

1000VA, Low Profile, Conduction-cooled Sine Wave Inverter

Rugged, Industrial Quality

CSI 1K-FT Series

- Rugged construction
- Conduction/convection cooling
- Sinusoidal output voltage
- Filtered input
- Full electronic protection
- Field-proven design topology



CSI 1K-FT Series rugged, compact DC/AC Inverter uses field proven topology to generate 1000W output power. It is a mature design with a track record in hundreds of 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. Suitable for a wide range of applications, the series features full electronic protection and low output noise. The unit requires conduction cooling to customer chassis, cabinet or heatsink. Perforations on the case assist cooling by air convection. This chassis-mount design is optimized for low component count and high efficiency. The use of components with established reliability results in a high demonstrated MTBF. CSI 1K-FT is manufactured at our plant under strict quality control. Versions meeting EN 50155 railway specifications and customized versions are also available.

SPECIFICATIONS

Input Voltage

24V, 36V, 48V, 125V, 250VDC
 +/-15% are standard
 Consult factory for other inputs, and ranges

Input Protection

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

Isolation

500Vdc input to chassis for input voltages up to 48Vdc;
 1700Vdc input to chassis for input voltage 125Vdc
 2250Vdc input to chassis for input voltage 250Vdc
 2250Vdc input to output
 Output neutral is connected to the chassis, internally
 Floating output as option

Standards

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

EMI

EN 55022 Class A
 as a minimum

Output Voltage

115Vac/8.7A /60Hz or 400Hz ;
 or 230Vac/4.35A /50Hz
 Output neutral is connected to the chassis internally.
 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

± 0.5% max.

Load Regulation

Maximum ± 6% from no load to full load. A ± 2% load regulation option is available.

Load Crest Factor

Maximum 3.0 at 90% load

Output Noise

High frequency ripple is better 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

140/280V by internal supply voltage limiting

Efficiency

Depends on input and output voltage combination.
 Typically 76% at full load

Operating Temperature Range

-20° C to +50° C cold-plate temperature

Temperature Drift

0.05% per °C over operating temperature range

Cooling

By conduction/convection

Environmental Protection

Basic ruggedizing

Humidity

5 - 95% non-condensing

MTBF

Min. 140,000 hours at 45°C
 Demonstrated MTBF is significantly higher

Indicators

None

Control Input

None
 Remote shutdown as option

Alarm Output

Output fail alarm (Form C)

Package/Dimensions (W x H x L)

F31: 483 x 67 x 355 mm
 (19" x 2.6" x 14") including terminal blocks and flanges.
 Mounting holes are clear.

Weight

7 kg (15 lb)

Connections

Input/output: Compression-type terminals

RoHS Compliance

Fully compliant

Warranty

Two years subject to application within good engineering practice

Enhancements to these general specifications can be accommodated upon request. Specifications are subject to change

Designer and manufacturer of quality ac-dc power supplies and battery chargers, converters, inverters, dc-output UPS systems, complete rack mount systems and DC-input fluorescent lamp inverters since 1982. Custom or standard. Absopulse is a BABT approved Facility.



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