

PRO TOPDC 24V/24V 20A EX

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

www.weidmueller.com



PROtop DCDC converters are used for safe electrical isolation to avoid ground loops that can occur when supplying field devices in production or process plants. DCDC converters can be used on long supply lines to refresh the supply voltage. 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 |
| Order No. | 2467310000 |
| Type | PRO TOPDC 24V/24V 20A EX |
| GTIN (EAN) | 4050118482218 |
| Qty. | 1 items |

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Technical data

Approvals

Approvals



ROHS Conform

Dimensions and weights

| | | | |
|------------|--------|-----------------|-------------|
| Depth | 125 mm | Depth (inches) | 4.9212 inch |
| Height | 130 mm | Height (inches) | 5.1181 inch |
| Width | 75 mm | Width (inches) | 2.9527 inch |
| Net weight | 1746 g | | |

Temperatures

| | | | |
|-----------------------------------|---------------------------|-----------------------|----------------|
| Storage temperature | -40 °C...85 °C | Operating temperature | -40 °C...70 °C |
| Humidity at operating temperature | 5...100 % no condensation | Start-up | ≥ -40 °C |

Environmental Product Compliance

| | |
|--------------------------------------|--------------------------------------|
| RoHS Compliance Status | Compliant with exemption |
| RoHS Exemption (if applicable/known) | 6c, 7a, 7cl |
| REACH SVHC | Lead 7439-92-1 |
| SCIP | 6d8cdf22-8230-4af8-86c8-3558c716666d |

Input

| | | |
|------------------------------------------------------|-----------------------------------------------------------------------------|------|
| Connection system | Screw connection | |
| Rated input voltage | 24 V DC | |
| Input voltage, max. | 31.2 V | |
| Input voltage, min. | 14 V | |
| Wire connection method | Screw connection | |
| Input fuse (internal) | Yes | |
| DC input voltage range | 14 V...31.2 V (linear Derating from 18 V...14 V, 60% rated load @ Uin 14 V) | |
| Inrush current | max. 15 A | |
| Inrush Current Limitation | Yes | |
| Current consumption in relation to the input voltage | Voltage type | DC |
| | Input voltage | 24 V |
| | Input current | 22 A |
| | Voltage type | DC |
| | Input voltage | 18 V |
| | Input current | 30 A |
| Nominal power consumption | 527.5 VA | |

Output

| | |
|----------------------------------|--------------------------|
| Output power | 480 W |
| Connection system | Clamping yoke connection |
| Rated output voltage | 24 V DC ± 1 % |
| Residual ripple, breaking spikes | <40 mVPP@25 °C |

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| Parallel connection option | yes, max 10 | |
| Output voltage, max. | 28.8 V | |
| Output voltage, min. | 22.5 V | |
| Output current, max. | 26 A | |
| Wire connection method | Screw connection | |
| Output voltage, note | adjustable with potentiometer or comunication module | |
| Nominal output current for Unom | 20 A @ 60 °C | |
| Mains failure bridge-over time | Mains failure bridge-over time, min. | 10 ms |
| | Input voltage type | DC |
| | Input voltage | 24 V |
| | Output current | 20 A |
| | Output voltage | 24 V |
| Protection against inverse voltage | Yes | |
| DCL - peak load reserve | Boost duration | 15 ms |
| | Multiple of the rated current | 500 % |
| | Boost duration | 5 s |
| | Multiple of the rated current | 200 % |
| Ramp-up time | ≤ 100 ms | |

General data

| | | | |
|------------------------|----------------------------|----------------------------------------|------------------------------------------------------------------------------|
| Degree of efficiency | 91% | Protection degree | IP20 |
| Surge voltage category | I, II, III | Mounting position, installation notice | On TS 35 mounting rail, 50 mm clearance above and below for free air supply. |
| Housing version | Metal, corrosion resistant | Derating | > 60°C (2.5% / 1°C) |
| Adjacent | No | Conformal coating | Yes |
| Power loss, idling | 5 W | 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 55032:2015, EN 55035:2017, EN 61000-6-1:2007, EN 61000-6-2:2005, EN 61000-6-3:2007/A1:2011, EN 61000-6-4:2007/A1:2011, IEC 61000-4-2, IEC 61000-4-3, DIN EN 61000-4-4, EN 61000-4-5:2005, EN 61000-4-6:2008, IEC 61000-4-8 | Vibration resistance IEC 60068-2-6 | 2.3 g (on DIN rail), 4 g (with direct mounting) |

Insulation coordination

| | | | |
|-----------------------------------|------------|----------------------------------|------------------------------------------|
| Surge voltage category | I, II, III | Protection class | III, with no ground connection, for SELV |
| Insulation voltage, input/output | 1.41 kV | Insulation voltage input / earth | 1.41 kV |
| Insulation voltage output / earth | 0.7 kV | | |

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Electrical safety (applied standards)

| | | | |
|----------------------------------------------------|----------------------------|--------------------------|--------------------------------------------------------|
| Electrical machine equipment | Acc. to EN60204 | 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)

| | | | |
|-------------------------------------------|----------------------|-------------------------------------------------------|-------------------|
| Connection system | Screw connection | Number of terminals | 2 for (+, -) |
| Screwdriver blade | 0.8 x 4.0 | Conductor cross-section, AWG/kcmil , max. | 10 AWG |
| Conductor cross-section, AWG/kcmil , min. | 26 AWG | Wire connection cross section, flexible (input), max. | 4 mm ² |
| Conductor cross-section, flexible , min. | 0.22 mm ² | Conductor cross-section, rigid , max. | 6 mm ² |
| Conductor cross-section, rigid , min. | 0.18 mm ² | | |

Connection data (output)

| | | | |
|-------------------------------------------|--------------------------|-------------------------------------------|---------------------|
| Connection system | Clamping yoke connection | Number of terminals | 4 (++ / -) |
| Conductor cross-section, AWG/kcmil , max. | 8 AWG | Conductor cross-section, AWG/kcmil , min. | 24 AWG |
| Conductor cross-section, flexible , max. | 6 mm ² | Conductor cross-section, flexible , min. | 0.5 mm ² |
| Conductor cross-section, rigid , max. | 6 mm ² | Conductor cross-section, rigid , min. | 0.2 mm ² |
| Screwdriver blade | 0.6 x 3.5 | | |

Connection data (signal)

| | | | |
|--------------------------------------------------------|---------------------|--------------------------------------------------------|---------------------|
| Wire connection cross-section, flexible (signal), max. | 1.5 mm ² | Wire connection method | Screw connection |
| Wire cross-section, AWG/kcmil , max. | 16 | Wire cross-section, solid , min. | 0.2 mm ² |
| Wire cross-section, solid , max. | 1.5 mm ² | Wire connection cross-section, flexible (signal), min. | 0.2 mm ² |
| Wire cross-section, AWG/kcmil , min. | 28 mm ² | | |

Signalling

| | | | |
|--------------------------|-----------------------------------|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Floating contact | Yes | LED green/red | Green: Operation (failure-free), Flashing green: advance warning I>90%, Green/red flashing: output switched off (switch-off mode), Flashing red: overload/error |
| Status relay (max. load) | Output voltage OK (30 V DC / 1 A) | | |

Classifications

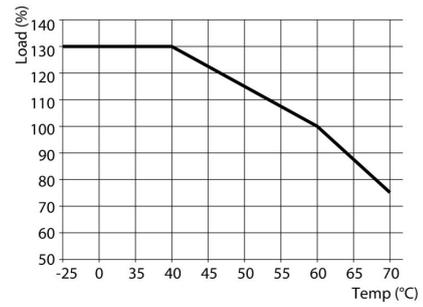
| | | | |
|-------------|-------------|-------------|-------------|
| ETIM 8.0 | EC002540 | ETIM 9.0 | EC002540 |
| ETIM 10.0 | EC002540 | ECLASS 14.0 | 27-04-07-01 |
| ECLASS 15.0 | 27-04-07-01 | | |

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Drawings



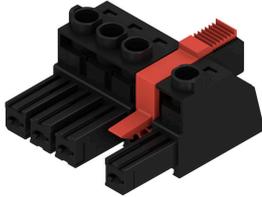
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Accessories

BVZ 7.62IT 180MF SN



180° female plug with a 7.62 pitch for IT power networks. Meets the requirements of UL1059 600 V class C. In combination with male header SV 7.62 IT.. with leading contact.

Meets the extended requirements on 5.5 mm touch safety for IT power networks as per IEC 61800-5-1 for 400 V to earth.

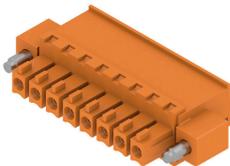
The self-locking (optionally also screwable) middle flange reduces the space requirements by one pitch width in comparison with conventional solutions.

On request also available without middle flange interlock.

General ordering data

| | | |
|------------|----------------------------|-----------------------------------------------------------------------------|
| Type | BVZ 7.62IT/04/180MF3 SN... | Version |
| Order No. | 1312730000 | PCB plug-in connector, female plug, 7.62 mm, Number of poles: 4, |
| GTIN (EAN) | 4050118115635 | 180°, Clamping yoke connection, Clamping range, max. : 10 mm ² , |
| Qty. | 32 ST | Box |

BCZ 3.81/270F



Female socket connectors with clamping-yoke screw system for connecting wires.

Three wire-outlet directions are available and provide flexible connection-level design options:

- 180° wire parallel to plugging direction
- 90° wire perpendicular and above plugging direction
- 270° wire perpendicular and below plugging direction

There are three housing shapes, covering many different requirements, to choose from:

- Standard housing without flange
- Flange with screw (F)
- Flange featuring Weidmüller's patented release latch (LR) for lock-and-release latching with no strain and no tools needed.

Weidmüller's 3.81-mm-pitch (0.15 inch) plug-in connectors are compatible with the layouts of customary connectors and offer space for labelling and coding.

General ordering data

| | | |
|------------|----------------------------|------------------------------------------------------------------------------|
| Type | BCZ 3.81/03/270F SN BK ... | Version |
| Order No. | 2569240000 | PCB plug-in connector, female plug, 3.81 mm, Number of poles: 3, |
| GTIN (EAN) | 4050118592436 | 180°, Clamping yoke connection, Clamping range, max. : 1.5 mm ² , |
| Qty. | 50 ST | Box |