

# 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
								$\perp$	$\perp$	$\sim$	$\sim$
1	2	3	4	5	6	7	8	9	10	11	12

The specifications on this data sheet are generic and are subject to change. Enhancements to these specifications can be provided upon request.

*OEM of professional quality AC/DC power supplies and battery chargers, DC/DC converters, DC-AC sine-wave inverters, phase and frequency converters, DC-output UPS systems and complete power systems in 19" and 23" racks since 1982. Custom or standard.*



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