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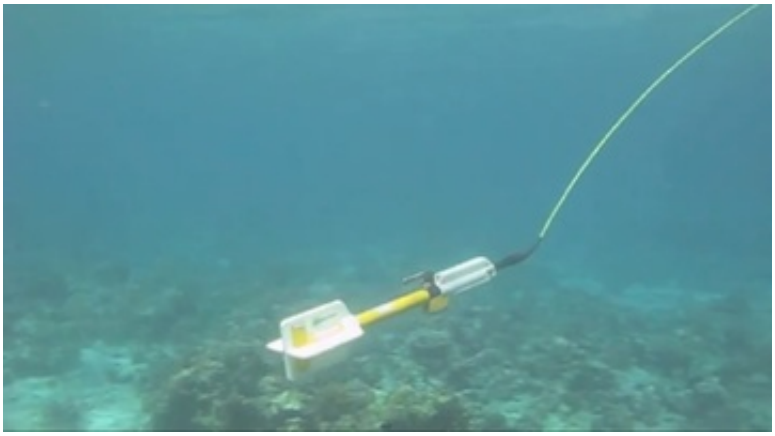
G-882 Data Sheet

The G-882 is the industry standard marine magnetometer. Very high resolution Caesium Vapour performance has been incorporated onto a low cost, small size, system for professional surveys in shallow water. High sensitivity at fast sample rates of total field measurements are maintained for all applications.



Magnetometer Survey at Nampula, Republic of Mozambique.Courtesy of © Arqueonautas Worldwide.

Features

- Streamlined design for tow safety
- Quick conversion from CG tow to nose tow, easy carry handles
- Highest Sensitivity in the industry, 0.004nT/root Hz
- Digital output, can be logged with MagLog™ software.
- Low weight, can be man handled
- New internal CM221 counter module, provides flash memory for storage of default parameter set by user.
- New Echosounder/altimeter option
- Zero phase lag on data
- True amplitudes reported
- Can be combined into gradient arrays, transverse, vertical or longitudinal
- Data from multiple magnetometers can easily be concatenated into a single data stream

The fast sample rate and high sensitivity design of the G-882 lends itself to configuring into transverse gradient arrays. When taking measurement of a magnetic gradient component it is critical that the sensors measure both simultaneously and have the ability to measure different field values. If when passing over a target, the same field value is measured by both sensors at any point in time, then that gradient measurement is of little or no value in target discrimination, this can occur if;

- The gradient array is too far away from the target, i.e. is too high in the water column.
- The magnetometers being used have insufficient sensitivity to be able to discriminate the small changes in field value over the width of the array.
- The gradiometer array is too small, so there is too little change in the magnetic field value over the width of the array for the magnetometers used to simultaneously measure a different field value.

The G-882 TVG frame ticks all of the boxes to help counter all 3 issues by being of a stable and hydro dynamic design to allow deeper towing, nearer to the sea bed where magnetic field gradients are greatest.

In shallow waters the G-882 can be deployed from a software Kevlar tow cable making deployment fast and simple. For greater deployment depths, or if deployed as an array on a TVG frame, a telemetry system can be utilised to run

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the system off a winch and wireline.

Product Dimensions

Physical	Dimensions (L x W x H)	Weight
(instrument only)	175cm x 28cm x 28cm	18kg

Technical Specifications

Measured Quantity:	Total Magnetic field in nT typical sensitivity 0.02nT at 0.1sec sample interva
Operating Principle:	Self Oscillating split beam Optically pumped Caesium Vapour cell (non-radioactive)
Heading Error:	Less than +/- 1nT over entire 360° range
Absolute Accuracy:	Less than 3nT throughout range
Output:	RS232 @ 1200 to 19200 baud (other output rates on request)
Power Supply:	24 to 32 VDC
Operating Temperature:	-35°C to + 50°C
Operating Range:	20,000nT to 100,000nT
Pressure Rating:	4000 psi (approx 2600 metres)
Operating Zones:	The earth's field vector should be at an angle of greater than 6° away from the sensor's equator and greater than 6° away from the sensor's long axis. Automatic hemisphere switching

Videos

https://www.youtube.com/watch?feature=player_embedded&v=70TRacT5RgI
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