

1500W Rugged, Industrial Quality Power Supply with PFC-Input in 5" X 5" X 12.5" Package PFC 1500 Series

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



This rugged, industrial quality AC/DC power supply with PFC input delivers up to 1500W output power. It is based on design topology that has an excellent track record in numerous heavy-duty applications. An optional built-in redundancy diode in each module allows for parallel connection and N+1 redundant operation. Cooling is by a high quality internal fan, which provides sufficient airflow for operation at the specified temperature without de-rating. Full electronic protection, low component count, large design headroom, and the use of components with established reliability result in a high MTBF. The chassis has four M6 PEM nuts for mounting on the under-surface. The unit is manufactured at our plant under strict quality control.

SPECIFICATIONS

Input Voltage

95-264Vac (Universal) 47... 63Hz
Input Current: 18Arms max.
Power Factor is better than 0.97 at full load for the entire input range.
Meets EN61000-3-2 and EN61000-3-12

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 EN60950-1 and related standards

EMI

EN55022 Class A with margins

Switching Frequency

100kHz PFC input section
55kHz ±3kHz output section

Hold Up Time

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

Output Voltage/Current

12Vdc/120A, 24Vdc/60A,
28Vdc/53A, 48Vdc/30A,
54Vdc/27A or 125Vdc/12A
Output is floating, either terminal can be grounded
Maximum output power 1500W
Other outputs available on request

Redundancy Diode

None. Available on request
Not available for 12V version

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 completely stable and independent of the main regulator loop.

Efficiency

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

Operating Temperature Range

0° C to +50° C for full specification with proper cooling
Extended temperature ranges available on request

Temperature Drift

0.03% per °C over operating temperature range

Cooling

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

Environmental Protection

Basic ruggedizing
Heavy ruggedizing and conformal coating available on request

Shock/Vibration

IEC 61373 Cat 1 A&B

Humidity

5 - 95% non-condensing

MTBF

120,000 hours @ 45° C
Demonstrated MTBF is significantly higher.
Fans excluded

Indicators

Diagnostic Output ON LED visible through the rear cooling slots

Control Input

None

Alarm Output

None
Available on request

Package/Dimensions (W x H x D)

U5512: 127 x 127 x 316mm (5" x 5" x 12.5") including terminal blocks and M6 grounding stud
Four M6 PEM nuts for mounting on the under-surface

Weight

5.2 kg (11.5 lbs)

Connections

Terminal block for input and output
M6 stud for chassis GND

RoHS Compliance

Fully compliant

Warranty

Two years subject to application within good engineering practice



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