



communications

SPD Technologies, Inc.  
Power Systems Group

# Power Systems Group

## PS383

### 50 Amp Transformer / Rectifier Unit



*This 28 VDC transformer/rectifier unit is used in a variety of applications on the Grumman A-6 aircraft.*

Power Systems Group PS383 Transformer/Rectifier Unit (TRU) converts aircraft primary AC power to 28 VDC power from a three-phase, 115 volt, 400 Hz generator per MIL-STD-704. Designed for minimum space and weight and maximum reliability (ambient cooled – no fan), it offers excellent versatility for use in new designs or retrofits.

The TRU design is based on a very simple, time proven concept, using extremely rugged components which produce both high reliability and extreme overload capabilities of 1200% (600 amps).

Power Systems Group TRUs provide inherent power factor correction on the input lines and low input current harmonic content. These features reduce the demands on the aircraft power generation systems. The output power meets the requirements for 28 volt systems per MIL-STD-704.

With an average of 250 years in-field-between-failures, over a fifteen year period, this unit has an excellent field demonstrated reliability.

#### Standard Features:

- Inherently rugged design
- No maintenance required
- High output surge capability
- Excellent power factor
- Low harmonic content on input current waveform
- EMI filters on all input and output lines

#### Applications:

- Grumman A-6 aircraft - various applications
- Emergency 28 volt power
- 28 volt aircraft bus

# Basic Specifications

## Electrical Characteristics:

Input ..... 100/190 to 120/208 VAC  
 400 Hz,  $\pm 20$  Hz  
 3-ph, wye load

Output

A) ..... 25,  $\pm 3$  VDC, 10% load to full load, 40 V max. at no load

B) ..... 50 A max.

C) ..... Max. overload;  
 100 A for 60.0 sec.  
 150 A for 20.0 sec.  
 250 A for 7.0 sec.  
 375 A for 3.0 sec.  
 600 A for 1.0 sec.

Efficiency ..... 85% min. (half load to full load)

Cooling ..... Self-cooled with no rotating parts

Weight ..... 8.0 lbs. max.

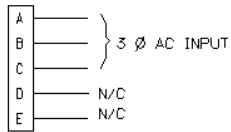
## Qualifications:

MS28133-1 per MIL-C-7115

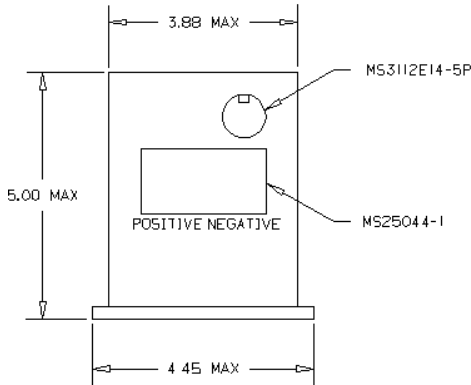
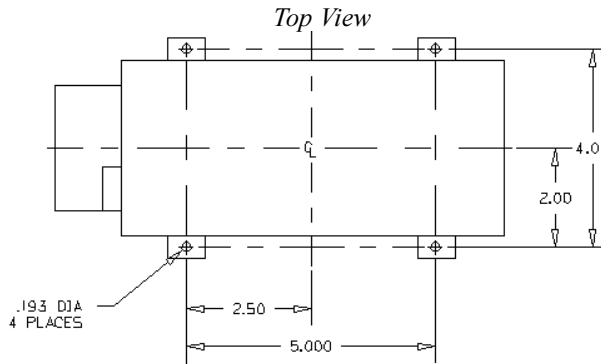
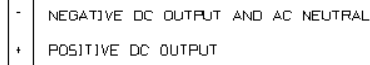
Specifications subject to change without notice.

## Model Diagram

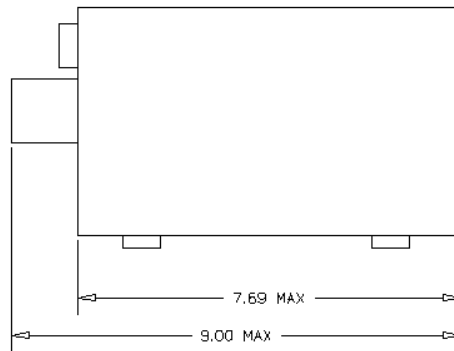
MS3112E14-5P



MS25044-1



Front View



Side View



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