

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



### 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)	

### ORDERING INFORMATION

Model Number	Style	Resistance Values	Value Range
VRS-100-9-1k-ROT	Rotary Switch	9 values	1 kΩ to 100 GΩ
VRS-100-10-1k-ROT	Rotary Switch	10 values	1 kΩ to 1 TΩ
VRS-100-9-1k-BP	Binding Post	9 values	1 kΩ to 100 GΩ
VRS-100-10-1k-BP	Binding Post	10 values	1 kΩ to 1 TΩ
VRS-100-11-1k-BP	Binding Post	11 values	1 kΩ to 10 TΩ
VRS-100-X-X-X	Custom Select	Custom Select	Custom Select

#### Options:

- 10TΩ: 10 TΩ value may be included in any model
- 10KV: 10 kV option available for resistances ≥100 MΩ

