

VOLTMETERS, DIGITAL & ANALOG

Special Purpose Meters

Models 428B, 3406A



HP 428B

Description

HP model 428B Clip-On Milliammeter measures direct current without interrupting your measured circuit or producing loading errors. DC current is measured by utilizing a clip-on transducer that converts the magnetic field around the conductor to an ac voltage proportional to dc current. This voltage is detected and displayed as direct current. Since no contact is made to the circuit, complete dc isolation is ensured.

Low frequency currents up to 400 Hz can also be measured by connecting an oscilloscope or voltmeter to the front panel output.

Specifications

DC current range: 1 mA to 10 A full scale, nine ranges.

Accuracy: $\pm 3\%$ of full scale ± 0.15 mA, from 0°C to 55°C (when instrument is calibrated to probe)

Output: variable linear output level with switch position for calibrated 1 V into open circuit (corresponds to full scale deflection)

Frequency Range: dc to 400 Hz (3 dB point)

Power: 115 or 230 V $\pm 10\%$, 48 to 440 Hz, 71 W.

Probe insulation: 300 V maximum

Probe tip size: ≈ 0.5 in. (12.7 mm) by 0.66 in. (16.67 mm) aperture diameter 0.16 in. (3.97 mm)

Size: cabinet, 292 H x 191 W x 368 mm D (11.5" x 7.5" x 14.5").

Weight: net, 8.6 kg (17 lb); shipping, 10.9 kg (24 lb).

Accessories Available

HP 3529A Magnetometer Probe: this probe measures magnetic field strength and direction. The component of magnetic field sensed is parallel to the cylindrical axis of the probe

Range: 1 mG to 10 G full scale, nine ranges. 1 mG = 1 mA conversion factor.

Accuracy: $\pm 3\%$ of full scale (0°C to +55°C) after calibration.

Frequency Range: dc to 80 Hz (3 dB point)

Weight: net, 0.45 kg (1 lb); shipping, 0.91 kg (2 lb).

Ordering Information

HP 428B Analog Milliammeter
HP 3529A Magnetometer Probe

Price

\$1900
\$270



HP 3406A

Description

The HP model 3406A RF Voltmeter employs sampling techniques to achieve an extremely high bandwidth (10 kHz to 1.2 GHz) with high input impedance. Signals as small as 50 μ V can be resolved. Accessory probe tips enable the use of the HP 3406A in applications such as receivers, amplifiers and coaxial transmission lines.

Specifications

Voltage range: 1 mV to 3 V full scale in 8 ranges; decibels from -50 to +20 dBm (0 dBm = 1 mW into 50 Ω); average-responding instrument calibrated to rms value of sine wave.

Frequency range: 10 kHz to 1.2 GHz; useful sensitivity from 1 kHz to beyond 2 GHz.

Full-Scale Accuracy (%) with appropriate accessory (after probe is properly calibrated)

10 kHz	20 kHz	25 kHz	100 kHz	100 MHz	700 MHz	1 GHz	1.2 GHz
± 13	± 8	± 5	± 3	± 5	± 8	± 13	± 13

Sample Hold Output

Provides ac signal whose unclamped portion has statistics that are narrowly distributed about the statistics of the input, inverted in sign (operating into > 200 k Ω load with < 1000 pF). Output is 0.316 V at f.s. on any range.

Meter

Meter scales: linear voltage, 0 to 1 and 0 to 3; decibel, -12 to +3. Individually calibrated taut-band meter.

General

DC recorder output: adjustable from 0 to 1.2 mA into 1000 ohms at full scale, proportional to meter deflection.

Power: 115V $\pm 10\%$, 48-440 Hz; 230V $\pm 10\%$, 48-66 Hz; 25 VA max.

Size: 159 mm H (without removable feet), x 197 mm W x 279 mm D (6.25" x 7.75" x 11"); $\frac{1}{2}$ module.

Weight: net, 5.4 kg (12 lb); shipping, 6.8 kg (15 lb).

Accessories: refer to data sheet.

Ordering Information

HP 3406A RF Voltmeter

Price

\$2700