The SR1010 meets or exceeds all of the requirements for resistance transfer standards in precision measurement applications. It is easily configured to transfer resistances up or down a decade from their initial resistance value. When used with the connecting networks and shorting bars, it provides 1 ppm transfer accuracies.

Each transfer standard contains twelve equal value precision resistors connected in series by specially designed true 4-terminal junctions. These special junctions assure that a 4-terminal measurement of a series of resistors agrees with the sums of the individual resistors in the series. Accurate parallel connections can be made with the Parallel Compensation Network and the Shorting Bars connected to the junctions.

These standards can be connected to provide three decade values: 10 resistors in series, 10R; 9 resistors in series — parallel, 1R; and 10 resistors in parallel, R/10. The part per million accuracy is assured as the series value is equal to 100 times the parallel value to better than 1 ppm.

The accuracy and precision of the individual resistors also make the Model SR1010 ideal for use as a multi-value standard resistor or reference voltage divider.
Specifications

**Standard Values**
1, 10, 100 Ω/step; 1, 10, 100 kΩ/step

**Accuracy**
- **Temperature Coefficient**
  - ±5 ppm/°C matched within 3 ppm/°C for 100 Ω and higher
  - ±1 ppm/°C for 10 Ω
  - ±15 ppm/°C matched within 5ppm/°C for 1 Ω
- **Power Coefficient**
  - ±0.1 ppm/mW per resistor for 100 Ω and higher
  - ±0.02 ppm/mW per resistor for 10 Ω
  - ±0.3 ppm/mW per resistor for 1 Ω
- **Initial**
  - ±20 ppm of nominal value matched with in 10 ppm
- **Long-Term**
  - ±50 ppm of nominal value
- **Calibration**
  - ±10 ppm

**Calibration Conditions**
23 °C, low power, four-terminal measurement

**Resistance Transfer Standards**
Model SR1010

**Calibration Data**
Initial calibration readings are affixed to instrument

**Dimensions**
- Height 11.20 cm (4.4 in)
- Width 31.00 cm (12.2 in)
- Depth 10.15 cm (4.0 in)
- Weight 1.5 kg (3.25 lb)

**Included Accessories**
- Manual P/N 8502
- Z540 Compliant Calibration for SR1010 with Certificate and Data P/N OPT-Z540

**Optional Accessories**
- Shorting Bars P/N SB103
- Series Parallel Compensation Network P/N SPC102
- Parallel Compensation Network P/N PC101

**Initial Accuracy:**
The specifications stated in the TEGAM instrument catalogs and data sheets are intended as acceptance specifications and are guaranteed for 60 days from the date of shipment. They are typically maintained for a much longer period of time.

**Long-Term Accuracy:**
These specifications are guaranteed for the standard warranty period, and are typically maintained for the life of the instrument. Long-term accuracy is implied when not otherwise stated.

**Calibration Accuracy:**
Calibration accuracy is the accuracy of TEGAM calibration data relative to the legal units maintained by the U.S. National Institute of Standards and Technology.