

HP 435B Power Meter

The HP 435B Power Meter is an analog power meter, compatible with the entire series of HP 8480 Power Sensors. Depending on which sensor is used, the HP 435B can measure power from -65 dBm to +44 dBm, full scale, at frequencies from 100 kHz to 50 GHz. This versatile instrument also features <1 percent instrumentation uncertainty, low noise and drift, auto-zero, recorder output, optional battery operation, and long cable options up to 61 m (200 ft).

HP 11683A Range Calibrator

The HP 11683A Calibrator is specifically designed for use with the HP 435B, 436A, 437B, 438A, 70100A, and E1416A Power Meters. It allows verification of full-scale meter readings on all ranges, as well as meter tracking. Simply connect the cable between the power meter and calibrator. The CAL ADJ control on the power meter is used to set the meter to full scale on the 1 mW range. The calibrator and meter are then stepped through the other ranges verifying accuracy within ±1 percent plus noise and drift. The HP 11683A also has a polarity switch that tests the auto-zero circuit.

HP 435B Specifications

Frequency range: 100 kHz to 50 GHz (sensor dependent)

Temperature range: 0° to 55° C

Power Range (calibrated in watts and dB in 5 dB steps)

With HP 848xB: +5 dBm (3 mW) to +44 dBm (25 W) full scale

With HP 848xH: -5 dBm (0.3 mW) to +35 dBm (3 W) full scale

With HP 848xA: -25 dBm (3 μW) to +20 dBm (100 mW) full scale

With HP 848xD: -65 dBm (300 pW) to -20 dBm (10 μW) full scale

Accuracy

Instrumentation: ±1% of full scale on all ranges

Zero: Automatic, operated by front-panel switch

Zero set: ±0.5% of full scale on most sensitive range, typical

Zero carryover: ±0.5% of full scale when zeroed on the most sensitive range

Power reference: Internal 50 MHz oscillator with Type N female connector on front panel (or rear panel, Opt 003 only)

Power output: 1.00 mW. Factory set to ±0.7% traceable to the U.S. National Institute of Standards and Technology

Accuracy: ±1.2% worst case (±0.9% rss) for one year

Supplemental Characteristics

Recorder output: Linearly proportional to indicated power with 1 volt corresponding to full scale; 1 kΩ output impedance, BNC connector

RF blanking output: Provides a contact closure to ground. Used for turning off RF input to sensor during auto-zeroing. BNC connector

Power consumption: 110 or 120 V (+5%, -10%), 48 to 66 Hz and 360 to 440 Hz; also 220 or 240 V (+5%, -10%), 48 to 66 Hz only; <20V · A

Weight: Net, 2.7 kg (5.9 lb). Shipping, 4.2 kg (9.2 lb)

Size: 155 mm H × 130 mm W × 279 mm D (6.3 in × 5.1 in × 11 in)

Accessories

Furnished: HP 11730A, 1.52-m (5-ft) cable for the power sensor; 2.3m (7.5 ft) power cable (mains plug shipped to match destination requirements)

Available

To select or substitute nonstandard lengths for power sensor cables, see HP 11730A-F Power sensor cables section.

HP 5060-8762: Rack adapter frame (holds three instruments the size of the HP 435B)

HP 11683A Range Calibrator Specifications

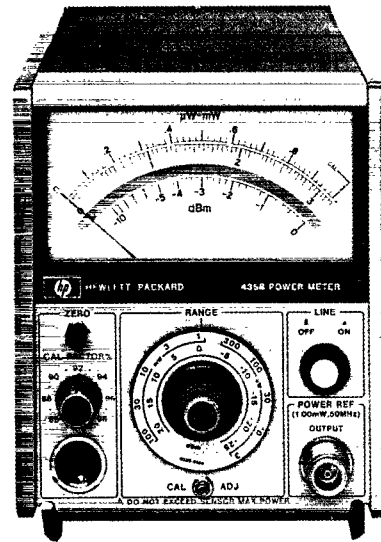
Calibration functions: Outputs corresponding to meter readings of 3, 10, 30, 100, and 300 μW; 1, 3, 10, 30, and 100 mW

Calibration uncertainty: ±0.25% in all ranges

Power: 100, 120, 220, or 240 Vac +5%, -10%, 48 - 440 Hz, less than 10 V · A

Weight: Net, 1.13 kg (2.5 lb). Shipping, 1.9 kg (4.2 lb)

Size: 89 mm H × 133 mm W × 216 mm D (3.5 in × 5.25 in × 8.5 in)



HP 435B

HP 11730A-F Power Sensor Cables

The HP 11730 series power sensor cables are for use with the HP 435B, 436A, 437B, 438A, 70100A, and E1416A power meters and the HP 8480 series of thermocouple and diode power sensors. These cables are designed to reduce RFI effects on low power readings with an improved shielding design in the cable itself. Cables may be ordered individually or in pairs in any combination desired for single and dual-channel measurements.

The HP 11730A cable is the standard cable for the HP 435B, 436A, 437B, 438A (2 cables shipped), 70100A, and E1416A meters. To order a nonstandard cable, select Option 004 for the meter in question, and order the desired cable from below.

Ordering Information

HP 11683A Range Calibrator

Price

HP 435B Power Meter

\$1,200

\$1,825

Opt 001 Rechargeable battery installed provides up to 16 hours of continuous operation

+ \$100

Opt 002 Input connector placed on rear panel in parallel with front

+ \$25

Opt 003 Parallel sensor inputs front and rear panels, reference oscillator output on rear panel

+ \$25

Opt 004 Delete power sensor cable

- \$75

Opt 910 Extra operating and service manual (P/N 00435-90040)

+ \$7.50

Opt W30 Extended repair service; see page 671

+ \$50

Opt W32 Calibration service; see page 671

\$475

HP 11730A 1.5 meter (5 ft) sensor cable

\$100

HP 11730B 5.0 meter (10 ft) sensor cable

\$110

HP 11730C 6.1 meter (20 ft) sensor cable

\$160

HP 11730D 15.2 meter (50 ft) sensor cable

\$220

HP 11730E 30.5 meter (100 ft) sensor cable

\$290

HP 11730F 61.0 meter (200 ft) sensor cable

\$475

☎ For off-the-shelf shipment, call 800-452-4844.