

## 300W, Encapsulated AC/DC Power Supply with PFC-Input for Heavy Duty Applications PPF 300 Series

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



The PPF 300 Series fully encapsulated, industrial quality AC/DC power supply with power factor corrected input uses a field proven design to generate 300W 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 heat-sinking 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/25A, 24Vdc/13A,  
36Vdc/8.3A, 48Vdc/6.2A or  
72Vdc/4.2A standard.  
Consult factory for other voltages.

#### Redundancy Diode

Optional

#### Line/Load Regulation

± 1% combined from zero load to full load (without redundancy diode)

#### 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 300W depending on output voltage

#### 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.

#### Environmental Protection

Fully encapsulated with thermally conductive silicon compound

#### Shock/Vibration

IEC 61373 Cat 1 A&B

#### Humidity

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

#### MTBF

150,000 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



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