

THM1176 AND TFM1186 COMPACT 3-AXIS MAGNETOMETERS
GO ANYWHERE, MEASURE ANYTHING!



THM1176 and TFM1186 magnetometers: ultra-compact and easy-to-use instruments to measure and map all three components of a magnetic field using Hall and Fluxgate technologies.



Comprehensive family of 3-axis sensors



DC or AC magnetic fields up to 1 kHz



Field strengths from nanoteslas to 20 T



Accuracy on the order of $\pm 1\%$ in any orientation



3-axis calibration of offset, gain, non-linearity, temperature drift and non-orthogonality



Dedicated software, including spectral analysis



Delivered with a calibration certificate



USB interface



ABOUT METROLAB

We are the **global market leader** for precision magnetometers. Established in Switzerland in **1985**, we have won the trust of all the large physics laboratories and all leading players in Magnetic Resonance Imaging, **across the world.**

With Metrolab, you measure magnetic fields with **Swiss precision and quality.**

PROBE FAMILY

| PROBE | TYPICAL APPLICATION | TECHNOLOGY | KEY SPECIFICATIONS | PROBE DIMENSIONS |
|-------------|--------------------------|-------------------------------|---|---|
| TFM1186 | Earth-field disturbances | 3-axis fluxgate | Range up to 100 μ T Resolution 4 nT Accuracy $\pm 0.5\%$, ± 100 nT | Housing 70 x 30 x 32 mm Cable 3 m |
| THM1176-LF | Weak/fringe fields | Discrete 3-axis Hall sensors | Range up to 8 mT Resolution 2 μ T Accuracy ± 20 μ T | Housing 113 x 16 x 10 mm Cable 3 m, optionally 6 m |
| THM1176-MF | General purpose | Integrated 3-axis Hall sensor | Range up to 3 T Resolution 0.1 mT Accuracy $\pm 1\%$ | Housing 113 x 16 x 10 mm Sensor 16.5 x 5 x 2.3 mm Cable 3 m, optionally 6 m |
| THM1176-HF | Very strong fields | Integrated 3-axis Hall sensor | Range up to 20 T* Resolution 0.3 mT Accuracy $\pm 1\%$ | Housing 113 x 16 x 10 mm Sensor 16.5 x 5 x 2.3 mm Cable 6 m |
| THM1176-HFC | Narrow gaps | Integrated 3-axis Hall sensor | Range up to 20 T** Resolution 0.3 mT Accuracy $\pm 1\%$ | No housing Sensor 0.5 x 2 x 8 mm Cable 3 m, optionally 6 m |

1 nT 1 μ T 1 mT 1 T

Resolution Range Max

Accuracy specified for total field
Accuracy typically 10x better along primary axes: Bx, By, Bz.

*Calibrated to 14 T
**Calibrated to 1.5 T



TFM1186

THM1176-LF

THM1176-MF

THM1176-HF

THM1176-HFC

EZMag3D SOFTWARE

| | |
|-----------------------------|---|
| OPERATING SYSTEMS | Windows, macOS, Linux |
| KEY MEASUREMENT | Output: Bx, By, Bz, temperature (uncalibrated) Timestamp (167 ns resolution) Sample rate - depends on trigger mode: 0.36 Sa/s to 6.8 kSa/s (1 Sa = Bx, By, Bz) |
| OPERATING MODES | Teslameter, Spectral analysis, AC analysis, Mapping |
| MAIN FEATURES | Graphical displays Control of range, units, trigger, acquisition & display rates Save or load settings and measurement file |
| OPERATING CONDITIONS | Temperature: 0 to 40°C Magnetic: electronics < 3 T; handheld tablet < 1 T |

KITS AND ACCESSORIES

Desktop Kit: a magnetometer to plug into the USB port of your computer.

Duo Kit: cost-effective package including your selection of two probes and a carrying case.

Handheld Kit: includes a carrying case with the tablet computer, charger, adapters and cables.

All kits include a USB drive containing the manual and EZMag3D software. Firmware and EZMag3D Software upgrades also included.

THM1176 kits include a zero-gauss chamber.

Warranty: 2 years
Calibration interval: 18 months
CE marked

Specifications are subject to change; for detailed and up-to-date specifications, please see www.metrolab.com/THM1176/specs