200W, Rugged, Industrial Quality AC-DC Power Supply with PFC-Input
PFC 53-F2 Series

- Electronic power factor correction (PFC)
- Rugged, industrial quality
- Conduction/convection cooling
- 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 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
95-264Vac, 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
EN55032 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 H x W x L
F2: 112 x 57 x 254 mm
4.43" x 2.25" x 10"
includes mounting flanges and baseplate, excludes 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.

ABSOPULSE power supplies are designed and built to customer requirements. The specifications on this data sheet are generic guidelines only and are subject to change.

OEM of industrial and railway quality DC-DC converters, AC-DC power supplies and battery chargers, DC-AC sine-wave inverters, phase and frequency converters, DC-output UPS systems and complete power systems in 19" and 23" racks since 1982. Custom or standard. ABSOPULSE is a BABT-approved Facility.

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