



Temperature Stabilized High Resistance Standard

MODEL 4310HR

- 100 MΩ to 10 TΩ elements
- Other Values Available
- N type Connectors
- Temperature Coefficient ± 0.2 ppm/°C
- Eliminates Oil Bath Requirements
- Low Thermal EMF's – Shielded Chamber
- Temperature Regulation: ± 0.01 °C per/year



Model 4310HR Temperature Stabilized High Resistance Standard

The Model 4310HR, a six-element resistance standard is the latest development from Measurements International's series of DC resistors and shunts. After many years of research in resistance materials, the Model 4310HR insures that you get the best performance on the market today. Combined with MI's experience in automated resistance measurements the 4310HR is used as a temperature controlled, 6-element working resistance reference.

The six-resistance elements cover the range from 100 MΩ to 10 TΩ. The resistance elements feature excellent stability and extremely low temperature coefficients housed in a single unit. Each resistance element is accessible from the back panel with all connections being made via N-type Connectors. The resistor elements are maintained at 30 °C, with an operating environment temperature range extending from 18 to 28 °C. The Model 4310HR can be mounted in any standard 19-inch instrument rack.

The 4310HR is housed in a double shielded enclosure, with the each inner enclosure being isolated from the external enclosure. This allows the inner enclosure to be driven with active guard voltages.





Model 4310HR Temperature Stabilized High Resistance Standard

Specifications: Rev 7

Nominal Resistance (Ohms)	Nominal Resistance tolerance (+/- ppm)	12 Month Stability (+/- ppm)	Max Current (100mW)	Temperature Coefficient (+/- ppm/°C)	Max. Voltage (&Gradient)
100 MΩ	100	25	10 μA	0.06	1 kV (0.2ppm/V)
1 GΩ	100	25	1 μA	0.06	1 kV (0.5ppm/V)
10 GΩ	1%	100	100 nA	2	1 kV (5ppm/V)
100 GΩ	1%	100	10 nA	2	1 kV (5ppm/V)
1 TΩ	1%	250	1 nA	2	1 kV (10ppm/V)
10 TΩ	5%	500	100 pA	2	1 kV (20ppm/V)
Temperature Stability			+/- 0.01 °C over a 1 year period		
Ambient Temperature Range			23 °C +/- 5 °C		
Ambient Humidity Range			20 to 50% RH		
Warranty			Standard 1 year Parts & Labor		

Dimensions: (L x W x H)

445 x 432 x 127 (mm)

Weight:

9 kg

Shipping Weight:

13 kg

Main Power:

85 to 264V – 47 to 440Hz

Corporate Headquarters

Measurements International
 PO Box 2359, 118 Commerce Drive
 Prescott, Ontario, Canada K0E 1T0
 Phone: (613) 925-5934
 Fax: (613) 925-1195
 Email: sales@mintl.com
 Toll Free: 1-800-324-4988

Worldwide Offices

MI-USA
 Phone: (407) 706-0328
 Email: sales@mintl.com
 Toll Free: 1-866-684-6393

MI-China
 Phone: 86-10-64459890
 Email: sales@mintl.com

MI-Europe
 Phone: +(420) 731-440-663
 Email: sales@mintl.com

MI-Japan
 Phone: +(81) 72 39 64 660
 Email: kaz@mijpn.com

MI-India
 Phone: +(91) 98 10 134 932
 Email: sales@MILLP.co.in



www.mintl.com