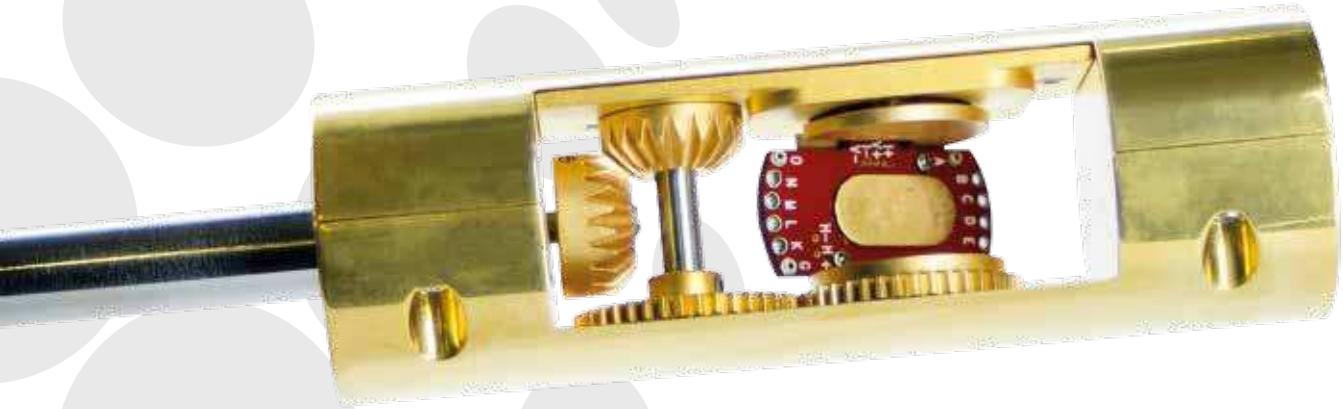
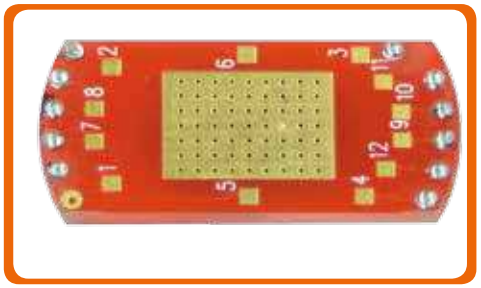
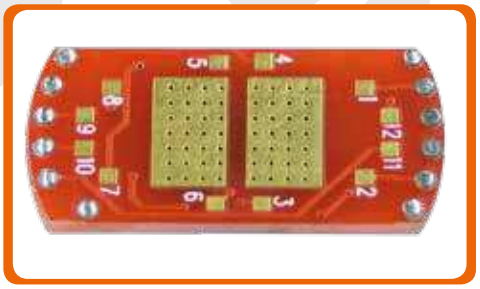
NanoMagnetics Instruments

Low Temperature

DC/AC Measurement & Characterization Systems







Static Insert

- Six contacts for Hall effect, four contacts for Van der Pauw measurement
- Sample size: max 10mm x 10mm
- Up to 12 contacts to sample
- 29 mm OD sample insert (other sizes are optional)
- 25 spare sample holders
- Measurement electronics and control software
- Temperature range : 1 – 300K

Rotary Insert (Vertical and Horizontal Rotator)

- Rotation : 0° – 360° with 0.01° resolution
- Sample size: max 5mm x 10mm
- Up to 12 contacts to sample
- 29 mm OD sample insert (other sizes are optional)
- 25 spare sample holders
- Measurement electronics and control software
- Temperature range : 1 – 300K
- KF50 or KF40 flange option

DC Resistance / Hall Effect Measurements

- Source current programming range : 50pA to 1A *
- Voltage measurement range : 100mV (100nV resolution) to 100V (10µV resolution) *
- Temperature range : 1 – 300K

AC Resistance / Hall Effect Measurements

- Source current programming range : 2nA to 100mA *
- Frequency range : 1Hz to 1kHz
- Real and imaginary parts of impedance Z(T)
- Voltage noise (with low noise voltage preamplifier): 1nV/√Hz noise floor at 1kHz at 60 dB gain

AC Susceptibility Measurement

- Sample Size: Max 5 mm diameter
- AC Frequency Range: 10 Hz to 10 kHz
- AC Field Amplitude Range: 2 mOe to 15 Oe
- Sensitivity: 2 x 10-7 emu (2 x 10-10 Am2 at 10 kHz)
- Real and imaginary parts of susceptibility χ (T)
- Includes calibrated sensor at sample stage/pick-up coils
- Measurement electronics and control software
- Temperature Range: 1,5 - 300 K

Options

- Low noise voltage preamplifier for AC Resistance
  - 1.5 nV/√Hz voltage noise floor at kHz
  - Voltage input range: ± 5 V at x1 gain
  - Common mode rejection: 120 dB at 1 kHz
- Calibrated Thermometer and Heater at the Sample Stage
- 400K High Temperature Option for measurement probes

Source and measurement ranges are configurable. Given values may vary.
Note: Specifications are subject to change without any notice