

## PRO DCDC 120W 48V/24V 5A

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

[www.weidmueller.com](http://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.	<a href="#">2869040000</a>
Type	PRO DCDC 120W 48V/24V 5A
GTIN (EAN)	4064675620860
Qty.	1 items

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**Technical data**
**Approvals**

Approvals



ROHS Conform

UL File Number Search [UL Website](#)

Certificate no. (cULus) E470829

**Dimensions and weights**

Depth	120 mm	Depth (inches)	4.7244 inch
Height	130 mm	Height (inches)	5.1181 inch
Width	32 mm	Width (inches)	1.2598 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

**Environmental Product Compliance**

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

**Input**

Connection system	Screw connection		
Recommended back-up fuse	10 A (DI) / 6A...10A (Char. B, C)		
Rated input voltage	48 V DC		
Input voltage, max.	58 V		
Input voltage, min.	28 V		
Wire connection method	Screw connection		
Input fuse (internal)	15A T		
DC input voltage range	28 ... 58 V DC		
Inrush current	<4 A @ Nominal input voltage		
Current consumption in relation to the input voltage	Voltage type	DC	
	Input voltage	48 V	
	Input current	2.75 A	
Nominal power consumption	133.3 VA		

**Output**

Output power	120 W
Connection system	Screw connection
Rated output voltage	24 V DC
Residual ripple, breaking spikes	≤ 20 mVPP @full load
Parallel connection option	yes, max. 3
Overload protection	Yes
Output voltage, max.	29.5 V
Output voltage, min.	22 V
Output current, max.	6 A
Wire connection method	Screw connection

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### Technical data

Output voltage, note	(adjustable via potentiometer on front)		
Nominal output current for $I_{nom}$	5 A @ 60 °C		
Capacitive load	unrestricted		
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	
Protection against inverse voltage	Yes		
Continuous output current @ $I_{Nomin}$	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 %	
Ramp-up time	≤ 100 ms		

### General data

Degree of efficiency	> 90 %	Protection degree	IP20
Surge voltage category	II	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	Current limiting	150% I <sub>out</sub>
Adjacent	No	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 61000-6-1:2019, EN 61000-6-2:2019, EN 61000-6-3, EN 61000-6-4, EN 55032, EN 55035	Vibration resistance IEC 60068-2-6	0.7 g

### Insulation coordination

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

### Electrical safety (applied standards)

Safety transformers for switch-mode power supplies	According to EN 61558-2-16
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### Connection data (input)

Connection system	Screw connection	Number of terminals	2 (+,-)
Screwdriver blade	0.6 x 3.5, PH 1, PZ 1	Conductor cross-section, AWG/kcmil, max.	12 AWG

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### Technical data

Conductor cross-section, AWG/kcmil , min.	30 AWG	Wire connection cross section, flexible (input), max.	4 mm <sup>2</sup>
Conductor cross-section, flexible , min.	0.2 mm <sup>2</sup>	Conductor cross-section, rigid , max.	4 mm <sup>2</sup>
Conductor cross-section, rigid , min.	0.2 mm <sup>2</sup>	Tightening torque, min.	0.4 Nm
Tightening torque, max.	0.5 Nm		

### Connection data (output)

Connection system	Screw connection	Number of terminals	4 (++ / -)
Conductor cross-section, AWG/kcmil , max.	14 AWG	Conductor cross-section, AWG/kcmil , min.	24 AWG
Conductor cross-section, flexible , max.	2.5 mm <sup>2</sup>	Conductor cross-section, flexible , min.	0.2 mm <sup>2</sup>
Conductor cross-section, rigid , max.	2.5 mm <sup>2</sup>	Conductor cross-section, rigid , min.	0.2 mm <sup>2</sup>
Tightening torque, min.	0.4 Nm	Screwdriver blade	0.6 x 3.5
Tightening torque, max.	0.5 Nm		

### Connection data (signal)

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

### Signalling

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

### Classifications

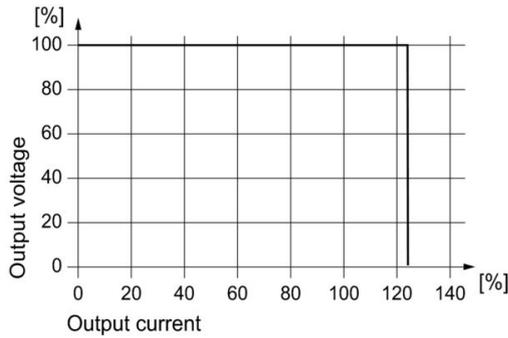
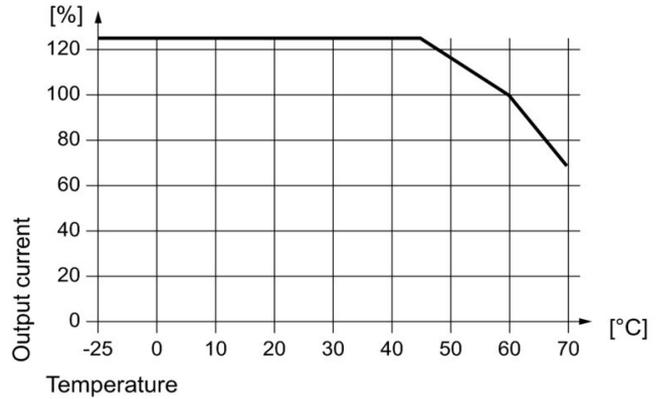
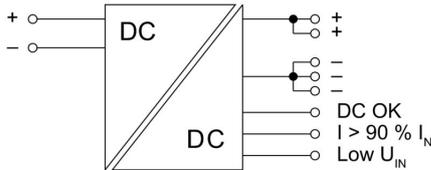
ETIM 8.0	EC002540	ETIM 9.0	EC002540
ETIM 10.0	EC002540	ECLASS 14.0	27-04-07-01
ECLASS 15.0	27-04-07-01		

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**Drawings**

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Display elements and status outputs

Event Input (typ.)	Output (typ.)	LED (Gr/Ye/Rd) Gr = DC OK Ye = I > 90% IN Rd = FAULT	Transistor status outputs		Status relay
			DC OK	I > 90%	
A: U <sub>IN</sub> < 6.1 V B: U <sub>IN</sub> < 22.6 V	-	OFF	Low	Low	OFF
A: U <sub>IN</sub> = 6.1 ... 18 V <sup>1)</sup> B: U <sub>IN</sub> = 22.6 ... 58 V <sup>1)</sup>	U > 90% U <sub>OUT</sub> I < 90% I <sub>N</sub>	Gr	High	Low	ON
	U > 90% U <sub>OUT</sub> I > 90% I <sub>N</sub>	Ye	High	High	ON
	U < 90% U <sub>OUT</sub>	Rd	Low	Low	OFF
Input (typ.)	LED (Ye) Low U <sub>IN</sub>		Transistor output Low U <sub>IN</sub>		
A: U <sub>IN</sub> = 6.2 ... 9 V B: U <sub>IN</sub> = 22.6 ... 36 V <sup>1)</sup>	ON		Low		
A: U <sub>IN</sub> = 9 ... 18 V <sup>1)</sup> B: U <sub>IN</sub> = 36 ... 58 V <sup>1)</sup>	OFF		High		

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

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**Accessories**

**BLZP 5.08HC/180 SN**



Female plug with clamping-yoke screw system for connecting wires with straight (180°) outlet direction. The female connectors provide space for labelling and can be coded. Fastened by means of a flange or release latch. They also provide an integrated plus/minus screw, protection against faulty insertion of the wire, and they are delivered with open clamping yokes. HC = High Current.

**General ordering data**

Type	BLZP 5.08HC/02/180 SN B...	Version
Order No.	<a href="#">1943810000</a>	PCB plug-in connector, female plug, 5.08 mm, Number of poles: 2,
GTIN (EAN)	4032248617821	180°, Clamping yoke connection, Clamping range, max. : 4 mm², Box
Qty.	180 ST	