250W ACR SERIES

DC/AC INVERTER

Description

The ACR series is a range of medium power inverters that provide a 240Vac true sinewave output with very low distortion. Designed for connection directly to the train auxiliary supply, the inverters incorporate surge and transient filtering ensuring compliance with both the traditional and latest rail specifications and norms for protection and EMC. The rugged construction and various mounting options ensure compliance with vibration and shock requirements.

Special features include:
- True sinewave output
- 250W continuous output power (400W peak)
- Very low distortion
- IP65 rated

Input Specifications

The following input voltage versions are available as standard:

110V	(66.0 - 137.5V) dc	(suffix A)
72V	(43.2 - 90.0V) dc	(suffix D)
52V	(31.2 - 65.0V) dc	(suffix C)
24V	(16.8 - 33.6V) dc	(suffix B)

Other ranges are available to order

Product reference	All references
Input Range	60% - 125% of nominal
Input Ripple	To BRB/RIA 13 and EN50155
Input Protection	Reverse polarity protection (some input versions require external fuse or circuit breaker) Surges and transients to BRB/RIA 12, EN50155 (Direct and Indirect)
Inrush Current	6 x nominal current (after 0.1ms)
Efficiency	85% typical

Output Specifications

Product reference	All references		
Maximum Output Power	250W continuous 400W peak (for 15 seconds.)		
Output Voltage	240V		
Setting Tolerance	±1.0% at 50% load, 15°C to 25°C		
Output Frequency	50Hz		
Frequency Tolerance	±2%		
Waveform	True Sinewave		
Harmonic Distortion	<1.5%		
Output Current	1.1A continuous, 1.7A for 15 seconds		
Line & Load Regulation	±5.0% combined		
Temperature Coefficient	<0.02% / °C		
Output Ripple	typically 5% Pk-Pk of output voltage		
Holdup Time	10ms at nominal input and maximum load		
Short Circuit Protection	Latch operates instantaneously if output current exceeds 15A (typically). LED indication provided. Reset by power-down, power-up.		
Delayed Current Limit	Latch operates if output power exceeds approximately 275W for longer than 16 to 20 seconds. LED indication provided. Reset by power-down, power-up.		
Thermal Protection	Output shuts off when safe operating temperature is exceeded. Automatic reset.		
Isolation	Input to Output Input to Case Output to Case	1.0kV ac 1.0kV ac 1.0kV ac	(Tested at 1.5kV dc) (Tested at 1.5kV dc) (Tested at 1.5kV dc)
Indicators	Input OK Output OK Lock out Over-current latch	Green LED Green LED Red LED Red LED	

>>> 24

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Environmental Details

Product reference	All references
Operating Temperature	-25°C to +55°C
Storage Temperature	-40°C to +80°C
Environmental protection	IP65
Relative Humidity	99% maximum
Vibration	BRB/RIA 13 – Para 10.5.11, BRB/RIA 20

Applicable Norms

Item	Reference
EMC	BRB/RIA 12, 18; EN50155, EN50121-3-2
Other	BRB/RIA 13, 18, 20; EN50155, LUL G6621

Mechanical Characteristics

Product reference	All references
Construction	Fully enclosed in sealed die-cast aluminium case
Mounting	Base plate allows surface mounting via six Ø9.5mm fixing holes, other base plates available upon request.
Dimensions (excluding base plate and connector)	Depth = 180mm Width = 280mm Height = 100mm
Weight	<6.5kg (5kg excluding mounting plate)
Connections	Input and output via circular bayonet connector (shell size 18-11), earth via M5 stud
Cooling	By convection

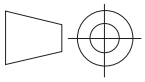
Technical Drawing

NOTES

1. All dimensions in mm

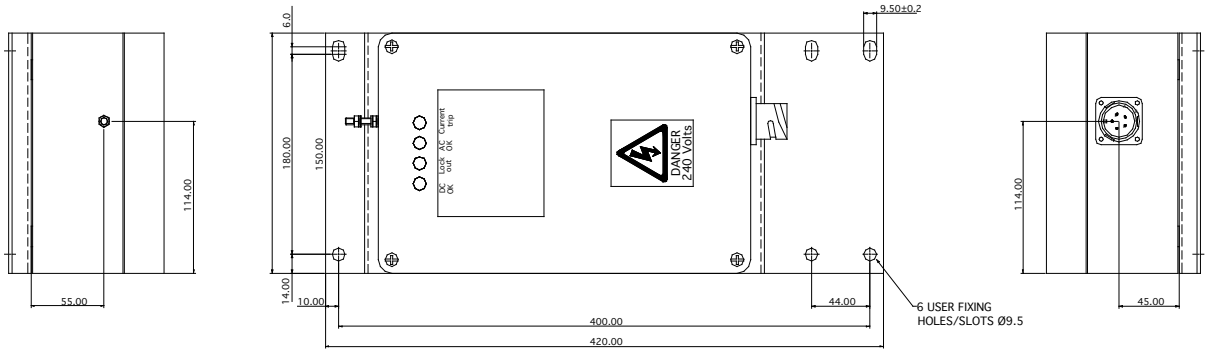
2. Specifications subject to change without notification

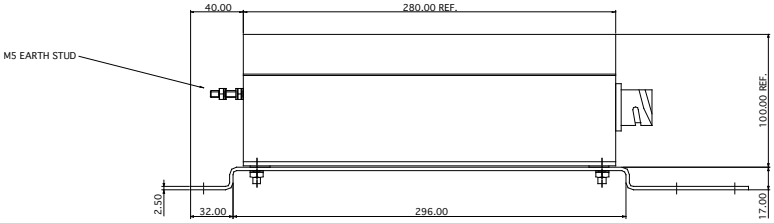
3.



4. Base plate 2,5 mm mild steel

5. Paint finish: RAL 7001 silver grey





Connector part numbers:
Litton: FRCIR02R18-11PF80T12
AB: ABCIRH00A18-11PCNF80P3

Pin Configuration:
A: -Ve dc Input
B: +Ve dc Input
C: Line
D: Neutral
E: Not used

NOTES:

BASE PLATE 2.5mm MILD STEEL
PAINT FINISH: RAL 7001 SILVER GREY

>>> 24