



# 9336 & 9337 Series

## PRECISION HIGH VALUE AIR RESISTANCE STANDARDS

HIGH TO ULTRA-HIGH VALUE LABORATORY AIR RESISTANCE STANDARDS



**GUILDLINE INSTRUMENTS 9336 & 9337 SERIES** of Resistance Standards are designed as very high stability calibration laboratory standards for accurate resistance calibration in air, between 10 MΩ and 10 PΩ. These new resistors complement the 9334 and 9336 Resistance Standards available from 1 Ω to 100 GΩ with many custom and intermediate values for special applications.

These resistors are also suitable for use as calibration standards for the Guildline 6500 Series of Teraohmmeters to include the new 6520 Programmable Teraohmmeter. They are also an excellent choice for the calibration of other high to ultra high ohms measuring instruments and standards.

With a wide laboratory environment from 18 °C to 28 °C, they can be used as working standards or reliable, ruggedized, transportable transfer standards. They are extremely useful for the calibration of resistance ranges of multi-function calibrators and high accuracy digital multimeters, as well as being used in more classical standards and calibration laboratory applications where the need for high accuracy high ohms values are required.

### 9336 & 9337 SERIES FEATURES

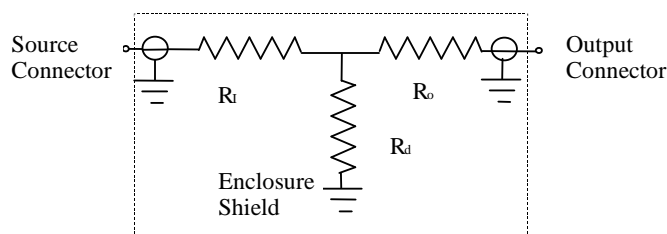
- ◆ 12 Month Stabilities Low as 10 ppm
- ◆ Wide Operating Range 18 °C to 28 °C
- ◆ Resistance Range 10MΩ to 100 GΩ
- ◆ Hermetically Sealed
- ◆ ISO 17025 Calibrations Available
- ◆ Compact and Ruggedized
- ◆ Nominal Initial Accuracy < 2 ppm
- ◆ Low Temperature Coefficients
- ◆ Voltage Hysteresis < 0.1 ppm
- ◆ Rated to 1000V
- ◆ Suitable for Calibration of Teraohmmeters Meggers, Long Scale DMM's, and More...

**The 9336 and 9337 Series of Precision Resistance Standards can be used as laboratory standard or for portable applications requiring high accuracy with resistance values from 10 MΩ to 10 PΩ.**

The resistor elements are securely mounted to the inside of a rugged hermetically sealed, shielded, aluminium enclosure. A pair of input/output Type N connectors provides the termination for the standard.

The "SOURCE" connector connects to the power supply of the measurement system, while the "OUTPUT" connector connects to the measurement detector. If necessary, the ambient temperature of the enclosure may be monitored and a correction factor applied to the value of the resistance.

The 9337 Standard Resistors are 3 terminal devices. The 3 terminal design minimizes the effect of current leakages from the source and output connectors. The high stability is achieved by use of a resistance divider network of the form shown below:



For The Ultimate In A High or Ultra High Value Resistance Standard Check Out The **6636 TEMPERATURE STABILIZED RESISTANCE STANDARD!**

# 9336/9337 SERIES OF PRECISION HIGH VALUE RESISTANCE STANDARDS

## SERIES SPECIFICATIONS

Model	Nominal Resistance Value ( $\Omega$ )	Initial <sup>1</sup> Tolerance $\pm$ ppm	Calibration <sup>2</sup> Uncertainty $\pm$ ppm	12 Month Stability <sup>3</sup> (+/- ppm)	Temperature Coefficient $\pm$ ppm/ $^{\circ}$ C	Voltage Coefficient $\pm$ ppm/ $V_{dc}$
9336-10M	10 M	25	15	10	<5	0.1
9336-100M	100 M	50	25	25	<5	0.5
9336-1G	1 G	100	80	35	<6	0.5
9336-10G	10 G	200	100	100	<25	1
9336-100G	100 G	500	500	200	<250	1
9337-1T	1T	1000	1000	500	<300	<2
9337-10T	10T	3000	4500	750	<500	<2
9337-100T	100T	5000	5500	1000	<800	<2
9337-1P	1P	2%	1%	2000	<1000	<2
9337-10P	10P	30%	25%	2%	<5000	<5
9336-X	Customer Specified Value		Specifications Provided Upon Request			
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**Note 1:** Initial Tolerance is the maximum variation of resistance mean value as adjusted initially at the point of sale.

**Note 2:** Calibrated at 23  $^{\circ}$ C, referred to the unit of resistance as maintained by the National Research Council of Canada (NRCC) or NIST and expressed as a total uncertainty with a coverage factor of  $k=2$ . A calibration report stating the measured value and uncertainty is provided with each resistor.

**Note 3:** Maximum Voltage Rating: 1000 volts

**Note 4:** Special Values available on request

GENERAL SPECIFICATIONS					
<b>Environmental</b>	Temperature		Humidity		
	Operating	18 $^{\circ}$ C to 28 $^{\circ}$ C		<50% RH non-condensing	
	Storage	-20 $^{\circ}$ C to 60 $^{\circ}$ C		15% to 80% RH	
<b>Dimensions</b>	Height	Width	Depth	Weight	
	mm	82 mm	124 mm	79 mm"	0.63 kg
	inches	3.8"	4.9"	3.1"	1.4 lbs

**Guildline provides Extended Warranties and Calibration Support Plans up to 5 years for total customer service and support solutions. Be sure to ask about these coverage plans when you order!**

ORDERING INFORMATION	
<b>9336-Model</b>	Resistance Standard (List Ohmic Value For Model)
9336-X	Customer Specified Value (State Value)
/TM9336	Technical Manual included at no charge.
<b>9337-Model</b>	Resistance Standard (List Ohmic Value For Model)
9337-X	Customer Specified Value (State Value)
/TM9337	Technical Manual included at no charge.
<b>Note: Report and Certificate of Calibration Provided with each 9336 &amp; 9337 Model</b>	
*Precision Leads Are Available – Call and tell us your requirements	
<b>Optional Calibration Services (ISO 17025 &amp; Z540 Service Available)</b>	
/Temp	Additional Customer Specified Temp Cal Point (Charge)
/Voltage	Additional Customer Specified Voltage Point (Charge)

**GUILDLINE IS DISTRIBUTED BY**

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