2000W, Rugged, Industrial Quality, AC/DC Power Supply with PFC-input
PFH 2K Series

- Electronic power factor correction (PFC)
- Rugged industrial quality
- Field-proven internal modules
- Cooling by internal fans
- Single phase input
- Full electronic protection
- Internal 1kW + 1kW redundancy

This rugged, industrial quality AC/DC power supply with PFC input delivers up to 2000W output power. It is built with two PFH 65F internal modules with field proven design topology. This modular construction provides inherent redundancy; the failure of one internal module would result in a 50% drop in output power while the unit remains functional at 1000W. This design can therefore be used as a 1000W redundant power supply. Several units can be paralleled for higher output power. Cooling is by high quality internal fans, which provide sufficient airflow for operation at the specified temperature without de-rating. Full electronic protection, 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
95-264Vac, 47… 63Hz
Input Current: 26A rms max. at 95V
Power Factor is better than 0.97 at full load for the entire input range.
Meets EN61000-3-2

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
EN 55022 Class A with margins

Switching Frequency
100kHz on input section
55kHz ± 3kHz on output section

Output Voltage/Current
36V/60A, 48Vdc/40A, 54Vdc/37A, 110V/18A or 125Vdc/16A are standard
Output is floating; either terminal can be grounded
Other outputs also on request

Redundancy Diode
Installed on each internal module for separation and redundancy

Line/Load Regulation
+/- 1% combined from zero load to full load including built-in redundancy diode

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 in case of insufficient cooling (self-resetting)

Output Overvoltage Protection
Second regulator loop completely stable and independent of the main regulator loop

Efficiency
Output voltage dependent
Typically 80% at full load

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

Temperature Drift
0.03% per °C over operating temperature range

Cooling
Internal high quality fan

Environmental Protection
Basic ruggedizing and conformal coating
Heavy ruggedizing as option

Shock/Vibration
IEC 61373 Cat 1 A&B

Humidity
5-95% non-condensing

MTBF
140,000 hours @45 °C per internal module (fan excluded)

Indicators
Green “Output ON” LED visible on each internal module through the cooling slots
The LED is connected before the redundancy diode.

Control Input
None

Alarm Output
Module Fail Alarm, Form C

Package/ Dimensions (W x H x L)
U5512: 127 x 127 x 316 mm (5" x 5" x 12.5"). Four M6 threaded insert at the bottom surface for mounting

Weight
5.2kg (11.5 lbs)

Connections
Barrier type terminal blocks with 3/8” spacing

RoHS Compliance
Fully compliant

Warranty:
Two years subject to application within good engineering practice

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