

150W, Encapsulated AC/DC Power Supply for Heavy Duty Applications PWI 150-P59 Series



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

This fully encapsulated, industrial quality, AC-DC power supply uses field-proven technology to generate the required output power. It has an excellent track record in numerous heavy-duty applications. The unit is entirely potted with a thermally conductive MIL-grade silicon rubber compound which provides protection from moisture and other contaminants, as well as immunity to shock and vibration. Cooling is via base plate by conduction. The unit is designed for continuous operation at 70°C cold plate temperature. 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 suitable for transportation, mining, oilrigs, military and other harsh environments. The converter is manufactured at our plant under strict quality control.

SPECIFICATIONS

Input Voltage

Universal input
95Vac - 264Vac, 47-63Hz
DC-input also available
Consult factory for other voltages

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 EN60950-1 and corresponding UL and CSA standards

EMI

EN55032 Class A with margins

Switching Frequency

47kHz ± 2kHz

Hold-Up Time

Minimum 5ms at full load for 5% drop of output voltage

Output Voltage

12Vdc, 24Vdc, 48Vdc or 125Vdc
Output is floating, either terminal can be grounded
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

Efficiency

Output is voltage dependent.
Typically 80% at full load

Operating Temperature Range

-40°C 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 with thermally conductive silicon potting compound with UL94V-0 flammability rating.

Shock/Vibration

IEC 61373 Cat 1 A&B

MTBF

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

Indicators

None

Control Input

None

Alarm output

None

Package/Dimensions (W x H x L)

P59: 108 x 70 x 191.5mm
(4.3" x 2.8" x 7.5")
Mounting holes are clear

Weight

1.5 kg (3.2 lb)

Connections

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

RoHS Compliance

Compliant

Warranty

Two years subject to application within good engineering practice

Terminal Block Pin-out

| OUTPUT | | | | | | INPUT | | |
|--------|---|---|---|----------|----------|-------|----|---|
| - | - | + | + | NOT USED | NOT USED | GND | PH | N |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |

Please note that ABSOPULSE power supplies are designed and built to customer specifications. The specifications on this data sheet are generic and will vary depending on input/output configuration and other customer requirements. Generic specifications are subject to change.

Designer and manufacturer of quality ac-dc power supplies and battery chargers, converters, inverters, dc-output UPS systems, and complete rack mount systems in 19" or 23" racks. Custom or standard. ABSOPULSE is a BABT-approved Facility.



ABSOPULSE ELECTRONICS LTD

110 Walgreen Road, Ottawa. Ontario. K0A 1L0. CANADA
Tel: +1-613-836-3511 | Fax: +1-613-836-7488

E-mail: absopulse@absopulse.com | <http://www.absopulse.com>