1000W, Rugged, Industrial Quality, Conduction/convection Cooled AC/DC Power Supply with PFC-input
PFL 1K – XXF44T Series

- Electronic power factor correction (PFC)
- Rugged industrial quality
- Field-proven internal modules
- Conduction/convection cooling, no fans
- Single phase input
- Full electronic protection
- N+1 redundancy

This rugged, industrial quality AC/DC power supply with PFC input delivers up to 1000W output power. It is built with two field proven PFC 319 internal modules, which have a track record in numerous heavy-duty applications. 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 half power. This design can also be used as a 500W redundant power supply. Several units can be paralleled for higher output power. The unit has no internal fans, and is cooled 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. The unit is manufactured at our plant under strict quality control.

SPECIFICATIONS

Input Voltage
95-264Vac, 47… 63Hz
Input Current: 13A 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
50 –150kHz (load dependent) on input section
55kHz ± 3kHz on output section

Output Voltage/Current
24Vdc/40A 1000W continuous
Output is floating; either terminal can be grounded
48V/20A or 125V/8A are also available
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)
Current Limit: 43A ± 2A

Output Overvoltage Protection
Double regulator loop
OVP setting: 31V ± 2V

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
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

Shock/Vibration
IEC 61373 Cat 1 A&B

Humidity
5-95% non-condensing

MTBF
140,000 hours @45°C per internal module
Demonstrated MTBF is significantly higher.

Indicators
Green "Output ON" LED visible on each internal module through the cooling slots

Control Input
None

Alarm Output
None installed
Available as option

Package / Dimensions (WxHxL)
F44T: 267 x 64 x 353mm
(10.5" x 2.5"x 13.9")
Mounting holes are clear

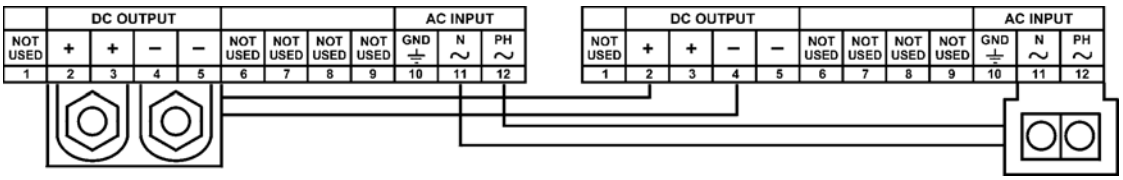
Weight
4.5kg (10 lbs)

Connections
Input: Terminal block with 13mm spacing
Output: Threaded studs

RoHS Compliance
Fully compliant

Warranty
Two years subject to application within good engineering practice

Terminal Block Pin-out



Enhancements to these general specifications and customizing can be accommodated upon request. Specifications are 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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