1,500W Rugged, Fan-cooled Industrial Power Supply with PFC-input
PFL 1K5F Series

- Rugged Industrial quality
- Electronic power factor correction (PFC)
- Fan cooling
- Single output
- Full electronic protection
- N+1 redundancy as an option

The PFL 1K5F Series AC/DC power supply is a low-profile version of the PFL 1K5F in 5" x 5" x 12" chassis. It is mature design has a track record in hundreds of applications. It includes two internal modules; the PFS 1000 input stage and a KFB 1500 type output stage. The PFL 1K5F is cooled by two internal fans and is rated for operation over a -20ºC to 50ºC temperature range without de-rating. An optional built-in redundancy diode allows for the outputs to be connected in parallel for 1+1 redundancy, or increased power. Additional ruggedizing and conformal coating are available for operation in extreme environments. The unit features full electronic protection and low output noise. This chassis-mount design is optimized for low component count and high efficiency. The use of components with established reliability results in high MTBF. The unit is manufactured at our plant under strict quality control.

SPECIFICATIONS

Input Voltage
95…264Vac ±15%;
47-63Hz

Power Factor is min.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 corresponding CSA and UL standards

EMI
Meets EN 55022 Class A as a minimum

Switching Frequency
Input section: 100kHz +/- 7kHz
Output section: 55 kHz +/-3kHz

Hold Up Time
Minimum 10ms at full load for 5% drop of output voltage at nominal input

Output Voltage/Current
24V/62A; 28V/54A; 48V/31A; 54V/27.7A and 125V/12A are standard.
Consult factory for other voltages

Redundancy Diode
Optional

Line/Load Regulation
+/-1% combined

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 cooling

Output Overvoltage Protection
Double regulator loop

Efficiency
80% - 84% at full load, depending on output voltage

Operating Temperature
-20° C to +50° C for full specification without derating.

Temperature Drift
0.03% per ° C over operating temperature range

Cooling
By internal fans

Environmental Protection
Basic ruggedizing
Heavy ruggedizing and conformal coating as option

MTBF
Min. 130,000 hours @45°C
Demonstrated MTBF is significantly higher.
Fans excluded

Indicators
None

Control Input
None

Alarm Outputs
None
Available as option

Dimensions (W x H x L)
F20: 279 x 64 x 292 mm
(11" x 2.5" x 11.5")
includes terminals and mounting flanges
Mounting holes are clear

Weight:
5.5 Kg (12 lb)

Connections
Input: barrier-type terminal block
Output: copper blocks with ¼" screws

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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