

PRO TOP1 960W 24V 40A EX

Weidmüller Interface GmbH & Co. KG
 Klingenbergstraße 26
 D-32758 Detmold
 Germany

www.weidmueller.com



Production processes constantly need to be made more efficient. As well as performance, energy efficiency and sustainability are also playing an increasingly important role in cutting-edge industry. PROtop power supplies combine excellent performance data with exemplary sustainability, which has a positive impact on the productivity of the entire production facility.

PROtop offers a number of advantages that give you a real competitive edge. These include the permanent reduction of energy costs thanks to high efficiencies as well as the increase in plant availability due to long service life and high MTBF values. In addition, there is a high functional density due to the extremely spacesaving designs.

PROtop can achieve significant savings compared to conventional power supply units. Its increased efficiency saves an average of 50 kWh per day in a medium-sized production facility with approx. 100 PROtop power supplies working in three-shift operation. This adds up to over 15,000 kWh a year and also improves the facility's carbon footprint. The service life, which is twice as long as that of standard power supplies, also sustainably reduces the costs of repurchase and exchange.

General ordering data

Version	Power supply, switch-mode power supply unit, 24 V
Order No.	2467010000
Type	PRO TOP1 960W 24V 40A EX
GTIN (EAN)	4050118481914
Qty.	1 items

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Technical data

Approvals

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ROHS	Conform
UL File Number Search	UL Website
Certificate no. (cULus)	E258476
Certificate no. (cULusEX)	E470829

Dimensions and weights

Depth	125 mm	Depth (inches)	4.9212 inch
Height	130 mm	Height (inches)	5.1181 inch
Width	139 mm	Width (inches)	5.4724 inch
Net weight	3382 g		

Temperatures

Storage temperature	-40 °C...85 °C	Operating temperature	-40 °C...70 °C
Humidity at operating temperature	5...100 % no condensation		

Environmental Product Compliance

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

Input

Connection system	Clamping yoke		
AC input voltage range	85...277 V AC		
Recommended back-up fuse	16 A, DI / 16 A, Char. B / 16 A, Char C		
Frequency range AC	45...65 Hz		
Rated input voltage	110...240 V AC / 120...340 V DC		
Surge protection	Varistor		
Input fuse (internal)	Yes		
DC input voltage range	80 ... 410 V DC		
Inrush current	max. 15 A		
Current consumption in relation to the input voltage	Voltage type	AC	
	Input voltage	100 V	
	Input current	12 A	
	Voltage type	DC	
	Input voltage	120 V	
	Input current	12 A	
Input electric strength, max.	AC/DC		
Nominal power consumption	1021 VA		

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Output

Output power	960 W		
Mains failure bridge-over time	> 20 ms @ 115V AC/ 230 VAC		
Connection system	Clamping yoke connection		
Rated output voltage	24 V DC \pm 1 %		
Residual ripple, breaking spikes	<50 mVss @ UNenn, Full Load		
Parallel connection option	Yes, for redundancy and power increase (with ORing MOSFET)		
Output voltage, max.	28.8 V		
Output voltage, min.	22.5 V		
Output current, max.	40 A		
Output voltage, note	adjustable with potentiometer or communication module		
Nominal output current for Unom	40 A @ 60 °C		
Protection against inverse voltage	Yes		
DCL - peak load reserve	Boost duration	5 s	
	Multiple of the rated current	150 %	
	Boost duration	15 ms	
	Multiple of the rated current	400 %	
Ramp-up time	\leq 100 ms		

General data

Power factor (approx.)	> 0.9	AC failure bridging time @ Inom	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC
Degree of efficiency	94%	Protection degree	IP20
Surge voltage category	III, II	Mounting position, installation notice	Horizontal on DIN rail TS 35, top and bottom 50 mm clearance for free air flow, 10 mm clearance to neighbouring subassemblies.
Housing version	Metal, corrosion resistant	Derating	> 60°C (2.5% / 1°C)
Earth leakage current, max.	3.5 mA	Conformal coating	Yes
Power loss, idling	5 W	Short-circuit protection	Yes, internal
Power loss, nominal load	61.3 W		

EMC / shock / vibration

Shock resistance IEC 60068-2-27	30 g in all directions	Noise emission in accordance with EN55032	Class B
Interference immunity test acc. to	EN 55032:2015, EN 55024:2010/A1:2015, EN 55035:2017, EN 61000-3-2:2014, EN 61000-6-1:2007, EN 61000-6-2:2005, EN 61000-6-3:2007/ A1:2011, EN 61000-6-4:2007/ A1:2011	Vibration resistance IEC 60068-2-6	2.3 g (on DIN rail), 4 g (with direct mounting)

Insulation coordination

Surge voltage category	III, II	Pollution severity	2
Protection class	I, with PE connection	Insulation voltage, input/output	3.5 kV
Insulation voltage input / earth	3.2 kV	Insulation voltage output / earth	0.5 kV

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Electrical safety (applied standards)

Electrical machine equipment	Acc. to EN60204	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)

Connection system	Clamping yoke	Number of terminals	3 for L/N/PE
Screwdriver blade	0.8 x 4.0	Conductor cross-section, AWG/kcmil , max.	10 AWG
Conductor cross-section, AWG/kcmil , min.	26 AWG	Wire connection cross section, flexible (input), 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 data (output)

Connection system	Clamping yoke connection	Number of terminals	5 (+ + / - -)
Conductor cross-section, AWG/kcmil , max.	6 AWG	Conductor cross-section, AWG/kcmil , min.	22 AWG
Conductor cross-section, flexible , max.	16 mm ²	Conductor cross-section, flexible , min.	6 mm ²
Conductor cross-section, rigid , max.	16 mm ²	Conductor cross-section, rigid , min.	0.2 mm ²
Screwdriver blade	1.0 x 5.5		

Connection data (signal)

Wire connection cross-section, flexible (signal), max.	1.5 mm ²	Wire connection method	Screw connection
Wire cross-section, AWG/kcmil , max.	16	Wire cross-section, solid , min.	0.2 mm ²
Wire cross-section, solid , max.	1.5 mm ²	Wire connection cross-section, flexible (signal), min.	0.2 mm ²
Wire cross-section, AWG/kcmil , min.	28 mm ²		

Signalling

Floating contact	Yes	LED green/red	Green: Operation (failure-free), Flashing green: advance warning I>90%, Green/red flashing: output switched off (switch-off mode), Flashing red: overload/error
Status relay (max. load)	Output voltage OK (30 V DC / 1 A)		

Guarantee

Time interval	3 years
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Classifications

ETIM 6.0	EC002540	ETIM 7.0	EC002540
ETIM 8.0	EC002540	ETIM 9.0	EC002540
ETIM 10.0	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

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ECLASS 15.0

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Drawings

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