

SCE Model 800 Power Supply

The SCE 800 is a miniature high performance, full militarized linear power supply. This series provides up to 140 watts in a single output version and 120 watts in a dual. Unit is a flat profile, base conduction cooled.

The unit is contained in a black anodized machined aluminum case, and is field repairable. Pass elements are MOSFETS, lightly stressed and well heatsinked. Mean time between failure (MIL-HDBK-217) is in excess of 100,000 hours. Foldback current limiting and crowbar overvoltage are standard.

Each unit is subjected to 10 cycles of thermal stress, and 48 hours of full power burn-in and is supplied with five full pages of test data.

SPECIFICATIONS

Electrical

Input:

- Voltage 115V to 200V \pm 15%
(170V - 230V L-L, 115V L-N)
Frequency 400Hz \pm 5%
- Transients \pm 30%, 3 seconds, no failure

Output:

- Voltage 24V, 5 Amp
- Regulation Line: \pm .03% for \pm 15%
Load: \pm .25% for \pm 50%
- Ripple 10mV p-p max, 1mV RMS
- Efficiency 50% minimum (rated load)
- Voltage Adjustment \geq \pm 5%
- Voltage Stability \leq .1% / 8 hr. after warmup
 \leq 2% within 60 seconds
- Temperature Coefficient \leq .01%/°C to +57°C
- Transient Response 500 μ sec to .25% Δ I = \pm 1.7 amps
undershoot/overshoot < 10%

Protection Circuits

- Isolation Input / Output ≥ 500 Megohm
- Overload Automatic
- Overvoltage Clamp Type - Reset by recycling power
- Remote Sense Yes, $\pm 5\%$

Construction

- Size 4" x 7.5" x 1.6"
- Weight ≤ 3.75 lbs.
- Connector
Cannon DBM13WP shell
Cannon DM53745-25 contacts
Cannon D20418-2 hardware
MTTR ≤ 2 hrs.

Maintainability

Reliability

- MTBF $>100,000$ @ $T \leq 55^\circ\text{C}$, Baseplate $\leq 80^\circ\text{C}$, 100% load