Power Innovation
Stromversorgungstechnik GmbH

let's talk!

# DC-DC Converter DCDC150-24-110

## For Rail & Industrial Applications

Picture may differ from actual device

## Specification

**General**

| | |
|---|---|
| Safety | DIN EN 60950, VDE 0805<br>Overload- and Short-circuit protected |

**Electrical Characteristics:**

**Input**

| | |
|---|---|
| Input Voltage Nominal | $U_E$ = 24 VDC |
| Stat. Voltage Tolerance | ± 30% (16,8 – 31,2 VDC) |
| Dyn. Voltage Tolerance | ± 40% (14,4 – 33,6 VDC) |
| Ripple | 15% |

**Output**

| | |
|---|---|
| Output Voltage | 110 VDC, isolated, "floating" |
| Voltage Tolerance | < ± 1% |
| Dyn. Regulation Tol. | < ± 2% |
| Ripple | < 100 $mV_{pp}$ (50 MHz 50 Ω) |
| Noise | < 200 $mV_{pp}$ (200 MHz 50 Ω) |
| Start-up Delay time | < 200 ms |
| Output Current | $I_A$ = 0-1,35 A |
| Current Limitation | $I_S$ = 1,2 x $I_{A\ max.}$ |
| Overload Characteristic | permanent short circuit secured |
| Parallel Operation | for Output Power Up-grade possible |
| Output Power | 150 W |
| Efficiency | >85 % @ $U_{Nom}$ |

**Ambient Characteristic:**

| | |
|---|---|
| Ambient Temperature | -40 to +85°C, Class TX according DIN EN50155 |
| Relative Humidity | max. 95%, with timely condensing (in combination with Option: -1: Coating) |
| Cooling | Ext. Forced Cooling / e.g. Fan Level below Module Carrier |
| Derating | without external cooling from +50°C / 2,5% per 1°C |
| Protection | Input Current = Fuse 16 AT;<br>Reverse polarity protection at the Input ;<br>OVP at the Output = $U_A$ + Tol. +10% |

**EMC-Emission:**

| | |
|---|---|
| Conductive | according DIN EN 50121-3-2 |
| Radiated | according DIN EN 50121-3-2 |

**EMC-Immunity:**

| | |
|---|---|
| Transient / Surge | 1,8 kV according DIN EN 50121-3-2 12 Ω |
| Burst | 2 kV according DIN EN 50121-3-2 |
| Electro Magnetic Field | 20 V/m according DIN EN 50121-3-2 |

**Insulation Test:**

| | |
|---|---|
| Input to Ground | 1500 $V_{eff}$ 1 min. |
| Output to Ground | 1500 $V_{eff}$ 1 min. |
| Input to Output | 1500 $V_{eff}$ 1 min. |
| Creeping distance | > 2,5 mm according DIN EN 50124 PD3 |

**Shock- and Vibration:**

| | |
|---|---|
| Vibration reliability | acc. DIN EN 50155 and EN 61373 |
| Frequency Range | 5-150 Hz |
| Transfer Frequency | 8 Hz |
| Amplitude Acceleration Below of the Transfer Frequency | 2 mm |
| Amplitude Acceleration Above of the Transfer Frequency | 5 $m/s^2$ |
| Shock Reliability | 50 $m/s^2$ all 3 Axis acc. DIN EN 61373 (extended) |
| MTBF | > 750.000 h @ 40°C |



**Power Innovation Stromversorgungstechnik GmbH, Rehland 2, 28832 Achim, Germany**
**Tel.: +49 (0)4202 5117-0,** Fax.: **+49 (0)4202 5117-70, E-Mail: sales@powerinnovation.com, http://www.powerinnovation.com**

Power Innovation
Stromversorgungstechnik GmbH

let's talk!

# DC-DC Converter DCDC150-24-110

## For Rail & Industrial Applications

## Specification

**Signal**

| | |
|---|---|
| Alarm contact | Optocoupler Signal contact for Output Voltage o.k. |
| Optical Signals | LED's (green) for $U_E$; $U_A$ |
| Remote ON/OFF | Inhibit ON >13V to $U_N$ or open; OFF <5V to 0V |
| Test point for $U_A$ | 2 mm Test Contacts at the Front panel |

**Connection Characteristics:**

| | |
|---|---|
| Connector | H15 DIN 61612; rear side |
| Pin Assignments | see Table 1 |

**Mechanical Characteristic:**

| | |
|---|---|
| Dimension | 19"-Alu Cassette, 3U, 10 TE |
| Weight | 570 g |
| Protection | IP 20 |

**Warranty Time** 24 Month

**Order Code**
DCDC150-24-110

**Options:**

| | |
|---|---|
| -1 | Formal Coating<br>add. Glued components |

**Pin Assignments :**

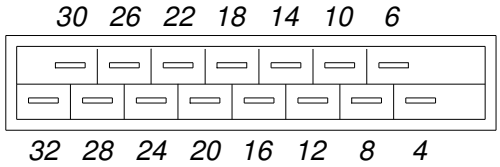
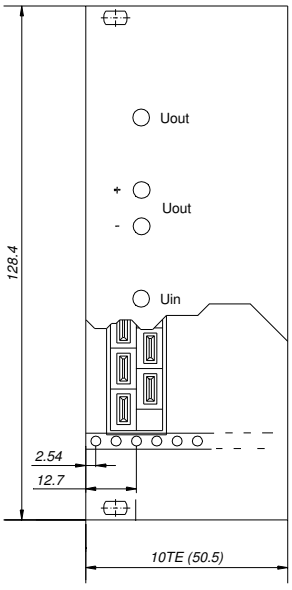
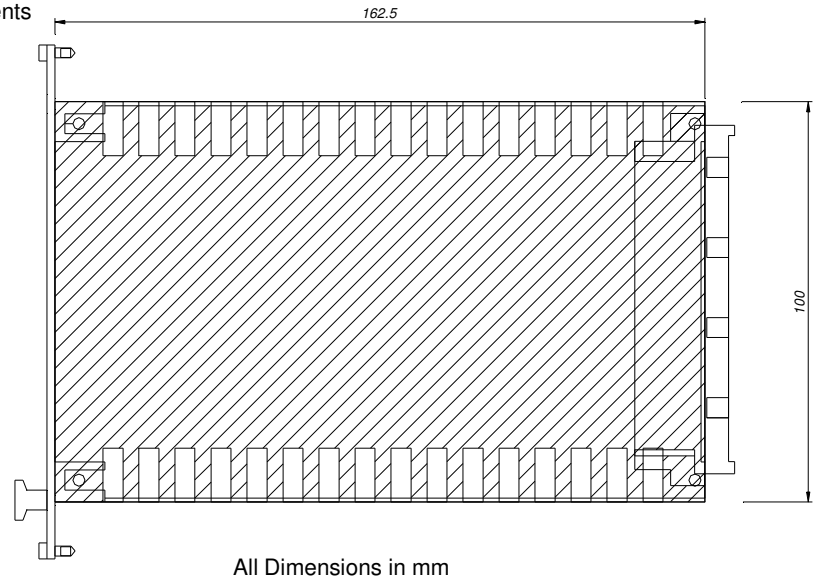



**Table 1:**

| Pin | Function | Abbreviation |
|---|---|---|
| 4 | Output Voltage positive | $U_A$ + |
| 6 | Output Voltage positive | $U_A$ + |
| 8 | Output Voltage negative | $U_A$ - |
| 10 | Output Voltage negative | $U_A$ - |
| 12 | Not connected / Sense positive | N.C. / S+ |
| 14 | Not connected / Sense negative | N.C. / S- |
| 16 | Signal Contact Emitter | $U_A$ o.k. / E |
| 18 | Signal Contact Collector | $U_A$ o.k. / C |
| 20 | Not connected | N.C. |
| 22 | Remote ON/OFF | Inhibit E/A |
| 24 | Protective Earth | PE |
| 26 | Input Voltage positive | $U_E$ + |
| 28 | Input Voltage positive | $U_E$ + |
| 30 | Input Voltage negative | $U_E$ - |
| 32 | Input Voltage negative | $U_E$ - |




All Dimensions in mm



**Power Innovation Stromversorgungstechnik GmbH, Rehland 2, 28832 Achim, Germany**
**Tel.: +49 (0)4202 5117-0,** Fax.: **+49 (0)4202 5117-70, E-Mail: sales@powerinnovation.com, http://www.powerinnovation.com**