

## 250W, Industrial Quality, Encapsulated AC/DC Power Supply with Conduction Cooling PPF 250-P59XW Series

- Electronic power factor correction (PFC)
- Field proven rugged design
- Conduction cooling
- Fully encapsulated
- Full electronic protection
- N+1 redundancy available



This fully encapsulated, industrial quality power converter utilizes field-proven technology to generate the required output power. It is a mature design with a track record in numerous 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 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. Full electronic protection, low component count, large design headroom and the exclusive use of components with established reliability contribute to a high MTBF. An optional built-in redundancy diode allows for parallel and N+1 operation. 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  
1500VDC output to chassis

#### Standards

Designed to meet EN60950-1 and  
related national standards

#### EMI

EN55022 Class A with 6dB margins

#### Switching Frequency

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

#### Hold-Up Time

Min. 10ms 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 base plate.

#### 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

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 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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