

MODEL 200 ONE OHM STANDARD

- REFERENCE RESISTANCE STANDARD
- < 0.1 PPM TEMPERATURE COEFFICIENT
- < 0.1 PPM LONG TERM STABILITY
- IMMUNE FROM BAROMETRIC CHANGES
- TRANSPORTABLE

Based on the most recent research in materials and processing, Ohm-Labs' Model 200 One Ohm standard is wound from a single length of carefully annealed and heat treated Evanohm wire to produce highly stable resistance standard.

For years, the L&N 4210-B Thomas type one ohm standard had proven an excellent reference standard. However, these resistors have a significant temperature coefficient, a barometric pressure coefficient, and often require weeks to stabilize after transport.

The Model 200 One Ohm Standard is designed to overcome these problems.

The temperature coefficient of resistance is less than $0.1 \mu\Omega/\Omega/^\circ\text{C}$, referenced to 20, 23 or 25 °C, depending on customer requirement. An installed precision 10 K thermistor, in close contact with the wire, provides accurate temperature of the standard.

Oil-filled and hermetically sealed in a heavy-walled enclosure, these standards have high immunity from changes in barometric pressure and relative humidity.

Long term stability, after an initial year of settling, has shown to be typically less than 0.1 ppm/year.

The recommended measurement current is 100 mA, but the Model 200 will not be harmed by application of continuous current up to 1 amp, nor by intermittent current (< 1 minute) up to 3 amps.

A modified version, model 2000, is optimized for use at 1 A applied current.



The Model 200 One Ohm Standard's rugged construction allows it to be used as a transport standard. Laboratories using Thomas type one ohm standards can keep these resistors in the laboratory and use the Model 200 as a transfer standard to a national laboratory or other reference lab.

Repeated shipment by ground commercial carrier, packed in regular bubble wrap and a cardboard box, has shown the Model 200 to be largely immune from shifts due to transport.

The Model 200 is supplied with ISO 17025 accredited calibration, including temperature coefficient data.

Ohm-Labs uses the basic design of the Model 200 One Ohm Standard for a series of resistance standards, including -T values for thermometry, and -Q values for use with a Quantum Hall System.

All Ohm-Labs' resistance standards carry a five year warranty.



ISO 17025 accredited calibration included.

Physical:

13 cm dia. x 17 cm high (5 x 6.5 in); 4.5 kg (10 lbs)

