300W, Rugged, Industrial Power Supply
HBC 300-FT Series

- Rugged Industrial quality
- Conduction/convection cooling
- Single output
- Full electronic protection
- Large design headroom
- Optimized cost by automated assembly
- Most versions are available from stock

The HBC 300 series a high reliability rugged industrial quality AC/DC power supply that uses field-proven topology to generate 300W output power. It is a mature design with a track record in numerous applications. The design has large design headroom and is rated for 50°C operation without derating. It is cooled via baseplate to a heatsinking surface and by natural convection. Low component count and the use of components with established reliability results in a high MTBF. The input is selectable for 230Vac or 115Vac operation by internal jumper. The unit has two output terminals "Redundant" via a built-in redundancy diode, and "Non-Redundant" which is direct. The unit is manufactured at our plant under strict quality control.
For customized versions with various options, and for Eurocard plug-in modules, the HBC 65 and LOT 65 series will remain available.

SPECIFICATIONS

Input Voltage
115/230Vac +/- 15%, 47 - 63Hz
Voltage selection by internal jumper
Input also accepts 220V – 370Vdc range

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 EN 60950 and corresponding UL and CSA standards

EMI
EN55022 Class B

Switching Frequency
55 KHz +/-3KHz

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

Output Voltage/Current
12V/25A; 24V/12A, 48V/6A or 125V/2A on the "Redundant" output
Voltage on the "Direct" terminal is one diode drop higher.
Output is floating, either terminal can be grounded.
Consult factory for other voltages

Redundancy Diode
Installed internally on the Redundant" terminal

Line/Load Regulation
+/- 1% combined from zero load to full load on the "Direct" output

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 stab and independent of main loop

Efficiency
80% - 87% at full load, depending on output voltage

Operating Temperature Range
0 to +50°C for full specification with proper cooling
(For extended temperature range see HBC 65 Series)

Temperature Drift
0.03% per °C over operating tempera range

Cooling
Conduction via base plate to customer heatsink or chassis and natural convection

Environmental Protection
Basic ruggedizing
Heavy ruggedizing and conformal coating available as an option

Shock/Vibration
IEC 61373 Cat 1 A&B

Humidity
5 - 95% non-condensing

MTBF
150,000 hours @ 45 °C
Demonstrated MTBF is significantly higher.

Indicators
Green "Output ON" LED visible through the cooling slots

Control Input
None

Alarm Output
Form C contacts

Package/Dimensions (W x H x L)
F3: 132 x 62 x 300 mm
(5.2" x 2.43" x 11.8") including terminal block and flanges
Mounting holes are clear

Weight
2 Kg (4.4 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 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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