

1600W, 1U, Rugged, Industrial Power Supply Shelf HBL 1K6-1U Series

- Rugged, industrial quality
- Low-profile 1U rack-mount enclosure
- Cooled by internal fans
- Single phase input
- Full electronic protection
- Field-proven design
- N+1 redundancy as an option



The HBL 1K6 Series heavy-duty modular AC/DC power supply system utilizes a field-proven full-bridge design to deliver up to 1600W, depending on output voltage. It is built with two HBL 800 internal modules. An optional built-in redundancy diode would allow for the outputs to be connected in parallel for N+1 redundancy, or increased power. Cooling is by two built-in fans and conduction to customer heatsink or chassis. The unit features full electronic protection and low output 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 extreme environments. The unit is manufactured at our plant under strict quality control.

SPECIFICATIONS

Input Voltage

230Vac $\pm 15\%$; 47-63Hz
115Vac can be selected 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
1500VDC output to chassis

Standards

Designed to meet EN 60950 and corresponding standards

EMI

Meets EN 55022 Class A with large design headroom
Class B version as option.

Switching Frequency

55 KHz ± 3 KHz (on AC/DC section)

Hold Up Time

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

Output Voltage/Current

Any single voltage 12V to 150Vdc

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)

Overload Protection

Rectangular current limiting with short circuit protection (no hiccup)
Thermal shutdown with automatic reset in case of insufficient airflow

Output Overvoltage Protection

Double regulator loop

Efficiency

Typ.80% at full load, depending on output voltage

Operating Temperature

0°C to +50°C for full specification with proper cooling
Wider temperature ranges as option

Temperature Drift

0.03% per °C over operating temperature range

Cooling

Forced air by two built-in fans and conduction to customer heatsink or chassis

Environmental Protection

Basic ruggedizing
Optional heavy ruggedizing and conformal coating

MTBF

110,000 hours @ 45°C
Demonstrated MTBF is significantly higher.

Indicators

Green LEDs on front-panel
“Output ON”

Control Input

None

Alarm Outputs

None
Available as option

Package/Dimensions (W x H x D)

1U (1.75”) x 19” x 16”
rack-mount chassis, including terminal blocks

Weight

Approx. 6 kg (13 lbs)

Connections

Input/output: barrier-type terminal block, 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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