

Model: HVI 3K5R-700/27-3U7SA-T6028

COSD: XXXX

Summary description: 3500W, Railway Quality DC/DC Converter/Charger
700Vdc to 27Vdc/129A

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 HVI 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. 1250V surge. Railway, Conformal coating, alarm. Battery is connected to the output

SPECIFICATIONS

Input Voltage

700Vdc nominal
420-1000Vdc operating range
1250V surge
Input Current: 12A 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

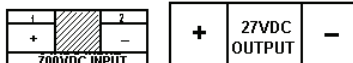
EN50121-3-2

Switching Frequency

55kHz ±3kHz

Output Voltage/Current

27Vdc ± 0.2V/129A continuous
Output is floating



Output Separation diode

Installed internally

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

Output Overvoltage Protection

Second regulator loop, completely stable and independent of main regulator loop
OVP setting: 30V ± 2V

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

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 HV Phoenix
2-pole 4V-7.62
Output: Threaded studs 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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