The new electrically isolated PRO DC/DC Converter from Weidmuller compliments the PROmax power supply series. Optimized for the Process, Transportation and Machinery Industry, this converter provides a host of advantages including avoidance of critical earth loops. From an unregulated or distorted input voltage, it generates a stable, low-distortion output voltage.

The DC/DC Converter is a versatile solution for all 24 V DC power supply applications. With its HazLoc and Class III protection, it’s also ideal for use in floating ground systems, such as battery backup systems found in marine technology.

Integrated features such as LED indicators, status relay and transistor outputs facilitate status and rapid error analysis, monitors the status of the 24V output voltage, and a LED that indicates DC OK status for the output voltage; all providing clear visual aids making trouble shooting quick and easy and optimize machine up-time.

- HazLoc C1D2 and ATEX
- High efficiency up to 94%
- High shock and vibration immunity
- Narrow housing
- Galvanic isolation: Protection Class III
- Super boost with more than 600% * I_n for 16ms
- Integrated status relay and active switching outputs
- Comprehensive international approvals: TUV, UL, GL, DNV, ABS, BV, RINA, LR

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### General technical specifications

- **Current limiting**: 150% I\text{out}
- **Housing version**: Metal, corrosion resistant
- **Humidity**: 0...95%, no condensation
  - Humidity at operating temperature: 0...95%, no condensation
- **Max. perm. air humidity (operational)**: 5%...95% RH
- **Storage temperature**: -40°C...85°C
- **MTBF**: 1,250,000 h
- **Protection against reverse voltages from the load**: 33...34 V DC
- **Protection circuit**: Overtemperature, Short-circuit, Inverse voltage
- **Start-up**: ≥ -40°C
- **Clip-in foot**: Metal
- **Degree of efficiency typ.**: 92%
- **Mounting position, installation notice**: Horizontal on TS35 mounting rail. 50mm of clearance at top and bottom for air circulation. Can mount side by side with no space in between. 50mm clearance at top and bottom for free air circulation, mountable side by side without clearance
- **Short-circuit protection**: Yes
- **Protection against over-heating**: Yes
- **Protection degree**: IP20
- **Protection against over-heating**: Yes
- **Surge voltage category**: III
- **EMC / shock / vibration**: Limiting of mains voltage harmonic currents in accordance with EN 61000-3-2
  - Vibration resistance IEC 60068-2-6: 2.3 g (15 Hz...150 Hz)
  - Shock resistance IEC 60068-2-27: 30 g in all directions
- **Noise emission acc. to EN55022 Class B**:
- **Interference immunity test acc. to EN 61000-4-2 (ESD), EN 61000-4-4 (burst), EN 61000-4-5 (surge), EN 61000-4-6 (conducted), EN 61000-4-3 (HF field)**:
- **Insulation coordination**: Class of protection: III, with no ground connection, for SELV
  - Insulation voltage input / earth: 1.5 kV
  - Insulation voltage output / earth: 0.5 kV
  - Insulation voltage: input / output: 1.5 kV
  - Surge voltage category: III
- **Pollution severity**: 2

### Electrical safety (applied standards)

- **Protection against dangerous shock currents**: Acc. to VDE0106-101
- **Safety extra-low voltage**: SELV acc. to EN60950, PELV acc. to EN60204
- **For use with electronic equipment**: Acc. to EN50178 / VDE0160
- **Protective separation / protection against electrical shock**: VDE0100-410 / acc. to DIN57100-410
- **Safety transformers for switch-mode power supplies**: nach EN61558-2-16

### Accessories

- **Diode module 10A for redundancy power**: CP DM 10
- **Diode module 20A for redundancy power**: CP M DM 20
- **DC UPS for 10A/20A**: 1370050010
- **DC UPS for 40A**: 1370040010
connectPower PRO DC/DC Converter

Technical data

**Input data**
- Rated input voltage: 24 V DC
- DC input voltage range: 14...32 V (during operation), 18...32 V (commissioning)
- Inrush current: max. 10 A
- Input fuse (internal): Yes
- Turn-on current limit: Yes
- Recommended back-up fuse: 10 A, Char. B circuit breaker, 10 A, Char. C circuit breaker

**Output data**
- Capacitive load: unrestricted
- Output current: 5 A
- Output voltage: 22.5...29.5 V
- Parallel connection option: Yes, max. 5 (without diode module)
- Protection against inverse voltage: Yes
- Rated output voltage: 24 V DC ± 1%
- Continuous output current @ U_{\text{rated}}: 5 A @ 60°C, 6 A @ 45°C, 3.75 A @ 70°C
- Output power: 120W
- Short-circuit protection: Yes
- Overload protection: Yes
- Power boost @ U_{\text{rated}}: 600% IN for 16 ms
- Ramp-up time: ≤ 9 ms (U_{\text{out}}: 10%...90%)
- Residual ripple, breaking spikes: max. 20 mVpp @ 24 V DC, IN

**General data**
- AC failure bridging time @ I_{\text{nom}}: > 10 ms @ 24 V DC
- Power loss, nominal load: 11 W
- Power loss, idling: 2 W
- Protection against reverse voltages from the load: 33...34 V DC
- Width x Height x Depth in. (mm): 1.26” x 5.118” x 4.724” (32 x 130 x 120)
- Net weight: 791 g

**Signaling**
- Contact Load (NO contact)
- Floating contact
- Relay on/off
- Transistor output, positive-switching

**Connection data**
- Connection system: Screw connection pluggable
- Number of terminals: 2 for (+,-), 8 (+ / - / signal)
- Conductor cross-section, AWG/kcmil, min/max: 30 / 12, 0.2 / 4, 0.2 / 4, 0.4 / 0.5 mm²
- Conductor cross-section, flexible, min/max mm²: 30 / 12, 0.2 / 4, 0.2 / 4, 0.4 / 0.5 mm²
- Tightening torque: 0.4...0.5 Nm
- Wire connection cross section, flexible (input), max. mm²: 4 mm²
- Reverse polarity protection: Yes

**Approvals**
- Classifications: eClass 6.2, 27-14-91-90
- Approvals: ROHS Conform

**Ordering data**

<table>
<thead>
<tr>
<th>Type</th>
<th>Qty.</th>
<th>Part No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRO DCDC 120W 24V 5A</td>
<td>1</td>
<td>2001800000</td>
</tr>
</tbody>
</table>
## Technical data

### Input data
- **Rated input voltage**: 24 V DC
- **DC input voltage range**: 14...32 V (during operation), 18...32 V (commissioning)
- **Inrush current**: max. 15 A
- **Input fuse (internal)**: Yes
- **Turn-on current limit**: Yes

### Output data
- **Capacitive load**: unrestricted
- **Output current**: 10 A
- **Output voltage**: 22.5...29.5 V
- **Parallel connection option**: Yes, max. 5 (without diode module)
- **Protection against inverse voltage**: Yes
- **Rated output voltage**: 24 V DC ± 1%
- **Continuous output current @ U<sub>Rated</sub>**: 10 A @ 60°C, 12 A @ 45°C, 7.5 A @ 70°C
- **Output power**: 240 W
- **Short-circuit protection**: Yes
- **Overload protection**: Yes
- **Power boost @ U<sub>Rated</sub>**: 600% IN for 16 ms
- **Ramp-up time**: ≤ 9 ms (U<sub>OUT</sub>: 10%...90%)
- **Residual ripple, breaking spikes**: max. 20 mVpp @ 24 V DC, IN

### General data
- **AC failure bridging time @ INom**: > 12 ms @ 24 V DC
- **Power loss, nominal load**: 22 W
- **Power loss, idling**: 2 W
- **Protection against reverse voltages from the load**: 33...34 V DC
- **Width x Height x Depth in. (mm)**: 1.693" x 5.118" x 4.724" (43 x 130 x 120) 2.953" x 5.118" x 4.724" (75 x 130 x 120)
- **Net weight**: 1,112 g 1,300 g

### Signaling
- **Contact Load (NO contact)**: max. 30 V / 0.5 A
- **Floating contact**: Yes
- **Relay on/off**: Output voltage > 21.6 V / < 20.4 V
- **Transistor output, positive-switching**: DC OK: 20 mA max., short-circuit-proof, I > 90%: 20 mA max., short-circuit-proof

### Connection data
- **Connection system**: Screw connection pluggable
- **Number of terminals**: 2 for (+, -)
- **Conductor cross-section, AWG/kcmil, min/max**: 30 / 12
- **Conductor cross-section, flexible, min/max mm²**: 0.8 / 4
- **Conductor cross-section, rigid, min/max mm²**: 4.4 / 0.5Nm
- **Tightening torque**: 4 mm²

### Approvals
- **Classification**: eClass 6.2, 27-14-91-90
- **Classifications**: ROHS Conform

### Ordering data

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<td>2001810000</td>
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