

400W, Encapsulated AC-DC Power Supply with PFC-Input for Heavy Duty Applications PPF 400-P400 Series



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

This fully encapsulated, industrial quality AC-DC power supply with power factor corrected input uses a field proven design to generate the required output power. It is a mature design with 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. 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 EN60950-1 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

None
Available as an 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

Min. 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 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

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

Indicators

None

Control Input

None

Alarm output

None on standard version

Dimensions

P400: 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

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 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

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