

# Proton Precession Magnetometer

This magnetometer measures the Earth's magnetic field using the proton precession principle. It is designed for geophysical exploration, geological surveys, and mineral prospecting.



## Overview

### High-Precision Geomagnetic Measurement

The DSHM-3 proton magnetic detector is a highly sensitive instrument designed for measuring weak magnetic fields based on the principle of proton magnetic moment precession. It is an essential tool for total geomagnetic field observation, supporting applications in geological exploration, oil and gas surveying, metallurgy, and coal mining. Additionally, it is suitable for surface base station navigation, ocean magnetic measurement, and geomagnetic observatory monitoring for earthquake prediction.

## Measurement Performance

### Measurement Range

**30000 nT**

Lower Limit

**70000 nT**

Upper Limit

### Allowed Gradient

Gradient Type	Tolerance
Vertical	d2000nT/m
Horizontal	d1500nT/m

**Resolution** 0.1 nT

**Precision** ±1nT

## Technical Specifications

### Data Storage Capacity

- 4005 readings (daily variation method)
- 2670 readings (manual method)

**Power Source** Lithium battery, 15.5V~16.8V/3.8Ah

**Continuous Operation** 10 hours

**LCD Display** 192\*64 lattice

## Physical Dimensions

Mainframe Dimensions	210 * 80 * 200 mm
Mainframe Weight	2 kg
Probe Dimensions	72 * 140mm
Probe Weight	1 kg

## Environmental Conditions

Operating Temperature	-20°C to +50°C
Operating Humidity	90% (at 30°C)