

- Menu Driven
- DC/AC/Peak/Max Hold/Store Functions
- Battery operated
- Multi Lingual
- Probe Polarity Indication

MAGNETIC PARTICLE INSPECTION EQUIPMENT

MAGMETER MODEL GM04

The Magnaflux® microprocessor controlled Magmeter offers sophisticated use, measuring functions in simple to use, menu driven, hand-held package.

Division of ITW Ltd

MAGNAFLUX®



Supplied with carrying case



Transverse Probe with hold button



Clear touch pad controls

MAGMETER MODEL GM04

The Magnaflux GM04 Microprocessor Controlled Hand Held Magmeter represents a significant improvement in functions, features and performance in todays market. The GM04 incorporates an Analogue Peak Detector for the DC and AC peak functions. This, coupled with the Microprocessor operation of the GM04 means that fast response is possible with digital stability (fast pulses / no drop in readings).

MEASUREMENT FUNCTIONS

The GM04 can measure:

- **DC** : DC magnetic field measurement
- **DC PEAK** : Maximum positive peak reading of the DC field
- **AC RMS** : True Root Mean Square (RMS)
- **AC RMS. MAX** : Maximum true RMS
- **AC PEAK** : Maximum positive peak value

MEASUREMENT UNITS

The GM04 can measure Magnetic Flux Density or Magnetic Field Strength. The menu system enables the Operator to easily choose between Tesla, Amps/m (SI units), Gauss and Oersted (cgs units).

DATA CAPTURE

The GM04 can HOLD measured values by pressing the Hall Probe button. Pressing the button again releases HOLD (when Enabled). The GM04 can also STORE measured values. These values can later be RECALLED.

RANGE CHANGING

If the Operator wishes to change ranges, the GM04 has a button dedicated to this function. No use of menu is required.

UTILITIES

The GM04 has a number of UTILITIES options allowing the Operator to disable or select various times for the automatic POWER DOWN. Also nulling routines can be selected. The GM04 also has the facility to operate its menu structure in English, French, German, Italian, Spanish and Portuguese.

CALIBRATION

The GM04 is Calibrated to Standards Traceable to the National Physical Laboratories. During manufacture, the accuracy of Nuclear Magnetic Resonance (NMR) is used to determine the irregularities and non-conformities of the GM04 and its Hall Probe. This is stored and used mathematically to automatically correct readings taken by the GM04.

APPLICATIONS

The GM04 is ideal for inspection and measurement of magnetic flux density of magnets and magnet assemblies in both goods inwards and quality assurance environments.

Applications include: Non-Destructive Testing (Magnetic), Computer Disk Drive Actuators, Loudspeaker Air Gaps, Electric Motor Air Gaps (including Pancake and Permanent Magnets), Transformer Stray Field Measurements, Magnetiser and Demagnetiser Field Measurements, Bending Magnets, Goods Inward and Quality Assurance Inspection, etc.

Specification and Operating Data

AUTO AND MANUAL RANGING

- Range 1** : 0 – to more than 3 Tesla, resolution 1 milliTesla
- Range 2** : 0 – 299.9 milliTesla, resolution 100 microTesla
- Range 3** : 0 – 29.9 milliTesla, resolution 10 microTesla
- Range 4** : 0 – 2.999 milliTesla, resolution 2 microTesla

Measurements can be made in Tesla, Gauss, Amps/m or Oersted

(1 mT = 10 Gauss = 0.796 kA/m)

Accuracy (at 20°C) +/- 1%

(DC) Traceable NPL

Reproducibility +/- 0.5%

Temperature Coefficient

Better than +/- 0.1% of reading /0°C including probe

Frequency Range

DC and 15 Hz to 10 kHz

Averaging Time Constant

100 milliseconds

Functions

DC, DC Peak, AC RMS, AC RMS MAX, AC Peak

Display

2 Line, 16 character dot matrix LCD

Display Sampling Rate

3/sec (approx)

Facilities

Store and Recall on 0 – 99 samples. Hold facility. Analogue Peak with digital storage. Auto and Manual ranges. Automatic reading conversion between different units. Operating set up at time of power-down is stored and recalled automatically at power-

on. Utilities, etc. Functions are selected with an easy to use menu.

Operating Temp. Range

0°C to +50°C

Storage Temp. Range

-20°C to +70°C

Battery Type

9V Longlife Alkaline (Duracell MN1604) or similar

Battery Life

Approximately 15 hours continuous operation. Auto Power-down after 1, 4 or 10 minutes or can be disabled, all under menu control

Dimensions

Length 196 mm x Width 100 mm x Height 40 mm

Weight (including battery)

400 g (not including probe)