

500VA Low-profile, Railway Quality Sine Wave Inverter RSI 500-FT Series



- Field-proven rugged design
- Conduction/convection cooled - no fan
- Low profile, compact size
- Sinusoidal wave shape
- Full electronic protection

This rugged DC/AC inverter uses field proven, microprocessor controlled high frequency PWM technology to generate the required output power with pure sine wave output voltage. It is a mature design with a track record in numerous applications. The DC/DC input stage boosts the input voltage to a higher DC voltage, which feeds the DC/AC inverter to generate the required AC output. The high frequency conversion enables a compact construction, low weight and high efficiency. The unit has full electronic protection. The input and output are filtered for low noise. Cooling is via baseplate to a cold plate surface and by additional natural convection. The use of components with established reliability results in high MTBF. The unit meets the requirements of EN 50155 for electronic equipment used on railway rolling stock. It is manufactured at our plant under strict quality control. Customized versions are available.

SPECIFICATIONS

Input Voltage

24Vdc (17 – 34V)
36Vdc (25 – 51V)
48Vdc (33 – 67V)
72Vdc (50 – 101V)
96Vdc (67 – 135V)
110Vdc (77 – 154V)
Consult factory for other input voltages and ranges

Input Protection

Inrush current limiting
Varistor
Reverse polarity protection
Internal safety fuse
Lower voltage than the specified minimum input will not damage the unit

Isolation

1500Vdc input to chassis/output
Output neutral is connected to the chassis internally.

Standards

Designed to meet
C22.2 No. 107.1 - 01, UL 458,
EN60950 and EN50155

Immunity

Meets criteria of EN50155 and EN50121-3-2 including
EN 61000-4-2 (ESD)
EN61000-4-3 (RF Immunity)
EN61000-4-4 (Fast transients)
EN50155 (Surge)
EN61000-4-6 (Conducted Imm.)
EN50155 (Voltage Variations)

EMI

EN55022 Class A or B according to requirements and EN50121-3-2 conducted and radiated

Output Voltage

115Vac @ 60Hz or
400Hz/4.4A rms continuous;
or 230Vac @ 50Hz/2.2A rms continuous
Isolated floating output optional
Consult factory for other output requirements

Output Wave Form

Sinusoidal

Total Harmonic Distortion

Less than 5% at full load

Line Regulation

Maximum 0.5%

Load Regulation

Maximum $\pm 6\%$ from no load to full load.
A $\pm 2\%$ load regulation option is available.

Load Crest Factor

Maximum 2.0 at 90% load

Output Noise

High frequency ripple is less than 500mVrms (20MHz BW)

Output Overload Protection

Current limiting with short circuit protection
Thermal shutdown with automatic recovery in case of insufficient cooling

Output Overvoltage Protection

140Vac (for 115Vac output) or
280Vac (for 230Vac output) by internal supply voltage limiting

Efficiency

Typically 80% at full load
Dependent on input/output combination

Operating Temperature

-25 to +55°C cold-plate temperature

Temperature Drift

0.05% per °C over operating temperature range

Cooling

Conduction to customer heat-sink or chassis and natural convection

Environmental Protection

Ruggedizing
Conformal coating

Shock/Vibration

IEC 61373 Cat 1 A&B

Humidity

5 - 95% non-condensing

MTBF

130,000 hours at 45 °C
Demonstrated MTBF is significantly higher

Indicators

None

Control Input

None
Optional remote shut down

Alarm Output

None on standard version
Optional Output Fail Alarm (Form C)

Dimensions

F 21: 254 x 66 x 361 mm
(10" x 2.6" x 14.2") including terminals and mounting flanges

Weight

4.2 kg (9 lb)

Connections

Compression-type terminals for input and output

RoHS Compliance

Fully compliant

Warranty

Two years subject to application within good engineering practice

Terminal Block Pin Out

GND ⊕	-	+	GND ⊕	N ~	PH ~
VDC INPUT			VAC OUTPUT		

Please note that ABSOPULSE inverters are designed and built to customer specifications. The specifications on this data sheet are generic and will vary depending on input/output configuration and other customer requirements. Generic specifications are subject to change.

Designer and manufacturer of quality converters, inverters, UPS systems, complete rack mount systems and DC-input fluorescent lamp inverters since 1982. Custom or standard. Absopulse is a BAPT-approved Facility



ABSOPULSE ELECTRONICS LTD

110 Walgreen Road, Ottawa, Ontario. K0A 1L0. CANADA

Tel: +1-613-836-3511 | Fax: +1-613-836-7488

E-mail: absopulse@absopulse.com | <http://www.absopulse.com>

For more information, please see:

http://www.absopulse.com/Absopulse_railway_mobile_extreme_environment_solutions.php

November 7, 2012/TS/OP/CL

Made in Canada