

PRO ECO 960W 24V 40A

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

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

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
Net weight	3,190 g	Width	160 mm
Width (inches)	6.299 inch		

Temperatures

Storage temperature	-40 °C...85 °C	Operating temperature	-25 °C...70 °C
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Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
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Rated data UL

Operating altitude	≤ 3000 m
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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	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
Nominal output current for U_{nom}	40 A @ 50 °C	Output power	960 W
Output voltage	24 V	Output voltage	22...28 V (adjustable via potentiometer)
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		

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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	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)	MTBF	> 500,000 h in accordance with IEC 61709 (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
Protection against over-heating	Yes	Protection against reverse voltages from the load	30...35 V DC
Short-circuit protection	Yes		

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/output	3 kV	Pollution severity	2
Protection class	I, with PE connection		

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 transformers for switch-mode power supplies	According to EN 61558-2-16		

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 ²	Conductor cross-section, rigid, max.	6 mm ²
Conductor cross-section, rigid, min.	0.5 mm ²	Connection system	Screw connection
Wire connection cross section, flexible (input), max.	2.5 mm ²		

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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 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)

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

Certificate no. (cULus)	E258476	Institute (cULus)	CULUS
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Classifications

ETIM 6.0	EC002540	ETIM 7.0	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

Approvals

Approvals



ROHS	Conform
UL File Number Search	E258476

Downloads

Approval/Certificate/Document of Conformity	Declaration of Conformity
Engineering Data	STEP
Engineering Data	EPLAN, WSCAD
User Documentation	Operating instructions

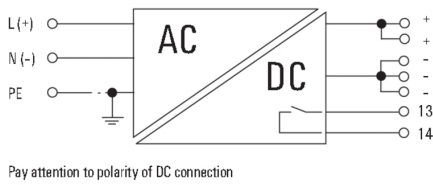
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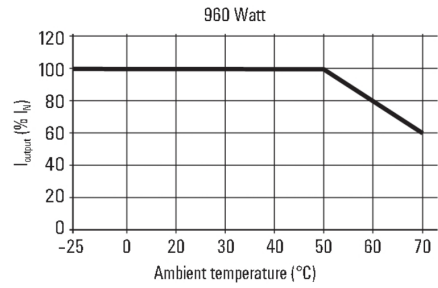
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Drawings

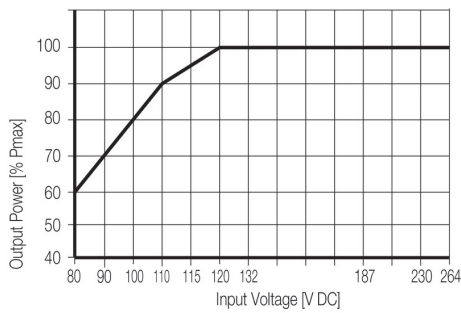
Electric symbol



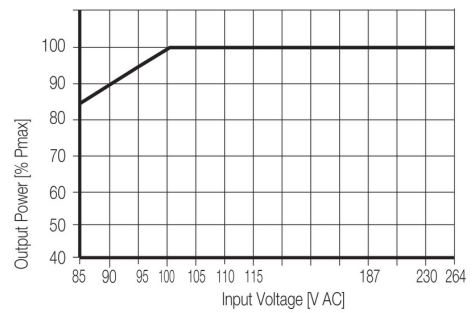
Derating curve



Derating curve



Derating curve



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Accessories**Crosshead screwdriver, Pozidrive**

VDE insulated screwdriver sets, for working on live parts up to 1000 V AC and 1500 V DC, DIN EN 60900. IEC 900. Each piece is "GS" safety tested. Blade made from fully hardened, high-alloy chromium-vanadium-molybdenum steel, gun-metal finish.

General ordering data

Type	SDIK PZ1 SL	Version
Order No.	1274730000	Mounting tool, Blade length: 80 mm
GTIN (EAN)	4050118073225	
Qty.	1 pc(s).	

Slotted screwdriver

VDE insulated screwdriver sets, for working on live parts up to 1000 V AC and 1500 V DC, DIN EN 60900. IEC 900. Each piece is "GS" safety tested. Blade made from fully hardened, high-alloy chromium-vanadium-molybdenum steel, gun-metal finish.

General ordering data

Type	SDIS SL 0.6X3.5X100	Version
Order No.	1274660000	Mounting tool, Blade width (B): 3.5 mm, Blade length: 100 mm, Blade thickness (A): 0.6 mm
GTIN (EAN)	4050118072631	
Qty.	1 pc(s).	

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Accessories
W-Series

Klippon® Connect with clamping yoke Technology

The high reliability and variety of designs of the terminal blocks with clamping yoke connections make planning easier and optimises operational safety. Klippon® Connect provides a proven response to a range of different requirements.

General ordering data

Type	WEW 35/1 V0 GF SW	Version
Order No.	1478990000	W-Series, End bracket
GTIN (EAN)	4050118286892	
Qty.	50 pc(s).	
Type	WEW 35/2 V0 GF SW	Version
Order No.	1479000000	W-Series, End bracket
GTIN (EAN)	4050118286779	
Qty.	100 pc(s).	