



### 9711B FEATURES

- ◆ Accuracy to  $\pm 0.01\%$ !
- ◆ Rack or Bench Mount Models!
- ◆ New Terminals – Better Connections!
- ◆ Designed for Maximum Air Flow!
- ◆ Enhanced Current and Resistance Markings!
- ◆ DC Current Measurement from 10  $\mu$ A to 300 Amperes Full Scale!
- ◆ Compact Design!
- ◆ Temperature Coefficient < 10ppm/ $^{\circ}$ C!



*For High Precision Single Value DC Applications, Look at Guildline's 9230A Series for DC Shunts to 10,000 Amps!*

GUILDLINE INSTRUMENTS 9711B DC PRECISION CURRENT SHUNT is a four-terminal rack mount or bench instrument designed for convenient measurement of current in nine ranges from 10 microamperes to 300 amperes. Voltage output at full rated current on all ranges is 0.1 volt. Accuracy is calibrated at 23  $^{\circ}$ C, and a ISO/IEC 17025 Accredited Report of Calibration giving the measured values is furnished.

Based on the world's most widely fielded Multi-Tap Shunt, the 9711A model, the 9711B model provides design enhancements for Current Connections, Air Flow through the unit and operator markings on the shunts.

All connections and adjustments are accessible on the front panel. Separate current and potential terminals are provided. Range selection is made by means of two brass plugs inserted in pairs of ports on the panel. The 9711B is supplied in either a bench or rack mount configuration.

The shunt resistors are mounted in air to reduce size and weight while minimizing self-heating effects. A ventilated cage surrounds the unit.

**With Latest Enhancements and Design Layout, the 9711B is an Excellent Solution for High Accuracy DC Current Calibration up to 300 Amperes.**

The range resistors up to 10 A are made of selected zernin 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.

# Model 9711B Precision DC Current Shunt

## 9711B Specifications (Also applies to 9711A Versions)

Resistance (Ohms)	Rated Current (Amperes)	1 Year Accuracy <sup>1, 2</sup>	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
0.00033333	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 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 (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. How can we improve? Simple! We offer an industry leading **2-Year Warranty** to show you our confidence.

Guildline is pleased to announce that our calibration facility is **ISO 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 manufacturers' standards, **call today** and see what we can do for you.

ORDERING INFORMATION	
9711B	Multi-Tap DC Current Shunt
9711A	Multi-Tap DC Current Shunt (Formica Enclosure)
/TM9711	Technical Manual (Included) A and B Versions
/RC	Report of Calibration Included
/CC	Calibration Certificate Included
<b>9711B AND 9711A SERIES OPTIONS</b>	
92301	20 A, 1 m Lead Set
92302	100 A, 1 m Lead Set
92303	300 A, 1 m Lead Set
SCW/18-30	30 Meters Shielded, Copper, Low Thermal Wire 18 Gauge
Many other leads and accessories to include system integration and IEEE are available.	

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