Data sheet

PRO TOP3 960W 48V 20A

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 ustainability 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 mediumsized 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, 48 V
Order No.	2467170000
Type	PRO TOP3 960W 48V 20A
GTIN (EAN)	4050118482072
Qty.	1 items

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Technical data

Approvals

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

Dimensions and weights

Depth	175 mm	Depth (inches)	6.8898 inch
Height	130 mm	Height (inches)	5.1181 inch
Width	89 mm	Width (inches)	3.5039 inch
Net weight	2490 g		

Temperatures

Storage temperature	-40 °C...85 °C	Operating temperature	-25 °C...70 °C
Humidity at operating temperature	5...95 %, no condensation	Start-up	≥ -40 °C

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	PUSH IN	
AC input voltage range	3 x 320...3 x 575 V AC / 2 x 360...2 x 575 V AC	
Recommended back-up fuse	6 - 8 A, Char. C	
Frequency range AC	45...65 Hz	
Rated input voltage	3x 400...3x 500 V AC (wide-range input)	
Surge protection	Varistor	
Input fuse (internal)	No	
DC input voltage range	450...800 V DC	
Inrush current	Max. 10 A	
Current consumption in relation to the input voltage	Voltage type	3-phase AC
	Input voltage	320 V
	Input current	3.4 A
	Voltage type	DC
	Input voltage	400 V
	Input current	3.2 A
Nominal power consumption	1007 VA	

Output

Output power	960 W
Mains failure bridge-over time	> 20 ms @ 115V AC/ 230 VAC

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Connection system	PUSH IN	
Rated output voltage	48 V DC ± 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.	56 V	
Output voltage, min.	45 V	
Output current, max.	20 A	
Output voltage, note	adjustable with potentiometer or comunication module	
Nominal output current for Unom	20 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	≤ 100 ms	

General data

Power factor (approx.)	> 0.75 @ 3x400 V AC	AC failure bridging time @ Inom	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC
Degree of efficiency	95,3 %	Weight	2490 g
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	No	Short-circuit protection	Yes, internal

EMC / shock / vibration

Shock resistance IEC 60068-2-27	30 g in all directions	Interference immunity test acc. to	EN 55024, EN 55032 (EN 55022), EN 61000-6-1, 2, 3, 4
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

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, SELV according to EN 62368-1
Safety transformers for switch-mode power supplies	According to EN 61558-2-16		

Connection data (input)

Connection system	PUSH IN	Number of terminals	4 for L1/L2/L3/PE
Conductor cross-section, AWG/kcmil , max.	4 AWG	Conductor cross-section, AWG/kcmil , min.	20 AWG

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Technical data

Wire connection cross section, flexible (input), max.	16 mm²	Conductor cross-section, flexible , min.	0.75 mm²
Conductor cross-section, rigid , max.	16 mm²	Conductor cross-section, rigid , min.	0.75 mm²

Connection data (output)

Connection system	PUSH IN	Number of terminals	4 (++ / –)
Conductor cross-section, AWG/kcmil , max.	4 AWG	Conductor cross-section, AWG/kcmil , min.	20 AWG
Conductor cross-section, flexible , max.	16 mm²	Conductor cross-section, flexible , min.	0.75 mm²
Conductor cross-section, rigid , max.	16 mm²	Conductor cross-section, rigid , min.	0.75 mm²

Connection data (signal)

Wire connection cross-section, flexible (signal), max.	1.5 mm²	Wire connection method	PUSH IN
Wire cross-section, AWG/kcmil , max.	16	Wire cross-section, solid , min.	0.14 mm²
Wire cross-section, solid , max.	1.5 mm²	Wire connection cross-section, flexible (signal), min.	0.14 mm²
Wire cross-section, AWG/kcmil , min.	26 mm²		

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)		

Classifications

ETIM 8.0	EC002540	ETIM 9.0	EC002540
ETIM 10.0	EC002540	ECLASS 14.0	27-04-07-01
ECLASS 15.0	27-04-07-01		

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Drawings