

# Model SR1

RESISTANCE STANDARDS & INSTRUMENTS

- Versatile working standard
- 50 ppm long-term accuracy for most values
- Select from a wide range of values from 1Ω to 10MΩ
- Accurate, stable, low cost

## Specifications

### Standard Values

1 Ω, 10 Ω, 100 Ω, 1 kΩ, 10 kΩ, 100 kΩ, 1 MΩ, 10 MΩ

### Nonstandard Values

0.01Ω, 0.1Ω

### Accuracy

See Table

### Calibration Conditions

23°C, low power, four-terminal measurement

### Temperature Coefficient

See Table

### Power Coefficient

See Table

### Terminal Resistance

Units with 1Ω or higher resistance: Binding posts add 0.1 to 0.2 mΩ to four-terminal resistance value; banana plugs add 2 to 3 mΩ additional resistance

### Maximum Ratings

See Table

### Breakdown Voltage

1500 V peak to case

### Calibration Data

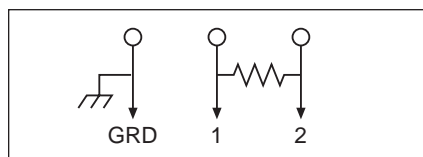
Initial calibration readings are affixed to instrument

### Dimensions

Height: 2.1" (5.3 cm)  
Width: 3.8" (9.65 cm)  
Depth: 2.4" (6.1 cm)  
Weight: 8 oz. (227 gm) net

## Standard Equipment

8234 Instruction Sheet



# Standard Resistor

The Model SR1 Standard Resistor is a laboratory standard of high accuracy and stability. The resistance of most values is initially adjusted to an accuracy of 20 ppm of nominal, with long-term accuracy guaranteed to better than 50 ppm. Other values have initial accuracy from 50 ppm to 200 ppm.

Model SR1 has been constructed to meet today's high standards of performance. The resistance wire used is a modern alloy having excellent stability, extremely low temperature coefficient over a wide range of temperatures, and very low thermal EMF to copper. A unifilar winding on a flat mica card is used to minimize both series inductance and shunt capacitance. The durable aluminum case provides electrostatic shielding. Gold plated terminals reduce connection errors.

Terminals appear on the top of each unit. They are also brought

out the bottom of the case on removable banana plugs. This allows plugging two or more units together in either series or parallel for a wide variety of resistance values. Four-terminal resistance measurements are easily made by using the banana plugs on the bottom of the case as two of the terminals.

For three-terminal or five-terminal guarded measurements, a binding post on top and a banana plug on the bottom provide connections to the case.



| Accuracy  |               |                 |                   | Coefficients   |                | Maximum Ratings |              |                  |
|-----------|---------------|-----------------|-------------------|----------------|----------------|-----------------|--------------|------------------|
| Value (Ω) | Initial (ppm) | Long Term (ppm) | Calibration (ppm) | Temp. (ppm/°C) | Power (ppm/mW) | Power (mW)      | Current (mA) | Voltage (peak V) |
| 0.01*     | 200           | 500             | 50                | 60             | 20             | 60              | 2500         |                  |
| 0.1*      | 100           | 300             | 30                | 40             | 2.5            | 250             | 1600         |                  |
| 1         | 20            | 50              | 10                | 15             | 0.3            | 1000            | 1000         |                  |
| 10        | 20            | 50              | 10                | 15             | 0.3            | 1000            | 320          |                  |
| 100       | 20            | 50              | 10                | 5              | 0.1            | 1000            | 100          |                  |
| 1 k       | 20            | 50              | 10                | 5              | 0.1            | 1000            | 32           |                  |
| 10 k      | 20            | 50              | 10                | 5              | 0.1            | 1000            | 10           |                  |
| 100 k     | 20            | 50              | 10                | 5              | 0.1            | 1000            | 3.2          |                  |
| 1 M       | 50            | 100             | 20                | 5              | 0.1            | 100             | 0.3          | 300              |
| 10 M      | 50            | 100             | 20                | 5              | 0.1            | 10              | 0.03         | 300              |

\*Special values. Contact TEGAM for specific details.



THE GLOBAL SOURCE FOR PROVEN TEST AND MEASUREMENT TECHNOLOGY.

TEN TEGAM WAY • GENEVA, OHIO 44041  
440-466-6100 • FAX 440-466-6110  
www.tegam.com • e-mail: sales@tegam.com