

Model: CSI 1KR-5E/180-110-3U2-U1159
COSD: XXXX
Summary Description: 1000VA, Railway Quality Sinewave Inverter
 110Vdc to 180Vac/110Hz
Customer Name: Thiele KG/Germany
Customer Part No.: Same as above



Product Description:

This rugged, DC/AC inverter system uses field proven, microprocessor controlled high frequency PWM technology to generate the required output power with pure sine wave output voltage. The inverter is built with internal power modules. A CDC 1000 module converts input voltage to an internal DC voltage, which feeds the MSI 2300 output module. Built-in fan provides sufficient airflow for operation without de-rating to the specified temperature. High frequency conversion enables compact construction, low weight and high efficiency. The unit has full electronic protection. Input and output are filtered for low noise. The use of components with established reliability results in a high MTBF. The unit is manufactured at our plant under strict quality control.

Special Features: Railway, Ruggedizing, Conformal coating

SPECIFICATIONS

Input Voltage

110Vdc nominal
 77-154Vdc operating range
 Input Current: 16A max

Input Protection

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

Isolation

2250Vdc input to chassis
 3150Vdc input to output
 Output neutral is internally connected to chassis

Standards

Designed to meet C22.2 No. 107.1 - 01, UL 458, EN60950-1 and EN50155, EN45545

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

EN50121-3-2

Output Voltage

180Vac, 110Hz, 5.5Arms continuous
 Output neutral is internally connected to chassis

Output Wave Form

Sinusoidal

Total Harmonic Distortion

Less than 5% at full load

Line / Load Regulation

± 6% combined from zero load to full load

Load Crest Factor

2 at 90% load

Output Noise

Better than 500mVrms (20MHz BW)

Output Overload Protection

Current limiting with short circuit protection. Thermal shutdown with automatic recovery in case of continuous overload or insufficient airflow.

Output Overvoltage Protection

By internal supply voltage limiting at 250Vac output

Efficiency

83% at full load

Operating Temperature Range

-25 °C to +55 °C

Temperature Drift

0.05% per °C over operating temperature range

Cooling

By built-in high quality fan

Environmental Protection

Ruggedizing
 Conformal coating

Shock / Vibration

IEC61373 Cat 1 A&B

Humidity

5 - 95% non-condensing

MTBF

130,000 hours @ 45°C (Fan excluded)
 Demonstrated MTBF is significantly higher

Indicators

None

Control Input

None

Alarm Output

Not installed

Package / Dimensions (HxWxL)

3U2: 132 x 132 x 407mm
 (5.2"x5.2"x16")
 Mounting holes are clear
 L-brackets included for mounting

Weight

Approx. 5.2kg (11 lbs)

Connections


Input: Terminal block
 Output: Terminal block

RoHS Compliance

Compliant

Warranty

Two years subject to application within good engineering practice
 Contamination related failures and shipping cost excluded

Originated by TS/kv	Date Dec 7, 2021
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