

2000W, Rugged, Industrial Quality AC/DC Power Supply with PFC-Input PFL 2K-E/110-F6W Series



- Electronic power factor correction (PFC)
- Rugged, industrial quality
- Field-proven design topology
- Full electronic protection
- N+1 redundancy as an option

This rugged, industrial quality AC-DC power supply with power factor corrected input utilizes field-proven PFQ 900 technology to generate the required output power. It is based on mature design topology with a track record in numerous applications. An optional built-in redundancy diode allows parallel connection to achieve higher output power, N+1 redundant operation or back-up battery connection. Cooling is by high quality built-in fans with which draw air into the unit, and by additional conduction via the baseplate. All heat generating components are installed on aluminum heatsink blocks which are thermally connected to the base plate. This also ensures exceptional mechanical ruggedness. Conformal coating provides protection against humidity and airborne contaminants. Full electronic protection, low component count, large design headroom and the exclusive use of components with established reliability contribute to a high MTBF. The unit is manufactured at our plant under strict quality control.

SPECIFICATIONS

Input Voltage

230Vac, 47-63Hz
195-264Vac operating range
Input current: 12Arms at 195V
Power Factor is better than 0.97 at full load for the entire input range.
Power factor meets EN61000-3-2 and EN61000-3-12

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
1500Vdc output to chassis

Standards

Designed to meet EN 60950-1 and corresponding UL and CSA standards

EMI

EN55032 Class A with margins

Switching Frequency

80kHz \pm 5kHz input section
55kHz output section

Hold Up Time

Min. 5ms at nominal input for 5% drop of the output voltage

Output Voltage/Current

110Vdc/18A
2000W continuous
The output is floating, either terminal can be grounded
Other outputs on request

Redundancy Diode

Not installed.
Available as option

Line/Load Regulation

\pm 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

Less than 120mVrms or 600mVpp (20MHz BW)

Output Overload Protection

Rectangular current limiting with short-circuit protection (no hiccup)
Thermal shutdown in case of insufficient cooling (self resetting)

Output Over-voltage Protection

Second regulator loop, completely stable and independent of main regulator loop

Efficiency

Min. 86% at full load

Operating Temperature Range

0°C to 50°C cold plate temperature for full specification without derating
Extended temperature range available

Temperature Drift

0.03% per °C over operating temperature range

Cooling

By built-in fans and additional conduction via base plate

Environmental Protection

Basic ruggedizing
Conformal coating

Shock/Vibration

IEC 61373 Cat 1 A&B

Humidity

5 - 95% non-condensing

MTBF

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

Indicators

Green "Output ON" LED visible through the cooling slots

Alarm Output

Output Fail alarm
Form C contacts available as option

Package/Dimensions W x H x L

F6W: 254 x 65 x 349 mm (10" x 2.6" x 13.75") including mounting flanges and terminal block
Mounting holes are clear

Weight

3.4 kg (7.5 lbs)

Connections

Input: 3-pole terminal block with 13mm spacing
Output: 12-pole terminal block with 9.5 mm spacing

RoHS Compliance

Compliant

Warranty

Two years subject to application within good engineering practice
Contamination related failures and shipping cost excluded

DC OUTPUT					ALARM			AC INPUT						
+	+	+	+	NOT USED	-	-	-	FAIL OPEN	COM	FAIL CLOSED	GND	N	PH	
1	2	3	4	5	6	7	8	9	10	11	12	1	2	3

The specifications on this data sheet are generic and are subject to change. Enhancements to these specifications can be provided upon request.

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