Cable Products

THRULINE® RF DIRECTIONAL WATTMETERS

Multifunction RF POWER ANALYST®

RUGGED, PEP RF POWER ANALYST® MODEL 4391A

The ruggedly built, multifunction Model 4391A RF POWER ANALYST® features a digital display, microprocessor-based operation, and simplified, push-button control. This wattmeter is well suited to C^3, telemetry, two-way communications, avionics and radar, as well as standard radio and television applications.

- Frequency: 0.45 to 2700 MHz. Power: 100 mW to 10 kW with 20% over-range.
- Reads forward and reflected CW or FM power in watts or dBm, Peak Envelope Power of SSB/DSB and symmetrical AM in watts, and peak power for pulses as narrow as 0.8 µs.
- Calculates SWR, return loss in dB and % modulation
- Stores peak and null readings to facilitate adjustment of maximum and minimum signal levels.
- Shock-resistant keyboard and range switches. RFI protection. Built-in international power supply/charger.

MODEL 4391A

Model: 4391A
Power Range: 100 mW to 10 kW using Bird Plug-in Elements*
Frequency Range: 450 kHz to 2.7 GHz
Insertion VSWR: with N Connectors 1.05 max. to 1000 MHz
Accuracy: Power Readings: ±5% of full scale CW, ±8% PEP; **VSWR:** ±10% of reading **% Modulation:** (CW power 1/3 or more of full scale) ±5% (0–90%), ±10% (90–100%)
Usable Over-range: to 120% of scale (CW, PEP, SWR and Return Loss)
Sampling Rate: 2 to 3 readings per second
Display: 3½ digit, 0.3" LED strobed
Modulation Frequency: 25 to 10,000 Hz (Audio)
Pulse Parameters: (min.) Pulse width 0.8 µs (100–2700 MHz), 1.5 µs (26–99 MHz) and 15 µs (2–25 MHz); Repetition Rate 25 PPS, and Duty Factor 1 x 10^{-4} min.
Return Loss: ±0.3 dB to corresponding SWR value
Battery Life: 8 hours (rechargeable)
AC Power: 100–130/200–260 V, 50/60 Hz, 6 W
Connectors: QC Type (Female N normally supplied)
Finish: Blue vinyl with silver anodized side panels
Nominal Size: (includes connectors) 9 9/16" L × 5 7/32" W × 4 5/16" H (243 mm × 158 × 110 mm)
Weight: 5¾ lbs. (2.6 kg)
Elements: Select 2 elements in a 10:1 power ratio from Tables 1, 2, 3, 3A, 4, 5, 6 and 14 on pages 25 – 28.
Recommended Accessories: Case (page 24).

MODEL 4391A AND 4380A-488
(Model 4380A-488 IEEE-488 interface unit described below.)

BUS INTERFACE UNITS MODELS 4380A-488, 4380A-232

Our interface units (IEEE-488 shown above or RS-232) let you remotely control a POWER ANALYST® Wattmeter's functions. Either interface requires a 15-pin connector on the rear of any Model 4380/4390 Series wattmeter. The connector and internal cabling are installed in a new Model 4391A POWER ANALYST®, or in older wattmeters having the suffix -832 in the Model number (e.g. Model 4391-832). Any 4380/4390 Series Wattmeter you already own without this connector can be retrofitted at our plant.

IEEE-488 Model: 4380A-488
Output: 3½ digit ASCII format
Logic Levels: Meets all IEEE standards 488-1978 specifications
GPIB Capabilities: Supports AH1, SH1, T5, L4 SR1, RL0, PP0, DC1, DT1, C0 and E1
Environment: Operating temperature range 0°C to +50°C. Storage temperature range –40°C to +100°C
AC Power: 100–130/200–260 Vac 50/60 Hz
Dimensions and Weight: 5 3/8" L × 3 1/4" W × 10 1/2" H (137 mm × 82 mm × 267 mm); 2 lb. 10 oz. (1.2 kg)
Output Connector: 24-pin IEEE-488 standard connector
Cable Supplied: 20 in. interconnecting cable to Bird RF POWER ANALYST®
Optional Cables: 3¼ ft. (1 m) IEEE-488 bus interface cable, P/N 5-1317-1; 6½ ft. (2 m) IEEE-488 bus interface cable, Bird P/N 5-1317-2; Use of longer bus interface cables is not recommended.

RS-232 Model: 4380A-232
Output: 3½ digit ASCII format
Logic Levels: Meets all EIA standard RS-232C specifications
Environment: Operating temperature range 0°C to +50°C. Storage temperature range –40°C to +100°C
AC Power: 100–130/200–260 Vac 50/60 Hz
Dimensions and Weight: 5 3/8" L × 3 1/4" W × 10 1/2" H (137 mm × 82 mm × 267 mm); 2 lbs. 10 oz. (1.2 kg)
Output Connector: Standard 25-pin subminiature D style RS-232
Cable Supplied: 20 in. interconnecting cable to Bird RF POWER ANALYST®
Optional Cables: 5 ft. (1.5 m) RS-232 bus interface cable, Bird P/N 5-1662-1; 10 ft. (3 m) RS-232 bus interface cable, Bird P/N 5-1662-2.

* Quoted accuracy only when used with other Bird products.