

PRO TOPDC 24V/24V 20A EX

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

www.weidmueller.com



PROtop DCDC converters are used for safe electrical isolation to avoid ground loops that can occur when supplying field devices in production or process plants. DCDC converters can be used on long supply lines to refresh the supply voltage. The integrated ORing MOSFET reliably decouples possible internal short circuits. It allows direct parallel connection of ACDC and DCDC converters of the PROtop series for redundancy purposes or to increase power. This makes the use of the otherwise common diode or redundancy modules obsolete. Furthermore, PROtop DCDC converters feature the powerful DCL technology – and their communication module allows full data transparency and remote control.

General ordering data

Version	DC/DC converter
Order No.	2467310000
Type	PRO TOPDC 24V/24V 20A EX
GTIN (EAN)	4050118482218
Qty.	1 items

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Technical data

Approvals

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ROHS Conform

Dimensions and weights

Depth	125 mm	Depth (inches)	4.9212 inch
Height	130 mm	Height (inches)	5.1181 inch
Width	75 mm	Width (inches)	2.9527 inch
Net weight	1746 g		

Temperatures

Storage temperature	-40 °C...85 °C	Operating temperature	-40 °C...70 °C
Humidity at operating temperature	5...100 % 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	Screw connection	
Rated input voltage	24 V DC	
Input voltage, max.	31.2 V	
Input voltage, min.	14 V	
Wire connection method	Screw connection	
Input fuse (internal)	Yes	
DC input voltage range	14 V...31.2 V (linear Derating from 18 V...14 V, 60% rated load @ Uin 14 V)	
Inrush current	max. 15 A	
Inrush Current Limitation	Yes	
Current consumption in relation to the input voltage	Voltage type	DC
	Input voltage	24 V
	Input current	22 A
	Voltage type	DC
	Input voltage	18 V
	Input current	30 A
Nominal power consumption	527.5 VA	

Output

Output power	480 W
Connection system	Clamping yoke connection
Rated output voltage	24 V DC ± 1 %
Residual ripple, breaking spikes	<40 mVPP@25 °C

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Parallel connection option	yes, max 10		
Output voltage, max.	28.8 V		
Output voltage, min.	22.5 V		
Output current, max.	26 A		
Wire connection method	Screw connection		
Output voltage, note	adjustable with potentiometer or communication module		
Nominal output current for Unom	20 A @ 60 °C		
Mains failure bridge-over time	Mains failure bridge-over time, min.	10 ms	
	Input voltage type	DC	
	Input voltage	24 V	
	Output current	20 A	
	Output voltage	24 V	
Protection against inverse voltage	Yes		
DCL - peak load reserve	Boost duration	15 ms	
	Multiple of the rated current	500 %	
	Boost duration	5 s	
	Multiple of the rated current	200 %	
Ramp-up time	≤ 100 ms		

General data

Degree of efficiency	91%	Protection degree	IP20
Surge voltage category	I, II, III	Mounting position, installation notice	On TS 35 mounting rail, 50 mm clearance above and below for free air supply.
Housing version	Metal, corrosion resistant	Derating	> 60°C (2.5% / 1°C)
Adjacent	No	Conformal coating	Yes
Power loss, idling	5 W	Short-circuit protection	Yes

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 55035:2017, EN 61000-6-1:2007, EN 61000-6-2:2005, EN 61000-6-3:2007/A1:2011, EN 61000-6-4:2007/A1:2011, IEC 61000-4-2, IEC 61000-4-3, DIN EN 61000-4-4, EN 61000-4-5:2005, EN 61000-4-6:2008, IEC 61000-4-8	Vibration resistance IEC 60068-2-6	2.3 g (on DIN rail), 4 g (with direct mounting)

Insulation coordination

Surge voltage category	I, II, III	Protection class	III, with no ground connection, for SELV
Insulation voltage, input/output	1.41 kV	Insulation voltage input / earth	1.41 kV
Insulation voltage output / earth	0.7 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	Screw connection	Number of terminals	2 for (+, -)
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	4 (++ / -)
Conductor cross-section, AWG/kcmil , max.	8 AWG	Conductor cross-section, AWG/kcmil , min.	24 AWG
Conductor cross-section, flexible , max.	6 mm ²	Conductor cross-section, flexible , min.	0.5 mm ²
Conductor cross-section, rigid , max.	6 mm ²	Conductor cross-section, rigid , min.	0.2 mm ²
Screwdriver blade	0.6 x 3.5		

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)		

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

