Boonton

Data Sheet

# 9240 Series
# RF Voltmeter

# 9240 Series RF Voltmeter

The 9240 series is the latest addition to Boonton's popular 9200 series of RF voltmeters. It combines accuracy, smart probes, and operator features that have never before been available in its price range. It is simple to use on the bench, and comprehensive enough to integrate into an ATE system. Boonton's proven voltage probes directly measure from 200 µV to 10 V with usable indication as low as 50 µV and have true RMS response below 30 mV. A 100-to-1 divider allows operation to 300 V. The voltage probes allow the 9240 series to display voltage levels in linear units. The compact sensor data adapter allows any probe to download calibration data to the instrument automatically as soon as it is plugged in.

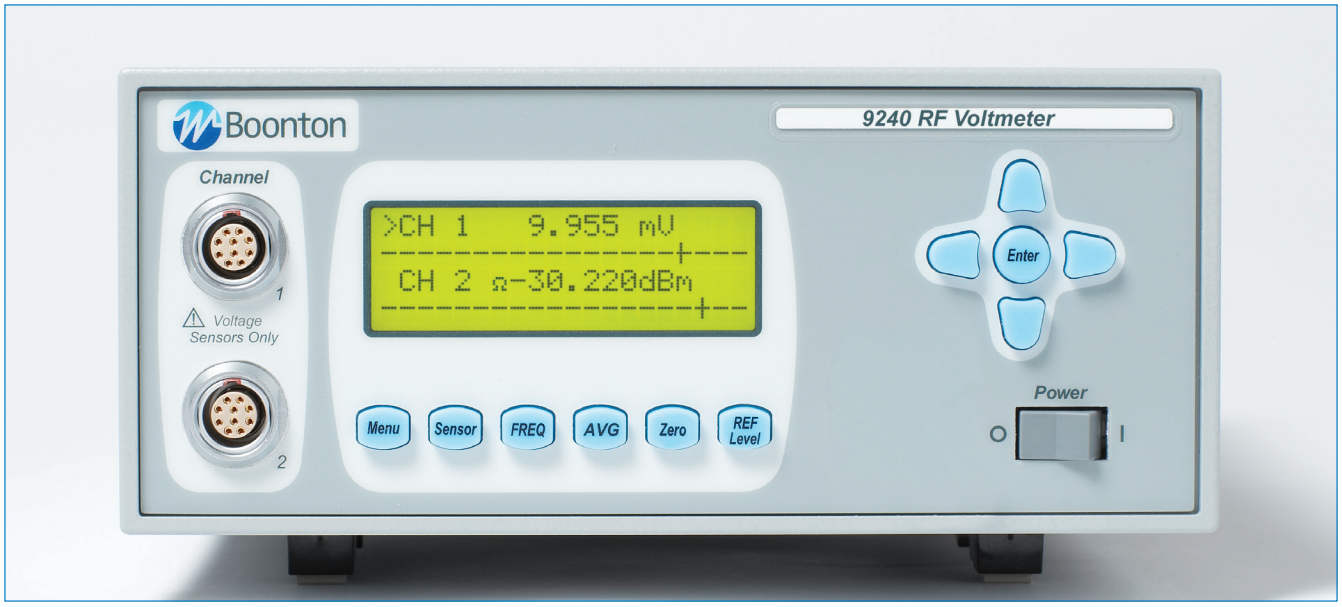
**Add a Second Channel**

The 9240 series can also be specified with a second channel input that provides a duplicate set of input amplifiers and circuits with connectors for a second voltage probe or sensor. This feature allows the instrument to display channels 1 and 2 as well as ratio and difference. Other features include a DC recorder output, IEEE-488 and RS-232 as standard interfaces.


## Features

- 10 Hz to 1.2 GHz measurement range*
- Dual-channel and differential voltage measurements
- 200 µV to 300 V measurement range
- 1% accuracy at full scale
- True RMS response below 30 mV
- Optional low-frequency probe for measurements from 10 Hz to 100 MHz
- DC recorder output
- IEEE-488 interface standard, RS-232

* Probe Dependent




## Specifications

| | |
|---|---|
| Voltage Range | 200 µV to 10 V in eight ranges (300 V to 700 MHz with a 100:1 divider) indications to 50 µV |
| Voltage Display | 1 mV to 300 V fs |
| Decibel Range (> 90 dB in eight ranges, 0.001 dB resolution) | |
| dBmV, 0dB = 1 mV | |
| dBV, 0dB = 1V | |
| dBW, 0dB = 1W | |
| dBm, 0dB =1mW (Calculated from voltage drop across a selectable Z Reference 5 to 2000Ω) | |
| dBr, 0dB = any reference level (Reference level can be selected at front panel to 0.001 dB resolution if display range of +/-99.99 dB is not exceeded) | |
| Frequency Range<br>10 kHz to 1.2 GHz with 952001A probes<br>10 Hz to 100 MHz with Model 952016 probe | |
| Waveform Response<br>RMS to 30 mV, calibrated in the RMS of a sine wave above 30 mV (RMS to 3V and 700 MHz with 100:1 divider) | |

### Basic Uncertainty

| **Voltage level (mV)** | **mV** |
|---|---|
| 3000 to 10,000 | 2% of reading: ±2 counts |
| 3 to 3000 | 1% of reading: ±1 count |
| 1 to 3 | 2% of reading: ±2 counts |
| 0.2 to 1 | 3% of reading: ±3 counts |

### Crest Factor

**Direct Input**

| Level | 300 µV | 1mV | 3 mV | 10 mV | 30 mV |
|---|---|---|---|---|---|
| Crest Factor | 140 | 42 | 14 | 4.1 | 1.4 |

**With Divider**

| Level | 30 mV | 100 mV | 300 mV | 1 V | 3 V |
|---|---|---|---|---|---|
| Crest Factor | 140 | 42 | 14 | 4.2 | 1.4 |

| | |
|---|---|
| Input Capacitance | Less than 1.5 pF |
| Maximum AC Input | 10 V, all frequencies and ranges |
| Maximum DC Input | 200 V, all frequencies and ranges |

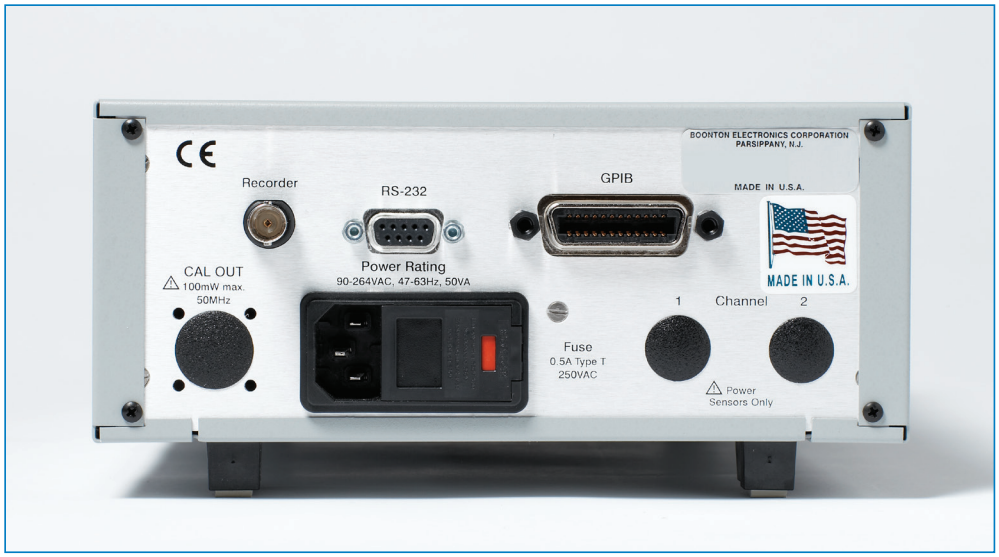
Recorder Output
10 V fs proportional to indicated voltage in mV mode over a range 7V = 0dBm regardless of Z. in dB mode, sensitivity of 1V per 10dB change over entire range

Line Stability
Less than 0.2% of reading with +/-10% line voltage change at reference line conditions (115 to 120 VAC, 50 to 400 Hz)

Zero
Automatic, operated by panel key, usable after 5 minute warm-up

### Other Specifications

| | |
|---|---|
| Power Consumption | 85-260 VAC, 47 to 63 Hz<br>85-135 VAC, 47 to 400 Hz<br>15 Watts, 25 VA |
| Operating Temperature | 0° to +55 °C |
| Weight | 5 lbs (2.3 kg) |
| Dimensions | 8.26" (21.0 cm) wide<br>3.48" (8.9 cm) high<br>13.5" (34.3 cm) deep |
| IEEE-488 Interface | Complies with IEEE-488 and implements SH1, AH1, T6, L4, SR1, RL1, DC1, and DT1 |
| RS-232 Interface | Complies with RS-232 (9-pin DCE) |




## Ordering Information

| | |
|---|---|
| 9241 | Single-input channel accessories as stated above |
| 9242 | Dual-input channels. Allow display of channels 1 and 2 and ratio of channels expressed in dB |

### Accessories Required

One or more of the available probe kits with sensor data adapter is required (one per probe included) to be ordered along with 9240 series

### Accessories Available

| | |
|---|---|
| 41-2A/10 | Sensor/Probe Interconnecting Cable (10 ft)<br>A special low-noise cable that connects the power sensor to the power meter. |
| 41-2A/20 | Sensor/Probe Interconnecting Cable (20 ft) |
| 41-2A/50 | Sensor/Probe Interconnecting Cable (50 ft) |
| 41-2A/100 | Sensor/Probe Interconnecting Cable (100 ft) |
| 95004701A | F/F Adapter, 41-2A |
| 95004901A | Bulkhead Connector F/F |
| 95403001A | Rack Mounting Kit 4241 Single Channel |
| 95005901A | Rack Slide Kit 4242 Dual Channel |
| 95109001A | Sensor Data Adapter |
| 95006201A | Transit case (Holds the 4240 series & up to 4 sensors) |

## Options

| | |
|---|---|
| -01 | Rear panel inputs |
| -30 | Warranty extension to 3 years |

## Probes

| Model Number | Description | Frequency |
|---|---|---|
| 95206302A | Standard Probe | 10 kHz to 1.2 GHz |
| 95206402A | Low-Frequency Probe | 10 Hz to 100 MHz |

**По вопросам продаж и поддержки обращайтесь:**

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