

PRO DCDC 240W 24V/48V 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. | 2869050000 |
| Type | PRO DCDC 240W 24V/48V 5A |
| GTIN (EAN) | 4064675620877 |
| 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 | 43 mm | Width (inches) | 1.693 inch |
| Net weight | 840 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 | 24 V | |
| | Input current | 11 A | |
| DC input voltage range | 28 ... 58 V DC | | |
| Input fuse (internal) | 20A T | | |
| Input voltage, max. | 34 V | | |
| Input voltage, min. | 18 V | | |
| Inrush current | <4 A @ Nominal input voltage | | |
| Rated input voltage | 24 V DC | | |
| Recommended back-up fuse | 15 A (DI) / 10A...16A (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 | Multiple of the rated current | 600 % |
| | Boost duration | 15 ms |
| Mains failure bridge-over time | Mains failure bridge-over time, min. | 10 ms |
| | Input voltage type | DC |
| | Input voltage | 24 V |
| | Output current | 5 A |
| | Output voltage | 48 V |
| Nominal output current for U _{nom} | 5 A @ 60 °C | |
| Output power | 240 W | |
| Output voltage, max. | 56 V | |
| Output voltage, min. | 28.5 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 | 48 V DC | |
| Residual ripple, breaking spikes | ≤ 50 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 | 60 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. | 28 AWG |
| Conductor cross-section, flexible , min. | 0.08 mm ² | Conductor cross-section, rigid , max. | 4 mm ² |
| Conductor cross-section, rigid , min. | 0.08 mm ² | Connection system | Screw connection: plug-gable |
| Number of terminals | 2 (+, -) | Screwdriver blade | 0.6 x 3.5 |
| 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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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

| | |
|--------------------------------------|--------------------------------------|
| 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 |
|------|---------|

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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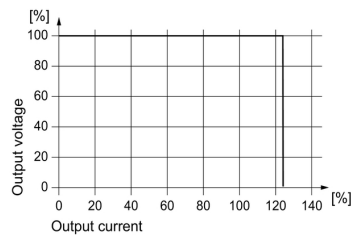
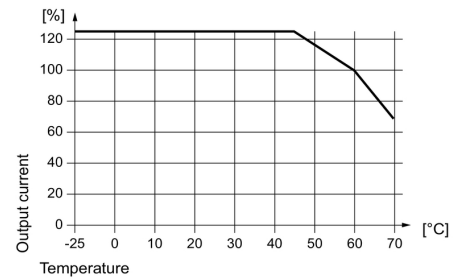
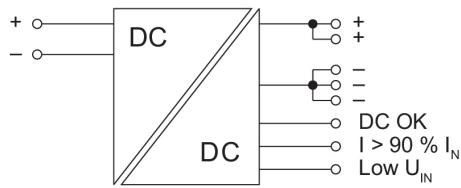
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Drawings



Display elements and status outputs

| Event | | LED (Gr/Ye/Rd) Gr = DC OK Ye = I > 90% IN Rd = FAULT | Transistor status outputs | | Status relay |
|--|--|---|--------------------------------|---------|--------------|
| Input (typ.) | Output (typ.) | | DC OK | I > 90% | |
| A: $U_{IN} < 12.2 \text{ V}$ B: $U_{IN} < 17.7 \text{ V}$ | — | OFF | Low | Low | OFF |
| A: $U_{IN} = 12.2 \dots 34 \text{ V}^{1)}$ B: $U_{IN} = 17.7 \dots 58 \text{ V}^{1)}$ | $U > 90\% U_{OUT}$ $U < 90\% U_{OUT}$ | Gr | High | High | ON |
| | $U > 90\% U_{OUT}$ $U < 90\% U_{OUT}$ | Ye | High | High | ON |
| | $U < 90\% U_{OUT}$ | Rd | Low | Low | OFF |
| Input (typ.) | LED (Ye) Low U_{IN} | | Transistor output Low U_{IN} | | |
| A: $U_{IN} = 12.2 \dots 18 \text{ V}$ B: $U_{IN} = 17.7 \dots 36 \text{ V}^{1)}$ | ON | | Low | | |
| A: $U_{IN} = 18 \dots 34 \text{ V}^{1)}$ B: $U_{IN} = 36 \dots 58 \text{ V}^{1)}$ | OFF | | High | | |

A: PRO DCDC 240W 24V/48V 5A
B: PRO DCDC 240W 48V/48V 5AGr = green
Ye = yellow

Rd = red

1) during operation