

500W, Rugged, Plug-in (Eurocard) AC/DC Power Supply Module HVC 419-EH Series



- Rugged, field proven design
- Regulated and adjustable output
- Convection cooling
- Full electronic protection
- Also available in stand-alone package
- N+1 redundancy available

This rugged, industrial quality plug-in converter uses field-proven topology to generate the required output power. It is a mature design with a track record in numerous applications. The PCB is a standard Eurocard size. The unit has a built-in redundancy diode for parallel connection or N+1 redundant operation, including hot-insertion. Cooling is by natural air convection. Heat generating components are installed on an aluminum heatsink block, which is connected to the heatsink plate on the side of the module. It has input and output filtering in compliance with EN 55022 EMI standards. Full electronic protection, low component count, 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

115/230VAC +/- 15%,
47 - 63Hz
Voltage selection by internal jumper
Other inputs available on request

Input Protection

Inrush current limiting
Varistor
Internal safety fuse
Lower voltage than the specified minimum input will not damage the unit

Isolation

2250VDC input to chassis
4300VDC input to output;
8mm spacing
500VDC output to chassis

Standards

Designed to meet EN60950 and related standards

EMI

EN55022 Class A with margins

Switching Frequency

55kHz +/-3kHz

Hold Up Time

Min. 10ms at any input for 5% drop of the output voltage

Output Voltage/Current

120Vdc/4A standard
Output is floating, either terminal can be grounded
Other outputs available on request

Redundancy Diode

Installed internally

Line/Load Regulation

+/- 1% combined from 10% load to full load, including redundancy diode

Dynamic Response

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

Output Ripple / Noise

Less than 1% peak to peak or 0.2%rms of the output voltage (20MHz BW)

Output Overload Protection

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

Output Over-voltage Protection

Second regulator loop completely stable and independent of main regulator loop

Efficiency

Output voltage dependent.
Typically 80% at full load

Operating Temperature Range

0°C to +50°C without derating
Extended temperature range available

Temperature Drift

0.03% per °C over operating temperature range

Cooling

Natural air convection

Environmental Protection

Basic ruggedizing
Full ruggedizing and conformal coating as option

Shock/Vibration

IEC 61373 Cat 1 A&B

Humidity

5-95% non-condensing

MTBF

100,000 hours @ 45 °C
Demonstrated MTBF is significantly higher

Indicators

Green "OUTPUT ON" LED on front-panel
Test Points on front-panel as option

Control Input

Adjustment potentiometer on front-panel as option

Alarm Output

Module fail alarm via optocoupler, C-E.

Package/Dimensions

4U x 16HP x 304mm Eurocard plug-in module

Weight

2.2kg (4.9 lbs)

Connections

H15 DIN connector

RoHS Compliance

Fully compliant

Warranty

Two years subject to application within good engineering practice

Enhancements to these general specifications and customizing can be accommodated upon request. Specifications are subject to change.

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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