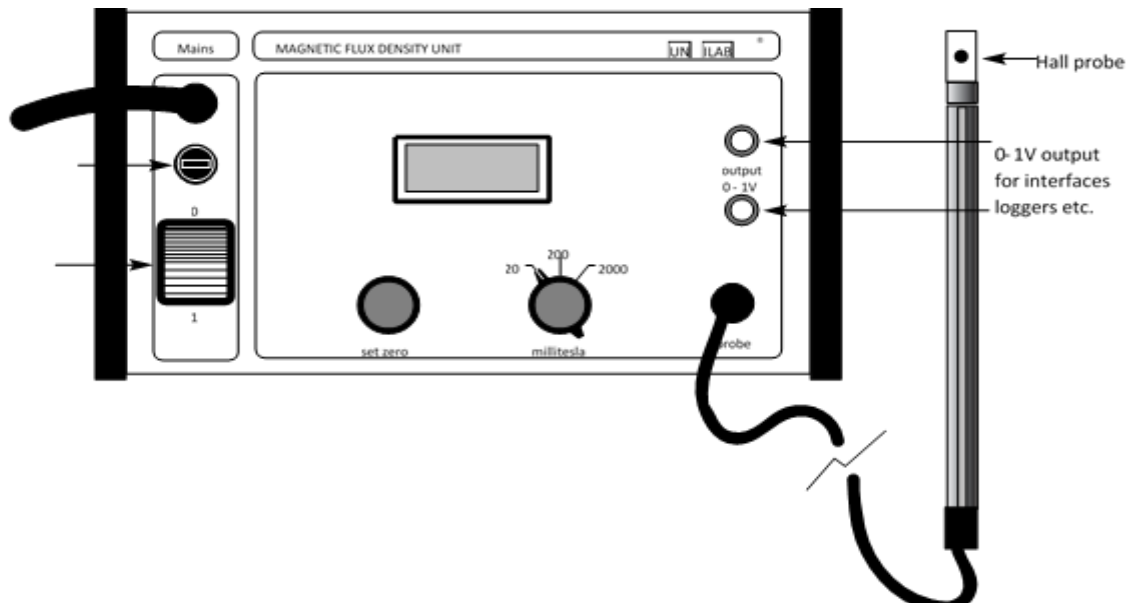


H28729 Digital Magnetic Flux Density Meter

NFU 413



Purpose

This unit measures magnetic field strength directly up to 2000mT (millitesla) using a Hall-effect probe mounted on a rotatable ball and socket head. This unit is fitted with a mains cable. The Hall probe is connected to the meter unit by a length of screened cable. The unit can be set to read the following ranges 20, 200 and 2000mT and the results appear on the 3.5 digit LCD display which also includes a polarity indicator.

Ratings

Powered by mains	230V ac +/-10% with a F50mA fuse
Output signal	0-1V
Dimensions	240 x 135 x 65mm
Mass	1.5Kg

Warnings

For your safety, this product should be used in accordance with these instructions, otherwise the protection provided may be impaired.

EMC

This equipment is Class A according to the EMC standard EN 55011 and is intended for use in a non-domestic environment only.

Do not open or remove covers or panels. Repairs and service may only be carried out by our repair agent, otherwise the warranty may be void.

Use only the 3-core mains cable supplied with the unit. If the mains cable is replaced, the rating of the replacement must be the same or better than the original.

The unit must be earthed at all times. The unit is earthed/grounded through the 3-core mains lead, so no additional earth connection is required.

Always position the power supply so that it can be disconnected from the mains, if an emergency arises.

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This unit is intended for use in DRY conditions. Avoid spillage of water and other liquids on to the unit. If spillage occurs, disconnect the mains supply.

There is no specific requirement for insulation of external circuits as they cannot become hazardous live, as a result of connection to this unit. Limit the length of any connecting leads to 3 metres.

Features

- Excellent, direct method of measuring magnetic field strengths.
- Indicates the earth's magnetic field strength
- 0-1V output for connection to data loggers
- Can be used to investigate the fields surrounding magnets and coils quantitatively and immediately, without using indirect methods such as flux coils and ballistic galvanometers
- The unit has three ranges 0-19.99, 0-199.99 and 0-1999mT selected by a 3-position switch.

For best accuracy, select the fluxmeter RANGE which gives the largest indication without going off scale.

Operation

Connect the mains supply and switch on the unit.

Select the 2000mT range. Place the end of the probe well away from magnets, iron or steel, and objects such as loudspeakers and telephones, which contain magnets.

Adjust the ZERO control until the LCD display is reading zero.

Repeat this adjustment for each range setting in turn. The ZERO control can be rotated ten full times between end stops.

On the more sensitive range (20mT) the probe is capable of detecting the magnetic field of the earth, and it may be necessary to place the plane of the probe along the magnetic north-south direction before the meter is brought exactly to zero.

Return the range switch to 2000, then place the probe in the magnetic flux to be measured.

Switch to progressively lower ranges, until the reading is not off scale.

Move the probe in all three dimensions to gain the maximum possible reading.

The unit and its Hall probe will not be damaged by flux densities larger than the maximum selected on the RANGE switch.

The unit is protected by a F50mA mains fuse, accessible from the top panel.

Switch off and disconnect from mains supply before replacing the fuse.

To remove the fuse, use a small coin or broad flat blade screwdriver to turn the fuse holder by 90 degrees anticlockwise, then lift it out

Cleaning

The unit may be wiped clean using a damp cloth. Be sure to disconnect the unit from the mains before cleaning, and do not use any abrasive cleaners or organic solvents.

Periodic testing:


Check the mains lead and plugs at both ends for any damage.

Periodically check the earth bonding and insulation, by performing a Portable Appliance Test (PAT). Most schools and local authorities have a regular schedule for such testing.

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Check that the fuse in the mains plug (5A recommended) and the T50mA fuse mounted on the front panel are all of the correct rating.

Disposal of Waste Electrical and Electronic Equipment (WEEE)



Do not dispose of this product with household waste

- For the proper treatment, recovery and recycling please take this product to an appropriate collection point.
- If you are unsure where this is, contact your Local Authority.
- By disposing of this product correctly you will be providing positive help to the environment.

Warranty, repairs and spare parts:

The power supply is guaranteed for a period of one year from the date of delivery to the customer. This warranty does not apply to defects resulting from the action of a user such as misuse, improper wiring, any operations outside of its specification, improper maintenance or repair, or unauthorized modification.

Our liability is limited to repair or replacement of the product. Any failure during the warranty period should be referred to Customer Services.

In the event of a fault, apart from replacing the instrument fuse in the front panel mount, the power supply should be referred to the Philip Harris recommended repair agent.

Please contact Customer Services or techsupport@philipharris.co.uk for advice

Instructions for authorized service technicians:

Ensure that any replaceable mains cord is of the correct rating.

Ensure that all earth conductors and protective earth bonding is maintained after service work.

Please refer to the detailed service procedures, safe servicing and continued safety - contact techsupport@philipharris.co.uk for advice.

For any manufacturer specific parts please refer to our recommended repairer.

Please refer to product specific risks that may affect service personnel, the protective measures and verification of the safe state after repair.

Supplier details:

Philip Harris Education, 2 Gregory Street, Hyde, Cheshire SK14 4RH

Orders and Information Tel: 0845 120 4521

Fax: 0800 138 8881

Repairs Tel: 0845 120 3211

E-mail: techsupport@philipharris.co.uk

Website: www.philipharris.co.uk

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