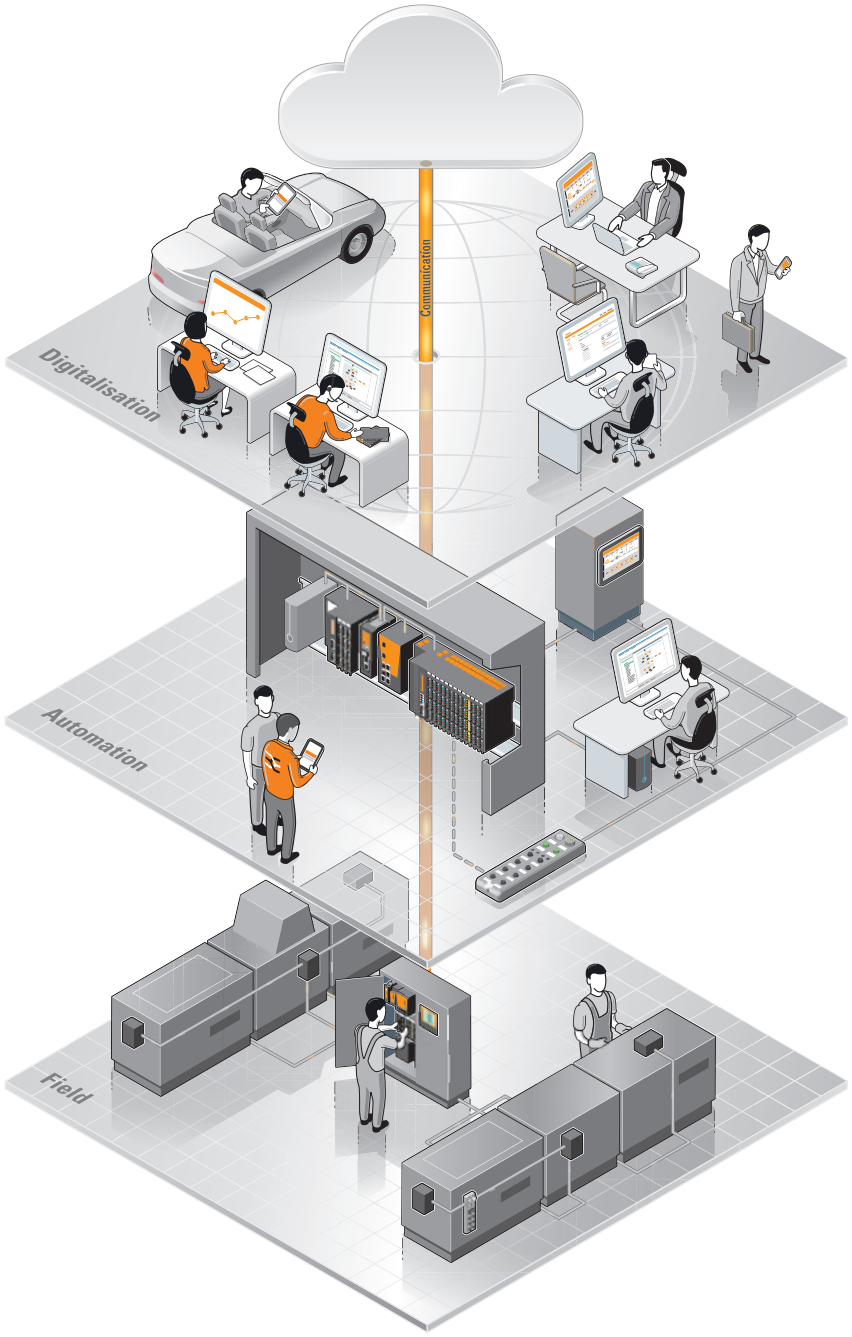
Power supplies

Let's connect.

Version 2019

Weidmüller



PROtop: CANopen or IO-Link

topGUARD: IO-Link

PROtop | PROmax | PROeco

PRO-E | INSTA POWER

maxGUARD

Redundancy Module

Battery | UPS | Buffer Module

DC/DC Converter

Power supplies
Catalogue 4.3

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 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

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 PRO-E

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

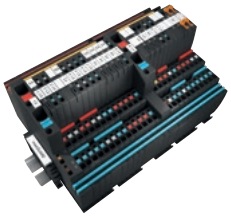
connectPower 1ph INSTA POWER

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

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 UPS control unit

- Two 24 V models in 10 A/20 A and 40 A
- Temperature-compensated charging feature, for a long battery life
- Integrated battery diagnostics including continuous availability test
- Status relay and additional transistor outputs for remote monitoring
- Convenient LED displays for easy error analysis

connectPower Battery module

- 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 module

- Maintenance-free UPS on a capacitor basis, with capability to support 20 A / 200 ms
- Parallel switching to increase the output current or support time
- Status notification via LED and relay contact

connectPower DC/DC converters

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

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

connectPower capaticity modules

- To increase the peak current
- Provides sufficient energy reserves
- Compact design
- For tripping circuit breakers

Communication modules

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

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 [V]	Derating at [°C]	Load reserve	Status relay	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 to +70 Start up @ -40	90.0	> 1	III	TÜV, cULus, Cl1Div2, EAC	●	●	●	●					2466850000
		PRO TOP1 120W 24V 5A	1			24	5	120					91.0				●	●	●	●					2466870000
		PRO TOP1 240W 24V 10A	1			24	10	240					92.5				●	●	●	●					2466880000
		PRO TOP1 480W 24V 20A	1			24	20	480					93.5				●	●	●	●					2466890000
		PRO TOP1 960W 24V 40A	1			24	40	960					94.5				●	●	●	●					2466900000
		PRO TOP1 120W 12V 10A	1			12	10	120					91.0				●	●	●	●					2466910000
		PRO TOP1 480W 48V 10A	1			48	10	480					93.5				●	●	●	●					2467030000
		PRO TOP1 960W 48V 20A	1			48	20	960					94.5				●	●	●	●					2466920000
		PRO TOP1 72W 24V 3A F	1			24	3	72					90.0				●	●	●	●					2568970000
		PRO TOP1 120W 24V 5A F	1			24	5	120					91.0				●	●	●	●					2568980000
		PRO TOP1 240W 24V 10A F	1			24	10	240					92.5				●	●	●	●					2568990000
		PRO TOP1 120W 12V 10A F	1			12	10	120					91.0				●	●	●	●					2569000000
		PRO TOP3 120W 24V 5A	2/3	3 x 320-3 x 575/ 2 x 360-2 x 575 3 x 320-3 x 575/ 2 x 360-2 x 575	450-800 (max. 500 acc. to UL508)	24	5	120					89.0				●	●	●	●					2467060000
		PRO TOP3 240W 24V 10A	2/3			24	10	240					93.0				●	●	●	●					2467080000
		PRO TOP3 480W 24V 20A	2/3			24	20	480					94.0				●	●	●	●					2467100000
		PRO TOP3 960W 24V 40A	2/3			24	40	960					95.3				●	●	●	●					2467120000
		PRO TOP3 480W 48V 10A	2/3			48	10	480					94.0				●	●	●	●					2467150000
		PRO TOP3 960W 48V 20A	2/3			48	20	960					95.3				●	●	●	●					2467170000
PROtop für höchste Ansprüche	A.16	PRO TOP1 72W 24V 3A CO	1	85-277	80-410	24	3	72	> 60	130 % permanently with ≤ 40 °C	NO	-40 to +70	90.0	> 1	III	TÜV, cULus, Cl1Div2, ATEX, IECEX, EAC					●	●		●	2466970000
		PRO TOP1 120W 24V 5A EX	1			24	5	120					91.0								●	●		●	2466980000
		PRO TOP1 240W 24V 10A EX	1			24	10	240					92.5								●	●		●	2466990000
		PRO TOP1 480W 24V 20A EX	1			24	20	480					93.5								●	●		●	2467000000
		PRO TOP1 960W 24V 40A EX	1			24	40	960					94.5								●	●		●	2467010000
		PRO TOP1 120W 12V 10A EX	1			12	10	120					91.0								●	●		●	2467020000
		PRO TOP1 480W 48V 10A EX	1			48	10	480					93.5								●	●		●	2467040000
		PRO TOP1 960W 48V 20A CO	1			48	20	960					94.5								●	●		●	2467050000
		PRO TOP3 120W 24V 5A CO	2/3	3 x 320-3 x 575/ 2 x 360-2 x 575	450-800 (max. 500 acc. to UL508)	24	5	120					89.0								●	●		●	2467070000
		PRO TOP3 240W 24V 10A CO	2/3			24	10	240					93.0								●	●		●	2467090000
		PRO TOP3 480W 24V 20A CO	2/3			24	20	480					94.0								●	●		●	2467110000
		PRO TOP3 960W 24V 40A CO	2/3			24	40	960					95.3								●	●		●	2467130000
		PRO TOP3 960W 36V 26,6A CO	2/3			36	27	960					95.3								●	●		●	2467140000
		PRO TOP3 480W 48V 10A CO	2/3			48	10	480					94.0								●	●		●	2467160000
		PRO TOP3 960W 48V 20A CO	2/3			48	20	960					95.3								●	●		●	2467180000

NO = NO contact
CO = CO contact
Start-up @ –40°C = In the range of –40 to –25°C the device starts, but some technical parameter may differ (i. e., ripple-voltage).

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 [V]	Derating at [°C]	Load reserve	Status relay	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.26	PRO MAX 72W 24V 3A	1	85-277	80-370	24	3	72	> 60	130 % permanently with ≤ 40 °C	NO	-25 to +70 -25 to +70 -25 to +70	90.0	> 0.5	III	TÜV, cULus, Cl1Div2, cULus, DNV GL, EAC, Semi F47			●	●	●	●	●	●	1478100000
		PRO MAX 120W 24V 5A	1			24	5	120					90.0						●	●	●	●	●	●	1478110000
		PRO MAX 180W 24V 7,5A	1			24	7.5	180					90.0						●	●	●	●	●	●	1478120000
		PRO MAX 240W 24V 10A	1			24	10	240					91.0						●	●	●	●	●	●	1478130000
		PRO MAX 480W 24V 20A	1			24	20	480					91.0						●	●	●	●	●	●	1478140000
		PRO MAX 960W 24V 40A	1			24	40	960					91.5						●	●	●	●	●	●	1478150000
		PRO MAX 70W 5V 14A	1			5	14	70					86.0						●	●	●	●	●	●	1478210000
		PRO MAX 72W 12V 6A	1			12	6	72					89.0						●	●	●	●	●	●	1478220000
		PRO MAX 120W 12V 10A	1			12	10	120					89.0						●	●	●	●	●	●	1478230000
		PRO MAX 240W 48V 5A	1			48	5	240					91.0						●	●	●	●	●	●	1478240000
		PRO MAX 480W 48V 10A	1			48	10	480					91.5						●	●	●	●	●	●	1478200000
		PRO MAX 960W 48V 20A	1			48	20	960					92.5						●	●	●	●	●	●	1478270000
		PRO MAX3 120W 24V 5A	2/3	3 x 320-3 x 575/ 2 x 360-2 x 575 3 x 320-3 x 575/ 2 x 360-2 x 575	450-800 (max. 500 acc. to UL508)	24	5	120					90.0						●	●	●	●	●	●	1478170000
		PRO MAX3 240W 24V 10A	2/3			24	10	240					91.0						●	●	●	●	●	●	1478180000
		PRO MAX3 480W 24V 20A	2/3			24	20	480					91.5						●	●	●	●	●	●	1478190000
		PRO MAX3 960W 24V 40A	2/3			24	40	960					92.5						●	●	●	●	●	●	1478200000
PROeco	A.38	PRO ECO 72W 24V 3A	1	85-264	80-370	24	3	72	> 40		NO		87.0	> 0.5	II	TÜV, cULus, EAC	●	●		●					1469470000
		PRO ECO 120W 24V 5A	1			24	5	120					87.0				●	●		●					1469480000
		PRO ECO 240W 24V 10A	1			24	10	240					90.0				●	●		●					1469490000
		PRO ECO 480W 24V 20A	1			24	20	480					91.0				●	●		●					1469510000
		PRO ECO 960W 24V 40A	1			24	40	960					93.0				●	●		●					1469520000
		PRO ECO 72W 12V 6A	1			12	6	72					90.0												1469570000
		PRO ECO 120W 12V 10A	1			12	10	120					90.0				●	●		●					1469580000
		PRO ECO 240W 48V 5A	1			48	5	240					90.0				●	●		●					1469590000
		PRO ECO 480W 48V 10A	1			48	10	480					90.0				●	●		●					1469610000
		PRO ECO3 120W 24V 5A	2/3	3 x 320-3 x 575/ 2 x 360-2 x 575 3 x 320-3 x 575/ 2 x 360-2 x 575	450-800 (max. 500 acc. to UL508)	24	5	120					89.0				●	●		●					1469530000
		PRO ECO3 240W 24V 10A	2/3			24	10	240					93.0				●	●		●					1469540000
		PRO ECO3 480W 24V 20A	2/3			24	20	480					94.0				●	●		●					1469550000
		PRO ECO3 960W 24V 40A	2/3			24	40	960					95.3				●	●		●					1469560000

Series / family			Input side			Output side						Additional functions							Recommendation for application									Order No.
	Page	Description	AC input voltage [V]	DC input voltage [V]	Rated voltage [V]	configurable range [V]	Rated current [A]	Nennleistung [W]	Status relay	Parallel connection option	Side-by-side connectability	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	
DC/DC	D.2	PRO DCDC 120W 24V 5A		18–31.2	24	22.5–29.5	5	120					92.0						●	●		●		●	2001800000
		PRO DCDC 240W 24V 10A		18–31.2	24	22.5–29.5	10	240	NO	≤ 5	●	-25 to +70	92.0	> 1	III	ABS CI1Div2			●	●		●		●	2001810000
		PRO DCDC 480W 24V 20A		18–31.2	24	22.5–29.5	20	480	NO				93.0						●	●		●		●	2001820000
USV	C.4	CP DC UPS 24V 20A/10A		20-30	U_{in} –0,3 VU_{in} –0,3 V		10 / 20		NO		●	-25 to +70	98.0		III		●	●	●	●				●	1370050010
		CP DC UPS 24V 40A					40		NO		●		98.0				●	●	●	●				●	1370040010
		CP DC BUFFER 24V 20A		22.5-30	24		20		NO		●		95.0				●	●	●	●				●	1251220000
		CP A BATTERY 24V DC1.3AH			24		10 A / 7.8 min	1.3 Ah		≤ 2	●	0 to +40					●	●	●	●				●	1406930000
		CP A BATTERY 24V DC3.4AH			24		10 A / 11.3 min	3.4 Ah		≤ 2	●						●	●	●	●				●	1251070000
		CP A BATTERY 24V DC7.2AH			24		10 A / 26.5 min	7.2 Ah		≤ 2	●						●	●	●	●				●	1251080000
		CP A BATTERY 24V DC12AH			24		10 A / 51 min	12 Ah		≤ 2	●						●	●	●	●				●	1251090000
		CP A BATTERY 24V DC17AH			24		10 A / 81 min	17 Ah		≤ 2	●						●	●	●	●					1251110000
DM / RM / CAP	E.5	PRO DM 10		0–60	U_{in} –0,7 VU_{in} –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 to +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		E.4 yes			> 97				●	●	●	●	●	●		●	2486080000
	E.4	PRO RM 10		10-32	U_{in} –0,13 VU_{in} –0,13 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	NO	yes			> 98		III		●	●	●	●	●	●		●	2486090000
		PRO RM 20			U_{IN} –0,2 V		2 × 24 A (-40 °C ~ +45 °C), 2 × 20 A (+45 °C ~ +60 °C), 2 × 15 A (+70 °C)	960	NO	yes			> 98			CI1Div2	●	●	●	●	●	●		●	2486100000
		PRO RM 40			U_{IN} –0,27 V		3 × 48 A (-40 °C ~ +45 °C), 2 × 40 A (+45 °C ~ +60 °C), 2 × 30 A (+70 °C)	1920	NO	yes			> 98				●	●	●	●	●	●		●	2486110000
	E.7	CP M CAP		18–30	U_{IN}		40 A / 1 min		CO	yes		-25 to +70		> 0.5			●	●	●	●	●	●			1222240000
		CP M CAP							CO								●	●	●	●	●	●			1222240010
INSTAPOWER	A.66	PRO INSTA 16W 24V 0.7A	85–264	95-370	24	22-28	0,7	16			●	-25 to +70	82.5	> 0.75	III		●	●	●	●	●	●			2580180000
		PRO INSTA 30W 12V 2.6A			12	9-16	2.5	30			●		85.0				●	●	●	●	●	●			2580220000
		PRO INSTA 30W 24V 1.3A			24	22-28	1,3				●		86.0				●	●	●	●	●	●			2580190000
		PRO INSTA 30W 5V 6A			5	4-6	6				●		82.0				●	●	●	●	●	●			2580210000
		PRO INSTA 60W 12V 5A			12	9-16	5	60			●		86.0				●	●	●	●	●	●			2580240000
		PRO INSTA 60W 24V 2.5A			24	22-28	2.5				●		89.0				●	●	●	●	●	●			2580230000
		PRO INSTA 90W 24V 3.8A			24	22-28	3.8	90			●		87.0				●	●	●	●	●	●			2580250000
		PRO INSTA 96W 24V 4A			24	22-28	4	96			●		87.0				●	●	●	●	●	●			2580260000
		PRO INSTA 96W 48V 2A			48	35-56	2				●		89.0				●	●	●	●	●	●			2580270000

Switched-mode power supply units

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.

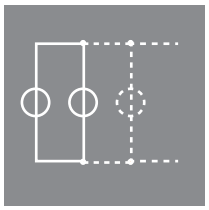
The different product series are optimised for the automation industry: they feature Ex approvals for the processing industry, a flat shape perfect for distribution tasks within buildings and provide decentralised control voltages.

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.

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)).

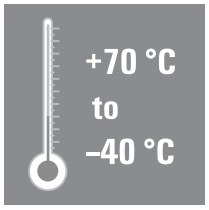


Parallel connection

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 PROeco

connectPower PROmax

connectPower PROtop

connectPower PRO-E

connectPower INSTA POWER

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.

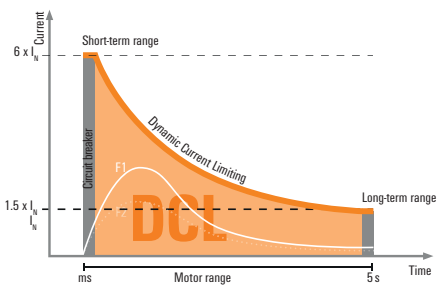
PROtop can achieve significant savings compared to conventional power supply units. Its increased efficiency saves an average of 50 kWh per day in a mediumsized production facility with approx. 100 PROtop power supplies working in three-shift operation. This adds up to over 15,000 kWh a year and also 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.

Also in the protection class IP65 available

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

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



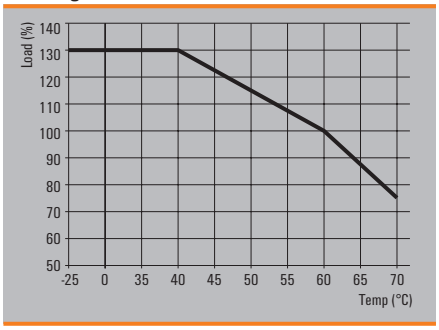
Highly future-proof
- Complete data transparency through to the cloud
- Remote controllability for integration into machine control systems
- CANopen and IO-Link communication protocols

CANopen IO-Link

connectPower PROtop

- DCL technology for an excellent dynamic range
- High energy efficiency (up to 95.3 % 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

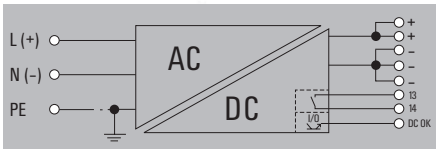
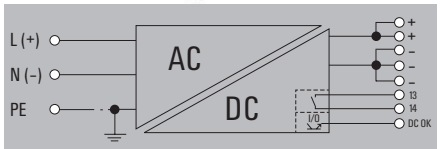


Technical data

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 degree / Pollution degree	I, with PE connection / 2
MTBF	> 1.000.000 h according IEC 1709 (SN29500)
Housing version	Metal, corrosion resistant
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
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
For use with electronic equipment	Acc. to EN50178 / VDE0160
Safety extra-low voltage	SELV according to EN 60950, PELV according to EN 60204
Protective separation / protection against electrical shock	VDE0100-410 / acc. to DIN57100-410
Protection against dangerous shock currents	Acc. to VDE0106-101

connectPower PROtop

- 1-phase power supplies

	PRO TOP1 72 W 24 V 3 A	PRO TOP1 120 W 24 V 5 A
	 Similar to illustration	 Similar to illustration
	 Pay attention to polarity of DC connection	 Pay attention to polarity of DC connection

Technical data

Input		
Rated input voltage	100 - 240 V AC / 120 - 340 V DC	100 - 240 V AC / 120 - 340 V DC
Input voltage range AC	85...277 V AC	85...277 V AC
Frequency range AC	45...65 Hz	45...65 Hz
DC input voltage range	80 ... 410 V DC	38...410 V DC (Derating 40% @ 48 V DC)
Input fuse (internal) / Inrush current	Yes / max. 5 A	Yes / max. 5 A
Output		
Rated output voltage	24 V DC ± 1 %	24 V DC ± 1 %
Output voltage	22.5...28.8 V	22.5...28.8 V
DCL - peak load reserve	150 % (5 s); 400 % (15 ms)	150 % (5 s); 600 % (15 ms)
Residual ripple, breaking spikes	< 50 mVss @ U_{Nenn}, Full Load	< 50 mVss @ U_{Nenn}, Full Load
Reserve capacity @ $U_{Nominal}$	130% permanent at ≤ 40°C, 150 % (5 s)	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U_{nom}	3 A @ 60 °C	5 A @ 60 °C
General data		
Derating	> 60°C (2.5% / 1°C)	> 60°C (2.5% / 1°C)
Series switching capability	Yes	Yes
Degree of efficiency	89%	91%
Power factor (approx.)	> 0.5	> 0.85
AC failure bridging time @ I_{nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC	> 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	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, max 10	yes, max 10
Depth x width x height	125 / 35 / 130 mm	125 / 35 / 130 mm
Net weight	650 g	850 g
Approvals		
Approvals	CE, cULus listed C1D2, TUEV, EAC	CE, cULus listed C1D2, TUEV, EAC

Connection data		**Input**	**Output**	**Input**	**Output**
Connection system		PUSH IN with actuator	PUSH IN with actuator	PUSH IN with actuator	PUSH IN with actuator
Number of terminals		3 for L/N/PE	5 (+ + / ---)	3 for L/N/PE	5 (+ + / ---)
Wire cross-section, rigid min/max	mm²	0.5 / 1.5	0.2 / 2.5	0.5 / 1.5	0.2 / 2.5
Wire cross-section, flexible min/max	mm²	0.5 / 2.5	0.2 / 2.5	0.5 / 2.5	0.2 / 2.5
Wire cross-section, AWG/kcmil min/max		20 / 12	26 / 12	20 / 12	26 / 12
Note					

Ordering data

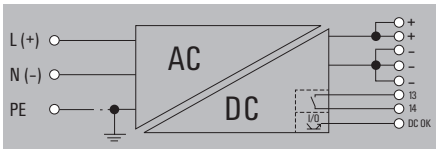
Type	**Qty.**	**Order No.**	**Type**	**Qty.**	**Order No.**
PRO TOP1 72W 24V 3A	1	**2466850000**	PRO TOP1 120W 24V 5A	1	**2466870000**
Note	Current technical data at catalog.weidmueller.com		Current technical data at catalog.weidmueller.com		

connectPower PROtop

- 1-phase power supplies

PRO TOP1 240 W 24 V 10 A

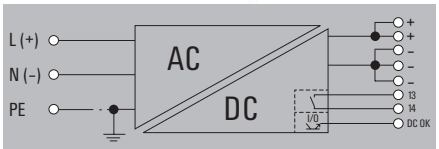
Similar to illustration



Pay attention to polarity of DC connection

PRO TOP1 480 W 24 V 20 A

Similar to illustration



Pay attention to polarity of DC connection

Technical data

Input		
Rated input voltage	100 - 240 V AC / 120 - 340 V DC	100 - 240 V AC / 120 - 340 V DC
Input voltage range AC	85...277 V AC	85...277 V AC
Frequency range AC	45...65 Hz	45...65 Hz
DC input voltage range	80 ... 410 V DC	80 ... 410 V DC
Input fuse (internal) / Inrush current	Yes / max. 5 A	Yes / max. 5 A
Output		
Rated output voltage	24 V DC ± 1 %	24 V DC ± 1 %
Output voltage	22.5...28.8 V	22.5...28.8 V
DCL - peak load reserve	150 % (5 s); 600 % (15 ms)	150 % (5 s); 500 % (15 ms)
Residual ripple, breaking spikes	< 50 mVss @ U_{Nenn}, Full Load	< 50 mVss @ U_{Nenn}, Full Load
Reserve capacity @ $U_{Nominal}$	130% permanent at ≤ 40°C, 150 % (5 s)	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U_{nom}	10 A @ 60 °C	20 A @ 60 °C
General data		
Derating	> 60°C (2.5% / 1°C)	> 60°C (2.5% / 1°C)
Series switching capability	Yes	Yes
Degree of efficiency	92 %	93%
Power factor (approx.)	> 0.9	> 0.9
AC failure bridging time @ I_{nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC	> 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	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, max 10	yes, max 10
Depth x width x height	125 / 39 / 130 mm	125 / 68 / 130 mm
Net weight	1050 g	1520 g
Approvals		
Approvals	CE, cULus listed C1D2, TUEV, EAC	CE, cULus listed C1D2, TUEV, EAC

Connection data		**Input**	**Output**	**Input**	**Output**
Connection system		PUSH IN with actuator	PUSH IN with actuator	PUSH IN	PUSH IN
Number of terminals		3 for L/N/PE	5 (+ + / ---)	3 for L/N/PE	5 (+ + / ---)
Wire cross-section, rigid min/max	mm²	0.5 / 1.5	0.2 / 2.5	0.2 / 10	0.2 / 10
Wire cross-section, flexible min/max	mm²	0.5 / 2.5	0.2 / 2.5	0.2 / 6	0.2 / 6
Wire cross-section, AWG/kcmil min/max		20 / 12	26 / 12	20 / 8	20 / 8
Note					

Ordering data

Type	**Qty.**	**Order No.**
PRO TOP1 240W 24V 10A	1	**2466880000**

Type	**Qty.**	**Order No.**
PRO TOP1 480W 24V 20A	1	**2466890000**

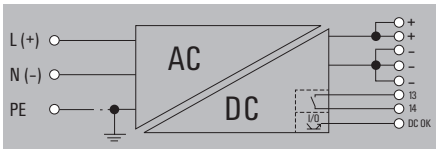
Note	Current technical data at catalog.weidmueller.com	Current technical data at catalog.weidmueller.com

connectPower PROtop

- 1-phase power supplies

PRO TOP1 960 W 24 V 40 A

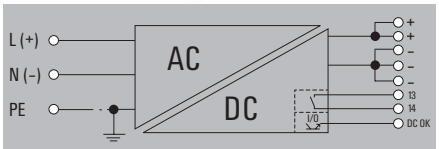
Similar to illustration



Pay attention to polarity of DC connection

PRO TOP1 120 W 12 V 10 A

Similar to illustration



Pay attention to polarity of DC connection

Technical data

Input		
Rated input voltage	100 - 240 V AC / 120 - 340 V DC	100 - 240 V AC / 120 - 340 V DC
Input voltage range AC	85...277 V AC	85...277 V AC
Frequency range AC	45...65 Hz	45...65 Hz
DC input voltage range	80 ... 410 V DC	80 ... 410 V DC
Input fuse (internal) / Inrush current	Yes / max. 15 A	Yes / max. 5 A
Output		
Rated output voltage	24 V DC ± 1 %	12 V DC ± 1 %
Output voltage	22.5...28.8 V	11...15 V
DCL - peak load reserve	150 % (5 s); 400 % (15 ms)	150 % (5 s); 400 % (15 ms)
Residual ripple, breaking spikes	< 50 mVss @ U_{Nenn}, Full Load	< 50 mVss @ U_{Nenn}, Full Load
Reserve capacity @ $U_{Nominal}$	130% permanent at ≤ 40°C, 150 % (5 s)	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U_{nom}	40 A @ 60 °C	10 A @ 60 °C
General data		
Derating	> 60°C (2.5% / 1°C)	> 60°C (2.5% / 1°C)
Series switching capability	Yes	Yes
Degree of efficiency	94%	90%
Power factor (approx.)	> 0.9	> 0.85
AC failure bridging time @ I_{nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC	> 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	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, max 10	yes, max 10
Depth x width x height	125 / 124 / 130 mm	125 / 35 / 130 mm
Net weight	3400 g	850 g
Approvals		
Approvals	CE, cULus listed C1D2, TUEV, EAC	CE, cULus listed C1D2, TUEV, EAC

Connection data		**Input**	**Output**	**Input**	**Output**
Connection system		PUSH IN	PUSH IN	PUSH IN with actuator	PUSH IN with actuator
Number of terminals		3 for L/N/PE	5 (+ + / - - -)	3 for L/N/PE	5 (+ + / - - -)
Wire cross-section, rigid min/max	mm²	0.75 / 16	0.75 / 16	0.5 / 1.5	0.2 / 2.5
Wire cross-section, flexible min/max	mm²	0.75 / 16	0.75 / 16	0.5 / 2.5	0.2 / 2.5
Wire cross-section, AWG/kcmil min/max		20 / 4	20 / 4	20 / 12	26 / 12
Note					

Ordering data

	Type	**Qty.**	**Order No.**
	PRO TOP1 960W 24V 40A	1	**2466900000**
Note	Current technical data at catalog.weidmueller.com		

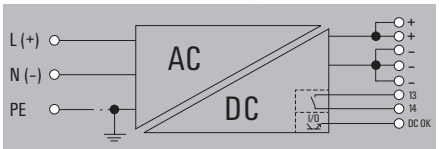
	Type	**Qty.**	**Order No.**
	PRO TOP1 120W 12V 10A	1	**2466910000**
	Current technical data at catalog.weidmueller.com		

connectPower PROtop

- 1-phase power supplies

PRO TOP1 480 W 48 V 10 A

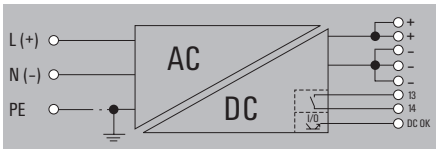
Similar to illustration



Pay attention to polarity of DC connection

PRO TOP1 960 W 48 V 20 A

Similar to illustration



Pay attention to polarity of DC connection

Technical data

Input		
Rated input voltage	100 - 240 V AC / 120 - 340 V DC	100 - 240 V AC / 120 - 340 V DC
Input voltage range AC	85...277 V AC	85...277 V AC
Frequency range AC	45...65 Hz	45...65 Hz
DC input voltage range	80 ... 410 V DC	80 ... 410 V DC
Input fuse (internal) / Inrush current	Yes / max. 5 A	Yes / max. 15 A
Output		
Rated output voltage	48 V DC ± 1 %	48 V DC ± 1 %
Output voltage	45...56 V	45...56 V
DCL - peak load reserve	150 % (5 s); 500 % (15 ms)	150 % (5 s); 400 % (15 ms)
Residual ripple, breaking spikes	< 100 mV_{PP}	< 100 mV_{PP}
Reserve capacity @ $U_{Nominal}$	130% permanent at ≤ 40°C, 150 % (5 s)	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U_{nom}	10 A @ 60 °C	20 A @ 60 °C
General data		
Derating	> 60°C (2.5% / 1°C)	> 60°C (2.5% / 1°C)
Series switching capability	No	No
Degree of efficiency	93%	94%
Power factor (approx.)	> 0.9	> 0.9
AC failure bridging time @ I_{nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC	> 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	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, max 10	yes, max 10
Depth x width x height	125 / 68 / 130 mm	125 / 124 / 130 mm
Net weight	1520 g	3382 g
Approvals		
Approvals	CE, cULus listed C1D2, TUEV, EAC	CE, cULus listed C1D2, TUEV, EAC

Connection data		**Input**	**Output**	**Input**	**Output**
Connection system		PUSH IN	PUSH IN	PUSH IN	PUSH IN
Number of terminals		3 for L/N/PE	5 (+ + / ---)	3 for L/N/PE	5 (+ + / ---)
Wire cross-section, rigid min/max	mm^2	0.2 / 10	0.2 / 10	0.75 / 16	0.75 / 16
Wire cross-section, flexible min/max	mm^2	0.2 / 6	0.2 / 6	0.75 / 16	0.75 / 16
Wire cross-section, AWG/kcmil min/max		20 / 8	20 / 8	20 / 4	20 / 4
Note					

Ordering data

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

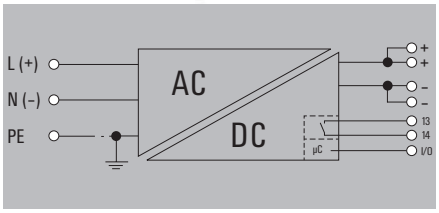
Type	**Qty.**	**Order No.**
PRO TOP1 960W 48V 20A	1	**2466920000**

Note	Current technical data at catalog.weidmueller.com	Current technical data at catalog.weidmueller.com

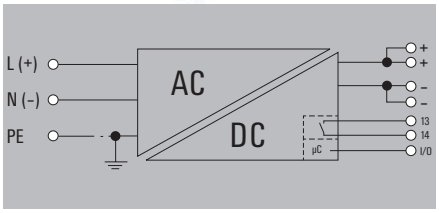
connectPower PROtop

- 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	100 - 240 V AC / 120 - 340 V DC	100 - 240 V AC / 120 - 340 V DC
Input voltage range AC	85...277 V AC	85...277 V AC
Frequency range AC	45...65 Hz	45...65 Hz
DC input voltage range	80 ... 410 V DC	80 ... 410 V DC
Input fuse (internal) / Inrush current	Yes / max. 5 A	Yes / max. 5 A
Output		
Rated output voltage	24 V DC ± 1 %	12 V DC ± 1 %
Output voltage	22.5...28.8 V	11...18.8 V
DCL - peak load reserve	150 % (5 s); 400 % (15 ms)	150 % (5 s); 400 % (15 ms)
Residual ripple, breaking spikes	< 50 mVss @ U_{Nenn}, Full Load	< 50 mVss @ U_{Nenn}, Full Load
Reserve capacity @ $U_{Nominal}$	130% permanent at ≤ 40°C, 150 % (5 s)	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U_{nom}	3 A @ 60 °C	10 A @ 60 °C
General data		
Derating	> 60°C (2.5% / 1°C)	> 60°C (2.5% / 1°C)
Series switching capability	Yes	Yes
Degree of efficiency	89%	90%
Power factor (approx.)	> 0.5	> 0.85
AC failure bridging time @ I_{nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC	> 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	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, max 10	yes, max 10
Depth x width x height	125 / 35 / 130 mm	125 / 35 / 130 mm
Net weight	650 g	850 g
Approvals		
Approvals	CE, cULus listed C1D2, TUEV, EAC	CE, cULus listed C1D2, TUEV, EAC

Connection data		**Input**	**Output**	**Input**	**Output**
Connection system		PUSH IN with actuator	PUSH IN with actuator	PUSH IN with actuator	PUSH IN with actuator
Number of terminals		3 for L/N/PE	4 (++ / - -)	3 for L/N/PE	4 (++ / - -)
Wire cross-section, rigid min/max	mm²	0.5 / 1.5	0.2 / 2.5	0.5 / 1.5	0.2 / 2.5
Wire cross-section, flexible min/max	mm²	0.5 / 2.5	0.2 / 2.5	0.5 / 2.5	0.2 / 2.5
Wire cross-section, AWG/kcmil min/max		20 / 12	26 / 12	20 / 12	26 / 12
Note					

Ordering data

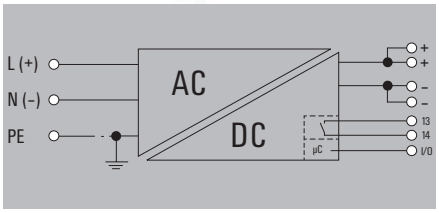
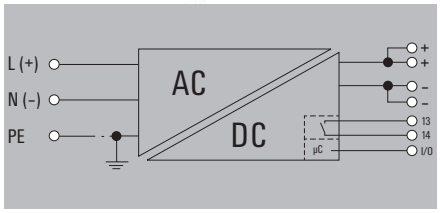
Type	**Qty.**	**Order No.**
PRO TOP1 72W 24V 3A F	1	**2568970000**

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

Note	Current technical data at catalog.weidmueller.com	Current technical data at catalog.weidmueller.com

connectPower PROtop

- 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	100 - 240 V AC / 120 - 340 V DC	100 - 240 V AC / 120 - 340 V DC
Input voltage range AC	85...277 V AC	85...277 V AC
Frequency range AC	45...65 Hz	45...65 Hz
DC input voltage range	48...410 V DC (Derating 40% @ 48 V DC)	80 ... 410 V DC
Input fuse (internal) / Inrush current	Yes / max. 5 A	Yes / max. 5 A
Output		
Rated output voltage	24 V DC ± 1 %	24 V DC ± 1 %
Output voltage	22.5...28.8 V	22.5...28.8 V
DCL - peak load reserve	150 % (5 s); 600 % (15 ms)	150 % (5 s); 600 % (15 ms)
Residual ripple, breaking spikes	< 50 mVss @ U_{Nenn}, Full Load	< 50 mVss @ U_{Nenn}, Full Load
Reserve capacity @ $U_{Nominal}$	130% permanent at ≤ 40°C, 150 % (5 s)	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U_{nom}	5 A @ 60 °C	10 A @ 60 °C
General data		
Derating	> 60°C (2.5% / 1°C)	> 60°C (2.5% / 1°C)
Series switching capability	Yes	Yes
Degree of efficiency	91%	92 %
Power factor (approx.)	> 0.85	> 0.9
AC failure bridging time @ I_{nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC	> 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	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, max 10	yes, max 10
Depth x width x height	125 / 35 / 130 mm	125 / 39 / 130 mm
Net weight	850 g	1050 g
Approvals		
Approvals	CE, cULus listed C1D2, TUEV, EAC	CE, cULus listed C1D2, TUEV, EAC

Connection data		**Input**	**Output**	**Input**	**Output**
Connection system		PUSH IN with actuator	PUSH IN with actuator	PUSH IN with actuator	PUSH IN with actuator
Number of terminals		3 for L/N/PE	4 (++ / - -)	3 for L/N/PE	4 (++ / - -)
Wire cross-section, rigid min/max	mm²	0.5 / 1.5	0.2 / 2.5	0.5 / 1.5	0.2 / 2.5
Wire cross-section, flexible min/max	mm²	0.5 / 2.5	0.2 / 2.5	0.5 / 2.5	0.2 / 2.5
Wire cross-section, AWG/kcmil min/max		20 / 12	26 / 12	20 / 12	26 / 12
Note					

Ordering data

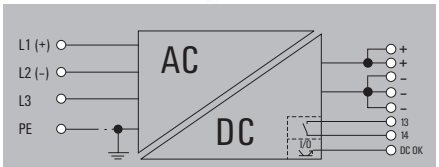
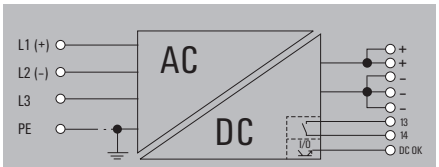
Type	**Qty.**	**Order No.**
PRO TOP1 120W 24V 5A F	1	**2568980000**

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

Note	Current technical data at catalog.weidmueller.com	Current technical data at catalog.weidmueller.com

connectPower PROtop

- 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	3 x 400...3 x 500 V AC (wide-range input)	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	3 x 320...3 x 575 V AC / 2 x 360...2 x 575 V AC
Frequency range AC	45...65 Hz	45...65 Hz
DC input voltage range	450...800 V DC (max. 500 V DC acc. to UL508)	450...800 V DC (max. 500 V DC acc. to UL508)
Input fuse (internal) / Inrush current	No / Max. 10 A	No / Max. 10 A
Output		
Rated output voltage	24 V DC ± 1 %	24 V DC ± 1 %
Output voltage	22.5...28.8 V	22.5...28.8 V
DCL - peak load reserve	150 % (5 s); 600 % (15 ms)	150 % (5 s); 600 % (15 ms)
Residual ripple, breaking spikes	< 50 mVss @ U_{Nenn}, Full Load	< 50 mVss @ U_{Nenn}, Full Load
Reserve capacity @ $U_{Nominal}$	130% permanent at ≤ 40°C, 150 % (5 s)	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U_{nom}	5 A @ 60 °C	10 A @ 60 °C
General data		
Derating	> 60°C (2.5% / 1°C)	> 60°C (2.5% / 1°C)
Series switching capability	Yes	Yes
Degree of efficiency	89%	93%
Power factor (approx.)	> 0.4 @ 3x400 V AC	> 0.75 @ 3x400 V AC
AC failure bridging time @ I_{nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC	> 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	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, max 10	yes, max 10
Depth x width x height	125 / 39 / 130 mm	125 / 50 / 130 mm
Net weight	967 g	1120 g
Approvals		
Approvals	CE, cULus listed C1D2, TUEV, EAC	CE, cULus listed C1D2, TUEV, EAC

Connection data		**Input**	**Output**	**Input**	**Output**
Connection system		PUSH IN with actuator	PUSH IN with actuator	PUSH IN with actuator	PUSH IN with actuator
Number of terminals		4 for L1/L2/L3/PE	5 (+ + / ---)	4 for L1/L2/L3/PE	5 (+ + / ---)
Wire cross-section, rigid min/max	mm²	0.5 / 1.5	0.2 / 2.5	0.5 / 1.5	0.2 / 2.5
Wire cross-section, flexible min/max	mm²	0.5 / 2.5	0.2 / 2.5	0.5 / 2.5	0.2 / 2.5
Wire cross-section, AWG/kcmil min/max		20 / 12	26 / 12	20 / 12	26 / 12
Note					

Ordering data

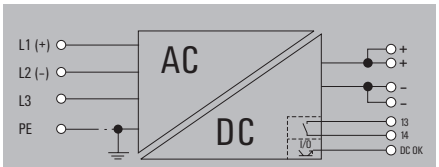
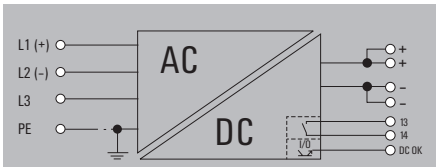
Type	**Qty.**	**Order No.**
PRO TOP3 120W 24V 5A	1	**2467060000**

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

Note	Current technical data at catalog.weidmueller.com	Current technical data at catalog.weidmueller.com

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	3 x 400...3 x 500 V AC (wide-range input)	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	3 x 320...3 x 575 V AC / 2 x 360...2 x 575 V AC
Frequency range AC	45...65 Hz	45...65 Hz
DC input voltage range	450...800 V DC (max. 500 V DC acc. to UL508)	450...800 V DC (max. 500 V DC acc. to UL508)
Input fuse (internal) / Inrush current	No / Max. 10 A	No / Max. 10 A
Output		
Rated output voltage	24 V DC ± 1 %	48 V DC ± 1 %
Output voltage	22.5...28.8 V	22.5...28.8 V
DCL - peak load reserve	150 % (5 s); 500 % (15 ms)	150 % (5 s); 400 % (15 ms)
Residual ripple, breaking spikes	< 50 mVss @ U_{Nenn}, Full Load	< 50 mVss @ U_{Nenn}, Full Load
Reserve capacity @ $U_{Nominal}$	130% permanent at ≤ 40°C, 150 % (5 s)	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U_{nom}	20 A @ 60 °C	40 A @ 60 °C
General data		
Derating	> 60°C (2.5% / 1°C)	> 60°C (2.5% / 1°C)
Series switching capability	Yes	Yes
Degree of efficiency	94%	95,3 %
Power factor (approx.)	> 0.75 @ 3x400 V AC	> 0.75 @ 3x400 V AC
AC failure bridging time @ I_{nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC	> 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	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, max 10	yes, max 10
Depth x width x height	125 / 68 / 130 mm	175 / 89 / 130 mm
Net weight	1650 g	2490 g
Approvals		
Approvals	CE, cULus listed C1D2, TUEV, EAC	CE, cULus listed C1D2, TUEV, EAC

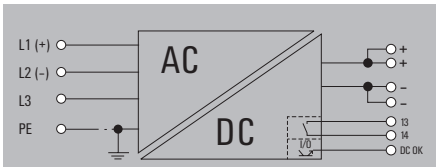
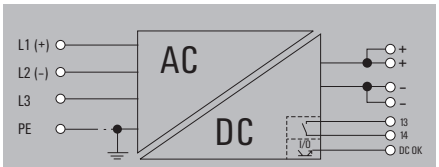
Connection data		**Input**	**Output**	**Input**	**Output**
Connection system		PUSH IN	PUSH IN	PUSH IN	PUSH IN
Number of terminals		4 for L1/L2/L3/PE	4 (++ / - -)	4 for L1/L2/L3/PE	4 (++ / - -)
Wire cross-section, rigid min/max	mm²	0.2 / 10	0.2 / 10	0.75 / 16	0.75 / 16
Wire cross-section, flexible min/max	mm²	0.2 / 6	0.2 / 6	0.75 / 16	0.75 / 16
Wire cross-section, AWG/kcmil min/max		20 / 8	20 / 8	20 / 4	20 / 4
Note					

Ordering data

	Type	**Qty.**	**Order No.**	**Type**	**Qty.**	**Order No.**
	PRO TOP3 480W 24V 20A	1	**2467100000**	PRO TOP3 960W 24V 40A	1	**2467120000**
Note	Current technical data at catalog.weidmueller.com			Current technical data at catalog.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	3 x 400...3 x 500 V AC (wide-range input)	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	3 x 320...3 x 575 V AC / 2 x 360...2 x 575 V AC
Frequency range AC	45...65 Hz	45...65 Hz
DC input voltage range	450...800 V DC (max. 500 V DC acc. to UL508)	450...800 V DC (max. 500 V DC acc. to UL508)
Input fuse (internal) / Inrush current	No / Max. 10 A	No / Max. 10 A
Output		
Rated output voltage	48 V DC ± 1 %	48 V DC ± 1 %
Output voltage	45...56 V	45...56 V
DCL - peak load reserve	150 % (5 s); 500 % (15 ms)	150 % (5 s); 400 % (15 ms)
Residual ripple, breaking spikes	< 50 mVss @ U_{Nenn}, Full Load	< 50 mVss @ U_{Nenn}, Full Load
Reserve capacity @ $U_{Nominal}$	130% permanent at ≤ 40°C, 150 % (5 s)	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U_{nom}	10 A @ 60 °C	20 A @ 60 °C
General data		
Derating	> 60°C (2.5% / 1°C)	> 60°C (2.5% / 1°C)
Series switching capability	No	No
Degree of efficiency	94%	95,3 %
Power factor (approx.)	> 0.75 @ 3x400 V AC	> 0.75 @ 3x400 V AC
AC failure bridging time @ I_{nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC	> 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	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, max 10	yes, max 10
Depth x width x height	125 / 68 / 130 mm	175 / 89 / 130 mm
Net weight	1645 g	2490 g
Approvals		
Approvals	CE, cULus listed C1D2, TUEV, EAC	CE, cULus listed C1D2, TUEV, EAC

Connection data		**Input**	**Output**	**Input**	**Output**
Connection system		PUSH IN	PUSH IN	PUSH IN	PUSH IN
Number of terminals		4 for L1/L2/L3/PE	4 (++ / - -)	4 for L1/L2/L3/PE	4 (++ / - -)
Wire cross-section, rigid min/max	mm²	0.2 / 10	0.2 / 10	0.75 / 16	0.75 / 16
Wire cross-section, flexible min/max	mm²	0.2 / 6	0.2 / 6	0.75 / 16	0.75 / 16
Wire cross-section, AWG/kcmil min/max		20 / 8	20 / 8	20 / 4	20 / 4
Note					

Ordering data

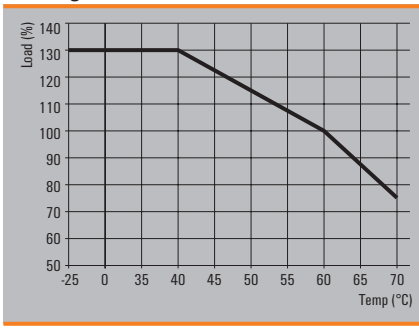
	Type	**Qty.**	**Order No.**	**Type**	**Qty.**	**Order No.**
	PRO TOP3 480W 48V 10A	1	**2467150000**	PRO TOP3 960W 48V 20A	1	**2467170000**
Note	Current technical data at catalog.weidmueller.com			Current technical data at catalog.weidmueller.com		

PROtop - for the highest standards

connectPower PROtop

- DCL technology for an excellent dynamic range
- High energy efficiency (up to 95.3 % 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



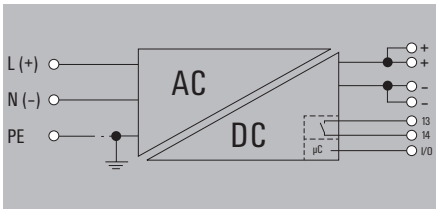
Technical data

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
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 degree / Pollution degree	I, with PE connection / 2
MTBF	> 1.000.000 h according IEC 1709 (SN29500)
Housing version	Metal, corrosion resistant
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
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
For use with electronic equipment	Acc. to EN50178 / VDE0160
Safety extra-low voltage	SELV according to EN 60950, PELV according to EN 60204
Protective separation / protection against electrical shock	VDE0100-410 / acc. to DIN57100-410
Protection against dangerous shock currents	Acc. to VDE0106-101

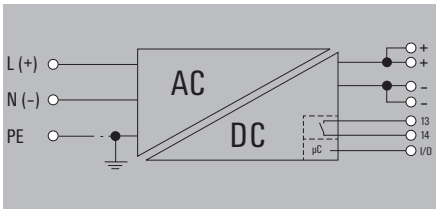
connectPower PROtop

- 1-phase power supplies

PRO TOP1 72W 24V 3A CO



PRO TOP1 120W 24V 5A EX



Technical data

Input		
Rated input voltage	100 - 240 V AC / 120 - 340 V DC	100 - 240 V AC / 120 - 340 V DC
Input voltage range AC	85...277 V AC	85...277 V AC
Frequency range AC	45...65 Hz	45...65 Hz
DC input voltage range	80 ... 410 V DC	48...410 V DC (Derating 40% @ 48 V DC)
Input fuse (internal) / Inrush current	Yes / max. 5 A	Yes / max. 5 A
Output		
Rated output voltage	24 V DC ± 1 %	24 V DC ± 1 %
Output voltage	22.5...28.8 V	22.5...28.8 V
DCL - peak load reserve	150 % (5 s); 400 % (15 ms)	150 % (5 s); 600 % (15 ms)
Residual ripple, breaking spikes	< 50 mVss @ U_{Nenn}, Full Load	< 50 mVss @ U_{Nenn}, Full Load
Reserve capacity @ $U_{Nominal}$	130% permanent at ≤ 40°C, 150 % (5 s)	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U_{nom}	3 A @ 60 °C	5 A @ 60 °C
General data		
Derating	> 60°C (2.5% / 1°C)	> 60°C (2.5% / 1°C)
Series switching capability	Yes	Yes
Degree of efficiency	89%	91%
Power factor (approx.)	> 0.5	> 0.85
AC failure bridging time @ I_{nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC	> 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	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, max 10	yes, max 10
Depth x width x height	125 / 35 / 130 mm	125 / 35 / 130 mm
Net weight	650 g	850 g
Approvals		
Approvals	CE, cULus listed C1D2, TUEV, EAC, Marine approvals (in preparation)	CE, cULus listed C1D2, TUEV, ATEX, IECEx, EAC, Marine approvals (in preparation)

Connection data		**Input**	**Output**	**Input**	**Output**
Connection system		Clamping yoke	Clamping yoke connection	Clamping yoke	Clamping yoke connection
Number of terminals		3 for L/N/PE	4 (+ + / - -)	3 for L/N/PE	4 (+ + / - -)
Wire cross-section, rigid min/max	mm²	0.2 / 4	0.2 / 4	0.2 / 4	0.2 / 4
Wire cross-section, flexible min/max	mm²	0.2 / 4	0.2 / 4	0.2 / 4	0.2 / 4
Wire cross-section, AWG/kcmil min/max		30 / 12	30 / 12	30 / 12	30 / 12
Note					

Ordering data

Type	**Qty.**	**Order No.**
PRO TOP1 72W 24V 3A CO	1	**2466970000**

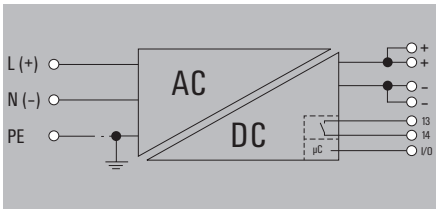
Type	**Qty.**	**Order No.**
PRO TOP1 120W 24V 5A EX	1	**2466980000**

Note

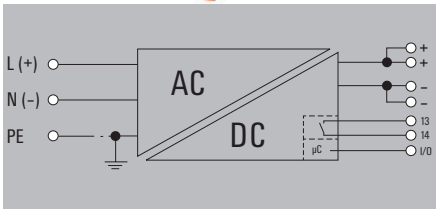
connectPower PROtop

- 1-phase power supplies

PRO TOP1 240W 24V 10A EX



PRO TOP1 480W 24V 20A EX



Technical data

Input		
Rated input voltage	100 - 240 V AC / 120 - 340 V DC	100 - 240 V AC / 120 - 340 V DC
Input voltage range AC	85...277 V AC	85...277 V AC
Frequency range AC	45...65 Hz	45...65 Hz
DC input voltage range	80 ... 410 V DC	80 ... 410 V DC
Input fuse (internal) / Inrush current	Yes / max. 5 A	Yes / max. 5 A
Output		
Rated output voltage	24 V DC ± 1 %	24 V DC ± 1 %
Output voltage	22.5...28.8 V	22.5...28.8 V
DCL - peak load reserve	150 % (5 s); 600 % (15 ms)	150 % (5 s); 500 % (15 ms)
Residual ripple, breaking spikes	< 50 mVss @ U_{Nenn}, Full Load	< 50 mVss @ U_{Nenn}, Full Load
Reserve capacity @ $U_{Nominal}$	130% permanent at ≤ 40°C, 150 % (5 s)	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U_{nom}	10 A @ 60 °C	20 A @ 60 °C
General data		
Derating	> 60°C (2.5% / 1°C)	> 60°C (2.5% / 1°C)
Series switching capability	Yes	Yes
Degree of efficiency	92 %	93%
Power factor (approx.)	> 0.9	> 0.9
AC failure bridging time @ I_{nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC	> 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	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, max 10	yes, max 10
Depth x width x height	125 / 39 / 130 mm	125 / 68 / 130 mm
Net weight	1.05 g	1520 g
Approvals		
Approvals	CE, cULus listed C1D2, TUEV, ATEX, IECEx, EAC, Marine approvals (in preparation)	CE, cULus listed C1D2, TUEV, ATEX, IECEx, EAC, Marine approvals (in preparation)

Connection data		**Input**	**Output**	**Input**	**Output**
Connection system		Clamping yoke	Clamping yoke connection	Clamping yoke	Clamping yoke connection
Number of terminals		3 for L/N/PE	4 (+ + / - -)	3 for L/N/PE	4 (+ + / - -)
Wire cross-section, rigid min/max	mm²	0.2 / 4	0.2 / 4	0.18 / 6	0.2 / 6
Wire cross-section, flexible min/max	mm²	0.2 / 4	0.2 / 4	0.22 / 4	0.5 / 6
Wire cross-section, AWG/kcmil min/max		30 / 12	30 / 12	26 / 10	24 / 8
Note					

Ordering data

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

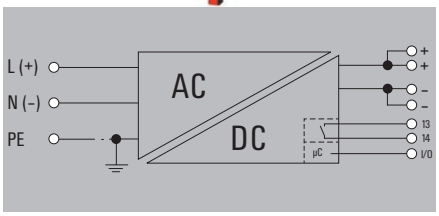
Type	**Qty.**	**Order No.**
PRO TOP1 480W 24V 20A EX	1	**2467000000**

Note

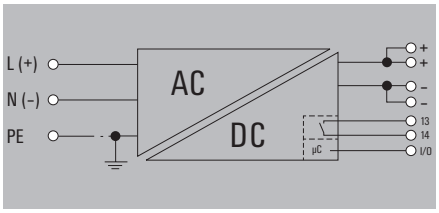
connectPower PROtop

- 1-phase power supplies

PRO TOP1 480W 48V 10A EX



PRO TOP1 960W 48V 20A CO



Technical data

Input		
Rated input voltage	100 - 240 V AC / 120 - 340 V DC	100 - 240 V AC / 120 - 340 V DC
Input voltage range AC	85...277 V AC	85...277 V AC
Frequency range AC	45...65 Hz	45...65 Hz
DC input voltage range	80 ... 410 V DC	80 ... 410 V DC
Input fuse (internal) / Inrush current	Yes / max. 5 A	Yes / max. 15 A
Output		
Rated output voltage	48 V DC ± 1 %	48 V DC ± 1 %
Output voltage	45...56 V	45...56 V
DCL - peak load reserve	150 % (5 s); 500 % (15 ms)	150 % (5 s); 400 % (15 ms)
Residual ripple, breaking spikes	< 100 mV_{PP}	< 100 mV_{PP}
Reserve capacity @ $U_{Nominal}$	130% permanent at ≤ 40°C, 150 % (5 s)	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U_{nom}	10 A @ 60 °C	20 A @ 60 °C
General data		
Derating	> 60°C (2.5% / 1°C)	> 60°C (2.5% / 1°C)
Series switching capability	No	No
Degree of efficiency	93%	94%
Power factor (approx.)	> 0.9	> 0.9
AC failure bridging time @ I_{nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC	> 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	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, max 10	yes, max 10
Depth x width x height	125 / 68 / 130 mm	125 / 139 / 130 mm
Net weight	1520 g	3382 g
Approvals		
Approvals	CE, cULus listed C1D2, TUEV, ATEX, IECEx, EAC, Marine approvals (in preparation)	CE, cULus listed C1D2, TUEV, EAC, Marine approvals (in preparation)

Connection data		**Input**	**Output**	**Input**	**Output**
Connection system		Clamping yoke	Clamping yoke connection	Clamping yoke	Clamping yoke connection
Number of terminals		3 for L/N/PE	4 (+ + / - -)	3 for L/N/PE	4 (+ + / - -)
Wire cross-section, rigid min/max	mm^2	0.18 / 6	0.2 / 6	0.18 / 6	0.2 / 16
Wire cross-section, flexible min/max	mm^2	0.22 / 4	0.5 / 6	0.22 / 4	6 / 16
Wire cross-section, AWG/kcmil min/max		26 / 10	24 / 8	26 / 10	22 / 6
Note					

Ordering data

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

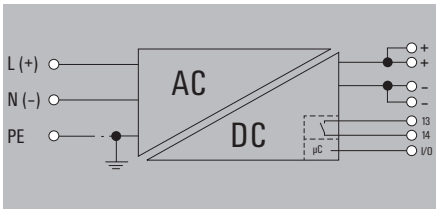
Type	**Qty.**	**Order No.**
PRO TOP1 960W 48V 20A CO	1	**2467050000**

Note

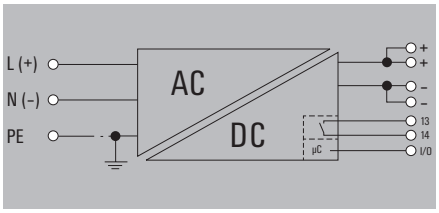
connectPower PROtop

- 1-phase power supplies

PRO TOP1 960W 24V 40A EX



PRO TOP1 120W 12V 10A EX



Technical data

Input		
Rated input voltage	100 - 240 V AC / 120 - 340 V DC	100 - 240 V AC / 120 - 340 V DC
Input voltage range AC	85...277 V AC	85...277 V AC
Frequency range AC	45...65 Hz	45...65 Hz
DC input voltage range	80 ... 410 V DC	80 ... 410 V DC
Input fuse (internal) / Inrush current	Yes / max. 15 A	Yes / max. 5 A
Output		
Rated output voltage	24 V DC ± 1 %	12 V DC ± 1 %
Output voltage	22.5...28.8 V	11...15 V
DCL - peak load reserve	150 % (5 s); 400 % (15 ms)	150 % (5 s); 400 % (15 ms)
Residual ripple, breaking spikes	< 50 mVss @ U_{Nenn}, Full Load	< 50 mVss @ U_{Nenn}, Full Load
Reserve capacity @ $U_{Nominal}$	130% permanent at ≤ 40°C, 150 % (5 s)	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U_{nom}	40 A @ 60 °C	10 A @ 60 °C
General data		
Derating	> 60°C (2.5% / 1°C)	> 60°C (2.5% / 1°C)
Series switching capability	Yes	Yes
Degree of efficiency	94%	90%
Power factor (approx.)	> 0.9	> 0.85
AC failure bridging time @ I_{nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC	> 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	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, max 10	yes, max 10
Depth x width x height	125 / 139 / 130 mm	125 / 35 / 130 mm
Net weight	3382 g	850 g
Approvals		
Approvals	CE, cULus listed C1D2, TUEV, ATEX, IECEx, EAC, Marine approvals (in preparation)	CE, cULus listed C1D2, TUEV, ATEX, IECEx, EAC, Marine approvals (in preparation)

Connection data		**Input**	**Output**	**Input**	**Output**
Connection system		Clamping yoke	Clamping yoke connection	Clamping yoke	Clamping yoke connection
Number of terminals		3 for L/N/PE	4 (+ + / - -)	3 for L/N/PE	4 (+ + / - -)
Wire cross-section, rigid min/max	mm²	0.18 / 6	0.2 / 16	0.2 / 4	0.2 / 4
Wire cross-section, flexible min/max	mm²	0.22 / 4	6 / 16	0.2 / 4	0.2 / 4
Wire cross-section, AWG/kcmil min/max		26 / 10	22 / 6	30 / 12	30 / 12
Note					

Ordering data

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

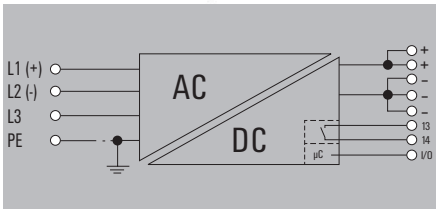
Type	**Qty.**	**Order No.**
PRO TOP1 120W 12V 10A EX	1	**2467020000**

Note

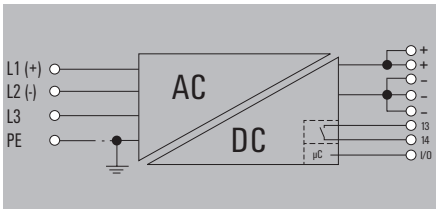
connectPower PROtop

- 3-phase power supplies

PRO TOP3 120W 24V 5A CO



PRO TOP3 240W 24V 10A CO



Technical data

Input		
Rated input voltage	3 x 400...3 x 500 V AC (wide-range input)	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	3 x 320...3 x 575 V AC / 2 x 360...2 x 575 V AC
Frequency range AC	45...65 Hz	45...65 Hz
DC input voltage range	450...800 V DC (max. 500 V DC acc. to UL508)	450...800 V DC (max. 500 V DC acc. to UL508)
Input fuse (internal) / Inrush current	No / Max. 10 A	No / Max. 10 A
Output		
Rated output voltage	48 V DC ± 1 %	48 V DC ± 1 %
Output voltage	22.5...28.8 V	22.5...28.8 V
DCL - peak load reserve	150 % (5 s); 600 % (15 ms)	150 % (5 s); 600 % (15 ms)
Residual ripple, breaking spikes	< 50 mVss @ U_{Nenn}, Full Load	< 50 mVss @ U_{Nenn}, Full Load
Reserve capacity @ $U_{Nominal}$	130% permanent at ≤ 40°C, 150 % (5 s)	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U_{nom}	5 A @ 60 °C	10 A @ 60 °C
General data		
Derating	> 60°C (2.5% / 1°C)	> 60°C (2.5% / 1°C)
Series switching capability	Yes	Yes
Degree of efficiency	89%	93%
Power factor (approx.)	> 0.4 @ 3x400 V AC	> 0.75 @ 3x400 V AC
AC failure bridging time @ I_{nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC	> 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	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, max 10	yes, max 10
Depth x width x height	125 / 39 / 130 mm	125 / 50 / 130 mm
Net weight	967 g	1120 g
Approvals		
Approvals	CE, cULus listed C1D2, TUEV, EAC, Marine approvals (in preparation)	CE, cULus listed C1D2, TUEV, EAC, Marine approvals (in preparation)

Connection data		**Input**	**Output**	**Input**	**Output**
Connection system		PUSH IN with actuator	PUSH IN with actuator	PUSH IN with actuator	PUSH IN with actuator
Number of terminals		4 for L1/L2/L3/PE	5 (+ + / ---)	4 for L1/L2/L3/PE	5 (+ + / ---)
Wire cross-section, rigid min/max	mm²	0.5 / 1.5	0.2 / 2.5	0.5 / 1.5	0.2 / 2.5
Wire cross-section, flexible min/max	mm²	0.5 / 2.5	0.2 / 2.5	0.5 / 2.5	0.2 / 2.5
Wire cross-section, AWG/kcmil min/max		20 / 12	26 / 12	20 / 12	26 / 12
Note					

Ordering data

Type	**Qty.**	**Order No.**
PRO TOP3 120W 24V 5A CO	1	**2467070000**

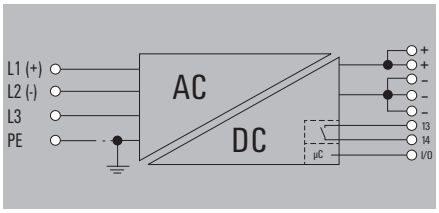
Type	**Qty.**	**Order No.**
PRO TOP3 240W 24V 10A CO	1	**2467090000**

Note

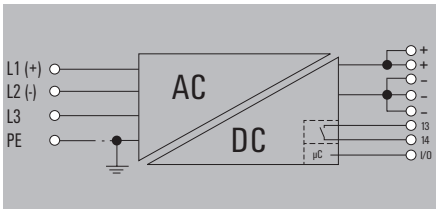
connectPower PROtop

- 3-phase power supplies

PRO TOP3 480W 24V 20A CO



PRO TOP3 960W 24V 40A CO



Technical data

Input		
Rated input voltage	3 x 400...3 x 500 V AC (wide-range input)	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	3 x 320...3 x 575 V AC / 2 x 360...2 x 575 V AC
Frequency range AC	45...65 Hz	45...65 Hz
DC input voltage range	450...800 V DC (max. 500 V DC acc. to UL508)	450...800 V DC (max. 500 V DC acc. to UL508)
Input fuse (internal) / Inrush current	No / Max. 10 A	No / Max. 10 A
Output		
Rated output voltage	48 V DC ± 1 %	48 V DC ± 1 %
Output voltage	22.5...28.8 V	22.5...28.8 V
DCL - peak load reserve	150 % (5 s); 500 % (15 ms)	150 % (5 s); 400 % (15 ms)
Residual ripple, breaking spikes	< 50 mVss @ U_{Nenn}, Full Load	< 50 mVss @ U_{Nenn}, Full Load
Reserve capacity @ $U_{Nominal}$	130% permanent at ≤ 40°C, 150 % (5 s)	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U_{nom}	20 A @ 60 °C	40 A @ 60 °C
General data		
Derating	> 60°C (2.5% / 1°C)	> 60°C (2.5% / 1°C)
Series switching capability	Yes	Yes
Degree of efficiency	94%	95,3 %
Power factor (approx.)	> 0.75 @ 3x400 V AC	> 0.75 @ 3x400 V AC
AC failure bridging time @ I_{nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC	> 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	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, max 10	yes, max 10
Depth x width x height	125 / 68 / 130 mm	175 / 89 / 130 mm
Net weight	1650 g	2490 g
Approvals		
Approvals	CE, cULus listed C1D2, TUEV, EAC, Marine approvals (in preparation)	CE, cULus listed C1D2, TUEV, EAC, Marine approvals (in preparation)

Connection data		**Input**	**Output**	**Input**	**Output**
Connection system		PUSH IN	PUSH IN	PUSH IN	PUSH IN
Number of terminals		4 for L1/L2/L3/PE	4 (++ / - -)	4 for L1/L2/L3/PE	4 (++ / - -)
Wire cross-section, rigid min/max	mm²	0.2 / 10	0.2 / 10	0.75 / 16	0.75 / 16
Wire cross-section, flexible min/max	mm²	0.2 / 6	0.2 / 6	0.75 / 16	0.75 / 16
Wire cross-section, AWG/kcmil min/max		20 / 8	20 / 8	20 / 4	20 / 4
Note					

Ordering data

Type	**Qty.**	**Order No.**
PRO TOP3 480W 24V 20A CO	1	**2467110000**

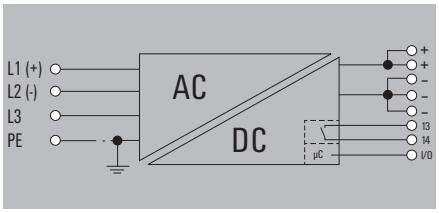
Type	**Qty.**	**Order No.**
PRO TOP3 960W 24V 40A CO	1	**2467130000**

Note

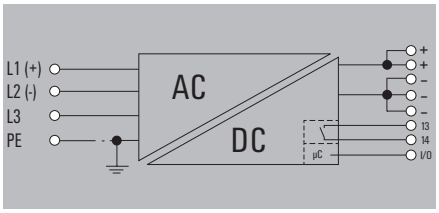
connectPower PROtop

- 3-phase power supplies

PRO TOP3 960W 36V 26,6A CO



PRO TOP3 480W 48V 10A CO



Technical data

Input		
Rated input voltage	3 x 400...3 x 500 V AC (wide-range input)	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	3 x 320...3 x 575 V AC / 2 x 360...2 x 575 V AC
Frequency range AC	45...65 Hz	45...65 Hz
DC input voltage range	450...800 V DC (max. 500 V DC acc. to UL508)	450...800 V DC (max. 500 V DC acc. to UL508)
Input fuse (internal) / Inrush current	No / Max. 10 A	No / Max. 10 A
Output		
Rated output voltage	36 V DC ± 1 %	48 V DC ± 1 %
Output voltage	33...44 V	45...56 V
DCL - peak load reserve	150 % (5 s); 500 % (15 ms)	150 % (5 s); 500 % (15 ms)
Residual ripple, breaking spikes	< 50 mVss @ U_{Nenn}, Full Load	< 100 mV ss @ 48 V DC, I Nenn
Reserve capacity @ $U_{Nominal}$	130% permanent at ≤ 40°C, 150 % (5 s)	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U_{nom}	26.6 A @ 60 °C	10 A @ 60 °C
General data		
Derating	> 60°C (2.5% / 1°C)	> 60°C (2.5% / 1°C)
Series switching capability	No	No
Degree of efficiency	95,3 %	94%
Power factor (approx.)	> 0.75 @ 3x400 V AC	> 0.75 @ 3x400 V AC
AC failure bridging time @ I_{nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC	> 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	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, max 10	yes, max 10
Depth x width x height	175 / 89 / 130 mm	125 / 68 / 130 mm
Net weight	2490 g	1645 g
Approvals		
Approvals	CE, cULus listed C1D2, TUEV, EAC, Marine approvals (in preparation)	CE, cULus listed C1D2, TUEV, EAC, Marine approvals (in preparation)

Connection data		**Input**	**Output**	**Input**	**Output**
Connection system		PUSH IN	PUSH IN	PUSH IN	PUSH IN
Number of terminals		4 for L1/L2/L3/PE	4 (++ / - -)	4 for L1/L2/L3/PE	4 (++ / - -)
Wire cross-section, rigid min/max	mm²	0.75 / 16	0.75 / 16	0.2 / 10	0.2 / 10
Wire cross-section, flexible min/max	mm²	0.75 / 16	0.75 / 16	0.2 / 6	0.2 / 6
Wire cross-section, AWG/kcmil min/max		20 / 4	20 / 4	20 / 8	20 / 8
Note					

Ordering data

Type	**Qty.**	**Order No.**
PRO TOP3 960W 36V 26,6A CO	1	**2467140000**

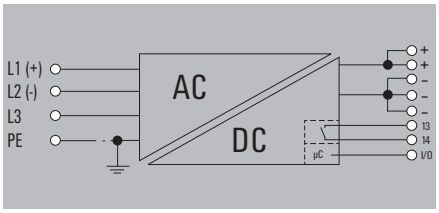
Type	**Qty.**	**Order No.**
PRO TOP3 480W 48V 10A CO	1	**2467160000**

Note

connectPower PROtop

- 3-phase power supplies

PRO TOP3 960W 48V 20A CO



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 (max. 500 V DC acc. to UL508)
Input fuse (internal) / Inrush current	No / Max. 10 A
Output	
Rated output voltage	48 V DC ± 1 %
Output voltage	45...56 V
DCL - peak load reserve	150 % (5 s); 400 % (15 ms)
Residual ripple, breaking spikes	< 100 mV ss @ 48 V DC, I Nenn
Reserve capacity @ $U_{Nominal}$	130% permanent at ≤ 40°C, 150 % (5 s)
Nominal output current for U_{nom}	20 A @ 60 °C
General data	
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, max 10
Depth x width x height	175 / 89 / 130 mm
Net weight	2490 g
Approvals	
Approvals	CE, cULus listed C1D2, TUEV, EAC, Marine approvals (in preparation)

Connection data		**Input**	**Output**
Connection system		PUSH IN	PUSH IN
Number of terminals		4 for L1/L2/L3/PE	4 (++ / - -)
Wire cross-section, rigid min/max	mm²	0.75 / 16	0.75 / 2.5
Wire cross-section, flexible min/max	mm²	0.75 / 16	0.75 / 16
Wire cross-section, AWG/kcmil min/max		20 / 4	20 / 4
Note			

Ordering data

Type	**Qty.**	**Order No.**
PRO TOP3 960W 48V 20A CO	1	**2467180000**

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

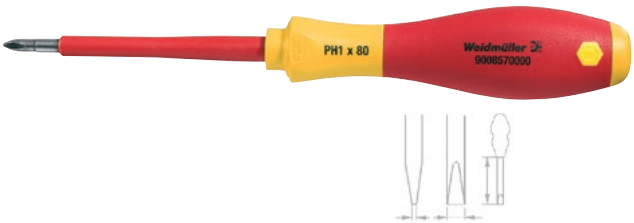
Small wall mounting

Type	Order No.
CP A WALLADAPTER 30 MM	1461870000

Large wall mounting

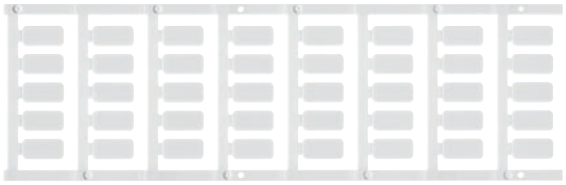
Type	Order No.
CP A WALLADAPTER 45 MM	1461850000

Small screwdriver



Type	Blade type	Size/AF	a	b	c	Order No.
SDIK PH1		1.00			80	9008570000
SDIS 0.5X3.0X100	B		0.5	3	100	9008380000

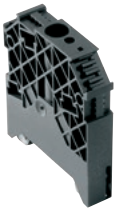
Markers



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

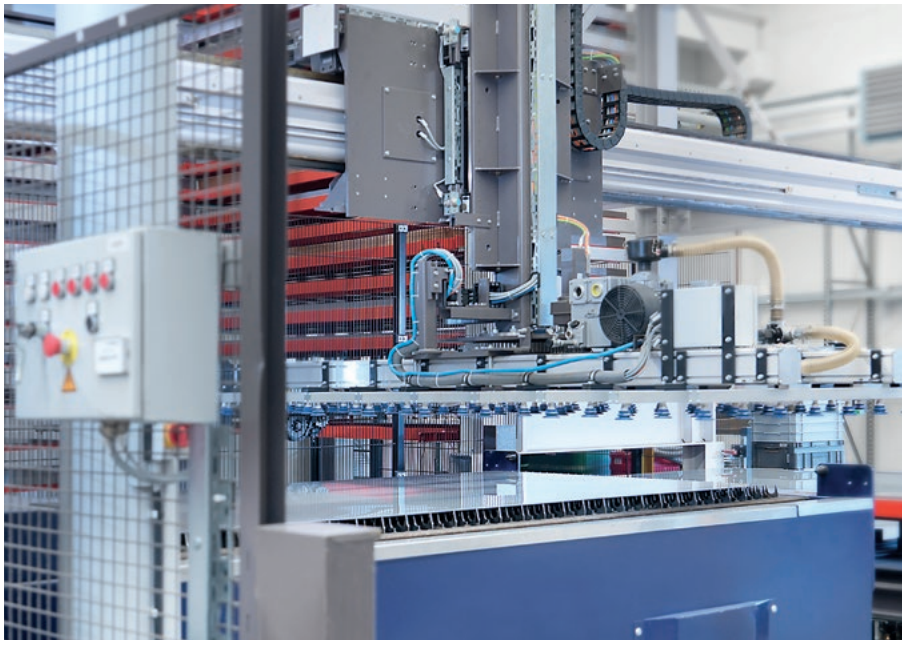
Powerful power supply for machines and systems

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.

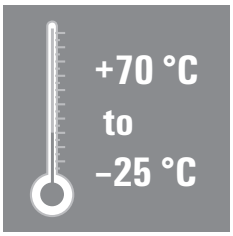
Our high performance and durable PROmax switched-mode power supply units are designed for demanding requirements. Continuous overload of up to 120 % or transient peak loads of 300 % are easy for PROmax to handle.

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 boot 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.

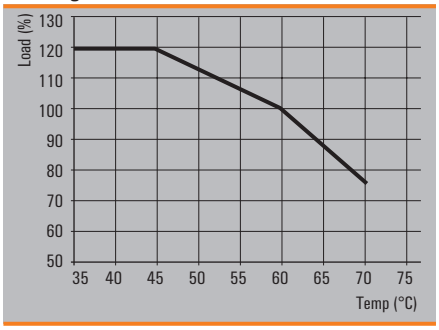
Powerful
Continuous output power of up to 120 % at temperatures up to +45 °C and high output peaks up to 300 % ensure safe operation, also at the limits.

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

connectPower PROmax

connectPower PROmax

Derating curve



Permitted continuous limit currents [A]

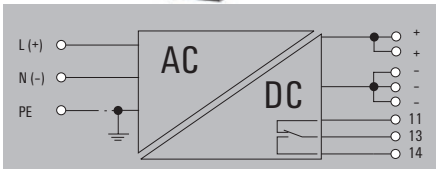
Typ\Temp.	45 °C	50 °C	55 °C	60 °C	65 °C	70 °C
1ph 24 V / 3 A	3,6	3,3	3,2	3	2,6	2,2
1ph 24 V / 5 A	6	5,7	5,4	5	4,4	3,8
1ph 24 V / 7,5 A	9	8,5	8	7,5	6,6	5,6
1ph 24 V / 10 A	12	11,3	10,7	10	8,8	7,5
1ph 24 V / 20 A	24	22,6	21,4	20	17,6	15
1ph 24 V / 40 A	48	45,2	42,8	40	35,2	30
1ph 5 V / 14 A	16,8	15,8	15	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 degree / Pollution degree	I, with PE connection / 2
MTBF	>500.000h (25°C, IEC 61709 (SN29500))
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
For use with electronic equipment	Acc. to EN50178 / VDE0160
Safety extra-low voltage	SELV according to EN 60950, PELV according to EN 60204, IEC61204
Protective separation / protection against electrical shock	VDE0100-410 / acc. to DIN57100-410
Protection against dangerous shock currents	Acc. to VDE0106-101

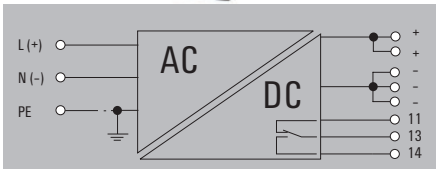
connectPower PROmax

PRO MAX 72W 24V 3A



Pay attention to polarity of DC connection

PRO MAX 120W 24V 5A



Pay attention to polarity of DC connection

Technical data

Input		
Rated input voltage	100...240 V AC (wide-range input)	100...240 V AC (wide-range input)
Input voltage range AC	85...277 V AC	85...277 V AC
Frequency range AC	45...65 Hz	45...65 Hz
DC input voltage range	80...370 V DC	80...370 V DC
AC current consumption	1 A @ 230 V AC / 1.5 A @ 115 V AC	1A @ 230 VAC / 2,5A @ 115 VAC
DC current consumption	1A @ 370 VDC / 1,5A @ 120 VDC	1,5A @ 370 VDC / 2,5A @ 120 VDC
Input fuse (internal) / Inrush current	Yes / max. 15 A	Yes / max. 15 A
Recommended back-up fuse	6 A, Char. B, circuit breaker, 3 - 5 A, char. C, circuit breaker	6 A, Char. B, circuit breaker, 6 A, char. C circuit breaker
Output		
Rated output voltage	24 V DC ± 1 %	24 V DC ± 1 %
Output voltage	22.5...29.5 V (adjustable via potentiometer)	22.5...29.5 V (adjustable via potentiometer)
Residual ripple, breaking spikes	< 50 mVss @ U_{Nenn}, Full Load	< 50 mVss @ U_{Nenn}, Full Load
Nominal output current for U_{nom}	3 A @ 60 °C	5 A @ 60 °C
Continous output current @ $U_{Nominal}$	3,6 A @ 45°C, 2,25 A @ 70°C	6.0 A @ 45 °C, 3,75 A @ 70 °C
Reserve capacity @ $U_{Nominal}$	3.6 A (1 min), 4.5 A (4s)	6 A (1 min), 7.5 A (4s)
Current capacity (pulse) @ $U_{Nominal}$	9 A (2ms)	15 A (2ms)
General data		
Degree of efficiency	89%	89%
Power factor (approx.)	> 0.90 @ 230 V AC	> 0.90 @ 230 V AC
AC failure bridging time @ I_{nom}	min. 20 ms	min. 20 ms
Protection against reverse voltages from the load	30...35 V DC	30...35 V DC
Parallel connection option	yes, max. 5	yes, max. 5
Depth x width x height	125 / 32 / 130 mm	125 / 40 / 130 mm
Net weight	650 g	859 g
Approvals		
Approvals	CE, cULus, cULus listed C1D2, cURus, RCM, EAC, SEMI F47, CB-scheme, CCC, GL, TUEV	CE, cULus, cULus listed C1D2, cURus, RCM, EAC, SEMI F47, CB-scheme, CCC, GL, TUEV

Connection data		Input	Output	Input	Output
Connection system		Screw connection	Screw connection	Screw connection	Screw connection
Number of terminals		3 for L/N/PE	8 (++,–,11,13,14)	3 for L/N/PE	8 (++,–,11,13,14)
Wire cross-section, rigid min/max	mm²	0.18 / 6	0.5 / 6	0.18 / 6	0.5 / 6
Wire cross-section, flexible min/max	mm²	0.22 / 4	0.5 / 4	0.22 / 4	0.5 / 4
Wire cross-section, AWG/kcmil min/max		26 / 10	26 / 12	26 / 10	26 / 12
Note					

Ordering data

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

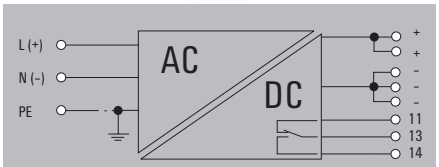
Type	Qty.	Order No.
PRO MAX 120W 24V 5A	1	1478110000

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

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

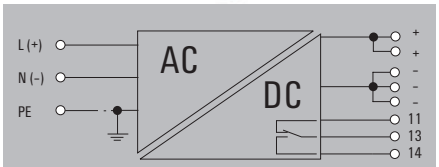
connectPower PROmax

PRO MAX 180W 24V 7,5A



Pay attention to polarity of DC connection

PRO MAX 240W 24V 10A



Pay attention to polarity of DC connection

Technical data

Input		
Rated input voltage	100...240 V AC (wide-range input)	100...240 V AC (wide-range input)
Input voltage range AC	85...277 V AC	85...277 V AC
Frequency range AC	45...65 Hz	45...65 Hz
DC input voltage range	80...370 V DC	80...370 V DC
AC current consumption	1 A @ 230 V AC / 2 A @ 115 V AC	1.5 A @ 230 V AC / 3 A @ 115 V AC
DC current consumption	1A @ 370 VDC / 2A @ 120 VDC	1,5A @ 370 VDC / 3A @ 120 VDC
Input fuse (internal) / Inrush current	Yes / max. 15 A	Yes / max. 15 A
Recommended back-up fuse	10 A, Char. B circuit breaker, 6...8 A, char. C circuit breaker	10 A, Char. B circuit breaker, 6...8 A, char. C circuit breaker
Output		
Rated output voltage	24 V DC ± 1 %	24 V DC ± 1 %
Output voltage	22.5...29.5 V (adjustable via potentiometer)	22.5...29.5 V (adjustable via potentiometer)
Residual ripple, breaking spikes	< 50 mVss @ U_{Nenn}, Full Load	< 50 mVss @ U_{Nenn}, Full Load
Nominal output current for U_{nom}	7,5 A @ 60 °C	10 A @ 60 °C
Continous output current @ $U_{Nominal}$	9 A @ 45°C, 5,6 A @ 70°C	12 A @ 45°C, 7,5 A @ 70°C
Reserve capacity @ $U_{Nominal}$	9 A (1 min), 11.25 A (4s)	12 A (1 min), 15 A (4s)
Current capacity (pulse) @ $U_{Nominal}$	22,5 A (2ms)	30 A (2ms)
General data		
Degree of efficiency	91.5%	91.5%
Power factor (approx.)	> 0.95 @ 230 V AC	> 0.95 @ 230 V AC
AC failure bridging time @ I_{nom}	min. 20 ms	min. 20 ms
Protection against reverse voltages from the load	30...35 V DC	30...35 V DC
Parallel connection option	yes, max. 5	yes, max. 5
Depth x width x height	125 / 50 / 130 mm	125 / 60 / 130 mm
Net weight	950 g	1050 g
Approvals		
Approvals	CE; cULus; cULusEX; cURus; DNVGL; EAC; TUEV	CE, cULus, cULus listed C1D2, cURus, RCM, EAC, SEMI F47, CB-scheme, CCC, GL, TUEV

Connection data		Input	Output	Input	Output
Connection system		Screw connection	Screw connection	Screw connection	Screw connection
Number of terminals		3 for L/N/PE	8 (++,–,11,13,14)	3 for L/N/PE	8 (++,–,11,13,14)
Wire cross-section, rigid min/max	mm^2	0.18 / 6	0.5 / 6	0.18 / 6	0.18 / 6
Wire cross-section, flexible min/max	mm^2	0.22 / 4	0.5 / 4	0.22 / 4	0.22 / 4
Wire cross-section, AWG/kcmil min/max		26 / 10	26 / 12	26 / 10	26 / 10
Note					

Ordering data

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

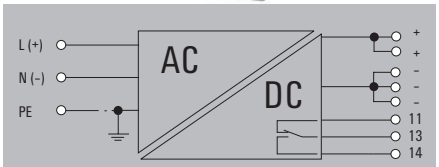
Type	Qty.	Order No.
PRO MAX 240W 24V 10A	1	**1478130000**

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.

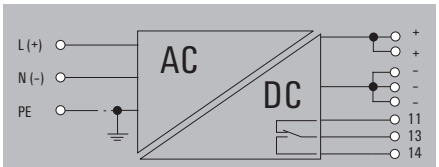
connectPower PROmax

PRO MAX 480W 24V 20A



Pay attention to polarity of DC connection

PRO MAX 960W 24V 40A



Pay attention to polarity of DC connection

Technical data

Input		
Rated input voltage	100...240 V AC (wide-range input)	100...240 V AC (wide-range input)
Input voltage range AC	85...277 V AC	85...277 V AC
Frequency range AC	45...65 Hz	45...65 Hz
DC input voltage range	80...370 V DC	80...370 V DC
AC current consumption	2,3A @ 230 VAC / 4,8A @ 115 VAC	4,52A @ 230 VAC / 10A @ 115 VAC
DC current consumption	1,5A @ 370 VDC / 4.8A @ 120 VDC	2,8A @ 370 VDC / 10A @ 120 VDC
Input fuse (internal) / Inrush current	Yes / max. 15 A	Yes / max. 15 A
Recommended back-up fuse	16 A, char. B circuit breaker, 10 A, Char. C circuit breaker	20 A, char. B circuit breaker, 16 A, char. C, circuit breaker
Output		
Rated output voltage	24 V DC ± 1 %	24 V DC ± 1 %
Output voltage	22.5...29.5 V (adjustable via potentiometer)	22.5...29.5 V (adjustable via potentiometer)
Residual ripple, breaking spikes	< 50 mVss @ U_{Nenn}, Full Load	< 50 mVss @ U_{Nenn}, Full Load
Nominal output current for U_{nom}	20 A @ 60 °C	40 A @ 60 °C
Continous output current @ $U_{Nominal}$	24 A @ 45°C, 15 A @ 70°C	48 A @ 45°C, 30 A @ 70°C
Reserve capacity @ $U_{Nominal}$	24 A (1 min), 30 A (4s), 100...240 V AC	48 A (1 min), 60 A (4s), 100...240 V AC
Current capacity (pulse) @ $U_{Nominal}$	60 A (2ms)	120 A (2ms)
General data		
Degree of efficiency	92 %	93%
Power factor (approx.)	> 0.95 @ 230 V AC	> 0.95 @ 230 V AC
AC failure bridging time @ I_{nom}	min. 20 ms	min. 20 ms
Protection against reverse voltages from the load	30...35 V DC	30...35 V DC
Parallel connection option	yes, max. 3	yes, max. 3
Depth x width x height	150 / 90 / 130 mm	150 / 140 / 130 mm
Net weight	2000 g	3900 g
Approvals		
Approvals	CE, cULus, cULus listed C1D2, cURus, RCM, EAC, SEMI F47, CB-scheme, CCC, GL, TUEV	CE, cULus, cULus listed C1D2, cURus, RCM, EAC, SEMI F47, CB-scheme, CCC, GL, TUEV

Connection data		Input	Output	Input	Output
Connection system		Screw connection	Screw connection	Screw connection	Screw connection
Number of terminals		3 for L/N/PE	8 (++,–,11,13,14)	3 for L/N/PE	8 (++,–,11,13,14)
Wire cross-section, rigid min/max	mm²	0.18 / 6	0.18 / 6	0.18 / 6	0.5 / 16
Wire cross-section, flexible min/max	mm²	0.22 / 4	0.22 / 4	0.22 / 4	0.5 / 16
Wire cross-section, AWG/kcmil min/max		26 / 10	26 / 10	26 / 10	22 / 8
Note					

Ordering data

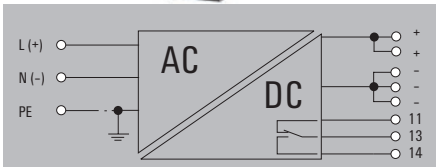
Type	Qty.	Order No.
PRO MAX 480W 24V 20A	1	**1478140000**

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.

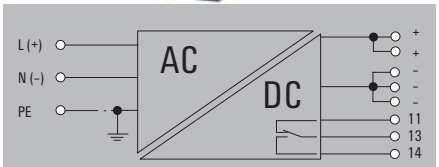
connectPower PROmax

PRO MAX 70W 5V 14A



Pay attention to polarity of DC connection

PRO MAX 72W 12V 6A



Pay attention to polarity of DC connection

Technical data

Input		
Rated input voltage	100...240 V AC (wide-range input)	100...240 V AC (wide-range input)
Input voltage range AC	85...277 V AC	85...277 V AC
Frequency range AC	45...65 Hz	45...65 Hz
DC input voltage range	80...370 V DC	80...370 V DC
AC current consumption	1 A @ 230 V AC / 1.5 A @ 115 V AC	1 A @ 230 V AC / 1.5 A @ 115 V AC
DC current consumption	1A @ 370 VDC / 1,5A @ 120 VDC	1A @ 370 VDC / 1,5A @ 120 VDC
Input fuse (internal) / Inrush current	Yes / max. 15 A	Yes / max. 15 A
Recommended back-up fuse	6 A, Char. B, circuit breaker, 3 - 5 A, char. C, circuit breaker	6 A, Char. B, circuit breaker, 3 - 5 A, char. C, circuit breaker
Output		
Rated output voltage	5 V DC	12 V DC ± 1 %
Output voltage	4.5...7 V (adjustable via potentiometer)	10...15 V (adjustable via potentiometer)
Residual ripple, breaking spikes	< 50 mVss @ U_{Nenn}, Full Load	< 50 mVss @ U_{Nenn}, Full Load
Nominal output current for U_{nom}	14 A @ 60°C	6 A @ 60°C
Continous output current @ $U_{Nominal}$	16,8 A @ 45°C, 10,5 A @ 70°C	7.2 A @ 45°C, 4.5 A @ 70°C
Reserve capacity @ $U_{Nominal}$	16.8 A (1 min), 21 A (4s)	7.2 A (1 min), 9 A (4s)
Current capacity (pulse) @ $U_{Nominal}$	42 A (2ms)	18 A (2ms)
General data		
Degree of efficiency	86%	89%
Power factor (approx.)	> 0.90 @ 230 V AC	> 0.90 @ 230 V AC
AC failure bridging time @ I_{nom}	min. 20 ms	min. 20 ms
Protection against reverse voltages from the load	> 7.5 V DC	> 18 V DC
Parallel connection option	yes, max. 5	yes, max. 5
Depth x width x height	125 / 32 / 130 mm	125 / 32 / 130 mm
Net weight	650 g	650 g
Approvals		
Approvals	CE, cULus, cULus listed C1D2, cURus, RCM, EAC, SEMI F47, CB-scheme, CCC, GL, TUEV	CE, cULus, cULus listed C1D2, cURus, RCM, EAC, SEMI F47, CB-scheme, CCC, GL, TUEV

Connection data		Input	Output	Input	Output
Connection system		Screw connection	Screw connection	Screw connection	Screw connection
Number of terminals		3 for L/N/PE	8 (++,–,11,13,14)	3 for L/N/PE	8 (++,–,11,13,14)
Wire cross-section, rigid min/max	mm²	0.18 / 6	0.5 / 6	0.18 / 6	0.5 / 6
Wire cross-section, flexible min/max	mm²	0.22 / 4	0.5 / 4	0.22 / 4	0.5 / 4
Wire cross-section, AWG/kcmil min/max		26 / 10	26 / 12	26 / 10	26 / 12
Note					

Ordering data

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

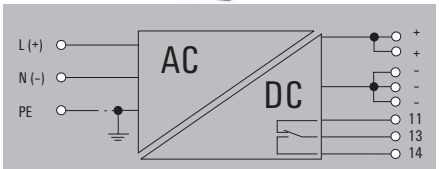
Type	Qty.	Order No.
PRO MAX 72W 12V 6A	1	**1478220000**

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

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

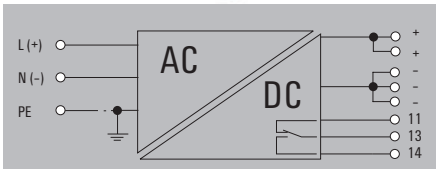
connectPower PROmax

PRO MAX 120W 12V 10A



Pay attention to polarity of DC connection

PRO MAX 240W 48V 5A



Pay attention to polarity of DC connection

Technical data

Input		
Rated input voltage	100...240 V AC (wide-range input)	100...240 V AC (wide-range input)
Input voltage range AC	85...277 V AC	85...277 V AC
Frequency range AC	45...65 Hz	45...65 Hz
DC input voltage range	80...370 V DC	80...370 V DC
AC current consumption	1A @ 230 VAC / 2,5A @ 115 VAC	1.5 A @ 230 V AC / 3 A @ 115 V AC
DC current consumption	1,5A @ 370 VDC / 2,5A @ 120 VDC	1,5A @ 370 VDC / 3A @ 120 VDC
Input fuse (internal) / Inrush current	Yes / max. 15 A	Yes / max. 15 A
Recommended back-up fuse	6 A, Char. B, circuit breaker, 6 A, char. C circuit breaker	10 A, Char. B circuit breaker, 6...8 A, char. C circuit breaker
Output		
Rated output voltage	12 V DC ± 1 %	48 V DC ± 1 %
Output voltage	10...15 V (adjustable via potentiometer)	30...56 V (adjustable via potentiometer)
Residual ripple, breaking spikes	< 50 mVss @ U_{Nenn}, Full Load	< 50 mVss @ U_{Nenn}, Full Load
Nominal output current for U_{nom}	10 A @ 60 °C	5 A @ 60 °C
Continous output current @ $U_{Nominal}$	12 A @ 45°C, 7,5 A @ 70°C	6.0 A @ 45 °C, 3,75 A @ 70 °C
Reserve capacity @ $U_{Nominal}$	12 A (1 min), 15 A (4s)	5 A (1 min), 7.5 A (4s)
Current capacity (pulse) @ $U_{Nominal}$	30 A (2ms)	15 A (2ms)
General data		
Degree of efficiency	89%	92.5%
Power factor (approx.)	> 0.90 @ 230 V AC	> 0.95 @ 230 V AC
AC failure bridging time @ I_{nom}	min. 20 ms	min. 20 ms
Protection against reverse voltages from the load	> 18 V DC	58...65 V DC
Parallel connection option	yes, max. 5	yes, max. 5
Depth x width x height	125 / 40 / 130 mm	125 / 60 / 130 mm
Net weight	850 g	1050 g
Approvals		
Approvals	CE, cULus, cULus listed C1D2, cURus, RCM, EAC, SEMI F47, CB-scheme, CCC, GL, TUEV	CE, cULus, cULus listed C1D2, cURus, RCM, EAC, SEMI F47, CB-scheme, CCC, GL, TUEV

Connection data		Input	Output	Input	Output
Connection system		Screw connection	Screw connection	Screw connection	Screw connection
Number of terminals		3 for L/N/PE	8 (++,–,11,13,14)	3 for L/N/PE	8 (++,–,11,13,14)
Wire cross-section, rigid min/max	mm²	0.18 / 6	0.5 / 6	0.18 / 6	0.18 / 6
Wire cross-section, flexible min/max	mm²	0.22 / 4	0.5 / 4	0.22 / 4	0.22 / 4
Wire cross-section, AWG/kcmil min/max		26 / 10	26 / 12	26 / 10	26 / 10
Note					

Ordering data

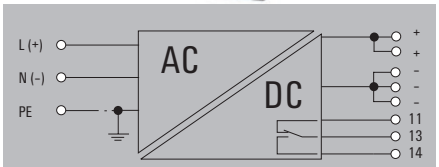
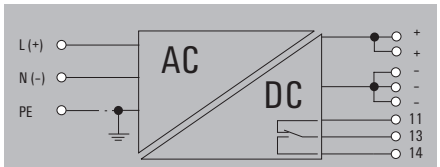
Type	Qty.	Order No.
PRO MAX 120W 12V 10A	1	1478230000

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.

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 48V 10A	PRO MAX 960W 48V 20A
		
	 Pay attention to polarity of DC connection	 Pay attention to polarity of DC connection

Technical data

Input		
Rated input voltage	100...240 V AC (wide-range input)	100...240 V AC (wide-range input)
Input voltage range AC	85...277 V AC	85...277 V AC
Frequency range AC	45...65 Hz	45...65 Hz
DC input voltage range	80...370 V DC	80...370 V DC
AC current consumption	2,3A @ 230 VAC / 4,8A @ 115 VAC	4,52A @ 230 VAC / 10A @ 115 VAC
DC current consumption	1,5A @ 370 VDC / 4.8A @ 120 VDC	2,8A @ 370 VDC / 10A @ 120 VDC
Input fuse (internal) / Inrush current	Yes / max. 15 A	Yes / max. 15 A
Recommended back-up fuse	16 A, char. B circuit breaker, 10 A, Char. C circuit breaker	20 A, char. B circuit breaker, 16 A, char. C, circuit breaker
Output		
Rated output voltage	48 V DC ± 1 %	48 V DC ± 1 %
Output voltage	30...56 V (adjustable via potentiometer)	30...56 V (adjustable via potentiometer)
Residual ripple, breaking spikes	< 50 mVss @ U_{Nenn}, Full Load	< 50 mVss @ U_{Nenn}, Full Load
Nominal output current for U_{nom}	10 A @ 60 °C	20 A @ 60 °C
Continous output current @ $U_{Nominal}$	12 A @ 45°C, 7,5 A @ 70°C	24 A @ 45°C, 15 A @ 70°C
Reserve capacity @ $U_{Nominal}$	12 A (1 min), 15 A (4s), 100...240 V AC	24 A (1 min), 30 A (4s), 100...240 V AC
Current capacity (pulse) @ $U_{Nominal}$	60 A (2ms)	60 A (2ms)
General data		
Degree of efficiency	93%	94%
Power factor (approx.)	> 0.95 @ 230 V AC	> 0.95 @ 230 V AC
AC failure bridging time @ I_{nom}	min. 20 ms	min. 20 ms
Protection against reverse voltages from the load	58...65 V DC	58...65 V DC
Parallel connection option	yes, max. 5	yes, max. 5
Depth x width x height	150 / 90 / 130 mm	150 / 140 / 130 mm
Net weight	2000 g	3950 g
Approvals		
Approvals	CE, cULus, cULus listed C1D2, cURus, RCM, EAC, SEMI F47, CB-scheme, CCC, GL, TUEV	CE, cULus, cULus listed C1D2, cURus, RCM, EAC, SEMI F47, CB-scheme, CCC, GL, TUEV

Connection data		Input	Output	Input	Output
Connection system		Screw connection	Screw connection	Screw connection	Screw connection
Number of terminals		3 for L/N/PE	8 (++,–,11,13,14)	3 for L/N/PE	8 (++,–,11,13,14)
Wire cross-section, rigid min/max	mm²	0.18 / 6	0.18 / 6	0.18 / 6	0.5 / 16
Wire cross-section, flexible min/max	mm²	0.22 / 4	0.22 / 4	0.22 / 4	0.5 / 16
Wire cross-section, AWG/kcmil min/max		26 / 10	26 / 10	26 / 10	22 / 8
Note					

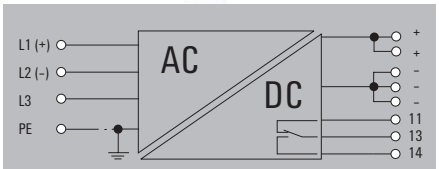
Ordering data

Type	Qty.	Order No.
PRO MAX 480W 48V 10A	1	**1478250000**
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.

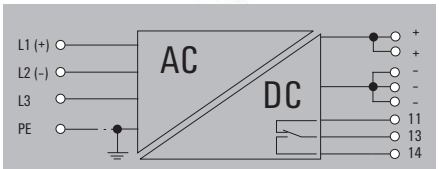
connectPower PROmax

PRO MAX3 120W 24V 5A



Pay attention to polarity of DC connection

PRO MAX3 240W 24V 10A



Pay attention to polarity of DC connection

Technical data

Input		
Rated input voltage	3 x 400...3 x 500 V AC (wide-range input)	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	3 x 320...3 x 575 V AC / 2 x 360...2 x 575 V AC
Frequency range AC	45...65 Hz	45...65 Hz
DC input voltage range	450...800 V DC (max. 500 V DC acc. to UL508)	450...800 V DC (max. 500 V DC acc. to UL508)
AC current consumption	0,28A @ 3*500 VAC / 0,3A @ 3*400 VAC	0,35A @ 3*500 VAC / 0,4A @ 3*400 VAC
DC current consumption	0.18 A @ 800 V DC / 0.3 A @ 450 V DC	0.35 A @ 800 V DC / 0.6 A @ 450 V DC
Input fuse (internal) / Inrush current	Yes / max. 15 A	Yes / max. 15 A
Recommended back-up fuse	2...3 A, char. C circuit breaker	3 - 5 A, char. C, circuit breaker
Output		
Rated output voltage	24 V DC ± 1 %	24 V DC ± 1 %
Output voltage	22.5...29.5 V (adjustable via potentiometer)	22.5...29.5 V (adjustable via potentiometer)
Residual ripple, breaking spikes	< 50 mVss @ U_{Nenn}, Full Load	< 50 mVss @ U_{Nenn}, Full Load
Nominal output current for U_{nom}	5 A @ 60 °C	10 A @ 60 °C
Continous output current @ $U_{Nominal}$	6.0 A @ 45 °C, 3,75 A @ 70 °C	12 A @ 45°C, 7,5 A @ 70°C
Reserve capacity @ $U_{Nominal}$	6 A (1 min), 7.5 A (4s), 400...500 V AC	12 A (1 min), 15 A (4s)
Current capacity (pulse) @ $U_{Nominal}$	15 A (2ms)	30 A (2ms)
General data		
Degree of efficiency	90%	91.5%
Power factor (approx.)	> 0.50 @ 3x400 V AC	> 0.85 @ 3*400 V AC
AC failure bridging time @ I_{nom}	min. 20 ms	min. 20 ms
Protection against reverse voltages from the load	30...35 V DC	30...35 V DC
Parallel connection option	yes, max. 5	yes, max. 5
Depth x width x height	125 / 40 / 130 mm	125 / 60 / 130 mm
Net weight	783 g	1322 g
Approvals		
Approvals	CE, cULus, cULus listed C1D2, cURus, RCM, EAC, SEMI F47, CB-scheme, CCC, GL, TUEV	CE, cULus, cULus listed C1D2, cURus, RCM, EAC, SEMI F47, CB-scheme, CCC, GL, TUEV

Connection data		Input	Output	Input	Output
Connection system		Screw connection	Screw connection	Screw connection	Screw connection
Number of terminals		4 for L1/L2/L3/PE	8 (++,–,11,13,14)	4 for L1/L2/L3/PE	8 (++,–,11,13,14)
Wire cross-section, rigid min/max	mm²	0.18 / 6	0.5 / 6	0.18 / 6	0.18 / 6
Wire cross-section, flexible min/max	mm²	0.22 / 4	0.5 / 4	0.22 / 4	0.22 / 4
Wire cross-section, AWG/kcmil min/max		26 / 10	26 / 12	26 / 10	26 / 10
Note					

Ordering data

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

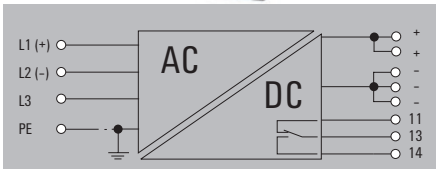
Type	Qty.	Order No.
PRO MAX3 240W 24V 10A	1	**1478180000**

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.

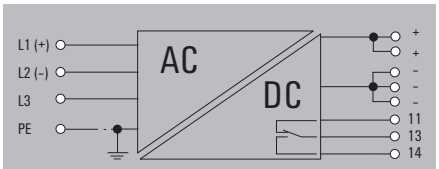
connectPower PROmax

PRO MAX3 480W 24V 20A



Pay attention to polarity of DC connection

PRO MAX3 960W 24V 40A



Pay attention to polarity of DC connection

Technical data

Input		
Rated input voltage	3 x 400...3 x 500 V AC (wide-range input)	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	3 x 320...3 x 575 V AC / 2 x 360...2 x 575 V AC
Frequency range AC	45...65 Hz	45...65 Hz
DC input voltage range	450...800 V DC (max. 500 V DC acc. to UL508)	450...800 V DC (max. 500 V DC acc. to UL508)
AC current consumption	0,7A @ 3*500 VAC / 0,85 @ 3*400 VAC	1,3A @ 3*500 VAC / 1,6A @ 3*400 VAC
DC current consumption	0.7 A @ 800 V DC / 1.2 A @ 450 V DC	1.4 A @ 800 V DC / 2.4 A @ 450 V DC
Input fuse (internal) / Inrush current	Yes / max. 15 A	Yes / max. 15 A
Recommended back-up fuse	3 - 5 A, char. C, circuit breaker	6...8 A, char. C circuit breaker
Output		
Rated output voltage	24 V DC ± 1 %	24 V DC ± 1 %
Output voltage	22.5...29.5 V (adjustable via potentiometer)	22.5...29.5 V (adjustable via potentiometer)
Residual ripple, breaking spikes	< 50 mVss @ U_{Nenn}, Full Load	< 50 mVss @ U_{Nenn}, Full Load
Nominal output current for U_{nom}	20 A @ 60 °C	40 A @ 60 °C
Continous output current @ $U_{Nominal}$	24 A @ 45°C, 15 A @ 70°C	48 A @ 45°C, 30 A @ 70°C
Reserve capacity @ $U_{Nominal}$	24 A (1 min), 30 A (4s)	48 A (1 min), 60 A (4s), 400...500 V AC
Current capacity (pulse) @ $U_{Nominal}$	60 A (2ms)	120 A (2ms)
General data		
Degree of efficiency	91.5%	93.5%
Power factor (approx.)	> 0.85 @ 3*400 V AC	> 0.75 @ 3x400 V AC
AC failure bridging time @ I_{nom}	min. 20 ms	min. 20 ms
Protection against reverse voltages from the load	30...35 V DC	30...35 V DC
Parallel connection option	yes, max. 3	yes, max. 3
Depth x width x height	150 / 70 / 130 mm	150 / 140 / 130 mm
Net weight	1600 g	3400 g
Approvals		
Approvals	CE, cULus, cULus listed C1D2, cURus, RCM, EAC, SEMI F47, CB-scheme, CCC, GL, TUEV	CE, cULus, cULus listed C1D2, cURus, RCM, EAC, SEMI F47, CB-scheme, CCC, GL, TUEV

Connection data		Input	Output	Input	Output
Connection system		Screw connection	Screw connection	Screw connection	Screw connection
Number of terminals		4 for L1/L2/L3/PE	8 (++,–,11,13,14)	4 for L1/L2/L3/PE	8 (++,–,11,13,14)
Wire cross-section, rigid min/max	mm²	0.18 / 6	0.18 / 6	0.18 / 6	0.5 / 16
Wire cross-section, flexible min/max	mm²	0.22 / 4	0.22 / 4	0.22 / 4	0.5 / 16
Wire cross-section, AWG/kcmil min/max		26 / 10	26 / 10	26 / 10	22 / 8
Note					

Ordering data

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.

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

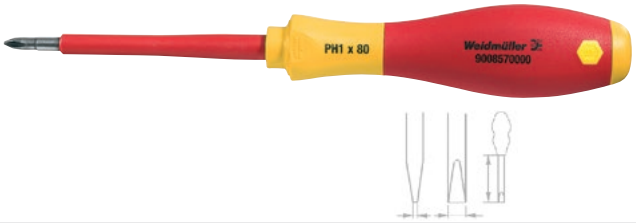
Small wall mounting

Type	Order No.
CP A WALLADAPTER 30 MM	1461870000

Large wall mounting

Type	Order No.
CP A WALLADAPTER 45 MM	1461850000

Small screwdriver

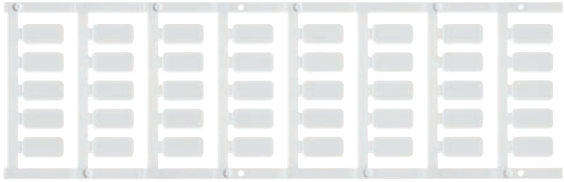


Type	Blade type	Size/AF	a	b	c	Order No.
SDIK PH1		1.00			80	9008570000
SDIS 0.5X3.0X100	B		0.5	3	100	9008380000

Large screwdriver

Type	Blade type	Size/AF	a	b	c	Order No.
SDIS 1.0X5.5X125	B		1	5.5	125	9008410000

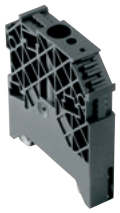
Markers



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

Endwinkel

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

Find the cost-effective solution for your power supply

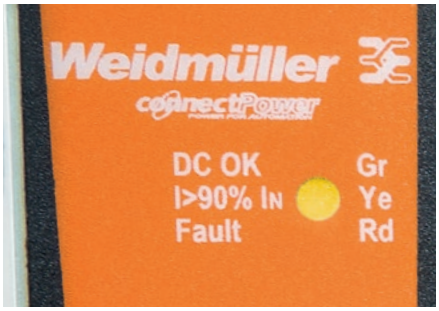
PROeco combines all of the basic functions in a compact design

Even in series machine construction, switched-mode power supply units can create a real competitive edge thanks to above-average performance values. The efficient PROeco series offers all of the basic functions and delivers impressively high performance and flexibility.

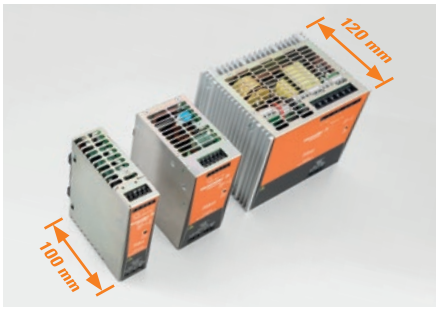
Our PROeco switched-mode power supply units are characterised by their compact design, a high degree of efficiency and the fact that they are extremely easy to service. Thanks to over temperature protection, short-circuit and overload protection, they can be universally used in all applications.

Solutions featuring PROeco are characterised by extensive safety functions and compatibility with our diode modules, capacity modules and UPS components for setting up a redundant power supply.

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

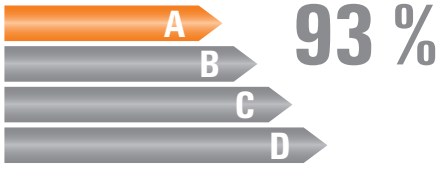


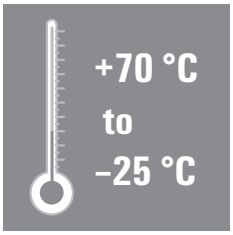
Extremely compact
With a depth of 100 mm, PROeco power supplies even fit into small cabinets.
The compact design also saves up to 50 % space in the cabinet.



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 500,000 hours.

Noticeably energy-saving
A high degree of efficiency of up to 93 % and minimal no-load losses ensure low energy consumption and a long service life.



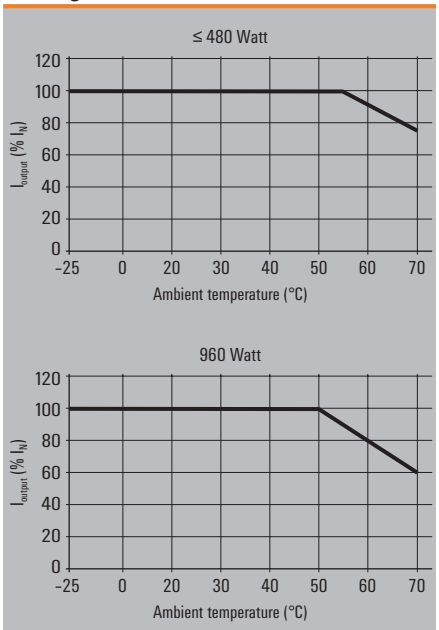


Power supply solution
Together with the uninterruptible DC UPS, the diode modules or CAP modules, you can create a power supply solution that is tailored to your requirements.

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

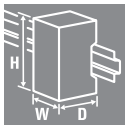
Derating curve



Technical data

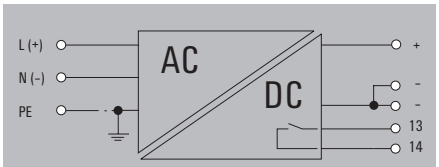
General data	
Ambient temperature (operational)	-25 °C...70 °C
Storage temperature	-40 °C...85 °C
Max. perm. air humidity (operational)	5 %...95 % RH
Protection degree	IP20
Protection degree	I, with PE connection
Pollution degree	2
Insulation voltage, input/output	3 kV
Insulation voltage input / earth	2 kV
Insulation voltage output / earth	0.5 kV
MTBF	> 500,000 h in accordance with IEC 61709 (SN29500)
Parallel connection option	yes, max. 5
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), EN61000-4-8 (Fields), EN61000-4-11 (Dips)
Limiting of mains voltage harmonic currents	According to EN 61000-3-2
Resistance to vibration / Shock	1 g according to EN 50178 / 15 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 / VDE0160
Safety extra-low voltage	SELV according to EN 60950, PELV according to EN 60204
Protective separation / protection against electrical shock	VDE0100-410 / acc. to DIN57100-410
Protection against dangerous shock currents	Acc. to VDE0106-101

connectPower PROeco



PRO ECO 72W 24V 3A

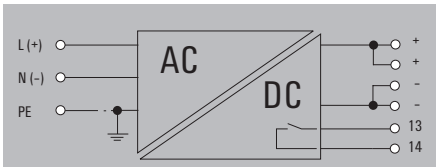
Similar to illustration



Pay attention to polarity of DC connection

PRO ECO 120W 24V 5A

Similar to illustration



Pay attention to polarity of DC connection

Technical data

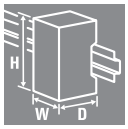
Input		
Rated input voltage	100...240 V AC (wide-range input)	100...240 V AC (wide-range input)
Input voltage range AC	85...264 V AC (derating at 100 V AC)	85...264 V AC (derating at 100 V AC)
Frequency range AC	47...63 Hz	47...63 Hz
DC input voltage range	80...370 V DC (Derating @ 120 V DC)	80...370 V DC (Derating @ 120 V DC)
AC current consumption	0,55 A @ 230 V AC / 1,04 A @ 110 V AC	1,26 A @ 230 V AC / 2,24 A @ 110 V AC
DC current consumption	0,22 A @ 370 V DC / 0,68 A @ 120 V DC	0,39 A @ 370 V DC / 1,16 A @ 120 V DC
Input fuse (internal) / Inrush current	Yes / max. 40 A	Yes / max. 40 A
Recommended back-up fuse	2 A / DI, safety fuse 6 A, Char. B, circuit breaker 2...4 A, Char. C circuit breaker	4 A / DI, safety fuse 6 A, Char. B, circuit breaker 3...5 A, Char. C, circuit breaker
Output		
Rated output voltage	24 V DC ± 1 %	24 V DC ± 1 %
Output voltage	22...28 V (adjustable via potentiometer)	22...28 V (adjustable via potentiometer)
Ramp-up time / Residual ripple, breaking spikes	≤ 100 ms / < 50 mV_{PP} @ 24 V DC, I_N	≤ 100 ms / < 50 mV_{PP} @ 24 V DC, I_N
Nominal output current for U_{nom}	3 A at 55 °C	5 A at 55 °C
Continous output current @ $U_{Nominal}$	3 A @ 55 °C, 2,25 A @ 70 °C	5 A @ 55 °C, 3,75 A @ 70 °C
Capacitive load	unrestricted	unrestricted
Protection against inverse voltage	Yes	Yes
Signalling		
Indication	Green LED (U_{output} > 21.6 V DC), Yellow LED (I_{output} > 90 % I_{Rated} typ.), red LED (overload, overtemperature, short-circuit, U_{output} < 20.4 V DC)	Green LED (U_{output} > 21.6 V DC), Yellow LED (I_{output} > 90 % I_{Rated} typ.), red LED (overload, overtemperature, short-circuit, U_{output} < 20.4 V DC)
Floating contact / Contact load	Yes / max. 30 V DC / 1 A	Yes / max. 30 V DC / 1 A
Relay on/off	Output voltage >21.6 V DC/ <20.4 V DC, overload	Output voltage >21.6 V DC/ <20.4 V DC, overload
General data		
Degree of efficiency	87 %	87 %
Power loss idling / nominal load / Power loss, nominal load	4 W / 9.5 W	4 W / 15 W
Earth leakage current, max.	3.5 mA	3.5 mA
Power factor (approx.)	> 0.5...230 V AC / > 0.53...115 V AC	> 0.5...230 V AC / > 0.53...115 V AC
AC failure bridging time @ I_{nom}	> 100 ms @ 230 V AC / > 20 ms @ 115 V AC	> 80 ms @ 230 V AC / > 20 ms @ 115 V AC
Parallel connection option	yes, max. 5	yes, max. 5
Depth x width x height / Net weight	100 / 34 / 125 mm / 566 g	100 / 40 / 125 mm / 675 g
Approvals		
Approvals	CE, TUEV (EN/IEC 60950-1), cULus, EAC	CE, TUEV (EN/IEC 60950-1), cULus, EAC

Connection data		**Input**	**Output**	**Input**	**Output**
Connection system		Screw connection	Screw connection	Screw connection	Screw connection
Number of terminals		3 for L/N/PE	5 (+,–,13,14)	3 for L/N/PE	6 (++,–,13,14)
Wire cross-section, rigid min/max	mm^2	0.5 / 6	0.5 / 6	0.5 / 6	0.5 / 6
Wire cross-section, flexible min/max	mm^2	0.5 / 2.5	0.5 / 2.5	0.5 / 2.5	0.5 / 2.5
Wire cross-section, AWG/kcmil min/max		26 / 12	26 / 12	26 / 12	26 / 12
Note					

Ordering data

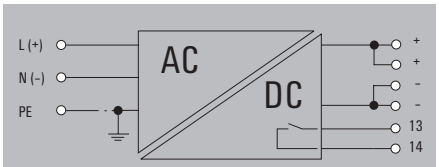
	Type	**Qty.**	**Order No.**
	PRO ECO 72W 24V 3A	1	**1469470000**
	PRO ECO 120W 24V 5A	1	**1469480000**
Note	The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.		

connectPower PROeco



PRO ECO 240W 24V 10A

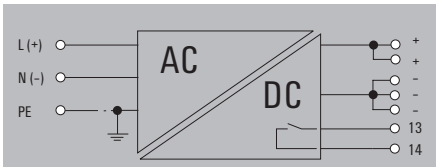
Similar to illustration



Pay attention to polarity of DC connection

PRO ECO 480W 24V 20A

Similar to illustration



Pay attention to polarity of DC connection

Technical data

Input		
Rated input voltage	100...240 V AC (wide-range input)	100...240 V AC (wide-range input)
Input voltage range AC	85...264 V AC (derating at 100 V AC)	85...264 V AC (derating at 100 V AC)
Frequency range AC	47...63 Hz	47...63 Hz
DC input voltage range	80...370 V DC (Derating @ 120 V DC)	80...370 V DC (Derating @ 120 V DC)
AC current consumption	1,23 A @ 230 V AC / 2,47 A @ 110 V AC	2,37 A @ 230 V AC / 5,2 A @ 110 V AC
DC current consumption	1,18 A @ 370 V DC / 2,4 A @ 120 V DC	1,55 A @ 370 V DC / 4,65 A @ 120 V DC
Input fuse (internal) / Inrush current	Yes / max. 15 A	Yes / max. 5 A
Recommended back-up fuse	4 A / DI, safety fuse 10 A, Char. B, circuit breaker 3...4 A, Char. C, circuit breaker	6 A / DI, safety fuse 16 A, Char. B, circuit breaker 6...8 A, Char. C, circuit breaker
Output		
Rated output voltage	24 V DC ± 1 %	24 V DC ± 1 %
Output voltage	22...28 V (adjustable via potentiometer)	22...28 V (adjustable via potentiometer)
Ramp-up time / Residual ripple, breaking spikes	≤ 100 ms / < 50 mV_{PP} @ 24 V DC, I_N	≤ 100 ms / < 50 mV_{PP} @ 24 V DC, I_N
Nominal output current for U_{nom}	10 A @ 55 °C	20 A @ 55 °C
Continous output current @ $U_{Nominal}$	10 A @ 55 °C, 2.5 A @ 70 °C	20 A @ 55 °C, 15 A @ 70 °C
Capacitive load	unrestricted	unrestricted
Protection against inverse voltage	Yes	Yes
Signalling		
Indication	Green LED (U_{output} > 21.6 V DC), Yellow LED (I_{output} > 90 % I_{Rated} typ.), red LED (overload, overtemperature, short-circuit, U_{output} < 20.4 V DC)	Green LED (U_{output} > 21.6 V DC), Yellow LED (I_{output} > 90 % I_{Rated} typ.), red LED (overload, overtemperature, short-circuit, U_{output} < 20.4 V DC)
Floating contact / Contact load	Yes / max. 30 V DC / 1 A	Yes / max. 30 V DC / 1 A
Relay on/off	Output voltage >21.6 V DC/ <20.4 V DC, overload	Output voltage >21.6 V DC/ <20.4 V DC, overload
General data		
Degree of efficiency	90%	91%
Power loss idling / nominal load / Power loss, nominal load	2 W / 24 W	5 W / 43 W
Earth leakage current, max.	3.5 mA	3.5 mA
Power factor (approx.)	> 0.94 @ 230 V AC / > 0.99 @ 115 V AC	> 0.98...230 V AC / > 0.98...115 V AC
AC failure bridging time @ I_{nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC
Parallel connection option	yes, max. 5	yes, max. 3
Depth x width x height / Net weight	100 / 60 / 125 mm / 1018.5 g	120 / 100 / 125 mm / 1557 g
Approvals		
Approvals	CE, TUEV (EN/IEC 60950-1), cULus, EAC	CE, TUEV (EN/IEC 60950-1), cULus, EAC

Connection data		**Input**	**Output**	**Input**	**Output**
Connection system		Screw connection	Screw connection	Screw connection	Screw connection
Number of terminals		3 for L/N/PE	6 (++,–,13,14)	3 for L/N/PE	7 (++,–,13,14)
Wire cross-section, rigid min/max	mm^2	0.5 / 6	0.5 / 6	0.5 / 6	0.5 / 6
Wire cross-section, flexible min/max	mm^2	0.5 / 2.5	0.5 / 2.5	0.5 / 2.5	0.5 / 2.5
Wire cross-section, AWG/kcmil min/max		26 / 12	26 / 12	26 / 12	26 / 10
Note					

Ordering data

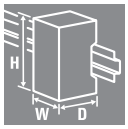
Type	**Qty.**	**Order No.**
PRO ECO 240W 24V 10A	1	**1469490000**

Type	**Qty.**	**Order No.**
PRO ECO 480W 24V 20A	1	**1469510000**

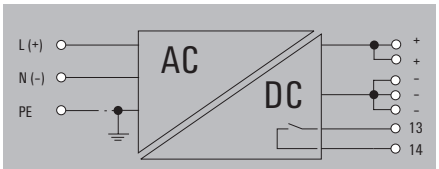
Note	The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.	The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.

connectPower PROeco

PRO ECO 960W 24V 40A



Similar to illustration



Pay attention to polarity of DC connection

Technical data

Input	
Rated input voltage	100...240 V AC (wide-range input)
Input voltage range AC	85...264 V AC (derating at 100 V AC)
Frequency range AC	47...63 Hz
DC input voltage range	80...370 V DC (Derating @ 120 V DC)
AC current consumption	4,6 A @ 230 V AC / 9,9 A @ 110 V AC
DC current consumption	2,9 A @ 370 V DC / 9 A @ 120 V DC
Input fuse (internal) / Inrush current	Yes / max. 5 A
Recommended back-up fuse	16 A / DI, safety fuse 20 A, Char. B, circuit breaker 16 A, Char. C, circuit breaker
Output	
Rated output voltage	24 V DC ± 1 %
Output voltage	22...28 V (adjustable via potentiometer)
Ramp-up time / Residual ripple, breaking spikes	≤ 100 ms / < 50 mV_{PP} @ 24 V DC, I_N
Nominal output current for U_{nom}	40 A @ 50 °C
Continous output current @ $U_{Nominal}$	40 A @ 50 °C, 24 A @ 70 °C
Capacitive load	unrestricted
Protection against inverse voltage	Yes
Signalling	
Indication	Green LED (U_{output} > 21.6 V DC), Yellow LED (I_{output} > 90 % I_{Rated} typ.), red LED (overload, overtemperature, short-circuit, U_{output} < 20.4 V DC)
Floating contact / Contact load	Yes / max. 30 V DC / 1 A
Relay on/off	Output voltage >21.6 V DC/ <20.4 V DC, overload
General data	
Degree of efficiency	93%
Power loss idling / nominal load / Power loss, nominal load	8 W / 85 W
Earth leakage current, max.	3.5 mA
Power factor (approx.)	> 0.98...230 V AC / > 0.98...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
Depth x width x height / Net weight	120 / 160 / 125 mm / 3190 g
Approvals	
Approvals	CE, TUEV (EN/IEC 60950-1), cULus, EAC

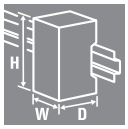
Connection data		Input	Output
Connection system		Screw connection	Screw connection
Number of terminals		3 for L/N/PE	7 (++,–,13,14)
Wire cross-section, rigid min/max	mm²	0.5 / 6	0.5 / 16
Wire cross-section, flexible min/max	mm²	0.5 / 2.5	2.5 / 10
Wire cross-section, AWG/kcmil min/max		26 / 12	22 / 8
Note			

Ordering data

Type	Qty.	Order No.
PRO ECO 960W 24V 40A	1	1469520000

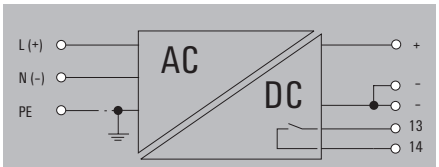
Note	
	The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.

connectPower PROeco



PRO ECO 72W 12V 6A

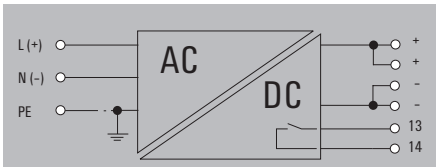
Similar to illustration



Pay attention to polarity of DC connection

PRO ECO 120W 12V 10A

Similar to illustration



Pay attention to polarity of DC connection

Technical data

Input		
Rated input voltage	100...240 V AC (wide-range input)	100...240 V AC (wide-range input)
Input voltage range AC	85...264 V AC (derating at 100 V AC)	85...264 V AC (derating at 100 V AC)
Frequency range AC	47...63 Hz	47...63 Hz
DC input voltage range	80...370 V DC (Derating @ 120 V DC)	80...370 V DC (Derating @ 120 V DC)
AC current consumption	0.6 A @ 230 V AC / 1.1 A @ 115 V AC	1.25 A @ 230 V AC / 2.25 A @ 110 V AC
DC current consumption	0.25 A @ 370 V DC / 0.7 A @ 120 V DC	0.4 A @ 370 V DC / 1.2 A @ 120 V DC
Input fuse (internal) / Inrush current	Yes / max. 40 A	Yes / max. 40 A
Recommended back-up fuse	2 A / DI, safety fuse 6 A, Char. B, circuit breaker 2...4 A, Char. C circuit breaker	4 A / DI, safety fuse 6 A, Char. B, circuit breaker 3...5 A, Char. C, circuit breaker
Output		
Rated output voltage	12 V DC ± 1 %	12 V DC ± 1 %
Output voltage	10...16 V (adjustable via potentiometer)	10...16 V (adjustable via potentiometer)
Ramp-up time / Residual ripple, breaking spikes	≤ 100 ms / < 50 mV ss @ 12 V DC, I Nenn	≤ 100 ms / < 50 mV ss @ 12 V DC, I Nenn
Nominal output current for U_{nom}	6 A @ 55 °C	10 A @ 55 °C
Continous output current @ $U_{Nominal}$	6 A @ 55 °C, 4.5 A @ 60 °C	10 A @ 55 °C, 2.5 A @ 70 °C
Capacitive load	unrestricted	unrestricted
Protection against inverse voltage	Yes	Yes
Signalling		
Indication	Green LED (U_{output} > 21.6 V DC), Yellow LED (I_{output} > 90 % I_{Rated} typ.), red LED (overload, overtemperature, short-circuit, U_{output} < 20.4 V DC)	Green LED (U_{output} > 21.6 V DC), Yellow LED (I_{output} > 90 % I_{Rated} typ.), red LED (overload, overtemperature, short-circuit, U_{output} < 20.4 V DC)
Floating contact / Contact load	Yes / max. 30 V DC / 1 A	Yes / max. 30 V DC / 1 A
Relay on/off	Output voltage >21.6 V DC/ <20.4 V DC, overload	Output voltage >21.6 V DC/ <20.4 V DC, overload
General data		
Degree of efficiency	85 %	87 %
Power loss idling / nominal load / Power loss, nominal load	4 W / 15 W	4 W / 20 W
Earth leakage current, max.	3.5 mA	3.5 mA
Power factor (approx.)	> 0.5...230 V AC / > 0.53...115 V AC	> 0.5...230 V AC / > 0.53...115 V AC
AC failure bridging time @ I_{nom}	> 100 ms @ 230 V AC / > 20 ms @ 115 V AC	> 80 ms @ 230 V AC / > 20 ms @ 115 V AC
Parallel connection option	yes, max. 5	yes, max. 5
Depth x width x height / Net weight	100 / 34 / 125 mm / 570 g	100 / 40 / 125 mm / 684 g
Approvals		
Approvals	CE, TUEV (EN/IEC 60950-1), cULus, EAC	CE, TUEV (EN/IEC 60950-1), cULus, EAC

Connection data		**Input**	**Output**	**Input**	**Output**
Connection system		Screw connection	Screw connection	Screw connection	Screw connection
Number of terminals		3 for L/N/PE	5 (+,–,13,14)	3 for L/N/PE	6 (++,–,13,14)
Wire cross-section, rigid min/max	mm²	0.5 / 6	0.5 / 6	0.5 / 6	0.5 / 6
Wire cross-section, flexible min/max	mm²	0.5 / 2.5	0.5 / 2.5	0.5 / 2.5	0.5 / 2.5
Wire cross-section, AWG/kcmil min/max		26 / 12	26 / 12	26 / 12	26 / 12
Note					

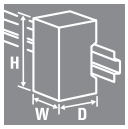
Ordering data

Type	**Qty.**	**Order No.**
PRO ECO 72W 12V 6A	1	**1469570000**

Type	**Qty.**	**Order No.**
PRO ECO 120W 12V 10A	1	**1469580000**

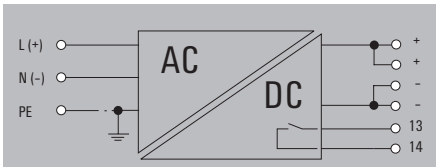
Note	The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.	The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.

connectPower PROeco



PRO ECO 240W 48V 5A

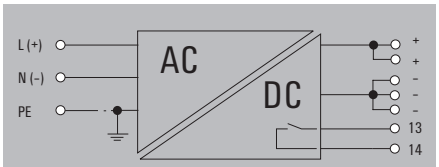
Similar to illustration



Pay attention to polarity of DC connection

PRO ECO 480W 48V 10A

Similar to illustration



Pay attention to polarity of DC connection

Technical data

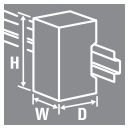
Input		
Rated input voltage	100...240 V AC (wide-range input)	100...240 V AC (wide-range input)
Input voltage range AC	85...264 V AC (derating at 100 V AC)	85...264 V AC (derating at 100 V AC)
Frequency range AC	47...63 Hz	47...63 Hz
DC input voltage range	80...370 V DC (Derating @ 120 V DC)	80...370 V DC (Derating @ 120 V DC)
AC current consumption	1.2 A @ 230 V AC / 2.4 A @ 115 V AC	2.4 A @ 230 V AC / 5.2 A @ 110 V AC
DC current consumption	1.2 A @ 370 V DC / 2.4 A @ 120 V DC	1.5 A @ 370 V DC / 4.6 A @ 120 V DC
Input fuse (internal) / Inrush current	Yes / Max. 10 A	Yes / max. 3 A
Recommended back-up fuse	4 A / DI, safety fuse 10 A, Char. B, circuit breaker 3...4 A, Char. C, circuit breaker	6 A / DI, safety fuse 16 A, Char. B, circuit breaker 6...8 A, Char. C, circuit breaker
Output		
Rated output voltage	48 V DC ± 1 %	48 V DC ± 1 %
Output voltage	42...56 V (adjustable via potentiometer)	42...56 V (adjustable via potentiometer)
Ramp-up time / Residual ripple, breaking spikes	≤ 100 ms / < 100 mV ss @ 48 V DC, I Nenn	≤ 100 ms / < 100 mV ss @ 48 V DC, I Nenn
Nominal output current for U_{nom}	5 A at 55 °C	10 A @ 55 °C
Continous output current @ $U_{Nominal}$	5 A @ 55 °C, 3,75 A @ 70 °C	10 A @ 55 °C, 2.5 A @ 70 °C
Capacitive load	unrestricted	unrestricted
Protection against inverse voltage	Yes	Yes
Signalling		
Indication	Green LED (U_{output} > 21.6 V DC), Yellow LED (I_{output} > 90 % I_{Rated} typ.), red LED (overload, overtemperature, short-circuit, U_{output} < 20.4 V DC)	Green LED (U_{output} > 21.6 V DC), Yellow LED (I_{output} > 90 % I_{Rated} typ.), red LED (overload, overtemperature, short-circuit, U_{output} < 20.4 V DC)
Floating contact / Contact load	Yes / max. 30 V DC / 1 A	Yes / max. 30 V DC / 1 A
Relay on/off	Output voltage >21.6 V DC/ <20.4 V DC, overload	Output voltage >21.6 V DC/ <20.4 V DC, overload
General data		
Degree of efficiency	92 %	93%
Power loss idling / nominal load / Power loss, nominal load	3 W / 23 W	5 W / 50 W
Earth leakage current, max.	3.5 mA	3.5 mA
Power factor (approx.)	> 0.94 @ 230 V AC / > 0.99 @ 115 V AC	> 0.98...230 V AC / > 0.98...115 V AC
AC failure bridging time @ I_{nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC
Parallel connection option	yes, max. 5	yes, max. 3
Depth x width x height / Net weight	100 / 60 / 125 mm / 1.01 g	120 / 100 / 125 mm / 1570 g
Approvals		
Approvals	CE, TUEV (EN/IEC 60950-1), cULus, EAC	CE, TUEV (EN/IEC 60950-1), cULus, EAC

Connection data		**Input**	**Output**	**Input**	**Output**
Connection system		Screw connection	Screw connection	Screw connection	Screw connection
Number of terminals		3 for L/N/PE	6 (++,–,13,14)	3 for L/N/PE	7 (++,–,13,14)
Wire cross-section, rigid min/max	mm²	0.5 / 6	0.5 / 6	0.5 / 6	0.5 / 6
Wire cross-section, flexible min/max	mm²	0.5 / 2.5	0.5 / 2.5	0.5 / 2.5	0.22 / 4
Wire cross-section, AWG/kcmil min/max		26 / 12	26 / 12	26 / 12	26 / 10
Note					

Ordering data

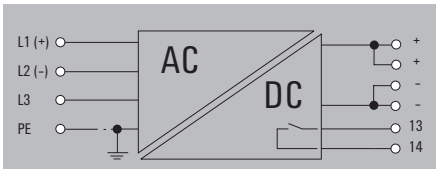
	Type	**Qty.**	**Order No.**
	PRO ECO 240W 48V 5A	1	**1469590000**
	PRO ECO 480W 48V 10A	1	**1469610000**
Note	The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.		

connectPower PROeco



PRO ECO3 120W 24V 5A

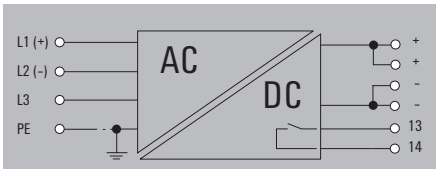
Similar to illustration



Pay attention to polarity of DC connection

PRO ECO3 240W 24V 10A

Similar to illustration



Pay attention to polarity of DC connection

Technical data

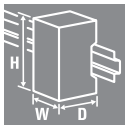
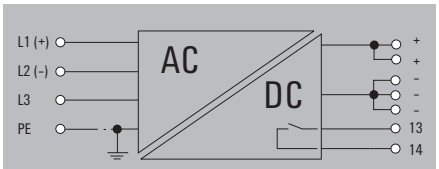
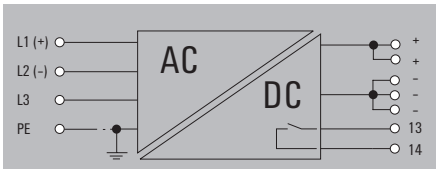
Input		
Rated input voltage	3 x 400...3 x 500 V AC (wide-range input)	3 x 400...3 x 500 V AC (wide-range input)
Input voltage range AC	3 x 320...3 x 575 V AC / 2 x 360...2 x 575 V AC	3 x 320...3 x 575 V AC / 2 x 360...2 x 575 V AC
Frequency range AC	47...63 Hz	47...63 Hz
DC input voltage range	450...800 V DC (max. 500 V DC acc. to UL508)	450...800 V DC (max. 500 V DC acc. to UL508)
AC current consumption	0.3 A @ 3 x 500 V AC / 0.4 A @ 3 x 400 V AC	0.6 A @ 3 x 500 V AC / 0.8 A @ 3 x 400 V AC
DC current consumption	0.2 A @ 800 V DC / 0.4 A @ 450 V DC	0.4 A @ 800 V DC / 0.7 A @ 450 V DC
Input fuse (internal) / Inrush current	Yes / max. 40 A	Yes / max. 50 A
Recommended back-up fuse	2 A / DI, safety fuse 2...3 A, Char. C, circuit breaker	2 A / DI, safety fuse 2...3 A, Char. C, circuit breaker
Output		
Rated output voltage	24 V DC ± 1 %	24 V DC ± 1 %
Output voltage	22...28 V (adjustable via potentiometer)	22...28 V (adjustable via potentiometer)
Ramp-up time / Residual ripple, breaking spikes	≤ 100 ms / < 50 mV_{PP} @ 24 V DC, I_N	≤ 100 ms / < 50 mV_{PP} @ 24 V DC, I_N
Nominal output current for U_{nom}	5 A at 55 °C	10 A @ 55 °C
Continous output current @ $U_{Nominal}$	5 A @ 55 °C, 3,75 A @ 70 °C	10 A @ 55 °C, 2.5 A @ 70 °C
Capacitive load	unrestricted	unrestricted
Protection against inverse voltage	Yes	Yes
Signalling		
Indication	Green LED (U_{output} > 21.6 V DC), Yellow LED (I_{output} > 90 % I_{Rated} typ.), red LED (overload, overtemperature, short-circuit, U_{output} < 20.4 V DC)	Green LED (U_{output} > 21.6 V DC), Yellow LED (I_{output} > 90 % I_{Rated} typ.), red LED (overload, overtemperature, short-circuit, U_{output} < 20.4 V DC)
Floating contact / Contact load	Yes / max. 30 V DC / 1 A	Yes / max. 30 V DC / 1 A
Relay on/off	Output voltage >21.6 V DC/ <20.4 V DC, overload	Output voltage >21.6 V DC/ <20.4 V DC, overload
General data		
Degree of efficiency	87 %	88%
Power loss idling / nominal load / Power loss, nominal load	6 W / 17 W	8 W / 26 W
Earth leakage current, max.	3.5 mA	3.5 mA
Power factor (approx.)	> 0.55 @ 3 x 500 V AC / > 0.65 @ 3 x 400 V AC	> 0.55 @ 3 x 500 V AC / > 0.65 @ 3 x 400 V AC
AC failure bridging time @ I_{nom}	> 40 ms @ 3 x 500 V AC / > 20 ms @ 3 x 400 V AC	> 40 ms @ 3 x 500 V AC / > 20 ms @ 3 x 400 V AC
Parallel connection option	yes, max. 5	yes, max. 5
Depth x width x height / Net weight	100 / 40 / 125 mm / 685 g	100 / 60 / 125 mm / 962 g
Approvals		
Approvals	CE, TUEV (EN/IEC 60950-1), cULus, EAC	CE, TUEV (EN/IEC 60950-1), cULus, EAC

Connection data		Input	Output	Input	Output
Connection system		Screw connection	Screw connection	Screw connection	Screw connection
Number of terminals		4 for L1/L2/L3/PE	6 (++,–,13,14)	4 for L1/L2/L3/PE	6 (++,–,13,14)
Wire cross-section, rigid min/max	mm²	0.5 / 6	0.5 / 6	0.5 / 6	0.5 / 6
Wire cross-section, flexible min/max	mm²	0.5 / 2.5	0.5 / 2.5	0.5 / 2.5	0.5 / 2.5
Wire cross-section, AWG/kcmil min/max		26 / 12	26 / 12	26 / 12	26 / 12

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.

Ordering data

Type	Qty.	Order No.
PRO ECO3 120W 24V 5A	1	1469530000
PRO ECO3 240W 24V 10A	1	1469540000

connectPower PROeco	PRO ECO3 480W 24V 20A	PRO ECO3 960W 24V 40A
	 Similar to illustration	 Similar to illustration
	 Pay attention to polarity of DC connection	 Pay attention to polarity of DC connection

Technical data

Input		
Rated input voltage	3 x 400...3 x 500 V AC (wide-range input)	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	3 x 320...3 x 575 V AC / 2 x 360...2 x 575 V AC
Frequency range AC	47...63 Hz	47...63 Hz
DC input voltage range	450...800 V DC (max. 500 V DC acc. to UL508)	450...800 V DC (max. 500 V DC acc. to UL508)
AC current consumption	1.2 A @ 3 x 500 V AC / 1.5 A @ 3 x 400 V AC	2,15 A @ 3 x 500 V AC / 2,68 A @ 3 x 400 V AC
DC current consumption	0.7 A @ 800 V DC / 1.2 A @ 450 V DC	1,37 A @ 800 V DC / 2,37 A @ 450 V DC
Input fuse (internal) / Inrush current	Yes / max. 50 A	Yes / max. 40 A
Recommended back-up fuse	4 A / DI, safety fuse 3...5 A, Char. C, circuit breaker	6 A / DI, safety fuse 10 A, Char. B, circuit breaker 6...8 A, Char, C, circuit breaker
Output		
Rated output voltage	24 V DC ± 1 %	24 V DC ± 1 %
Output voltage	22...28 V (adjustable via potentiometer)	22...28 V (adjustable via potentiometer)
Ramp-up time / Residual ripple, breaking spikes	≤ 100 ms / < 50 mV_{PP} @ 24 V DC, I_N	≤ 100 ms / < 50 mV_{PP} @ 24 V DC, I_N
Nominal output current for U_{nom}	20 A @ 55 °C	40 A @ 50 °C
Continous output current @ $U_{Nominal}$	20 A @ 55 °C, 15 A @ 70 °C	40 A @ 50 °C, 24 A @ 70 °C
Capacitive load	unrestricted	unrestricted
Protection against inverse voltage	Yes	Yes
Signalling		
Indication	Green LED (U_{output} > 21.6 V DC), Yellow LED (I_{output} > 90 % I_{Rated} typ.), red LED (overload, overtemperature, short-circuit, U_{output} < 20.4 V DC)	Green LED (U_{output} > 21.6 V DC), Yellow LED (I_{output} > 90 % I_{Rated} typ.), red LED (overload, overtemperature, short-circuit, U_{output} < 20.4 V DC)
Floating contact / Contact load	Yes / max. 30 V DC / 1 A	Yes / max. 30 V DC / 1 A
Relay on/off	Output voltage >21.6 V DC/ <20.4 V DC, overload	Output voltage >21.6 V DC/ <20.4 V DC, overload
General data		
Degree of efficiency	89%	90%
Power loss idling / nominal load / Power loss, nominal load	8 W / 48 W	5 W / 95 W
Earth leakage current, max.	3.5 mA	3.5 mA
Power factor (approx.)	> 0.55 @ 3 x 500 V AC / > 0.65 @ 3 x 400 V AC	> 0.55 @ 3 x 500 V AC / > 0.65 @ 3 x 400 V AC
AC failure bridging time @ I_{nom}	> 30 ms @ 3 x 500 V AC / > 20 ms @ 3 x 400 V AC	> 25 ms at 3 x 500 V AC / > 20 ms at 3 x 400 V AC
Parallel connection option	yes, max. 3	yes, max. 3
Depth x width x height / Net weight	120 / 100 / 125 mm / 1300 g	120 / 160 / 125 mm / 2899 g
Approvals		
Approvals	CE, TUEV (EN/IEC 60950-1), cULus, EAC	CE, TUEV (EN/IEC 60950-1), cULus, EAC

Connection data		Input	Output	Input	Output
Connection system		Screw connection	Screw connection	Screw connection	Screw connection
Number of terminals		4 for L1/L2/L3/PE	7 (++,–,13,14)	4 for L1/L2/L3/PE	7 (++,–,13,14)
Wire cross-section, rigid min/max	mm^2	0.5 / 6	0.5 / 6	0.5 / 6	0.5 / 16
Wire cross-section, flexible min/max	mm^2	0.5 / 2.5	0.5 / 2.5	0.5 / 2.5	2.5 / 10
Wire cross-section, AWG/kcmil min/max		26 / 12	26 / 10	26 / 12	22 / 8
Note					

Ordering data

	Type	Qty.	Order No.
	PRO ECO3 480W 24V 20A	1	**1469550000**
	PRO ECO3 960W 24V 40A	1	**1469560000**
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

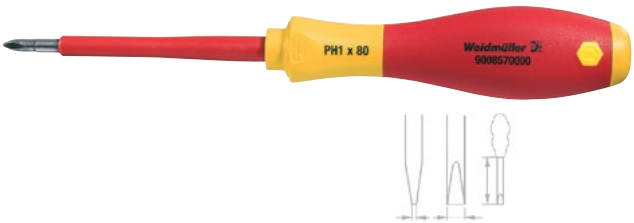
Small wall mounting

Type	Order No.
CP A WALLADAPTER 30 MM	1461870000

Large wall mounting

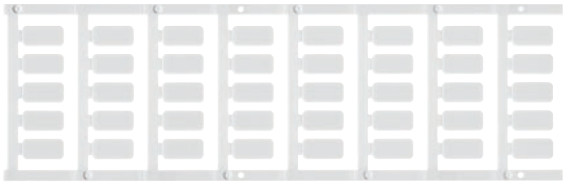
Type	Order No.
CP A WALLADAPTER 45 MM	1461850000

Small screwdriver



Type	Blade type	Size/AF	a	b	c	Order No.
SDIK PH1		1.00			80	9008570000
SDIS 0.5X3.0X100	B		0.5	3	100	9008380000

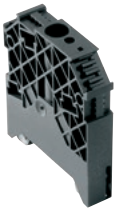
Markers



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 supplies for industrial automation

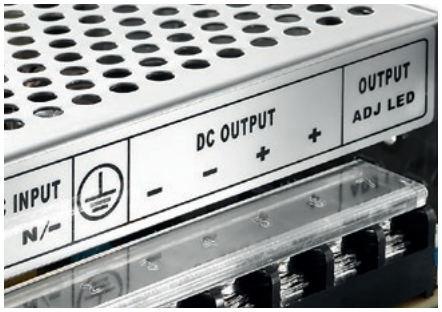
PRO-E power supplies: the wall-mountable single-phase power solution

With applications in industrial automation, you place value on a power supply with high levels of stability while remaining flexible at the same time.

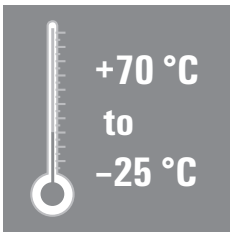
Our new plate-mounted PRO-E power supplies offer an excellent price/performance ratio and are designed for all-purpose use. Thanks to the wide variety of models with output voltages of 5 V, 12 V, 24 V and 48 V, as well as extensive international approvals, it is suitable for use in many applications. The performance bandwidth ranges from 25 W up to 350 W.

Individual adaptability makes PRO-E the right choice for your power supply

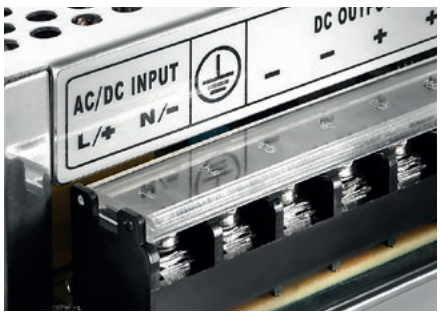
Safe operation
Overload protection, short-circuit protection, surge protection and reverse polarity protection guarantee stable operation.



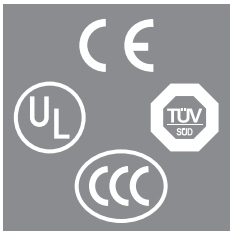
Robust
Wide operating temperature range from – 25 °C to 70 °C (derating from 50 °C, 70 % at 70 °C).



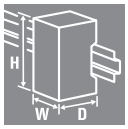
Has a wide range of uses
Wide range input voltage of 85 to 264 V AC and 110 to 370 V DC.



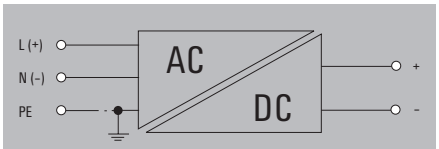
Can be used around the world
All-purpose usage due to worldwide approvals CE, UL, TÜV, CCC.



connectPower PRO-E

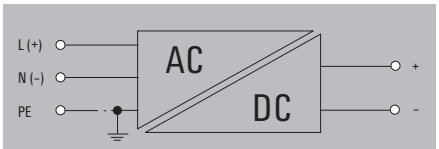


CP E SNT 25W 5V 5A



Note polarity for DC connection

CP E SNT 25W 12V 2.1A



Note polarity for DC connection

Technical data

Input		
Input voltage	85...264 V AC / 110...370 V DC	85...264 V AC / 110...370 V DC
Input current	0.3 A @ 230 V AC / 0.6 A @ 120 V AC	0.3 A @ 230 V AC / 0.6 A @ 120 V AC
Input frequency	47...63 Hz	47...63 Hz
Input fuse (internal)	yes / max. 20A	yes / max. 20A
Recommended back-up fuse	1 A at 230 V AC, characteristic curve C	1 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	5 A@5 V DC	2.1 A@12 V DC
Output power	25 W	25 W
Residual ripple, breaking spikes	< 100 mV_{PP}	< 100 mV_{PP}
Overload protection	120~150% Ikonst. of max. output power, automatic restart	120~150% Ikonst. of max. output power, automatic restart
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	Recommended with diode module	Recommended with diode module
Insulation coordination		
electrical isolation, output-earth	0.5 kV	0.5 kV
electrical isolation, input-earth	2 kV	2 kV
electrical isolation, input-output	3 kV	3 kV
General data		
Ambient temperature (operational)	Ambient temperature (operational) -20°C...70°C (>50°C derating,refer derated curve); 70% rated load @ 70°C	Ambient temperature (operational) -20°C...70°C (>50°C derating,refer derated curve); 70% rated load @ 70°C
Storage temperature	-20 °C...85 °C	-20 °C...85 °C
Max. perm. air humidity (operational)	5 %...95 % RH	5 %...95 % RH
Degree of efficiency	77 % @ 5 V DC	79 % @ 12 V DC
Status indicator	Operation, green LED	Operation, green LED
Standards	EN 60950	EN 60950
EMC standards	EN 55011, EN 55022, EN 55024, EN 61000-6 /-2, -3	EN 55011, EN 55022, EN 55024, EN 61000-6 /-2, -3
Mounting position, installation notice	Panel mount, screw fix	Panel mount, screw fix
Net weight	157 g	154 g
Approvals	CE; cURus; EAC	CE; cURus; EAC
Screw connection		
Connection cross-section, solid, min. / max.	0.34 / 4 mm^2	0.34 / 4 mm^2
Depth x width x height	91 / 51 / 28 mm	91 / 51 / 28 mm

Note

Ordering data

Type	Qty.	Order No.
CP E SNT 25W 5V 5A	1	1202640000

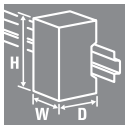
Type	Qty.	Order No.
CP E SNT 25W 12V 2.1A	1	1202630000

Note

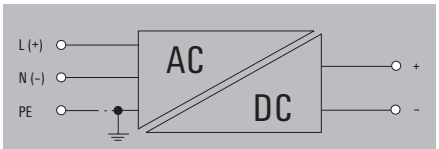
The internal varistor found in a switch-mode power supply does not replace the necessary surge protection in a system.

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

connectPower PRO-E

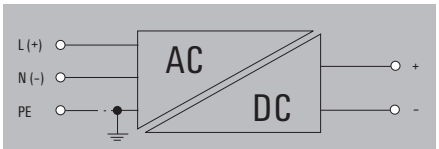


CP E SNT 25W 24V 1.1A



Note polarity for DC connection

CP E SNT 25W 48V 0.57A



Note polarity for DC connection

Technical data

Input		
Input voltage	85...264 V AC / 110...370 V DC	85...264 V AC / 110...370 V DC
Input current	0.3 A @ 230 V AC / 0.6 A @ 120 V AC	0.3 A @ 230 V AC / 0.6 A @ 120 V AC
Input frequency	47...63 Hz	47...63 Hz
Input fuse (internal)	yes / max. 20A	yes / max. 20A
Recommended back-up fuse	1 A at 230 V AC, characteristic curve C	1 A at 230 V AC, characteristic curve C
Output		
Output voltage	24 V DC	48 V DC
Output voltage adjustment	± 10% nominal output voltage tolerance, adjustable with potentiometer	± 10% nominal output voltage tolerance, adjustable with potentiometer
Output current	1.1 A@24 V DC	0.57 A@48 V DC
Output power	25 W	25 W
Residual ripple, breaking spikes	< 100 mV_{PP}	< 100 mV_{PP}
Overload protection	120~150% Ikonst. of max. output power, automatic restart	120~150% Ikonst. of max. output power, automatic restart
Surge protection	28...32 V @ 24 V DC	55...62 V @ 48 V DC
Mains failure bridge-over time	20 ms	20 ms
Parallel connection option	Recommended with diode module	Recommended with diode module
Insulation coordination		
electrical isolation, output-earth	0.5 kV	0.5 kV
electrical isolation, input-earth	2 kV	2 kV
electrical isolation, input-output	3 kV	3 kV
General data		
Ambient temperature (operational)	Ambient temperature (operational) -20°C...70°C (>50°C derating,refer derated curve); 70% rated load @ 70°C	Ambient temperature (operational) -20°C...70°C (>50°C derating,refer derated curve); 70% rated load @ 70°C
Storage temperature	-20 °C...85 °C	-20 °C...85 °C
Max. perm. air humidity (operational)	5 %...95 % RH	5 %...95 % RH
Degree of efficiency	84 % @ 24 V DC	83 % @ 48 V DC
Status indicator	Operation, green LED	Operation, green LED
Standards	EN 60950	EN 60950
EMC standards	EN 55011, EN 55022, EN 55024, EN 61000-6 /-2, -3	EN 55011, EN 55022, EN 55024, EN 61000-6 /-2, -3
Mounting position, installation notice	Panel mount, screw fix	Panel mount, screw fix
Net weight	151 g	156 g
Approvals	CE; cURus; EAC	CE; cURus; EAC
Screw connection		
Connection cross-section, solid, min. / max.	0.34 / 4 mm^2	0.34 / 4 mm^2
Depth x width x height	91 / 51 / 28 mm	91 / 51 / 28 mm

Note

Ordering data

Type	Qty.	Order No.
CP E SNT 25W 24V 1.1A	1	1202620000

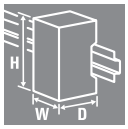
Type	Qty.	Order No.
CP E SNT 25W 48V 0.57A	1	1202610000

Note

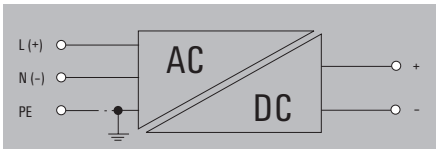
The internal varistor found in a switch-mode power supply does not replace the necessary surge protection in a system.

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

connectPower PRO-E

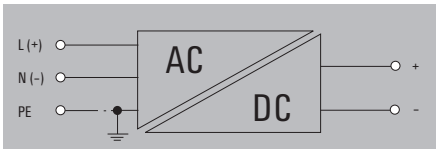


CP E SNT 50W 5V 10A



Note polarity for DC connection

CP E SNT 50 W 12V 4.2A



Note polarity for DC connection

Technical data

Input		
Input voltage	85...264 V AC / 110...370 V DC	85...264 V AC / 110...370 V DC
Input current	0.6 A @ 230 V AC / 1.2 A @ 120 V AC	0.6 A @ 230 V AC / 1.2 A @ 120 V AC
Input frequency	47...63 Hz	47...63 Hz
Input fuse (internal)	yes / max. 20A	yes / max. 20A
Recommended back-up fuse	2 A at 230 V AC, characteristic curve C	2 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	10 A@5 V DC	4.2 A@12 V DC
Output power	50 W	50 W
Residual ripple, breaking spikes	< 100 mV_{PP}	< 100 mV_{PP}
Overload protection	120~150% Ikonst. of max. output power, automatic restart	120~150% Ikonst. of max. output power, automatic restart
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	Recommended with diode module	Recommended with diode module
Insulation coordination		
electrical isolation, output-earth	0.5 kV	0.5 kV
electrical isolation, input-earth	2 kV	2 kV
electrical isolation, input-output	3 kV	3 kV
General data		
Ambient temperature (operational)	Ambient temperature (operational) -20°C...70°C (>50°C derating,refer derated curve); 70% rated load @ 70°C	Ambient temperature (operational) -20°C...70°C (>50°C derating,refer derated curve); 70% rated load @ 70°C
Storage temperature	-20 °C...85 °C	-20 °C...85 °C
Max. perm. air humidity (operational)	5 %...95 % RH	5 %...95 % RH
Degree of efficiency	78 % @ 5 V DC	81 % @ 12 V DC
Status indicator	Operation, green LED	Operation, green LED
Standards	EN 60950	EN 60950
EMC standards	EN 55011, EN 55022, EN 55024, EN 61000-6 /-2, -3	EN 55011, EN 55022, EN 55024, EN 61000-6 /-2, -3
Mounting position, installation notice	Panel mount, screw fix	Panel mount, screw fix
Net weight	333 g	331 g
Approvals	CE; cURus; EAC	CE; cURus; EAC
Screw connection		
Connection cross-section, solid, min. / max.	0.34 / 4 mm^2	0.34 / 4 mm^2
Depth x width x height	105 / 100 / 35 mm	105 / 100 / 35 mm

Note

Ordering data

Type	Qty.	Order No.
CP E SNT 50W 5V 10A	1	**1202590000**

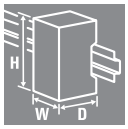
Type	Qty.	Order No.
CP E SNT 50W 12V 4.2A	1	**1202580000**

Note

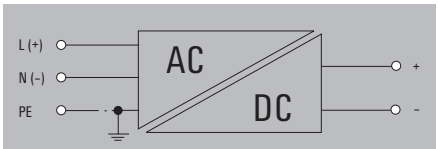
The internal varistor found in a switch-mode power supply does not replace the necessary surge protection in a system.

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

connectPower PRO-E

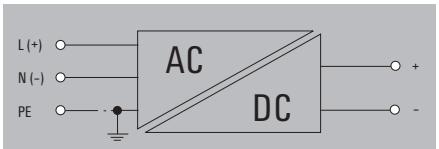


CP E SNT 50W 24V 2.2A



Note polarity for DC connection

CP E SNT 50W 48V 1.1A



Note polarity for DC connection

Technical data

Input		
Input voltage	85...264 V AC / 110...370 V DC	85...264 V AC / 110...370 V DC
Input current	0.6 A @ 230 V AC / 1.2 A @ 120 V AC	0.6 A @ 230 V AC / 1.2 A @ 120 V AC
Input frequency	47...63 Hz	47...63 Hz
Input fuse (internal)	yes / max. 20A	yes / max. 20A
Recommended back-up fuse	2 A at 230 V AC, characteristic curve C	2 A at 230 V AC, characteristic curve C
Output		
Output voltage	24 V DC	48 V DC
Output voltage adjustment	± 10% nominal output voltage tolerance, adjustable with potentiometer	± 10% nominal output voltage tolerance, adjustable with potentiometer
Output current	2.2 A@24 V DC	1.1 A@48 V DC
Output power	50 W	50 W
Residual ripple, breaking spikes	< 100 mV_{PP}	< 100 mV_{PP}
Overload protection	120~150% Ikonst. of max. output power, automatic restart	120~150% Ikonst. of max. output power, automatic restart
Surge protection	28...32 V @ 24 V DC	55...62 V @ 48 V DC
Mains failure bridge-over time	20 ms	20 ms
Parallel connection option	Recommended with diode module	Recommended with diode module
Insulation coordination		
electrical isolation, output-earth	0.5 kV	0.5 kV
electrical isolation, input-earth	2 kV	2 kV
electrical isolation, input-output	3 kV	3 kV
General data		
Ambient temperature (operational)	Ambient temperature (operational) -20°C...70°C (>50°C derating,refer derated curve); 70% rated load @ 70°C	Ambient temperature (operational) -20°C...70°C (>50°C derating,refer derated curve); 70% rated load @ 70°C
Storage temperature	-20 °C...85 °C	-20 °C...85 °C
Max. perm. air humidity (operational)	5 %...95 % RH	5 %...95 % RH
Degree of efficiency	84 % @ 24 V DC	86 % @ 48 V DC
Status indicator	Operation, green LED	Operation, green LED
Standards	EN 60950	EN 60950
EMC standards	EN 55011, EN 55022, EN 55024, EN 61000-6 /-2, -3	EN 55011, EN 55022, EN 55024, EN 61000-6 /-2, -3
Mounting position, installation notice	Panel mount, screw fix	Panel mount, screw fix
Net weight	320 g	340 g
Approvals	CE; cURus; EAC	CE; cURus; EAC
Screw connection		
Connection cross-section, solid, min. / max.	0.34 / 4 mm^2	0.34 / 4 mm^2
Depth x width x height	105 / 100 / 35 mm	105 / 100 / 35 mm

Note

Ordering data

Type	Qty.	Order No.
CP E SNT 50W 24V 2.2A	1	1202450000

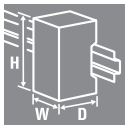
Type	Qty.	Order No.
CP E SNT 50W 48V 1.1A	1	1202460000

Note

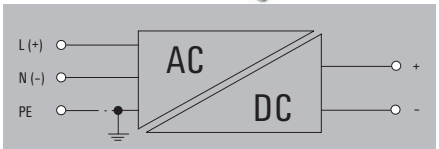
The internal varistor found in a switch-mode power supply does not replace the necessary surge protection in a system.

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

connectPower PRO-E

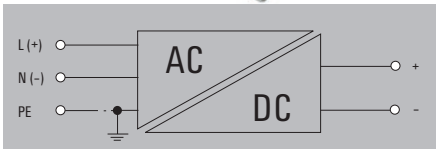


CP E SNT 75W 5V 12A



Note polarity for DC connection

CP E SNT 75W 12V 6A



Note polarity for DC connection

Technical data

	CP E SNT 75W 5V 12A	CP E SNT 75W 12V 6A
Input		
Input voltage	85...264 V AC / 110...370 V DC	85...264 V AC / 110...370 V DC
Input current	1 A @ 230 V AC / 2 A @ 120 V AC	1 A @ 230 V AC / 2 A @ 120 V AC
Input frequency	47...63 Hz	47...63 Hz
Input fuse (internal)	yes / max. 20A	yes / max. 20A
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	12 A@5 V DC	6 A@12 V DC
Output power	75 W	75 W
Residual ripple, breaking spikes	< 100 mV_{PP}	< 100 mV_{PP}
Overload protection	120~150% Ikonst. of max. output power, automatic restart	120~150% Ikonst. of max. output power, automatic restart
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	Recommended with diode module	Recommended with diode module
Insulation coordination		
electrical isolation, output-earth	0.5 kV	0.5 kV
electrical isolation, input-earth	2 kV	2 kV
electrical isolation, input-output	3 kV	3 kV
General data		
Ambient temperature (operational)	Ambient temperature (operational) -20°C...70°C (>50°C derating,refer derated curve); 70% rated load @ 70°C	Ambient temperature (operational) -20°C...70°C (>50°C derating,refer derated curve); 70% rated load @ 70°C
Storage temperature	-20 °C...85 °C	-20 °C...85 °C
Max. perm. air humidity (operational)	5 %...95 % RH	5 %...95 % RH
Degree of efficiency	76 % @ 5 V DC	81 % @ 12 V DC
Status indicator	Operation, green LED	Operation, green LED
Standards	EN 60950	EN 60950
EMC standards	EN 55011, EN 55022, EN 55024, EN 61000-6 /-2, -3	EN 55011, EN 55022, EN 55024, EN 61000-6 /-2, -3
Mounting position, installation notice	Panel mount, screw fix	Panel mount, screw fix
Net weight	406 g	400 g
Approvals	CE; cURus; EAC	CE; cURus; EAC
Screw connection		
Connection cross-section, solid, min. / max.	0.34 / 4 mm^2	0.34 / 4 mm^2
Depth x width x height	135 / 98.5 / 40 mm	135 / 98.5 / 40 mm

Note

Ordering data

Type	Qty.	Order No.
CP E SNT 75W 5V 12A	1	1202470000

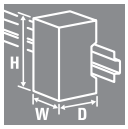
Type	Qty.	Order No.
CP E SNT 75W 12V 6A	1	1202480000

Note

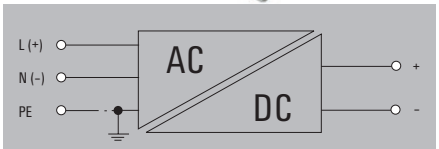
The internal varistor found in a switch-mode power supply does not replace the necessary surge protection in a system.

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

connectPower PRO-E

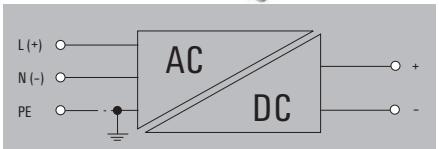


CP E SNT 75W 24V 3.2A



Note polarity for DC connection

CP E SNT 75W 48V 1.6A



Note polarity for DC connection

Technical data

Input		
Input voltage	85...264 V AC / 110...370 V DC	85...264 V AC / 110...370 V DC
Input current	1 A @ 230 V AC / 2 A @ 120 V AC	1 A @ 230 V AC / 2 A @ 120 V AC
Input frequency	47...63 Hz	47...63 Hz
Input fuse (internal)	yes / max. 20A	yes / max. 20A
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	24 V DC	48 V DC
Output voltage adjustment	± 10% nominal output voltage tolerance, adjustable with potentiometer	± 10% nominal output voltage tolerance, adjustable with potentiometer
Output current	3.2 A@24 V DC	1.6 A@48 V DC
Output power	75 W	75 W
Residual ripple, breaking spikes	< 100 mV_{PP}	< 100 mV_{PP}
Overload protection	120~150% Ikonst. of max. output power, automatic restart	120~150% Ikonst. of max. output power, automatic restart
Surge protection	28...32 V @ 24 V DC	55...62 V @ 48 V DC
Mains failure bridge-over time	20 ms	20 ms
Parallel connection option	Recommended with diode module	Recommended with diode module
Insulation coordination		
electrical isolation, output-earth	0.5 kV	0.5 kV
electrical isolation, input-earth	2 kV	2 kV
electrical isolation, input-output	3 kV	3 kV
General data		
Ambient temperature (operational)	Ambient temperature (operational) -20°C...70°C (>50°C derating,refer derated curve); 70% rated load @ 70°C	Ambient temperature (operational) -20°C...70°C (>50°C derating,refer derated curve); 70% rated load @ 70°C
Storage temperature	-20 °C...85 °C	-20 °C...85 °C
Max. perm. air humidity (operational)	5 %...95 % RH	5 %...95 % RH
Degree of efficiency	85 % @ 24 V DC	86 % @ 48 V DC
Status indicator	Operation, green LED	Operation, green LED
Standards	EN 60950	EN 60950
EMC standards	EN 55011, EN 55022, EN 55024, EN 61000-6 /-2, -3	EN 55011, EN 55022, EN 55024, EN 61000-6 /-2, -3
Mounting position, installation notice	Panel mount, screw fix	Panel mount, screw fix
Net weight	411 g	408 g
Approvals	CE; cURus; EAC	CE; cURus; EAC
Screw connection		
Connection cross-section, solid, min. / max.	0.34 / 4 mm^2	0.34 / 4 mm^2
Depth x width x height	135 / 98.5 / 40 mm	135 / 98.5 / 40 mm

Note

Ordering data

Type	Qty.	Order No.
CP E SNT 75W 24V 3.2A	1	1202490000

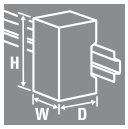
Note

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

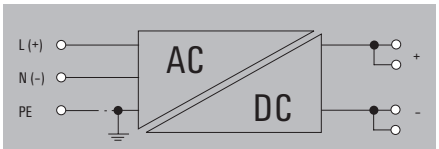
Type	Qty.	Order No.
CP E SNT 75W 48V 1.6A	1	1202510000

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

connectPower PRO-E

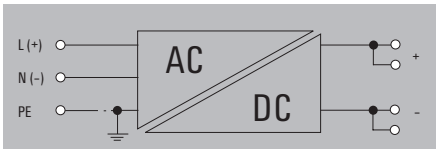


CP E SNT 100W 5V 16A



Note polarity for DC connection

CP E SNT 100W 12V 8.5A



Note polarity for DC connection

Technical data

	CP E SNT 100W 5V 16A	CP E SNT 100W 12V 8.5A
Input		
Input voltage	88...132 V AC / 176...264 V AC optional / 250...370 V DC	88...132 V AC / 176...264 V AC optional / 250...370 V DC
Input current	1.5 A @ 230 V AC / 3 A @ 120 V AC	1.5 A @ 230 V AC / 3 A @ 120 V AC
Input frequency	47...63 Hz	47...63 Hz
Input fuse (internal)	yes / max. 20A	yes / max. 20A
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	16 A@5 V DC	8.5 A@12 V DC
Output power	100 W	100 W
Residual ripple, breaking spikes	< 100 mV_{PP}	< 100 mV_{PP}
Overload protection	120~150% Ikonst. of max. output power, automatic restart	120~150% Ikonst. of max. output power, automatic restart
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	Recommended with diode module	Recommended with diode module
Insulation coordination		
electrical isolation, output-earth	0.5 kV	0.5 kV
electrical isolation, input-earth	2 kV	2 kV
electrical isolation, input-output	3 kV	3 kV
General data		
Ambient temperature (operational)	Ambient temperature (operational) -20°C...70°C (>50°C derating,refer derated curve); 70% rated load @ 70°C	Ambient temperature (operational) -20°C...70°C (>50°C derating,refer derated curve); 70% rated load @ 70°C
Storage temperature	-20 °C...85 °C	-20 °C...85 °C
Max. perm. air humidity (operational)	5 %...95 % RH	5 %...95 % RH
Degree of efficiency	77 % @ 5 V DC	81 % @ 12 V DC
Status indicator	Operation, green LED	Operation, green LED
Standards	EN 60950	EN 60950
EMC standards	EN 55011, EN 55022, EN 55024, EN 61000-6 /-2, -3	EN 55011, EN 55022, EN 55024, EN 61000-6 /-2, -3
Mounting position, installation notice	Panel mount, screw fix	Panel mount, screw fix
Net weight	551 g	548 g
Approvals	CE; cURus; EAC	CE; cURus; EAC
Screw connection		
Connection cross-section, solid, min. / max.	0.34 / 4 mm^2	0.34 / 4 mm^2
Depth x width x height	164 / 97.5 / 40 mm	164 / 97.5 / 40 mm

Note

Ordering data

Type	Qty.	Order No.
CP E SNT 100W 5V 16A	1	**1165820000**

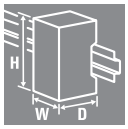
Type	Qty.	Order No.
CP E SNT 100W 12V 8.5A	1	**1165830000**

Note

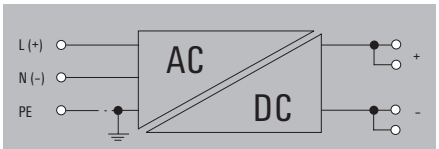
The internal varistor found in a switch-mode power supply does not replace the necessary surge protection in a system.

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

connectPower PRO-E

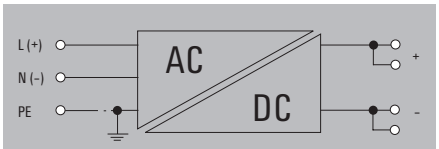


CP E SNT 100W 24V 4.5A



Note polarity for DC connection

CP E SNT 100W 48V 2.3A



Note polarity for DC connection

Technical data

Input		
Input voltage	88...132 V AC / 176...264 V AC optional / 250...370 V DC	88...132 V AC / 176...264 V AC optional / 250...370 V DC
Input current	1.5 A @ 230 V AC / 3 A @ 120 V AC	1.5 A @ 230 V AC / 3 A @ 120 V AC
Input frequency	47...63 Hz	47...63 Hz
Input fuse (internal)	yes / max. 20A	yes / max. 20A
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	24 V DC	48 V DC
Output voltage adjustment	± 10% nominal output voltage tolerance, adjustable with potentiometer	± 10% nominal output voltage tolerance, adjustable with potentiometer
Output current	4.5 A@24 V DC	2.3 A@48 V DC
Output power	100 W	100 W
Residual ripple, breaking spikes	< 100 mV_{PP}	< 100 mV_{PP}
Overload protection	120~150% Ikonst. of max. output power, automatic restart	120~150% Ikonst. of max. output power, automatic restart
Surge protection	28...32 V @ 24 V DC	55...62 V @ 48 V DC
Mains failure bridge-over time	20 ms	20 ms
Parallel connection option	Recommended with diode module	Recommended with diode module
Insulation coordination		
electrical isolation, output-earth	0.5 kV	0.5 kV
electrical isolation, input-earth	2 kV	2 kV
electrical isolation, input-output	3 kV	3 kV
General data		
Ambient temperature (operational)	Ambient temperature (operational) -20°C...70°C (>50°C derating,refer derated curve); 70% rated load @ 70°C	Ambient temperature (operational) -20°C...70°C (>50°C derating,refer derated curve); 70% rated load @ 70°C
Storage temperature	-20 °C...85 °C	-20 °C...85 °C
Max. perm. air humidity (operational)	5 %...95 % RH	5 %...95 % RH
Degree of efficiency	85 % @ 24 V DC	86 % @ 48 V DC
Status indicator	Operation, green LED	Operation, green LED
Standards	EN 60950	EN 60950
EMC standards	EN 55011, EN 55022, EN 55024, EN 61000-6 /-2, -3	EN 55011, EN 55022, EN 55024, EN 61000-6 /-2, -3
Mounting position, installation notice	Panel mount, screw fix	Panel mount, screw fix
Net weight	527 g	556 g
Approvals	CE; cURus; EAC	CE; cURus; EAC
Screw connection		
Connection cross-section, solid, min. / max.	0.34 / 4 mm^2	0.34 / 4 mm^2
Depth x width x height	164 / 97.5 / 40 mm	164 / 97.5 / 40 mm

Note

Ordering data

Type	Qty.	Order No.
CP E SNT 100W 24V 4.5A	1	**1165840000**

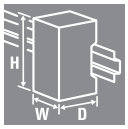
Type	Qty.	Order No.
CP E SNT 100W 48V 2.3A	1	**1165850000**

Note

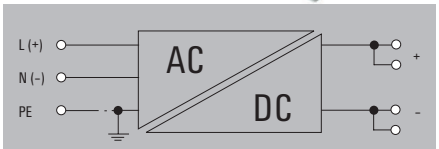
The internal varistor found in a switch-mode power supply does not replace the necessary surge protection in a system.

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

connectPower PRO-E

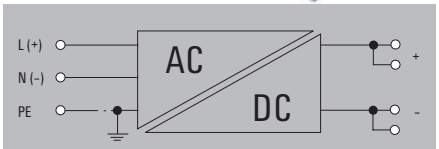


CP E SNT 150W 12V 12.5A



Note polarity for DC connection

CP E SNT 150W 24V 6.5A



Note polarity for DC connection

Technical data

Input		
Input voltage	88...132 V AC / 176...264 V AC optional / 250...370 V DC	88...132 V AC / 176...264 V AC optional / 250...370 V DC
Input current	2 A @ 230 V AC / 3.5 A @ 120 V AC	2 A @ 230 V AC / 3.5 A @ 120 V AC
Input frequency	47...63 Hz	47...63 Hz
Input fuse (internal)	yes / max. 35A	yes / max. 35A
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	12 V DC	24 V DC
Output voltage adjustment	± 10% nominal output voltage tolerance, adjustable with potentiometer	± 10% nominal output voltage tolerance, adjustable with potentiometer
Output current	12.5 A@12 V DC	6.5 A@24 V DC
Output power	150 W	150 W
Residual ripple, breaking spikes	< 100 mV_{PP}	< 100 mV_{PP}
Overload protection	120~150% Ikonst. of max. output power, automatic restart	120~150% Ikonst. of max. output power, automatic restart
Surge protection	13.5...16.2 V @ 12 V DC	28...32 V @ 24 V DC
Mains failure bridge-over time	20 ms	20 ms
Parallel connection option	Recommended with diode module	Recommended with diode module
Insulation coordination		
electrical isolation, output-earth	0.5 kV	0.5 kV
electrical isolation, input-earth	2 kV	2 kV
electrical isolation, input-output	3 kV	3 kV
General data		
Ambient temperature (operational)	Ambient temperature (operational) -20°C...70°C (>50°C derating,refer derated curve); 70% rated load @ 70°C	Ambient temperature (operational) -20°C...70°C (>50°C derating,refer derated curve); 70% rated load @ 70°C
Storage temperature	-20 °C...85 °C	-20 °C...85 °C
Max. perm. air humidity (operational)	5 %...95 % RH	5 %...95 % RH
Degree of efficiency	82 % @ 12 V DC	86 % @ 24 V DC
Status indicator	Operation, green LED	Operation, green LED
Standards	EN 60950	EN 60950
EMC standards	EN 55011, EN 55022, EN 55024, EN 61000-6 /-2, -3	EN 55011, EN 55022, EN 55024, EN 61000-6 /-2, -3
Mounting position, installation notice	Panel mount, screw fix	Panel mount, screw fix
Net weight	680 g	682 g
Approvals	CE; cURus; EAC	CE; cURus; EAC
Screw connection		
Connection cross-section, solid, min. / max.	0.34 / 4 mm^2	0.34 / 4 mm^2
Depth x width x height	205 / 99 / 40 mm	205 / 99 / 40 mm

Note

Ordering data

Type	Qty.	Order No.
CP E SNT 150W 12V 12.5A	1	**1165870000**

Type	Qty.	Order No.
CP E SNT 150W 24V 6.5A	1	**1165880000**

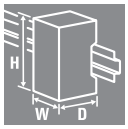
Note

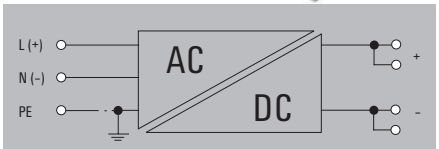
The internal varistor found in a switch-mode power supply does not replace the necessary surge protection in a system.

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

connectPower PRO-E

CP E SNT 150W 48V 3.3A





Note polarity for DC connection

Technical data

Input	
Input voltage	88...132 V AC / 176...264 V AC optional / 250...370 V DC
Input current	2 A @ 230 V AC / 3.5 A @ 120 V AC
Input frequency	47...63 Hz
Input fuse (internal)	yes / max. 35A
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 A@48 V DC
Output power	150 W
Residual ripple, breaking spikes	< 100 mV_{PP}
Overload protection	120~150% Ikonst. of max. output power, automatic restart
Surge protection	55...62 V @ 48 V DC
Mains failure bridge-over time	20 ms
Parallel connection option	Recommended with diode module
Insulation coordination	
electrical isolation, output-earth	0.5 kV
electrical isolation, input-earth	2 kV
electrical isolation, input-output	3 kV
General data	
Ambient temperature (operational)	Ambient temperature (operational) -20°C...70°C (>50°C derating,refer derated curve); 70% rated load @ 70°C
Storage temperature	-20 °C...85 °C
Max. perm. air humidity (operational)	5 %...95 % RH
Degree of efficiency	87 % @ 48 V DC
Status indicator	Operation, green LED
Standards	EN 60950
EMC standards	EN 55011, EN 55022, EN 55024, EN 61000-6 /-2, -3
Mounting position, installation notice	Panel mount, screw fix
Net weight	685 g
Approvals	CE; cURus; EAC
Screw connection	
Connection cross-section, solid, min. / max.	0.34 / 4 mm^2
Depth x width x height	205 / 99 / 40 mm

Note

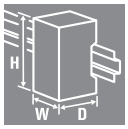
Ordering data

Type	Qty.	Order No.
CP E SNT 150W 48V 3.3A	1	**1165890000**

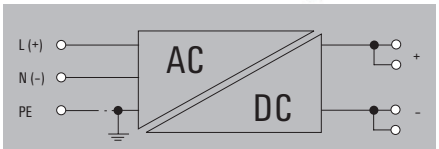
Note

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

connectPower PRO-E

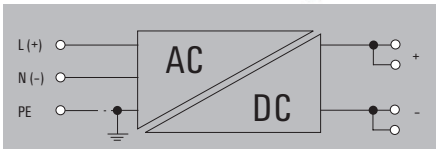


CP E SNT 250W 12V 21A



Note polarity for DC connection

CP E SNT 250W 24V 10.5A



Note polarity for DC connection

Technical data

Input		
Input voltage	88...132 V AC / 176...264 V AC optional / 250...370 V DC	88...132 V AC / 176...264 V AC optional / 250...370 V DC
Input current	2.5 A @ 230 V AC / 4.7 A @ 120 V AC	2.5 A @ 230 V AC / 4.7 A @ 120 V AC
Input frequency	47...63 Hz	47...63 Hz
Input fuse (internal)	yes / max. 35A	yes / max. 35A
Recommended back-up fuse	6 A at 230 V AC, characteristic curve C	6 A at 230 V AC, characteristic curve C
Output		
Output voltage	12 V DC	24 V DC
Output voltage adjustment	± 10% nominal output voltage tolerance, adjustable with potentiometer	± 10% nominal output voltage tolerance, adjustable with potentiometer
Output current	21 A@12 V DC	10.5 A @ 24 V DC
Output power	250 W	250 W
Residual ripple, breaking spikes	< 100 mV_{PP}	< 100 mV_{PP}
Overload protection	120~150% Ikonst. of max. output power, automatic restart	120~150% Ikonst. of max. output power, automatic restart
Surge protection	13.5...16.2 V @ 12 V DC	28...32 V @ 24 V DC
Mains failure bridge-over time	20 ms	20 ms
Parallel connection option	Recommended with diode module	Recommended with diode module
Insulation coordination		
electrical isolation, output-earth	0.5 kV	0.5 kV
electrical isolation, input-earth	2 kV	2 kV
electrical isolation, input-output	3 kV	3 kV
General data		
Ambient temperature (operational)	Ambient temperature (operational) -20°C...70°C (>50°C derating,refer derated curve); 70% rated load @ 70°C	Ambient temperature (operational) -20°C...70°C (>50°C derating,refer derated curve); 70% rated load @ 70°C
Storage temperature	-20 °C...85 °C	-20 °C...85 °C
Max. perm. air humidity (operational)	5 %...95 % RH	5 %...95 % RH
Degree of efficiency	80 % @ 12 V DC	81 % @ 24 V DC
Status indicator	Operation, green LED	Operation, green LED
Standards	EN 60950	EN 60950
EMC standards	EN 55011, EN 55022, EN 55024, EN 61000-6 /-2, -3	EN 55011, EN 55022, EN 55024, EN 61000-6 /-2, -3
Mounting position, installation notice	Panel mount, screw fix	Panel mount, screw fix
Net weight	1000 g	1022 g
Approvals	CE; cURus; EAC	CE; cURus; EAC
Screw connection		
Connection cross-section, solid, min. / max.	0.34 / 4 mm^2	0.34 / 4 mm^2
Depth x width x height	231 / 115 / 49.5 mm	231 / 115 / 49.5 mm

Note

Ordering data

Type	Qty.	Order No.
CP E SNT 250W 12V 21A	1	**1202520000**

Type	Qty.	Order No.
CP E SNT 250W 24V 10.5A	1	**1202530000**

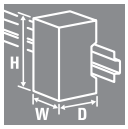
Note

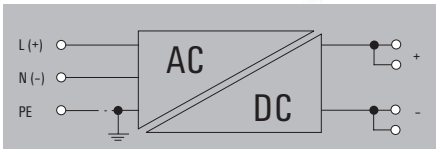
The internal varistor found in a switch-mode power supply does not replace the necessary surge protection in a system.

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

connectPower PRO-E

CP E SNT 250W 48V 5.2A





Note polarity for DC connection

Technical data

Input	
Input voltage	88...132 V AC / 176...264 V AC optional / 250...370 V DC
Input current	2.5 A @ 230 V AC / 4.7 A @ 120 V AC
Input frequency	47...63 Hz
Input fuse (internal)	yes / max. 35A
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 A@48 V DC
Output power	250 W
Residual ripple, breaking spikes	< 100 mV_{PP}
Overload protection	120~150% Ikonst. of max. output power, automatic restart
Surge protection	55...62 V @ 48 V DC
Mains failure bridge-over time	20 ms
Parallel connection option	Recommended with diode module
Insulation coordination	
electrical isolation, output-earth	0.5 kV
electrical isolation, input-earth	2 kV
electrical isolation, input-output	3 kV
General data	
Ambient temperature (operational)	Ambient temperature (operational) -20°C...70°C (>50°C derating,refer derated curve); 70% rated load @ 70°C
Storage temperature	-20 °C...85 °C
Max. perm. air humidity (operational)	5 %...95 % RH
Degree of efficiency	83 % @ 48 V DC
Status indicator	Operation, green LED
Standards	EN 60950
EMC standards	EN 55011, EN 55022, EN 55024, EN 61000-6 /-2, -3
Mounting position, installation notice	Panel mount, screw fix
Net weight	1052 g
Approvals	CE; cURus; EAC
Screw connection	
Connection cross-section, solid, min. / max.	0.34 / 4 mm^2
Depth x width x height	231 / 115 / 49.5 mm

Note

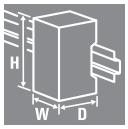
Ordering data

Type	Qty.	Order No.
CP E SNT 250W 48V 5.2A	1	1202540000

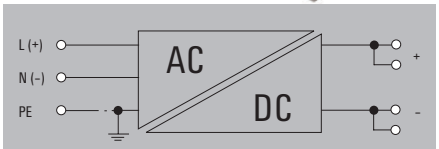
Note

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

connectPower PRO-E

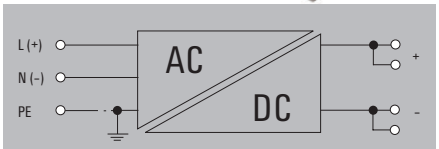


CP E SNT 350W 24V 14.6A



Note polarity for DC connection

CP E SNT 350W 48V 7.3A



Note polarity for DC connection

Technical data

	CP E SNT 350W 24V 14.6A	CP E SNT 350W 48V 7.3A
Input		
Input voltage	85...264 V AC / 110...370 V DC	85...264 V AC / 110...370 V DC
Input current	3 A @ 230 V AC / 5.6 A @ 120 V AC	3 A @ 230 V AC / 5.6 A @ 120 V AC
Input frequency	47...63 Hz	47...63 Hz
Input fuse (internal)	yes / max. 35A	yes / max. 35A
Recommended back-up fuse	6 A at 230 V AC, characteristic curve C	6 A at 230 V AC, characteristic curve C
Output		
Output voltage	24 V DC	48 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 A@24 V DC	7.3 A@48 V DC
Output power	350 W	350 W
Residual ripple, breaking spikes	< 100 mV_{PP}	< 100 mV_{PP}
Overload protection	120~150% Ikonst. of max. output power, automatic restart	120~150% Ikonst. of max. output power, automatic restart
Surge protection	28...32 V @ 24 V DC	55...62 V @ 48 V DC
Mains failure bridge-over time	20 ms	20 ms
Parallel connection option	Recommended with diode module	Recommended with diode module
Insulation coordination		
electrical isolation, output-earth	0.5 kV	0.5 kV
electrical isolation, input-earth	2 kV	2 kV
electrical isolation, input-output	3 kV	3 kV
General data		
Ambient temperature (operational)	Ambient temperature (operational) -20°C...70°C (>50°C derating,refer derated curve); 70% rated load @ 70°C	Ambient temperature (operational) -20°C...70°C (>50°C derating,refer derated curve); 70% rated load @ 70°C
Storage temperature	-20 °C...85 °C	-20 °C...85 °C
Max. perm. air humidity (operational)	5 %...95 % RH	5 %...95 % RH
Degree of efficiency	83 % @ 24 V DC	85 % @ 48 V DC
Status indicator	Operation, green LED	Operation, green LED
Standards	EN 60950	EN 60950
EMC standards	EN 55011, EN 55022, EN 55024, EN 61000-6 /-2, -3	EN 55011, EN 55022, EN 55024, EN 61000-6 /-2, -3
Mounting position, installation notice	Panel mount, screw fix	Panel mount, screw fix
Net weight	1030 g	1051 g
Approvals	CE; cURus; EAC	CE; cURus; EAC
Screw connection		
Connection cross-section, solid, min. / max.	0.34 / 4 mm^2	0.34 / 4 mm^2
Depth x width x height	230 / 115 / 49.5 mm	230 / 115 / 49.5 mm

Note

Ordering data

Type	Qty.	Order No.
CP E SNT 350W 24V 14.6A	1	**1202550000**

Type	Qty.	Order No.
CP E SNT 350W 48V 7.3A	1	**1202560000**

Note

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

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

An everlasting power supply for buildings and machines

INSTA POWER power supplies – compact, efficient and reliable

In building automation and mechanical engineering, many small distributors, meter cabinets and electrical distributions must often be taken into account. Efficient power supply solutions with high power density and high efficiency are in demand here.

The single phase INSTA POWER have a broad power spectrum, compact design, and good price-performance ratio. They operate in a temperature range from -25 °C to +70 °C and have wide range of approvals and wide-range voltage input. They are suitable for a variety of applications, which include signal and telecommunication systems and automation systems with low power requirements up to 96 W.

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.

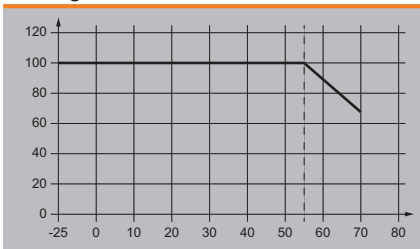
Robust and reliable
INSTA POWER operates reliably in a temperature range from -25 °C to +70 °C (start-up: -40 °C) and have a high MTBF value of more than 1,000,000 hours.

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.

connectPower INSTA POWER – Compact, highly efficient and reliable

connectPower INSTA POWER

Derating curve



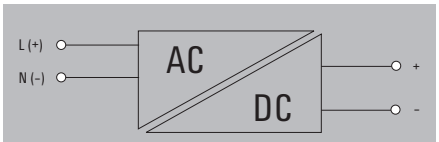
Technical data

General data	
Ambient temperature (operational)	-25 °C...70 °C
MTBF	> 750.000 h nach IEC 61709 (SN29500)
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 degree	II
Pollution degree	2
Electrical safety (applied standards)	
For use with electronic equipment	Acc. to EN50178 / VDE0160
Electrical machine equipment	Acc. to EN60204
Protection against dangerous shock currents	Acc. to VDE0106-101
Protective separation / protection against electrical shock	VDE0100-410 / acc. to DIN57100-410
Safety transformers for switch-mode power supplies	According to EN 61558-2-16

connectPower INSTA POWER

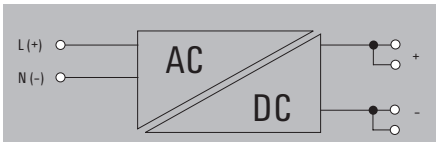
- 1-phase power supplies

PRO INSTA 16 W 24 V 0.7 A



Note polarity for DC connection

PRO INSTA 30 W 5 V 6 A



Note polarity for DC connection

Technical data

Input		
Rated input voltage	100 - 240 V AC / 120 - 340 V DC	100 - 240 V AC / 120 - 340 V DC
Input voltage range AC	85...264 V AC (derating at 100 V 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	0.5 A @ 230 V AC / 1.0 A @ 100 V AC
Frequency range AC	45...65 Hz	45...65 Hz
DC input voltage range	95...370 V DC	95...370 V DC
DC current consumption	0.08 A @ 370V DC /0.22 A @ 120 V DC	0.2 A @ 370 V DC / 0.5 A @ 120 V DC
Inrush current	max. 40 A	max. 40 A
Output		
Rated output voltage	24 V DC ± 1 %	5 V DC ± 2 %
Nominal output current for U_{nom}	0.7 A @ 55 °C	6 A @ 55 °C
Output voltage	22...28 V (adjustable via potentiometer on front)	7...4 V (adjustable via potentiometer on front)
Continous output current @ $U_{Nominal}$	0.7 A @ 55 °C, 0.43 A @ 70 °C	6 A @ 55 °C, 3.75 A @ 70 °C
Residual ripple, breaking spikes	< 50 mVss @ U_{Nenn}, Full Load	< 50 mVss @ U_{Nenn}, Full Load
Capacitive load	unrestricted	unrestricted
General data		
Degree of efficiency	82.5 %	82 %
Power loss idling / nominal load	0.4 W	0.45 W
Power loss, nominal load	3.6 W	5.4 W
Protection against reverse voltages from the load	30...35 V DC	8...10 V DC
Depth x width x height	60 / 22.5 / 90.5 mm	60 / 72 / 90 mm
Net weight	82 g	256 g
Approvals		
Approvals	CE, TUEV (IEC 62368-1), cCSAus, Cl.1 Div.2, NEC Cl.2, EAC	CE, TUEV (IEC 62368-1), cCSAus, Cl.1 Div.2, NEC Cl.2, EAC

Connection data		**Input**	**Output**	**Input**	**Output**
Connection system		PUSH IN	PUSH IN	PUSH IN	PUSH IN
Number of terminals		2 (L,N)	2 (+ / -)	2 (L,N)	4 (++ / –)
Wire cross-section, rigid min/max	mm^2	0.25 / 2.5	0.25 / 2.5	0.25 / 2.5	0.25 / 2.5
Wire cross-section, flexible min/max	mm^2	0.25 / 2.5	0.25 / 2.5	0.25 / 2.5	0.25 / 2.5
Wire cross-section, AWG/kcmil min/max		24 / 12	24 / 12	24 / 12	24 / 12
Note					

Ordering data

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

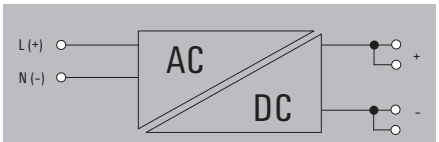
Type	**Qty.**	**Order No.**
PRO INSTA 30W 5V 6A	1	**2580210000**

Note

connectPower INSTA POWER

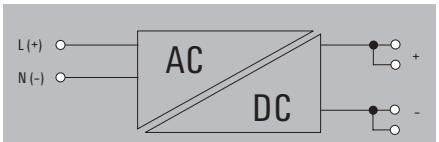
- 1-phase power supplies

PRO INSTA 30 W 12 V 2.6 A



Note polarity for DC connection

PRO INSTA 30 W 24 V 1.3 A



Note polarity for DC connection

Technical data

Input		
Rated input voltage	100 - 240 V AC / 120 - 340 V DC	100 - 240 V AC / 120 - 340 V DC
Input voltage range AC	85...264 V AC (derating at 100 V 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	0.5 A @ 230 V AC / 1.0 A @ 100 V AC
Frequency range AC	45...65 Hz	45...65 Hz
DC input voltage range	95...370 V DC	95...370 V DC
DC current consumption	0.2 A @ 370 V DC / 0.5 A @ 120 V DC	0.2 A @ 370 V DC / 0.5 A @ 120 V DC
Inrush current	max. 40 A	max. 40 A
Output		
Rated output voltage	12 V DC ± 1 %	24 V DC ± 1 %
Nominal output current for U_{nom}	2.6 A @ 55 °C	1.3 A @ 55 °C
Output voltage	16...9 V (adjustable via potentiometer on front)	22...28 V (adjustable via potentiometer on front)
Continous output current @ $U_{Nominal}$	2.6 A @ 55 °C, 1.625 A @ 55 °C	1.3 A @ 55 °C, 0.8 A @ 70 °C
Residual ripple, breaking spikes	< 50 mVss @ U_{Nenn}, Full Load	< 50 mVss @ U_{Nenn}, Full Load
Capacitive load	unrestricted	unrestricted
General data		
Degree of efficiency	85 %	86%
Power loss idling / nominal load	0.45 W	0.45 W
Power loss, nominal load	5.29 W	4.88 W
Protection against reverse voltages from the load	18...25 V DC	30...35 V DC
Depth x width x height	60 / 54 / 90 mm	60 / 54 / 90 mm
Net weight	192 g	192 g
Approvals		
Approvals	CE, TUEV (IEC 62368-1), cCSAus, Cl.1 Div.2, NEC Cl.2, EAC	CE, TUEV (IEC 62368-1), cCSAus, Cl.1 Div.2, NEC Cl.2, EAC

Connection data		**Input**	**Output**	**Input**	**Output**
Connection system		PUSH IN	PUSH IN	PUSH IN	PUSH IN
Number of terminals		2 (L,N)	4 (++ / –)	2 (L,N)	4 (++ / –)
Wire cross-section, rigid min/max	mm²	0.25 / 2.5	0.25 / 2.5	0.25 / 2.5	0.25 / 2.5
Wire cross-section, flexible min/max	mm²	0.25 / 2.5	0.25 / 2.5	0.25 / 2.5	0.25 / 2.5
Wire cross-section, AWG/kcmil min/max		24 / 12	24 / 12	24 / 12	24 / 12
Note					

Ordering data

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

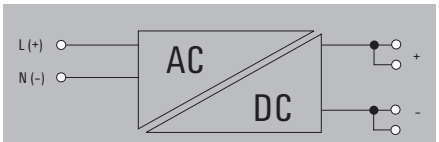
Type	**Qty.**	**Order No.**
PRO INSTA 30W 24V 1.3A	1	**2580190000**

Note

connectPower INSTA POWER

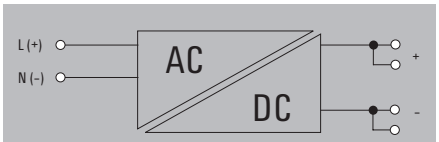
- 1-phase power supplies

PRO INSTA 60 W 12 V 5 A



Note polarity for DC connection

PRO INSTA 60 W 24 V 2.5 A



Note polarity for DC connection

Technical data

Input		
Rated input voltage	100 - 240 V AC / 120 - 340 V DC	100 - 240 V AC / 120 - 340 V DC
Input voltage range AC	85...264 V AC (derating at 100 V 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	0.7 A @ 230 V AC / 1.5 A @ 100 V AC
Frequency range AC	45...65 Hz	45...65 Hz
DC input voltage range	95...370 V DC	95...370 V DC
DC current consumption	0.25 A @ 370 V DC / 0.8 A @ 120 V DC	0.25 A @ 370 V DC / 0.8 A @ 120 V DC
Inrush current	max. 40 A	max. 40 A
Output		
Rated output voltage	12 V DC ± 1 %	24 V DC ± 1 %
Nominal output current for U_{nom}	5 A @ 55 °C	2.5 A @ 55 °C
Output voltage	16...9 V (adjustable via potentiometer on front)	22...28 V (adjustable via potentiometer on front)
Continous output current @ $U_{Nominal}$	5 A @ 55 °C, 3.75 A @ 70 °C	2.5 A @ 55 °C, 1.56 A @ 70 °C
Residual ripple, breaking spikes	< 50 mVss @ U_{Nenn}, Full Load	< 50 mVss @ U_{Nenn}, Full Load
Capacitive load	unrestricted	unrestricted
General data		
Degree of efficiency	86%	89%
Power loss idling / nominal load	0.42 W	0.44 W
Power loss, nominal load	8.4 W	6.6 W
Protection against reverse voltages from the load	18...25 V DC	30...35 V DC
Depth x width x height	60 / 72 / 90 mm	60 / 72 / 90 mm
Net weight	258 g	258 g
Approvals		
Approvals	CE, TUEV (IEC 62368-1), cCSAus, Cl.1 Div.2, NEC Cl.2, EAC	CE, TUEV (IEC 62368-1), cCSAus, Cl.1 Div.2, NEC Cl.2, EAC

Connection data		**Input**	**Output**	**Input**	**Output**
Connection system		PUSH IN	PUSH IN	PUSH IN	PUSH IN
Number of terminals		2 (L,N)	4 (++ / –)	2 (L,N)	4 (++ / –)
Wire cross-section, rigid min/max	mm²	0.25 / 2.5	0.25 / 2.5	0.25 / 2.5	0.25 / 2.5
Wire cross-section, flexible min/max	mm²	0.25 / 2.5	0.25 / 2.5	0.25 / 2.5	0.25 / 2.5
Wire cross-section, AWG/kcmil min/max		24 / 12	24 / 12	24 / 12	24 / 12
Note					

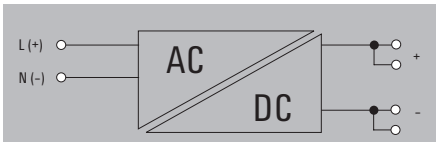
Ordering data

	Type	**Qty.**	**Order No.**	**Type**	**Qty.**	**Order No.**
	PRO INSTA 60W 12V 5A	1	**2580240000**	PRO INSTA 60W 24V 2.5A	1	**2580230000**
Note						

connectPower INSTA POWER

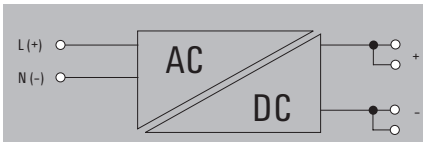
- 1-phase power supplies

PRO INSTA 90 W 24 V 3.8 A



Note polarity for DC connection

PRO INSTA 96 W 24 V 4 A



Note polarity for DC connection

Technical data

Input		
Rated input voltage	100 - 240 V AC / 120 - 340 V DC	100 - 240 V AC / 120 - 340 V DC
Input voltage range AC	85...264 V AC (derating at 100 V 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	1.2 A @ 230 V AC / 2.5 A @ 100 V AC
Frequency range AC	45...65 Hz	45...65 Hz
DC input voltage range	95...370 V DC	95...370 V DC
DC current consumption	0.4 A @ 370 V DC / 1.3 A @ 120 V DC	0.4 A @ 370 V DC / 1.35 A @ 120 V DC
Inrush current	max. 40 A	max. 40 A
Output		
Rated output voltage	24 V DC ± 1 %	24 V DC ± 1 %
Nominal output current for U_{nom}	3.8 A @ 55 °C	4 A @ 55 °C
Output voltage	22...28 V (adjustable via potentiometer on front)	22...28 V (adjustable via potentiometer on front)
Continous output current @ $U_{Nominal}$	3.8 A @ 55 °C, 2.38 A @ 70 °C	4 A @ 55 °C, 2.5 A @ 70 °C
Residual ripple, breaking spikes	< 50 mVss @ U_{Nenn}, Full Load	< 50 mVss @ U_{Nenn}, Full Load
Capacitive load	unrestricted	unrestricted
General data		
Degree of efficiency	87 %	87 %
Power loss idling / nominal load	0.45 W	0.45 W
Power loss, nominal load	11.7 W	12.48 W
Protection against reverse voltages from the load	30...35 V DC	30...35 V DC
Depth x width x height	60 / 90 / 90 mm	60 / 90 / 90 mm
Net weight	352 g	352 g
Approvals		
Approvals	CE, TUEV (IEC 62368-1), cCSAus, Cl.1 Div.2, NEC Cl.2, EAC	CE, TUEV (IEC 62368-1), cCSAus, Cl.1 Div.2, EAC

Connection data		**Input**	**Output**	**Input**	**Output**
Connection system		PUSH IN	PUSH IN	PUSH IN	PUSH IN
Number of terminals		2 (L,N)	4 (++ / –)	2 (L,N)	4 (++ / –)
Wire cross-section, rigid min/max	mm²	0.25 / 2.5	0.25 / 2.5	0.25 / 2.5	0.25 / 2.5
Wire cross-section, flexible min/max	mm²	0.25 / 2.5	0.25 / 2.5	0.25 / 2.5	0.25 / 2.5
Wire cross-section, AWG/kcmil min/max		24 / 12	24 / 12	24 / 12	24 / 12
Note					

Ordering data

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

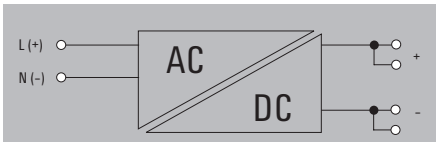
Type	**Qty.**	**Order No.**
PRO INSTA 96W 24V 4A	1	**2580260000**

Note

connectPower INSTA POWER

- 1-phase power supplies

PRO INSTA 96 W 48 V 2 A



Note polarity for DC connection

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)
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	56...35 V (adjustable via potentiometer on front)
Continous output current @ $U_{Nominal}$	2 A @ 55 °C, 1.25 A @ 70 °C
Residual ripple, breaking spikes	< 50 mVss @ U_{Nenn}, Full Load
Capacitive load	unrestricted
General data	
Degree of efficiency	89%
Power loss idling / nominal load	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	CE, TUEV (IEC 62368-1), cCSAus, Cl.1 Div.2, EAC

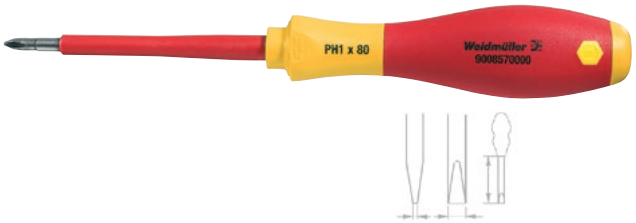
Connection data		**Input**	**Output**
Connection system		PUSH IN	PUSH IN
Number of terminals		2 (L,N)	4 (++ / –)
Wire cross-section, rigid min/max	mm²	0.25 / 2.5	0.25 / 2.5
Wire cross-section, flexible min/max	mm²	0.25 / 2.5	0.25 / 2.5
Wire cross-section, AWG/kcmil min/max		24 / 12	24 / 12
Note			

Ordering data

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

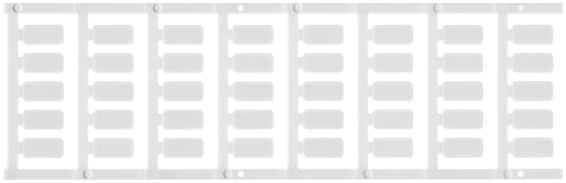
Note

Small screwdriver



Type	Blade type	Size/AF	a	b	c	Order No.
SDIS 0.5X3.0X100	B		0.5	3	100	**9008380000**

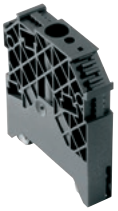
Markers



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**

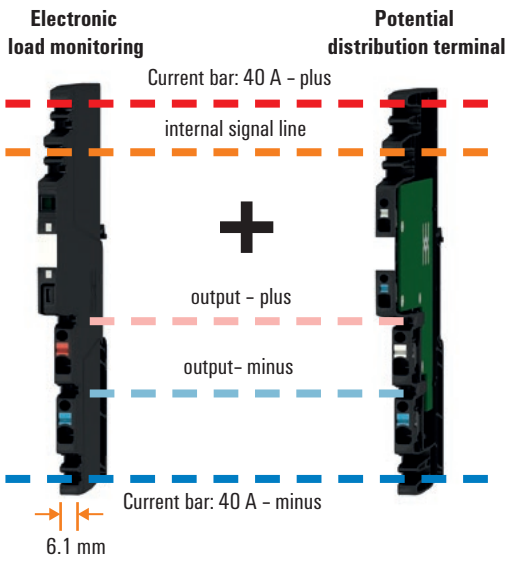
Electronic load monitoring

Control current distribution further developed

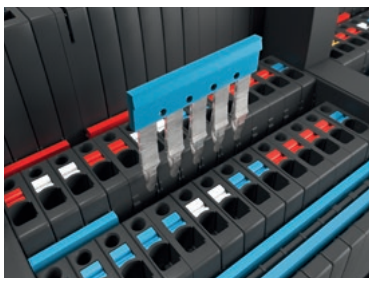
Load monitoring and potential distribution in one overall solution

New ways in the control current distribution increase the efficiency in the operation of machines and plants. The combination of load monitoring and potential distribution terminals saves up to 50 % space and up to 20 % wiring costs, while the free combinability of numerous single-channel and four-channel variants optimizes material costs. Benefit from the advantages of a modular system that offers you high flexibility and adapts optimally to any application.

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



Intelligent protection of DC loads

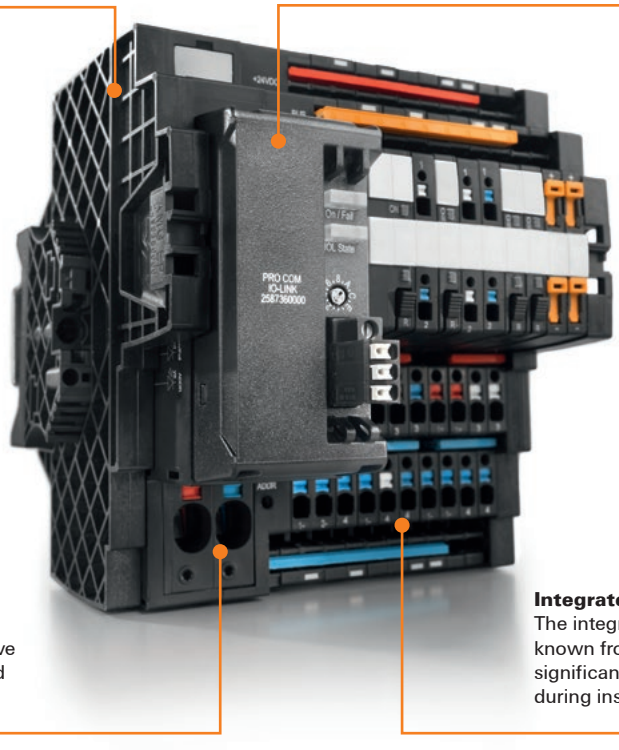
topGUARD load monitoring system with communication via IO-LINK

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 IODD file. The module can be used for PROtop power supplies as well as for topGUARD load monitoring.

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.

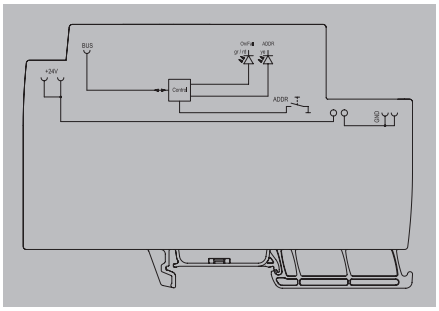


Modular and innovative
The modular concept enables custom-fit solutions. The first of its kind, voltage-adaptive class 2 load monitoring allows the continued use of 18 to 30 V DC operating voltage.

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 – power-feed module

TGD FIM-C



Technical data

Input	
Input fuse (internal)	No
DC input voltage range	18...30 V DC
Rated input voltage	24 V DC
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	Address is assigned, Addresses being assigned (slow flashing, 1.5 Hz), Address error (fast flashing, 13 Hz)
LED green/red	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)
Connection data	
Number of terminals	2 (+,–)
Wire cross-section, AWG/kcmil min/max	18...6
Wire cross-section, flexible min/max	0.75...16 mm²
Wire cross-section, rigid min/max	0.75...10 mm²
Screwdriver blade	1.2 x 6.5
Approvals	
Approvals	CE, UL 61010 (in preparation)
Note	

Ordering data

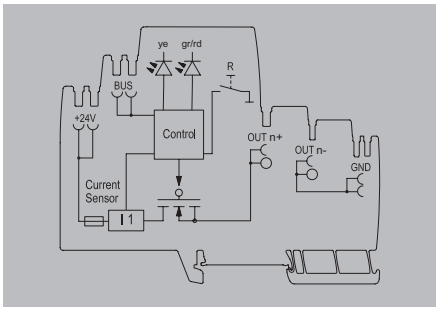
Rated current	Type	Qty.	Order No.
	TGD FIM-C	1	**2625000000**
Note			

Accessories

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

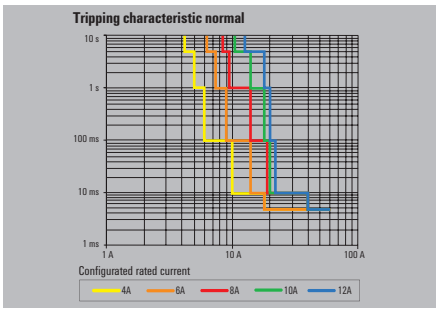
topGUARD – load monitoring adjustable

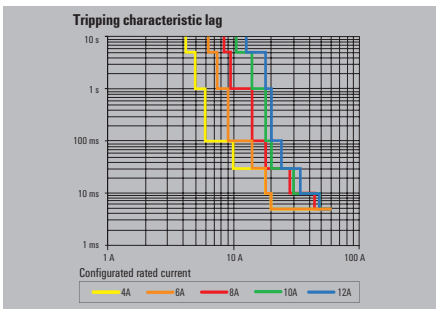
TGD ELM-12



Technical data

Input	
Input fuse (internal)	Yes
DC input voltage range	18...30 V DC
Rated input voltage	24 V DC
max. admissible residual ripple at the input	100 mVpp
Output	
Connection system	PUSH IN
Triggering characteristic	see characteristic curve
Adjustable range	4-12 A
adjustable rated current	Yes
Capacitive load	20,000 µF
Function key	
Function key	Activation time < 3s, Reset, ON
General data	
Relay to activate the output	No
Protection degree	IP20
Surge protection input, output, bus	Suppressor diode
Overvoltage category	III
Signalling	
Yellow LED	Address is assigned, Address is being assigned (flashing)
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	...
Wire cross-section, flexible min/max	0.14...2.5 mm²
Wire cross-section, rigid min/max	0.14...2.5 mm²
Screwdriver blade	0.6 x 3.5
Approvals	
Approvals	CE, UL 61010 (in preparation), UL 2367 (in preparation)
Note	





Ordering data

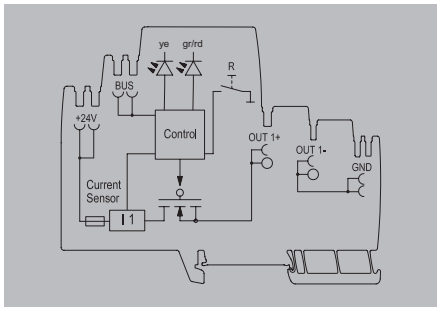
Rated current	Type	Qty.	Order No.
12.00 A	TGD ELM-12	1	**2624990000**
Note			

Accessories

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

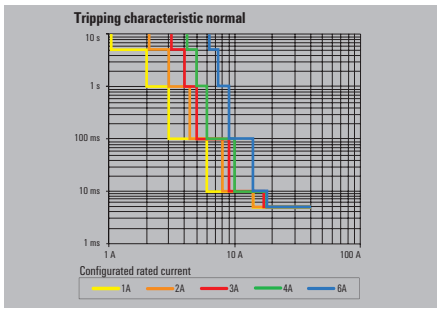
topGUARD – Adjustable load monitoring

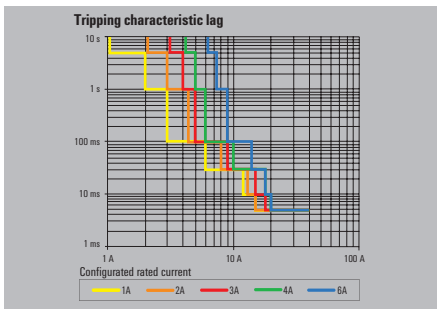
TGD ELM-6



Technical data

Input	
Input fuse (internal)	Yes
DC input voltage range	18...30 V DC
Rated input voltage	24 V DC
max. admissible residual ripple at the input	100 mVpp
Output	
Connection system	PUSH IN
Triggering characteristic	see characteristic curve
Adjustable range	1- 6 A
Capacitive load	15,000 µF
adjustable rated current	Yes
Function key	
Function key	Activation time < 3s, Reset, ON
General data	
Relay to activate the output	No
Protection degree	IP20
Surge protection input, output, bus	Suppressor diode
Overvoltage category	III
Signalling	
Yellow LED	Address is assigned, Address is being assigned (flashing)
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	...
Wire cross-section, flexible min/max	0.14...2.5 mm²
Wire cross-section, rigid min/max	0.14...2.5 mm²
Screwdriver blade	0.6 x 3.5
Approvals	
Approvals	CE, UL 61010 (in preparation), UL 2367 (in preparation)
Note	





Ordering data

Rated current	
	6.00 A
Note	

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

Accessories

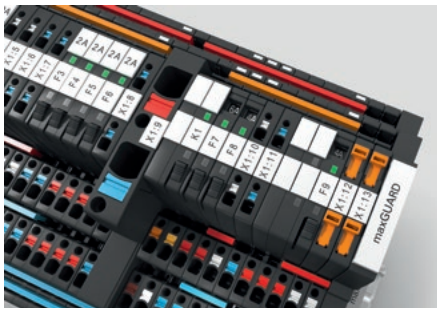
Note	

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

High level of modularity for optimal adaptability
Customised solutions made simple with maxGUARD

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.



Sophisticated arrangement of connections and markers ensures clarity

Markers for current strength

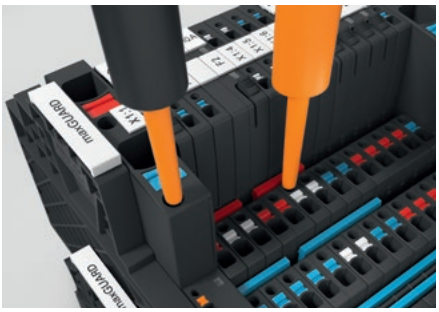
Continuous marker channel for equipment ID

Supply terminal (positive): 16 mm²

Supply terminal (negative): 16 mm²

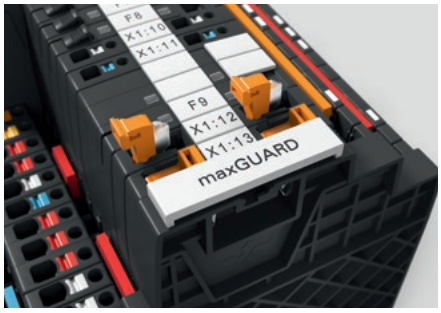
Reset input and alarm output for connecting to the PLC

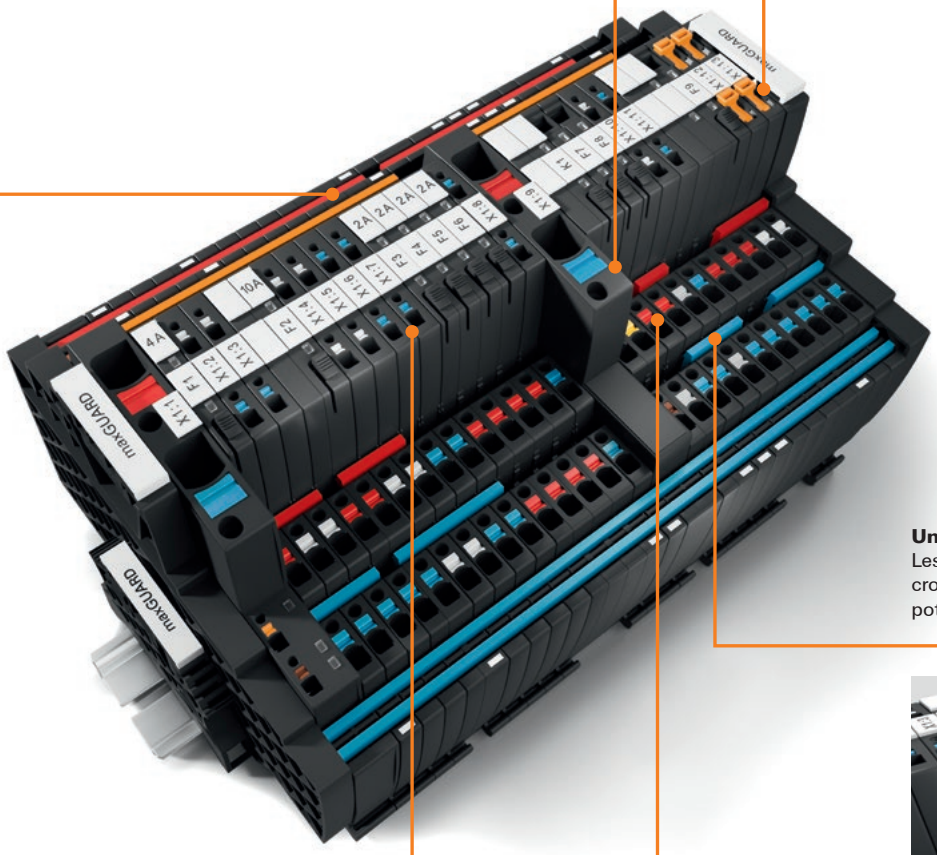
Integrated test point
Consistently integrated test points in the maxGUARD control voltage distribution's input and output speed up troubleshooting operations.



New approvals: Marine, Class 2, Ex

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 %

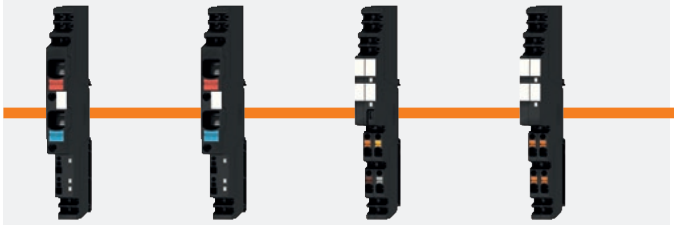
Particularly space-saving
Electronic load monitors and potential distributors with a 6.1 mm pitch.

Space saving up to 50 %

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

Supply terminals, control and alarm modules



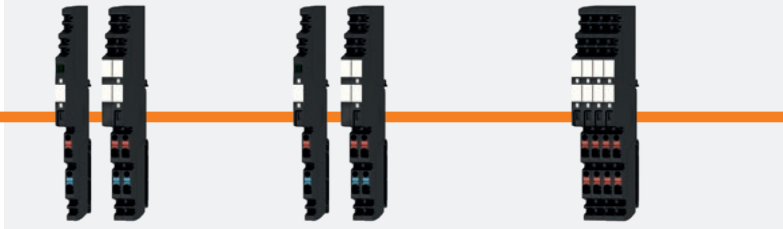
Supply terminal
16 mm²
Passive

Supply terminal
16 mm²
With alarm and reset function

Control module
Alarm
Reset
I>90 %
ON/OFF

Alarm module
Potential-free contacts for alarm
I>90 %

Electronic load monitoring



Fixed-value modules
1 / 2 / 4 / 6 A
6.1 mm housing
8 A / 10 A
12.2 mm housing

Adjustable modules
1 - 2 - 3 - 4 - 6 A
6.1 mm housing
4 - 6 - 8 - 10 - 12 A
12.2 mm housing

Load monitoring (4-channel)
2-2-2-2 A, 4-4-4-4 A
6-6-6-6 A, 2-2-4-4 A
2-2-6-6 A
Monitored individually
Negative potential thanks to use of AMG XMD potential distribution terminals
24.4 mm housing

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

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

Load monitoring (fixed value)

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

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

Load monitoring adjustable

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

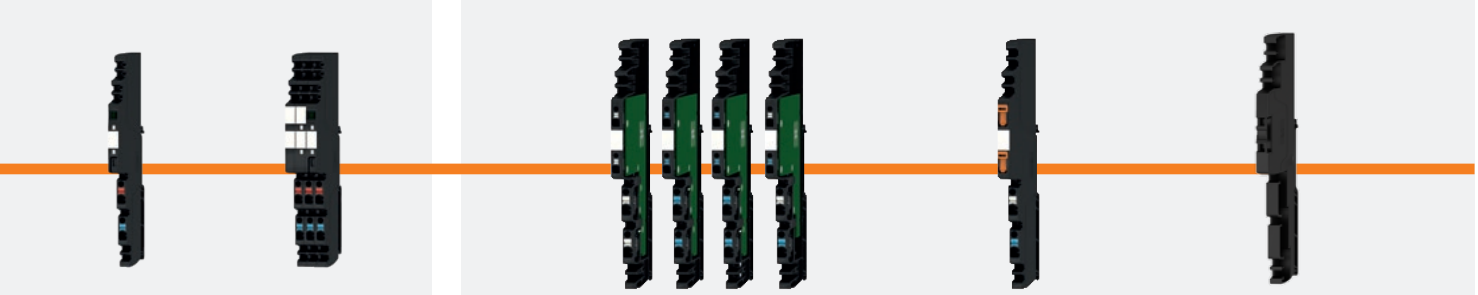
Type	Order No.
AMG ELM-6	2080360000
AMG ELM-6 EX	2082000000
AMG ELM-12	2080410000
AMG ELM-12 EX	2082010000

Load monitoring, 4 channels

4-channel electronic load monitoring with fixed triggering current
(without I >90% function)

Type	Order No.
AMG ELM-Q2222	2080750000
AMG ELM-Q2244	2081650000
AMG ELM-Q2266	2081820000
AMG ELM-Q4444	2080880000
AMG ELM-Q6666	2080920000

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

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

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)

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

Potential distributor

Flexible application through various potential distributor.

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**

End plate and Separation plate

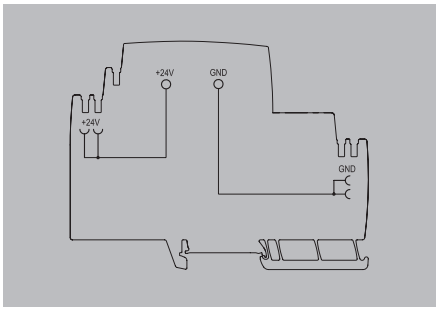
End plate for mechanical stabilization.
Separation plate for logical subdivision.

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

maxGUARD – power-feed module

Passive power-feed module

AMG FIM-0



Technical data

Input	
Input fuse (internal)	No
DC input voltage range	18...30 V DC
Rated input voltage	24 V DC
max. admissible residual ripple at the input	100 mVpp
General data	
Protection degree	IP20
Control inputs	No
Overvoltage category	III
Connection data	
Number of terminals	2 (+,–)
Wire cross-section, AWG/kcmil min/max	18...6
Wire cross-section, flexible min/max	0.75...16 mm²
Wire cross-section, rigid min/max	0.75...10 mm²
Screwdriver blade	1.2 x 6.5
Approvals	
Approvals	CE; cULus; TUEV; EAC
Note	

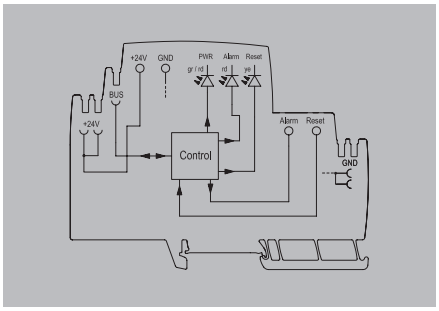
Ordering data

Rated current			
	Type	**Qty.**	**Order No.**
	AMG FIM-0	1	**2081870000**
Note			

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
Overvoltage 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
Wire cross-section, flexible min/max	0.75…16 mm²
Wire cross-section, rigid min/max	0.75…10 mm²
Screwdriver blade	1.2 x 6.5
Approvals	
Approvals	CE; cULus; TUEV; EAC
Note	

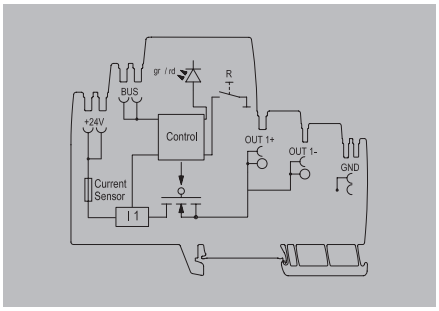
Ordering data

Rated current	Type	Qty.	Order No.
	AMG FIM-C	1	2081880000
Note			

maxGUARD – load monitoring (fixed value)

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

AMG ELM - xF

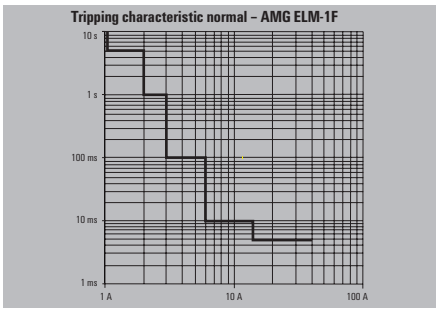


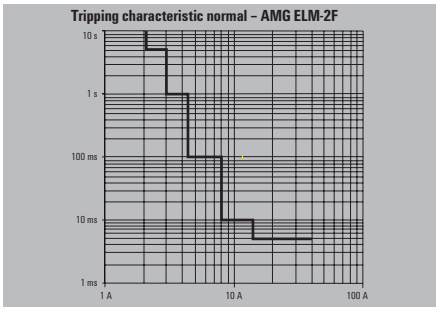
Technical data

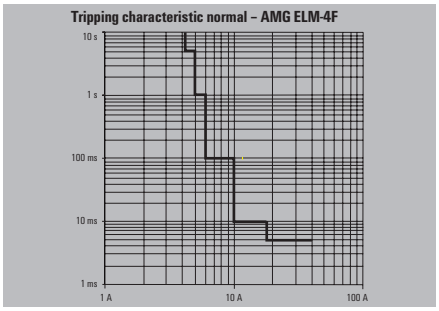
Input	
Input fuse (internal)	Yes
DC input voltage range	18...30 V DC
Rated input voltage	24 V DC
Current consumption (idle) / Current consumption (full load)	25 mA / I_{OUT} +30 mA
max. admissible residual ripple at the input	100 mVpp
Output	
Connection system	PUSH IN
Triggering characteristic	see characteristic curve
Switch-on delay	1 s
Capacitive load	2080420000: 10,000 µF; 2080480000: 10,000 µF; 2080490000: 10,000 µF; 2080500000: 15,000 µF

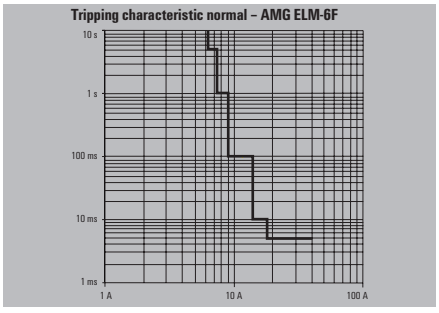
Function key			
LED initial state	LED green, in operation	LED flashing red, load monitoring has triggered (disconnected)	LED red (permanently lit)
Pressing the button	> 0.1 to 2 s (manual disconnect)	> 0.1 to 2 s (confirm and reset)	> 0.1 to 2 s (restart)
LED, subsequent state	Red LED	Red LED	LED green
Output, subsequent state	switched off	switched off	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
Wire cross-section, flexible min/max	0.14...2.5 mm²
Wire cross-section, rigid min/max	0.14...2.5 mm²
Screwdriver blade	0.6 x 3.5
Approvals	
Approvals	CE; cULus; EAC; TUEV
Note	









Ordering data

Rated current	Type	Qty.	Order No.
1.00 A	AMG ELM-1F	1	**2080420000**
2.00 A	AMG ELM-2F	1	**2080480000**
4.00 A	AMG ELM-4F	1	**2080490000**
6.00 A	AMG ELM-6F	1	**2080500000**
Note			

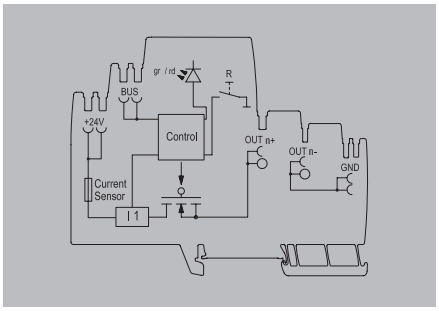
Accessories

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

maxGUARD – load monitoring (fixed value)

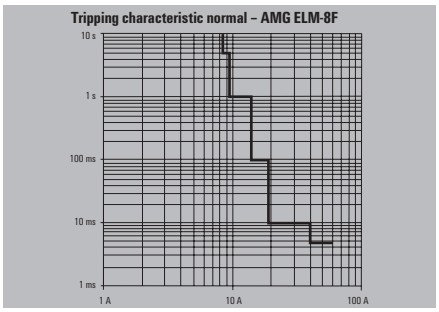
Electronic load monitoring with fixed rated current (without I > 90 % pre warning > 90 %)

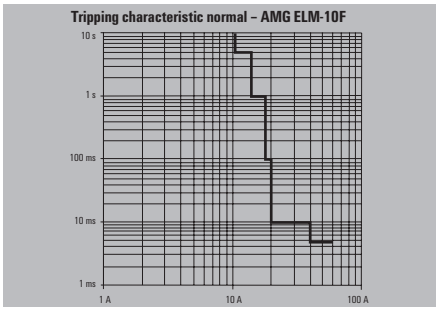
AMG ELM - xF



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	2080600000: 15,000 µF; 2080650000: 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	Red LED	LED green
Output, subsequent state	switched off	switched off	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	4 (++ / –)		
Wire cross-section, AWG/kcmil min/max	26...12		
Wire cross-section, flexible min/max	0.14...2.5 mm²		
Wire cross-section, rigid min/max	0.14...2.5 mm²		
Screwdriver blade	0.6 x 3.5		
Approvals			
Approvals	CE; cULus; EAC; TUEV		
Note			





Ordering data

Rated current	Type	Qty.	Order No.
8.00 A	AMG ELM-8F	1	2080600000
10.00 A	AMG ELM-10F	1	2080650000
Note			

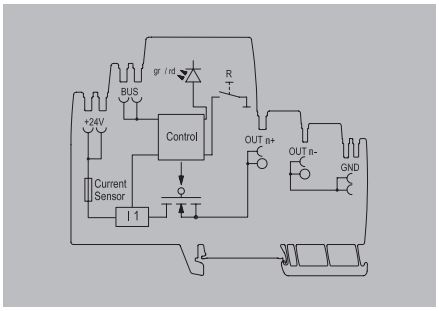
Accessories

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

maxGUARD – load monitoring (fixed value), Class 2

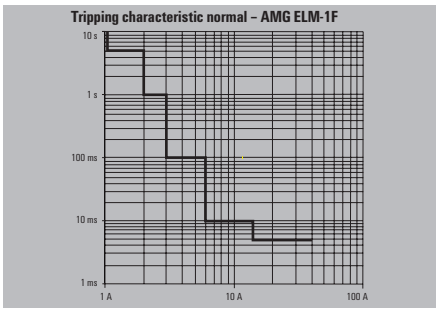
Electronic load monitoring with fixed rated current (without I > 90 % pre warning)
- Class 2 Approval

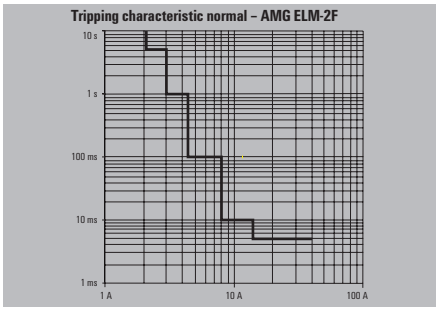
AMG ELM - xF CL2

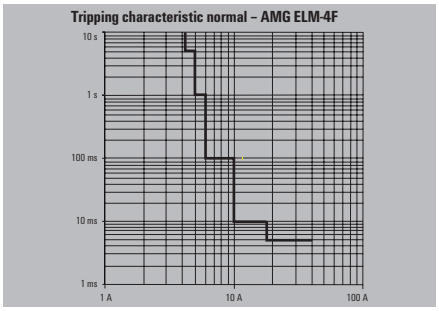


Technical data

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	Red LED	LED green
Output, subsequent state	switched off	switched off	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		
Wire cross-section, flexible min/max	0.14...2.5 mm²		
Wire cross-section, rigid min/max	0.14...2.5 mm²		
Screwdriver blade	0.6 x 3.5		
Approvals			
Approvals	CE, cURus, TUEV, UL1310 Cl.2; EAC		
Note			







Ordering data

	Type	Qty.	Order No.
1.00 A	AMG ELM-1F CL2	1	**2491270000**
2.00 A	AMG ELM-2F CL2	1	**2491280000**
4.00 A	AMG ELM-4F CL2	1	**2491290000**
Note			

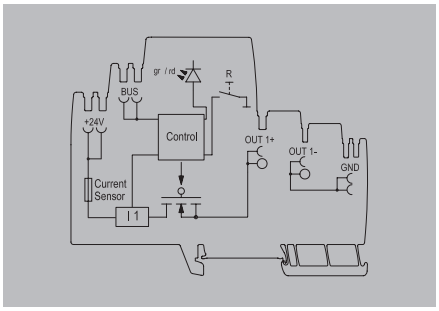
Accessories

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

maxGUARD – load monitoring adjustable

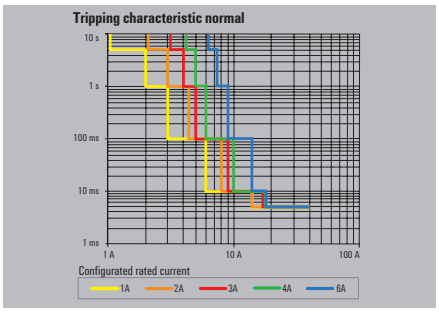
Electronic load monitoring with adjustable triggering current and triggering characteristic

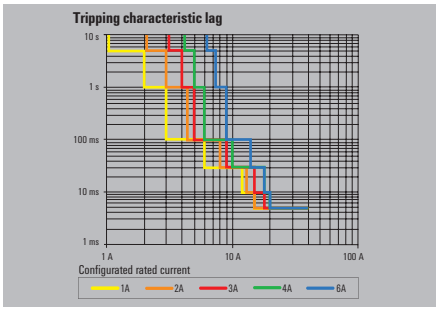
AMG ELM-6



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- 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	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	Red LED	LED green
Output, subsequent state	switched off	switched off	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	2 (+ / -)		
Wire cross-section, AWG/kcmil min/max	26...12		
Wire cross-section, flexible min/max	0.14...2.5 mm²		
Wire cross-section, rigid min/max	0.14...2.5 mm²		
Screwdriver blade	0.6 x 3.5		
Approvals			
Approvals	CE; cULus; EAC; TUEV		
Note			





Ordering data

Rated current	
	6.00 A
Note	

Type	Qty.	Order No.
AMG ELM-6	1	**2080360000**

Accessories

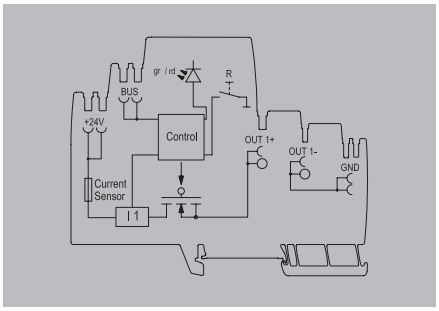
Note	

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

maxGUARD – load monitoring adjustable

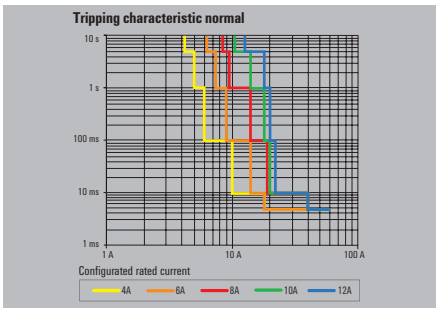
Electronic load monitoring with adjustable trigger current and characteristic (with I > 90 % pre warning > 90 %)

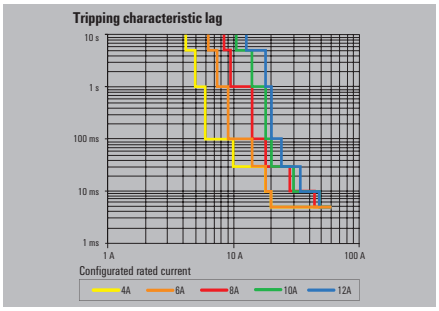
AMG ELM-12



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	4-12 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	Red LED	LED green
Output, subsequent state	switched off	switched off	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		
Wire cross-section, flexible min/max	0.14...2.5 mm²		
Wire cross-section, rigid min/max	0.14...2.5 mm²		
Screwdriver blade	0.6 x 3.5		
Approvals			
Approvals	CE; cULus; EAC; TUEV		
Note			





Ordering data

Rated current	
	12.00 A
Note	

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

Accessories

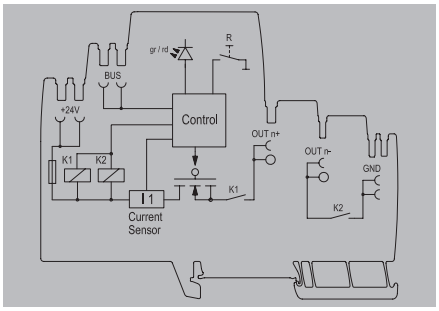
Note	

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

maxGUARD – load monitoring with relay

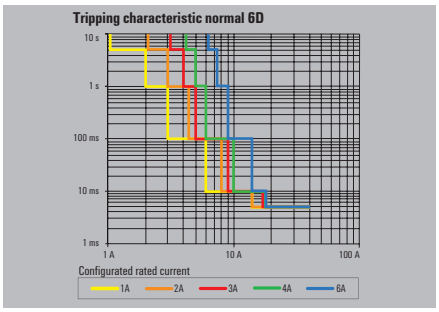
Electronic load monitoring with 2-pole output relay for all-pole load disconnection; triggering current and triggering characteristic adjustable.

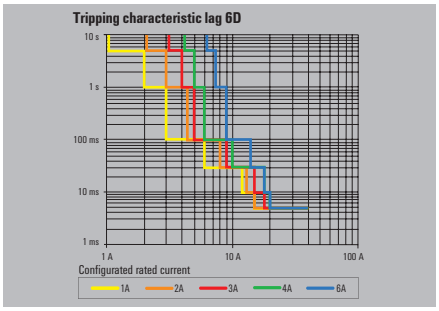
AMG ELM – adjustable with output relay

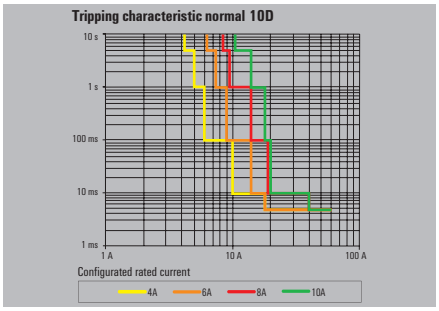


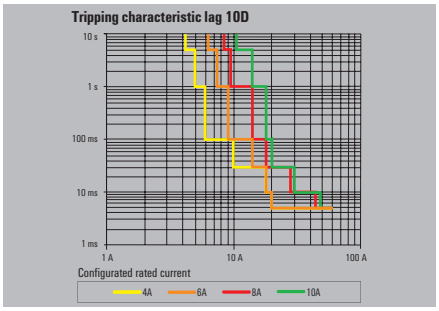
Technical data

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	Red LED	LED green
Output, subsequent state	switched off	switched off	switched on
General data			
Relay to activate the output	Yes		
Protection degree	IP20		
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...12		
Wire cross-section, flexible min/max	0.14...2.5 mm²		
Wire cross-section, rigid min/max	0.14...2.5 mm²		
Screwdriver blade	0.6 x 3.5		
Approvals			
Approvals	ABS; BURVER; CE; cULus; DNVGL; EAC; LLOYDSREG; RINA; TUEV; EAC		
Note			









Ordering data

Rated current	Type	Qty.	Order No.
6.00 A	AMG ELM-6D CO	1	2082440000
10.00 A	AMG ELM-10D CO	1	2082470000
Note			

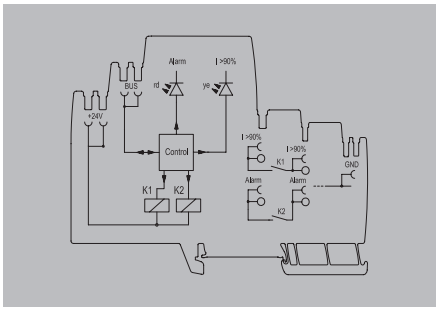
Accessories

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

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
Wire cross-section, flexible min/max	0.14...2.5 mm²
Wire cross-section, rigid min/max	0.14...2.5 mm²
Screwdriver blade	0.6 x 3.5
Approvals	
Approvals	CE; cULus; TUEV; EAC
Note	

Ordering data

Rated current	Type	Qty.	Order No.
	AMG AM	1	**2081890000**
Note			

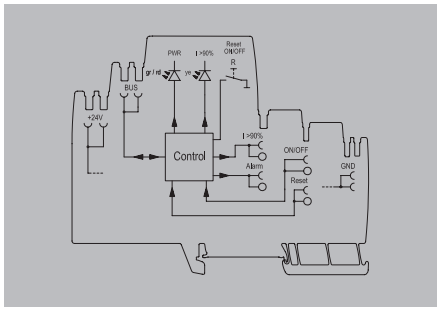
Accessories

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% 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
Wire cross-section, flexible min/max	0.14...2.5 mm²
Wire cross-section, rigid min/max	0.14...2.5 mm²
Screwdriver blade	0.6 x 3.5
Approvals	
Approvals	CE; cULus; EAC; TUEV
Note	

Ordering data

Rated current	Type	Qty.	Order No.
	AMG CM	1	2081900000
Note			

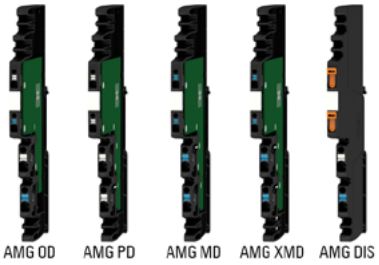
Accessories

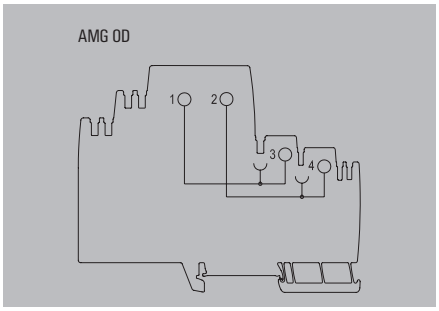
Plug-in cross-connection	Type	Qty.	Order No.
50-pole	ZQV 4N/50	5	1528130000
50-pole / red	ZQV 4N/50 RD	5	2460730000
50-pole / blue	ZQV 4N/50 BL	5	1528240000
2-pole	ZQV 4N/2	60	1527930000
2-pole/ red	ZQV 4N/2 RD	60	2460450000
2-pole / blue	ZQV 4N/2 BL	60	1528040000
Note			

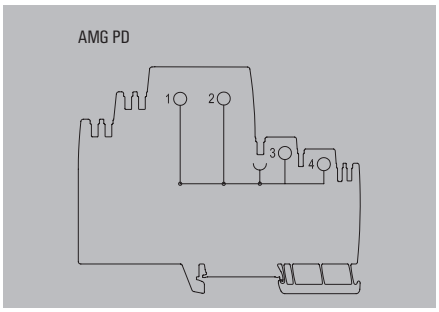
maxGUARD – Potential distributor

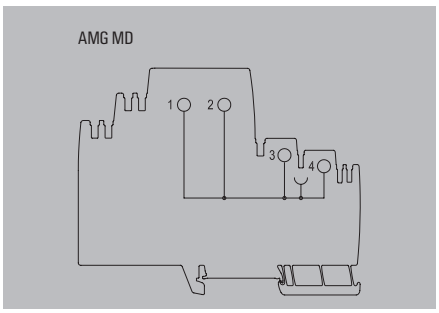
Potential distribution in combination with the electronic load monitoring.

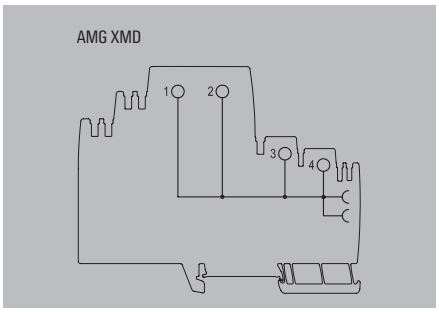
AMG

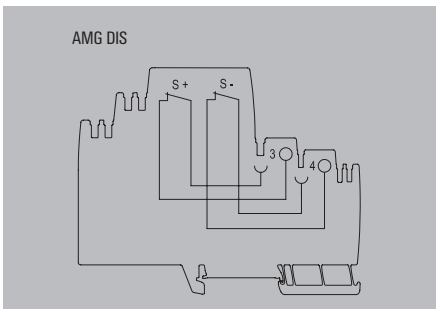












Technical data

General data	
Protection degree	IP20
Total current load per potential	2122910000: 12 A; 2122920000: 12 A; 2122930000: 12 A; 2122940000: 24 A; 2123050000: 12 A
Current load per contact point	12 A
Connection data	
Connection system	PUSH IN
Number of terminals	4 (++ / –), 2 x 1.5 mm², 2 x 2.5 mm²
Wire cross-section, AWG/kcmil min/max	26...12
Wire cross-section, flexible min/max	0.14...2.5 mm²
Wire cross-section, rigid min/max	0.14...2.5 mm²
Screwdriver blade	0.6 x 3.5
Approvals	
Approvals	CE; cULus; EAC; TUEV
Note	

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

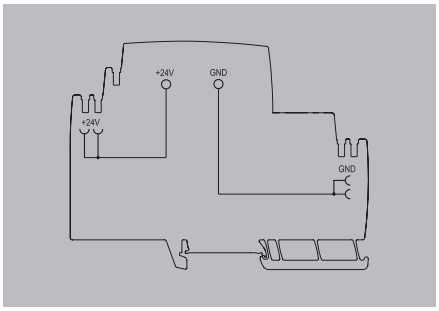
Plug-in cross-connection	Type	Qty.	Order No.
50-pole	ZQV 4N/50	5	1528130000
50-pole / red	ZQV 4N/50 RD	5	2460730000
50-pole / blue	ZQV 4N/50 BL	5	1528240000
2-pole	ZQV 4N/2	60	1527930000
2-pole/ red	ZQV 4N/2 RD	60	2460450000
2-pole / blue	ZQV 4N/2 BL	60	1528040000

Note

maxGUARD – power-feed module

Passive power-feed module

AMG FIM-0 Ex



Technical data

Input	
Input fuse (internal)	No
DC input voltage range	18...30 V DC
Rated input voltage	24 V DC
max. admissible residual ripple at the input	100 mVpp
General data	
Protection degree	IP20
Control inputs	No
Overvoltage category	III
Connection data	
Number of terminals	2 (+,–)
Wire cross-section, AWG/kcmil min/max	18...6
Wire cross-section, flexible min/max	0.75...16 mm²
Wire cross-section, rigid min/max	0.75...10 mm²
Screwdriver blade	1.2 x 6.5
Approvals	
Approvals	ABS; BURVER; CE; cULus; cULus C1D2; ATEX; DNVGL; EAC; IECEX; LLOYDSREG; RINA; TUEV
Note	

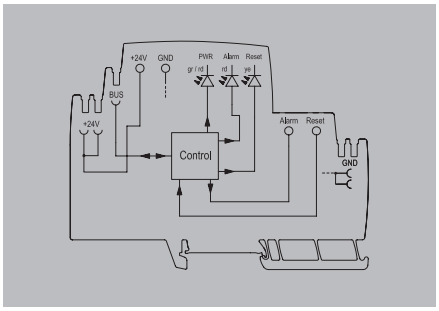
Ordering data

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

maxGUARD – power-feed module

Active power-feed module with reset and alarm function

AMG FIM-C Ex



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
Overvoltage 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
Wire cross-section, flexible min/max	0.75…16 mm²
Wire cross-section, rigid min/max	0.75…10 mm²
Screwdriver blade	1.2 x 6.5
Approvals	
Approvals	ABS; BURVER; CE; cULus; cULus C1D2; ATEX; DNVGL; EAC; IECEX; LLOYDSREG; RINA; TUEV
Note	

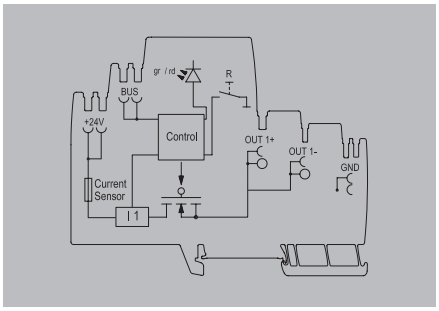
Ordering data

Rated current			
Type		**Qty.**	**Order No.**
AMG FIM-C EX		1	**2082540000**
Note			

maxGUARD – load monitoring (fixed value)

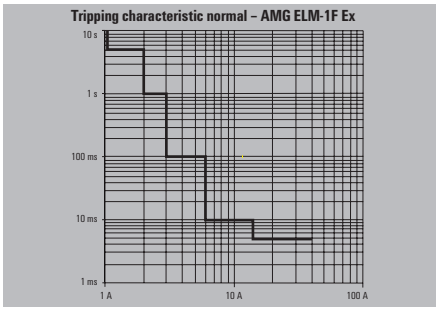
Electronic load monitoring with fixed current (without I > 90% function)

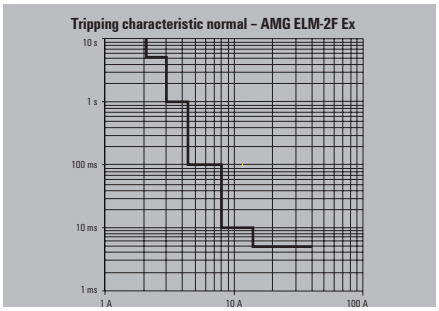
AMG ELM - xF Ex

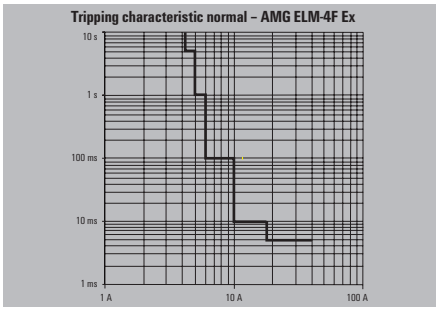


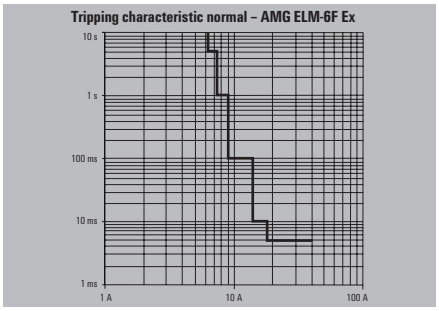
Technical data

Input			
Input fuse (internal)	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	2082040000: 10,000 µF; 2082050000: 10,000 µF; 2082060000: 10,000 µF; 2082310000: 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	Red LED	LED green
Output, subsequent state	switched off	switched off	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		
Wire cross-section, flexible min/max	0.14...2.5 mm²		
Wire cross-section, rigid min/max	0.14...2.5 mm²		
Screwdriver blade	0.6 x 3.5		
Approvals			
Approvals	ABS; BURVER; CE; cULus; cULus C1D2; ATEX; DNVGL; EAC; IECEX; LLOYDSREG; RINA; TUEV		
Note			









Ordering data

Rated current	Type	Qty.	Order No.
1.00 A	AMG ELM-1F EX	1	**2082040000**
2.00 A	AMG ELM-2F EX	1	**2082050000**
4.00 A	AMG ELM-4F EX	1	**2082060000**
6.00 A	AMG ELM-6F EX	1	**2082310000**
Note			

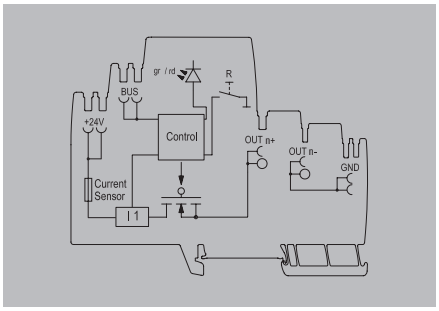
Accessories

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

maxGUARD – load monitoring (fixed value)

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

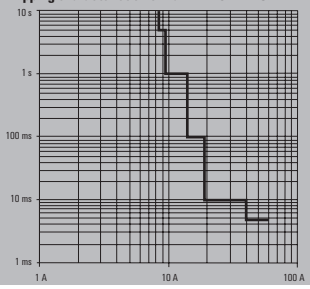
AMG ELM - xF Ex



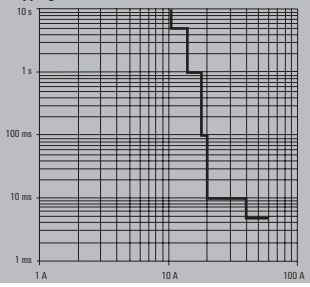
Technical data

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		
Switch-on delay	1 s		
Capacitive load	2082320000: 15,000 µF; 2082430000: 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	Red LED	LED green
Output, subsequent state	switched off	switched off	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	4 (++ / –)		
Wire cross-section, AWG/kcmil min/max	26...12		
Wire cross-section, flexible min/max	0.14...2.5 mm²		
Wire cross-section, rigid min/max	0.14...2.5 mm²		
Screwdriver blade	0.6 x 3.5		
Approvals			
Approvals	ABS; BURVER; CE; cULus; cULus C1D2; ATEX; DNVGL; EAC; IECEX; LLOYDSREG; RINA; TUEV		
Note			

Tripping characteristic normal – AMG ELM-8F Ex



Tripping characteristic normal – AMG ELM-10F Ex



Ordering data

Rated current	Type	Qty.	Order No.
8.00 A	AMG ELM-8F EX	1	**2082320000**
10.00 A	AMG ELM-10F EX	1	**2082430000**
Note			

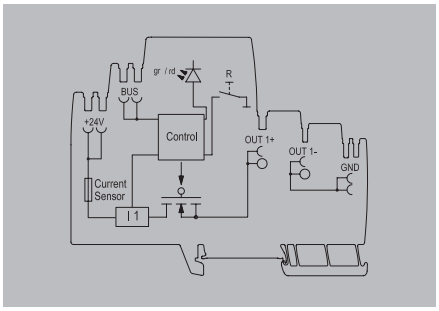
Accessories

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

maxGUARD – load monitoring adjustable

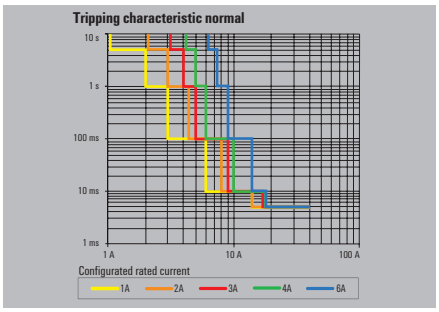
Electronic load monitoring with adjustable triggering current and triggering characteristic

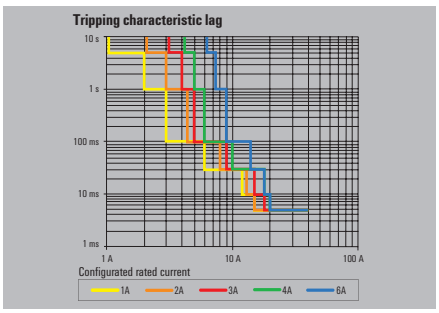
AMG ELM-6 Ex



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	1- 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	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	Red LED	LED green
Output, subsequent state	switched off	switched off	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	2 (+ / -)		
Wire cross-section, AWG/kcmil min/max	26...12		
Wire cross-section, flexible min/max	0.14...2.5 mm²		
Wire cross-section, rigid min/max	0.14...2.5 mm²		
Screwdriver blade	0.6 x 3.5		
Approvals			
Approvals	ABS; BURVER; CE; cULus; cULus C1D2; ATEX; DNVGL; EAC; IECEX; LLOYDSREG; RINA; TUEV		
Note			





Ordering data

Rated current	
	6.00 A
Note	

Type	Qty.	Order No.
AMG ELM-6 EX	1	**2082000000**

Accessories

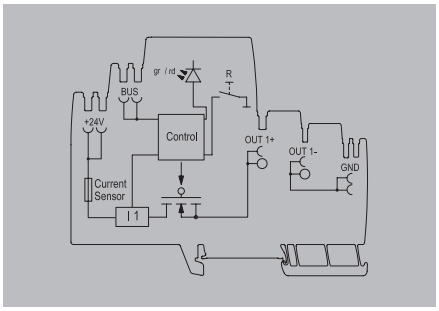
Note	

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

maxGUARD – load monitoring adjustable

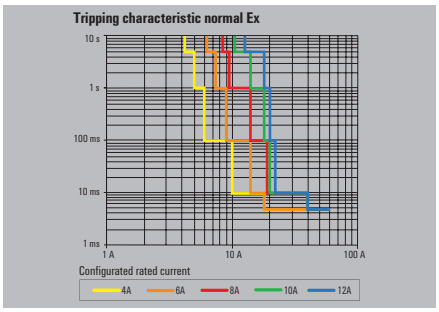
Electronic load monitoring with adjustable trigger current and characteristic (with I > 90 % pre warning)

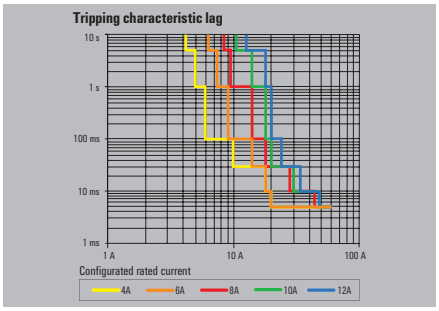
AMG ELM-12 Ex



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	4-12 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	Red LED	LED green
Output, subsequent state	switched off	switched off	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		
Wire cross-section, flexible min/max	0.14...2.5 mm²		
Wire cross-section, rigid min/max	0.14...2.5 mm²		
Screwdriver blade	0.6 x 3.5		
Approvals			
Approvals	ABS; BURVER; CE; cULus; cULus C1D2; ATEX; DNVGL; EAC; IECEX; LLOYDSREG; RINA; TUEV		
Note			





Ordering data

Rated current	
	12.00 A
Note	

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

Accessories

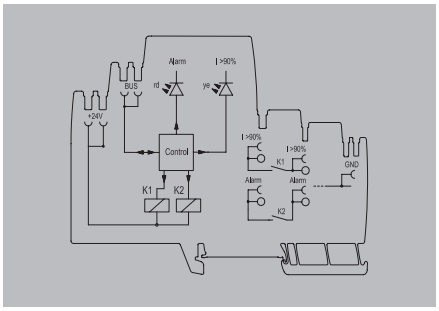
Note	

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

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
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
Wire cross-section, flexible min/max	0.14...2.5 mm²
Wire cross-section, rigid min/max	0.14...2.5 mm²
Screwdriver blade	0.6 x 3.5
Approvals	
Approvals	ABS; BURVER; CE; cULus; DNVGL; EAC; LLOYDSREG; RINA; TUEV
Note	

Ordering data

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

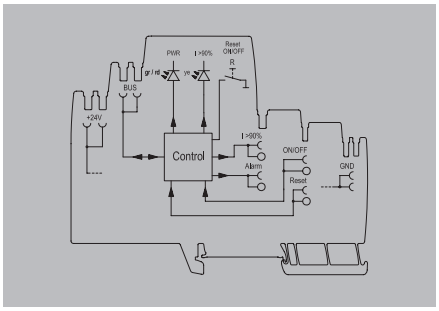
Accessories

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
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
Wire cross-section, flexible min/max	0.14...2.5 mm²
Wire cross-section, rigid min/max	0.14...2.5 mm²
Screwdriver blade	0.6 x 3.5
Approvals	
Approvals	ABS; BURVER; CE; cULus; cULus C1D2; ATEX; DNVGL; EAC; IECEX; LLOYDSREG; RINA; TUEV
Note	

Ordering data

Rated current	Type	Qty.	Order No.
	AMG CM EX	1	**2083360000**
Note			

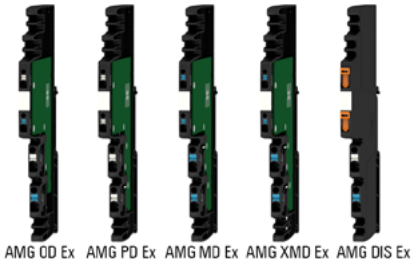
Accessories

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			

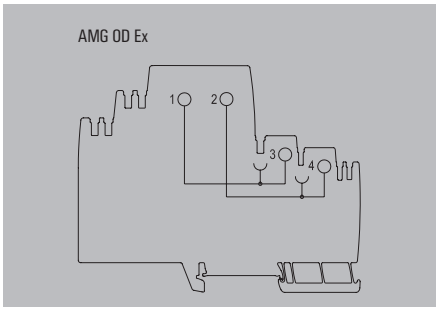
maxGUARD – Potential distributor

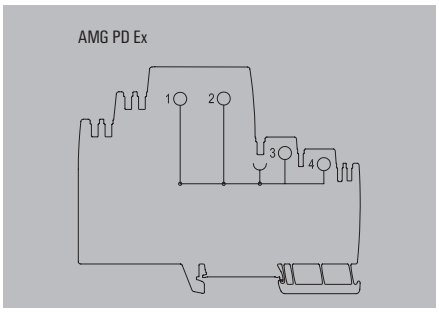
Potential distribution in combination with the electronic load monitoring.

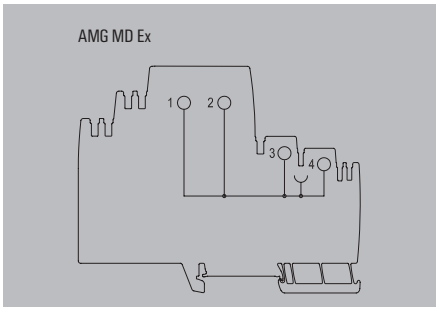
AMG

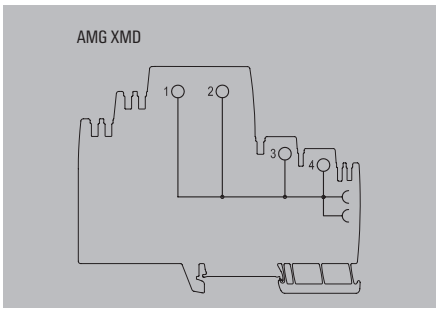


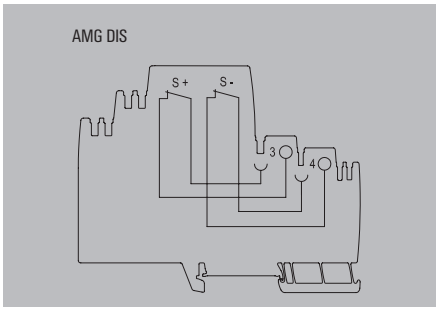
AMG OD Ex AMG PD Ex AMG MD Ex AMG XMD Ex AMG DIS Ex











Technical data

General data	
Protection degree	IP20
Total current load per potential	2495090000: 12 A; 2495070000: 12 A; 2495040000: 12 A; 2495080000: 24 A; 2495100000: 12 A
Current load per contact point	12 A
Connection data	
Connection system	PUSH IN
Number of terminals	4 (++ / –), 2 x 1.5 mm², 2 x 2.5 mm²
Wire cross-section, AWG/kcmil min/max	26...12
Wire cross-section, flexible min/max	0.14...2.5 mm²
Wire cross-section, rigid min/max	0.14...2.5 mm²
Screwdriver blade	0.6 x 3.5
Approvals	
Approvals	ABS; BURVER; CE; cULus; cULusEX; DEMKOATEX; DNVGL; EAC; IECEXULD; LLOYDSREG; RINA; TUEV
Note	

Ordering data

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

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 – accessories

Cross-connector orange

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

maxGUARD – accessories

Endplate and separation plate

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

End brackets

Type	Qty.	Order No.
WEW 35/2 SW	100	1061210000
WEW 35/2 V0 GF SW	100	1479000000

Cutting tool for ZQV

Type	Qty.	Order No.
KT 14	1	1157820000

Uninterruptible power supplies

Uninterruptible power supplies

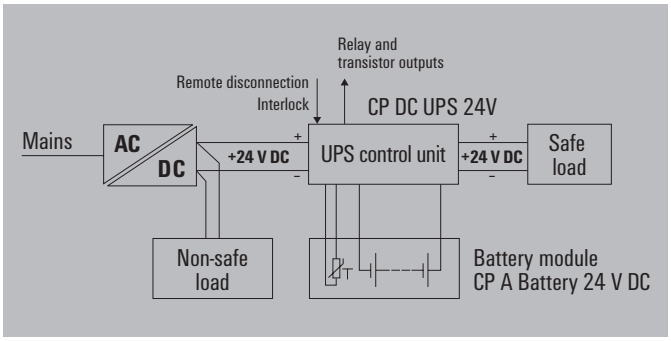
Weidmüller's uninterruptible power supplies reliably protect 24 V DC consumers from voltage drop-outs and dips, such as those that could occur as a result of mains faults. These products therefore play a key role in increasing systems availability.

The buffer module is the perfect solution for bridging short-term power supply failures or dips of up to 100 ms. The capacitor-based technology enables maintenance-free operation, depending on the application, of up to 10 years.

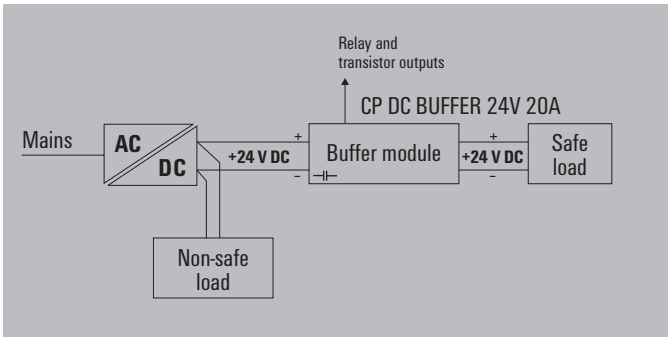
The UPS control unit, together with the accompanying battery module and the power supply, form a complete DC UPS system with support times in minutes or hours. The modular construction allows for the overall load to be distributed into non-safe and safe load circuits, such that often a smaller UPS can be designed.

A huge variety of operating types are available to suit the particular application precisely. A remote input to block battery operation, as well as multiple signal outputs, enable remote operation of the UPS.

UPS with battery module

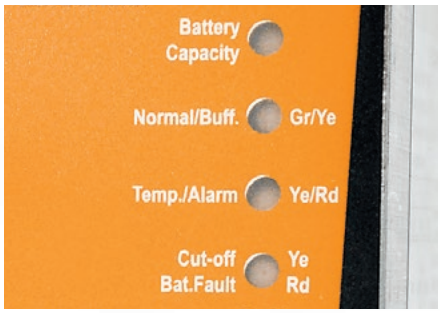


UPS with buffer module



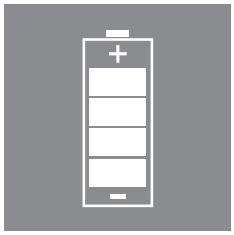
Space saving
The ability to mount the UPS components side-by-side in only 66 mm width saves space in the electronics cabinet.

Quick error analysis
The charging level indicator and the status and error indicators facilitate rapid error analysis.

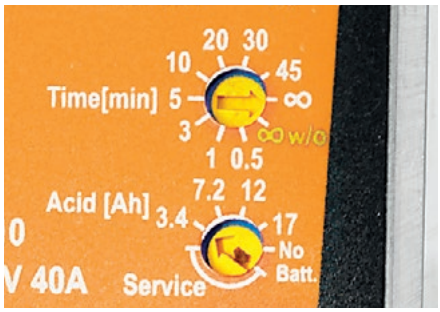


Usable around the globe
International approvals (cURus, cULus) and TÜV certification facilitate the use of these products around the world, and in different applications.

Long battery service life
The temperature-compensated characteristic charge curve ensures the best charge for the battery. This maintains the battery's long service life.



Flexible application
Multiple operation modes optimise the use of battery power and facilitate its flexible application.



Time saving
The three additional active 24 V DC transistor outputs simplify cabling and save time.

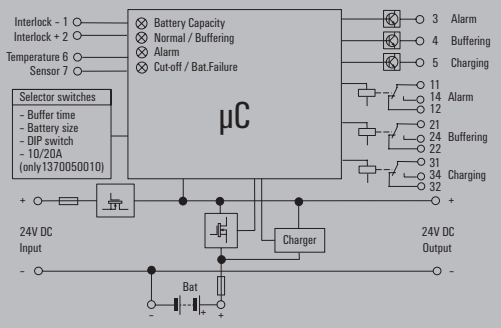
UPS control unit

- Two 24 V models in 10 A/20 A and 40 A
- Temperature-compensated charging feature for long battery life
- Integrated battery diagnostics including continuous availability test
- Status relay and additional transistor outputs for remote monitoring
- Convenient LED displays for easy error analysis

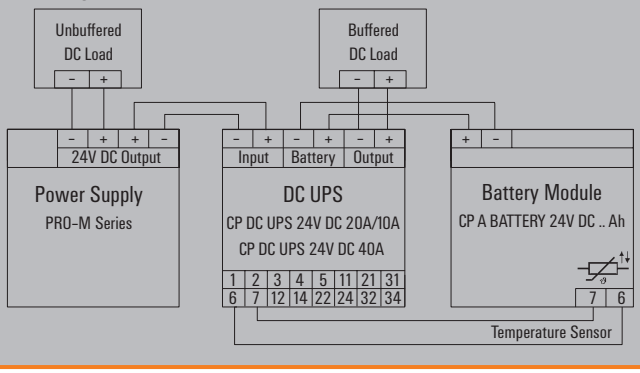
Technical data

Signalling	
Status relay (max. load)	Fault (alarm) (30 V AC/DC 0.1 A), Battery operation (buff.) (30 V AC/DC 0.1 A), Laden (Charg.) (30V AC/DC 0,1A)
Transistor outputs (24...27 V DC max. load 150 mA)	Battery operation (buff.), Charging, Fault (alarm)
Status indicator	Three-colour LED: Battery capacity >85% green, >40% yellow, >20% red, <20% red (Flashing), Green/yellow LED: normal / buffering, Yellow/red LED: temperature alarm / alarm, Yellow/red LED: switch-off / battery fault
General data	
Ambient temperature (operational)	-25 °C...70 °C
Storage temperature	-40 °C...85 °C
Humidity	5...95 %, no condensation
Protection degree	IP20
Protection degree	III, with no ground connection, for SELV
Pollution degree	2
Overvoltage category	III
Insulation voltage	1 kV DC
MTBF	> 500,000 h in accordance with IEC 61709 (SN29500)
Protection against reverse voltages from the load	32...34 V DC
Parallel connection option	Yes, max. 2, Yes, with diode module
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.
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 / 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 / VDE0160
Safety extra-low voltage	EN 60950

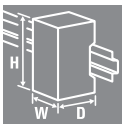
Blockschaltbild



Verdrahtung



UPS control unit



Technical data

	CP DC UPS 24V 20A/10A	CP DC UPS 24V 40A
Input		
Rated input voltage	24 V DC	
DC input voltage range	20...30 V DC	20...30 V DC
Input current	≤ 13A (for 10A), ≤ 23A (for 20A)	≤ 43 A
Input fuse (internal)	Yes	Yes
DC current consumption	max. 200 mA (without battery), max. 0.5 A (with fully charged battery)	max. 200 mA (without battery), max. 0.5 A (with fully charged battery)
Reverse polarity protection	Yes	Yes
Output		
Rated output voltage	24 V DC ± 1 %	24 V DC ± 1 %
Output voltage	Vo = Vin - 0.2 V normal operation (Imax), Vo = Vin - 0.3 V battery supply (I max)	Vo = Vin - 0.2 V normal operation (Imax), Vo = Vin - 0.3 V battery supply (I max)
Nominal output current for U_{nom}	20 A @ 60 °C	40 A @ 60 °C
Integrated battery charger		
Charging feature	IU characteristic curve	IU characteristic curve
Charging voltage (temperature compensated)	27, 48 V @ 20°C	27, 48 V @ 20°C
Temperature coefficient	- 48 mV / °C	- 48 mV / °C
Charging current	0.15 CA	0.15 CA
Battery availability test	every minute	every minute
Battery module		
Rated voltage	24 V	24 V
Storage medium	1.3 Ah, 3.4 Ah, 7.2 Ah, 12 Ah, 17 Ah, Selectable with rotary switch	3.4 Ah, 7.2 Ah, 12 Ah, 17 Ah, Selectable with rotary switch
Parallel connection option	Yes, max. 2	Yes, max. 2
Operating elements and control inputs		
Output current selector switch	20 A, 10 A	
Selector switch battery	1.3 Ah, 3.4 Ah, 7.2 Ah, 12 Ah, 17 Ah, No Battery, Service	3.4 Ah, 7.2 Ah, 12 Ah, 17 Ah, No Battery, Service
Selector switch buffer times	0.5 min, 1 min, 3 min, 5 min, 10 min, 20 min, 30 min, 45 min, ∞, ∞ w/0	0.5 min, 1 min, 3 min, 5 min, 10 min, 20 min, 30 min, 45 min, ∞, ∞ w/0
DIP switch	Inversion of transistor outputs, Operation without temperature probe	Inversion of transistor outputs, Operation without temperature probe
Remote disconnection (Interlock)	Yes	Yes
Temperature probe	NTC 100 kΩ	NTC 100 kΩ
General data		
Buffer times	Depending on the connected battery	Depending on the connected battery
Degree of efficiency	≥ 96% normal mode, battery is being charged, ≥ 98% normal mode, battery is charged, ≥ 98% buffer mode	≥ 96% normal mode, battery is being charged, ≥ 98% normal mode, battery is charged, ≥ 98% buffer mode
Power loss	< 10 W	< 10 W
Depth x width x height / Net weight	150 / 66 / 130 mm / 1146 g	150 / 66 / 130 mm / 1051.8 g
Approvals		
Approvals	CE, TUEV, cURus, cULus, DNVGL, EAC	CE, TUEV, cURus, cULus, DNVGL, EAC

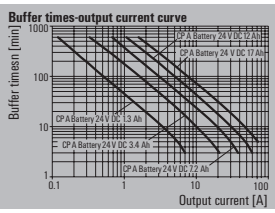
Connection data		**Input/output/battery**	**Signal**	**Input/output/battery**	**Signal**
Wire connection method		Screw connection	Screw connection	Screw connection	Screw connection
Wire cross-section, rigid min/max	mm²	0.5 / 16	0.5 / 16	0.5 / 16	0.5 / 16
Wire cross-section, flexible min/max	mm²	0.5 / 16	0.5 / 16	0.5 / 16	0.5 / 16
Wire cross-section, AWG/kcmil min/max		26 / 6	26 / 12	26 / 6	26 / 12
Tightening torque	Nm	1.2...1.5		1.2...1.5	
Note					

Ordering data

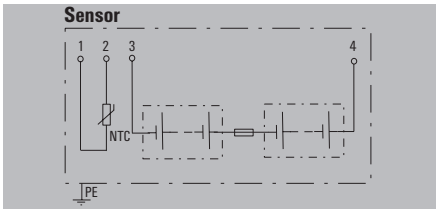
	Type	**Qty.**	**Order No.**	**Type**	**Qty.**	**Order No.**
	CP DC UPS 24V 20A/10A	1	**1370050010**	CP DC UPS 24V 40A	1	**1370040010**
Note						

Battery modules

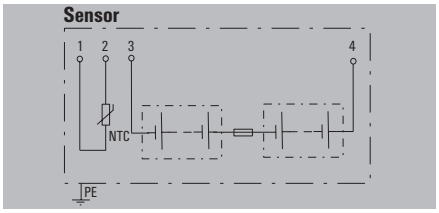
- Maintenence-free lead-acid batteries from 3.4 Ah to 17 Ah
- Integrated temperature sensor for optimal battery charging
- Capacity up to 40 A / 30 min or 1 A / 30 hrs
- Robust metal housing for wall mounting



CP A BATTERY 24V DC1.3AH



CP A BATTERY 24V DC3.4AH



Technical data

Rated input voltage	24 V DC	24 V DC
Nominal capacity	1.3 Ah	3.4 Ah
Charging current, max.	0.2 A	0.51 A
Overload and short circuit protection	15 A fuse	25 A fuse
Buffer time 10A		11.3 min
Buffer time 20A		5 min
Output current, max.	15 A	25 A
Parallel connection option	Yes	Yes
Series switching capability	No	No
Temperature probe	NTC 100 kΩ	NTC 100 kΩ
General data		
Battery type	Maintenance-free AGM lead-acid battery	Maintenance-free AGM lead-acid battery
Operating life	6...9 years at 20°C	6...9 years at 20°C
Ambient temperature	0°...+40°C (Charging); -15°...+50°C (Discharging)	0°...+40°C (Charging); -15°...+50°C (Discharging)
Storage temperature	-15 °C...40 °C	-15 °C...40 °C
Latest commissioning	9 months	9 months
Max. perm. air humidity (operational)	5 %...95 % RH	5 %...95 % RH
Protection degree	III, with no ground connection, for SELV	III, with no ground connection, for SELV
Protection degree	IP20	IP20
Vibration DIN rail/wall in accordance with IEC 68-2-6	0.7 / 0.7 g	0.7 / 0.7 g
Shock wall acc. to IEC 68227	30 g	30 g
Depth x width x height / Net weight	124 / 52 / 148 mm / 1650 g	137 / 108 / 144 mm / 3478 g
Approvals		
Approvals	CE, cULus listed, DNV GL, RoHS	CE, cULus listed, DNV GL, RoHS

Connection data		Input/output/battery	Signal	Input/output/battery	Signal
Wire connection method			Pluggable screw connection		Pluggable screw connection
Wire cross-section, rigid min/max	mm²	0.2 / 4	0.2 / 4	0.2 / 6	0.2 / 1.5
Wire cross-section, flexible min/max	mm²	0.2 / 4	0.2 / 4	0.5 / 6	0.2 / 1.5
Wire cross-section, AWG/kcmil min/max		30 / 12	30 / 12	22 / 10	28 / 16
Tightening torque	Nm	0.5...0.5		0.5...0.6	
Note					

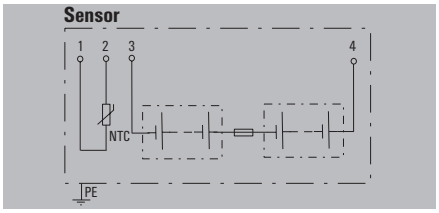
Ordering data

Type	Qty.	Order No.
CP A BATTERY 24V DC1.3AH	1	1406930000

Type	Qty.	Order No.
CP A BATTERY 24V DC3.4AH	1	1251070000

Note

CP A BATTERY 24V DC7.2AH

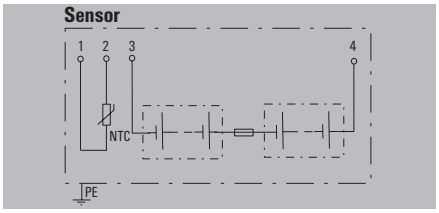


24 V DC	
7.2 Ah	
1.08 A	
2x25 A fuse	
26.5 min	
11.5 min	
50 A	
Yes	
No	
NTC 100 kΩ	
Maintenance-free AGM lead-acid battery	
9...12 years at 20°C	
0°...+40°C (Charging); -15°...+50°C (Discharging)	
-15 °C...40 °C	
9 months	
5 %...95 % RH	
III, with no ground connection, for SELV	
IP20	
- / 0.7 g	
30 g	
134 / 162 / 155 mm / 6200 g	
CE, cULus listed, DNV GL, RoHS	

Input/output/battery	Signal
	Pluggable screw connection
0.2 / 16	0.2 / 1.5
0.5 / 16	0.2 / 1.5
22 / 6	28 / 16
1.2...1.5	

Type	Qty.	Order No.
CP A BATTERY 24V DC7.2AH	1	**1251080000**

CP A BATTERY 24V DC12AH

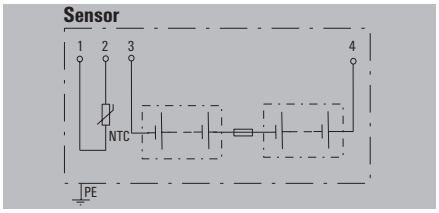


24 V DC	
12 Ah	
1.8 A	
2x25 A fuse	
51 min	
22.7 min	
50 A	
Yes	
No	
NTC 100 kΩ	
Maintenance-free AGM lead-acid battery	
6...9 years at 20°C	
0°...+40°C (Charging); -15°...+50°C (Discharging)	
-15 °C...40 °C	
9 months	
5 %...95 % RH	
III, with no ground connection, for SELV	
IP20	
- / 0.7 g	
30 g	
134 / 229 / 155 mm / 9120 g	
CE, cULus listed, DNV GL, RoHS	

Input/output/battery	Signal
	Pluggable screw connection
0.2 / 16	0.2 / 1.5
0.5 / 16	0.2 / 1.5
22 / 6	28 / 16
1.2...1.5	

Type	Qty.	Order No.
CP A BATTERY 24V DC12AH	1	**1251090000**

CP A BATTERY 24V DC17AH



24 V DC	
17 Ah	
2.55 A	
2x25 A fuse	
81 min	
34.2 min	
50 A	
Yes	
No	
NTC 100 kΩ	
Maintenance-free AGM lead-acid battery	
6...9 years at 20°C	
0°...+40°C (Charging); -15°...+50°C (Discharging)	
-15 °C...40 °C	
9 months	
5 %...95 % RH	
III, with no ground connection, for SELV	
IP20	
- / 0.7 g	
30 g	
160 / 242 / 178 mm / 13330 g	
CE, cULus listed, DNV GL, RoHS	

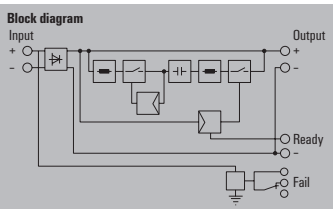
Input/output/battery	Signal
	Pluggable screw connection
0.2 / 16	0.2 / 1.5
0.5 / 16	0.2 / 1.5
22 / 6	28 / 16
1.2...1.5	

Type	Qty.	Order No.
CP A BATTERY 24V DC17AH	1	**1251110000**

Buffer modules

- Maintenance-free UPS on a capacitor basis, with a capacity of 20 A / 260 ms
- Parallel switching to increase the output current or buffer time
- Status notification via LED and relay contact

CP DC BUFFER 24V 20A



Technical data

Input	
Rated input voltage	24 V DC
Input current	0...22 A
Max. approved input current	22 A
Surge protection	31 - 34 V (only at discharge)
Output	
Output voltage	24 V
Output current	20A
Output current, max.	22 A
Parallel connection option	Yes, without diode module
Overload protection	≥ 22 A (only at discharge)
Surge protection	31 - 34 V (only at discharge)
Status relay (max. load)	Input voltage OK (30 V AC/DC 2A), Ready for operation (24 V AC/DC 300 mA)
Display	
Status indicator	Green LED
General data	
Degree of efficiency	95 %
Insulation voltage, input/output	1 kV
Storage medium	Internal condenser
Buffer times	250 ms at 20 A, 6 s at 1 A
MTBF	> 500,000 h in accordance with IEC 61709 (SN29500)
Ambient temperature (operational)	-25 °C...70 °C
Storage temperature	-40 °C...85 °C
Humidity	5...95 %, no condensation
Depth x width x height / Net weight	150 / 66 / 130 mm / 1280 g
For use with electronic equipment	Acc. to EN50178 / VDE0160
Approvals	
Approvals	CE, TUEV, cULus, cURus

Connection data		**Input**	**Output**
Connection system		Screw connection	Screw connection
Number of terminals		2	4
Wire cross-section, rigid min/max	mm²	0.5 / 16	0.5 / 16
Wire cross-section, flexible min/max	mm²	6 / 16	6 / 16
Wire cross-section, AWG/kcmil min/max		12 / 6	12 / 6
Note			

Ordering data

Type	**Qty.**	**Order No.**
CP DC BUFFER 24V 20A	1	**1251220000**

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

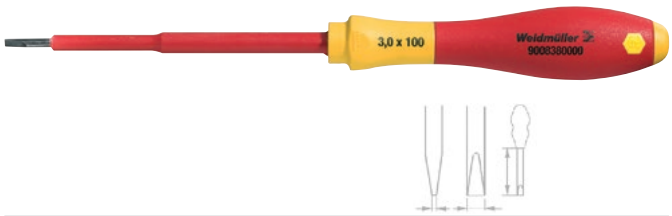
Large wall mounting

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

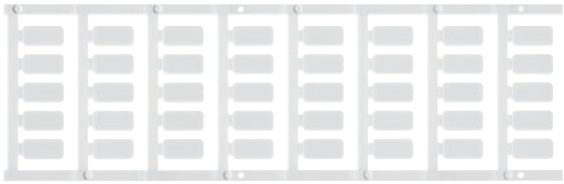


Type	Blade type	Size/AF	a	b	c	Order No.
SDIS 0.5X3.0X100	B		0.5	3	100	9008380000

Large screwdriver

Type	Blade type	Size/AF	a	b	c	Order No.
SDIS 1.0X5.5X125	B		1	5.5	125	9008410000

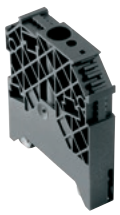
Markers



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

DC/DC converters

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.

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.

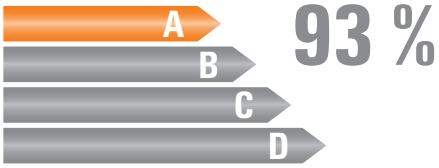
As well as having above-average performance characteristics, the DC/DC converter also stands out thanks to its slim design, ease of servicing and high degree of efficiency of up to 94 %. It also has a wide range of safety functions and can be combined with PROtop, PROeco or PROmax power supplies. It is also possible to combine UPS components, diode and redunancy 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.

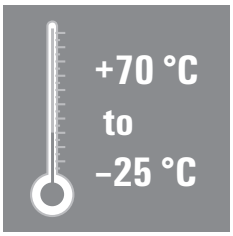
In floating voltage systems, e. g. with emergency power battery systems in marine engineering, the control voltage needs to be galvanically isolated from the battery voltage

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.

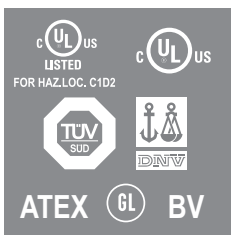


Quick status diagnostics and maintenance
The preventative function monitoring via LED display, the status relay and transistor outputs make it easier to carry out status and error analyses during commissioning and operation.

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 with 5 A, 10 A and 20 A and international approvals (e. g. cULus, Class I, Div. 2, ATEX, GL, DNV) allow for global use in a range of different applications.



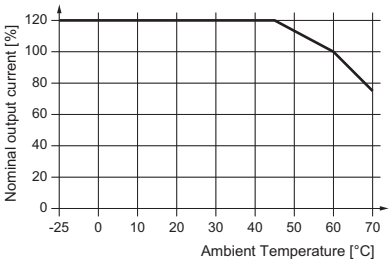
ConnectPower DC/DC converter

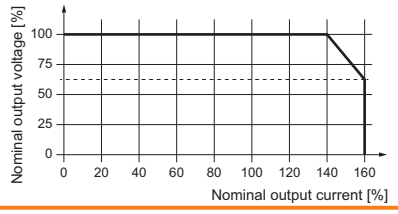
Signal states

Event		LED (Gr/Ye/Rd) g r = "DC OK" Ye = "i > 90% I_N" Rd = "FAul T"	LED (Ye)	Transistor status outputs			Status
Input	Output		"I ow u_{IN}"	DC OK	i > 90% i_N	I ow u_{IN}	relay
U_{IN} < 14 V	–	OFF	ON	Low	Low	Low	OFF
U_{IN} = 14...19.2 V *1)	I < 90 % I_N	Gr	ON	High	Low	Low	ON
	I > 90 % I_N	Ye	ON	High	High	Low	ON
	U < 20.4 V	Rd	ON	Low	Low	Low	OFF
U_{IN} > 19.2 V	I < 90 % I_N	Gr	OFF	High	Low	High	ON
	I > 90 % I_N	Ye	OFF	High	High	High	ON
	U < 20.4 V	Rd	OFF	Low	Low	High	OFF

Gr = grün / green / verte / verde / verde / verde / 绿色
Ye = gelb / yellow / jaune / giallo / amarillo / amarelo / 黄色
Rd = rot / red / rouge / rosso / rojo / vermelho / 红色
*1) während des Betriebes / during operations / en cours de fonctionnement / durante l'esercizio / durante el servicio / durante a operação / 运行过程中

Derating curve



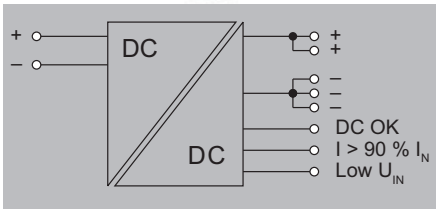


Technical data

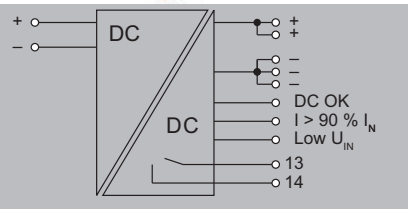
General data	
Current limiting	150% I_{out}
Insulation voltage input / earth	1.5 kV
Insulation voltage output / earth	0.5 kV
Insulation voltage, input/output	1.5 kV
Ambient temperature (operational) / Storage temperature / Start-up	-25 °C...70 °C / -40 °C...85 °C / ≥ -40 °C
Humidity at operating temperature	5...95 %, no condensation
Protection degree / Pollution degree	III, with no ground connection, for SELV / 2
MTBF	1250000
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
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), EN61000-4-3 (HF field)
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
For use with electronic equipment	Acc. to EN50178 / VDE0160
Safety extra-low voltage	SELV according to EN 60950, PELV according to EN 60204
Protective separation / protection against electrical shock	VDE0100-410 / acc. to DIN57100-410
Protection against dangerous shock currents	Acc. to VDE0106-101

ConnectPower DC/DC converter

PRO DCDC 120W 24V 5A



PRO DCDC 240W 24V 10A



Technical data

Input		
Rated input voltage	24 V DC	24 V DC
DC input voltage range	14...32 V (during operation), 18...32 V (commissioning)	14...32 V (during operation), 18...32 V (commissioning)
Input fuse (internal)	Yes	Yes
Inrush current / Inrush Current Limitation	Max. 10 A / Yes	max. 15 A / Yes
Recommended back-up fuse	10 A, Char. B circuit breaker, 10 A, Char. C circuit breaker	25 A, Char.B circuit breaker, 25 A, Char.C circuit breaker
Output		
Rated output voltage	24 V DC ± 1 %	24 V DC ± 1 %
Output voltage	22.5...29.5 V (adjustable via potentiometer on front)	22.5...29.5 V (adjustable via potentiometer on front)
Continous output current @ $U_{Nominal}$	5 A @ 40 °C, 6 A @ 45°C, 3,75 A @ 70°C	10 A @ 60 °C, 12 A @ 45°C, 7,5 A @ 70°C
Output power	120 W	240 W
Ramp-up time	≤ 9 ms (Uout: 10%...90%)	≤ 9 ms (Uout: 10%...90%)
Capacitive load	unrestricted	unrestricted
Parallel connection option	yes, max. 5 (without diode module)	yes, max. 5 (without diode module)
Reserve capacity @ $U_{Nominal}$	600% IN for 16 ms	600% IN for 16 ms
Residual ripple, breaking spikes	max. 20 mVpp @ 24 VDC, IN	max. 20 mVpp @ 24 VDC, IN
Protection against inverse voltage / Overload protection	Yes / Yes	Yes / Yes
General data		
AC failure bridging time @ I_{nom}	> 10 ms @ 24 V DC	> 12 ms @ 24 V DC
Protection against reverse voltages from the load	33...34 V DC	33...34 V DC
Start-up	≥ -40 °C	≥ -40 °C
Current limiting	150% I_{out}	150% I_{out}
Power loss idling / nominal load	2 W / 11 W	2 W / 22 W
Degree of efficiency	Typ.: 92 %	Typ.: 92 %
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	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	No	Yes
Relay on/off / Contact load	/	Output voltage > 21.6 V / < 20.4 V / max. 30 V DC / 0.5 A
Approvals		
Approvals	CE, TUEV (EN/IEC 60950-1), ABS, BURVER, cULus, cULus Class I Division 2, DNVGL, LLOYDSREG, RINA	CE, TUEV (EN/IEC 60950-1), ABS, BURVER, cULus, cULus Class I Division 2, DNVGL, LLOYDSREG, RINA

Connection data		**Input**	**Output**	**Input**	**Output**
Connection system		Screw connection: pluggable		Screw connection: pluggable	
Number of terminals		2 for (+, -)	8 (+ / - / signal)	2 for (+, -)	10 (+ / - / signal)
Wire cross-section, rigid min/max	mm²	0.2 / 4	0.2 / 2.5	0.08 / 4	0.2 / 2.5
Wire cross-section, flexible min/max	mm²	0.2 / 4	0.2 / 2.5	0.08 / 4	0.2 / 2.5
Wire cross-section, AWG/kcmil min/max		30 / 12	24 / 14	30 / 12	24 / 14
Note					

Ordering data

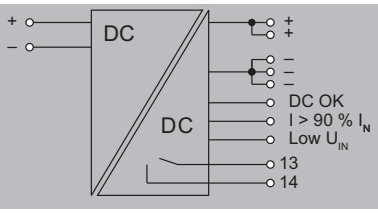
Type	**Qty.**	**Order No.**
PRO DCDC 120W 24V 5A	1	**2001800000**

Type	**Qty.**	**Order No.**
PRO DCDC 240W 24V 10A	1	**2001810000**

Note

ConnectPower DC/DC converter

PRO DCDC 480W 24V 20A



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)
Continous 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 (Uout: 10%...90%)
Capacitive load	unrestricted
Parallel connection option	yes, max. 3
Reserve capacity @ $U_{Nominal}$	600% IN for 16 ms
Residual ripple, breaking spikes	max. 20 mVpp @ 24 VDC, IN
Protection against inverse voltage / Overload protection	Yes / Yes
General data	
AC failure bridging time @ I_{nom}	> 10 ms @ 24 V DC
Protection against reverse voltages from the load	33...34 V DC
Start-up	≥ -40 °C
Current limiting	150% I_{out}
Power loss idling / nominal load	3 W / 40 W
Degree of efficiency	typ. > 93%
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
Approvals	
Approvals	CE, TUEV (EN/IEC 60950-1), ABS, BURVER, cULus, cULus Class I Division 2, DNVGL, LLOYDSREG, RINA

Connection data		Input	Output
Connection system		Screw connection	
Number of terminals		2 for (+, -)	10 (+ / - / signal)
Wire cross-section, rigid min/max	mm²	0.5 / 16	0.18 / 6
Wire cross-section, flexible min/max	mm²	0.5 / 16	0.18 / 6
Wire cross-section, AWG/kcmil min/max		22 / 8	26 / 10
Note			

Ordering data

Type	Qty.	Order No.
PRO DCDC 480W 24V 20A	1	2001820000

Note

Redundancy, diode and capacity modules

Reliable protection of sensitive system components
Redundancy, diode and capacity 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. In addition, Weidmüller has a capacity module that has sufficient energy reserves to, for example, connect a miniature circuit breaker to the power supply. quickly and purposefully.

Diode modules

The diode modules allow with 20 A or 40 A output current to the construction of safe power supply systems.

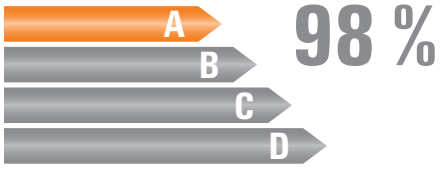
Redundancy modules

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.

Capacity module

The capacity modules provide sufficient energy reserves ready, for example, to meet the demand for a motor start. and I'll cover for you. In addition, the reserve enables the selective circuit breaker tripping in the case of an Short-circuit.

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

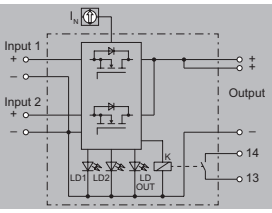
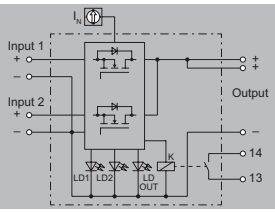


Redundancy module
- Up to 40 A per input
- Individually adjustable current warning for Overload directly at the device
- Suitable for EX areas

Diode module
- Ideal for setting up trouble-free systems
- In versions with 20 or 40 A output current obtainable
- Also suitable for small systems

Capacity module
- Integrated alarm relay for monitoring the input voltage
- Optical status monitoring by red/green LEDs
- Remote messages via potential-free contact

connectPower redundancy modules

	PRO RM 10	PRO RM 20
		
		

Technical data

Input			
DC input voltage range		10 ... 32 V DC	10 ... 32 V DC
Input current		2 × 12 A (-40 °C ~ +45 °C), 2 × 10 A (+45 °C ~ +60 °C), 2 × 7.5 A (+70 °C)	2 × 24 A (-40 °C ~ +45 °C), 2 × 20 A (+45 °C ~ +60 °C), 2 × 15 A (+70 °C)
Output			
Rated output voltage		V_{INPUT}-typ. 0.13 V	V_{INPUT}-typ. 0.2 V
Continous output current @ $U_{Nominal}$		1 × 24 A (-40 °C ~ +45 °C), 1 × 20 A (+45 °C ~ +60 °C), 1 × 15 A (+70 °C)	1 × 48 A (-40 °C ~ +45 °C), 1 × 40 A (+45 °C ~ +60 °C), 1 × 30 A (+70 °C)
General data			
Ambient temperature (operational)		-40 °C...70 °C	-40 °C...70 °C
Storage temperature		-40 °C...85 °C	-40 °C...85 °C
Derating		> 60°C / 75% @ 70°C	> 60°C / 75% @ 70°C
Degree of efficiency		> 98%	> 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.	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 / 30 / 130 mm / 497 g	125 / 38 / 130 mm / 558 g
Approvals		CE, TUEV, cULus, UL Class I Division 2, ATEX, IECEx, EAC, DNVGL	CE, TUEV, cULus, UL Class I Division 2, ATEX, IECEx, EAC, DNVGL

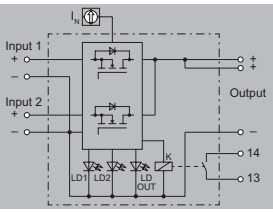
Connection data		**Input**	**Output**	**Input**	**Output**
Connection system		PUSH IN	PUSH IN	PUSH IN	PUSH IN
Number of terminals		4 (+,+,–,–)	2 (+ / -)	4 (+,+,–,–)	2 (+ / -)
Wire cross-section, rigid min/max	mm²	0.2 / 2.5	0.2 / 10	0.2 / 10	0.75 / 16
Wire cross-section, flexible min/max	mm²	0.2 / 2.5	0.2 / 6	0.2 / 6	0.75 / 16
Wire cross-section, AWG/kcmil min/max		26 / 12	24 / 8	24 / 8	20 / 4
Note					

Ordering data

	Type	**Qty.**	**Order No.**	**Type**	**Qty.**	**Order No.**
Screw connection	PRO RM 10	1	**2486090000**	PRO RM 20	1	**2486100000**
Note						

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_{INPUT}-typ. 0.27 V
Continous output current @ $U_{Nominal}$	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	CE, TUEV, cULus, UL Class I Division 2, ATEX, IECEx, EAC, DNVGL

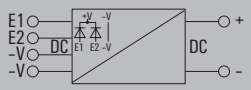
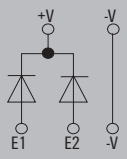
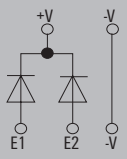
Connection data		Input	Output
Connection system		Screw connection	Screw connection
Number of terminals		4 (+,+,–,–)	2 (+ / -)
Wire cross-section, rigid min/max	mm²	0.2 / 16	0.5 / 16
Wire cross-section, flexible min/max	mm²	0.5 / 16	0.5 / 35
Wire cross-section, AWG/kcmil min/max		22 / 6	20 / 1
Note			

Ordering data

	Type	Qty.	Order No.
Screw connection	PRO RM 40	1	2486110000

Note

connectPower diode modules

	PRO DM 10	PRO DM 20
		
		
		

Technical data

	PRO DM 10	PRO DM 20
Input		
DC input voltage range	0...60 V DC	0...60 V DC
Input current	2 × 12 A (-40 °C ~ +45 °C), 2 × 10 A (+45 °C ~ +60 °C), 2 × 7.5 A (+70 °C)	2 × 24 A (-40 °C ~ +45 °C), 2 × 20 A (+45 °C ~ +60 °C), 2 × 15 A (+70 °C)
Output		
Rated output voltage	V_{INPUT}-typ. 0.7 V	V_{INPUT}-typ. 0.7 V
Continous output current @ $U_{Nominal}$	1 × 24 A (-40 °C ~ +45 °C), 1 × 20 A (+45 °C ~ +60 °C), 1 × 15 A (+70 °C)	1 × 48 A (-40 °C ~ +45 °C), 1 × 40 A (+45 °C ~ +60 °C), 1 × 30 A (+70 °C)
General data		
Ambient temperature (operational)	-40 °C...70 °C	-40 °C...70 °C
Storage temperature	-40 °C...85 °C	-40 °C...85 °C
Derating	> 60°C / 75% load @ 70°C	> 60°C / 75% load @ 70°C
Degree of efficiency	> 97% @ 24 V Input voltage	> 97% @ 24 V Input voltage
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 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 / 32 / 125 mm / 518 g	125 / 32 / 125 mm / 568 g
Approvals	CE, TUEV (EN/IEC 60950-1), cULus, EAC	CE, TUEV (EN/IEC 60950-1), cULus, EAC

Connection data		PRO DM 10		PRO DM 20	
		Input	**Output**	**Input**	**Output**
Connection system		Screw connection	Screw connection	Screw connection	Screw connection
Number of terminals		4 (1+, 2+, 1-, 2-)	4 (++ / –)	4 (1+, 2+, 1-, 2-)	4 (++ / –)
Wire cross-section, rigid min/max	mm²	0.18 / 6	0.18 / 6	0.18 / 6	0.5 / 16
Wire cross-section, flexible min/max	mm²	0.22 / 4	0.22 / 6	0.22 / 4	0.5 / 16
Wire cross-section, AWG/kcmil min/max		26 / 10	26 / 10	26 / 10	22 / 8
Note					

Ordering data

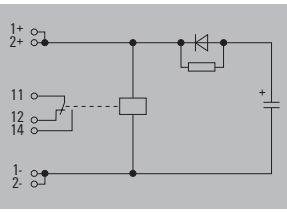
	PRO DM 10			PRO DM 20		
	Type	**Qty.**	**Order No.**	**Type**	**Qty.**	**Order No.**
Screw connection	PRO DM 10	1	**2486070000**	PRO DM 20	1	**2486080000**
Note						

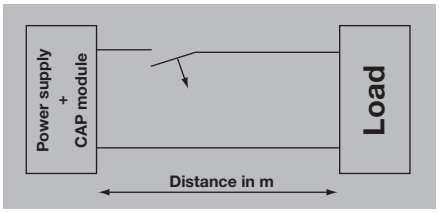
connectPower capacity modules

CP M CAP

Pulse triggering for circuit breakers:
with the Weidmüller capacitance module
The following conditions apply to the table entries:

- Ambient temperature of 20 °C
- Inner resistance of the circuit breakers is taken into account
- Half of the rated current flows to a neighbouring circuit before the short circuit is formed
- DC-compatible circuit breakers: Siemens 5SY series





Technical data

Input	
Rated input voltage / DC input voltage range	24 V DC / 18...30 V DC
Output	
Peak current output / Recovery time for the capacitor	load dependent (typ. 40 A for 1 ms) / Approx. 1 sec.
Switching thresholds	21.6 V DC, relay is on for Power Good, 20.4 V DC, relay is off for Power Fail
Floating contact	Yes
General data	
Depth x width x height / Net weight	/ 150 / 34 / 130 mm / 725 g
Ambient temperature (operational) / Storage temperature	-25 °C...70 °C-40 °C...85 °C
Humidity	5...95 %, no condensation
Protection degree	IP20
Protection degree	III, with no ground connection, for SELV
Pollution degree	2
Insulation voltage	0.5 kV $_{\text{Input / output - Box}}$
MTBF	> 500,000 h in accordance with IEC 61709 (SN29500)
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	
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	1 g according to EN 50178 / 15 g In all directions
Electrical safety (applied standards)	
Electrical machine equipment	Acc. to EN60204
For use with electronic equipment	Acc. to EN50178 / VDE0160
Safety extra-low voltage	SELV according to EN 60950, PELV according to EN 60204
Approvals	
Approvals	CE, TUV, cULus, GL, EAC

Fuse tripping

Conductor cross section	B6	B10
0.75 mm²	10 m	
1.0 mm²	14 m	6 m
1.5 mm²	20 m	9 m
2.5 mm²	30 m	15 m
4 mm²	50 m	24 m
6 mm²		
	B16	
0.75 mm²		
1.0 mm²		
1.5 mm²	4 m	
2.5 mm²	6 m	
4 mm²	10 m	
6 mm²	16 m	
	C2	**C4**
0.75 mm²	11 m	6 m
1.0 mm²	14 m	8 m
1.5 mm²	21 m	12 m
2.5 mm²	34 m	19 m
4 mm²		32 m
6 mm²		
	C6	**C10**
0.75 mm²	3 m	
1.0 mm²	3.5 m	2 m
1.5 mm²	5.5 m	3 m
2.5 mm²	9 m	5 m
4 mm²	14 m	8 m
6 mm²		12 m

Connection data		Input	Output
Wire connection method		Screw connection	Screw connection
Number of terminals		4 (++–)	3 (CO contacts)
Wire cross-section, rigid min/max	mm²	0.5 / 6	0.5 / 6
Wire cross-section, flexible min/max	mm²	0.5 / 4	0.5 / 2.5
Wire cross-section, AWG/kcmil min/max		26 / 12	26 / 12
Note		For low-impedance connections we recommend 2.5 mm².	

Ordering data

	Type	Qty.	Order No.
Plastic clip-in foot	CP M CAP	1	1222240000
Metal clip-in foot	CP M CAP	1	1222240010

Note

Communication modules

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.

Available in IO-Link or CANopen

ProCom CANopen

ProCom 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

ProCom IO-Link

ProCom 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 CANopen

PRO COM CAN OPEN

Technical data

System data	
Connection type	2 x RJ45 plug-in connectors
Field bus protocol	CANopen
Module type	plug-on module
Interface	PROtop interconnection interface
General data	
Ambient temperature (operational)	-25 °C...70 °C
Protection degree	IP20
Weight	36 g
Depth x width x height	33.6 / 35 / 74.4 mm
Approvals	
Approvals	CE

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	CE

Note

Ordering data

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

Note

Service and support

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 worldwide network of industrial managers for machine construction, process automation, energy and traffic engineering and for device manufacturers know the challenges you face and can support you in your specific applications.

Training course on technologies, applications and the detailed functionality of our products is available to you locally or at our headquarter in Germany. Our personal support can answer any questions reliably and expertly. Our online services are available 365 day a year around the clock to provide answers to your questions on our products - from user documentation through software to planning tools.

In short: Weidmüller's global service combines our expertise with your requirements.

Professional advice on planning
Our global network of industrial managers has extensive experience in automation technology and electrical connectivity. This expertise allows us to assist you with advice and planning support in order to work with you on resolving the everyday challenges of your applications.

Technology and application training
Industrial automation is moving towards smart production. It faces the challenges of new technologies and applications. Our varied range of training courses develops this knowledge further or provides more in-depth information on the handling of our products and solutions. Our seminars are modular and can be customised. We can train you and your employees in our academy, on your premises if you wish or online in our webinars at any time.

Customised installation
The challenges for the future are reducing costs and increasing efficiency. This requires intelligent, individual solutions which are tailored to your requirements. We can offer a highly qualified customer-specific production service in our application centre. Whether you need modified products, pre-assembled terminal rails or complete small cabinets: we produce the solutions developed for your application quickly and flexibly.

Online support and downloads

Exactly the right help and information on our solutions and products

If our products are used in your automation technology applications, you need the best possible individual support, from planning through installation to operation.

For every stage of your application, we can offer the right tools and information for our products and solutions. Up-to-date, uncomplicated, comprehensive and around the clock via our service portal at www.weidmueller.com/service.

Fast access to our support and services is available via Weidmüller webcodes. Simply select the service you want on the right hand side, then enter the webcode made up of five digits with a preceding hashtag into the search field in the top right corner of www.weidmueller.com and it will bring up the details you need.

Online and personal support

From planning through installation to operation, we can provide exactly the right help and information for each step of your application based on our solutions and products: up-to-date, uncomplicated and comprehensive, around the clock, online or in person.

Visit our website
for more information

www.weidmueller.com/service

Let's connect.

Engineering Support

As a developer, you need simple processes and system-wide tools. We support you in your development environment with comprehensive data, software tools and interfaces, product selection guides and development samples.

Engineering data
Webcode #01219

Product software
Webcode #01212

Whitepaper for device connectivity
Webcode #11359

Engineering software
Webcode #11377

Product configurators, product selection guides and samples
Webcode #01214

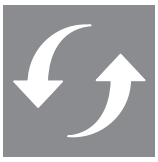
Technical data and downloads

Download all the documents and software relating to our products by simply entering the item number. You can also view our Online Catalogue and research the technical properties of our products.

Find downloads
Webcode #11379

Products in the Online Catalogue
Webcode #01217

Security Advisory Board
Webcode #11424



Product Change Notification
Webcode #11425

Commercial support

Integrate our product data into your commercial sytem using standardised interfaces or familiarise yourself with the wide range of products in our technical catalogues.

Electronic catalogue in BMECat format and other formats
Webcode #11378

Access our Webshop
Webcode #11382

Technical catalogue in PDF Format
Webcode #01218

More offers in online support and downloads

Not found what you are looking for? We have even more to offer you in online support and downloads.

Approvals, certificates and declaration of conformity
Webcode #11374

Here you will find information on the CE declaration of conformity, on RoHS and REACH and other company related certificates and approvals.

Glossary/Technical appendix

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.

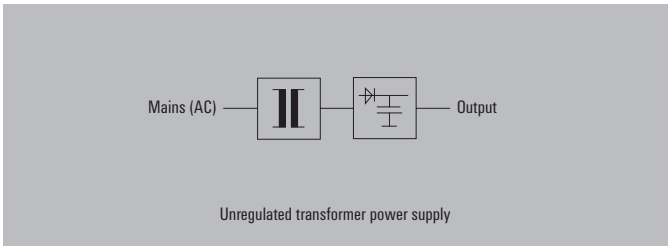
Regulated power supplies from Weidmüller have proven themselves reliable over many years in the supply of electrical sub-assemblies and systems. They perform reliably and safely – even under harsh industrial conditions – in all sectors of machine construction, industrial automation, and the power and process industries.

Weidmüller offers custom-fit solutions for practically all of your requirements:

- Switch-mode power supplies
- DC/DC converters
- Diode and redunancy modules
- UPS control modules
- Electronic load monitoring

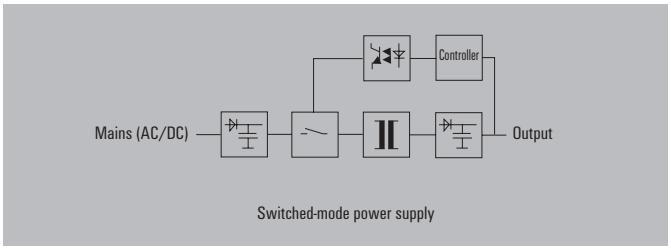
How they work

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.



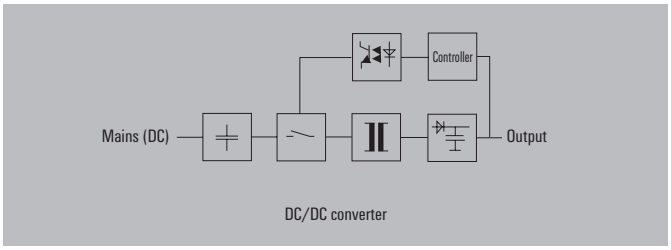
Unregulated transformer power supply

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.).



Switched-mode power supply

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.



DC/DC converter

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
73/23 EWG	Electrical equipment for use within specific voltage limits (Low Voltage Directive)
2004/108/EG (89/336 EWG)	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
GL	Test specifications for electrical/electronic devices and systems for use in marine technology
UL1310	Class 2 power supplies (limited energy)
UL1604	Electrical equipment for use in dangerous surroundings

Standard/Approval	Description
SEMI F47	Resistance of electronic devices against voltage drops
2006/95/EG (72/23/EWG)	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.

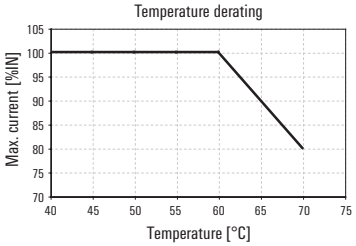
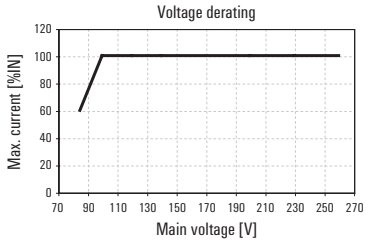
B

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.

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.

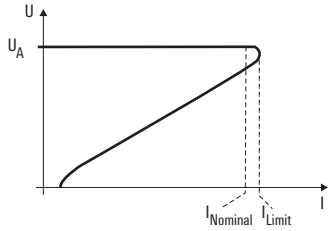
D

DC/DC converter	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.
Derating	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.  
Diode modules	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.

E

Efficiency	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.
EMC (electromagnetic compatibility)	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.

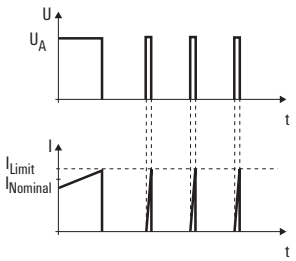
F

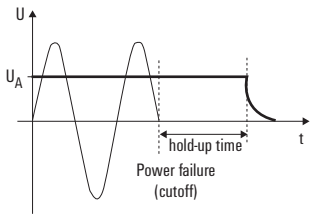
Foldback characteristic curve	The foldback characteristic curve is a special type of output curve that protects the power supply unit from overloads. When a specific current limit is exceeded (for example, by 110 or 120 % of the nominal level), the current is limited electronically and lowered to a very 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.

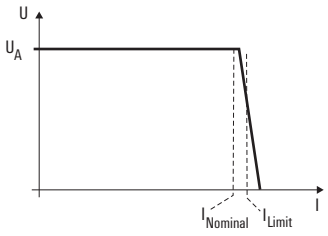
H

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. 

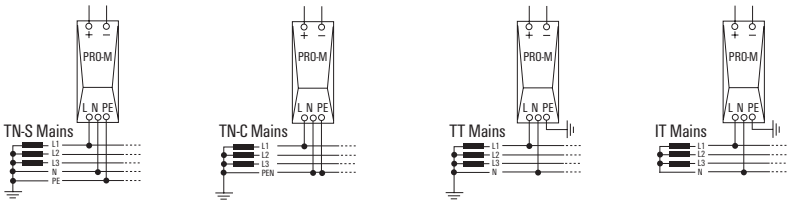
Hold-up time (mains-failure bridging time)	The hold-up time (also known as the mains-failure bridging time) is the interval from the start of the mains outage to the point in time when the output voltage can no longer be maintained at its original level. The hold-up time indicates how long a mains outage may last before it influences the output voltage. For DC power supplies, EN 61204 requires a bridging time of at least 20 ms. 

I

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.

O

Output characteristic curves	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. 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. → Hiccup mode, foldback characteristic curve, IU characteristic curve
Overvoltage category	Power supply units are classified into overvoltage categories according to the immunity against mains surges and transient voltages.

P

PELV (protective extra-low voltage)	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.
PFC (power factor correction)	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.
Pollution severity	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.
Power-boost or boost	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.
Power factor	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.

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.

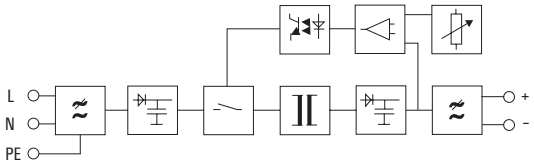
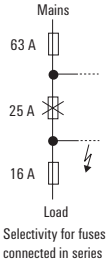
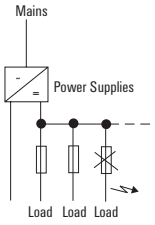
R

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 an 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.

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.  Selectivity for fuses connected in series  Selectivity for DC systems
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.

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).

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.

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.

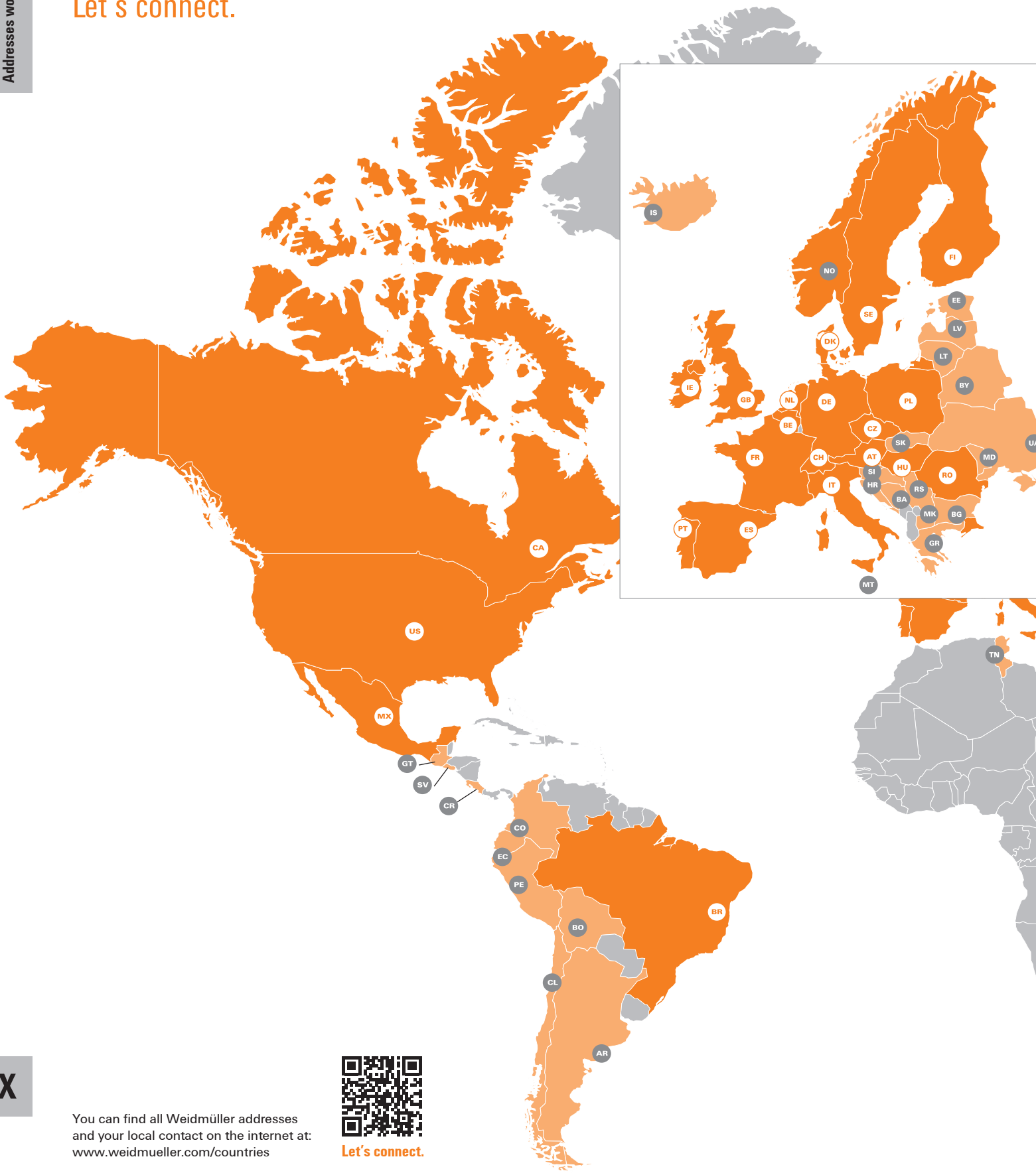
Index

Type	Order No.	Page
ZQV 4N/9	1528070000	B.32
ZQV 4N/9 BL	1528220000	B.32
ZQV 4N/9 RD	2460750000	B.32

Order No.	Type	Page
1060000000		
1061210000	WEW 35/2 SW	B.32
1150000000		
1157820000	KT 14	B.32
1160000000		
1162600000	WEW 35/1 SW	A.25
1162600000	WEW 35/1 SW	A.37
1162600000	WEW 35/1 SW	A.48
1162600000	WEW 35/1 SW	A.74
1162600000	WEW 35/1 SW	C.9
1165820000	CP E SNT 100W 5V 16A	A.58
1165830000	CP E SNT 100W 12V 8.5A	A.58
1165840000	CP E SNT 100W 24V 4.5A	A.59
1165850000	CP E SNT 100W 48V 2.3A	A.59
1165870000	CP E SNT 150W 12V 12.5A	A.60
1165880000	CP E SNT 150W 24V 6.5A	A.60
1165890000	CP E SNT 150W 48V 3.3A	A.61
1168970000	MTA 30 BK	A.25
1168970000	MTA 30 BK	A.37
1168970000	MTA 30 BK	A.48
1168970000	MTA 30 BK	C.9
1200000000		
1202450000	CP E SNT 50W 24V 2.2A	A.55
1202460000	CP E SNT 50W 48V 1.1A	A.55
1202470000	CP E SNT 75W 5V 12A	A.56
1202480000	CP E SNT 75W 12V 6A	A.56
1202490000	CP E SNT 75W 24V 3.2A	A.57
1202510000	CP E SNT 75W 48V 1.6A	A.57
1202520000	CP E SNT 250W 12V 21A	A.62
1202530000	CP E SNT 250W 24V 10.5A	A.62
1202540000	CP E SNT 250W 48V 5.2A	A.63
1202550000	CP E SNT 350W 24V 14.6A	A.64
1202560000	CP E SNT 350W 48V 7.3A	A.64
1202580000	CP E SNT 50W 12V 4.2A	A.54
1202590000	CP E SNT 50W 5V 10A	A.54
1202610000	CP E SNT 25W 48V 0.57A	A.53
1202620000	CP E SNT 25W 24V 1.1A	A.53
1202630000	CP E SNT 25W 12V 2.1A	A.52
1202640000	CP E SNT 25W 5V 5A	A.52
1220000000		
1222240000	CP M CAP	E.7
1222240010	CP M CAP	E.7
1240000000		
1248580000	SM 18/9.5 K MC NE WS	A.25
1248580000	SM 18/9.5 K MC NE WS	A.37
1248580000	SM 18/9.5 K MC NE WS	A.48
1248580000	SM 18/9.5 K MC NE WS	A.74
1248580000	SM 18/9.5 K MC NE WS	C.9
1250000000		
1251070000	CP A BATTERY 24V DC3.4AH	C.6
1251080000	CP A BATTERY 24V DC7.2AH	C.7
1251090000	CP A BATTERY 24V DC12AH	C.7
1251110000	CP A BATTERY 24V DC17AH	C.7
1251220000	CP DC BUFFER 24V 20A	C.8
1251310000	MTA 45 MF	A.25
1251310000	MTA 45 MF	A.37
1251310000	MTA 45 MF	A.48
1251310000	MTA 45 MF	C.9
1251320000	MTA 30 MF	A.25
1251320000	MTA 30 MF	A.37
1251320000	MTA 30 MF	A.48
1251320000	MTA 30 MF	C.9
1370000000		
1370040010	CP DC UPS 24V 40A	C.5
1370050010	CP DC UPS 24V 20A/10A	C.5
1400000000		
1406930000	CP A BATTERY 24V DC1.3AH	C.6
1440000000		
1444480000	CP DC UPS TF05	C.9
1444540000	CP DC UPS TF25	C.9
1460000000		
1461850000	CP A WALLADAPTER 45MM	A.25
1461850000	CP A WALLADAPTER 45MM	A.37
1461850000	CP A WALLADAPTER 45MM	A.48
1461850000	CP A WALLADAPTER 45MM	C.9
1461870000	CP A WALLADAPTER 30 MM	A.25
1461870000	CP A WALLADAPTER 30 MM	A.37
1461870000	CP A WALLADAPTER 30 MM	A.48
1461870000	CP A WALLADAPTER 30 MM	C.9
1469470000	PRO ECO 72W 24V 3A	A.41
1469480000	PRO ECO 120W 24V 5A	A.41
1469490000	PRO ECO 240W 24V 10A	A.42
1469510000	PRO ECO 480W 24V 20A	A.42
1469520000	PRO ECO 960W 24V 40A	A.43
1469530000	PRO ECO3 120W 24V 5A	A.46
1469540000	PRO ECO3 240W 24V 10A	A.46
1469550000	PRO ECO3 480W 24V 20A	A.47
1469560000	PRO ECO3 960W 24V 40A	A.47
1469570000	PRO ECO 72W 12V 6A	A.44
1469580000	PRO ECO 120W 12V 10A	A.44
1469590000	PRO ECO 240W 48V 5A	A.45
1469610000	PRO ECO 480W 48V 10A	A.45
1470000000		
1478100000	PRO MAX 72W 24V 3A	A.29
1478110000	PRO MAX 120W 24V 5A	A.29
1478120000	PRO MAX 180W 24V 7,5A	A.30
1478130000	PRO MAX 240W 24V 10A	A.30
1478140000	PRO MAX 480W 24V 20A	A.31
1478150000	PRO MAX 960W 24V 40A	A.31
1478170000	PRO MAX3 120W 24V 5A	A.35
1478180000	PRO MAX3 240W 24V 10A	A.35
1478190000	PRO MAX3 480W 24V 20A	A.36
1478200000	PRO MAX3 960W 24V 40A	A.36
1478210000	PRO MAX 70W 5V 14A	A.32
1478220000	PRO MAX 72W 12V 6A	A.32
1478230000	PRO MAX 120W 12V 10A	A.33
1478240000	PRO MAX 240W 48V 5A	A.33
1478250000	PRO MAX 480W 48V 10A	A.34
1478270000	PRO MAX 960W 48V 20A	A.34
1479000000	WEW 35/2 V0 GF SW	B.32
1520000000		
1527930000	ZQV 4N/2	B.20
1527930000	ZQV 4N/2	B.21
1527930000	ZQV 4N/2	B.22
1527930000	ZQV 4N/2	B.29
1527930000	ZQV 4N/2	B.30
1527930000	ZQV 4N/2	B.31
1527930000	ZQV 4N/2	B.32
1527940000	ZQV 4N/3	B.32
1527970000	ZQV 4N/4	B.32
1527980000	ZQV 4N/5	B.32
1527990000	ZQV 4N/6	B.32
1528020000	ZQV 4N/7	B.32
1528030000	ZQV 4N/8	B.32
1528040000	ZQV 4N/2 BL	B.20
1528040000	ZQV 4N/2 BL	B.21
1528040000	ZQV 4N/2 BL	B.22
1528040000	ZQV 4N/2 BL	B.29
1528040000	ZQV 4N/2 BL	B.30
1528040000	ZQV 4N/2 BL	B.31
1528040000	ZQV 4N/2 BL	B.32
1528070000	ZQV 4N/9	B.32
1528080000	ZQV 4N/3 BL	B.32
1528090000	ZQV 4N/10	B.32
1528120000	ZQV 4N/4 BL	B.32
1528130000	ZQV 4N/50	B.20
1528130000	ZQV 4N/50	B.21
1528130000	ZQV 4N/50	B.22
1528130000	ZQV 4N/50	B.29
1528130000	ZQV 4N/50	B.30
1528130000	ZQV 4N/50	B.31
1528130000	ZQV 4N/50	B.32
1528140000	ZQV 4N/5 BL	B.32
1528170000	ZQV 4N/6 BL	B.32
1528180000	ZQV 4N/7 BL	B.32
1528190000	ZQV 4N/8 BL	B.32
1528220000	ZQV 4N/9 BL	B.32
1528230000	ZQV 4N/10 BL	B.32
1528240000	ZQV 4N/50 BL	B.20
1528240000	ZQV 4N/50 BL	B.21
1528240000	ZQV 4N/50 BL	B.22
1528240000	ZQV 4N/50 BL	B.29
1528240000	ZQV 4N/50 BL	B.30
1528240000	ZQV 4N/50 BL	B.31
1528240000	ZQV 4N/50 BL	B.32
1960000000		
1962250000	MTA 45 BK	A.25
1962250000	MTA 45 BK	A.37
1962250000	MTA 45 BK	A.48
1962250000	MTA 45 BK	C.9
2000000000		
2001800000	PRO DCDC 120W 24V 5A	D.5
2001810000	PRO DCDC 240W 24V 10A	D.5
2001820000	PRO DCDC 480W 24V 20A	D.6
2080000000		
2080360000	AMG ELM-6	B.11
2080360000	AMG ELM-6	B.17
2080410000	AMG ELM-12	B.11
2080410000	AMG ELM-12	B.18
2080420000	AMG ELM-1F	B.11
2080420000	AMG ELM-1F	B.14
2080480000	AMG ELM-2F	B.11
2080480000	AMG ELM-2F	B.14
2080490000	AMG ELM-4F	B.11
2080490000	AMG ELM-4F	B.14
2080500000	AMG ELM-6F	B.11
2080500000	AMG ELM-6F	B.14
2080600000	AMG ELM-8F	B.11
2080600000	AMG ELM-8F	B.15
2080650000	AMG ELM-10F	B.11
2080650000	AMG ELM-10F	B.15
2080750000	AMG ELM-Q2222	B.11
2080880000	AMG ELM-Q4444	B.11
2080920000	AMG ELM-Q6666	B.11
2081650000	AMG ELM-Q2244	B.11
2081820000	AMG ELM-Q2266	B.11
2081870000	AMG FIM-0	B.11
2081870000	AMG FIM-0	B.12
2081880000	AMG FIM-C	B.11
2081880000	AMG FIM-C	B.13
2081890000	AMG AM	B.11
2081890000	AMG AM	B.20
2081900000	AMG CM	B.11
2081900000	AMG CM	B.21
2082000000	AMG ELM-6 EX	B.11
2082000000	AMG ELM-6 EX	B.27
2082010000	AMG ELM-12 EX	B.11
2082010000	AMG ELM-12 EX	B.28
2082040000	AMG ELM-1F EX	B.11
2082040000	AMG ELM-1F EX	B.25
2082050000	AMG ELM-2F EX	B.11
2082050000	AMG ELM-2F EX	B.25
2082060000	AMG ELM-4F EX	B.11
2082060000	AMG ELM-4F EX	B.25
2082310000	AMG ELM-6F EX	B.11
2082310000	AMG ELM-6F EX	B.25
2082320000	AMG ELM-8F EX	B.11
2082320000	AMG ELM-8F EX	B.26
2082430000	AMG ELM-10F EX	B.11
2082430000	AMG ELM-10F EX	B.26
2082440000	AMG ELM-6D CO	B.11
2082440000	AMG ELM-6D CO	B.19
2082470000	AMG ELM-10D CO	B.11
2082470000	AMG ELM-10D CO	B.19
2082530000	AMG FIM-0 EX	B.11
2082530000	AMG FIM-0 EX	B.23
2082540000	AMG FIM-C EX	B.11
2082540000	AMG FIM-C EX	B.24
2082770000	AMG AM CO	B.11
2082770000	AMG AM CO	B.29
2083360000	AMG CM EX	B.11
2083360000	AMG CM EX	B.30
2120000000		
2122910000	AMG OD	B.11
2122910000	AMG OD	B.14
2122910000	AMG OD	B.15
2122910000	AMG OD	B.16
2122910000	AMG OD	B.17
2122910000	AMG OD	B.18
2122910000	AMG OD	B.19
2122910000	AMG OD	B.22
2122910000	AMG OD	B.25
2122910000	AMG OD	B.26
2122910000	AMG OD	B.27
2122910000	AMG OD	B.28
2122910000	AMG OD	B.5
2122910000	AMG OD	B.6
2122920000	AMG PD	B.11
2122920000	AMG PD	B.14
2122920000	AMG PD	B.15
2122920000	AMG PD	B.16
2122920000	AMG PD	B.17
2122920000	AMG PD	B.18
2122920000	AMG PD	B.19
2122920000	AMG PD	B.22
2122920000	AMG PD	B.25
2122920000	AMG PD	B.26
2122920000	AMG PD	B.27
2122920000	AMG PD	B.28
2122920000	AMG PD	B.5
2122920000	AMG PD	B.6
2122930000	AMG MD	B.11
2122930000	AMG MD	B.14
2122930000	AMG MD	B.15
2122930000	AMG MD	B.16
2122930000	AMG MD	B.17
2122930000	AMG MD	B.18
2122930000	AMG MD	B.19
2122930000	AMG MD	B.22
2122930000	AMG MD	B.25
2122930000	AMG MD	B.26
2122930000	AMG MD	B.27
2122930000	AMG MD	B.28
2122930000	AMG MD	B.5
2122930000	AMG MD	B.6
2122940000	AMG XMD	B.11
2122940000	AMG XMD	B.22
2123000000	AMG PP	B.11
2123000000	AMG PP	B.32
2123050000	AMG DIS	B.11
2123050000	AMG DIS	B.14
2123050000	AMG DIS	B.15
2123050000	AMG DIS	B.16
2123050000	AMG DIS	B.17
2123050000	AMG DIS	B.18
2123050000	AMG DIS	B.19
2123050000	AMG DIS	B.22
2123050000	AMG DIS	B.25
2123050000	AMG DIS	B.26
2123050000	AMG DIS	B.27
2123050000	AMG DIS	B.28
2123050000	AMG DIS	B.5
2123050000	AMG DIS	B.6
2460000000		
2460450000	ZQV 4N/2 RD	B.20
2460450000	ZQV 4N/2 RD	B.21
2460450000	ZQV 4N/2 RD	B.22
2460450000	ZQV 4N/2 RD	B.29
2460450000	ZQV 4N/2 RD	B.30
2460450000	ZQV 4N/2 RD	B.31
2460450000	ZQV 4N/2 RD	B.32
2460730000	ZQV 4N/50 RD	B.20
2460730000	ZQV 4N/50 RD	B.21
2460730000	ZQV 4N/50 RD	B.22
2460730000	ZQV 4N/50 RD	B.29
2460730000	ZQV 4N/50 RD	B.30
2460730000	ZQV 4N/50 RD	B.31
2460730000	ZQV 4N/50 RD	B.32
2460740000	ZQV 4N/10 RD	B.32
2460750000	ZQV 4N/9 RD	B.32
2460760000	ZQV 4N/8 RD	B.32
2460770000	ZQV 4N/7 RD	B.32
2460780000	ZQV 4N/6 RD	B.32
2460790000	ZQV 4N/5 RD	B.32
2460800000	ZQV 4N/4 RD	B.32
2460810000	ZQV 4N/3 RD	B.32
2466850000	PRO TOP1 72W 24V 3A	A.7
2466870000	PRO TOP1 120W 24V 5A	A.7
2466880000	PRO TOP1 240W 24V 10A	A.8
2466890000	PRO TOP1 480W 24V 20A	A.8
2466900000	PRO TOP1 960W 24V 40A	A.9
2466910000	PRO TOP1 120W 12V 10A	A.9
2466920000	PRO TOP1 960W 48V 20A	A.10
2466970000	PRO TOP1 72W 24V 3A CO	A.17
2466980000	PRO TOP1 120W 24V 5A EX	A.17
2466990000	PRO TOP1 240W 24V 10A EX	A.18
2467000000	PRO TOP1 480W 24V 20A EX	A.18
2467010000	PRO TOP1 960W 24V 40A EX	A.20
2467020000	PRO TOP1 120W 12V 10A EX	A.20
2467030000	PRO TOP1 480W 48V 10A	A.10
2467040000	PRO TOP1 480W 48V 10A EX	A.19
2467050000	PRO TOP1 960W 48V 20A CO	A.19
2467060000	PRO TOP3 120W 24V 5A	A.13
2467070000	PRO TOP3 120W 24V 5A CO	A.21
2467080000	PRO TOP3 240W 24V 10A	A.13
2467090000	PRO TOP3 240W 24V 10A CO	A.21
2467100000	PRO TOP3 480W 24V 20A	A.14
2467110000	PRO TOP3 480W 24V 20A CO	A.22
2467120000	PRO TOP3 960W 24V 40A	A.14
2467130000	PRO TOP3 960W 24V 40A CO	A.22
2467140000	PRO TOP3 960W 36V 26,6A CO	A.23
2467150000	PRO TOP3 480W 48V 10A	A.15
2467160000	PRO TOP3 480W 48V 10A CO	A.23
2467170000	PRO TOP3 960W 48V 20A	A.15
2467180000	PRO TOP3 960W 48V 20A CO	A.24
2467320000	PRO COM CAN OPEN	F.4
2480000000		
2486070000	PRO DM 10	E.6
2486080000	PRO DM 20	E.6
2486090000	PRO RM 10	E.4
2486100000	PRO RM 20	E.4
2486110000	PRO RM 40	E.5
2490000000		
2491270000	AMG ELM-1F CL2	B.11
2491270000	AMG ELM-1F CL2	B.16
2491280000	AMG ELM-2F CL2	B.11
2491280000	AMG ELM-2F CL2	B.16
2491290000	AMG ELM-4F CL2	B.11
2491290000	AMG ELM-4F CL2	B.16
2495040000	AMG MD EX	B.11
2495040000	AMG MD EX	B.31
2495070000	AMG PD EX	B.11
2495070000	AMG PD EX	B.31
2495080000	AMG XMD EX	B.11
2495080000	AMG XMD EX	B.31
2495090000	AMG OD EX	B.11
2495090000	AMG OD EX	B.31

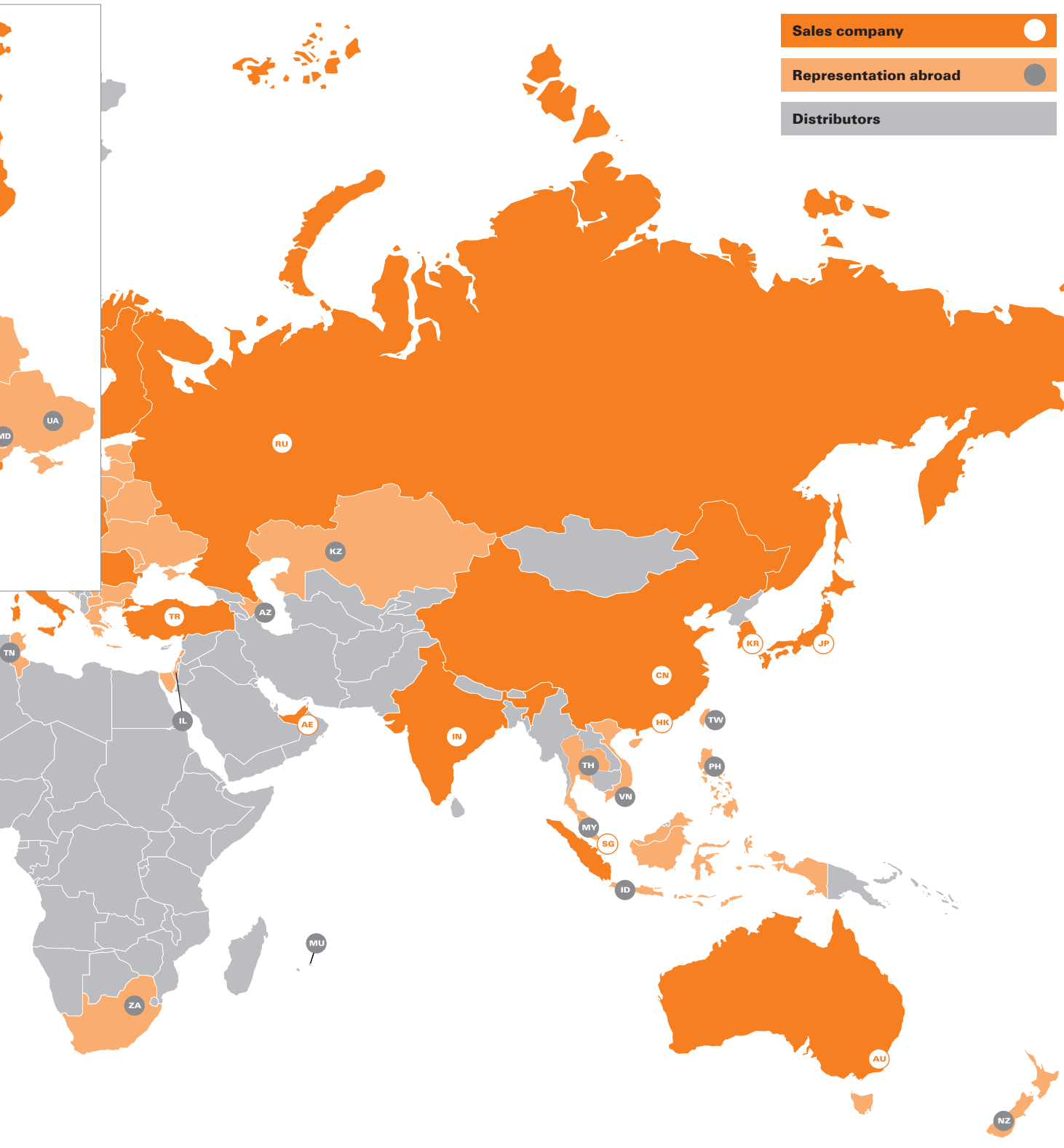
Addresses worldwide

Let's connect.



You can find all Weidmüller addresses and your local contact on the internet at: www.weidmueller.com/countries

Let's connect.


Sales company
Representation abroad
Distributors
UA
RU
KZ
TR
AZ
TN
IL
AE
IN
CN
HK
TW
KR
JP
TH
PH
VN
MY
SG
ID
MU
ZA
AU
NZ

We cannot guarantee that there are no mistakes in the publications or software provided by us to the customer for the purpose of making orders. We try our best to quickly correct errors in our printed media.

All orders are based on our general terms of delivery, which can be reviewed on the websites of our group companies where you place your order. On demand we can also send the general terms of delivery to you.

Weidmüller – Your partner in Industrial Connectivity

As experienced experts we support our customers and partners around the world with products, solutions and services in the industrial environment of power, signal and data. We are at home in their industries and markets and know the technological challenges of tomorrow. We are therefore continuously developing innovative, sustainable and useful solutions for their individual needs. Together we set standards in Industrial Connectivity.

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 16
32758 Detmold, Germany
T +49 5231 14-0
F +49 5231 14-292083
www.weidmueller.com

Personal support can
be found on our website:
www.weidmueller.com/contact

Made in Germany

Order Number: 2685490000/08/2019/SMR