

200W, Rugged, Industrial Quality AC/DC Power Supply with PFC-Input PFC 53-F2 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 plug-in converter utilizes field-proven PFC53 technology to generate the required output power. It is a mature design with a track record in numerous applications. An optional built-in redundancy diode allows parallel connection to achieve higher output power or N+1 redundant operation. Cooling is by conduction via baseplate. Additional cooling is achieved by natural convection through the cooling slots. All heat generating components are installed on aluminum heatsink blocks which are thermally connected to the base plate. This also provides exceptional mechanical ruggedness. Conformal coating provides protection against humidity and airborne contaminants. The input and output are filtered for low noise. 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. This series is also available in Eurocard plug-in format for rack-mount applications.

SPECIFICATIONS

Input Voltage

90-264Vac, 47... 63Hz
Input current 2.6A max at 90V
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 60950-1 and corresponding UL and CSA standards

EMI

EN55022 Class A with margins

Switching Frequency

50-150KHz input section (load dependent)
55 KHz output section

Hold Up Time

Min. 10ms at any input for 5% drop in the output voltage

Output Voltage/Current

12V/16A, 24V/8A, 48V/4A, 110/1.8A or 125V/1.6A
200W continuous
The output is floating, either terminal can be grounded
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

Less than 1% peak-to-peak or 0.2% RMS of the output voltage (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.

Efficiency

Output voltage dependent
Typically 80% 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

Conduction to customer heat-sink or chassis and natural convection

Environmental Protection

Ruggedizing
Conformal coating

Shock/Vibration

IEC 61373 Cat 1 A&B

Humidity

5 - 95% non-condensing

MTBF

150,000 hours @ 45 °C
Demonstrated MTBF is significantly higher

Indicators

Green "Output ON" LED visible through the cooling slots

Alarm Output

None on standard version
Available as an option

Package / Dimensions

F2: 114 x 58 x 256 mm (4.5" x 2.3" x 10.1") including mounting flanges and terminals

Weight

1.2kg (2.6 lb)

Connections

9-pole barrier type terminal block with 3/8" spacing

RoHS Compliance

Compliant

Warranty

Two years subject to application within good engineering practice.



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