

Model: HVI 3K5R-750/27-3U7SA-T6225
COSD: XXXX
Summary description: 3500W, Railway Quality DC/DC Converter/Charger
 750Vdc to 27Vdc/130A
Customer Name: Thiele KG/Germany (KS)
Customer Part No.: Same as above



Product description:

This rugged, industrial quality power converter module uses field proven technology to generate the required output power. The unit has six internal power cards, two input filter FID2000 and four KHI 1200 boards. Built-in fans provide sufficient airflow for operation at the specified temperature without de-rating. The fans draw air into the unit and the exhaust exits at the rear of the unit. The system has full electronic protection. The input and output are filtered for low noise. Large design headrooms, and the use of components with established reliability result in a high MTBF. The unit is manufactured at our plant under strict quality control.

Special Features: 420-1000Vdc input range. 1200V surge. Railway, Conformal coating, alarm

SPECIFICATIONS

Input Voltage

750Vdc nominal
 420-1000Vdc operating range
 1200V short time excursions
 Input Current: 10A max

Input Protection

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

Isolation

3000Vdc input to chassis
 4300Vdc input to output
 5600Vdc type test
 1000Vdc output to chassis

Standards

Designed to meet EN 60950-1 and EN 50155 standards

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

Switching Frequency

55kHz ±3kHz

Output Voltage/Current

27Vdc /130A continuous
 Output is set to 27V ± 0.2V at 10A load
 Output is floating

Output Separation diode

Installed internally for separation of the internal modules and for battery charging

Line/Load Regulation

± 1.5% combined from no load to full load, including separation diode

Dynamic Response

Max 5% voltage deviation for 10% to 50% load step, with better than 1msec recovery time

Output Ripple/Noise

Better than 70mVrms or 350mVpp (@ 20MHz BW)

Output Overload Protection

Rectangular current limiting with short-circuit protection (no hiccup)
 Current Limit: 135A ± 5A

Warning: Wires to battery must be fused externally, directly at the battery.

Output Overvoltage Protection

Second regulator loop, completely stable and independent of main regulator loop
 OVP setting: 29V ± 1.5V

Efficiency

85% at full load

Operating Temperature Range

-25°C +55°C for full specification

Temperature Drift

0.03% per °C over operating temperature range

Cooling

By built-in high quality fans

Environmental Protection

Ruggedizing
 Conformal coating

Shock/Vibration

IEC 61373 Cat 1 A & B

Humidity

5 – 95% non-condensing

MTBF

95,000 hours @ 45°C
 Demonstrated MTBF is significantly higher

Indicators

Green OUTPUT ON LED on each internal power card, visible through the cooling slots

Control Input

None

Alarm Outputs

Output Fail alarm
 Form C contacts

Package/ Dimensions

3U7: 432 x 132 x 407mm
 17" x 5.2" x 16"
 Chassis mount

Weight

12kg (26 lbs)

Connections


Input: Terminal block Phoenix HV assembly
 Output: Threaded studs dual M6

RoHS Compliance

Compliant

Warranty

Two years subject to application within good engineering practice
 Contamination related failures and shipping cost not included.

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