



# **COMPACT 3-AXIS MAGNETOMETERS THM1176 AND TFM1186**

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 8 kHz in continuous mode



Field intensity from nanoteslas to 30 T



0.5% accuracy



3-axis calibration



Dedicated software



Delivered with a calibration certificate up to 3 T



Standard USB



## **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.

#### **SYSTEM**

PROBE	TYPICAL APPLICATION	TECHNOLOGY		KEY SPECIFICATIONS	PROBE DIMENSIONS
TFM1186	Earth's field		Range up to 100 μT	Housing 70 x 30 x 32 mm	
	Earth-field disturbances	3-axis fluxgate		Resolution 4 nT Accuracy ±0.5%, ±100 nT	Cable 3 m
THM1176-LF	Weak/fringe fields	5 gauss Discrete 3-axis Hall sensor		Range up to 8 mT Resolution 2 μT Accuracy ±20 μT	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 0.05 mT Accuracy ±0.5% up to 1.5 T ±1% up to 3 T	Housing 113 x 16 x 10 mm Sensor 16.5 x 5 x 2.3 mm Cable 3 m, optionally 6 m
THM1176-HFC	Narrow gaps	Integrated 3-axis Hall sensor		Range up to 30 T* Resolution 0.3 mT Accuracy ±1%	No housing Sensor 0.5 x 2 x 8 mm Cable 3 m, optionally 6 m
1 nT 1μT		1 mT	1 T	Accuracy specified for total fi Accuracy typically 10x better	ield along primary axes: Bx, By, B:
Resolution	Range max			*Calibrated 0.5% up to 1.5 T	



#### 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  ${\sf EZMag3D\ Software\ upgrades\ also\ included}.$ 

THM1176 kits include a zero-gauss chamber.

## **WARRANTY & CALIBRATION**

Warranty: 5 years

Handheld Kit warranty: 2 years

Recommended calibration interval:

18 months

CE marked

Specifications are subject to change; for details and up-to-date specifications, see: www.metrolab.com/products/three-axis-hall-effect-magnetometer-thm1176/

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