BOONTON

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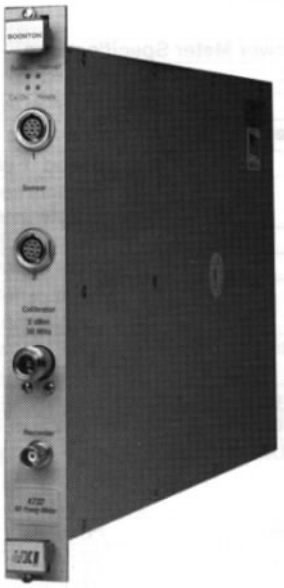
RF POWER METER 4730 SERIES



- **Frequency Range: 10 kHz to 110 GHz**
- **Power Range: -70 dBm to +44 dBm**
- **90 dB Dynamic Range**
- **Automatic download of sensor calibration data**
- **Backward compatible with all existing Boonton diode, thermocouple, and waveguide sensors**
- **Over 200 readings per second in single channel mode**
- **Single or Dual Channel Capability**
- **Single-slot, C-size Module**
- **VXI Bus Message Based Device**

Description

The 4730 series is a VXI microprocessor based RF power meter that can be configured to meet virtually any RF/Microwave power measurement requirement. It has the same state-of-the-art characteristics of the popular 4230A series along with accuracy, functionality, speed, and flexibility of VXI. The unit is a single-slot, C-size, VXIbus formatted instrument, which means that you will get extreme accuracy, in a mainframe chassis.

The 4730 series is designed for both military and commercial VXIbus ATE systems. Its high-stability and precision are ideal for radar, EW, avionics, automotive, and all facets of telecommunications. They include: ATE Systems, Satellite Communications, Paging, PCS, and Microwave Communications. As well as: manufacturers of components of: attenuators, filters, amplifiers, (TWT and solid state), detectors, mixers, and antenna systems.

Two Channel Operation

The 4730 series also can be configured with a second channel input that provides a duplicate set of input amplifiers and connectors for a second power sensor. This feature allows the unit to measure and calculate the difference and ratio of the two channels.

Additional Features

- **Duty Cycle Setting for Pulse Measurements**
- **Selectable Filtering**
- **Automatic or Preset Ranging**
- **Built in Calibration Source**
- **Automatic Calibration**
- **Automatic Zeroing**

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VXI bus

4730 Series VXI Power Meter Specifications

Frequency Range:	10 kHz to 100 GHz, sensor dependent		
Power Range:	-70 dBm to +44 dBm, sensor dependent		
Number of Channels:	One / Two		
Measurement:	Speed: 1 channel: 200 readings/sec. 2 channel: 100 readings/sec.		
Power Sensors:	Accepts sensor data adapter with full-calibration data, including high-frequency calibration factors, stored in non-volatile memory. Compatible with all Boonton CW Power Sensors. *See Sensor Data Sheet.		
Dynamic Range:	Up to 90 dB with diode sensors, 50 dB with thermocouple sensors. * See power sensor specifications.		
Inputs:	Front panel sensor connectors standard.		
Outputs:	Front panel PWR REF connector, 0 dBm, 50 MHz. Front panel RECORDER BNC connector, 0 to 10 V into 1MΩ. Output impedance is 9.09 kΩ. May be operated into 1kΩ for 1V fs.		
Measurement Units:	Absolute: watts, dBm. Relative: %,dBr.		
Measurement Accuracy:	Total accuracy is the sum of the following uncertainties (errors are +/- worst case):		
Instrumentation Accuracy:	0.002% at full scale.		
Power Reference Uncertainty:	Output frequency: 50 MHz +/- 1.5%. Output level: 0 dBm level accuracy: +/- 0.7% (25°C) for 90 days. +/- 0.9% RSS, 1.2% worst case (0° to +55°C) for 1 year. Source impedance: 50 +/- 1 Ω. SWR: < 1.05. Harmonic output: < -50 dBc.		
Other Uncertainties:	For sensor, noise, high-frequency calibration uncertainty, *See power sensor specifications.		
Calibration Factors:	+3 dB to –3 dB in 0.01 dB steps. These calibration factors are stored in non-volatile memory. When a frequency other than that is stored is used, the meter linearity interpolates between the calibration factor above and below the frequency entered to obtain a calibration factor.		
Ranging:	Automatic or manual.		
Filtering:	Filter times in 0.05-second intervals to 20 seconds.		
Zeroing:	Automatic function to calculate, store, and apply zero corrections to each range.		
Measurement Offset:	-99.99 to 99.99 in 0.01 dB steps (dBr).		
Power Consumption:	+24VDC	52 mA	1.3 Watts
	-24 VDC	57 ma	1.4 Watts
	+5 VDC	690 ma	4.7 Watts
Operating Temperature:	0 to +55°C.		
Weight:	2.64 lbs. (1.20 kg).		
Dimensions:	Single-slot, C-size module.		
Accessories Required:	One or more of the available power sensors and a power sensor cable and one sensor data adapter are required.		

POWER SENSORS

Ordering Information:

Single Channel **4731**
Dual Channel **4732**

Diode Sensors			Thermocouple Sensors		
Model Number	**Frequency (MHz-GHz)**	**Power (dBm)**	Model Number	Frequency (MHz-GHz)	Power (dBm)
51011(EMC)	0.01 to 8	-60 to +20	51100	10 to 18	-30 to +20
51011	0.1 to 12.4	-60 to +20	51101	0.1 to 4.2	-30 to +20
51012*	0.1 to 2	-60 to +20	51102	30 to 26.5	-30 to +20
51013	0.1 to 18	-60 to +20	51200	10 to 18	-10 to +37
51015	0.1 to 18	-50 to +30	51201	0.1 to 4.2	-10 to +37
51033	0.1 to 18	-40 to +33	51300	10 to 18	0 to +44
51071	10 to 26.5	-70 to +20	51301	0.1 to 4.2	0 to +44
51072	30 to 40	-70 to +20			
51075	0.5 to 18	-70 to +20			
51077	0.5 to 18	-60 to +30			
51078	0.1 to 18	-20 to +37			

*75Ω

Consult factory for details on K, Ka, Q, U, V, & W waveguide sensors.

Specifications subject to change without notice.

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