

## 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 EN62368-1 and corresponding UL and CSA standards

#### EMI

EN 55032 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 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  
 Conformal coating

#### 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

Compliant

#### Warranty

Two years subject to application within good engineering practice

ABSOPULSE power supplies are designed and built to customer requirements. The specifications on this data sheet are generic guidelines only and are subject to change

OEM of industrial and railway quality DC-DC converters, AC-DC power supplies and battery chargers, DC-AC sine-wave inverters, phase and frequency converters, DC-output UPS systems and complete power systems in 19" and 23" racks since 1982. Custom or standard. ABSOPULSE is a BABT-approved Facility.



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