

Group3

Digital Teslameter



**Precision Magnetic Field Measurements
Using Hall Effect Sensors**

Group3 Digital Teslameters

For Precision Magnetic Field Measurements

Group3 Digital Teslameters are recognised worldwide as the highest performance magnetic field measuring instruments that use Hall effect sensors. Hall effect devices offer the smallest sensing area, and are able to measure a wide range of field values, making them ideal for field mapping and magnet control, as well as for general measurements.

Group3's unique linearization and temperature correction techniques have overcome the inherent problems of standard Hall effect devices. Every Group3 probe is individually characterised at several hundred field values and at a range of temperatures. This data is stored within the probe itself. Advanced software algorithms in the Group3 Teslameter use this data to produce corrected digital field readings. For accuracy and ease of use the Group3 Teslameter is the most cost effective instrument available.

New!

Group3 introduces the DTM-151

New circuitry in the DTM-151 provides greatly increased ability to operate in electrically noisy environments. Well proven Group3 engineering has been further enhanced by the addition of noise filters, suppressors and an internal isolating power module, allowing the DTM-151 to operate reliably under extreme conditions. Advanced digital techniques have further enhanced resolution to 0.0000001 tesla (0.001 gauss). Fiber optic communication, a standard feature of Group3 serial teslameters, permits long distance noise-free transmission of data back to a computer.

Features

- Outstanding accuracy 0.01% total system accuracy (Probe + Teslameter).
- Negligible thermal drift typically less than 5ppm/°C, with excellent long term stability.
- High resolution 1 part in 600,000 (7 digit display) - resolves to 0.0000001 T on serial output.
- Small probe size 1mm x 0.5mm active area on smallest probes - ideal for precision mapping.
- Wide range probes one small probe covers whole range - no need to change probes.
- Fiber optic comms. noise free transmission of data - even across high voltage differences.
- Noise immunity DTM-151 incorporates many features to reduce the effects of electrical transients.

Group3 Teslameters Cover The Field

A range of models to choose from, of differing specifications - DTM-130, DTM-132, DTM-141, DTM-151. Communications options are serial data via fiber optics and RS232, or GPIB (IEEE-488). Easily driven from a PC serial port, preferably over fiber optics using a Group3 serial to fiber optic converter. Seven digit high intensity red LED display and mode indicators on front panel. Four ranges - 0.3, 0.6, 1.2, and 3T or 0.03, 0.06, 0.12, and 0.3T full scale, depending on probe. Simple-to-use two button selection of range and mode. Switch selection of gauss or tesla. Wide band analog output DC to 3 kHz (-3dB), uncorrected. Small size for easy installation - 125mm wide x 50mm high x 217mm long. Panel mount versions available - up to 3 units fit across a standard 2U rack panel. Metal case for transient shielding.

Group3 Probes

Probe cable lengths from 2 to 30 metres. Shielded probe cable available - recommended for longer cables and high noise environments. A range of sizes and sensitivities of probe head available. Special probe configurations to order. Probe holders available - axial, transverse, and 3-axis.

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