

PRO ECO 960W 24V 40A**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

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

General ordering data

Version	Power supply, switch-mode power supply unit, 24 V
Order No.	1469520000
Type	PRO ECO 960W 24V 40A
GTIN (EAN)	4050118275704
Qty.	1 pc(s).

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Technical data

Dimensions and weights

Depth	120 mm	Depth (inches)	4.724 inch
Height	125 mm	Height (inches)	4.921 inch
Width	160 mm	Width (inches)	6.299 inch
Net weight	3,190 g		

Temperatures

Storage temperature	-40 °C...85 °C	Operating temperature	-25 °C...70 °C
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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 at 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	Nominal power consumption	1,032.3 VA
Rated input voltage		Recommended back-up fuse	16 A / DI, safety fuse 20 A, Char. B, circuit breaker 16 A, Char. C, circuit breaker
	100...240 V AC		
Surge protection	Varistor		

Output

Capacitive load	unrestricted	Connection system	Screw connection
Continuous output current @ U_{Nominal}	40 A @ 50 °C, 24 A @ 70 °C	Nominal output current for U_{nom}	40 A @ 50 °C
Output power	960 W	Output voltage, max.	28 V
Output voltage, min.	22 V	Output voltage, note	(adjustable via potentiometer)
Overload protection	Yes	Parallel connection option	yes, max. 3
Protection against inverse voltage	Yes	Ramp-up time	≤ 100 ms
Rated output voltage	24 V DC ± 1 %	Residual ripple, breaking spikes	<50 mV _{pp} @ 24 V DC, I_N

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	Green LED ($U_{\text{output}} > 21.6 \text{ V DC}$), Yellow LED ($I_{\text{output}} > 90 \% I_{\text{Rated}}$ typ.), red LED (overload, overtemperature, short-circuit, $U_{\text{output}} < 20.4 \text{ V DC}$)	Max. perm. air humidity (operational)	5 %...95 % RH
Mounting position, installation notice	on terminal rail TS 35	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
Surge voltage category	II		

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EMC / shock / vibration

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
Noise emission in accordance with EN55032	Class B	Shock resistance IEC 60068-2-27	15 g In all directions
Vibration resistance IEC 60068-2-6	1 g according to EN 50178		

Insulation coordination

Insulation voltage input / earth	2 kV	Insulation voltage output / earth	0.5 kV
Insulation voltage, input/output	3 kV	Pollution severity	2
Protection class	I, with PE connection	Surge voltage category	II

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 IEC 60950-1, PELV according to EN 60204-1	Safety transformers for switch-mode power supplies	According to EN 61558-2-16

Connection data (input)

Conductor cross-section, AWG/kcmil , max.	12 AWG	Conductor cross-section, AWG/kcmil , min.	26 AWG
Conductor cross-section, flexible , min.	0.5 mm ²	Conductor cross-section, rigid , max.	6 mm ²
Conductor cross-section, rigid , min.	0.5 mm ²	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 ²

Connection data (output)

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

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Classifications

ETIM 6.0	EC002540	ETIM 7.0	EC002540
ETIM 8.0	EC002540	ETIM 9.0	EC002540
ECLASS 9.0	27-04-07-01	ECLASS 9.1	27-04-07-01
ECLASS 10.0	27-04-07-01	ECLASS 11.0	27-04-07-01
ECLASS 12.0	27-04-07-01	ECLASS 13.0	27-04-07-01
ECLASS 14.0	27-04-07-01		

Environmental Product Compliance

RoHS Compliance Status	Compliant with exemption
RoHS Exemption (if applicable/known)	7a, 7cl
REACH SVHC	Lead 7439-92-1
SCIP	6d8cdf22-8230-4af8-86c8-3558c716666d

Approvals

Approvals



ROHS	Conform
UL File Number Search	UL Website
Certificate no. (cULus)	E258476

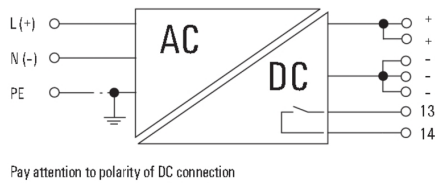
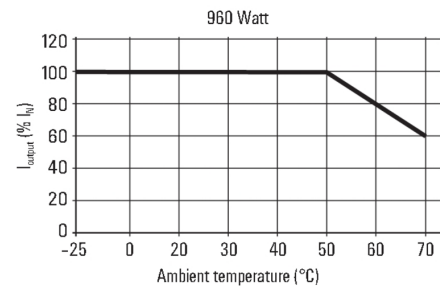
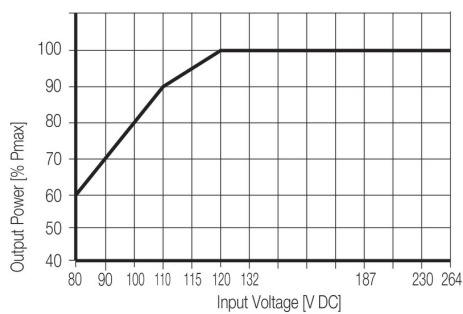
Downloads

Approval/Certificate/Document of Conformity	UL508 CSA C22.2 Certificate.pdf Declaration of Conformity UK Conformity Assessed
Engineering Data	CAD data – STEP
User Documentation	Operating instructions
Catalogues	Catalogues in PDF-format

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Drawings**Electric symbol****Derating curve****Derating curve****Derating curve**