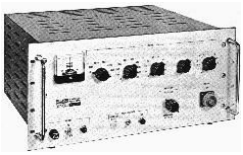

# Fluke 408B 6,000V @ 20mA Power Supply

## GENERAL DESCRIPTION

The Fluke Model 408B High Voltage DC Power Supply is capable of providing an output of 0 to 6,000 Vdc at 0 to 20 mA. The output voltage is selected by four decade switches and a vernier potentiometer. The instrument may be operated with either positive or negative output terminal grounded, as selected by a front-panel switch. Overcurrent protection is provided to return the supply to standby operation in the event of excessive load current.

The Model 408B is a hybrid design utilizing silicon transistors for the amplifier circuitry and a vacuum tube for the necessary high voltage series passing element. A time-delay relay is incorporated in the input circuitry, which prolongs the life of the high voltage passing tube. The reference element is a highly stable temperature compensated gas tube.

The package design provides for adequate cooling at high ambient temperatures without the use of cooling fans. Rubber feet are provided for bench top operation to per mit unrestricted air flow through the bottom cover air vents. The front panel is punched for mounting in a standard 19 inch rack. Side panels are tapped for Jonathan #130 quick disconnect chassis slides or other rack mounting supports.

## SPECIFICATIONS

**Electrical**

| | |
|---|---|
| OUTPUT VOLTAGE | 0 to +/-6,000 VDC |
| OUTPUT CURRENT | 0 to 20 mA |
| OUTPUT POLARITY | + or - grounded via front panel switch |
| LINE REGULATION | 0.001% or 2 mV (whichever is greater) for 10% line change from nominal |
| LOAD REGULATION | 0.001% or 5 mV (whichever is greater) for full load change |
| STABILITY | +/-0.005% per hour; +/-0.02% per day after warmup |
| RESOLUTION | 5 mV |
| RIPPLE | Less than 1 mV RMS; less than 5 mv peak-to-peak |
| VOLTAGE CALIBRATION | 0 to 5000V in 5 steps of 1000V<br>0 to 900V in 9 steps of 100V<br>0 to 90V in 9 steps of 10V<br>0 to 9V in 9 steps of 1V<br>0 to 1. 2V vernier |
| CALIBRATION ACCURACY | +/-0.25% or 250 mV (which-ever is greater) with vernier at zero |
| RESETABILITY | +/-0.05% or 50 mV (whichever is greater) |
| RECOVERY TIME | Within 50 uSec |
| WARMUP TIME | 30 minutes |
| OVERCURRENT TRIP | Set to latch off at 25 mA load current. Internally adjustable from 5 to 25 mA |
| METER | 6000-0-6000 vdc (+/-3%) |
| OUTPUT CONNECTORS | MS3102A-18-16S front and rear (one mating connector supplied) |
| INPUT POWER | |

| | |
|---|---|
| | 100/115/230 VAC +/-10%, 50-5000 Hz, approx. 300 VA at full output |

**MECHANICAL**

| | |
|---|---|
| HUMIDITY | 0 to 80% |
| OPERATING TEMPERATURE RANGE | 0' C to 50' C |
| STORAGE TEMPERATURE RANGE | -200' C to +70' C |
| ALTITUDE, OPERATING | 0 to 10,000 ft |
| ALTITUDE, NON-OPERATING | 0 to 50,000 ft |
| VIBRATION | Meets MIL-T-945A |
| SHOCK | Meets MIL-E-4970A (20 g's, 11 mSec in three principal axis) |
| TEMPERATURE COEFFICIENT OF OUTPUT | Less than 20 ppm per 'C from +10' C to +400' C |
| SIZE | 19" wide x 8-3/4" high x 15" behind panel (rack mount with resilient feet for bench use) |
| WEIGHT | Approximately 59 pounds |

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