

TRANSMITTING HEADING DEVICES / EMC SYSTEM

MD53A/B ELECTROMAGNETIC COMPASS

SKU: F053006

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FEATURES

- **The independent compass component in a Marine Data Electro-Magnetic Compass System (EMC)**
- **Directly senses the Earth's Magnetic Field**
- **Generates Digital NMEA 0183 Heading Data**
- **Does not require a ship's host magnetic compass**
- **An alternative or a backup to a gyro**
- **Weatherproof marinised housing**

OVERVIEW

The MD53A/B is an Earth's Field Electro-Magnetic Compass which directly senses the Earth's magnetic field. It has no moving parts and does not require a host magnetic compass. In this way, the MD53A/B forms the sensing element of a solid-state Electro Magnetic Compass (EMC) system – an alternative or a backup to a Gyro system.

The weatherproof MD53A/B provides digital NMEA 0183 heading data (HDT, HDG, HDM) when used with the MD97CSP Compass Sensor Processor. Vessel heading may be transmitted to any location on the vessel and displayed with a Marine Data compass repeater. Magnetic corrections and heading fluctuation damping are applied with the MD71THD Variation and Deviation Corrector.

Constructed from robust aluminium alloy and finished in Window Grey (RAL7040) Semi-gloss Powder Coat, to complement existing marine navigation equipment.

The MD53A/B Electro-Magnetic Compass from Marine Data: Flexible in application, easy to install and simple to maintain.

APPLICATIONS

- Provides the source of NMEA 0183 Digital Heading Data as part of a Marine Data Transmitting Heading Device (THD) System
- An alternative or backup to a gyro compass as source of Heading

RELATED PRODUCTS & ACCESSORIES

MD71EMC - Electro-Magnetic Compass System
MD97CSP - Compass Sensor Processor
MD71THD - Control & Display Head Unit for TMC & EMC Systems

SPECIFICATIONS

PHYSICAL	
Weight:	1.0 kg
Dimensions:	H 166 mm; W 142 mm; D 123 mm
Mounting:	Bulkhead, surface, or deck head
Connections:	2.5 m 5-core screened captive cable
Construction:	Aluminium alloy housing and bracket
Finish:	Window Grey (RAL7040) Semi-gloss Powder Coat

ELECTRICAL	
Power Supply:	Power is supplied by the Marine Data MD97CSP Compass Sensor Processor; 10 V; 400 - 500 Hz
Sensor Type:	Magnetic Fluxgate coil, 3 phase
Data Input:	Earth's Magnetic Field
Data Output:	3 phase positional signal

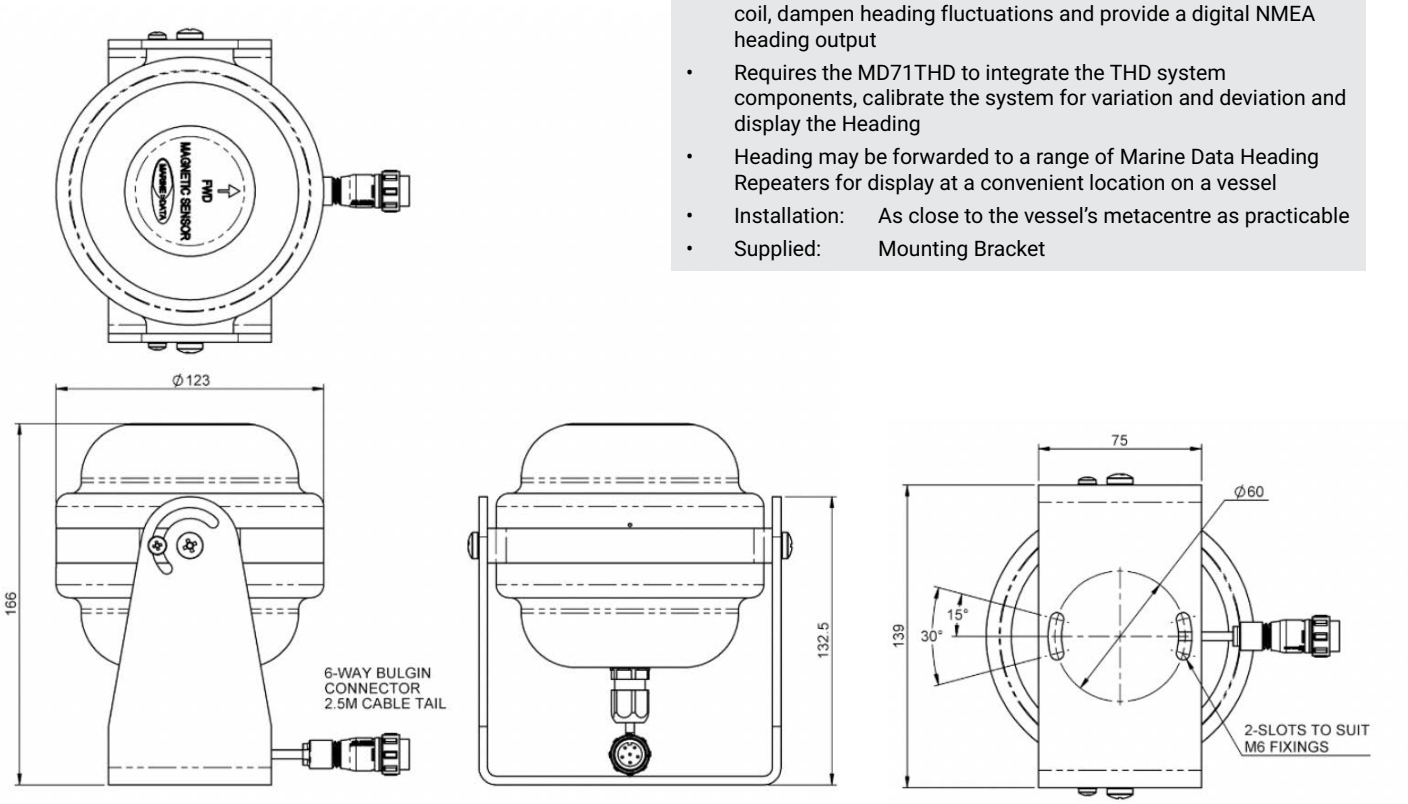
OPERATIONAL	
Performance:	± 1° (static) accuracy
Follow-Up Rate:	Instantaneous (limited by the processor unit)
Display:	None, requires an external display (e.g. a Marine Data Compass Repeater or the MD71THD Control & Display Unit)
Magnetic Flux Density:	Operates from 0.12 to 0.38 Gauss (CGS) (12x10-6 to 38x10-6 Tesla)
MTBF:	>30,000 Hours

ENVIRONMENTAL	
IEC 60945 Equipment Category:	Exposed Area
Operating temp:	-15°C to +55°C
RoHS:	Exempt

APPROVALS	
Complies with:	IEC 60945

ADDITIONAL

- Normally supplied as part of the MD71EMC Transmitting Magnetic Compass System (Electro-magnetic)
- Requires the MD97CSP Compass Sensor Processor to drive the coil, dampen heading fluctuations and provide a digital NMEA heading output
- Requires the MD71THD to integrate the THD system components, calibrate the system for variation and deviation and display the Heading
- Heading may be forwarded to a range of Marine Data Heading Repeaters for display at a convenient location on a vessel
- Installation: As close to the vessel's metacentre as practicable
- Supplied: Mounting Bracket



All dimensions in mm

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