

1000W, Rugged, Industrial Quality AC/DC Power Supply with PFC-input

PFL 1KF – XXF44T Series



- Electronic power factor correction (PFC)
- Rugged industrial quality
- Field-proven internal modules
- Cooling by internal fan
- Single phase input
- Full electronic protection
- N+1 redundancy as an option

This rugged, industrial quality AC/DC power supply with PFC input delivers up to 1000W output power. The unit is built with two field-proven internal power modules, a PFC 1500 and a KFB 1500. An optional built-in redundancy diode allows for parallel connection to achieve higher output power or N+1 redundancy, and also makes the unit suitable for battery charging applications. Cooling is by a high quality internal fan and via base plate to a heat-sinking surface. 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

Not installed
 Available as option

Line/Load Regulation

+/- 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 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

Internal high quality fan and conduction by installing unit to the heat-sinking surface (chassis or cabinet wall)

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

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

Indicators

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

Control Input

None

Alarm Output

Not installed
 Available as option

Package / Dimensions (W x H x L)

F44T: 267 x 64 x 353mm (10.5" x 2.5" x 13.9") including mounting flanges and terminals
 Mounting holes are clear

Weight

4.5kg (10 lbs)

Connections

Input: 2-pole barrier type terminal block with 13mm spacing
Output: 4-pole barrier type terminal block with 13mm spacing

RoHS Compliance

Fully compliant

Warranty:

Two years subject to application within good engineering practice

Terminal Block Pin-out:

DC OUTPUT				AC INPUT	
+	+	-	-	N	PH
1	2	3	4	1	2

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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