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# DC-DC CONVERTER 48/24 V DC & 12/24 V DC

48/24 V DC, 5 A & 12/24V DC, 4A

CD5.242
DC-DC converter 48/24 VDC. 5A


- Only 32 mm wide
- Isolated output voltage
- Wide input voltage range
- 20% Power Reserve

### PRODUCT DESCRIPTION

Puls Dimension DC-DC converters have a high efficiency, very compact and mounted on a DIN rail.
The input voltage can for example. come from power supplies, batteries, solar panels, etc.. The output is galvanically isolated from the input. Typical applications are mounting at the end of a long cable to stabilize the voltage, convert one voltage to another or to isolate specific loads. Can also be used in conjunction with batteries to get a constant output voltage even though the battery voltage drops.
DC-DC converters are equipped with a soft start function which means that the stream gradually rises to the nominal value. This is avoided with high starting currents that can cause a voltage drop on the primary side and give boot problems.
A power reserve of 20% gives additional power resources at the temporary power peaks.

## TECHNICAL DATA

### INPUT DATA

| | |
|---|---|
| **Max entrance tripple** | 5 V pp |
| **Inrush current** | Typ. 0,6 A @ 48 V DC |
| **Input voltage dc max** | 60 V DC |
| **Input voltage dc** | 48 V |
| **Input capacitance** | 800 µF |
| **Input voltage dc min** | 36 V DC |

### OUTPUT DATA

| | |
|---|---|
| **Output voltage min** | 24 V DC |
| **Output voltage** | 24 V DC |
| **Output voltage max** | 28 V DC |

| | |
|---|---|
| **Power** | 120 W |
| **Output current** | 5 A |

## EFFICIENCY / LIFETIME / MTBF

| | |
|---|---|
| **Life span** | 64000 h @ 24 V DC, 5 A, 40 °C |
| **Efficiency** | 90,3 % |
| **MTBF (IEC 61709)** | 951000 h @ 24 V DC, 5 A, 40 °C |

## DIMENSIONS

| | |
|---|---|
| **Weight** | 0,425 kg |
| **Depth** | 102 mm |
| **Width** | 32 mm |
| **Height** | 124 mm |

## OTHER

| | |
|---|---|
| **IP class** | IP20 |
| **Startup delay** | 670 ms |
| **Ripple max** | 50 mV pp |
| **Power drop from +60 °C to + 70 °C** | 3 W/°C |
| **Clamp type** | Screw on |
| **Temperature min without derating** | -25 °C |
| **Series** | Dimension C |
| **Keep time** | Typ. 5,6 ms @ 48 V DC |
| **Approvals** | ABS, ATEX, CB, CE, CSA, GL, IECEx, UL |
| **Temperature max without derating** | 60 °C |
| **Material protection** | Aluminium |
| | |
| **Type Power Supply** | DC-DC |

Fig. 5-1 **Output voltage vs. output current, at 48Vdc input voltage, typ.**

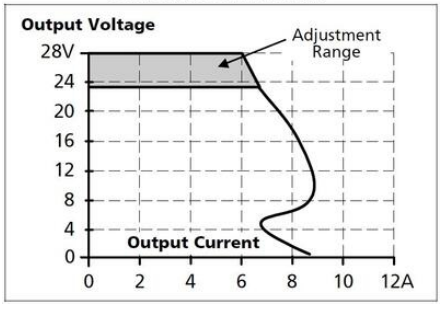


Fig. 13-1 **Output current vs. ambient temp.**

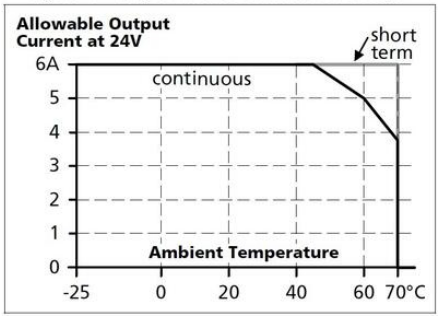


Fig. 7-1 **Efficiency vs. output current at 24V output and 48Vdc input voltage, typ.**

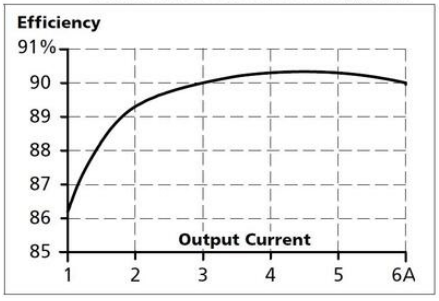

Fig. 7-2 **Losses vs. output current at 24V output and 48Vdc input voltage, typ.**

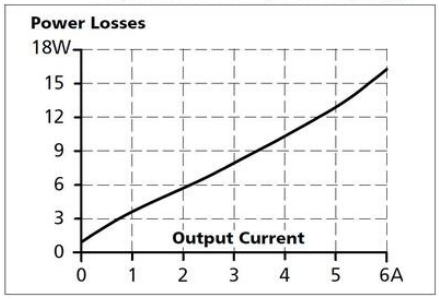


Fig. 9-1 **Front side**


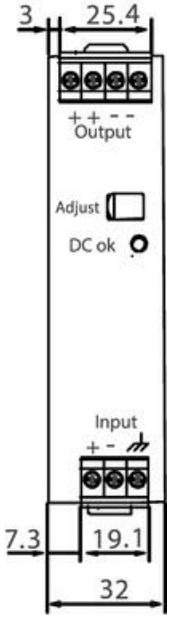


Fig. 19-2 **Side view**