

400Vac Input, Rugged, Industrial Quality 3kW Power Supply with PFC-Input PHI 3K Series

- Electronic power factor correction (PFC)
- Wide AC-input voltage range
- Rugged, industrial quality
- Field-proven design
- Adjustable single output
- Full electronic protection
- N+1 redundancy



This rugged, industrial quality ac/dc power supply with PFC input delivers up to 3kW output power. It utilizes a field proven modular design concept with a track record in numerous heavy-duty applications. The unit is built with internal power modules, a PHI 3000 and two KHH 1502. A built-in redundancy diode separates the internal modules and also allows for a number of units to be connected in parallel to achieve higher output power, N+1 redundancy or to create a 3-phase high power system. The output redundancy diode also makes the unit suitable for battery charging applications. Built-in fans provide sufficient airflow for operation to the specified temperature without de-rating. Full electronic protection, low component count, large design headroom and the use of components with established reliability result in a high MTBF. The unit is manufactured at our plant under strict quality control.

SPECIFICATIONS

Input Voltage

400Vac nominal
340 - 480Vac operating range
47-63Hz
Input current: 11Arms max
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 minimum input will not damage the unit

Isolation

2250Vdc input to chassis
4300Vdc input to output
5600V type test
8mm spacing
2250Vdc output to chassis

Standards

Designed to meet EN60950 and related standards

EMI

EN55022 Class A

Switching Frequency

50kHz \pm 150kHz PFC stage
55kHz \pm 5kHz Output stage

Output Voltage/Current

200Vdc/15A or 400Vdc/7A
continuous
Output is floating; either terminal can be grounded
Consult factory for other voltages

Redundancy Diode

Installed internally

Line/Load Regulation

\pm 1% combined from zero load to full load including redundancy diode

Dynamic Response

Max 5% voltage deviation for 10% to 50% load step, with better than 1msec recovery time

Output Ripple / Noise

Less than 1% peak-to-peak or 0.2% RMS of the output voltage (20MHz BW)

Output Overload Protection

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

Output Over-voltage Protection

Second regulator loop completely stable and independent of the main regulator loop.

Efficiency

Better than 80% at full load, depending on output voltage

Operating Temperature Range

0 to +50°C for full specification with proper cooling
Extended temp. range available

Temperature Drift

0.03% per °C over operating temperature range

Cooling

By two built-in high quality fans

Environmental Protection

Basic ruggedizing and conformal coating
Heavy ruggedizing available as option

Shock/Vibration

IEC 61373 Cat 1 A&B

Humidity

5 - 95% non-condensing

MTBF

90,000 hours @ 45°C (fans excluded)
Demonstrated MTBF is significantly higher.

Indicators

None

Control Input

None
Available as option

Alarm Output

Not installed
Available as option

Package / Dimensions

3U3: 187 x 132 x 407mm (7.4"x 5.2" x 16") including terminal blocks and fans, excluding mounting brackets

Weight

Approx. 7kg (15 lbs)

Connections

Input: Terminal block
Output: Terminal block

RoHS Compliance

Fully compliant

Warranty

Two years subject to application within good engineering practice

Enhancements to these general specifications and customizing can be accommodated upon request. 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.



ABOPULSE ELECTRONICS LTD

110 Walgreen Road
Ottawa, Ontario. K0A 1L0. CANADA
Tel: +1-613-836-3511 Fax: +1-613-836-7488
E-mail: absopulse@absopulse.com
<http://www.absopulse.com>