METER

TEMPOS

Thermal Properties Analyzer

NEW TECHNOLOGY—NEW POSSIBILITIES

There's never been a thermal properties analyzer that gives accurate measurements under all conditions. Small sensors are fragile and face contact resistance. Large sensors and high-priced, steady-state methods, require long heat times, which drive moisture away from the sensor and alter the reading. Alternative instruments use one standard equation without making any adjustments for real-world conditions—plus they're bulky and expensive. There's simply been no convenient or affordable way to measure accurately. Until now.

THERMAL PROPERTIES ANALYZER TAKES COMPLIANCE TO A WHOLE NEW LEVEL

The ASTM 5334- and IEEE 442-compliant TEMPOS takes accurate readings of thermal conductivity, thermal resistivity, thermal diffusivity, and specific heat in many material types across multiple disciplines, from soil and concrete to insulation, food, plastics, and lubricating oil. The new TR-4 needle is designed specifically to be compliant with IEEE specifications.

FEATURES

- Measures thermal properties of soil, concrete, insulation, food, plastics, lubricating oil, and much more
- Improved algorithms increase accuracy
- New one-minute read times
- Measure thermal diffusivity and specific heat at a fraction of the cost
- ASTM 5334- and IEEE 442-compliant. The new TR-4 needle is designed specifically to IEEE specifications.
- Controlled heating ensures heat is constant
- Test setup easier than ever. Results displayed clearly
- Mini USB cable makes downloading data easier
- Automatically identifies the sensor you have plugged in and illustrates heating
- Extended battery life lengthens use time
- Portable: use in the field or in the lab

SPECS

Controller	**Length:** 18.5 cm (7. 28 in) **Width:** 10.0 cm (3.94 in) **Height:** 3.5 cm (1.38 in)
Display Size	**Width:** 5.5 cm (2.17 in) **Height:** 4.0 cm (1.57 in)
Sensor Interface	DB-15 connector
Carrying Case	**Length:** 37.0 cm (14.57 in) **Width:** 30.0 cm (11.81 in) **Height:** 10.5 cm (4.13 in))
Operating Environment Range (Sensors)	-50.00 – 150.00 °C
Operating Environment Range (Controller)	0.00 – 50.00 °C
Power (Controller)	5 AA batteries
Battery Life (Controller)	More than 250 high-power measurements
Read Modes	Manual and unattended measurement modes
Data Storage	2,048 measurements in flash memory (both raw and processed data are stored for download)
Compliance	EN 61326-1:2013 EN 55022/CISPR 22
GSA	View GSA details

KS-3 (6 cm [small] single needle)

Range	**Conductivity:** 0.02 – 2.00 W/(m • K) **Resistivity:** 50 – 5000 °C • cm/W
Accuracy	**Conductivity:** ±10% from 0.2–2.0 W/(m • K)
Size	1.3 mm diameter × 60 mm length

TR-3 (10 cm [large] single needle)

Range	**Conductivity:** 0.10 – 4.00 W/(m • K) **Resistivity:** 25 – 1000 °C • cm/W
Accuracy	**Conductivity:** ±10% from 0.1–4.0 W/(m • K)
Size	2.4 mm diameter × 100 mm length

TR-4 (10 cm [large] IEEE-compliant single needle)

Range	**Conductivity:** 0.10 – 4.00 W/(m • K) **Resistivity:** 25 – 1000 °C • cm/W
Accuracy	Conductivity: ±10% from 0.1–4.0 W/(m • K)
Size	1.9 mm diameter × 100 mm length 1:50 length to diameter ratio

RK-3 (6 cm [thick] single needle)

Range	**Conductivity:** 0.10 – 6.00 W/(m • K) **Resistivity:** 17 – 1000 °C • cm/W
Accuracy	**Conductivity:** ±10% from 0.1–6.0 W/(m • K)
Size	3.9 mm diameter × 60 mm length

SH-3 (3 cm dual needle)

Range	**Conductivity:** 0.02 – 2.00 W/(m • K) **Resistivity:** 50 – 5000 °C • cm/W **Diffusivity:** 0.10 – 1.00 mm²/s **Volumetric Specific Heat Capacity:** 0.5000 – 4.2000 MJ/m³ K
Accuracy	**Conductivity:** ±10% from 0.2–2.0 W/(m • K) **Diffusivity:** ±10% at conductivity above 0.2 W/(m • K) ±0.02 W/(m • K) from 0.10–0.20 W/(m • K) **Volumetric Specific Heat Capacity:** ±10% at conductivities above 0.1 W/(m • K)
Size	1.3 mm diameter × 30 mm length, 6 mm spacing

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