made for experts

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INV-R Series

Heavy Duty Inverter

Description

The INV-R is an extremely robust family of DC/AC Inverters with a variety of DC input options. The units operate within a wide ambient temperature range from as low as -25°C to as high as +55°C. Excellent shock and vibration figures make this unit ideal for mobile as well as static installations. These inverters are built to EN50155 ensuring their suitability for railroad and locomotive applications. Rugged cases along with a load and temperature controlled fan provide additional resistance to the rigours of harsh environments. The INV-R series of inverters produce a stabilised true sinewave controlled via a microprocessor. Potential free alarm contacts are provided for signalling failure. The output can be enabled or disabled remotely via a galvanically isolated control input. The units have an overload capability of up to 1½ times the nominal output power. If the overload is experienced for an extended time period then the unit will switch off to protect itself. After approximately 30 seconds have elapsed the inverter will attempt to restart automatically.

- Ideal for vehicle mount applications
- Shortcircuit & overload protection
- Sub-chassis mounting
- No 50Hz transformer

Selection Table

Part Number	Maximum Power	Input Voltage	Output Voltage	Output Frequency
INV-R 2000-24-230	2000VA	24VDC	230VAC	50Hz
INV-R 2000-48-230	2000VA	48VDC	230VAC	50Hz
INV-R 2000-110-230	2000VA	110VDC	230VAC	50Hz

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Technical Data

Input	INV-R 2000-24-230	INV-R 2000-48-230	INV-R 2000-110-230
Input Voltage Nom.	24VDC	48/60VDC	110VDC
Input Range	16.8 - 32.64VDC	38 - 72VDC	77 - 154VDC

General	
Electrical Safety	EN 60950, VDE 0805 (overload & shortcircuit protected)
EMC	EN 50121-3-2

Output		
Output Voltage Nom.	230VAC, single phase	
Output Frequency	50Hz	
Voltage Stability	±5%	
Efficiency	>86%	
Output Power Max.	2000VA/1600W	
Output Current	Nominal 6.95A	
Short Circuit Current	I_{sc} = 10.4A	
Power Factor	0.8	
Load Range	0 - 100%	
Crestfactor	>2.5	
Harmonic Distortion	<2%	
Overload Capability	1.25 x P_{NOM} for 12sec, 1.50 x P_{NOM} for 3sec	1.50 x P_{NOM} for 10sec
Restart After Overload	After 30 seconds	

Housing	
Casing	Sheet steel, zinc plated
Dimensions	600 x 170 x 270mm (W x H x D)
Weight	Approx. 12kg
Protection	IP 20
Cooling	Temperature and power controlled fan

Connecting Terminals	
Input: -X1	Phoenix power combicon, male, PC6/3-GF-10-6/10mm^2, with locking device
Signal: -X2	Phoenix mini con, female, 1.0mm^2, with locking device
Output: -X3	Phoenix power combi con, female, 1.0mm^2, with locking device

Ambient Conditions	
Operating Temperature	-25°C to +55°C, acc En50155
Relative Humidity	<75% average per year
Shock and Vibration	EN50155 mounted in frame frequency range 5-150Hz, Transfer frequency 8.2Hz
Oscillation Amplitude	Below transit frequency: 7.5mm
Acceleration Amplitude	Above transit frequency: 20m/s^2

Other			
Alarm Contact	Potential free, max. 125VDC/0.5A		
Remote ON/OFF	24VDC, via relay coil	48VDC, via relay coil	110VDC, via relay coil
Warranty	2 Years		