

## PROeco PRO ECO 960W 24V 40A

**Weidmüller Interface GmbH & Co. KG**  
Klingenbergstraße 16  
D-32758 Detmold  
Germany  
Fon: +49 5231 14-0  
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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 960W 24V 40A
Order No.	<a href="#">1469520000</a>
Version	Power supply, switch-mode power supply unit, 24 V
GTIN (EAN)	4050118275704
Qty.	1 pc(s).

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**Technical data**
**Dimensions and weights**

Width	160 mm	Width (inches)	6.299 inch
Height	125 mm	Height (inches)	4.921 inch
Depth	120 mm	Depth (inches)	4.724 inch
Net weight	3,019 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	4,6 A @ 230 V AC / 9,9 A @ 110 V AC	AC input voltage range	85...264 V AC (Derating @ 100 V AC)
Connection system	Screw connection	DC current consumption	2,9 A @ 370 V DC / 9 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. 5 A	Rated input voltage	100...240 V AC (wide-range input)
Recommended back-up fuse	16 A / DI, safety fuse 20 A, Char. B, circuit breaker 16 A, Char. C, circuit breaker	Surge protection	Varistor

**output**

Capacitive load	unrestricted	Connection system	Screw connection
Continuous output current @ $U_{Rated}$	40 A @ 50 °C, 24 A @ 70 °C	Output power	960 W
Output voltage	24 V	Output voltage	22...28 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 @ $U_{Nom}$	40 A @ 50 °C	Rated output voltage	24 V DC ± 1 %
Residual ripple, breaking spikes	< 50 mV <sub>SS</sub> @ 24 V DC, $I_N$		

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**Technical data****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	8 W	Power loss, nominal load	85 W
Protection against over-heating	Yes	Protection against reverse voltages from the load	30...35 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 mm <sup>2</sup>	Conductor cross-section, rigid, max.	6 mm <sup>2</sup>
Conductor cross-section, rigid, min.	0.5 mm <sup>2</sup>	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 mm <sup>2</sup>

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**Technical data****Connection data (output)**

Conductor cross-section, AWG/kcmil , max.	8	Conductor cross-section, AWG/kcmil , min.	22
Conductor cross-section, flexible , max.	10 mm <sup>2</sup>	Conductor cross-section, flexible , min.	2.5 mm <sup>2</sup>
Conductor cross-section, rigid , max.	16 mm <sup>2</sup>	Conductor cross-section, rigid , min.	0.5 mm <sup>2</sup>
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)



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



ROHS

Conform

**Downloads**

Approval/Certificate/Document of Conformity	<a href="#">DE_PA5200_160202_001.pdf</a>
Brochure/Catalogue	<a href="#">CAT 4.3 ELECTR 15/16 EN</a>
Engineering Data	<a href="#">EPLAN, WSCAD</a>
Engineering Data	<a href="#">STEP</a>
User Documentation	<a href="#">Operating instructions</a> <a href="#">Operating instructions</a>

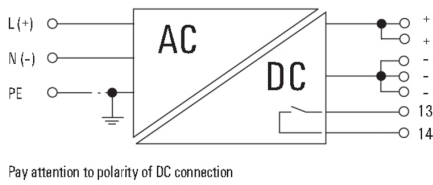
**Data sheet**

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**Drawings**

**Electric symbol**



**Derating curve**

