DC-DC CONVERTER 110/24 V DC CPS20

110/24,5 V DC, 16,3 A

CPS20.241-60
PSU 110V dc I/P 24.5V dc 16.3A 400W O/P Railway Compliant

- Width 65 mm
- 93,7 % efficiency
- Acc. to EN 50155 railway application standard
- Built-in Redundancy (Decoupling Mosfet at the Output)
- Conformal coated PC-boards

PRODUCT DESCRIPTION

The CPS20.241-60 DC/DC converter is designed specifically for railway & transportation applications. It is approved according to the EN 50155 standard, which is an international standard covering electronic equipment used on rolling stock for railway applications. The standard covers aspects such as temperature, humidity, shock, vibration, EMI and other parameters. Because of these requirements, the unit is equipped with conformal coated pc-boards.

The unit features a DC-OK signal contact for remote monitoring, a decoupling MOSFET for building redundant power supply systems and quick-connect spring-clamp terminals for a reliable connection even when mechanical vibration and shock are involved. The unit also covers an extreme wide temperature range from -40°C up to +70°C with full output current.

This DC/DC converter comes in a very compact housing and requires only 65mm space on the DIN-rail due to the high efficiency and low power losses. The high efficiency is achieved by utilizing cutting edge technology and other unique design techniques.

TECHNICAL DATA

INPUT DATA

Input voltage dc	110 V
Input voltage dc min	77 V DC
Input voltage dc max	154 V DC
Inrush current	Typ. 6 A @ 110 V DC
Max entrance tripple	15 V pp

OUTPUT DATA

Output voltage	24,5 V DC
Output voltage min	24,5 V DC
Output voltage max	24,5 V DC

Output current	16,3 A
Power	400 W

EFFICIENCY / LIFETIME / MTBF

Efficiency	93,7 %
Life span	151000 h @ 16,3 A, 40 °C
MTBF (IEC 61709)	571000 h @ 16,3 A, 40 °C

DIMENSIONS

Width	65 mm
Height	124 mm
Depth	127 mm
Weight	0,98 kg

OTHER

Approvals	CE, EN 50155
Keep time	Typ. 35 ms @ 16,3 A
IP class	IP20
Clamp type	Spring-clamp
Material protection	Aluminium
Ripple max	70 mV pp
Series	Dimension C
Temperature min without derating	-40 °C
Temperature max without derating	70 °C
Startup delay	900 ms
Conformal coated	Yes
DC relay output	Yes

Fig. 6-1 **Output voltage vs. output current, typ.**

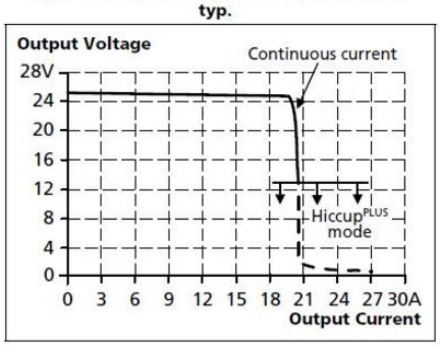


Fig. 15-1 **Output current vs. ambient temp.**

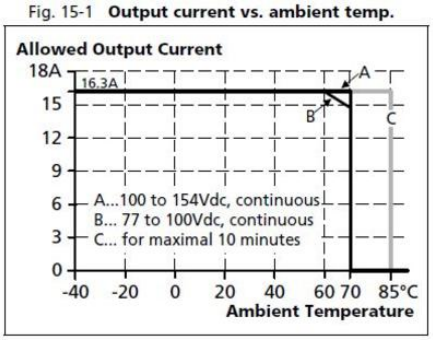


Fig. 9-1 **Efficiency vs. output current, typ**

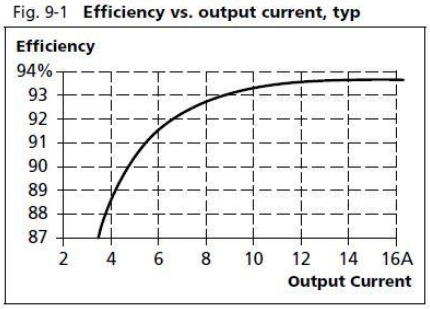


Fig. 6-2 **Short-circuit on output, Hiccup^{PLUS} mode, typ.**

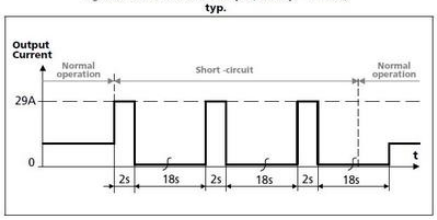


Fig. 13-1 **Front side**

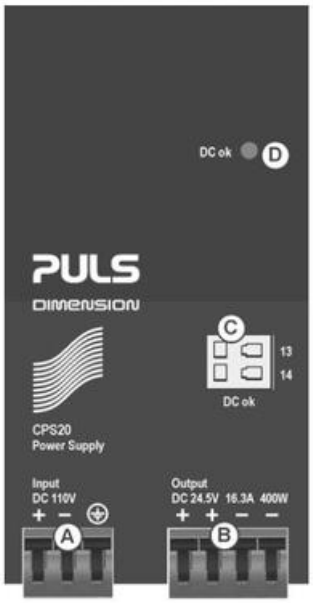
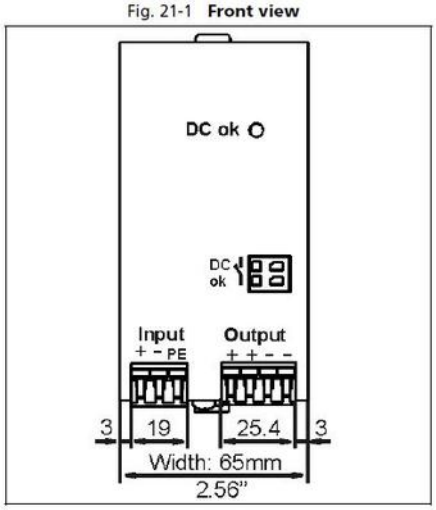


Fig. 21-1 **Front view**



Side view