

1500W Rugged, AC/DC Industrial Power Supply HBL 1K5F-FT Series

- Rugged, industrial quality
- Single phase 230Vac input
- Fan cooling
- Full electronic protection
- Field-proven design topology
- Good \$/W ratio



The HBL 1K5F series rugged industrial quality AC/DC power supply uses field-proven topology to generate 1500W output power. It is a mature design with a track record in hundreds of applications. Cooling is by built-in fans, and additional conduction via baseplate. Additional ruggedizing and conformal coating are available for operation in mobile applications. 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
230Vac $\pm 15\%$; 47-63Hz

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

Input Isolation/Safety
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 EN 55022 Class A as a minimum

Switching Frequency
55 KHz ± 3 KHz

Hold Up Time
Minimum 10ms at full load for 5% drop of output voltage @ 230V nominal input

Output Voltages
24Vdc/62A, 28V/53A,
48V/31A, 56V/27A or
125V/12A
Other outputs on request

Redundancy Diode
None
Available for customized versions. Please verify with factory.

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)

Overload Protection
Rectangular current limiting with short circuit protection
Thermal shutdown with automatic reset in case of insufficient airflow

Over-voltage Protection
Double regulator loop completely stable and independent of main loop

Efficiency
Min 80% at full load

Operating Temperature
0 to $+50^{\circ}\text{C}$ for full specification

Environmental Protection
Basic ruggedizing
Optional heavy ruggedizing and conformal coating

Temperature Drift
0.03% per $^{\circ}\text{C}$ over operating temperature range

Cooling
Forced air by built-in fans and additional cooling via base plate

MTBF
Min. 100,000 hours @ 45°C (fan not included)
Demonstrated MTBF is significantly higher.

Indicators
None

Control Input
None

Alarm Output
None on the standard version

Package/Dimensions (WxHxL)
FF6: 236 x 65 x 349 mm
(9.28" x 2.55" x 13.75") including terminal block and flanges
Mounting holes are clear

Weight:
3.6 kg (8 lbs)

Connections
Input: 6-pole barrier type terminal block, 3/8" spacing
Output: 1/4" DIA brass studs or terminal block

RoHS Compliance
Fully compliant

Warranty:
Two years subject to application within good engineering practice



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