

600Vdc Input, 2kW Rugged, Industrial Quality DC/DC Converter HVI 2K



- Rugged construction
- Single regulated output
- Full electronic protection
- Fan cooling
- Field-proven design
- N+1 redundancy possible

This rugged, industrial quality power converter system uses field proven modules to generate 2kW output power. It has three internal modules, two KHI 1500 and one FIB 2000. To ensure high reliability and long operating life, all critical components on the primary side are designed and tested for corona inception levels significantly higher than the operating voltages. 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. It features full electronic protection and low output 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.

SPECIFICATIONS

Input Voltage

600Vdc
450V – 800V range
Input current: 5.5A 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

Input-chassis 3000Vdc on each unit
Input-output 3000Vdc on each unit
5600Vdc type test
Output-chassis 500Vdc

Standards

Designed to meet IEC61010-1
Ed. 2, IEC 62103 Ed. 1, UL 508C
and related standards

EMI

EN55022 Class A with margins
conducted and radiated

Switching Frequency

55kHz +/- 3kHz

Output Voltage/Current

12V/130A, 24V/80A or 48V/40A.
Other outputs on request.
Output is floating; either terminal can be grounded

Redundancy Diode

Included for the separation of the internal modules

Line/Load Regulation

Better than +/-1.5% 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 0.2% Vrms and
1% Vpp of the output voltage
(@ 20MHz BW)

Output Overload Protection

Rectangular current limiting with
short-circuit protection (no hiccup)
Thermal shutdown in case of
insufficient airflow (self-resetting)

Output Overvoltage Protection

Second regulator loop, completely
stable and independent of main
regulator loop

Efficiency

Min 80% at full load depending
on input/output configuration

Operating Temperature Range

0°C to 50°C for full specification
Wider range available as option

Temperature Drift

0.03% per °C over operating
temperature range

Cooling

By two built-in fans

Environmental Protection

Basic ruggedizing
Full ruggedizing and conformal
coating available as an option

Shock/Vibration

IEC 61373 Cat 1 A&B

Humidity

5 – 95% non condensing

MTBF

85,000 hours @45°C
(fans not included)
Demonstrated MTBF is
significantly higher.

Indicators

Not on standard version
Optional

Control Input

None

Alarm Outputs

Optional

Package/Dimensions (W x H x L)

3U3: 187 x 132 x 407 mm
(7.4 x 5.2 x 16") including connectors
Can be chassis or 19" rack
mounted

Weight

Approx. 7kg (15 lbs.)

Connections

Input: Terminal block
Output: Threaded studs

RoHS Compliance

Fully compliant

Warranty

Two years subject to application
within good engineering practice

Enhancements to these general specifications can be accommodated upon request. Designed to meet common approval requirements

*Designer and manufacturer of quality converters, inverters, UPS systems, complete rack mount systems
and DC-input fluorescent lamp inverters since 1982. Custom or standard. Absopulse is a BABT-approved Facility*



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