

500W AC-DC Power Supply with PFC-Input Rugged Industrial Quality PFC 65F-F3W Series



- Electronic power factor correction (PFC)
- Rugged, field-proven design topology
- Cooling by high-quality built-in fans
- Full electronic protection
- N+1 redundancy as an option

This industrial quality AC-DC power supply with PFC-input utilizes field-proven technology to generate the required output power. Cooling is by high quality built-in fans that draw air into the unit, and by conduction via the baseplate. 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. An optional built-in redundancy diode allows for parallel and N+1 operation. An output fail alarm is available on request. 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

Universal 95-264Vac, 47 - 63Hz
Power Factor is min.0.97 at full load for the entire input range.
Meets EN 61000-3-2

Input Protection

Inrush current limiting
Varistor
Internal safety fuse
Lower voltage than the specified min. 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 62368-1 and corresponding UL and CSA standards

EMI

EN 55032 Class A as minimum

Switching Frequency

50-150KHz Boost section
(dependent on the load)
55KHz \pm 3KHz for the DC-DC
(half-bridge) section

Hold Up Time

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

Output Voltage/Current

12Vdc, 24Vdc, 48Vdc or 125Vdc
500W continuous output power
Output is floating; either terminal can be grounded
Other outputs and increased output power 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 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

Double regulator loop completely stable and independent of main loop

Efficiency

Output voltage dependent.
Typically higher than 80% at full load

Operating Temperature Range

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

Forced air by high quality built-in fans and conduction to customer heat-sink or chassis

Environmental Protection

Basic ruggedizing
Conformal coating

Shock/Vibration

IEC 61373 Cat 1 A&B

Humidity

5-95% non-condensing

MTBF

130,000 hours @ 45°C
Demonstrated MTBF is significantly higher

Indicators

None

Control Input

None

Alarm Output

Not installed
Optional output Fail Alarm

Dimensions

F3W: 160 x 70 x 290 mm
6.3" x 2.73" x 11.4"
Includes baseplate, excludes terminals
Mounting holes are clear

Weight

2.3 kg (5 lb)

Connections

12 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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