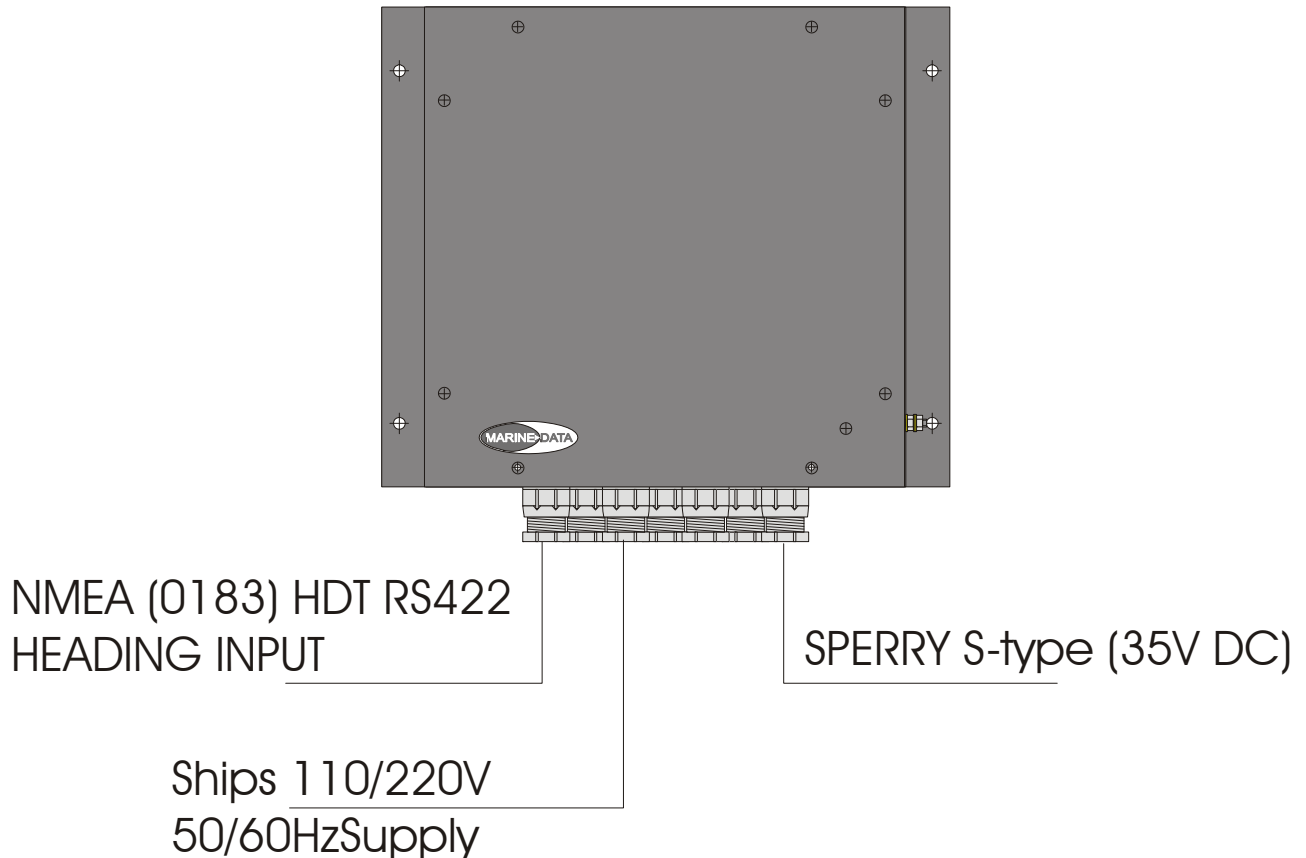


MD42/8/ST-35

NMEA TO STEP RETRANSMISSION UNIT



System application

- **Introduction**

This unit provides a six step per one degree, 35V DC common positive, output from an applied digital RS422 NMEA (0183) HDT sentence. Other available output voltages are 24 50 and 70V. Common positive or common negative systems are available. The unit is entirely solid state and contains no moving parts. Connections are made via screw terminals. Seven cable glands can accommodate cable diameter up to 13mm.

The retransmission unit is based on Z80 microprocessor architecture, which processes the digital input to generate a six step per one-degree output. The output stages are in the open collector configuration and are fitted with pull up resistors. A linear power supply provides DC to supply the output with a maximum of 5A, 1.6A. The unit is fuse protected. The power supply also supplies the microprocessor and interface circuits with their supplies.

- **Installation For Digital or step Input.**

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 mounting option. (see specification for detail.)
3	Locate signal and power connections	The MD42 is designed to run on a 110/220V a 35V S-Type step output. Isolation and earthing requirements should comply with Lloyd's rules and regs. VI para 1.13.2
4	Mechanically install the MD42	
5	Identify ships wire functions and remove lid of unit	
6	Wire as indicated below and commission	

Figure 1 lid removed to expose connector panel

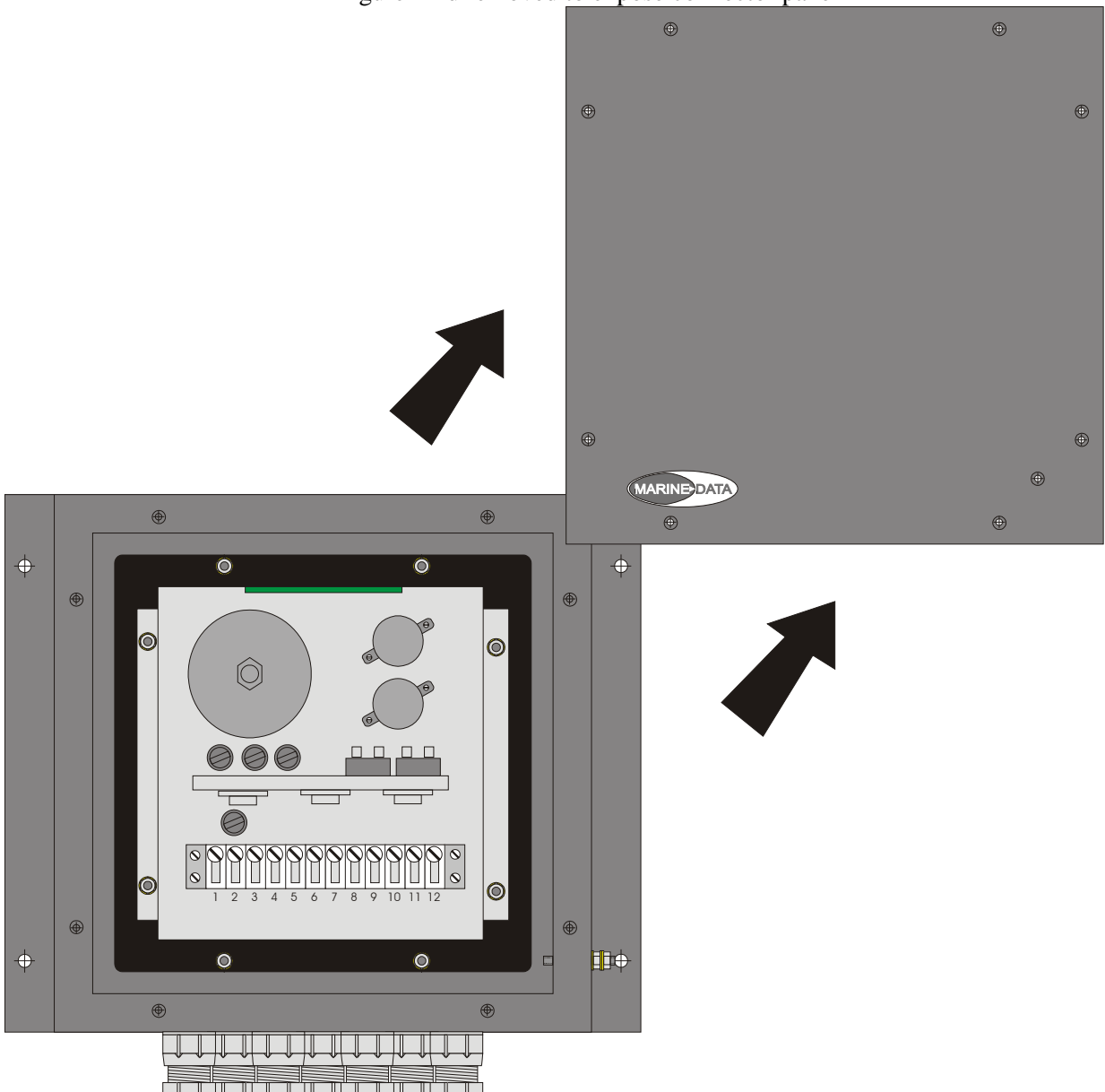
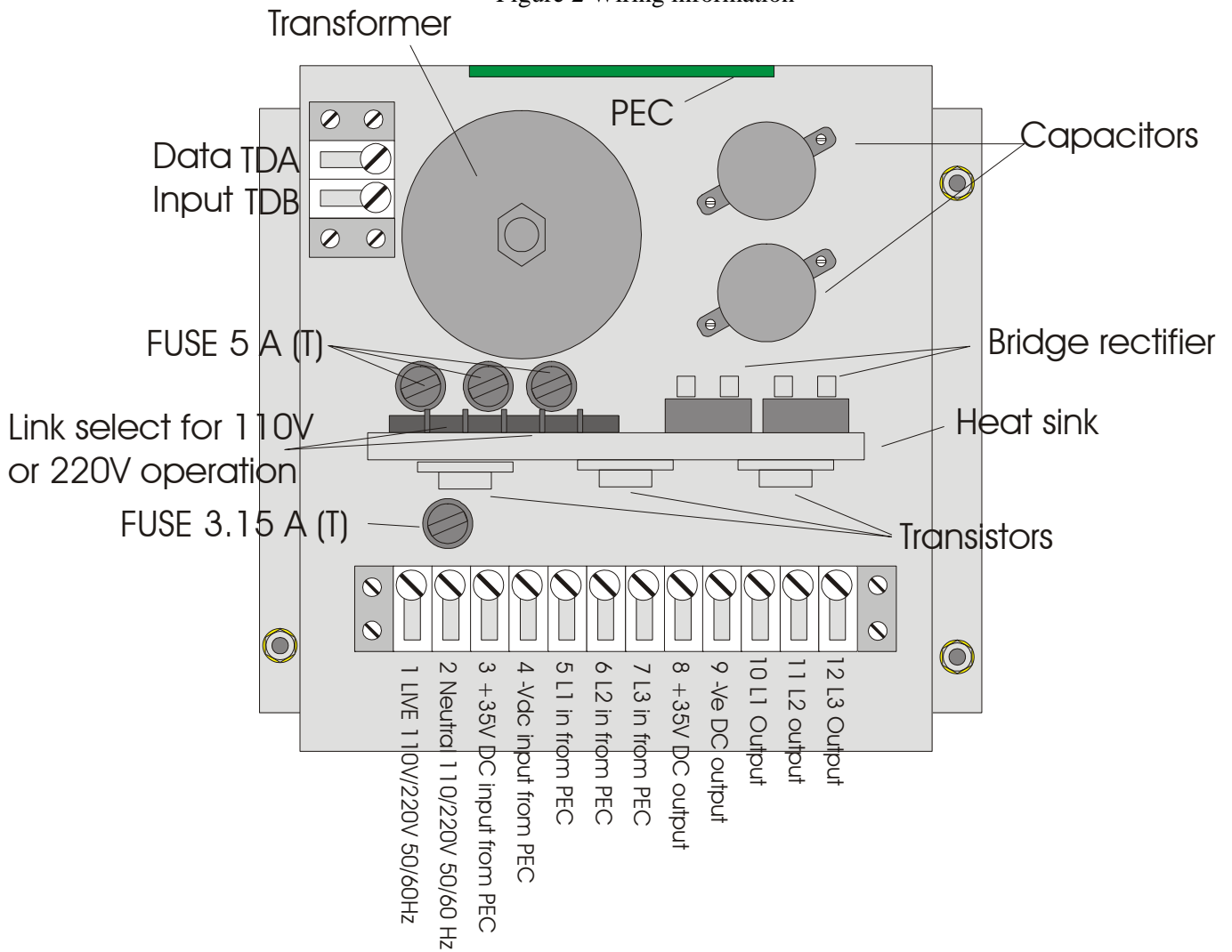


Figure 2 Wiring information



System Commissioning

STEP	DESCRIPTION	REMARKS
1	Ensure that installation is satisfactory	
2	Switch supply and power	
3	Align all receiving devices to current transmitted heading.	For step input configuration the repeater will have to be aligned to the ships heading,
4	Ensure the repeater follows with the gyro	
5	Commissioning is complete	See Controls

Operator Controls and indicators.

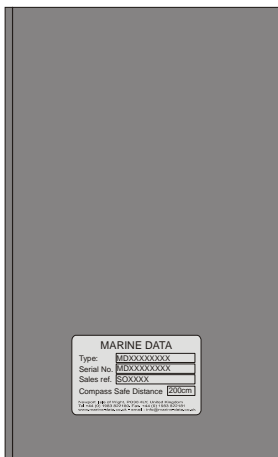
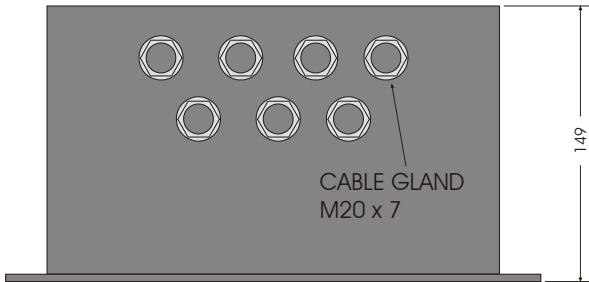
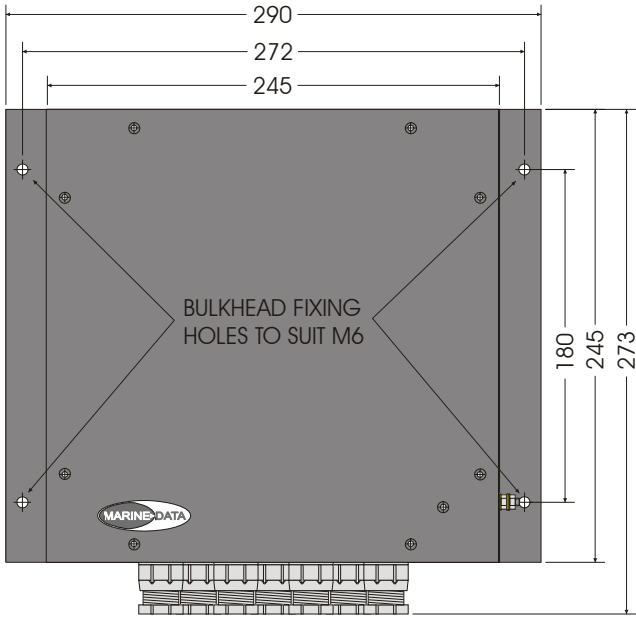
There are no controls each repeater must be aligned to heading independently

User fault finding Guide.

Symptom	Probable fault	Remedy/Note
MD42 does not operate.	No Power Blown fuse	Check incoming power supply. Replace defective fuse(s).
If the unit starts up initially and then ceases to operate after a short period, there is likely to be an overload on the output. Check the current taken by the repeaters.		

SPECIFICATION FOR MD42/8/ST-35

Physical



- Weight 6.2Kg
- Mounting Bulkhead
- Finish Black/Grey
- Connections 2 x internal barrier strip
- Construction Aluminium Enclosure

Electrical

- Power supply 110/220 50/60Hz user configurable
- Data Input RS422 digital data Nmea (0183) HDT sentence.
- Data Output 35V S- type 6 steps per 1 degree (5A per step line) common positive

Note common positive is standard if your system is common negative it must be stated when ordering

Note step voltage must be confirmed when ordering

Operational

- Performance +/- 1/6° (1 step) Accuracy
- Follow up rate 12° /S

Mounting Information

- See diagram at right for mounting information.

Environmental

- Rating IP54
- Temperature -10° C to +70° C