Model: FC3KR-330W16/E-2X3U7-U1580
COSD: XXXX
Summary description: 3000VA, Railway Quality, Frequency Converter 330Vac/16.7Hz to 230Vac/50Hz
Customer Name: Thiele KG/Germany
Customer Part Number: Same as above

Preliminary

Product description:
This rugged, DC/AC inverter system uses field proven, microprocessor controlled frequency converter utilizes PWM technology to generate the required output power with pure sine wave output voltage. It is built with internal power modules. One FIB380, three CAP 1000 and three KHH 2000 input modules convert input voltage to an internal DC bus voltage, which feeds two MSI 2300 output modules. Built-in fans provide 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. The 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: 231-429Vac/16Hz input. Railway, Ruggedizing, Conformal coating,

SPECIFICATIONS

Input Voltage
330Vac nominal, 16.7Hz
231-429Vac operating range
Input Current: 23Arms max.

Input Protection
Inrush current limiting
Varistor
Internal safety fuse
Lower voltage than specified input min. will not damage unit

Isolation
2250Vdc input to chassis
Output neutral is connected to the chassis internally

Standards
Designed to meet C22.2 No. 107.1 – 01, UL 458 and EN 60950-1, EN 50155 EN 45545

Immunity
Meets criteria of EN 50155 and EN 50121-3-2 including:
EN 61000-4-2 (ESD)
EN 61000-4-3 (RF Immunity)
EN 61000-4-4 (Fast Transients)
EN 50155 (Surge)
EN 61000-4-6 (Conducted Imm.)
EN 50155 (Voltage Variations)

EMI
EN50121-3-2

Output Voltage
230Vac/13Arms, 50Hz

Output Wave Form
Sinusoidal

Total Harmonic Distortion
Less than 5% at full load

Line/Load Regulation
± 6% from no load to full load

Load Crest Factor
2 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
270Vac by internal supply voltage limiting

Efficiency
80% 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 fans

Environmental Protection
Ruggedizing
Conformal coating

Shock/Vibration
IEC 61373 Cat 1 &AB

Humidity
5 - 95% non-condensing

MTBF
110,000 hours at 45 °C (Fans excluded)
Demonstrated MTBF is significantly higher

Indicators
None

Control Input
None

Alarm Output
Not installed

Package/Dimensions (WxHxL)
Two 3U7: 132 x 483 x 407mm each (5.2” x 19” x16”)
Chassis mount

Weight
Approx. 22kg (46 lbs)

Connections
Input: Terminal block Phoenix FRONT
Output: Terminal block Phoenix FRONT
Interconnection: Cable with connector

RoHS Compliance
Compliant

Warranty
Twelve months subject to application within good engineering practice
Contamination related failures and shipping cost excluded

Drawn by TS/kv	Date March 1, 2022
Checked by TS	Drawing No./Rev SCD U1580A
Approved by TS	ABSOPULSE ELECTRONICS LTD.

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