

PRO DCDC 120W 24V 5A**Weidmüller Interfaces GmbH & Co. KG**

Postfach 3030

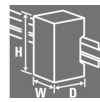
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www.weidmueller.com



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, 24 V
Order No.	2001800000
Type	PRO DCDC 120W 24V 5A
GTIN (EAN)	4050118383836
Qty.	1 pc(s).

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Technical data**Dimensions and weights**

Depth	120 mm	Depth (inches)	4.724 inch
Height	130 mm	Height (inches)	5.118 inch
Width	32 mm	Width (inches)	1.26 inch
Net weight	767 g		

Temperatures

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

Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
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Input

Connection system	Screw connection	DC input voltage range	14...32 V (during operation), 18...32 V (commissioning)
Input fuse (internal)	Yes	Inrush Current Limitation	Yes
Inrush current	Max. 10 A	Nominal power consumption	130.4 VA
Rated input voltage	24 V DC	Recommended back-up fuse	10 A, Char. B circuit breaker, 10 A, Char. C circuit breaker

Output

Capacitive load	unrestricted																				
Connection system	Screw connection																				
Continuous output current @ $U_{Nominal}$	5 A @ 40 °C, 6 A @ 45 °C, 3.75 A @ 70 °C																				
DCL - peak load reserve	<table> <tr> <td>Multiple of the rated current</td><td>150 %</td></tr> <tr> <td>Boost duration</td><td>5 s</td></tr> <tr> <td>Multiple of the rated current</td><td>200 %</td></tr> <tr> <td>Boost duration</td><td>200 ms</td></tr> <tr> <td>Multiple of the rated current</td><td>300 %</td></tr> <tr> <td>Boost duration</td><td>100 ms</td></tr> <tr> <td>Multiple of the rated current</td><td>400 %</td></tr> <tr> <td>Boost duration</td><td>50 ms</td></tr> <tr> <td>Multiple of the rated current</td><td>600 %</td></tr> <tr> <td>Boost duration</td><td>20 ms</td></tr> </table>	Multiple of the rated current	150 %	Boost duration	5 s	Multiple of the rated current	200 %	Boost duration	200 ms	Multiple of the rated current	300 %	Boost duration	100 ms	Multiple of the rated current	400 %	Boost duration	50 ms	Multiple of the rated current	600 %	Boost duration	20 ms
Multiple of the rated current	150 %																				
Boost duration	5 s																				
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Boost duration	100 ms																				
Multiple of the rated current	400 %																				
Boost duration	50 ms																				
Multiple of the rated current	600 %																				
Boost duration	20 ms																				
Nominal output current for U_{nom}	5 A @ 60 °C																				
Output current	5 A																				
Output power	120 W																				
Output voltage, max.	29.5 V																				
Output voltage, min.	22.5 V																				
Output voltage, note	(adjustable via potentiometer on front)																				
Overload protection	Yes																				
Parallel connection option	yes, max. 5 (without diode module)																				
Protection against inverse voltage	Yes																				
Ramp-up time	≤ 9 ms (U_{out} : 10%...90%)																				
Rated output voltage	24 V DC ± 1 %																				
Residual ripple, breaking spikes	max. 20 mVpp @ 24 VDC, IN																				

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Technical data

General data

AC failure bridging time @ I_{nom}	> 10 ms @ 24 V DC	Clip-in foot	www.weidmueller.com
Current limiting	150% I_{out}	Degree of efficiency	Typ.: 92 %
Housing version	Metal, corrosion resistant	Humidity	5...95 %, no condensation
Max. perm. air humidity (operational)	5 %...95 % RH	Mounting position, installation notice	Horizontal on TS35 mounting rail. 50 mm of clearance at top & bottom for air circ. Can mount side by side with no space in between., 50 mm clearance at top and bottom for free air circulation, mountable side by side without clearance
Operating temperature	-25 °C...70 °C	Power loss, idling	2 W
Power loss, nominal load	11 W	Protection against over-heating	Yes
Protection against reverse voltages from the load	33...34 V DC	Protection degree	IP20
Short-circuit protection	Yes	Start-up	≥ -40 °C
Surge voltage category	III		

EMC / shock / vibration

Interference immunity test acc. to	EN 61000-4-2 (ESD), EN 61000-4-4 (burst), EN 61000-4-5 (surge), EN 61000-4-6 (conducted), EN 61000-4-3 (HF field)	Limiting of mains voltage harmonic currents	According to EN 61000-3-2
Noise emission in accordance with EN55032	Class B	Shock resistance IEC 60068-2-27	30 g in all directions
Vibration resistance IEC 60068-2-6	2.3 g (15 Hz...150 Hz)		

Insulation coordination

Humidity at operating temperature	5...95 %, no condensation	Insulation voltage input / earth	1.5 kV
Insulation voltage output / earth	0.5 kV	Insulation voltage, input/output	1.5 kV
Pollution severity	2	Protection class	III, with no ground connection, for SELV
Surge voltage category	III		

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 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)

Conductor cross-section, AWG/kcmil, max.	12 AWG	Conductor cross-section, AWG/kcmil, min.	30 AWG
Conductor cross-section, flexible, min.	0.2 mm ²	Conductor cross-section, rigid, max.	4 mm ²
Conductor cross-section, rigid, min.	0.2 mm ²	Connection system	Screw connection
Reverse polarity protection	Yes	Wire connection cross section, flexible (input), max.	4 mm ²

Creation date November 22, 2022 11:41:22 PM CET

Catalogue status 18.11.2022 / We reserve the right to make technical changes.

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Technical data

Connection data (output)

Conductor cross-section, AWG/kcmil ,
max.

14 AWG

Conductor cross-section, flexible , max.

2.5 mm²

Conductor cross-section, rigid , max.

2.5 mm²

Connection system

Screw connection

Reverse polarity protection

Yes

Conductor cross-section, AWG/kcmil
min.

24 AWG

Conductor cross-section, flexible , min.

0.2 mm²

Conductor cross-section, rigid , min.

0.2 mm²

Number of terminals

8 (+ / - / signal)

Connection data (signal)

Wire connection method

Screw connection

Approbations

Certificate no. (cULus)

E258476

Institute (cULus)

CULUS

Certificate no. (cULusEX)

E470829

Institute (cULusEX)

CULUSEX

Classifications

ETIM 6.0

EC002540

ETIM 8.0

EC002540

ECLASS 9.1

27-04-07-01

ECLASS 11.0

27-04-07-01

ETIM 7.0

EC002540

ECLASS 9.0

27-04-07-01

ECLASS 10.0

27-04-07-01

ECLASS 12.0

27-04-07-01

Approvals

Approvals



ROHS

Conform

UL File Number Search

UL Website

Certificate no. (cULus)

E258476

Certificate no. (cULusEX)

E470829

Downloads

Approval/Certificate/Document of
Conformity[DE_PA5200_160310_002.pdf](#)

Engineering Data

[CAD data – STEP](#)

Engineering Data

[EPLAN, WSCAD](#)

User Documentation

[Operating Instructions](#)

Catalogues

[Catalogues in PDF-format](#)

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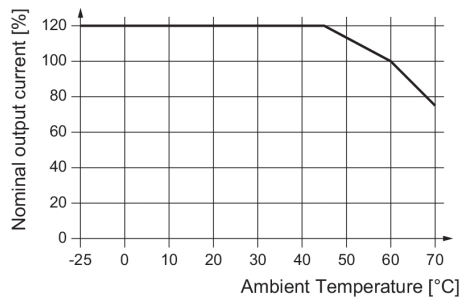
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Drawings



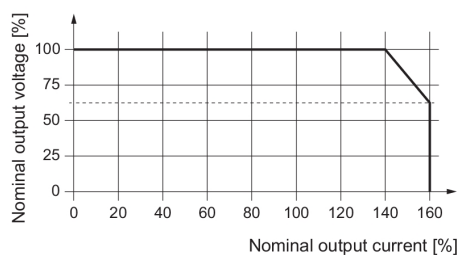
Derating curve

Event	Input	Output	LED (Gr/Ye/Rd)		Transistor status outputs		
			gr = "DC OK"	Ye = "I > 90% I _N "	Rd = "FAL T"	LED (Ye)	"I ow u _{IN} "
U _{IN} < 14 V	—	—	OFF	ON	—	Low	Low
U _{IN} = 14...19.2 V *1)	I < 90% I _N	Gr	ON	High	Low	Low	Low
	I > 90% I _N	Ye	ON	High	High	Low	Low
	U < 20.4 V	Rd	ON	Low	Low	Low	Low
U _{IN} > 19.2 V	I < 90% I _N	Gr	OFF	High	Low	High	High
	I > 90% I _N	Ye	OFF	High	High	High	High
	U < 20.4 V	Rd	OFF	Low	Low	High	High

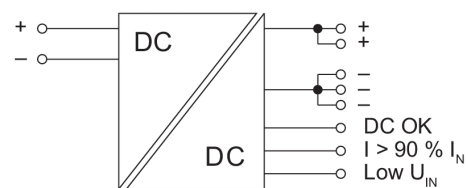
Gr = grün / green / verte / verde / verde / verde / 绿色
 Ye = gelb / yellow / jaune / giallo / amarillo / amarillo / 黄色
 Rd = rot / red / rouge / rosso / rojo / vermelho / 红色

*1) während des Betriebes / during operations / en cours de fonctionnement / durante l'esercizio / durante el servicio / durante a operação / 运行过程中

Signal states



UI characteristic curve



Switching symbol