

# P R B X

POWERBOX **Railway Line**  
ENR280D1500110 Series  
1500VDC-110VDC  
Single Output  
DC/DC Converter



## Input

Nominal input voltage	Un	1500VDC
Minimum voltage	Uimin	700VDC
Maximum voltage	Uimax	2000VDC (5 min)
Battery voltage	110VDC (+25%-30%).	
Battery voltage monitorin	The device continuously monitor the external battery voltage and start/stop converter at pre-defined levels.	
Battery input voltage	110VDC.	

## Output

Output voltage	110VDC ±15%.	
Output power	280W for 120 sec.	
Output peak power	800W/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.	
LED indicators	Mode, HV conv OK, HV converter active Low output voltage.	

## 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: 11kV DC, 2 sec. Input to ground: 11kV DC, 2 sec. Output to ground: 2.55kV DC.	
Mechanical characteristics	All printed circuit boards have protective coating (EN50155). Wall mounting design. HV system connector + PE: Cable lug terminals. LV system connector: Male connector type H15 acc to DIN 41612.	
MTBF	50 000 h according to MIL HDBK 217F, temperature 40°C.	
Life time	The converter is designed for a lifetime of at least 25 years.	
Dimensions	See drawing.	
Weight	4.2 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

Enviroment	EN50155.	
EMC	EN50121-2-3	

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Mechanical

