

PROmax PRO MAX 480W 24V 20A

Weidmüller Interface GmbH & Co. KG
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PROmax offers diverse solutions for demanding automation.

Our high performance and durable PROmax switch-mode power supply units are designed for especially demanding requirements. PROmax reliably copes with continuous overload of up to 20% or short-term peak loads of 300% occurring with high control cabinet temperatures.

High boost capability and full power are also made possible in a wide temperature range. Our switch-mode power supply units can be used around the world and are also suitable for confined spaces thanks to their low width.

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

General ordering data

Type	PRO MAX 480W 24V 20A
Order No.	1478140000
Version	Power supply, switch-mode power supply unit, 24 V
GTIN (EAN)	4050118286137
Qty.	1 pc(s).

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Technical data
Dimensions and weights

Width	90 mm	Width (inches)	3.543 inch
Height	130 mm	Height (inches)	5.118 inch
Depth	150 mm	Depth (inches)	5.905 inch
Net weight	2,000 g		

Temperatures

Humidity at operating temperature	5...95 %, no condensation	Operating temperature, max.	70 °C
Operating temperature, min.	-25 °C	Storage temperature, max.	85 °C
Storage temperature, min.	-40 °C	Operating temperature	-25 °C...70 °C
Storage temperature	-40 °C...85 °C		

Input

AC current consumption	2,3A @ 230 VAC / 4,8A @ 115 VAC	AC input voltage range	85...277 V AC
Connection system	Screw connection	DC current consumption	1,5A @ 370 VDC / 4,8A @ 120 VDC
DC input voltage range	80...370 V DC	Frequency range AC	45...65 Hz
Input fuse (internal)	Yes	Inrush current	max. 15 A
Rated input voltage	100...240 V AC (wide-range input)	Recommended back-up fuse	16 A, Char. B circuit breaker, 10 A, char. C circuit breaker
Standby power consumption, max.	1 W	Surge protection	Varistor

output

Connection system	Screw connection	Continuous output current @ U_{Rated}	24 A @ 45°C, 15 A @ 70°C
Output power	480 W	Output voltage	24 V
Output voltage	22.5...29.5 V (adjustable via potentiometer)	Parallel connection option	yes, max. 3
Protection against inverse voltage	Yes	Pulsed current capacity @ U_{Rated}	60 A (2ms)
Rated (nominal) output current @ U_{Nom}	20 A @ 60 °C	Rated output voltage	24 V DC \pm 1 %
Reserve capacity @ U_{Rated}	24 A (1 min), 30 A (4s), 100...240 V AC	Residual ripple, breaking spikes	< 50 mVss @ U_{Nenn} , Full Load

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Technical data**General data**

AC failure bridging time @ I_{Nom}	min. 20 ms	Current limiting	> 120 % I_N
Degree of efficiency	92 %	Derating	> 60°C / 75% @ 70°C
Earth leakage current, max.	3.5 mA	Housing version	Metal, corrosion resistant
MTBF	>500.000h (25°C, 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.
Operating temperature	-25 °C...70 °C	Power factor (approx.)	> 0.95 @ 230 V AC
Power loss, idling	4.8 W	Power loss, nominal load	41.7 W
Protection against reverse voltages from the load	30...35 V DC	Protection degree	IP20
Series switching capability	Yes	Short-circuit protection	Yes
Start-up	≥ -40 °C	Status indication	LED red/green and relay (≥21.6 V DC LED green, relay on/ ≤20.6 LED red, relay off)
Surge voltage category	III		

EMC / shock / vibration

Noise emission acc. to EN55023	Class B	Vibration resistance IEC 60068-2-6	2.3 g
Interference immunity test acc. to	EN 55024, EN 55022, IEC61000-3-2,-3, IEC61000-4-2,-3,-4,-5,-6,-8,-11	Shock resistance IEC 60068-2-27	30 g in all directions

Insulation coordination

Class of protection	I, with PE connection	Humidity at operating temperature	5...95 %, no condensation
Insulation voltage input / earth	3.5 kV	Insulation voltage output / earth	0.5 kV
Insulation voltage, input/output	4 kV	Pollution severity	2
Surge voltage category	III		

Electrical safety (applied standards)

Electrical machine equipment	Acc. to EN60204	For use with electronic equipment	Acc. to EN50178 / VDE0160
Protection against dangerous shock currents	Acc. to VDE0106-101	Protective separation / protection against electrical shock	VDE0100-410 / acc. to DIN57100-410
Safety extra-low voltage	SELV acc. to EN60950, PELV acc. to EN60204, IEC61204	Safety transformers for switch-mode power supplies	nach EN61558-2-16

Connection data (input)

Conductor cross-section, AWG/kcmil , max.	10	Conductor cross-section, AWG/kcmil , min.	26
Conductor cross-section, flexible , min.	0.22 mm ²	Conductor cross-section, rigid , max.	6 mm ²
Conductor cross-section, rigid , min.	0.18 mm ²	Connection system	Screw connection
Number of terminals	3 for L/N/PE	Screwdriver blade	0.8 x 4.0, PZ 1
Tightening torque, max.	0.6 Nm	Tightening torque, min.	0.5 Nm
Wire connection cross section, flexible (input), max.	4 mm ²		

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Technical data

Connection data (output)

Conductor cross-section, AWG/kcmil , max.	10	Conductor cross-section, AWG/kcmil , min.	26
Conductor cross-section, flexible , max.	4 mm ²	Conductor cross-section, flexible , min.	0.22 mm ²
Conductor cross-section, rigid , max.	6 mm ²	Conductor cross-section, rigid , min.	0.18 mm ²
Connection system	Screw connection	Number of terminals	8 (+,+,-,11,13,14)
Screwdriver blade	0.8 x 4.0, PZ 1	Tightening torque, max.	0.6 Nm
Tightening torque, min.	0.5 Nm		

Signalling

Contact load (NO contact)	max. 30 V DC / 1 A	Floating contact	Yes
Status indication	LED red/green and relay (≥21.6 V DC LED green, relay on/ ≤20.6 LED red, relay off)		

Approvals

Institute (GERMLLOYD)		Certificate No. (GERMLLOYD)	61934-14
Institute (cULus)		Certificate no. (cULus)	E258476
Institute (cULusEX)		Certificate no. (cULusEX)	E470829
Institute (cURus)		Certificate No. (cURus)	E255651

Classifications

ETIM 5.0	EC002541	ETIM 6.0	EC002540
eClass 6.2	27-04-90-04	eClass 7.1	27-04-90-04
eClass 8.1	27-04-90-04	eClass 9.0	27-04-07-03
eClass 9.1	27-04-07-01		

Product information

Descriptive text ordering data	The internal varistor found in a switch-mode power supply does not replace the need for surge protection within a system.
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Data sheet

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ROHS Conform

Downloads

Approval/Certificate/Document of Conformity	DE_PA5200_160310_001.pdf
Brochure/Catalogue	CAT 4.3 ELECTR 15/16 EN
Engineering Data	EPLAN, WSCAD
Engineering Data	STEP
User Documentation	Operating instructions Operating instructions

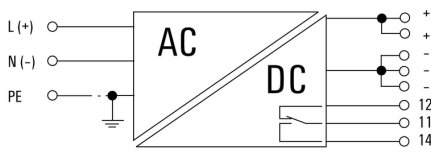
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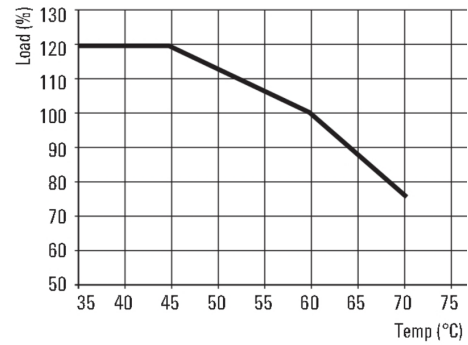
Drawings

Electric symbol



Pay attention to polarity of DC connection

Derating curve



Derating curve