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### • Introduction

The MD 69/8 is a twin speed, digital input bearing repeater. It accepts a digital input of RS422 type. It is powered from 24Vdc ships supply. power consumption is low typically 10 watts.

The display gives a resolution to one sixth of a degree and is accurate to one tenth of a degree. The display is visible to three meters and consists of an electromechanical display graduated in degrees(0-360), and an inner display graduated to sixths of a degree resolving 1-10 degrees. A lubber line is provided at '000'. The whole assembly is mounted in an aluminium bowl, suspended in a gimballed mounting.

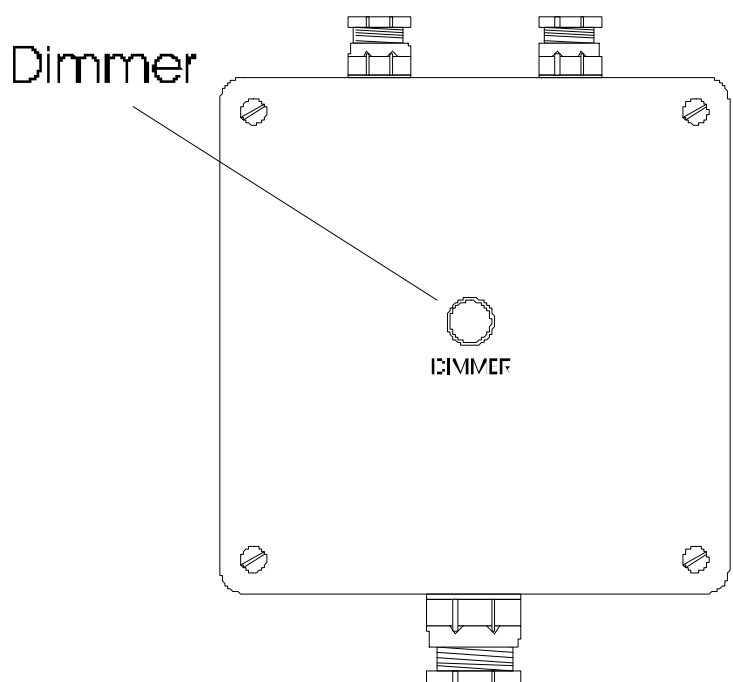
A junction box is provided on an angle bracket to which the gimballed assembly fixes to. This provides the interface to the display and the ships cabling via terminal blocks. The junction box also houses the push button which operates the cyclic dimmer control.

The repeater can either be Pelorus or bulkhead mounted. The internal components are housed in a robust splashproof aluminium enclosure.

A suitable Thompson pattern azimuth circle may be used in conjunction with the bearing repeater to take celestial and terrestrial bearings.

### Operators Controls

There is a single control located on the lid of the junction box it controls the illumination level. The lighting is cyclic. To increase or decrease the illumination the push button is depressed and held until the desired level is reached the the button is released.

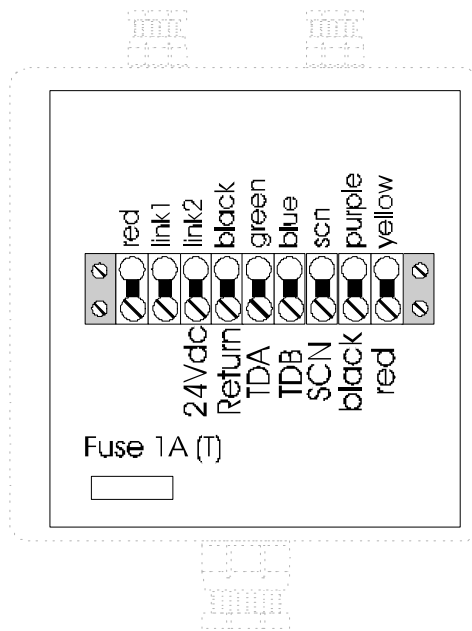


• **Installation.**

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.	Bulkhead or panel mounting option. (see specification for detail.)
3	Physically install the MD69/8.	
4	Remove Fixing Screws from junction box lid.	The wiring barrier strip is exposed.
5	Locate all incoming cables and terminate them .	Ensure all incoming supply and signal cables are either suitably isolated from each other and ships chassis and connected or bonded to ships earth as per connection table below.
6	Physical installation is complete.	Do not apply power.

wiring to repeater



wiring to ship

**MD 69/8 connection details**

**Table 1** Connections Power and signal.

Incoming systems cable ident*	Description	Terminal
	24vdc	24vdc +
	dc return	return
	TDA (data positive)	TDA
	TDB (data negitave)	TDB
	screen	SCN

• **System Commissioning**

Step	Description	Remarks
1	Ensure the installation is satisfactory.	
2	Apply system and signal power(24V), to the repeater.	The dial will align itself and settle at the transmitted heading.
3	Slew the ships compass.	Ensure MD69/8 follows correctly.
4	Fill out and return the commissioning form.	Send a copy to MDL. Failure to do so may affect warranty conditions.

\* left intentionally blank to be filled out by installer.

- **Maintenance and fault finding.**

No maintenance is required beyond wiping dust from the MD69/8 periodically.

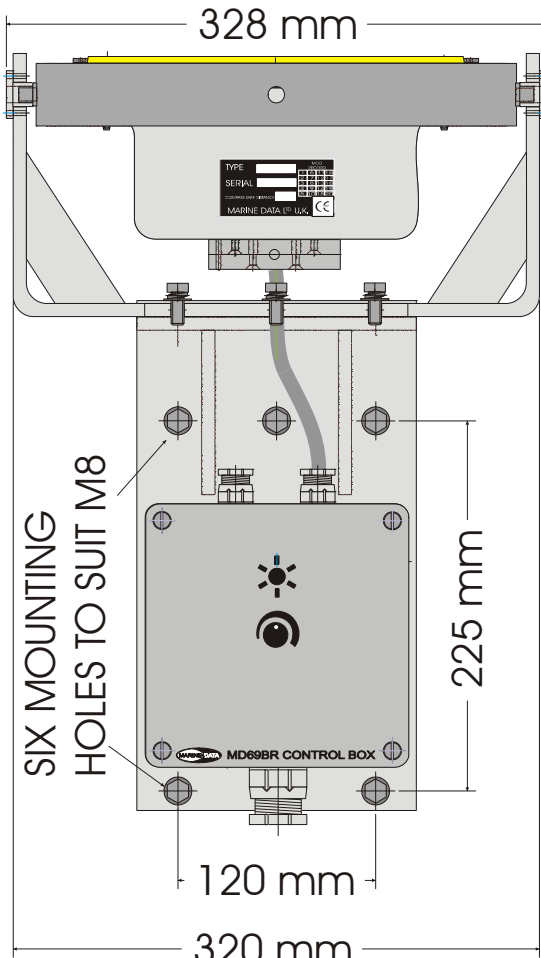
Symptom	Probable fault	Remedy
MD69/8 does not operate.	No power.	Check incoming power supply
Lighting not visible	Damage to internal lamp, or push button switch.	Replace lamp, potentiometer or both.
Repeater does not respond to digital data in put	Data positive and negative swapped. Not responding to digital word	Swap TDA and TDB. Check digital word to repeater is correct.

- **Available Finished Items and Spare Parts**

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

● **SPECIFICATION FOR MD69/8**

● **Physical**



● **Electrical**

- Weight 10 Kg
- Mounting Bulkhead
- Finish Black/Grey
- Connections 1 X Internal Barrier Strip via junction box.
- Construction Aluminium Enclosure

- Power Supply 24, DC (10 watts) derived from ships supply.
- Data Input Digital RS422 Nema 0183 sentence '\$XXHDT,XXX.X,T<CR> <LF>.
- Data Outputs None.

● **Operational**

- Performance  $\pm 1/3^0$  Accuracy
- Follow up rate  $12^0$ /sec

● **Environmental**

- Rating IP65
- Temperature  $-10^0$  C to  $+70^0$  C

