

## 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

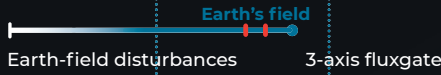

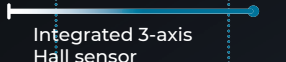
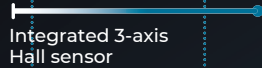
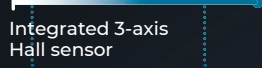
### ABOUT METROLAB

 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.**

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## PROBE FAMILY

PROBE	TYPICAL APPLICATION	TECHNOLOGY	KEY SPECIFICATIONS	PROBE DIMENSIONS
TFM1186	Earth-field disturbances 	3-axis fluxgate	Range up to 100 $\mu$ T Resolution 4 nT Accuracy $\pm 0.5\%$ , $\pm 100$ 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 $\mu$ T Accuracy $\pm 20$ $\mu$ 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  $\mu$ 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](http://www.metrolab.com/THM1176/specs)