

Explorer

Mini Marine Magnetometer



7 lbs, soaking wet.

The Explorer is the world's smallest, lightest and most efficient high-sensitivity total field magnetometer. That's a lot of punch for a mag that packs so light.

Explorer and a toothbrush will get you a day's worth of good data. Ideal for shallow water, small boats, and small budgets, it can be used without restrictions anywhere in the world. Its high sensitivity, unmatched accuracy and durability make Explorer the perfect mini marine mag, with large-scale features.

Less is More

Explorer is the smallest, lightest total field mag out there. At a mere 3kgs (7 lbs) its convenience beats the heavy-weights, fitting neatly in all those hard to reach places from your boat, to the survey area, to your budget.

Highly Sensitive

What Explorer lacks in size, it does not lack in sensitivity. Explorer delivers high-resolution output at 0.02nT. That's on par with optically pumped sensors, and more sensitive than any proton sensors.

Efficient

Explorer was designed with unsurpassed power efficiency, a maximum of 2W. That means dependable, low power consumption, and the convenience of leaving your generator at home when you only need lightweight alkaline batteries. Optional is a 24V Universal AC power supply.

Smarter Data

Explorer uses the smartest data technology available to marine magnetometers. Its absolute accuracy, 0.1nT, is shared only with Marine Magnetic's SeaSPY model.

Anytime. Anyplace

No matter where you are in the world, or what direction you are surveying in, Explorer's omnidirectional sensor has your back. It collects accurate data every single time. Unlike optically pumped

magnetometers that require orientation specific to your location's magnetic field, Explorer's omnidirectional sensor is pre-optimized for hassle-free data collection.

Quick Start

Explorer's sensors work immediately upon start-up. No temperature stabilization is required, so that you're always ready to go. It also means Explorer works as well in cold arctic waters, as it does in the tropics.

Maintenance-Free Durability

Explorer sensors will always be as hassle-free as the day you first got it. They differ from optically pumped mag sensors that degrade with time, lose data quality, and contain consumable parts that need replacing. Instead, Explorer's sensors are maintenance-free, durable, and yield consistently accurate data.

Plug and Play

Explorer plays well with others. It is compatible with leading side scans, AUVs, ROVs and deep tow platforms. Behind these platforms Explorer can be towed to 6000m.

Overhauser Effect

Using Marine Magnetics' stable Overhauser sensor – the only one of its kind – the Explorer's magnetometer measures the ambient magnetic field using a specialized branch of Nuclear Resonance technology, applied specifically to hydrogen nuclei.

Standard Hardware

- 300m depth rated Explorer towfish
- Tow cable (length specified by customer)
- Power isolator
- RS232 cable
- Battery clip cables
- SeaLINK software

Options Available

- Pressure sensor
- Side Scan Sonar integration
- Additional tow cable
- Tow cable termination kit
- Custom reusable shipping case
- Metal tow cable reel – hand winch
- RS-232 Extension cable
- Depth options: 1000m, 3000m and 6000m
- Universal input 24VDC output power supply

Specifications

Performance

Operating Zones **NO RESTRICTIONS**
Explorer will perform exactly according to spec throughout the entire range.

Absolute Accuracy	0.1nT
Sensor Sensitivity	0.02nT
Counter Sensitivity	0.001nT
Resolution	0.001nT
Dead Zone	NONE
Temperature Drift	NONE
Power Consumption	2 W
Timebase stability	1ppm, -45°C to +60°C
Range	18,000nT to 120,000nT
Gradient Tolerance	Over 10,000nT/m
Sampling Range	4Hz – 0.1Hz
External Trigger	By RS-232
Communications	RS-232, 9600bps
Power Supply	9VDC - 40VDC or 100 - 240VAC
Operating Temperature	-45°C to +60°C
Temperature Sensor	-45°C to +60°C, 0.1 step

Towfish Dimensions

Towfish Length	86 cm (33.75 inches)
Towfish Diameter	6 cm (2.375 inches)
Towfish Weight in Air	3 kgs (7 lbs)
Towfish Weight in Water	1.2 kg (2.6 lbs)

Tow Cable Dimensions

Conductors	Four + shield
Strength Member	Kevlar
Breaking Strength	2,500 kg (5,500 lbs)
Outer Diameter	1 cm (0.4 inches)
Bending Diameter	16.5 cm (6.5 inches)
Weight in Air	122 g/m (82 lb/1000 ft)
Weight in Water	34 g/m (23 lb/1000 ft)
Cable Termination	Field Replaceable

“Years of survey experience have taught me that both your SeaSPY and Explorer magnetometers are the best on the market today. In the harsh conditions associated with remote sensing surveys your magnetometers have never let me down, not once.

Anytime anyone asks me to recommend a magnetometer the answer is always ‘Marine Magnetics’.

Thanks for making my job that much easier.”

*Michael Krivor
Search Inc.*

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