

TC-2000 Type-T Thermocouple Meter

Measures 4 channels of temperature using Type-T thermocouple probes

The TC-2000 type-T thermocouple meter is a compact, accurate temperature monitoring device. With unparalleled channel correlation and resolution to 0.01°C, the TC-2000 is perfect for differential temperature monitoring applications or temperature monitoring in the field.

This unit offers four channels of temperature measurement using standard, readily available type-T thermocouple probes. All four channels are measured five times per second, and all measured temperatures are displayed simultaneously on the easy-to-read display. The TC-2000's outstanding accuracy (0.2°C), resolution (0.01°C), and channel agreement (0.02°C) set it apart from standard thermocouple meters.

Four channels of matched, multi-range analog outputs plus a standard RS-232 serial output are easily accessed on the back panel. The TC-2000 thermocouple meter can be easily integrated into any data acquisition system.

The accuracy of the TC-2000 thermocouple meter is ensured by a NIST-traceable calibration at our facility. User calibration is easy, using one or more international temperature standards for continued traceability. The TC-2000 thermocouple meter uses an internal reference junction tightly coupled to its reference temperature sensor, making it almost completely insensitive to sudden changes in ambient temperature.



FEATURES

-100 to +125°C at 0.01°C resolution

Uses type-T thermocouples

Accuracy better than 0.2°C, NIST-traceable

Multi-range analog plus serial outputs

Flexible operation including max/min

Rugged, light, low power consumption



TC-2000 Type-T Thermocouple Meter

SPECIFICATIONS

ACCURACY AND RESOLUTION	0.2 °C; 16 bits
ANALOG OUTPUTS	Voltage Range: 0-5V; Number of Outputs: 1 per channel (total of 4)
CONNECTOR TYPE	BNC
DIGITAL FILTRATION	Range: 0 to 50 sec (for 0-63% of a step change); Increment Rate: 0.2 sec
DIGITAL OUTPUTS	Communication Standard: RS232-8N1; Baud Rate: 152000; Modes: Broadcast or Polled; Sampling Interval: Configurable from 0.2 to 180 sec; A/D Resolution: 16 bits; Connector Type: DB-9
DISPLAY	Digital 4 x 16 line alphanumeric LCD
DIMENSIONS	(W x D x H) 11 x 10 x 7 in. (28 x 25 x 18 cm)
ENVIRONMENTAL REQUIREMENTS	Temperature: 0 – 50 °C; Relative Humidity: Non-Condensing
MEASUREMENT RANGE	Oxygen: 0 – 100% (best accuracy above 1%) Carbon Dioxide: 0-5% CO ₂ standard; 0-10% CO ₂ optional; Barometric Pressure: 30 – 110 kPa
OPERATING TEMPERATURE	5 – 45 °C
POWER REQUIREMENTS	External Power: 12 – 24 VDC; universal adapter supplied; Optional Power: 6x AA cells (not included)
RECOMMENDED CALIBRATION INTERVAL	1 Year
TEMPERATURE MEASUREMENT	Range: -100 to 125 °C; Accuracy: 0.2 °C; Resolution: 0.01 °C; Noise: < 0.01 °C RMS without filtration; Thermocouple Type: T
WEIGHT	3 lbs (1.4kg)

ABOUT US

Sable Systems International designs and manufactures leading-edge gas, metabolic and behavioral measurement systems for calorimetry, respirometry, metabolic/behavioral phenotyping, and gas analysis. Our products enable the highest precision and resolution, optimum workflow and reliable performance – giving you utmost confidence in your results. Scientists the world over rely on Sable technology for their research needs in physiological, biomedical, environmental, process control and gas analysis applications.



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