

COMPASS SENSOR INTERFACE

MD97/8/x

- Generates digital NMEA 0183 heading data from a ship's host Magnetic Compass or from the MARINE DATA™ Electromagnetic Compass
- Two versions to interface with the MARINE DATA™ Magnetic Compass Sensors MD52A¹ & MD53A²
- May be programmed for Earth's local magnetic variation and ship's magnetic deviation
- Easily configured with the MARINE DATA™ MD93/8 Variation & Deviation Corrector
- Incorporates a heading stabilisation filter to stabilise fluctuating heading data
- Capable of producing two Furuno™ compatible digital outputs
- Rugged, marinised aluminium alloy housing



The MD97/8/x Compass Sensor Interface from Marine Data.

¹MD52A senses a ship's magnetic compass ²MD53A directly senses the magnetic field of the Earth

MARINE DATA

...navigation with innovation

SPECIFICATIONS (with options)

Physical

- Weight: 0.45kg
- Dimensions: 76mm overall width; 165mm overall length; 38mm overall height
- Mounting: Bulkhead mounted
- Connections (with options):
 - 5 way socket for compass sensor (*sensor available separately*)
 - 4 way socket for power and NMEA 0183 RS422 data output
 - 7 way plug for MARINE DATA MD93/8 variation corrector
 - 7 way socket for 2 x Furuno™ compatible digital outputs (*factory-fitted option*)
- Construction: Aluminium alloy enclosure
- Finish: Alochrome™ 1200; painted black-grey RAL 7021

Electrical

- Power Supply: 24V DC nominal (18V - 31V DC)
- Power consumption (when connected to compass sensor): 1.5W without MD93/8; 3.5W with MD93/8
- Data Input:
 - (1) MD52A Ship's Compass Sensor (fluxgate coil); 10V, 400-500Hz
 - (2) MD53A Electromagnetic Compass (Earth's magnetic field sensor; fluxgate coil); 10V, 400-500Hz
 - (3) MD93/8 NMEA 0183 Variation and Deviation Corrector
- Data Output:

Digital RS422 NMEA 0183; 1 start bit; 8 data bits; no parity; 2 stop bits Baud rate: 4800 (*other speeds available as factory options*); heading data HDM, HDT & HDG (Variation & Deviation are output on data string HDG)

Operational

- Performance with MD52A fitted: $\pm 1.0^\circ$ accuracy with respect to the compass card. Overall performance is constrained by the vessel's magnetic compass operating in its binnacle
- Performance with MD53A fitted: $\pm 1.0^\circ$ accuracy to Earth's magnetic field (in extreme case, $\pm 3.0^\circ$)

- Update rate: 3Hz (*other update rates available as factory options*)
- Display: None. The required configuration accessory *MD93/8 Variation & Deviation Corrector* has an onboard 16 character alphanumeric LCD display which can show Magnetic Heading, True Heading (corrected magnetic heading) and Variation

Additional Information

- The MARINE DATA™ MD97/8 is available in two models:
 - (1) MD97/8/52 to interface with the MARINE DATA™ MD52A Ship's Compass Sensor
 - (2) MD97/8/53 to interface with the MARINE DATA™ MD53A Electromagnetic Compass
- The MD97/8 is designed to accept a manual keypad input from the MARINE DATA™ MD93/8 variation corrector. This allows the magnetic heading to be corrected for:
 - (1) local magnetic variation and
 - (2) the magnetic deviation characteristics of the vessel
- The MARINE DATA™ MD93/8 also allows the heading stabilisation filter to be adjusted in accordance with vessel dynamic performance
- The MD93/8 Variation and Deviation Corrector may be connected directly to the MD97/8 Compass Sensor Interface or it may optionally be connected using the MARINE DATA™ MD94/8 Signal Junction Box and NMEA Buffer
- Independently tested to IEC60945: 2002 by TÜV Product Service Ltd.



...navigation with innovation

MARINE DATA, Vittlefields Technology Centre, Forest Road, NEWPORT, Isle of Wight, PO30 4LY, United Kingdom
tel: +44 (0)1983 822180 fax: +44 (0)1983 822181 email: sales@marine-data.co.uk web: www.marine-data.co.uk

MARINE DATA reserves the right to make changes to its products and specifications without notice. ©MARINE DATA 2010 ver01 rev07



MD97/8/x

