

## 250W, Encapsulated AC-DC Power Supply with PFC-Input for Heavy Duty Applications PPF 250-P59XW Series



- Electronic power factor correction (PFC)
- Rugged, field-proven design topology
- Conduction/convection cooling
- Fully encapsulated
- Full electronic protection
- N+1 redundancy available

This fully encapsulated, industrial quality AC-DC power supply with PFC-input utilizes field-proven technology to generate the required output power. 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 by conduction via a base plate to a heatsinking surface. The unit is designed for continuous operation at 70°C with installation on an appropriate size heat-sinking surface. An optional built-in redundancy diode allows for parallel and N+1 operation. Full electronic protection, low component count, large design headroom and the exclusive use of components with established reliability contribute to a high MTBF. It is manufactured at our plant under strict quality control.

### SPECIFICATIONS

#### Input Voltage

95-264Vac, universal, 45-65Hz  
Input Current: 3Arms max at 95V input  
Power factor is min 0.97 at full load for the entire input range.  
Meets EN61000-3-2  
The input also accepts DC voltage in the 95-350Vdc range  
Consult factory for other voltages

#### 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 EN62368-1 and related national standards

#### EMI

EN55032 Class A with margins

#### Switching Frequency

80kHz ± 8kHz – Input section  
55kHz ± 3kHz – Output section

#### Hold-Up Time

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

#### Output Voltage/Current

12Vdc/20A, 24Vdc/10A, 48Vdc/5A,  
72Vdc/3.5A, 110Vdc/2.2A,  
125Vdc/2.0A continuous  
Output is floating, either terminal can be grounded  
Consult factory for other voltages.

#### 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

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

#### Output Overload Protection

Rectangular current limiting with short-circuit protection (no hiccup)  
Thermal shutdown in case of insufficient cooling (self-resetting)

#### Output Overvoltage Protection

Second regulator loop

#### Efficiency

Typically, 80% at full load depending on input/output configuration.

#### 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 baseplate to customer chassis or heatsink.

#### Environmental Protection

Full encapsulation with thermally conductive silicon potting compound  
With UL94V-0 flammability rating.  
Meets environmental criteria as requested in MIL-810 C, D

#### Shock/Vibration

IEC 61373 Cat 1 A&B

#### Humidity

5 – 95% non-condensing  
Contact factory for higher rating

#### MTBF

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

#### Indicators

None

#### Control Input

None

#### Alarm output

Not installed  
Available as option

#### Dimensions

P59XW: 146 x 64 x 191 mm  
5.8" x 2.5" x 7.5" including terminals and mounting flanges  
Mounting holes are clear

#### Weight

2kg (4.5 lbs.)

#### Connections

7-pole barrier-type terminal block with 3/8" spacing, cover included

#### RoHS Compliance

Compliant

#### Warranty

Two years subject to application within good engineering practice

#### Terminal Block Pin-out

DC OUTPUT				AC or DC INPUT		
–	+	NOT USED	NOT USED	PH (+)	N (-)	GND
1	2	3	4	5	6	7

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.*



#### ABSOPULSE ELECTRONICS LTD

110 Walgreen Road, Ottawa, Ontario | K0A 1L0 | CANADA

Tel: +1-613-836-3511 | Fax: +1-613-836-7488

<https://absopulse.com/contact> | <https://www.absopulse.com>