

Model 9211B

New and Improved - Multi-Tap, 300A Precision DC Current Shunt

World's Best Selling Precision Multiple Value DC Current Shunt



9211B FEATURES

- ◆ Accuracy Low as $\pm 0.01\%$!
- ◆ Now with new style casing improving Air Flow through the elements!
- ◆ New style cable connections for 100 A and 300 A leads!
- ◆ Now featuring case markings in both resistance and current!
- ◆ For Rack or Bench Mounting!
- ◆ DC Current Measurement from 10 μA to 300 A Full Scale!
- ◆ Compact Design now with handles!
- ◆ Temperature Coefficient $< 10 \text{ ppm}/^\circ\text{C}$!



For High Precision Single Value DC Applications, Look at Guildline's 9230A Series of High precision DC Shunts from 10 A to 10 kA!

GUILDLINE INSTRUMENTS 9211B DC PRECISION CURRENT SHUNT continues to improve the world's most widely fielded multi-tap shunt available, the model 9211A.

Like the model 9211A, the 9211 "B" Version is a four-terminal precision shunt designed to measure current in nine ranges from 10 μA to 300 A while continuing to provide the same, high performance specifications. Voltage output at full rated current on all ranges is 0.1 volt. The 9211B is now available in either a bench version or a rack mount version.

New style cable connections are accessible on the front panel allowing for quick, secure and repeatable lead changes. The 9211B bench model now comes with side handles and can easily be converted to a rack mount unit. Improved markings allow operators to easily determine current ranges and ohmic values. And a new style case replaces the old formic case. This new case is designed to vastly improve air flow across the resistive elements.

Separate current and potential terminals are provided. Range selection is made by means of two brass plugs inserted in pairs on the panel.

The 9211B is a Convenient and Excellent Solution for Wide Range - High Accuracy DC Current Calibration up to 300 Amperes.

The shunt resistors are mounted in air to minimize size and weight while minimizing self-heating effects. The range resistors up to 10 A are made of selected zeranin wire and are non-inductively wound up to the 1 A range.

These elements may be subjected to 140 % of rated current without damage. The 100 A and 300 A resistors are made of manganin plate and may be subjected to 110% of rated current without damage.

Accuracy is calibrated at 23 $^\circ\text{C}$, and referred to the unit of resistance as maintained by several National Metrology Institutes (i.e NMI's). A 17025 Accredited report of calibration giving the measured values is provided with every 9211B sold at no extra charge.

Model 9211B Precision DC Multi-Tap Current Shunt

9211B Specifications

| Resistance (Ω) | Rated Current (A) | 1 Year Accuracy ^{1,2} (%) | Temperature Coefficient (ppm/°C) | Power Dissipation at Rated Current (mW) |
|----------------|-------------------|------------------------------------|----------------------------------|---|
| 10,000 | 0.00001 | ± 0.01 | 5 | 0.001 |
| 1,000 | 0.0001 | ± 0.01 | 5 | 0.01 |
| 100 | 0.001 | ± 0.01 | 5 | 0.1 |
| 10 | 0.01 | ± 0.01 | 5 | 1 |
| 1 | 0.1 | ± 0.01 | 5 | 10 |
| 0.1 | 1 | ± 0.01 | 10 | 100 |
| 0.01 | 10 | ± 0.01 | 10 | 1000 |
| 0.001 | 100 | ± 0.05 | 30 | 10 W |
| 0.000 333 333 | 300 | ± 0.1 | 30 | 30 W |

Note 1: Calibrated in air at 23 °C traceable to the SI unit of electric resistance, calibration uncertainties expanded and expressed at the 95 % level of confidence. An ISO/IEC 17025 accredited certificate and report of calibration stating the calibrated value and estimated uncertainty is provided with each resistor.

Note 2: A traceable report of calibration stating the measured values and expanded uncertainty is provided with each unit at test currents of 1/10 of rated current and full rated current to a maximum of 100 A and a minimum of 0.1 mA.

| GENERAL SPECIFICATIONS | | | | |
|---------------------------------|-----------------|-----------------|-------------------------|---------|
| Environmental | Temperature | | Humidity | |
| Operating | 5 °C to 38 °C | 41 °F to 100 °F | <70 % RH non-condensing | |
| Storage | -20 °C to 55 °C | -4 °F to 131 °F | <90 % RH non-condensing | |
| Exterior Dimension (Bench) | 222 mm (H) | 513 mm (W) | 254 mm (D) | 13.6 kg |
| | 8.7" (H) | 20.2" (W) | 10" (D) | 30 lbs |
| Exterior Dimension (Rack Mount) | 222 mm (H) | 482 mm (W) | 183 mm (D) | 13.6 kg |
| | 8.7" (H) | 19" (W) | 7.2" (D) | 30 lbs |

Warranty

Over 60 Years of Guildline innovation in engineering and design, solutions that satisfy real measurement issues, and outstanding craftsmanship and we back it up with an industry leading **2-Year Warranty!**

Guildline is pleased to announce that our calibration facility is **ISO/IEC 17025 Accredited**. We have the widest range of resistance accredited, from **1 μΩ all the way to 10 PΩ**. Whether you own a Guildline product and have other manufacturer's standards, **call today** and see what we can do for you.

| Ordering Information | |
|--|--|
| 9211B | DC Current Shunt Bench Style |
| 9211B/R | DC Current Shunt, Rack Mount |
| /TM9211B | Technical Manual (Included) |
| /RC | Report of Calibration Included |
| /CC | Calibration Certificate Included |
| 9211B SERIES OPTIONS | |
| 92301 | 20 A, 1 m Lead Set |
| 92302 | 100 A, 1 m Lead Set includes Low Thermal Leads |
| 92303 | 300 A, 1 m Lead Set Includes Low Thermal Leads |
| SCW/18-30 | 30 m Shielded, Copper, Low Thermal Wire 18 Gauge |
| Many other leads and accessories to include system integration and IEEE are available. | |

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| Guildline IS DISTRIBUTED BY: |
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