# 3B SCIENTIFIC® PHYSICS



# Axial/tangential field probe 1001040

#### Instruction sheet

06/15 SP



- 1 Tangential probe
- 2 Axial probe
- 3 Support stem
- 4 Slide switch

### 1. Description

The axial/tangential field probe measures magnetic fields produced by DC and AC currents as well as magnetic flux (B) and field strength (H).

The field probe works by means of the Hall principle and makes up a sensor unit in combination with the teslameter E (1008537).

The support stem for the Hall probes emerges from the side of the plastic casing containing the electronic circuitry for both probes and also provides a handle when making measurements. Connection to the teslameter is made via a 5-pin diode-protected plug. The requisite voltage is supplied by the teslameter. The slide switch on the casing selects whether the axial or the tangential probe is activated.

## 2. Technical data

Hall sensor InAs monocrystalline

1 mm<sup>2</sup> approx.

Measurement range: 1 mT to 2 T

Electr. conversion: 1 mV is 1 mT

Frequency range: 1 Hz to 10 kHz

Casing: 130 x 44 x 22 mm³

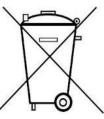
Stem: 125 x 11 x 4 mm³

#### 3. Storage, cleaning and disposal

- Keep the equipment in a clean, dry and dust-free place.
- Do not clean the unit with volatile solvents or

abrasive cleaners.

- Use a soft, damp cloth to clean it.
- The packaging should be disposed of at local recycling points.
- Should you need to dispose of the equipment itself, never throw it away in normal domestic waste. Local regulations for the disposal of electrical equipment will apply.



#### 4. Sample experiments

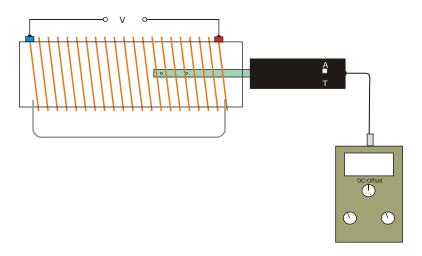


Fig.1 Field measurement inside a coil using axial field probe.

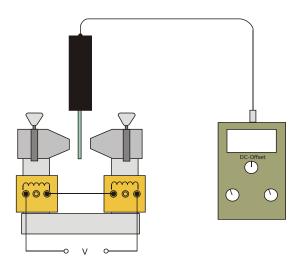


Fig. 2 Magnetic field measurement inside the air gap of a transformer using tangential field probe