TPSYS02
PC CONTROLLED THERMAL CONDUCTIVITY MEASUREMENT SYSTEM

TPSYS02 is a system for the measurement of thermal conductivity using TP02 or TP08 Non-Steady-State Probes (NSSP). The system is designed for high accuracy measurements. It is particularly suitable for analysis of soils, thermal backfill materials, sediments, foodstuff, powders, sludges, paints and glues.

The main components of TPSYS02 are the TP02 (or its smaller equivalent, type TP08) Non-Steady-State Probe, the MCU Measurement and Control Unit and software. TP02 and TP08 are designed for measuring in media in the thermal conductivity, $\lambda$, range of 0.1 to 6 W/m.K. The measurement principle is that of a NSSP or Transient Line Source. For details on TP02 or TP08, see the separate brochures. The MCU takes care of the measurement and control process. It is recommended to perform measurements with TPSYS02 in a laboratory environment. A special “field configuration” is available for stand-alone measurements.

TPSYS02 is operated in conjunction with a PC or laptop (field configuration: via Keyboard Display). The software arranges communication with the MCU. Unique is that the measurement is extremely fast (several minutes only), absolute and independent of sample size.

MORE INFORMATION / OPTIONS
Alternative designs: Hukseflux is specialised in NSSP design. Alternative models, for instance for field use, are available at Hukseflux. For use in soils, it is suggested to also consult the brochures of the more robust but less accurate systems FTN, MTN and TNS.

TPSYS02 SPECIFICATIONS
Sensor supplied: TP02 or TP08
Suitable media: 0.1 to 6 W/m.K
Accuracy (depends on sample): $+/- (3\% + 0.02) W/mK$
Typical heating cycle duration: 200 s (typical)
Requirements: PC equipped with Windows XP (at least)
Options: Field configuration, Arctic version