

**New!****FLUXGATE SENSORS**

MAG43-3D Fluxgate Borehole Probe

3D-1M/3D-3M Fluxgate Surface Sensors

The MAG43-3D Fluxgate Borehole Probe and 3D-1M and 3D-3M Fluxgate Surface Sensors provide direct measurement of three-dimensional secondary magnetic fields from currents induced in subsurface targets. Magnetic field measurements are especially useful for the detection and characterization of highly conductive sulphide targets exhibiting very long time-constant decays: whereas only limited voltage may be generated in a conventional induction coil, the strong magnetic field components from these targets are readily measured by fluxgate sensors.

In conjunction with components of a PROTEM TDEM system, boreholes as deep as 2 km can be surveyed with the MAG43-3D using a 500 x 500 m transmitter loop; in developed mines, the transmitter loop can be laid out in underground workings. The probe has three low-noise fluxgate sensors which measure orthogonal components of a secondary magnetic field. Along the hole, spatial resolution as fine as 1 m can be obtained.

The MAG43-3D is available separately or as a complete borehole system with cable, winch, dummy probe, test cable and retrieval tools.

For exploration from surface, the 3D-1M and 3D-3M sensors collect high quality three-dimensional data sequentially and simultaneously, respectively. Small and lightweight, the surface sensors allow for rapid and efficient acquisition of survey data.





FLUXGATE SENSORS

3D-3M THREE-COMPONENT FLUXGATE SURFACE SENSOR

TECHNICAL SPECIFICATIONS

Sensing: Three orthogonal low noise
Fluxgate Sensors

Measuring range: $\pm 100 \mu\text{T}$

Bandwidth: 3 kHz for all 3 sensors

Power requirement: $\pm 8 \text{ V}$ to $\pm 12 \text{ V} / \pm 40 \text{ mA}$

Operating Temperature: -40°C to $+60^\circ\text{C}$

Weight: 2.3 kg

Size: 33 x 28 x 18 cm

MAG43-3D THREE-COMPONENT FLUXGATE BOREHOLE PROBE

TECHNICAL SPECIFICATIONS

1.A BOREHOLE PROBE

Components: Sensor; Preamplifier-Battery Pack;
Cable Head

Sensing: Three orthogonal low noise Fluxgate
Sensors (One axial and two radial)

Measuring range: $\pm 100 \mu\text{T}$

Overall Length: 138 cm

Maximum Diameter: 3.8 cm

Weight: 4.85 kg incl. pre-amp

Operating Temperature: -30°C to $+80^\circ\text{C}$

Sensor-Bandwidth 3 kHz for all sensors

Probe Rotation Correction: Two orthogonal tilt meters
with range from $\pm 1^\circ$ to $\pm 80^\circ$ (from vertical)

Battery: Rechargeable nickel cadmium battery sealed
pack for 20 hrs continuous operation

1.B CONTROL BOX

Description:

- Channel selection
- Impedance and Gain matching network between probe and PROTEM receiver
- Preamplifier battery charging
- Preamplifier testing
- VLF filter

Size: 22 x 13.5 x 8 cm

Weight: 1.5 kg

2. CABLE

Type: Two-conductor shielded; polyurethane jacket;
Kevlar strength membrane

Diameter: 5.6 mm

Weight: 40 kg/km

Length: Standard 1000 m
Optional 2000 m

Breaking Strength: 500 kg

3. WINCH

Drum Capacity: 2000 m

Size: 91.4 x 67.3 x 64.3 cm

Weight: 52.3 kg

Mechanical Counter Resolution: 0.1 m

Operation Mode: Manual or motorized