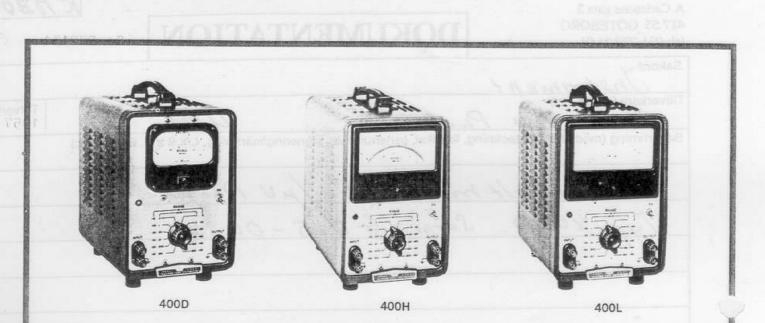


VACUUM TUBE VOLTMETERS Quality linear and log voltmeters

Models 400D, 400H, 400L



Description

Model 400D is essentially a low-priced precision voltmeter offering wide voltage range, 2% accuracy and the broad frequency coverage 10 Hz to 4 MHz.

Model 400H is an adaptation of Model 400D but offering individual meter-face calibration and 1% accuracy on an extra large 5" mirror-scale meter.

Model 400L, a logarithmic version of Model 400D, has an

accuracy of $\pm 2\%$ of reading or $\pm 1\%$ of full scale, whichever is more accurate. The 5" meter is mirror-backed.

Special dB-measuring options

As normally supplied, Models 400D and 400H read direct in volts and dB, with the voltage scale uppermost. For greater resolution in dB measuring, these instruments are available as Models 400D Option 01, and 400H Option 01 (\$25 extra) with the dB meter scale uppermost.

Specifications

| | 400D,DR | 400H,HR | 400L,LR |
|---|---|--|---|
| Voltage range: | 1.0 mV to 300 V full scale, 12 ranges | 1.0 mV to 300 V full scale, 12 ranges | $-70~\mathrm{dB}$ to $+52~\mathrm{dB}$ in 12 ranges 1.0 mV to 300 V full scale, 12 ranges |
| Frequency range: | 10 Hz to 4 MHz | | |
| Accuracy: (as % of full scale on 400D,DR and 400H,HR) | ±2%, 20 Hz to 1 MHz ±3%, 20 Hz to 2 MHz ±5%, 10 Hz to 4 MHz | ± 1%, 50 Hz to 500 kHz ± 2%, 20 Hz to 1 MHz ± 3%, 20 Hz to 2 MHz ± 5%, 10 Hz to 4 MHz | #2% of reading or #1% of full scale, whichever is more accurate, 50 Hz to 500 kHz; #3% of reading or #2% of full scale, 20 Hz to 1 MHz; #4% of reading or #3% of full scale, 20 Hz to 2 MHz; #5% of reading, 10 Hz to 4 MHz |
| Long-term stability: | reduction in Gm of amplifier tubes to 75% of nominal value results in error of less than 0.5%, 50 Hz to 1 MHz | | |
| Calibration: | reads rms value of sine wave; voltage indication proportional to average value of applied wave; linear voltage scale 0 to 3 and 0 to 1; dB scale — 12 to +2 dB (0 dB = 1 mW in 600 ohms); 10 dB interval between ranges | | reads rms value of sine wave; logarithmic voltage scale 0.3 to 1 and 0.8 to 3; linear dB scale, -10 dB to +2 dB (based on 0 dB = 1 mW in 600 ohms); 10 dB intervals between ranges |
| Input impedance: | 10 megohms shunted by 15 pF on ranges 1 to 300 V; 25 pF on ranges 0.001 to 0.3 V | | |
| Amplifier: | output approx. 0.15 V max.; internal impedance 50 ohms; max. gain approx. 150 on 0.001 range | | |
| Power: | 115 or 230 volts = 10%, 50 to 1,000 Hz; approx. 80 watts (100 watts for 400 H,L) | | |
| Dimensions: | cabinet mount: 7½" wide, 11½" high, 12" deep (191 x 292 x 305 mm); rack mount: 19" wide, 7" high, 10%" deep behind panel (483 x 389 x 276 mm) | | |
| Weight: | net 18 lbs (8,1 kg), shipping 19 lbs (8,6 kg) (cabinet mount); net 21 lbs (9,45 kg), shipping 31 lbs (14 kg) (rack mount) | | |
| Price: | HP 400D, \$250* HP 400DR, \$255** | HP 400H, \$325* HP 400HR, \$330** | HP 400L, \$325* HP 400LR, \$330** |

^{*}Cabinet.

^{**}Rack mount.