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THIS WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.

WARNING

OBSERVE ALL SAFETY RULES WHEN WORKING WITH HIGH VOLTAGES OR LINE VOLTAGES. WHENEVER HAZARDOUS VOLTAGES (>45V) ARE USED, TAKE ALL MEASURES TO AVOID ACCIDENTAL CONTACT WITH ANY LIVE COMPONENTS:

- **USE MAXIMUM INSULATION AND MINIMIZE THE USE OF BARE CONDUCTORS.**
- **REMOVE POWER WHEN HANDLING THE UNIT.**
- **POST WARNING SIGNS AND KEEP PERSONNEL SAFELY AWAY.**

CAUTION

DO NOT APPLY ANY VOLTAGES OR CURRENTS TO THE TERMINALS OF THIS INSTRUMENT IN EXCESS OF THE MAXIMUM LIMITS INDICATED ON THE FRONT PANEL OR THE OPERATING GUIDE LABEL.



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SRX1 SERIES RESISTANCE STANDARD OPERATION MANUAL



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SRX1 im/August 2019



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General Information

Specifications

The SRX1 Series are extremely stable, precise, laboratory or portable resistance standards.

Each unit has a temperature chart showing its accuracy range in 0.5°C increments. The unit requires no oil or air bath because of the low temperature coefficient. There are two versions of the SRX1. The SRX1 is delivered with α and β and the SRX1-N which is delivered without α and β measurements.

The SRX1 Series is ideal for any applications inside or outside of a laboratory environment within the temperature range of 18°C to 28°C. They are rugged and small, and they have a virtually zero temperature coefficient.



SRX1 SERIES OPERATING GUIDE
CONSULT INSTRUCTION MANUAL FOR PROPER INSTRUMENT OPERATION

Stability: <7 ppm/year

Maximum Voltage: 2 V

Max Change from 23°C value (18°C to 28°C): ±3 ppm/°C

Adjustment to Nominal: ±15 ppm

Temperature Range: 18°C to 28°C

Model: SRX1-100 **SN:** _____

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For convenience to the user, the pertinent specifications are given in an **OPERATING GUIDE**, shown in the figure, affixed to the case of the instrument.

SPECIFICATIONS

Model SRX1-	Nominal Value (Ω)	Adjustment to Nominal (ppm)	Stability 1 year (ppm)	Max Voltage (V)
1	1	<20	<10	>0.32
10	10	<20	<10	>1
100	100	<15	<7	>2
1k	1 k	<10	<7	>10
10k	10 k	<15	<5	>30
100k	100 k	<15	<7	>100
1M	1 M	<22	<10	>100
10M	10 M	<35	<20	>100

Test Conditions: Four-terminal Kelvin measurements, low power, at 23°C; two-terminal for 1 M Ω . **Initial calibration data, traceable to SI, is provided.**

to a total of 5 W will be <300 ppm.

Terminals:

The binding posts are gold plated tellurium copper for low thermal emf and low resistance. A case ground terminal is also provided.

Change Resulting from Power Cycling: Value of the standard will remain within specifications after unlimited applications of power cycles of up to 5 W.

Resistance Change with Temperature: Over the range of +18°C to +28°C, the Standard Resistors shall not change more than 3 ppm from their reported calibration value.

100 k Ω and under: Four 5-way binding posts for 4-terminal measurement.

1 M Ω and over: Two 5-way binding posts for 2-terminal measurement.

Change Resulting from Temperature Cycling: The standard resistors shall have a temperature cycling change of 2 ppm or less for a cycle from 23° to 0°C to 23°C and for a temperature cycle from 23°C to 40°C to 23°C.

Operating Conditions: 18-28°C; <80% RH.

Maximum Applied Power: As indicated in table for Max. Voltage above.

Negligible change in resistance value will result from applying voltages up to the maximum voltage as indicated in the table above.

Non-Operating Storage Conditions: 18-28°C; RH not controlled.

Dimensions: 8.6 cm H x 10.2 cm W x 12.7 cm D (3.4" x 4.0" x 5").

Weight: 0.5 kg (1.0 lb), nominal.

Application of up to 5 W is allowed; change in resistance value from the max voltage up

SRX1-1 Series Resistance Standard

Sample Label

Replaceable Parts List

IET Part Number	Description
BP-1000-RD	Red Binding Post
BP-1000-BK	Black Binding Post
BP-1000-GN	Green Binding Post
SRX1-1-Res	SRX1 1 Ω Resistor Assembly
SRX1-10-Res	SRX1 10 Ω Resistor Assembly
SRX1-100-Res	SRX1 100 Ω Resistor Assembly
SRX1-1k-Res	SRX1 1 k Ω Resistor Assembly
SRX1-10k-Res	SRX1 10 k Ω Resistor Assembly
SRX1-100k-Res	SRX1 100 k Ω Resistor Assembly
SRX1-1M-Res	SRX1 1 M Ω Resistor Assembly