

## TT-KD2 Professional

Thermal Property Measurement System for measuring the thermal conductivity, thermal resistivity, thermal diffusivity and heat capacity of liquids, solids, pastes and powders.

### TT-KD2 Pro Introduction

The TT-KD2 Pro uses 3 thermal properties sensors to measure **thermal conductivity, thermal resistivity, thermal diffusivity and specific heat of liquids, solids, pastes and powders**. The TT-KD2 Pro allows the user to choose an automated mode where the reading is displayed directly or a manual mode where you can download the raw values from each reading for further analysis using a spreadsheet program as required by IEEE and ASTM standards.

### Measurement Principles

The TT-KD2 Pro uses transient line heat source method to make measurements. A measurement cycle consists of a 30s equilibration time, a 30s heat time and a 30s cool time. Temperature measurements are made at 1s intervals during heating and cooling. Measurements are then fit with exponential integral functions using a nonlinear least squares procedure. A linear drift term corrects for temperature changes of the sample during the measurement, to optimize the accuracy of the readings.

### TT-KD2 Pro Controller

The TT-KD2 Pro controller allows auto-testing of up to 4000 tests. Results can be displayed and named within the controller or downloaded to computer through TT-KD2 Pro utility software for further analysis.

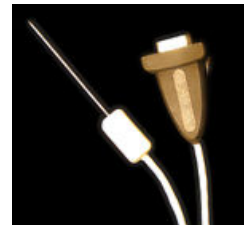


### TT-KD2 Pro Thermal Conductivity Sensor

The TT-KD2 Pro includes the sensor for measuring thermal conductivity, thermal resistivity & thermal diffusivity.

Sensor specification:

- Temperature range: -50 to 150C
- Sensor length- 6 cm
- Sensor Diameter: 1.27 mm
- Sensor Cable length is 1m

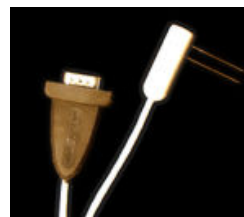


### TT-KD2 Pro Heat Capacity Sensor

As an accessory the user can purchase the heat capacity sensor for rapid measurement of heat capacity.

Sensor specification:

- Temperature range: -50 to 150C
- Sensor length- 30 mm
- Sensor Diameter: 1.28 mm
- Sensor Cable length is 1m



### TT-KD2 Pro System Specifications

Temperature range:	-50 to 150 °C
Thermal Conductivity:	0.02 to 2 W/mK
Thermal Resistivity:	0.5 to 50mC W-1
Specific Heat Testing:	0.5 to 4 MJ m-3 C-1
Thermal Diffusivity Testing:	0.1 to 1.0 mm2s-1

IEEE Standard 442-1981 and ASTM Standard D 5334-00

TT-KD2 Pro Includes:

TT-KD2 Pro Download Utility and Cable  
Performance Reference Materials  
Read out stand  
Thermal Grease  
Drill bit for testing solids  
Carrying case  
Manual