

# Three -Axis Magnetometer



## General Description

The three axis fluxgate magnetometer consists of a fluxgate sensor, a data acquisition module, a host computer, and host computer software. The portable power supply or voltage-stabilized power supply provides power to data acquisition module and sensor. Analog signal, output by the magnetic sensor, is acquired by acquisition module in real time and converted by high speed AD converter. After conversion, the signal is transmitted to host computer through cable or TCP protocol and can be displayed in two ways with the assistance of software: dimensional waveform or data. Another advantage of the system is that it allows the user to save generated data for later use.

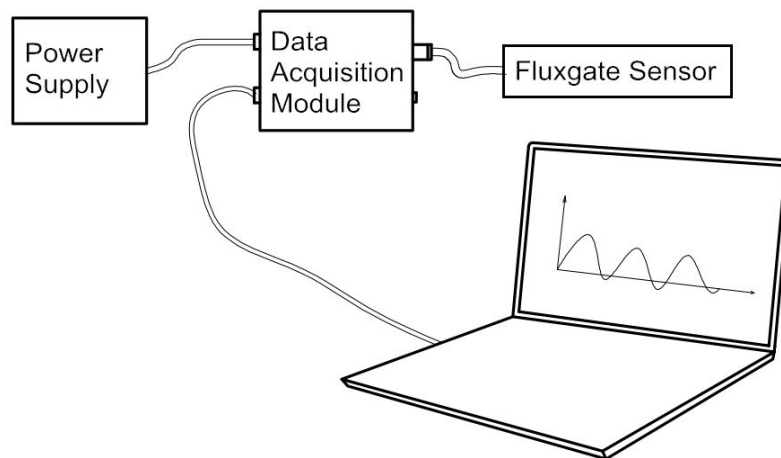
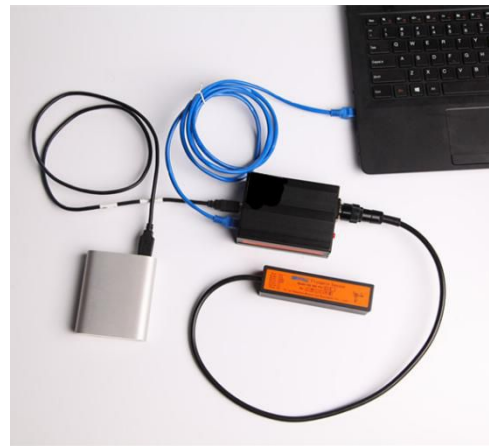


Figure 1. A set of magnetometer

## Key System Specifications

### Performance

Model	HS-PC-MM3LN	HS-PC-MM3C
Measuring Range	$\pm 100000\text{nT}$	$\pm 100000\text{nT}$
Linearity	0.01% FS	0.02% FS
Precision	0.01%+Reading	0.01%+Reading
Measuring Precision	0.1nT	1nT
Sampling Frequency	200Hz	200Hz

### Electrical Parameter

Operation Voltage		+ 5VDC
Power Supply	Portable Power Supply	Work for 9.5 hours after full charge
	Regulated Power Supply	Work continuously
Working Current		$\leq 700\text{mA}$
Power consumption		$\approx 4\text{W}$ (excluding host computer)
Water proof Grade	Probe	IP68
	Power Supply	Non water proof
	Data Acquisition Module	Non water proof
	Computer	Non water proof
Applicable Operation Temperature		$-25^{\circ}\text{C} \sim 80^{\circ}\text{C}$ ( $-13^{\circ}\text{F} \sim 176^{\circ}\text{F}$ )

## Mechanical Parameter

Size	Sensor	30*30*110mm
	Data Acquisition Module	35*76*100mm
	Computer	14"
Weight	Sensor	160g
	Data Acquisition Module	252g

## Function and Mode

Unit	nT/Gs/mOe
Measuring Mode	Absolute value measurement
	Relative value measurement
Data Transmitting	Data Transmitting by Cable(TCP/IP protocol)
Data Saving	Text format
	Binary format
Display	Numerical display
	Two dimensional waveform display
Zero Setting	If sensor is working in zero magnetic environment, magnetic shield is recommended.

## Application Domain

- Spatial magnetic field Measurement
- Environmental magnetic field monitoring
- Shielding effect testing
- Magnetic field characteristics identification
- Multidimensional magnetic field description
- Alternating-current magnetic field measurement

- Airborne magnetic inspection
- Remanence detection

## Main Hardware

### Data Acquisition Module

Size: 35mm×76mm×100mm

Functional Interface: Ethernet interface, USB-B interface, Mini0-USB interface,  
Magnetic sensor interface

Light: Power indication, Status indication

Switch setting: Reset switch



Figure 2. Data Acquisition Module

### Fluxgate Sensor



Figure 3. Fluxgate Sensor

## Parameters

Magnetometer Model		HS-PC-MM3LN		HS-PC-MM3C	
Fluxgate Sensor Model		HS-MS-FG3LN-100		HS-MS-FG3C-100	
Parameter of Fluxgate Sensor	Measuring Precision	0.1nT		1nT	
	Measuring Range	±100000nT		±100000nT	
	Bandwidth	DC~1KHz (0.3dB)		DC~1KHz (0.3dB)	
	Linearity	≤0.01% FS		≤0.02% FS	
	Orthogonality	≤±0.2°		≤±0.5°	
	Noise	Frequency Domain Noise	≤6pT/rmsVHz@1Hz	Time Domain Noise	≤1nT RMS @ 10 times per second
	Time Domain Noise	≤ 0.1nT RMS @ 10 times per second			

## Our Main Customers



## Contact Details

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