

PRO DCDC 120W 48V/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.	2869040000
Type	PRO DCDC 120W 48V/24V 5A
GTIN (EAN)	4064675620860
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		

Input

Connection system	Screw connection: pluggable	
Current consumption in relation to the input voltage	Voltage type	DC
	Input voltage	48 V
	Input current	2.75 A
DC input voltage range	18 ... 34 V DC	
Input fuse (internal)	15A T	
Input voltage, max.	58 V	
Input voltage, min.	28 V	
Inrush current	<4 A @ Nominal input voltage	
Rated input voltage	48 V DC	
Recommended back-up fuse	10 A (DI) / 6A...10A (Char. B, C)	
Wire connection method	Screw connection	

Output

Capacitive load	unrestricted	
Connection system	Screw connection	
Continous 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	48 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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Technical data

General data

Adjacent	No	Current limiting	150% I_{out}
Degree of efficiency	> 90 %	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, derating 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	Start-up	≥ -40 °C
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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Technical data**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		

Approbations

Certificate No. (ATEX)	UL23ATEX2968X	Institute(ATEX)	DEMKOATEX
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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

Environmental Product Compliance

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

Approvals

Approvals



ROHS	Conform
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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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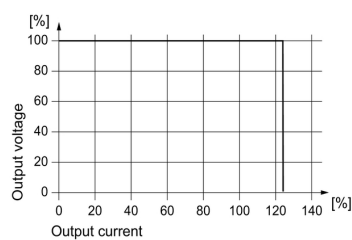
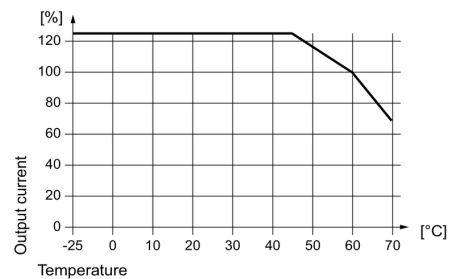
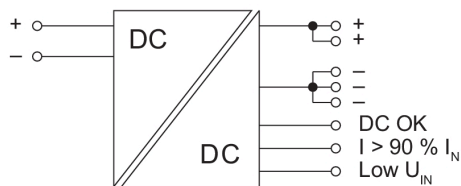
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Drawings



Display elements and status outputs

Event		LED (Gr/Ye/Rd) Gr = DC OK Ye = 1-90% IN Rd = FAULT	Transistor status outputs		Status relay
Input (typ.)	Output (typ.)		DC OK	I > 90%	
A: $U_{in} < 6.1 \text{ V}$ B: $U_{in} < 22.6 \text{ V}$	—	OFF	Low	Low	OFF
A: $U_{in} = 6.1 \dots 18 \text{ V}$ B: $U_{in} = 22.6 \dots 58 \text{ V}$	$U > 90\% U_{out}$ $U < 90\% U_{out}$	Gr	High	Low	ON
	$U > 90\% U_{out}$ $U < 90\% U_{out}$	Ye	High	High	ON
	$U > 90\% U_{out}$ $U < 90\% U_{out}$	Rd	Low	Low	OFF
Input (typ.)	LED (Ye) Low U_{in}		Transistor output Low U_{in}		
A: $U_{in} = 6.2 \dots 9 \text{ V}$ B: $U_{in} = 22.6 \dots 36 \text{ V}$ ¹⁾	ON		Low		
A: $U_{in} = 9 \dots 18 \text{ V}$ B: $U_{in} = 36 \dots 58 \text{ V}$	OFF		High		

A: PRO DCDC 120W 12V/24V 5A
B: PRO DCDC 120W 48V/24V 5AGr = green
Ye = yellow
Rd = red

1) during operation