The KD2 sensor is a needle in which a heater and a temperature sensor are sealed. The display module contains a battery, a 16-bit microcontroller/AD converter, and power control circuitry. The microcontroller switches power to the sensor and measures the power dissipated and the temperature of the sensor.

A reading is initiated by pressing the left button on the display module. The controller waits 90 seconds for temperature stability, then heats the probe with about 40 mA while reading its temperature each second for 30 seconds.

At the end of the reading, the controller computes the thermal conductivity and diffusivity from the temperature vs. time data. The left button allows scrolling through a display of thermal conductivity, thermal resistivity, and thermal diffusivity.

Easy to use, Low power.
No calibration necessary.
Fast 2 minute read time.
Simple menu structure.
Easy to read display.

**Portable 2-minute analysis of thermal conductivity and thermal diffusivity.**

Direct readout of thermal conductivity, thermal diffusivity, thermal resistivity & temperature.

- Easy readings.
- Single needle sensor works in gels, liquids soils and porous media.
- Rugged stainless steel case and sensor.

DECAGON
950 NE Nelson Court
Pullman, Washington 99163
800-755-2751
fax 509-332-5158
echo@decagon.com
www.decagon.com/echo/
KD2 Specifications

KD2 Thermal properties analyzer includes:

- KD2 readout device.
- One KD probe.
- Protective carrying case.

Applications

- Soil heat flux in energy balance studies.
- Heat dissipation from buried power lines.
- Geothermal designs.
- Soil heat flow under fires.
- Thermal properties in relation to moisture and density.

KD2 Specifications

Measurement speed:
2 minutes.

Accuracy:
5% Thermal Conductivity.
10% Thermal Diffusivity.

Power:
3.6 volt lithium battery.

Weight:
115g (4oz).

Warranty:
One year parts and labor.

Operating environment:
5 to 40°C.

Range of measurement:
K 0.1 to 2 Wm⁻¹ C⁻¹
D 0.1 to 1.0 mm²s⁻¹
R 0.5 to 10 mC W⁻¹

Sensor:
Needle length—60 mm.
Needle diameter—0.9 mm.
Cable length—72cm.