

## PRO TOP1 960W 24V 40A EX

**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

[www.weidmueller.com](http://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.	<a href="#">2467010000</a>
Type	PRO TOP1 960W 24V 40A EX
GTIN (EAN)	4050118481914
Qty.	1 items

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## Technical data

### Approvals

Approvals



ROHS	Conform
UL File Number Search	<a href="#">UL Website</a>
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
Nominal power consumption	1021 VA	

### Output

Output power	960 W
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### Technical data

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

### 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		

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## Technical data

### 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 <sup>2</sup>
Conductor cross-section, flexible , min.	0.22 mm <sup>2</sup>	Conductor cross-section, rigid , max.	6 mm <sup>2</sup>
Conductor cross-section, rigid , min.	0.18 mm <sup>2</sup>		

### 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 <sup>2</sup>	Conductor cross-section, flexible , min.	6 mm <sup>2</sup>
Conductor cross-section, rigid , max.	16 mm <sup>2</sup>	Conductor cross-section, rigid , min.	0.2 mm <sup>2</sup>
Screwdriver blade	1.0 x 5.5		

### Connection data (signal)

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

### 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**

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## Accessories

### End bracket



Weidmüller's range of products includes end brackets that guarantee a permanent, reliable mounting on the terminal rail and prevent sliding. Versions with and without screws are available. The end brackets include marking options, also for group markers, and also a test plug holder.

#### General ordering data

Type	WEW 35/1 V0 GF SW	Version	
Order No.	<a href="#">1478990000</a>	End bracket, black, TS 35, V-0, Wemid, Width: 12 mm, 130 °C	
GTIN (EAN)	4050118286892		
Qty.	50 ST		
Type	WEW 35/2 V0 GF SW	Version	
Order No.	<a href="#">1479000000</a>	End bracket, black, TS 35, V-0, Wemid, Width: 8 mm, 130 °C	
GTIN (EAN)	4050118286779		
Qty.	50 ST		

### 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 SLIM 0.6X3.5X100	Version	
Order No.	<a href="#">2749610000</a>	Mounting tool, Blade width (B): 3.5 mm, Blade length: 100 mm, Blade thickness (A): 0.6 mm	
GTIN (EAN)	4050118896350		
Qty.	1 ST		

### Installation



Mounting accessory for Weidmüller Power Supplies.

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## Accessories

### General ordering data

Type	PRO TOP BRACKETS	Version
Order No.	<a href="#">257590000</a>	Mounting foot
GTIN (EAN)	4050118683059	
Qty.	1 ST	
Type	MTA 45 MF	Version
Order No.	<a href="#">1251310000</a>	Electronics housings, Mounting flange
GTIN (EAN)	4050118042719	
Qty.	1 ST	
Type	CP A WALLADAPTER 30 MM	Version
Order No.	<a href="#">1461870000</a>	
GTIN (EAN)	4050118268225	
Qty.	1 ST	

### Communication modules



Weidmüller's plug-in communication modules enable individual components to exchange relevant data with the cloud. This lays the foundation for targeted process optimization using condition monitoring and remote controllability - factors that play a decisive role in increasing efficiency, quality, process stability and availability can contribute. The communication modules are designed according to IP20 protected, can be operated without tools and can be flexibly adapted to different customisable communication protocols.

### General ordering data

Type	PRO COM CAN OPEN	Version
Order No.	<a href="#">2467320000</a>	Communication module
GTIN (EAN)	4050118482225	
Qty.	1 ST	
Type	PRO COM CAN OPEN EX	Version
Order No.	<a href="#">2467340000</a>	Communication module
GTIN (EAN)	4050118481822	
Qty.	1 ST	
Type	PRO COM DISPLAY 7S	Version
Order No.	<a href="#">2466960000</a>	Communication module
GTIN (EAN)	4050118481808	
Qty.	1 ST	
Type	PRO COM IO-LINK	Version
Order No.	<a href="#">2587360000</a>	Communication module
GTIN (EAN)	4050118599152	
Qty.	1 ST	

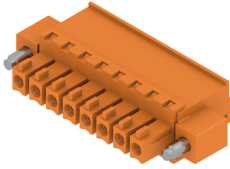
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## Accessories

### BCZ 3.81/270F



Female socket connectors with clamping-yoke screw system for connecting wires.

Three wire-outlet directions are available and provide flexible connection-level design options:

- 180° wire parallel to plugging direction
- 90° wire perpendicular and above plugging direction
- 270° wire perpendicular and below plugging direction

There are three housing shapes, covering many different requirements, to choose from:

- Standard housing without flange
- Flange with screw (F)
- Flange featuring Weidmüller's patented release latch (LR) for lock-and-release latching with no strain and no tools needed.

Weidmüller's 3.81-mm-pitch (0.15 inch) plug-in connectors are compatible with the layouts of customary connectors and offer space for labelling and coding.

#### General ordering data

Type	BCZ 3.81/03/270F SN BK ...	Version
Order No.	<a href="#">2569240000</a>	PCB plug-in connector, female plug, 3.81 mm, Number of poles: 3,
GTIN (EAN)	4050118592436	180°, Clamping yoke connection, Clamping range, max. : 1.5 mm <sup>2</sup> ,
Qty.	50 ST	Box

### BUZ 10.16HP/180SF



High-performance female header with the proven, 100% maintenance-free Weidmüller steel clamping yoke. Side-by-side mounting without sacrificing any poles or with patented multifunction flange for secure, fast fixing without tools. Maximum connection and operating reliability thanks to a mating profile that prevents incorrect connection, unique coding diversity, protection against incorrect wiring and 4-point silver contact.

#### General ordering data

Type	BUZ 10.16HP/04/180SF AG...	Version
Order No.	<a href="#">1924720000</a>	PCB plug-in connector, female plug, 10.16 mm, Number of poles: 4,
GTIN (EAN)	4032248564873	180°, Clamping yoke connection, Clamping range, max. : 16 mm <sup>2</sup> ,
Qty.	20 ST	Box