at a specified current limit (for example, 110 or 120 % on the nominal rating) and then switches back on after a certain delay. This leads to a pulsating mode of operations which can only revert to continual operations after the overload has been eliminated. The main disadvantage here is that the connected consumer load must be restarted after every pause. A restart may not be possible with motors or large capacitive loads since the restart current peak may once again exceed the defined limit.



**Hold-up time
(mains-failure bridging time)**

The hold-up time (also known as the mains-failure bridging time) is the interval from the start of the mains outage to the point in time when the output voltage can no longer be maintained at its original level. The hold-up time indicates how long a mains outage may last before it influences the output voltage. For DC power supplies, EN 61204 requires a bridging time of at least 20 ms.



Input voltage range

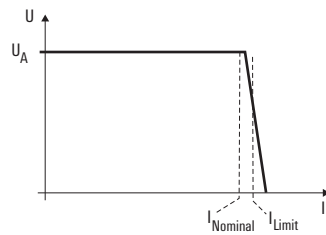
This refers to the minimum and maximum input voltage at which the rated output specifications can be maintained.

Inrush current

The inrush current refers to the peak current that occurs when turning on a consumer load. Switched-mode power supplies have storage capacitors in the input which can cause significant current peaks while the mains power is being switched on. A variety of circuitry solutions can be used to attenuate these current peaks. In the simplest solution, an inrush limiter is used. Active switching can be used in other cases. The peak current specification indicates which upstream fuse should be used in the circuit. If a fuse is selected which is too sensitive, it can trigger when the mains power is switched on.

IU characteristic curve

The IU characteristic curve is a special output characteristic curve that protects power supply units from overloads and short circuits. It offers the best performance with regards to overload and short circuit capabilities. A current limit is activated at a specific current level (for example, 110 or 120 % on the nominal rating). As the load continues to increase, the output voltage is reduced according to the current limit curve until it reaches a level approaching zero volts. Thus a pulsating mode of operations is avoided for short-term overloads. Large capacitive loads or motors are brought back up along the slope of the current-limit characteristic curve. After a short circuit or overload is fixed, the IU characteristic curve offers the advantage of immediately returning to the normal voltage control mechanism. The full output voltage is then immediately available. The IU characteristic curve is becoming the established standard for modern power supplies. Additional variants are available which pertain to the peak current capacity and the slope of the current-limit characteristic curve.



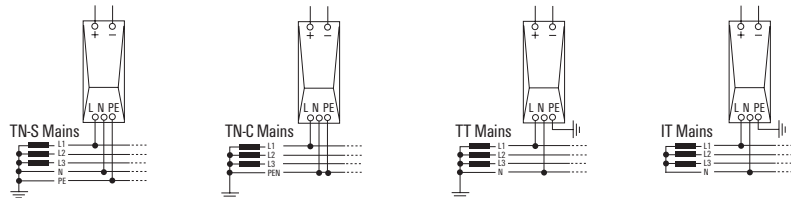
M

Mains harmonics

Power supplies can experience harmonics caused by mains rectification on the input side. These harmonics are multiples of the mains frequencies. Existing standards define specific limit values since such harmonics can significantly lower the mains quality.

Mains system types

This refers to the types of mains supply systems. Systems differ in their method of earthing and the implementation of the phase wire, PE wire and central-point wire. Common mains systems include the TN, IT and TT networks. The individual mains types can also differ in their voltage levels and frequencies.



MTBF (mean time between failure)

The MTBF is a statistical value that specifies the probability that a product will fail. It is typically specified in hours and normally assumes a temperature of 25 °C. The probability of failure depends largely on the ambient surroundings. The key variables are the type of load and the ambient temperature.

W

O

Output characteristic curves	<p>The output characteristic curves of power supply devices are determined by current and voltage. Unregulated devices do not have a current limit. In the case of an overload or short circuit, fuses or temperature switches are used to protect the device. Regulated devices are protected against overload and short circuits by means of various output characteristic curves. In this case, the system attempts to prevent any activation of fuses or temperature switches.</p> <p>The mandatory manual reset which follows an overload or short circuit can then be avoided. Common output characteristic curves include the hiccup mode, the foldback characteristic curve or the IU characteristic curve.</p> <p>→ Hiccup mode, foldback characteristic curve, IU characteristic curve</p>
Overvoltage category	<p>Power supply units are classified into overvoltage categories according to the immunity against mains surges and transient voltages.</p>

P

PELV (protective extra-low voltage)	<p>This is a functional DC voltage with secure isolation according to EN 50178. As with SELV, a reinforced or double insulation is used between the primary and secondary sides. However, the secondary side is earthed.</p>
PFC (power factor correction)	<p>The power factor correction can be either passive or active in relation to power supply devices. The reactive power resulting from the bridge rectification puts a significant strain on the power supply network. The relatively poor power efficiency factor that results can be improved by using passive components (such as filters) or an active electronic mechanism. For switched-mode power supplies, PFC usually refers to the active variant of the power factor correction. Power factors of almost 1 can be reached when using an active PFC. Practically no reactive power is drawn from the mains supply network; therefore the strain on the mains network is relatively low.</p>
Pollution severity	<p>Pollution severity describes the environment and ambient conditions that a device requires in order for it to function smoothly. Significant environmental variables include condensation or air containing dust and oil.</p>
Power-boost or boost	<p>The power-boost function is the surge current handling capacity in the seconds to minutes range. This function is often required for starting up DC motors. DC motors have a high start-up current and often require several seconds before they have achieved their rated rotational speed. The power-boost function helps to optimise this start-up phase.</p>
Power factor	<p>The power factor is the ratio of reactive power to apparent power. It is an indicator of the device performance with respect to the load on the mains power network. Depending on the technology in use, the power factor for power supplies can be between 0.45 and nearly 1.</p>

Power loss	For power supply units, the power loss specification indicates the thermal output emitted during nominal (rated) operations. This is a key specification used by engineers when designing the climate control systems within electrical cabinets. It is calculated as the difference between the input and output power and can also take the degree of efficiency into account.
Power rating	The continual output permitted under the rated conditions.
Power supply units connected in series	Power supplies can only be connected in series when this is clearly permitted by the manufacturer. Such series connections are then normally tied to certain conditions. They can be used to increase the output voltage. This is not widely implemented.
Protection degree	According to DIN EN 60529, devices can be classified according to their protection degrees. The numeric code (for example, IP 20) defines two protection degrees: protection against touch or penetration by external objects (the first digit) and protection against water penetration (the second digit). Switched-mode power supplies intended for use in electrical cabinets or similar enclosures are often designed with IP 20 protection. The first digit (in this case, 2) ensures finger protection. The second digit (0) indicates that no protection against water is provided.
Pulsed current capacity	The pulsed current capacity describes the dynamic performance of a switched-mode power supply. Capacitive consumer loads, with their high inrush currents, put a particular strain on a switched-mode power supply. Peak values are reached (in the ms range) which amount to levels many times higher than the mains current. If the current control mechanism reacts too quickly, this can lead to voltage drops and can cause problems for loads which are connected in parallel. For this reason, power supplies are often equipped with a surge current limiting factor based on time. This allows a high current output for only a few ms which can be much higher than the rated current.

R

Rated control voltage	The nominal value of the sparkover voltage for the relay.
Rated input voltage	The input voltage required at which, under the normal mains voltage fluctuations, the output levels can be kept stable. It usually corresponds to the rated voltage for the electric utility's power grid.
Rated output current	The long-term current permitted under the rated conditions.
Rated output voltage	The nominal output voltage used for the rated specifications. It usually corresponds to the factory default output voltage.

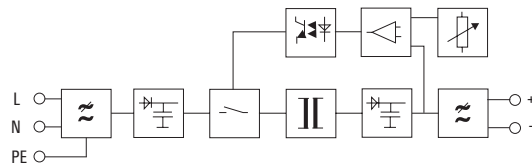
Redundancy	A power supply system is considered redundant if it is constructed so that it has partial power supplies which are independent of each other and each of these can individually deliver the output load. When a fault occurs, therefore, it is still possible to continue to supply the connected rated load. In reality, at least two power supplies are connected in parallel using decoupling diodes. In this way, a short circuit in the output of one power supply will not lead to the failure of the entire power supply system. → Diode modules
Regulated power supply units	Switched-mode power supplies, as opposed to more common power supply units, have become established as the standard for the 10–1,000 W power range. They produce a stable output voltage with minimal residual ripple, even when influenced by fluctuations in the mains voltage, mains frequency or load. Their small size and weight is a result of their superior efficiency degree. The electronic control mechanism typically ensures a constant output voltage that varies ± 1 %.
Residual ripple	The residual ripple describes the ratio of superimposed AC voltage to DC voltage on the output side of the power supplies. In addition to a percent specification, the superimposed ripple is often specified in mV_{SS} for switched-mode power supplies.
Resistance to shock	Resistance to shock refers to mechanical immunity against impacts in any direction. This is a key factor while the product is being transported.
Response time	The response time is the time that a power supply unit needs to compensate for a disturbance (for example, a load fluctuation).

S

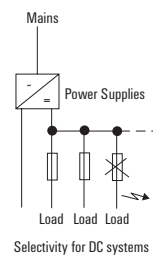
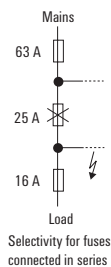
Switching frequency	Switched-mode power supplies are normally operated with switching frequencies from 20 to 200 kHz. The HF or power transformer is switched on and off using transistors at this switching frequency. Small, compact units can be built with this method in comparison with the traditional 50/60 Hz transformers.
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Switched-mode power supply units

The switching pulse can be either primary or secondary. Thus there are primary switched-mode and secondary switched-mode power supply units. Secondary switched-mode power supply units are no longer of much significance. The primary switched-mode power supplies are now the focus of attention. The pulse refers to the high-frequency on and off switching of the transformer or transmitter in order to transmit energy. The high frequency allows the use of extra small inductive and capacitive components, particularly for the transmitter. In comparison to transformer-based power supply units, the weight and volume required are much reduced.

**Selectivity**

When surge protection equipment is connected in series, selectivity refers to the ability of only one upstream fuse to trigger selectively in the event of an overload. The differentiation can take into account current or also time. With DC power supply systems, selectivity refers to the separate fusing of load circuits on the DC side. In this case as well, only the proper series fuse should trigger in the event of an overload. Fuses in DC circuits play a critical role since the power supplies must react to upcoming short circuits with a speedy cut-off or by limiting the current. Usually electronic fuses are used for this purpose.

**SELV (safety extra low voltage)**

SELV refers to extra-low safety voltages according to IEC/EN 60950. Reinforced or doubled insulation between the primary and secondary sides is used to prevent electric shock. The output voltage here is sufficiently low so that it does not pose an injury risk if a person comes into direct contact.

Surge

A surge is a high-power voltage pulse which can be caused by, for example, a lightning strike. The switching operations from large consumer loads can also generate such voltage surges on the mains network. The surge test is used to demonstrate the immunity against high-power voltage pulses.

T

Temperature range	The temperature range specifies the minimum and maximum ambient temperatures for which a device can start up and run continuously.
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U

Unregulated power supply units	Unregulated power supplies consist mainly of a transformer, a rectifier and an Elkos filter. Since no controlling system is in place, mains voltage fluctuations influence the DC voltage side. Unregulated power supply units are very sturdy; they can be used in applications where a stabilised DC voltage is not necessary (for example, power supply to contactors).
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V

Vibration resistance	Vibration resistance describes the resistance against constant mechanical vibrations that occur during operations. Rail and ship applications place stricter demands for vibration resistance on the device.
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W

Wide-range input	Modern switched-mode power supplies often feature a wide input range. They can be run under a wide range of voltages: from min. to max. rated voltages including the tolerance limits. They do not require any manual range switching.
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W

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1240000000

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1250000000

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1440000000

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1460000000

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1470000000

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2930000000

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3030000000

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3140000000

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