

Ultrahigh Standard Resistor



The HVR10000 Series is a highly stable standard resistor that gets a low temperature coefficient and low voltage coefficient with a ultrahigh resistance range. The connecting terminals of the resistance circuit has guard, which enables stable resistance measurement in the air. There is the temperature sensor, which enables the internal temperature measurement of the resistor. Precision resistance measurement is possible at $25\text{ }^{\circ}\text{C} \pm 10\text{ }^{\circ}\text{C}$, it can be used for calibration of measuring instruments.



※ This product incorporates the results of the joint research with the National Institute of Advanced Industrial Science and Technology.

■ Type HVR10000 Series

● Dimensions 150W × 100D × 95H (mm)

● Weight About 1.7 kg

● Connecting terminals

Resistance circuit	BNC receptacle
Guard and Shield	Binding post
Temperature sensor Thermistor 10 kΩ / RTD Pt 100 Ω	2-pin connector / 4-pin connector

※1 Connecting terminal are possible to change BNC-HV receptacle (MHV type) or N-type receptacle.

● Specifications

Resistance value	Initial resistance tolerance ^{※2} (ppm)	Temperature coefficient ^{※3} (ppm/°C)	Long-term stability ^{※4} (ppm/year)	Voltage coefficient ^{※5} (ppm/V)	Max. working voltage ^{※6} (V)
100 MΩ	±50	±2	±25	±0.1	500 (1000)
1 GΩ	±100	±5	±25	±0.1	500 (1000)
10 GΩ	±100	±5	±25	±0.1	500 (1000)
100 GΩ	±250	±5	±25	±0.1	500 (1000)
1 TΩ	±1000	±25	±50	±1	500 (1000)
10 TΩ	±2500	±25	±100	±5	500 (1000)
100 TΩ	±10 000	±2000	±250	±25	500 (1000)

※2 Measurement condition : Temperature $25\text{ }^{\circ}\text{C} \pm 0.1\text{ }^{\circ}\text{C}$, Relative humidity $50\% \pm 10\%$, Measurement voltage 100 V.

※3 Measurement condition : Temperature $25\text{ }^{\circ}\text{C}$ (Reference) and $23\text{ }^{\circ}\text{C}$ and $21\text{ }^{\circ}\text{C}$, Measurement voltage 100 V.

※4 Test method: Nominal temperature and humidity (Temperature $5\text{ }^{\circ}\text{C}$ to $35\text{ }^{\circ}\text{C}$, Relative humidity 45 % to 85 %).

※5 Measurement condition : Temperature $25\text{ }^{\circ}\text{C} \pm 0.1\text{ }^{\circ}\text{C}$, Relative humidity $50\% \pm 10\%$, Measurement voltage 100 V (Reference) and 500 V.

※6 The number in parenthesis is when using BNC-HV receptacle (MHV type) or N-type receptacle.