

## 400W, Encapsulated AC/DC Power Supply with PFC-Input for Heavy Duty Applications PPF 400 Series



- Field proven rugged design
- Conduction cooling
- Fully encapsulated
- Full electronic protection
- N+1 redundancy available

The PPF 400 Series fully encapsulated, industrial quality AC/DC power supply with power factor corrected input uses a field proven design to generate 400W 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 to increase resistance to shock, vibration and humidity. Cooling is via base plate by conduction. The unit is designed for continuous operation at 70°C with installation on an appropriate size heatsinking surface. It has full electronic protection. Low component count, large design headroom, and the use of components with established reliability result in high MTBF. An optional built-in redundancy diode allows for parallel and N+1 operation. The unit is manufactured at our plant under strict quality control.

### SPECIFICATIONS

#### Input Voltage

Universal 95 ... 264Vac  
47 - 63Hz

Power Factor is min.0.97 at full load for the entire input range.  
Meets EN61000-3-2

#### 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 and related national standards

#### EMI

EN55022 Class A with margins

#### Switching Frequency

50-150KHz Boost section  
(dependent on the load)  
67 KHz +/-3KHz for the  
(half bridge) DC/DC section

#### Hold-Up Time

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

#### Output Voltage/Current

12Vdc/30A, 24Vdc/17A,  
36Vdc/12A, 48Vdc/9A or  
72Vdc/6A standard.  
Consult factory for other voltages.

#### Redundancy Diode

Optional

#### 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

Min. 80% at 400W depending on output voltage

#### 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 compound

#### Shock/Vibration

IEC 61373 Cat 1 A&B

#### Humidity

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

#### MTBF

140,000 hours @ 45°C  
Demonstrated MTBF is significantly higher

#### Indicators

None

#### Control Input

None

#### Alarm output

None on standard version

#### Dimensions

P 400: 131 x 76 x 232 mm  
(5.2" x 3" x 9.2") including terminal block and flanges  
Mounting holes are clear

#### Weight

2.2 kg (4.85 lbs)

#### Connections

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

#### RoHS Compliance

Fully compliant

#### Warranty

Two years subject to application within good engineering practice

#### Terminal Pin-Out

AC INPUT			OPTIONAL ALARM		DC OUTPUT			
PH	N	GND	FAIL CLOSED	COM	-	-	+	+
1	2	3	4	5	6	7	8	9

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.*



#### ABSOPULSE ELECTRONICS LTD

110 Walgreen Road  
Ottawa, Ontario. KOA 1L0. CANADA  
Tel: +1-613-836-3511 Fax: +1-613-836-7488  
E-mail: [absopulse@absopulse.com](mailto:absopulse@absopulse.com)  
<http://www.absopulse.com/index.php>