

Source Control Document.

Model: HVI 5K-480d/120-3U7-T6262
COSD: XXXX
Summary Description: 2kW, DC/DC Power Supply
480Vdc to 120Vdc/41A



Product Description:

This rugged, industrial quality power converter utilizes field proven technology to generate the required output power. It is a mature design with a track record in numerous applications. The unit is built with two FID2000 and four KHI 1200 internal modules. The input and output are filtered for low noise. High quality built-in fans provide sufficient airflow for operation within the specified temperature range without de-rating. The fans draw air into the unit, and exhaust at the terminal side of the unit. All heat generating components are installed on aluminum heatsink blocks which are thermally connected to the base plate. This also ensures exceptional mechanical ruggedness. Conformal coating provides protection against humidity and airborne contaminants. Full electronic protection, low component count, large design headrooms, and the exclusive use of components with established reliability contribute to a high MTBF. The unit is manufactured at our plant under strict quality control.

Special Features: Conformal coating

SPECIFICATIONS

Input Voltage

480Vdc
410-550Vdc operating range
Input Current: 13A 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

Input to chassis 3000Vdc on each unit
Input to output 3000Vdc on each unit
Output to chassis 1300Vdc

Standards

Designed to meet EN60950-1 and corresponding standards

EMI / EMC

EN55022 Class A with margins

Switching Frequency

55kHz +/-5kHz

Output Voltage/Current

120Vdc +/- 0.5V / 41A
Output is floating; either terminal can be grounded

Output Separation Diode

Installed internally

Line/Load Regulation

±1% combined from zero load to full load

Dynamic Response

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

Output Ripple/Noise

Better than 150mVrms and 500mVpp (@ 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: 44A ± 2.5A

Output Over-voltage Protection

Second regulator loop, completely stable and independent of main regulator loop
OVP limit: 140V +/- 5V

Efficiency

90% at full load

Operating Temperature Range

0°C to +50°C for full specification

Temperature Drift

0.03% per °C over operating temperature range

Cooling

By built-in fans

Environmental Protection

Basic ruggedizing
Conformal coating

Shock/Vibration

IEC 61373 Cat 1 A&B

Humidity

5-95% non-condensing

MTBF

95,000 hours @45°C
(Fans not included)

Indicators

Green high intensity Output ON LED on each internal module visible through cooling slots

Alarm Output

Not installed

Package/ Dimensions (WxHxL)

3U7: 432 x 132 x 407mm
(17" x 5.2" x 16")

Chassis mount

Four L-brackets included for mounting

Weight

14kg (31 lbs)

Connections


Input: Terminal block
Output: Terminal block

RoHS Compliance

Not required, but accepted

Warranty

Two years subject to application within good engineering practice

Drawn by TS/sa	Date November 19, 2019
Checked by TS	Drawing No./ Rev. SCD T6262-2A
Approved by TS	

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