

PRO DCDC 120W 12V/24V 5A**Weidmüller Interface GmbH & Co. KG**

Klingenbergstraße 26

D-32758 Detmold

Germany

www.weidmueller.com



The DC/DC converter compensates for voltage fluctuations, such as those that occur with unregulated power supplies or long cables. With galvanic isolation and protection class III for earth-free systems, the DC/DC converter is particularly suitable for use in independent supply systems. The space-saving module can optimally convert voltage levels, offers above-average power performance, comprehensive safety functions, and a high efficiency of up to 95 %.

General ordering data

Version	DC/DC converter
Order No.	2869030000
Type	PRO DCDC 120W 12V/24V 5A
GTIN (EAN)	4064675620853
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	640 g		

Temperatures

Storage temperature	-45 °C...85 °C	Operating temperature	-25 °C...70 °C
Humidity at operating temperature	5 - 95% rel. humidity	Start-up	≥ -40 °C

Input

Connection system	Screw connection: pluggable		
Current consumption in relation to the input voltage	Voltage type	DC	
	Input voltage	12 V	
	Input current	11.8 A	
DC input voltage range	9 ... 18 V DC		
Input fuse (internal)	40A T		
Input voltage, max.	18 V		
Input voltage, min.	9 V		
Inrush current	<4 A @ Nominal input voltage		
Rated input voltage	12 V DC		
Recommended back-up fuse	20 A (DI) / 16 A ... 20 A (Char. B, C)		
Wire connection method	Screw connection		

Output

Capacitive load	unrestricted		
Connection system	Screw connection		
Continuous output current @ $U_{Nominal}$	5 A @ 60°C, 6.25 A @ 45°C, 3.75 A @ 70°C		
DCL - peak load reserve	Boost duration	15 ms	
	Multiple of the rated current	600 %	
Mains failure bridge-over time	Mains failure bridge-over time, min.	10 ms	
	Input voltage type	DC	
	Input voltage	12 V	
	Output current	5 A	
	Output voltage	24 V	
Nominal output current for U_{nom}	5 A @ 60 °C		
Output power	120 W		
Output voltage, max.	29.5 V		
Output voltage, min.	22 V		
Output voltage, note	(adjustable via potentiometer on front)		
Overload protection	Yes		
Parallel connection option	yes, max. 3		
Protection against inverse voltage	Yes		
Rated output voltage	24 V DC		
Residual ripple, breaking spikes	≤ 20 mVPP @full load		
Wire connection method	Screw connection		

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Adjacent	No	Current limiting	150% I _{out}
Degree of efficiency	> 86 %	Mounting position, installation notice	On TS 35 mounting rail, 50 mm clearance above and below for free air supply. With a load ≥ 50 % of the rated current, keep at least 15 mm lateral spacing. The device should be mounted vertically. For other mounting directions, de-rating to 75% of the load must be considered.
Protection against reverse voltages from the load	32 V DC	Protection degree	IP20
Short-circuit protection	Yes	Surge voltage category	II

EMC / shock / vibration

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	0.7 g		

Insulation coordination

Insulation voltage input / earth	2 kV	Insulation voltage output / earth	0.5 kV
Insulation voltage, input/output	4 kV	Pollution severity	2
Protection class	III	Surge voltage category	II

Electrical safety (applied standards)

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 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: plug-gable
Number of terminals	2 (+,-)	Screwdriver blade	0.6 x 3.5, PH 1, PZ 1
Tightening torque, max.	0.5 Nm	Tightening torque, min.	0.4 Nm
Wire connection cross section, flexible (input), max.	4 mm ²		

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	4 (++ / -)
Screwdriver blade	0.6 x 3.5	Tightening torque, max.	0.5 Nm
Tightening torque, min.	0.4 Nm		

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Catalogue status 26.11.2024 / We reserve the right to make technical changes.

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Connection data (signal)

Number of terminals	5	Wire connection cross-section, flexible (signal), max.	1.5 mm ²
Wire connection cross-section, flexible (signal), min.	0.2 mm ²	Wire connection method	PUSH IN
Wire cross-section, AWG/kcmil, max.	14	Wire cross-section, AWG/kcmil, min.	28 mm ²
Wire cross-section, solid, max.	1.5 mm ²	Wire cross-section, solid, min.	0.2 mm ²

Signalling

Contact load (NO contact)	max. 30 V DC / 0.5 A, max. 50 V AC / 0.3 A	Floating contact	Yes
Transistor output, positive-switching	DC OK: 20 mA max., short-circuit-proof, I > 90%: 20 mA max., short-circuit-proof, Low U _{IN} : 20 mA max., short-circuit-proof		

Classifications

ETIM 6.0	EC002540	ETIM 7.0	EC002540
ETIM 8.0	EC002540	ETIM 9.0	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	ECLASS 13.0	27-04-90-02
ECLASS 14.0	27-04-07-01		

Environmental Product Compliance

RoHS Compliance Status	Compliant with exemption
RoHS Exemption (if applicable/known)	7a, 7cl
REACH SVHC	Lead 7439-92-1
SCIP	832efd73-195b-4198-ad0c-1126d0bc238d

Approvals

Approvals



ROHS Conform

Downloads

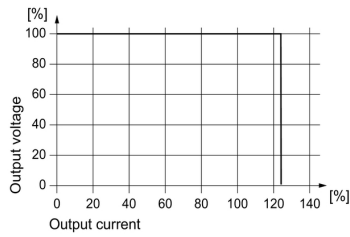
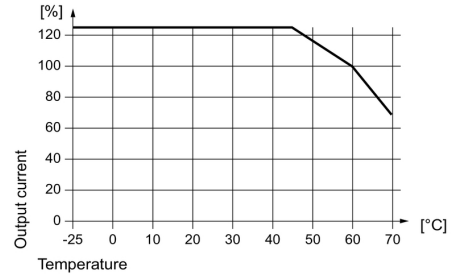
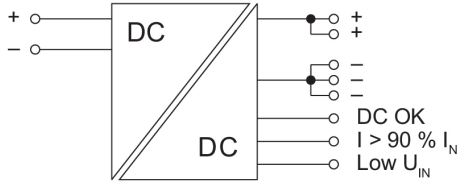
Approval/Certificate/Document of Conformity	Declaration of Conformity
Engineering Data	CAD data – STEP
User Documentation	Instruction sheets
Catalogues	Catalogues in PDF-format

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Drawings



Display elements and status outputs

Event	LED (Gr/Yel/Rd)	Transistor status outputs	Status relay
Input (typ.) A: U _{IN} < 6.1 V B: U _{IN} < 22.6 V	Gr = DC OK Ye = I > 90% I _N Rd = FAULT	DC OK	I > 90%
A: U _{IN} = 6.1 ... 18 V ¹⁾ B: U _{IN} = 22.6 ... 58 V ¹⁾	U > 90% U _{OUT} I < 90% I _{OUT}	High	Low
	U > 90% U _{OUT} I > 90% I _{OUT}	High	High
	U < 90% U _{OUT}	Low	Low
Input (typ.) A: U _{IN} = 6.2 ... 9 V B: U _{IN} = 22.6 ... 36 V ¹⁾	LED (Ye) Low U _{IN}	Transistor output Low U _{IN}	
A: U _{IN} = 9 ... 18 V ¹⁾ B: U _{IN} = 36 ... 58 V ¹⁾		Low	High

A: PRO DCDC 120W 12V/24V 5A
 B: PRO DCDC 120W 48V/24V 5A
 Gr = green
 Ye = yellow
 Rd = red
 1) during operation