

Rugged, Industrial Quality 1000W/1500W DC/DC Plug-in Converter

BKP 419-EH Series



- 4U x 16HP x 12" plug-in module
- Rugged, industrial quality
- Adjustable output
- Convection or forced air cooling
- Full electronic protection
- Field-proven design
- Redundancy diode included

This rugged, industrial quality, DC/DC plug-in converter uses field-proven technology to generate up to 1500W output power, depending on the cooling method employed. The natural air convection cooled version generates 1000W and the unit with forced-air cooling by system fans, 1500W. Heat generating components are installed on aluminum heatsink blocks, which are connected to the heatsink fins on the side of the module. A built-in redundancy diode allows for parallel connection or N+1 redundant operation, including hot-insertion. The unit has input and output filtering in compliance with EN55022 EMI standards. Full electronic protection, low component count, large design headrooms, and the use of components with established reliability result in a high MTBF. This is a mature design with a track record in numerous applications. It is manufactured at our plant under strict quality control.

SPECIFICATIONS

Input Voltage

125Vdc (105 – 140V)
Please consult factory for other voltages and ranges

Input Protection

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

Input Isolation/Safety

1500Vdc input to chassis
2250Vdc input to output
500Vdc output to chassis

Standards

Designed to meet EN60950 and corresponding CSA and UL standards

EMI

EN55022 Class A with margins

Switching Frequency

55kHz +/-3kHz

Output Voltage/Current

24V or 48Vdc continuous per plug in module.
Output is floating, either terminal can be grounded
For configuration options, see chart
Consult factory for other outputs

Redundancy Diode

Installed internally

Line/Load Regulation

+ 1% combined from zero 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

Better than 80mVrms or 400mVpp (20MHz BW)

Output Overload Protection

Current limiting with short circuit protection (No hiccup)
Self-resetting thermostat for thermal protection

Output Overvoltage Protection

Double regulator loop

Efficiency

85% at full load

Operating Temperature Range

0°C to +50°C for full specification with proper air convection

Temperature Drift

0.03% per °C over operating temperature range

Cooling

Natural air convection or forced-air cooling by system fans. Please refer to chart.

Environmental Protection

Basic ruggedizing
Full ruggedizing and conformal coating as option

Shock/Vibration

IEC61371 Cat 1 A&B

Humidity

5 - 95% non-condensing

MTBF

110,000 hours @45°C
Demonstrated MTBF is significantly higher.

Indicators

Green "Output ON" LED on front panel

Control Input

Front panel Vout adjusting potmeter and test points connected before redundancy diode

Alarm Output

Converter Fail alarm via optocoupler output (opens on failure)

Package/Dimensions (H x W x D)

Plug-in module 4U x 16HP x 12"

Weight

2.2kg (4.9 lbs)

Connections

H15 connector (Double connector for inputs > 40A)

RoHS Compliance

Fully compliant

Warranty

Two years subject to application within good engineering practice

Model	Input V	Output V/A	Cooling	Package Size
BKP 419-125/24V-EH	125V	24V/40A (1000w)	Convection	4U x 16HP x 12"
BKP 419-125/48V-EH	125V	48V/20A (1000W)	Convection	4U x 16HP x 12"
BKP 419F-125/24V-EH	125V	24V/60A (1500W)	External forced air	4U x 16HP x 12"
BKP 419F-125/48V-EH	125V	48V/30A (1500W)	External forced air	4U x 16HP x 12"

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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