

700 - 1000W Rugged, Industrial Quality AC/DC Power Supply HBC 319F-FT Series

- Rugged industrial quality
- Field-proven design
- Regulated and adjustable output
- Full electronic protection
- N+1 redundancy by built in diode as option



FF4W chassis:
internal side fans



FF4 chassis:
external side fans

This rugged, industrial quality AC/DC power supply utilizes a field proven technology to generate the required output power. It is a mature design with a track record in numerous applications. Cooling is by three high quality fans and additional conduction via the baseplate. The fans are either enclosed within the chassis (FF4W) or are attached to the outside of the chassis (FF4). The fans draw air into the unit. Both mechanical formats have the same total footprint. An optional built-in redundancy diode allows for parallel and N+1 operation. Additional ruggedizing and conformal coating are available on request for applications that require immunity to high levels of shock, vibration and humidity. Full electronic protection, low component count, large design headroom, and the exclusive use of components with established reliability contribute to a high MTBF. All of our products are manufactured at our plant under strict quality control.

SPECIFICATIONS

Input Voltage

115/230Vac \pm 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 EN60950-1 and corresponding standards

EMI

EN55022 Class A with margins

Switching Frequency

55kHz \pm 3kHz

Hold Up Time

Min. 5ms at full load for
5% drop of the output voltage at nominal input

Output Voltage/Current

24Vdc/31A, 48Vdc/15A or
125Vdc/6A are standard
Output is floating, either terminal can be grounded
Other outputs available on request

Redundancy Diode

None
Available as option

Line/Load Regulation

\pm 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

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 Over-voltage Protection

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

Efficiency

Output voltage dependent.
Typically 85% at full load

Operating Temperature Range

0 °C to 50 °C for full specification without derating
Extended temperature ranges available

Temperature Drift

0.03% per °C over operating temperature range

Cooling

Forced air by high quality built-in fans and conduction to customer heat sink or chassis
Fans draw air into the unit

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 hours @ 45 °C
Demonstrated MTBF is significantly higher (fans excluded)

Indicators

Green "Output ON" LED visible through cooling slots

Control Input

None on standard version
Available as option

Alarm Output

None on standard version
Form C alarm available as option

Package/Dimensions (W x H x L)

FF4: 156 x 62 x 356 mm (6.2" x 2.4" x 14") or
FF4W: 156 x 65 x 356 mm
6.2" x 2.5" x 14" including terminal block, flanges and fans.
Mounting holes are clear

Weight

2.5 kg (5.5 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



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