



technical data

MODEL 408A

TELEPHONE Prospect 6-1171
TWX - HALLS LAKE TLX - 852

JOHN FLUKE MFG. CO., INC.
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MODEL 408A
DIRECT CURRENT POWER SUPPLY

FEATURES

- 500 to 6010 V, 0 to 20 ma
- Selective Polarity
- 0.01% Regulation
- 0.005% Stability
- 10 Millivolt resolution
- 0.25% Calibration accuracy
- Center zero panel meter

APPLICATIONS

- Calibration of:
 - a. High voltage standards
 - b. Electrostatic voltmeters
- Providing power for:
 - a. Photomultiplier tubes
 - b. Proportional counters
 - c. Ionization chambers
 - d. Traveling wave tubes

DESCRIPTION

Extremely stable and well regulated, the Model 408A High Voltage Power Supply provides noise free DC voltages from 500 to 6010 volts. The 0 - 20 milliamperes current rating allows operation of several photomultiplier tubes from this one source. The dial readout indicates the voltage output to an accuracy better than 0.25%.

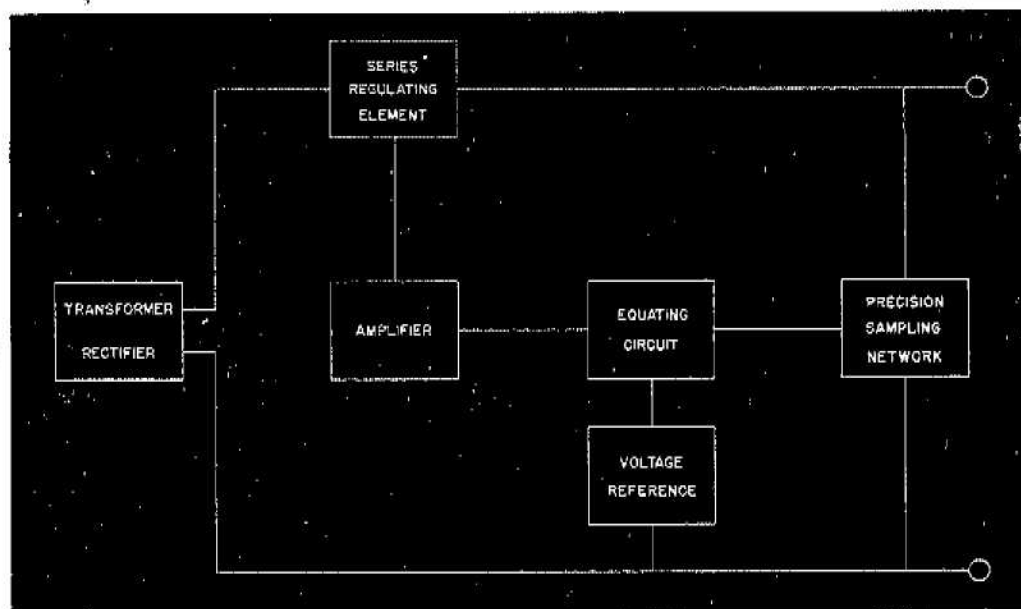
A 1.02 volt sample is available at front panel binding posts for potentiometric monitoring. This unit has a voltage resolution of 10 millivolts at any output voltage and the voltage resettability is better than 0.1%.

Separate power and high voltage switches are provided and fused separately. An automatic 20 second time delay is energized upon turn-on to allow proper warm-up of components before the high voltage is applied.

The Model 408A employs precision 0.1% wirewound sampling circuits to compare a portion of the output to an internal reference. The error signal is fed from a differential amplifier to a tetrode series passing tube to achieve an extremely stable output free from the annoying effects of line voltage and load current fluctuations. Stability in both the main and auxiliary supplies is further improved by the use of regulated heater voltages.

Generous de-rating of all components, use of printed circuits, epoxy encapsulated transformer, and silicon rectifiers further increase the reliability of this instrument. A polarity switch is incorporated on the front panel which automatically removes the input power while the polarity is being switched.

MODEL 408A SIMPLIFIED BLOCK DIAGRAM



ELECTRICAL SPECIFICATIONS

Input Voltage:	117 V, 50 - 60 CPS, single phase (220/234 V, 50 - 60 CPS model available upon request)
Input Power:	225 watts fully loaded, 65 watts standby
Output Voltage:	500 to 6010 volts DC
Output Current:	0 to 20 milliamperes DC
Output Polarity:	Positive or negative with respect to chassis, selected by front panel switch
Output Connectors:	Amphenol MS-3102A-18-16S, one on front panel and one on rear skirt. One mating connector, Amphenol type AN-3106A-18-16P, furnished.
Monitoring Output:	1.02 volt sample (adjustable ± 2.5 mv) for potentiometric monitoring at front panel binding posts.
Regulation vs. Line:	0.01% maximum for 20% change in line voltage (105 to 130V)
Regulation vs. Load:	0.01% maximum from 0 to full load
Stability:	0.005% per hour, .03% per day, after warmup
Ripple & Jitter:	Less than 5 mv RMS at any output voltage and current in either polarity.
Voltage Calibration:	1 - 500 volt, 4 - 1000 volt steps 9 - 100 volt steps 10 - 10 volt steps 1 - 10 volt vernier
Voltage Resolution:	10 millivolts at any output voltage
Calibration Accuracy:	Better than 0.25%
Resettability:	Better than 0.1%
Voltage Overshoot:	None, instant resetting HV time delay circuit used
Meter:	3-1/2" rectangular, 6-0-6 KV

MECHANICAL SPECIFICATIONS

Mounting:	Standard relay rack, panel 19" wide x 8-3/4" high. Chassis dimensions 17" wide x approximately 14" deep x 8-1/4" high. Equipped with resilient feet for bench use.
Weight:	46 pounds
Finish:	Smooth gray, baked enamel. Panel machine engraved
Price:	\$695.00 f.o.b. factory, Seattle, Washington

The right is reserved, without notice, to make such changes in equipment, design, or components as engineering or manufacturing progress may warrant.

Prices subject to change without notice.