

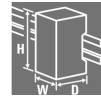
PRO DCDC 120W 24V 5A**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

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).

PRO DCDC 120W 24V 5A

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

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
Operating temperature, min.	-25 °C	Operating temperature, max.	70 °C
Humidity at operating temperature	5...95 %, no condensation	Humidity	5...95 %, no condensation

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	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
Nominal output current for U_{nom}	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	

PRO DCDC 120W 24V 5A

Weidmüller Interface GmbH & Co. KG

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com

Technical data

General data

AC failure bridging time @ I_{nom}	> 10 ms @ 24 V DC	Clip-in foot	metal
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), EN61000-4-3 (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 February 16, 2023 12:44:45 PM CET

Catalogue status 03.02.2023 / We reserve the right to make technical changes.

PRO DCDC 120W 24V 5A

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

www.weidmueller.com

Technical data**Connection data (output)**

Conductor cross-section, AWG/kcmil , max.	14 AWG	Conductor cross-section, AWG/kcmil , min.	24 AWG
Conductor cross-section, flexible , max.	2.5 mm ²	Conductor cross-section, flexible , min.	0.2 mm ²
Conductor cross-section, rigid , max.	2.5 mm ²	Conductor cross-section, rigid , min.	0.2 mm ²
Connection system	Screw connection	Number of terminals	8 (+ / - / signal)
Reverse polarity protection	Yes		

Connection data (signal)

Wire connection method	Screw connection
------------------------	------------------

Approbations

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

Classifications

ETIM 6.0	EC002540	ETIM 7.0	EC002540
ETIM 8.0	EC002540	ECLASS 9.0	27-04-07-01
ECLASS 9.1	27-04-07-01	ECLASS 10.0	27-04-07-01
ECLASS 11.0	27-04-07-01	ECLASS 12.0	27-04-07-01

Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
SCIP	6d8cdf22-8230-4af8-86c8-3558c716666d

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	WSCAD
User Documentation	Operating Instructions
Catalogues	Catalogues in PDF-format

Creation date February 16, 2023 12:44:45 PM CET

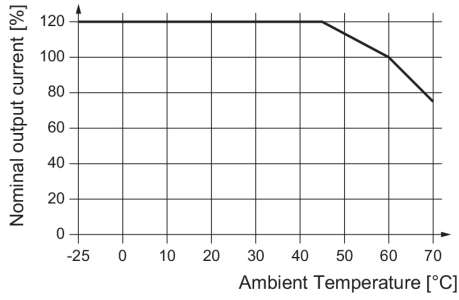
Catalogue status 03.02.2023 / We reserve the right to make technical changes.

PRO DCDC 120W 24V 5A

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

www.weidmueller.com

Drawings

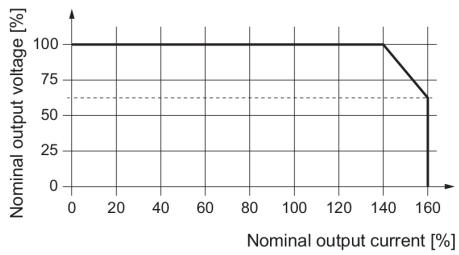


Derating curve

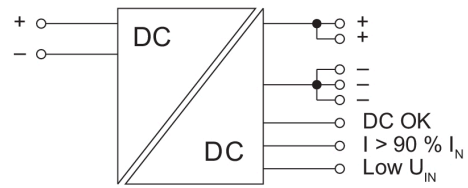
Event Input	Output	LED (Gr/Ye/Rd)		Transistor status outputs		
		gr = "DC OK" Ye = "I > 90% I _N " Rd = "FAul T"	LED (Ye) "I low U _{IN} "	DC OK	I > 90% I _N	I low U _{IN}
U _{IN} < 14 V	–	OFF	ON	Low	Low	Low
U _{IN} = 14...19.2 V *1)	I < 90% I _N	Gr	ON	High	Low	Low
	I > 90% I _N	Ye	ON	High	High	Low
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

Gr = grün / green / verde / 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