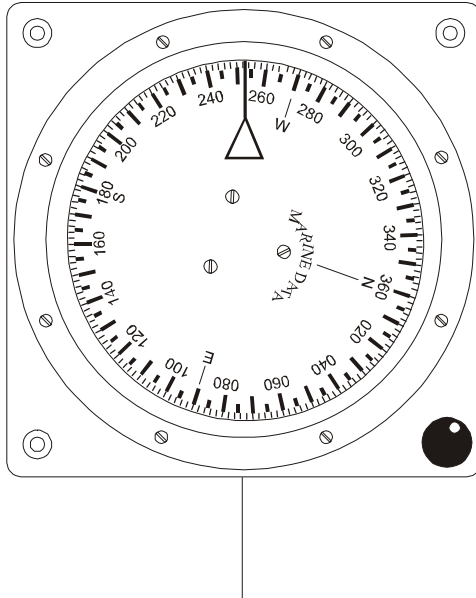


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SHIPS SUPPLY AND NMEA DATA

Typical system application.

- **Introduction**

The MD12/8 is a compact dial repeater suitable for console mounting where space is limited. The unit has an easily to read dial marked to 2 degrees, white on black background.

The MD12/8 is operated from a digital input (NMEA) and supply of 24VDC 24,

- **Operators Controls**

There is provision a rotary dimmer control on the front of the unit.

To adjust the illumination level of the display on the MD12 Increase clockwise. To decrease rotate control counter clockwise.

- Installation.**

Tools required : basic hand tools; D.V.M; megger

Step	Description	Remarks
1	Inspect the packing for contents.	Note any damage or exclusions.
2	Inspect the mounting position for suitable clearance and cable access.	Panel mounting option. (see specification for detail.)
3	Mechanically install the MD12/8.	
4	Locate all incoming cables and terminate them .	Ensure all incoming supply and signal cables are either suitably isolated and connected or bonded to ships earth as per connection table below.
5	Installation is complete.	Do not apply power.

MD12/8 Connection tables

Table 1 Connections Power and signal.

Incoming systems ident*	Description	Tailed core colour
	+24VDC,	Red
	Supply return	Black
	TDA	Green
	TDB	Blue

- System Commissioning**

Step	Description	Remarks
1	Ensure the installation is satisfactory.	
2	Apply system and signal power(+24V DC) to the repeater.	Power is derived from a suitable ships supply.
3	Upon applying power the dial will rotate clockwise to the '000' mark then provided there is valid data present on the data lines to the current heading. Whilst zeroing the illumination will flash. If no valid data is present or the ships heading data is lost the repeaters illumination will flash and the dial will rotate +/- 35 degrees about the last known good heading.	If the repeater fails to respond to ships heading Check that the digital word is correct The on start up the repeater automatically selects in ascending order of priority the following valid data sentence types HDT, HDG and HDM. Also check the data lines do not require swapping.
4	Slew the ships compass.	Ensure 12/8 follows correctly.
5	Fill out and return commissioning form.	Send copy to MDL failure to do so may affect warranty conditions.

- **Maintenance and fault finding.**

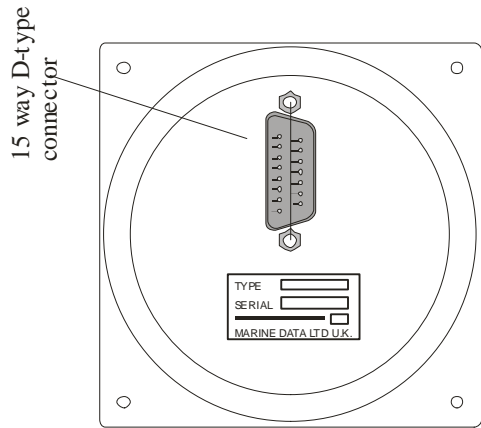
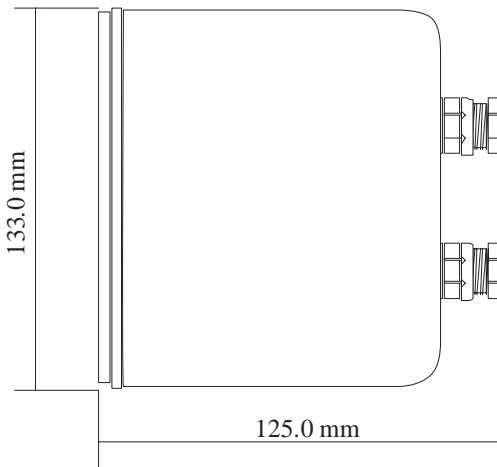
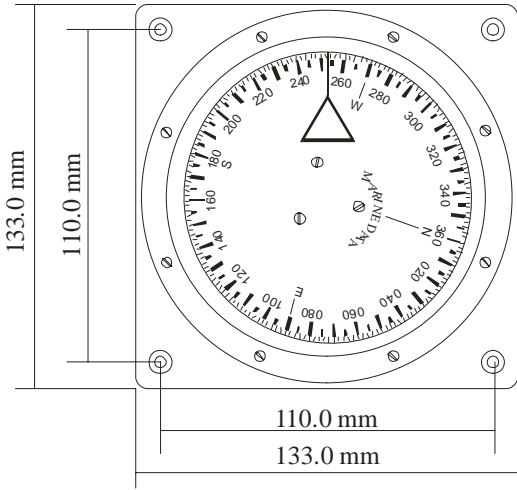
No maintenance is required beyond wiping dust from the MD12/8 periodically.

Symptom	Probable fault	Remedy
MD12/8 does not operate.	No power.	Check incoming power supply
Lighting not visible	Damaged pcb.	Return for repair
Does not respond to heading input.	Incorrect wiring does TDA and TDB require swapping? Or incorrect sentence being sent, or incorrect Baud rate.	Check using a suitable Data test meter.

- **Available Finished Items and Spare Parts**

In the Event that spare parts are needed please contact your dealer or MDL direct.

SPECIFICATION FOR MD12/8



Physical

- Weight

Repeater	1 Kg.
Control Box	2.0 Kgs.
Repeater + Dimmer Panel	
- Mounting
- Finish
- Connections
- Construction

Electrical

- Power Supply
- Data Input
- Data Outputs

24V DC (300 mA)
 NMEA 4800 Baud,
 all of the following sentences:-
 \$xxHDT,XXX.X,T<CR><LF>
 \$xxHDG,XXX.X,<CR><LF>
 \$xxHDM,XXX.X,M<CR><LF>
 None.

Operational

- Performance
- Follow up rate
- Display Resolution

$\pm 1/10^\circ$ resolution
 $> 12^\circ/\text{sec}$
 Dial marked to 2° Black on White numbering. Graduations at 2° , 5° , and 10° .

Environmental

- Rating
- Temperature

IP65
 -10°C to $+70^\circ\text{C}$

MARINE DATA RESERVES THE RIGHT TO MAKE CHANGES TO ITS PRODUCTS AND SPECIFICATIONS WITHOUT NOTICE