

1,300W Rugged, Industrial AC/DC Power Supply

HBC 1K3 Series



- Rugged, industrial quality
- Fan cooling
- Full electronic protection
- Field-proven design topology

The HBC 1K3 series rugged industrial quality AC/DC power supply uses field-proven internal modules to generate 1,300W output power. It is a mature design with a track record in numerous applications. Cooling is by a built-in fan, with additional conduction via the baseplate. The unit has full electronic protection. The input and output are filtered for low noise. Low component count, large design headrooms, and the use of components with established reliability result in a high MTBF. Additional ruggedizing and conformal coating are available for operation in mobile applications. It is manufactured at our plant under strict quality control. The chassis has four M6 PEM nuts for mounting on the bottom surface. Power factor corrected versions are also available.

SPECIFICATIONS

Input Voltage

115/230VAC $\pm 15\%$
Selectable by internal jumper
47 - 63Hz
Input current 22Arms max at 95V

Input Protection

Inrush current limiting
Varistor
Internal safety fuse
Lower voltage than the specified minimum input will not damage the unit

Input Isolation

2250VDC input to chassis
4300VDC input to output
8mm spacing
500VDC output to chassis

Standards

Designed to meet EN60950 and corresponding UL and CSA standards

EMI

Meets and EN 55022 Class A with margins

Switching Frequency

55kHz ± 3 kHz

Hold-up Time

Min. 5msec at nominal input

Output Voltages

24V/54A, 48V/27A or 125V/10A are standard
Output is floating, either terminal can be grounded
Consult factory for other voltages

Redundancy Diode

Not installed
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

Better 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
Thermal shutdown with automatic reset in case of insufficient airflow

Output Overvoltage Protection

Double regulator loop

Efficiency

Min 80% at full load

Operating Temperature

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 built-in fans and additional cooling via base plate

Environmental Protection

Basic ruggedizing
Heavy ruggedizing and conformal coating as option

Shock/Vibration

IEC 61373 Cat 1 A&B

Humidity

5 - 95% non-condensing

MTBF

110,000 hours at 45°C (Fan excluded)
Demonstrated MTBF is significantly higher

Indicators

None

Control Input

None

Alarm Output

None
Available as option

Dimensions (W x H x L)

U5512: 127 x 127 x 315 mm (5" x 5" x 12.4") enclosed case
Mounting by four M6 screw ports on the bottom surface

Weight

5.2 kg (11.5 lb.)

Connections

Input: terminal blocks
Output: Terminal block or threaded studs

RoHS Compliance

Fully compliant

Warranty

Two years subject to application within good engineering practice



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