

**PROtop
PRO TOP1 960W 48V 20A CO**

Weidmüller Interface GmbH & Co. KG
Klingenbergstraße 26
D-32758 Detmold
Germany
Fon: +49 5231 14-0
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www.weidmueller.com



High-end power supplies must perform efficiently and reliably, even in challenging industrial environments. This requires high power reserves, a long service life and optimal protection against overvoltage, vibration and extreme temperature conditions.

New DCL technology gives PROtop an outstanding dynamic range. This can be used for the reliable triggering of circuit breakers or for powerful motor starts.

General ordering data

Type	PRO TOP1 960W 48V 20A CO
Order No.	2467050000
Version	Power supply, switch-mode power supply unit, 48 V
GTIN (EAN)	4050118481952
Qty.	1 pc(s).

Creation date May 2, 2020 12:53:16 PM CEST

Catalogue status 17.04.2020 / We reserve the right to make technical changes.

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Technical data
Dimensions and weights

Width	139 mm	Width (inches)	5.472 inch
Height	130 mm	Height (inches)	5.118 inch
Depth	125 mm	Depth (inches)	4.921 inch
Net weight	3,382 g		

Temperatures

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

Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
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Input

AC input voltage range	85...277 V AC	Connection system	Clamping yoke
DC input voltage range	80 ... 410 V DC	Dielectric strength	max. 300 V AC ≤ 15 s
Frequency range AC	45...65 Hz	Input fuse (internal)	Yes
Inrush current	max. 15 A	Rated input voltage	100 - 240 V AC / 120 - 340 V DC
Recommended back-up fuse	16 A, DI / 16 A, Char. B / 16 A, Char C	Surge protection	Varistor

Output

DCL - peak load reserve	150 % (5 s); 400 % (15 ms)	Connection system	Clamping yoke connection
Mains failure bridge-over time	> 20 ms @ 115V AC/ 230 VAC	Nominal output current for U _{nom}	20 A @ 60 °C
Output power	960 W	Output voltage	48 V
Output voltage	45...56 V	Parallel connection option	yes, max 10
Protection against inverse voltage	Yes	Ramp-up time	≤ 100 ms
Rated output voltage	48 V DC ± 1 %	Reserve capacity @ U _{Nominal}	130% permanent at ≤ 40°C, 150 % (5 s)
Residual ripple, breaking spikes	< 100 mV _{PP}	Triggerable circuit breakers	C2, C4, C6, B6, B10, B2, B4

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AC failure bridging time @ I _{nom}	> 20 ms @ 230 V AC / > 20 ms @ 115 V AC	Conformal coating	Yes
Degree of efficiency	94%	Derating	> 60°C (2.5% / 1°C)
Earth leakage current, max.	3.5 mA	Housing version	Metal, corrosion resistant
MTBF	> 1.000.000 h according IEC 1709 (SN29500)	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 active subassemblies with full load, 5 mm with passive neighbouring subassemblies, direct row mounting with 90% rated load
Operating temperature	-40 °C...70 °C	Power factor (approx.)	> 0.9
Power loss, idling	10 W	Power loss, nominal load	61.3 W
Protection degree	IP20	Series switching capability	No
Short-circuit protection	Yes, internal	Surge voltage category	III, II

EMC / shock / vibration

Noise emission in accordance with EN55032	Class B	Vibration resistance IEC 60068-2-6	2.3 g (on DIN rail), 4 g (with direct mounting)
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	Shock resistance IEC 60068-2-27	30 g in all directions

Insulation coordination

Humidity at operating temperature	5...100 % no condensation	Insulation voltage input / earth	3.2 kV
Insulation voltage output / earth	0.5 kV	Insulation voltage, input/output	3.5 kV
Pollution severity	2	Protection class	I, with PE connection
Surge voltage category	III, 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 according to EN 60950, PELV according to EN 60204	Safety transformers for switch-mode power supplies	According to EN 61558-2-16

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Connection data (input)

Conductor cross-section, AWG/kcmil , max.	10	Conductor cross-section, AWG/kcmil , min.	26
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 system	Clamping yoke
Number of terminals	3 for L/N/PE	Screwdriver blade	0.8 x 4.0
Wire connection cross section, flexible (input), max.	4 mm ²		

Connection data (output)

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



Connection data (signal)

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

Signalling

Floating contact	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)	Yes Output voltage OK (30 V DC / 1 A)	

Approvals

Institute (cULus)		Certificate no. (cULus)	E258476
Institute (cULusEX)		Certificate no. (cULusEX)	E470829

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		

Data sheet**PROtop
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Approvals



ROHS

Conform

DownloadsApproval/Certificate/Document of
Conformity[Declaration of Conformity](#)

User Documentation

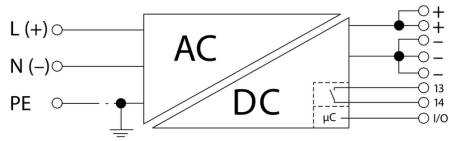
[IS PRO TOP1 960W 48V 20A CO](#)

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Drawings



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Accessories

End brackets



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

Installation



Power supplies from Weidmüller have long since proved their worth in supplying electrical modules. They can therefore be used safely in harsh industrial environments, in small businesses and in living areas, and have been granted international approvals. Weidmüller provides power supplies and additional components for industrial applications:

- Switched-mode power supply units
- DC/DC converters
- UPS control modules
- Electronic fuses

General ordering data

Type	MTA 45 MF	Version
Order No.	1251310000	Electronics housings, Mounting flange
GTIN (EAN)	4050118042719	
Qty.	1 pc(s).	
Type	PRO TOP BRACKETS	Version
Order No.	2575900000	Mounting foot
GTIN (EAN)	4050118683059	
Qty.	1 pc(s).	
Type	CP A WALLADAPTER 45MM	
Order No.	1461850000	
GTIN (EAN)	4050118268010	
Qty.	1 pc(s).	

Communication modules



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- Switched-mode power supply units
- DC/DC converters
- UPS control modules
- Electronic fuses

General ordering data

Type	PRO COM CAN OPEN	Version
Order No.	2467320000	Communication module
GTIN (EAN)	4050118482225	
Qty.	1 pc(s).	
Type	PRO COM CAN OPEN EX	Version
Order No.	2467340000	Communication module
GTIN (EAN)	4050118481822	
Qty.	1 pc(s).	

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Accessories

Type	PRO COM IO-LINK	Version
Order No.	2587360000	Communication module
GTIN (EAN)	4050118599152	
Qty.	1 pc(s).	
Type	PRO COM DISPLAY 7S	Version
Order No.	2466960000	Communication module
GTIN (EAN)	4050118481808	
Qty.	1 pc(s).	