

FEATURES

- **AC inputs – 115/230VAC or 3PH 208VAC**
- **110V to 140V Programmable Output**
- **5500W Peak Power @ 70C from 3PH 208**
- **3000W Peak Power @ 70C from 115/230VAC**
- **87% - 90% Efficient**
- **Over Current & Voltage Protection**
- **Operational Redundancy with two Units**
- **Operates from -30C to +70C**
- **No Cooling Fans Required**
- **Meets AREMA 11.5.1 for Class C equipment**

OVERVIEW

The Trilogy Products Switch Machine Power Supply is a 19” rack mount, high efficiency, switch-mode power supply that provides an output voltage range of 110V to 140V. The output is fully adjustable within the specified range. The unit operates from 115/230VAC at 3000W or 3PH 208VAC at 5500W in ambient temperatures of -30C to +70C without cooling fans. Over the temperature and input voltage range and with load transitions from 0% to 100%, the power supply will maintain the output voltage within +/-2% of nominal.

In switch machine applications, peak power output lasts for as long as it takes to move the switch. The peak power rating of the Trilogy Products Switch Machine Power Supply is defined as 10 seconds at 50A (27A for 115/230 operation) every 1 minute, or a duty cycle of 1/6. Duty cycles greater than this could cause the unit to protect itself by going into thermal shutdown.

The Switch Machine Power Supply offers operational redundancy when paired with a second unit. This allows for the entire load to be taken by one supply in the event of a failure of the other supply, and also balances the load between the two supplies for increased lifespan. Load sharing is accomplished via a CAT5 patch cable connected between two units via the front panel connectors.

The switch machine power supply has a number of protection features to ensure safe operation. These include input under-voltage lockout, output over current protection and output over voltage protection. Normally the power supply protects itself from excessive output current by “folding back” the output voltage under circumstances where the maximum output current or output power would be exceeded. Should an internal supply failure allow more current to flow out of the supply than the maximum, the unit will shut down.

The power supply provides an alarm contact used for indication and remote monitoring. The alarm relay contact is normally closed



during trouble-free operation and opens should the unit experience a fault, or if the unit is powered off.

The power supply provides a number of seven-segment displays on the front panel which display supply voltage and current and bus voltage. A green “System OK” LED indicates proper supply operation while three red fault LEDs representing under voltage (UV), over voltage (OV) and over load (OL) are available on the front panel. Faults are latched on the LEDs and the “RESET” button on the front panel will reset the alarm clear status LEDs if faults have been cleared. The “LAMP TEST” button will flash all the displays and LED’s to provide verification of their operation.

The front-panel display and buttons also provide calibration and test functions using the built-in menu system.

External connections for input AC and output DC are made using standard AAR binding posts. Alarm relay contact connections are made using barrier strip terminals.

ELECTRICAL SPECIFICATIONS

Input Voltage_____ 115/230VAC or 3PH 208VAC
 Output Voltage_____ 110V-140V
 Maximum Peak Output Power_____ 3000W or 5500W
 Min Operating Temperature_____ -30°C
 Max Operating Temperature_____ +70°C
 Alarm Relay Contact Rating_____ 5A
 Output Voltage Regulation_____ +/-2%

MECHANICAL SPECIFICATIONS

Height_____ 10in (6U)
 Width_____ 19in
 Depth_____ 22in

ORDERING INFORMATION

115VAC Input, 3kW_____ SiPS-110V-3000-115
 230VAC, 3kW_____ SiPS-110V-3000-230
 208VAC 3-phase, 5.5kW_____ SiPS-110V-5500-208