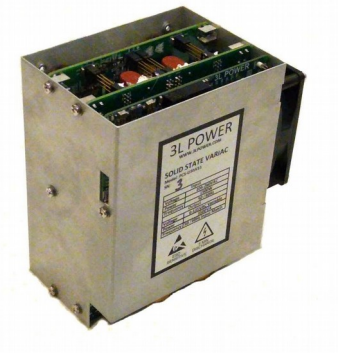
Solid State Variac Datasheet

3L Power part number
PCS-U3hV11



Description

The 3L Power Solid State Variac (SSV) is a compact, lightweight, digitally controlled variable AC power supply. It can supply AC voltage with variable voltage magnitude and variable frequency for many applications, including for regulated microgrids, transformer or CT excitation circuits, or test equipment. The SSV can replace standard, much heavier rotary variacs in most applications. The pure sine wave output provides clean, distortion-free voltage for noise-sensitive equipment.

Smooth sine wave output is accomplished through the use of high-frequency switching in a neutral point clamped design. Custom designed filtering at both the input and output ensure smooth output voltage as well as low emissions operation and fault tolerance. Complex logic included in the integrated Atlas board allow for inter-connectivity as well as application flexibility and upgradeability.

A custom power factor correction circuit at the variac's input allows for a low-distortion input as well as the capability to universally accept 120/240 Vac input voltage at either 50 or 60 Hz.

The 3L Power Solid State Variac has the following specifications:

Electrical

Power	3.5kVA
Current Output	$26A_{RMS}$
Peak Instantaneous Current	45A
Output Voltage	$0\text{-}135V_{AC}$ Variable
Output Frequency	0-400Hz <500W output, 50-60 Hz matching input frequency >500W output
Maximum Input Power	1500W
Input Voltage	$104 – 260V_{AC}$
Undervoltage Fault	$90V_{RMS}$ In

Mechanical

Overall Length	7 Inches
Overall Width	6.33 Inches
Overall Height	4.03 Inches
Weight	5.0 Lbs
Cooling	Fan, self-cooled
Operational Ambient Temperature	-20 to 50°C
Shell material	Aluminum
Mounting hole pattern	4x #6-32 threaded holes on rectangular 6.2” x 4.15” spacing (see manual)
Ingress protection rating	None

For more detailed information, including pinout information and operational guides, see the Solid State Variac User Manual. More information is available at www.3LPower.com.