

100W, Encapsulated AC/DC Power Supply for Heavy Duty Applications PWI 100 Series



- Rugged, field proven design
- Conduction cooling
- Fully encapsulated
- Full electronic protection
- Universal input ranges

The PWI 100 Series fully encapsulated, industrial quality AC/DC power supply uses field-proven topology to generate 100W output power. This design platform has an excellent track record in numerous heavy-duty applications. It is entirely encapsulated with a thermally conductive MIL-grade silicon rubber compound to ensure immunity to shock, vibration and humidity. Cooling is via base plate to a heat-sinking surface. The unit operates over a -40 to +70°C cold-plate temperature range for full specification without derating. It has full electronic protection. Low component count, large design headroom, and the use of components with established reliability result in high MTBF. The PWI 100 is manufactured at our plant under strict quality control. Versions to meet the EN50155 railway standard as well as customized versions are available on request.

SPECIFICATIONS

Input Voltage

Universal input
95VAC - 264VAC, 47-420Hz
120 ...360VDC
Consult factory for other voltages

Input Protection

Inrush current limiting
Varistor
Internal safety fuse
Line to GND varistor upon request
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 EN60950 and
related standards. Versions for
EN50155 available on request

EMI

EN55022 Class A as a minimum

Switching Frequency

55 KHz +/-3KHz

Hold-Up Time

Minimum 5ms at full load for 5%
drop of output voltage at 120V AC
input.

Output Voltage/Current

12V/8A, 24V/4A, 48V/2A
Consult factory for other voltages

Redundancy Diode

None

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

Better than 1% of output voltage
peak to peak or 0.2% RMS of the
output voltage. (20MHz BW)

Output Overload Protection

Rectangular current limiting with
short-circuit protection
(hiccup type)

Output Over-voltage Protection

Double regulator loop completely
stable and independent of main
regulator loop
Transzorb on output

Efficiency

Min. 80% at full load

Operating Temperature Range

-40 to +70°C cold-plate temperature
for full specification

Temperature Drift

0.03% per °C over operating
temperature range.

Cooling

Conduction via base plate to
customer heatsink or chassis

Environmental Protection

Full encapsulation

Shock/Vibration

Meets requirements of IEC 61373
Cat 1 A&B and Cat 2 as a minimum.

MTBF

180,000 hours @ 45°C
Demonstrated MTBF
significantly higher

Indicators

None

Control Input

None

Alarm output

None

Package/Dimensions

P99: 81 x 66 x 156 mm
(3.2" x 2.6" x 6.2") including
terminal blocks and flanges.
Mounting holes are clear.

Weight

0.95 kg (2 lb)

Connections

6 pole barrier type terminal block,
3/8" spacing

RoHS Compliance

Fully compliant

Warranty

Two years subject to application
within good engineering practice

Enhancements to these general specifications and customizing can be accommodated upon request. Specifications subject to change.

Designer and manufacturer of quality converters, inverters, UPS systems, complete rack mount systems and DC-input fluorescent lamp inverters since 1982. Custom or standard. Absopulse is a BABT-approved Facility.



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