

3000W, Rugged Industrial Quality Variable Output Power Supply LPS 3K Series



- Power factor corrected input
- Rugged industrial quality
- Current and Voltmeters
- Bench-top or 19" Rack mount
- Custom output ranges available
- Full electronic protection

This rugged, industrial quality, ac/dc power supply series with PFC input is specifically designed for applications that require wide output adjustability. They are suitable for product testing and similar purposes in engineering labs or in the field. A variety of models are available which can readily be adapted to customer requirements with lead times of only a few weeks. The units are built with field-proven internal modules which are typically available from stock for the output ranges of 14-37V (24V), 28-74V (48V) or 60-160V (125V). The output voltage adjustment potentiometer knob is located on front panel of the unit. Electronic adjustment by analog control voltage (0 – 10V or similar) is also available. Other output voltages and adjustment ranges are available on request. Output voltage and current are displayed on analog meters on the front panel of the unit. Heavy-duty terminals for the output are also located on the front-panel. The AC-input is equipped with a breaker, which is also used as an ON/OFF switch. Cooling is by high quality internal fans, which provide sufficient airflow for operation at the specified temperature range without de-rating. The units are available in bench-top and 19" rack-mount format. 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

95V - 264V universal
Max input current: 40A max.
Power Factor is better than 0.97 at full load for the entire input range.
Meets EN61000-3-2 and EN61000-3-12
Consult factory for other inputs

Input Protection

Inrush current limiting
Internal safety fuse
Input breaker 50A, used also as ON/OFF switch
Lower voltage than the specified minimum input will not damage the unit

Isolation

2250Vdc input to chassis
4300Vdc input to output
8mm spacing
1000Vdc input to output

Standards

Designed to meet EN 60950 and corresponding UL and CSA standards

EMI

EN 55022 Class A with margins

Switching Frequency

Input section: 100kHz \pm 10kHz
Output section: 55kHz \pm 3kHz

Output Voltage

24V (14-37V adj. range) 80A max or
48V (28-74V adj. range) 40A max or
125V (60-160V adj. range) 18A max.
Output adjustable by knob on front panel, or electrical control with analog control voltage
Output is floating either terminal can be grounded or several units can be connected in series for higher voltage
Consult factory for other output requirements

Redundancy Diode

None

Line/Load Regulation

\pm 1% combined from no 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% RMS of the output voltage (20HZ BW)

Output Overload Protection

Rectangular current limiting with short-circuit protection.
Thermal shutdown in case of insufficient cooling (self-resetting)

Output Overvoltage Protection

Second regulator loop

Efficiency

Output voltage dependent
Typically 80% at full load

Operating Temperature

0°C to 50°C for full specification
Extended temperature range available

Temperature Drift

0.03% per °C over operating temperature range

Cooling

By three high quality built-in fans

Environmental Protection

Basic ruggedizing
Heavy ruggedizing and conformal coating available as option

Shock/Vibration

IEC 61373 Cat 1 A&B

Humidity

5-95% non-condensing

MTBF

85,000 hours @ 45°C
Demonstrated MTBF is significantly higher

Indicators

Output ON LED (green)
Analog output voltage and current meters on front panel

Control Input

Front-panel adjustments:
Potentiometer with knob on the front panel or electronic control by analog control voltage

Alarm Output

None

Dimensions (H x W x D)

3U (133 mm) x 381 x 305mm
3U (5.25") x 15" x 12"
19" Rack mountable version is also available

Weight

Approx. 10 kg (22 lb)

Connections

Input: Phoenix G10/2 terminals on the rear panel
Output: Rugged terminal for specific output combination on the front-panel

RoHS Compliance

Fully compliant

Warranty

Two years subject to application within good engineering practice

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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For further information, please see:

Power Systems – AC/DC – Laboratory http://www.absopulse.com/Absopulse_powersystems.php

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Made in Canada