PROeco
PRO ECO 480W 48V 10A

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 16
D-32758 Detmold
Germany
Fon: +49 5231 14-0
Fax: +49 5231 14-292083
www.weidmueller.com

You are looking for a reliable power supply with basic functions.
With PROeco we can offer you low-cost switch-mode power supply units with
high efficiency and system capability. Let's connect.
In the series production of machines, in particular, switch-mode power supply units with
above-average performance values can deliver genuine competitive advantages.
The low-cost PROeco series offers all the basic functions and delivers impressively
high performance and flexibility.
Our PROeco switch-mode power supply units feature a compact design, high
efficiency and are extremely easy to maintain. Thanks to temperature protection,
short-circuit and overload resistance they can be universally used in all
applications.
Wide-ranging safety functions and compatibility with our diode and capacitance modules, together with UPS components for setting up a
redundant power supply, characterise solutions with PROeco.

General ordering data

Type	PRO ECO 480W 48V 10A
Order No.	1469610000
Version	Power supply, switch-mode power supply unit, 48 V
GTIN (EAN)	4050118275490
Qty.	1 pc(s).

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Technical data

Dimensions and weights

Width	100 mm	Width (inches)	3.937 inch
Height	125 mm	Height (inches)	4.921 inch
Depth	120 mm	Depth (inches)	4.724 inch
Net weight	1,570 g		

Temperatures

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	2.4 A @ 230 V AC / 5.2 A @ 110 V AC	AC input voltage range	85...264 V AC (Derating @ 100 V AC)
Connection system	Screw connection	DC current consumption	1.5 A @ 370 V DC / 4.6 A @ 120 V DC
DC input voltage range	80...370 V DC (Derating @ 120 V DC)	Frequency range AC	47...63 Hz
Input frequency	47...63 Hz	Input fuse (internal)	Yes
Inrush current	max. 3 A	Rated input voltage	100...240 V AC (wide-range input)
Recommended back-up fuse	6 A / DI, safety fuse 16 A, Char. B, circuit breaker 6...8 A, Char. C, circuit breaker	Surge protection	Varistor

output

Capacitive load	unrestricted	Connection system	Screw connection
Continuous output current @ U_{Rated}	10 A @ 55 °C, 7.5 A @ 70 °C	Output power	480 W
Output voltage	48 V	Output voltage	42...56 V (adjustable via potentiometer)
Overload protection	Yes	Parallel connection option	yes, max. 3
Protection against inverse voltage	Yes	Ramp-up time	≤ 100 ms
Rated (nominal) output current @ U_{Nom}	10 A @ 55 °C	Rated output voltage	48 V DC ± 1 %
Residual ripple, breaking spikes	< 100 mV ss @ 48 V DC, I Nenn		

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General data

AC failure bridging time @ I_{Nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC	Degree of efficiency	93%
Earth leakage current, max.	3.5 mA	Housing version	Metal, corrosion resistant
Indication	LED green (U_{output} > 21.6 V DC), LED yellow (I_{output} > 90% I_{Rated} typ.), LED red (overload, overtemperature, short-circuit, U_{output} < 20.4 V DC)	MTBF	> 500,000 h acc. to IEC 1709 (SN29500
Max. perm. air humidity (operational)	5 %...95 % RH	Mounting position, installation notice	on terminal rail TS 35
Operating temperature	-25 °C...70 °C	Power factor (approx.)	> 0.98 @ 230 V AC / > 0.98 @ 115 V AC
Power loss, idling	5 W	Power loss, nominal load	50 W
Protection against over-heating	Yes	Protection against reverse voltages from the load	58 ... 65 V DC
Protection degree	IP20	Short-circuit protection	Yes

EMC / shock / vibration

Limiting of mains voltage harmonic currents	in accordance with EN 61000-3-2	Noise emission acc. to EN55023	Class B
Vibration resistance IEC 60068-2-6	1 g according to EN50178	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)
Shock resistance IEC 60068-2-27	15 g In all directions		

Insulation coordination

Class of protection	I, with PE connection	Insulation voltage input / earth	2 kV
Insulation voltage output / earth	0.5 kV	Insulation voltage, input/output	3 kV
Pollution severity	2		

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	Safety transformers for switch-mode power supplies	nach EN61558-2-16

Connection data (input)

Conductor cross-section, AWG/kcmil , max.	12	Conductor cross-section, AWG/kcmil , min.	26
Conductor cross-section, flexible , min.	0.5 mm²	Conductor cross-section, rigid , max.	6 mm²
Conductor cross-section, rigid , min.	0.5 mm²	Connection system	Screw connection
Number of terminals	3 for L/N/PE	Tightening torque, max.	0.6 Nm
Tightening torque, min.	0.5 Nm	Wire connection cross section, flexible (input), max.	2.5 mm²

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Connection data (output)

Conductor cross-section, AWG/kcmil , max.	10	Conductor cross-section, AWG/kcmil , min.	26
Conductor cross-section, flexible , max.	4 mm²	Conductor cross-section, flexible , min.	0.22 mm²
Conductor cross-section, rigid , max.	6 mm²	Conductor cross-section, rigid , min.	0.5 mm²
Connection system	Screw connection	Number of terminals	7 (++,—,13,14)
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
Relay on/off	Output voltage >21.6 V DC/ <20.4 V DC, Overload		

Approvals

Institute (cULus)	c UL us LISTED	Certificate no. (cULus)	E258476

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.

Approvals

Approvals	CE c UL us LISTED EAC TÜV Type Approved
ROHS	Conform

Downloads

Approval/Certificate/Document of Conformity	DE_PA5200_160202_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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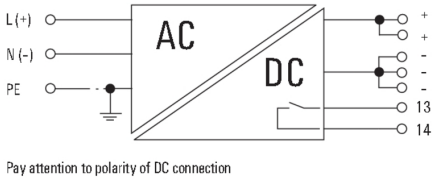
Drawings

Electric symbol



Pay attention to polarity of DC connection

Derating curve