Model: HVI 2K-750/24-3U3-S5037  
COSD: 8N14-1 (8N14-2, 8N14-3)  
Summary Description: 2000W, Industrial Quality DC/DC Converter  
750Vdc to 24V/83A  
Customer Name: GE Energy Storage/USA  
Customer Part Number: Same as above  
Product Description: This rugged, industrial DC/DC converter is built with one FID 2000 and two KHI 1200 internal modules to generate the required output power. Cooling is by built-in fans, which suck air into the unit and push it out at the other end through perforations. Ruggedizing and conformal coating provide added immunity to shock, vibration and humidity. Low component count, large headrooms and the use of components with established reliability results in high MTBF.  
Special Features: Conformal coating

SPECIFICATIONS

Input Voltage  
- 750Vdc nominal  
- 550-850Vdc operating range  
- Input current: 4.5A max.

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  
- 2250Vdc input to chassis  
- 4300Vdc input to output  
- 5600Vdc type testing  
- 8mm spacing  
- 500Vdc output to chassis

Standards  
- Designed to meet EN60950-1 and corresponding standards

EMI  
- EN 55022 Class A with margins

Switching Frequency  
- 55kHz ±3kHz

Output Voltage/Current  
- 24Vdc ± 0.3V / 83A  
- 2KW continuous  
- Output is floating; either terminal can be grounded

Output Separation Diode  
- Installed internally for separation for the internal modules

Line/Load Regulation  
- ±2% combined from zero load to full load including separation diodes

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

Output Ripple/Noise  
- Better than 60mVrms and 300mVpp (@ 20MHz BW)

Output Overload Protection  
- Rectangular current limiting with short-circuit protection (no hiccup)  
- Thermal shutdown in case of insufficient airflow (self-resetting)  
- Current Limit: 89A ± 4A

Output Over-voltage Protection  
- Second regulator loop, completely stable and independent of main regulator loop  
- OVP limit: 27V ± 2V

Efficiency  
- 80% at full load

Operating Temperature Range  
- -20°C to +55°C for full specification

Temperature Drift  
- 0.03% per °C over operating temperature range

Cooling  
- By built-in high quality fans

Environmental Protection  
- Basic ruggedizing  
- Conformal coating

Shock/Vibration  
- IEC 61373 Cat 1 A&B

Humidity  
- 5-95% non-condensing

MTBF  
- 85,000 hours @45°C  
- (Fans not included)

Indicators  
- Green high intensity OUTPUT ON LED on each internal module visible through the rear perforation

Alarm Output  
- Not installed

Package/ Dimensions (WxHxL)  
- 3U3: 187 x 132 x 407mm  
- (7.4” x 5.2” x 16”)

Mounting holes are clear

Weight  
- 6.2kg (13.5 lbs)

Connections  
- Input: Terminal block, PHOENIX H.V assembly  
- Output: Threaded studs M6

RoHS Compliance  
- Not required, but accepted

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

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