

SCM10

Single Channel Temperature Indicator

The Scientific Instruments Model SCM-10 Temperature Monitor is a compact, easy to use, precision instrument. With appropriate sensors the SCM10 is capable of measuring temperature from 1.4K to 1200K and in difficult sensing conditions including high vacuum and magnetic fields. With serial, Ethernet, and convenient graphical user interface, as well as an ASCII command set and LabVIEW™ drivers, the SCM10 can be used as a stand-alone temperature monitor or can be easily integrated into other systems.



SUPPORTED SENSORS

Diodes

Silicon, Gallium Arsenide (25K & above)

RTDs

RuO 1kΩ, RuO 100kΩ, Pt 100Ω, Pt 1000Ω, Cernox™, Carbon-Glass (4K & above)

Standard Curves: Si410, Si430, DT470, DT670, CTI, PT100, PT1000, R0600, R0105

User Curve: One 200-point user curve in non-volatile memory

Settings: Sensor Curve

Input Connector: DB15

THERMOMETRY

Number of Inputs: 1

Measurement Type: 4-lead single polarity

Excitation: Constant current, 10μA or 1μA (0.01%)

A/D Resolution: 24 bit

Input Accuracy and Measurement Resolution: Sensor Dependent

Measurement Rate: 5 rdg/s



48mm (1.9 in)

166mm (6.5 in)

96mm (3.8 in)

Size: 1/8 DIN



SCIENTIFIC INSTRUMENTS

SCM10

FRONT PANEL

Display Type: 6 digit LED

Display Units: K, °C, °F, V, Ω

Display Update Rate: 2 rdg/s

Temperature Display Resolution: 0.001° between 0–99.999°, 0.01° between 100–999.99°, 0.1° above 1000°

Sensor Units Display Resolution: 100uV (for diode type), Sensor Dependent (for RTD type)

Supported OS: Windows 7.0, XP & Vista (32 bit)

Mounting: Panel mount into 91 mm W x 44 mm H (3.6 x 1.7 in) cutout

Weight: 0.45 kg (1 lb)

Approval: CE mark, RoHS compliant



INTERFACE

SERIAL INTERFACE:

Format: RS-232C

Baud Rates: 9600, 19600, 57600, 115200

Functionality: Graphical User Interface, LabView Drivers (Version 8.0)

Connector: DB9

ETHERNET INTERFACE:

Format: 10–BaseT

Functionality: Graphical User Interface, LabView Drivers, Web Based Monitoring Utility

ALARMS:

Number: 2, High and Low

Settings: High Setpoint, Low Setpoint, Dead band, Latching or Non-latching, Alarm On/Off

RELAYS:

Number: 2

Contacts: Normally Open (NO), Normally Closed (NC), and Common (C)

Contact Rating: 24 VDC at 1 A

ANALOG OUTPUT:

Isolation: Output is not isolated from chassis ground

Update Rate: 2rdg/s

The SCM10 can be configured for the appropriate sensor type using the front panel or the utility software. Two convenient sensor excitation currents are provided to choose from. Measurements are available in °K, °C or °F temperature units, or sensor units V or Ω .

The SCM10 also has an embedded web server that can be used to connect to the instrument from anywhere within the LAN using an internet browser. The instrument web page shows the current temperature reading and shows the status of all alarms and relays.

	VOLTAGE	CURRENT
RANGE	0–10 V	4–20 mA
RESOLUTION	0.16 mV	0.3 mA
ACCURACY	±1.25 mV	±2.5 mA
MIN. LOAD RESISTANCE	500 Ω (short-circuit protected)	N/A

