Magnetic Field probe

for the LogIT Microsense® system

Instructions

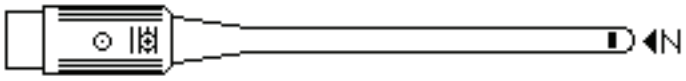
Overview

The Magnetic Field probe is intended for educational investigations into the characteristics and strength of magnetic and electromagnetic fields using a Microsense® compatible data logger or interface.

In Use

The probe is based on a miniature Hall effect solid state sensor mounted on a flexible probe to allow easy access into coils etc.

It is calibrated in standard SI units for flux density (B), milli-Tesla (mT) and is bidirectional, producing positive readings when a North magnetic pole is presented to the outer tip of the probe (see drawing).



The most sensitive parts are the flat faces of the hall device which can be seen raised at the tip of the probe.
Take care to not bend probe more than 90°.

Zero Adjustment

You may see a small reading from the probe even when it is not next to a magnetic field. This is due both to local conditions and variations between data loggers.
It is quite usual and can normally be ignored where trends of change and field strength are generally more important than accuracy. Some software allows you to offset or 'tare' to zero and this should be used where possible. We have fitted a small adjustment control just above the plug fixing rivet through a small hole. If you wish you may adjust this control very carefully and gently using a small potentiometer trimming tool or plastic screwdriver.
Please note that this is not intended for frequent adjustment.

Specifications

Range:	-90 mT to +90 mT Magnetic Flux density (B)
Nominal accuracy:	+/- 9%:

Care

Do not bend more than 90^{o} as this will damage the probe.
Never expose to liquid, condensation or extreme temperatures.
Protect from dirt and other foreign particles from entering the sensor.
Do not attempt to disassemble - there are no user serviceable parts inside.

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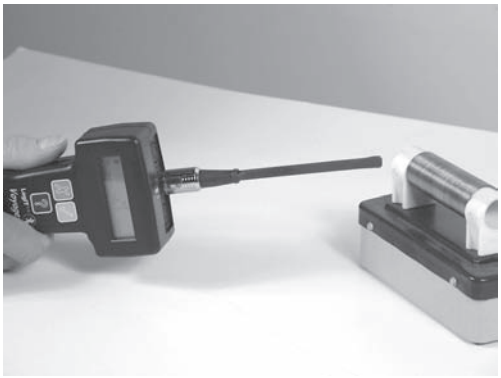
Examples of use.

Using the Magnetic field probe.

This example show's the Magnetic field probe being used to find the magnetic field strength of a speaker.

By placing the probe in different parts of the speakers coil, the magnetic field strength of the speaker's magnet can be found.



The probe can also be used with coils to show how magnetic fields are produced around the coil.

It is also small enough to be placed inside the coil.

Other experiment ideas.

Magnetic field produced from an induced electric current by dropping a standard magnet through a coil of wire.
Magnetic field strength of different types of magnetic material.

Waste electrical and electronic products must not be disposed of with household waste.
Please recycle where facilities exist.
Check with your Local Authority or Retailer for recycling advice.

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