1000W, Rugged, Conduction/Convection Cooled Industrial Quality Power Supply
HBL 1K Series

- Rugged industrial design
- Conduction/convection cooling, no fan
- Full electronic protection
- Field-proven design
- Competitive price

This rugged, industrial quality AC/DC power supply utilizes field proven technology to deliver up to 1000W depending on input/output configuration. It has an excellent track record in numerous applications. Cooling is by conduction via base plate to a heat-sinking surface and by natural convection. Full electronic protection, low component count, large design headroom, and the use of components with established reliability result in a high MTBF. Additional ruggedizing and conformal coating are available for applications that require higher immunity to shock, vibration and humidity. The unit is manufactured at our plant under strict quality control. Customized versions and fan-cooled versions with increased output power are also available.

SPECIFICATIONS

Input Voltage
115/230Vac ±15%; 47-63Hz
Voltage selection by internal jumper
250Vdc (190 – 370V)
Other voltages on request

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 related standards

EMI
Meets EN 55022 Class A as a minimum

Switching Frequency
55 KHz +/-3KHz

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

Output Voltage/Current
24V/38A, 28V/32V,
48V/21A, 56V/18A or 125V/8A
Other outputs on request

Redundancy Diode
None
Available as option on outputs 48V and higher

Line/Load Regulation
+/- 1% combined from zero load to full load on both outputs

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

Output Overvoltage Protection
Double regulator loop

Efficiency
Output voltage dependent
Typically 80% at full load

Operating Temperature
0°C to 50°C for full specification
Extended temperature range available

Temperature Drift
0.03% per °C over operating temperature range

Cooling
Conduction via base plate to customer chassis or heatsink and additional natural air convection through cooling slots

Environmental Protection
Basic ruggedizing
Heavy ruggedizing and conformal coating as option

MTBF
Min. 160,000 hours @45°C
Demonstrated MTBF is significantly higher.

Terminal Block Pin-out

OUTPUT											
+	+	+	+	NOT USED	RTN	RTN	RTN	RTN	NOT USED	NOT USED	NOT USED
1	2	3	4	5	6	7	8	9	10	11	12

INPUT		
GND ⏚	N ~	PH ~
1	2	3

Indicators
Green Output LED visible through the cooling slots

Alarm Outputs
None on standard version
Available as an option

Dimensions (W x H x L)
F6: 210 x 64 x 356 mm;
(8.3" x 2.5" x 14") including terminals and mounting flanges
Mounting holes are clear

Weight:
3.2 kg (7 lbs)

Connections
Barrier-type terminal block, 3/8" spacing

RoHS Compliance
Fully compliant

Warranty:
Two years subject to application within good engineering practice

Please note that the above specifications set only generic guidelines for the design. Customizing and enhancements are possible. Please contact us with your specific requirements.

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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