

High Resistance Standards

VRS-100 Series

An economical set of precision high resistance standards designed for testing megohmmeters or other instruments; 9 or 10 values up to 10 TΩ with special Kel-F isolation.

Features:

- Set of nine resistors - 1 kΩ, 10 kΩ, 100 kΩ, 1 MΩ, 10 MΩ, 100 MΩ, 1 GΩ, 10 GΩ, 100 GΩ, (1 TΩ and 10 TΩ optional), open circuit
- Non-standard value sets up to 10 TΩ
- High-accuracy - up to 20 ppm
- Maximum voltage: 5,000 V or 10,000 V
- Excellent TC - as low as 5 ppm/°C
- Excellent stability - as low as 10 ppm/year
- Both Ground and Guard terminals are brought out to minimize leakage effects
- Two styles available

Rotary Switch Style



Model **VRS-100** High Resistance Standards, rotary switch style, with guard and case ground

Binding Post Style



Model **VRS-100-10-BP-10kV** High Resistance Standards, binding post style, 10 kV option and case ground

SPECIFICATIONS

Nominal value	Max voltage	Initial adjustment to nominal	Temperature coefficient	Voltage coefficient (±ppm/V)	Stability
1 kΩ	50 V	20 ppm	3 ppm/°C	-	10 ppm/year
10 kΩ	150 V	20 ppm	3 ppm/°C	-	10 ppm/year
100 kΩ	500 V	20 ppm	3 ppm/°C	-	10 ppm/year
1 MΩ	1,250 V	20 ppm	5 ppm/°C	<1	15 ppm/year
10 MΩ	5,000 V	50 ppm	25 ppm/°C	<1	20 ppm/year
100 MΩ	5,000 V or 10,000 V	100 ppm	25 ppm/°C	1	100 ppm/year
1 GΩ	5,000 V or 10,000 V	0.50%	25 ppm/°C	1	500 ppm/year
10 GΩ	5,000 V or 10,000 V	0.50%	50 ppm/°C	2	500 ppm/year
100 GΩ	5,000 V or 10,000 V	1%	50 ppm/°C	5	500 ppm/year
1 TΩ	5,000 V or 10,000 V	2%*	100 ppm/°C	<20 (10 ppm typical)	500 ppm/year
10 TΩ	5,000 V or 10,000 V	5%*	300 ppm/°C	<20 (10 ppm typical)	--

* 1 TΩ and 10 TΩ calibrated at 1000 V

High Resistance Standards

VRS-100 Series

SPECIFICATIONS CONTINUED

Calibration conditions:

Two-terminal measurements with **GND** (and **GUARD** if applicable), at 23°C, RH <50%, low voltage;
 1 TΩ and 10 TΩ calibrated at 1,000 V

Operating temperature range:

18°C to 28°C

Storage temperature:

0°C to 40°C

Terminals:

The binding posts are constructed of tellurium copper for low thermal emf and low resistance, (relevant only for the low resistances that may be included in the VRS unit.)

Rotary Switch style: Three 5-way binding posts for **H**, **L**, and **GUARD**, along with an additional binding post for **CASE GND**.

Binding Post style: Series of 5-way binding posts for 2-terminal measurement, along with two additional binding posts for case **GND**.

Mechanical:

VRS Style	Dimensions	Weight
Rotary Switch	16.7cm W x 16.7cm H x 22.9cm D (6.6" W x 6.6" H x 9" D)	2 kg (4.5 lbs)
Binding Post	31.2cm W x 11.4cm H x 12.7cm D (12.3" W x 4.5" H x 5" D)	

**COSINUS Messtechnik - Ihr Partner für Messlösung
in allen elektrischen und physikalischen Anwendungen**

COSINUS Messtechnik GmbH

Rotwandweg 4

82024 Taufkirchen

Tel.: 089 / 66 55 94 - 0

Fax: 089 / 66 55 94 -30

office@cosinus.de
www.cosinus.de