

## Source Control Document.

**Model:** HVI 2K-480d/120-3U3-T6262  
**COSD:** XXXX  
**Summary Description:** 2kW, DC/DC Power Supply  
 480Vdc to 120v/16.6A



### 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 an FID2000 and two 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:** Output diode, conformal coating

### SPECIFICATIONS

#### Input Voltage

480Vdc  
 410-550Vdc operating range  
 Input Current: 6A 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 / 16.6A  
 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: 18A +/- 1A

#### 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

110,000 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)

3U3: 187 x 132 x 407mm  
 (7.4" x 5.2" x 16")

#### Weight

Approx. 7kg (15lbs)

#### Connections

Terminal blocks

#### 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 T6262A
Approved by TS	

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