

1500W, Rugged, Industrial Quality AC/DC Power Supply with PFC-input PFL 1K5F – XXF44T Series

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



This rugged, industrial grade AC/DC power supply with power factor corrected input uses field proven topology to generate the required output power. It is a flat-profile version of the mature PFC 1K5 design, which has a track record in numerous applications. The unit is built with two field-proven internal power modules, a PFQ 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 high quality internal fans 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: 20A 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 ± 5kHz on input section
55kHz ± 3kHz on output section

Output Voltage/Current

24V/ 60A continuous
1500W continuous max
Output is floating; either terminal can be grounded
48V/30A or 125V/12A are also available
Other outputs 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: 63A ± 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 fans 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 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")
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			
+	+	-	-
1	2	3	4

AC INPUT	
N	PH
1	2

40A rated terminals



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