

## SR1 Series

The SR1 is a versatile, rugged resistance standard. After inheriting the SR1 series from esi, IET took the opportunity to significantly improve its long-term stability and temperature coefficient. The result is a resistance standard with stability of up to  $\pm 10$  ppm/year and a TC of up to 3 ppm/°C.

### Features:

- Versatile, rugged working standard
- Improved long-term accuracy: up to  $\pm 10$  ppm/year
- Improved temperature coefficient: up to 3 ppm/°C
- Available in values from 0.01  $\Omega$  to 10 M $\Omega$

Model SR1 has been constructed to meet today's high standards of performance. The resistance wire used is a modern alloy with excellent stability improved further by an extremely low temperature coefficient over a wide range of temperatures, and very low thermal EMF to copper -- features that have been further improved by IET Labs.

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.



Sample SR1 Standard Resistor

## SPECIFICATIONS

Nominal Value	Model Number	Adjustment to nominal	Stability per year	Calibration Uncertainty	Temperature coefficient	Power coefficient	Max power	Max current	Max voltage	Terminals
0.01 $\Omega$	SR1-0.01	200 ppm	100 ppm	50 ppm	20 ppm/°C	0.1 ppm/mW	2 W	0.15 V	14 A	4 bp's + gnd
0.1 $\Omega$	SR1-0.1	200 ppm	20 ppm	50 ppm	20 ppm/°C	0.1 ppm/mW	1 W	0.3 V	3.0 A	4 bp's + gnd
1 $\Omega$	SR1-1	20 ppm	10 ppm	20 ppm	10 ppm/°C	0.5 ppm/mW	0.25 W	0.5 V	0.5 A	4 bp's + gnd
10 $\Omega$	SR1-10	10 ppm	5 ppm	10 ppm	3 ppm/°C	0.15 ppm/mW	0.1 W	1 V	0.1 A	4 bp's + gnd
100 $\Omega$	SR1-100	10 ppm	5 ppm	10 ppm	1 ppm/°C	0.05 ppm/mW	0.1 W	3 V	30 mA	4 bp's + gnd
1 k $\Omega$	SR1-1k	10 ppm	2 ppm	10 ppm	1 ppm/°C	0.05 ppm/mW	0.1 W	10 V	10 mA	4 bp's + gnd
10 k $\Omega$	SR1-10k	10 ppm	2 ppm	10 ppm	1 ppm/°C	0.05 ppm/mW	0.1 W	30 V	3 mA	4 bp's + gnd
100 k $\Omega$	SR1-100k	10 ppm	2 ppm	10 ppm	1 ppm/°C	0.05 ppm/mW	0.1 W	100 V	1 mA	4 bp's + gnd
1 M $\Omega$	SR1-1M	20 ppm	5 ppm	15 ppm	3 ppm/°C	0.15 ppm/mW	0.1 W	316 V	0.3 mA	2 bp's + gnd
10 M $\Omega$	SR1-10M	20 ppm	10 ppm	20 ppm	5 ppm/°C	0.25 ppm/mW	0.1 W	2000 V	0.1 mA	2 bp's + gnd

### Calibration conditions:

At 23°C, low power, traceable to SI  
 $< 1$  M $\Omega$ : Five-wire  
 $\geq 1$  M $\Omega$ : Three-wire

### Terminals:

Gold-plated, tellurium-copper, low-thermal-emf binding posts on standard 3/4 inch spacing. A **GROUND** terminal is provided on all units

### Mechanical information:

**Dimensions:** 10.2 cm W x 8.9 cm H x 14.0 cm D (4.0" W x 3.5" H x 5.5" D)  
**Weight:** 0.9 kg (2 lbs)

## ESI-STYLE UNITS

While supplies last, IET is proud to offer SR1 Standard Resistors in optional esi-style configuration. These standards come in smaller housings with binding posts on the top and banana plugs on the bottom. This configuration allows the plugging

of two or more units together in either series or parallel for a wider variety of resistance values. Both top and bottom terminal connections provide a terminal grounded to the case.

