

P R B X

POWERBOX Railway Line ENR280D75024 Series 750VDC – 24VDC Single Output DC/DC Converter

Input

Nominal input voltage	Un	750VDC
Minimum voltage	Uimin	350VDC (0,47*750V)
Maximum voltage	Uimax	950VDC (1,27* 750V)
Battery voltage	24VDC (+25%-30%).	
Battery voltage monitoring	The device continuously monitor the external battery voltage and start/stop converter at pre-defined levels.	
Input voltage	750VDC.	
Protection	750VDC, 24VDC.	
Inrush current	Max peak 50A, less than 5.0A after 1 ms.	

Output

Output voltage	+24VDC ±15%.	
Output power	280W for 120 sec.	
Output peak current	17.0A min, 100ms.	
Protection	Overvoltage, overload and short circuit protection.	
Thermal protection	Shuts down when safe internal temperature is exceeded. Auto-recovery.	
Power fail & Power OK	Isolated digital signal.	

General

Efficiency	>78%. Power losses 16W in idle mode and 12A battery current.
Insulation	According to EN 50155 and EN 50124-1. Insulation test voltages: Input to output: 6.5kV DC, 1min ¹⁾ Input to ground: 6.5kV DC, 1min ¹⁾ Output to ground: 2.1kV DC, 1min ¹⁾ ¹⁾ DC-voltage because of internal EMI-apacitor to ground.
Mechanical characteristics	All printed circuit boards have protective coating (EN50155). Wall mounting design. High voltage system connector: Cable lug terminals. Low voltage system connector: Male connector type H15 acc to DIN 41612.
MTBF	50 000 h according to MIL HDBK 217F, temperature 50 C.
Life time	The converter is designed for a lifetime of at least 25 years.
Dimensions	See drawing.
Weight	2.2 kg.



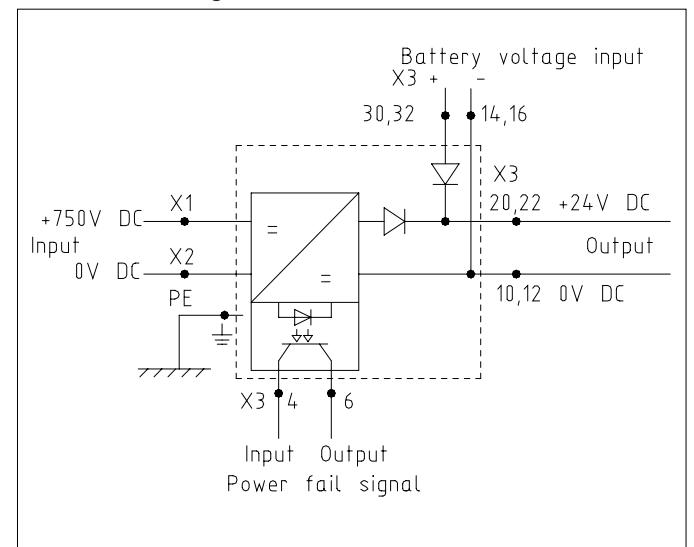
Environmental According to EN50155 class Tx

Operating temperature	-40 C to +70°C.
Storage temperature	-40 C to +85°C.
Tolerance	±10% in the temperature range -40°C to -25°C.
Cooling	Convection.
Humidity	Test according to EN50155. Infrequent and slight moisture and condensation does not cause any malfunction or failure. Yearly average RH 75%. 30 days /year RH 95%.
Shock and vibrations	IEC 61373. Category 1, Class B.

Standards

Environment	EN50155.
EMC	EN50121-3-2.

Block Circuit Diagram



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Mechanical

