

Measurement system of physical properties at low temperatures(PPMS), 2009 model

Application:

Thermal, electrical and magnetic characterization of materials in the cryogenic temperature.

Functional parameters:

Measurable physical properties:

1. Thermal properties:

- a. Thermal conductivity (k)
- b. Specific heat (c)
- c. Seebeck coefficient (S)
- d. thermoelectric figure of merit (Z)

2. Electrical properties

- a. electrical resistivity (in C.C.)
- b. electrical resistivity (in A.C.)
- c. Hall effect
- d. characteristics I-V
- e. critical currents of superconducting materials

3. Magnetic properties

- a. magnetic susceptibility (in A.C.) - sensitivity: $2 \times 10^{-11} \text{ Am}^2$
- b. magnetization in C.C. - $2,5 \times 10^{-5} \dots 5 \text{ emu}$;
- c. magnetic couple - sensitivity: $10^{-7} \text{ emu la } 9\text{T}$;
- d. anisotropy of magnetization - torque: $1 \times 10^{-4} \text{ Nm}$

