

500W, Rugged, Industrial Quality AC/DC Power Supply HBC 319 Series



- Rugged field-proven design
- Regulated and adjustable output
- Conduction/ convection cooling
- Full electronic protection
- N+1 redundancy available

This rugged, industrial quality AC/DC power supply series uses a field-proven topology to deliver the required output power. It is a mature design with a track record in numerous applications. An optional built-in redundancy diode allows for parallel connection or N+1 redundant operation. Cooling is by conduction via base plate to a heat-sinking surface and by natural convection. Additional ruggedizing and conformal coating are available for operation in extreme environments. Full electronic protection, low component count, large design headroom, and the use of components with established reliability result in a high MTBF. The series is manufactured at our plant under strict quality control. Customized versions and fan-cooled versions with increased output power are also available.

SPECIFICATIONS

Input Voltage

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

Input Protection

Inrush current limiting
Varistors
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

EN 55022 Class A with margins

Switching Frequency

55KHz +/- 3KHz

Hold Up Time

Minimum 5ms at full load for 5% drop of output voltage at nominal input

Output Voltages

24VDC/20A, 48VDC/10A or 125V/4A standard
Output is floating, either terminal can be grounded
Other outputs available on request

Redundancy Diode

None
Available as option

Line/Load Regulation

± 1% combined from no 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

Less than 1% of output voltage 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 Overvoltage Protection

Double regulator loop completely stable and independent of main loop

Efficiency

Output voltage dependent.
Typically 80% at full load

Operating Temperature

0°C to 50°C cold plate temperature for full specification without derating
Extended temperature ranges available on request

Temperature Drift

0.03% per °C over operating temperature range

Cooling

Conduction to customer heatsink or chassis and natural 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

160,000 at 45°C
Demonstrated MTBF is significantly higher

Indicators

Green "Output ON" LED visible through the cooling slots

Control Input

None on standard version
Available as option

Alarm Output

None on standard version
Available as option

Package/Dimensions (W x H x L)

F4: 130 x 64 x 353 mm
(5.1" x 2.5" x 13.9) including mounting flanges and terminals
Mounting holes are clear

Weight

2.2 kg (4.9 lb)

Connections

12 pole barrier type terminal block with 3/8" spacing

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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