

750W Peak, Rugged, Industrial Quality AC/DC Power Supply for Switchgear Motors

HBC 319-A/125FTS-SG Series

- Rugged field-proven design
- High peak current capacity
- Fully regulated output
- Conduction/convection cooling
- Full electronic protection
- Built in redundancy diode



This rugged, industrial quality AC/DC power supply uses field-proven topology to deliver 750W peak output power. It was specifically adapted to provide the high peak power for the start-up of the motor in electric switchgear. This special version of the HBC 319 Series generates 125Vdc at 4A, with 6A peak current for several seconds without fan cooling. Several modules can be connected in parallel for higher output current and for redundant applications. A built-in redundancy diode provides separation between the units if used in multiple configuration. Conformal coating is a standard feature for this application. Full electronic protection, low component count, large design headroom 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

115Vac, 47-63Hz
97-132Vac operating range
Input Current 15A rms peak max.
230Vac as well as other inputs are available on request

Input Protection

Electronic 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
1400VDC output to chassis

Standards

Designed to meet EN60950-1 and related standards

EMI

EN 55022 Class A with margins

Switching Frequency

55KHz \pm 3KHz

Hold Up Time

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

Output Voltages

125Vdc/4A continuous, 6A peak for min 30 sec
500W continuous, 750W peak
Output is floating, either terminal can be grounded
Other outputs available on request

Redundancy Diode

Installed internally

Line/Load Regulation

\pm 1% combined from no 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 120mVrms and 120mVpp (20MHz BW)

Output Overload Protection

Current limiting with short circuit protection (No hiccup)
Self-resetting thermostat for thermal protection
Current Limit: 6.5A \pm 0.4A

Output Overvoltage Protection

Double regulator loop
OVP setting: 140V \pm 5V

Efficiency

85% at full load

Operating Temperature

0 °C to 50 °C for full specification
Extended temperature ranges available on request

Temperature Drift

0.03% per °C over operating temperature range

Cooling

Conduction via base-plate and natural convection

Environmental Protection

Basic ruggedizing
Conformal coating

Shock/Vibration

IEC 61373 Cat 1 A&B

Humidity

5 – 95% non-condensing

MTBF

140,000 at 45°C
Demonstrated MTBF is significantly higher

Indicators

Green "Output ON" LED visible through the cooling slots

Control Input

None

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

Compliant

Warranty

Two years subject to application within good engineering practice

Terminal Block Pin-out

| 125VDC OUTPUT | | | | | | | | 115VAC INPUT | | | |
|---------------|---|---|---|---|----------|----------|----------|--------------|-----|----|----|
| NOT USED | + | + | - | - | NOT USED | NOT USED | NOT USED | GND | GND | N | PH |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |



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