

Owner's Manual



thrustems



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4. Thruster Panel

4.1 Thruster Panel Specifications

1. Time lapse device

Integrated time lapse device when changing directions (port to starboard and vice versa).

- Setting options:

1. Time lapse device as from 1 second (factory setting)
2. No time lapse delay when changing over directions

2. Temperature safety

All electric thruster motors are provided with a temperature switch. The control panel switches the thruster automatically off in the case of a too high temperature. This situation is indicated by means of a LED indicator and a buzzer.

3. Switching off the panel

- Dependent on the settings, the panel can switch off automatically, when it has not been activated during a certain period of time.

Setting options:

1. Panel does not switch off automatically
2. Panel switches off after 30 minutes (factory setting)
3. Panel switches off after 60 minutes
4. Panel switches off after 120 minutes

4. Protection against continuous use

If the thruster is operated during more than 2 minutes continuously, this equipment can be switched off automatically, dependent on the settings.

Setting options:

1. The thruster switches off after 2 minutes of use. The LED indicator and the buzzer are activated.
2. The thruster does NOT switch off after 2 minutes of use. LED indicator and the buzzer are activated.

5. Detection by the relay

If an interruption occurs in the wiring of the control current circuit of the relay, the LED on the panel will blink intermittently with a red colour.

6. Protection against erroneous switching. This is an in-built function also referred to as child protection setting (See section 4.4).

7. Supply voltage is 12VDC or 24VDC

8. The front section of the panel is watertight in accordance with IP65

4. Thruster Panel

4.2 Control Panel Connections

- Use the panel connection cables to connect the motor with the control panel(s). Panel connection cables are available in lengths of 7m, 10m, 15m or 20m.
- Use the thruster panel splitter cables when connecting two or more panels in parallel (Figure 17 and 18).
- Any number of ThrustEMS panels can be connected in parallel (Figure 17 and 18).

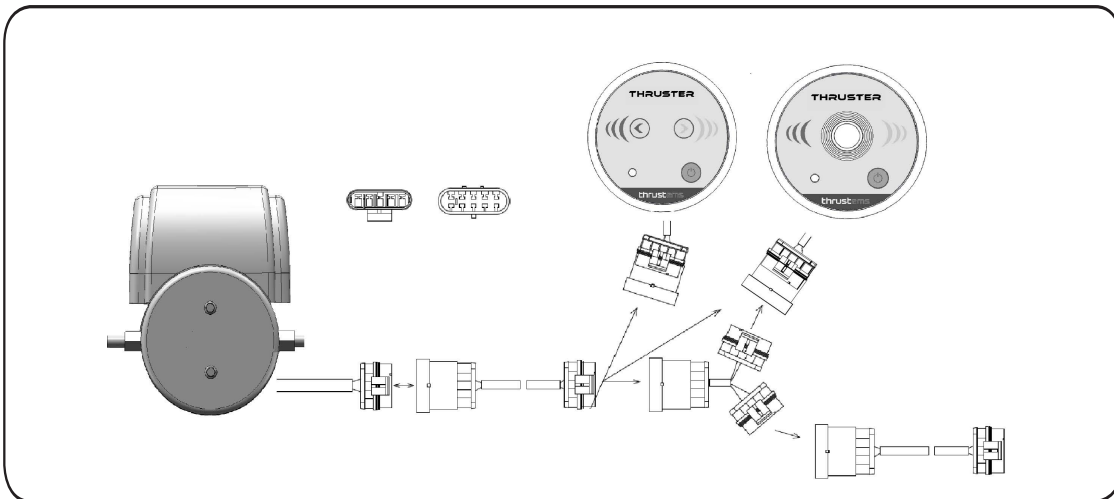


Figure 17

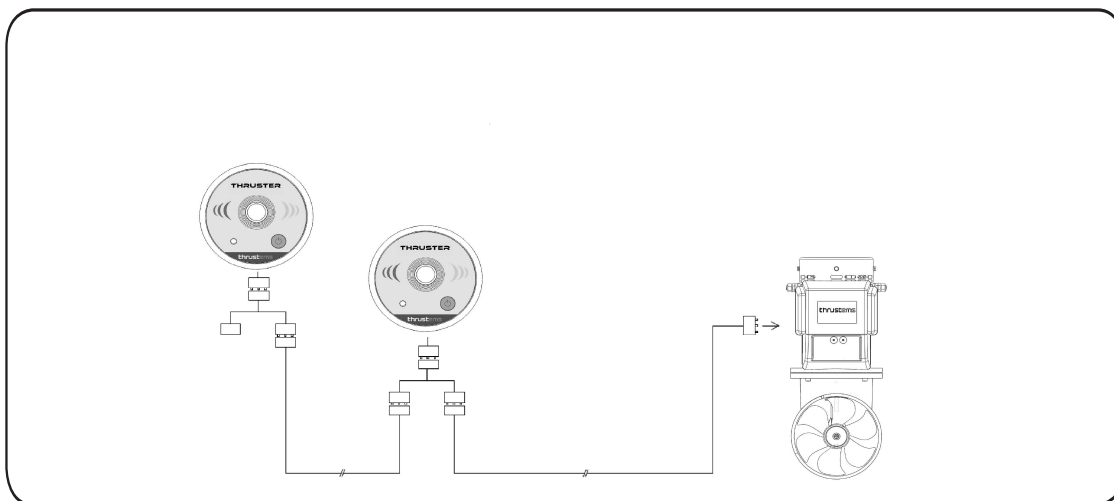


Figure 18

4. Thruster Panel

- Please verify the correct direction of the thruster once the installation is completed.



If the thrust direction does not correspond to panel and gearleg is fitted, simply change the blue and the white wires on the solenoid mounted on the motor (Figure 19). Thus, the desired direction in combination with the panel will be achieved.

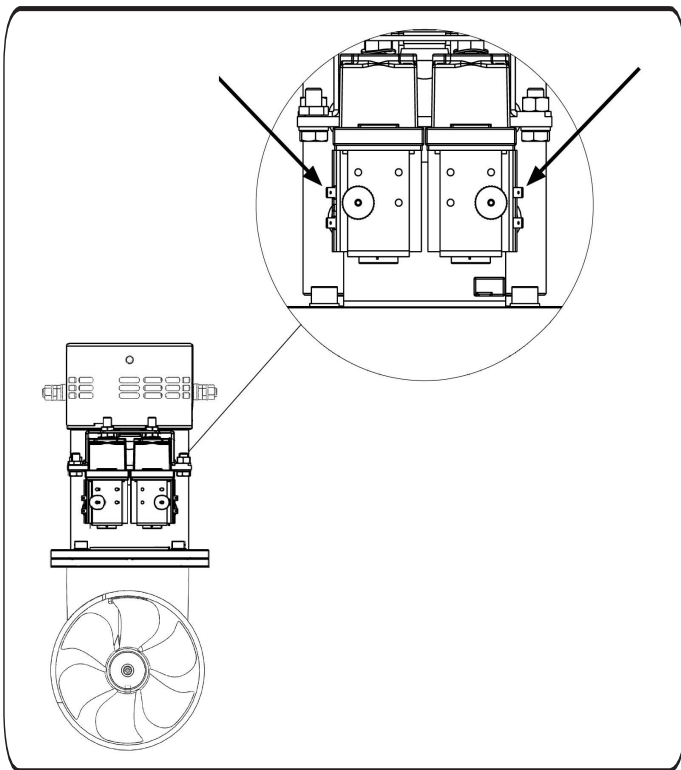


Figure 19

4.3 Control Panel Settings

- In order to be able to modify the settings, the backside of the panel must be removed. By changing the positions 1 - 4 of the dip switch from OFF to ON, the settings are altered.
- When dip switch settings are changed, the panel must be switched OFF and ON.

Dip switch	Description
1	Setting for time lapse device when switching over (portside <-> starboard)
2	Setting for 2 minutes' continuous use of the joystick / push buttons
3	Setting for automatic switching off of the panel
4	

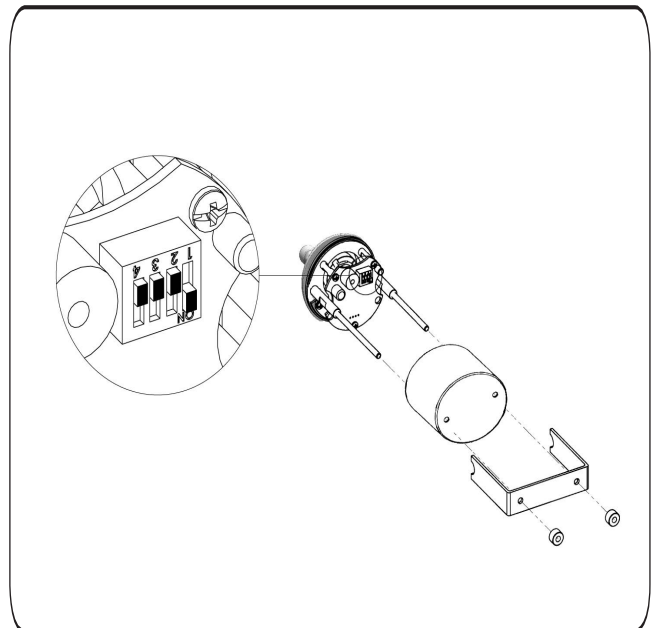
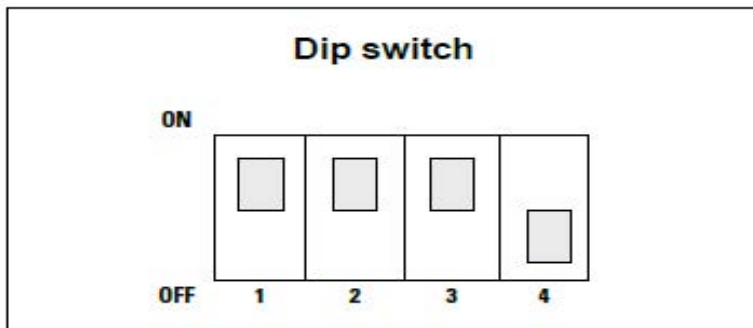


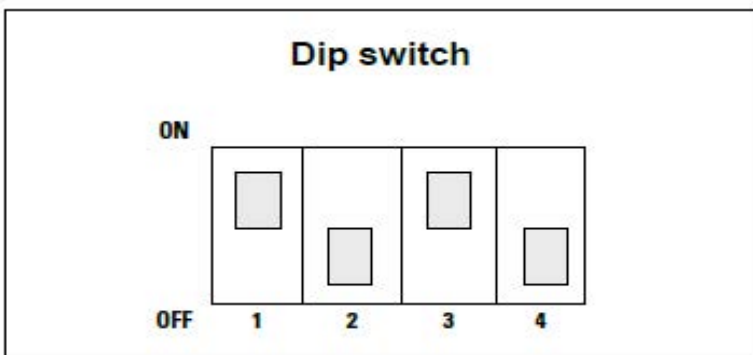
Figure 20 Location of the Dip Switch

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- For optimal use of the ThrustEMS product range we recommend these settings of the dip switch:

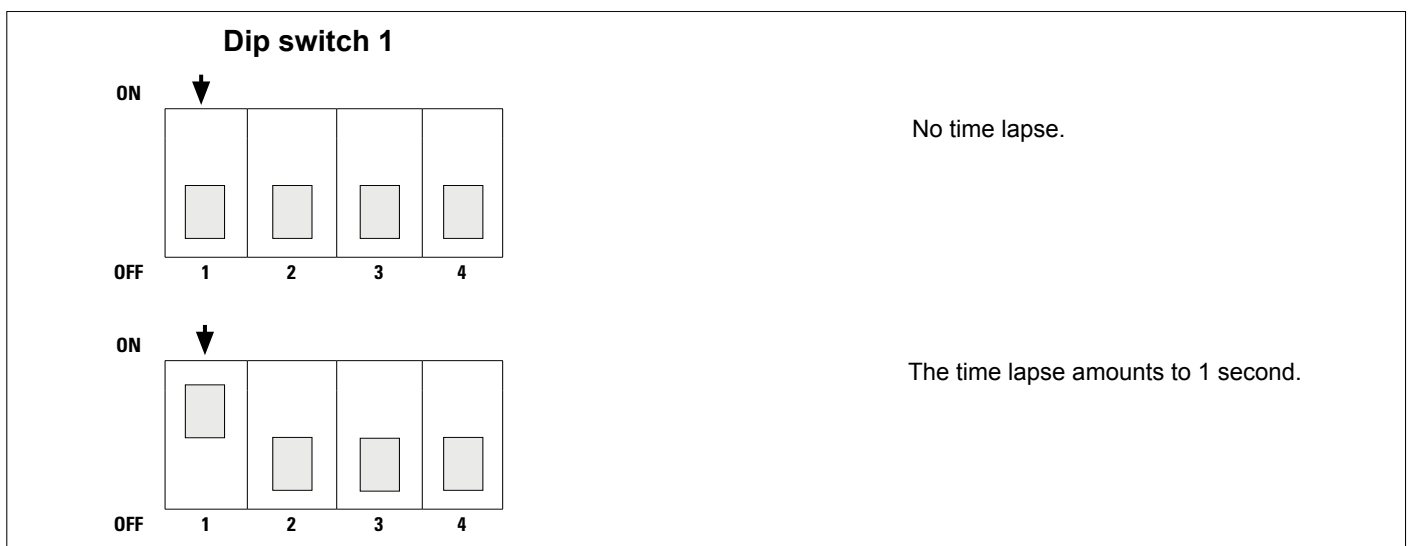


Optimal setting for Performance Series thrusters (factory setting)



Optimal setting for Standard Series thrusters

Dip Switch Description



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Dip switch 2

ON

OFF

ON

OFF

If the joystick (or push buttons) are operated for more than 2 minutes continuously, the bow thruster will be switched off.

The LED indicator and the buzzer are activated.

If the joystick (or push buttons) are operated for more than 2 minutes continuously, the bow thruster will NOT be switched off.

The LED indicator and the buzzer are activated.

Dip switches 3 and 4

ON

OFF

ON

OFF

The panel will not be switched off automatically.

If the panel is not engaged during more than 30 minutes, it will switch off automatically.

If the panel is not engaged during more than 60 minutes, it will switch off automatically.

If the panel is not engaged during more than 120 minutes, it will switch off automatically.

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4.4 Operation of the Thruster Panel

- Switching the panel ON:

Push the ON/OFF key. The LED will blink intermittently with a green colour and the buzzer will sound. In order to activate the panel, the ON/OFF button must be pushed again within a time lapse of 6 seconds (child protection function). The green LED will be on continuously and the buzzer will stop. If the ON/OFF switch is not pushed (again) within 6 seconds' time, the panel will not be switched on.

- Switching the panel OFF by hand:

Push the ON/OFF switch so as to disengage the panel.

- Automatic switch-off of the panel:

- if the settings of the dip switches 3 and 4 have not been altered from factory setting, the panel will switch off automatically after 30 minutes.

- if the settings of the dip switches 3 and 4 have been modified, as described above, the panel will switch off automatically after 60 min, 120 min or will not be switched off.

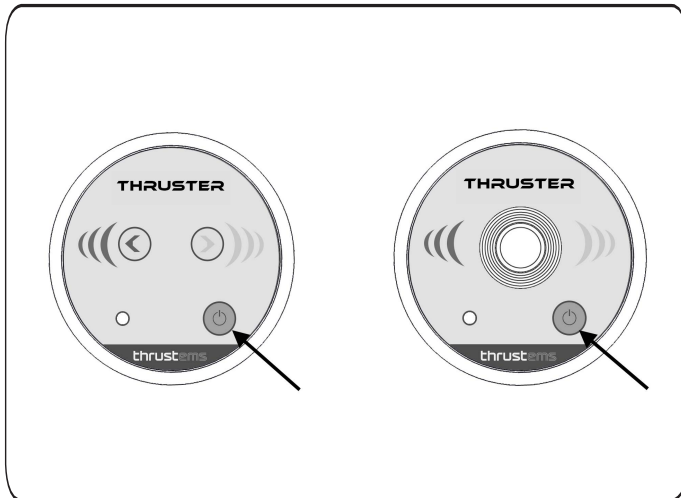


Figure 21

- Using the panel to turn the boat:

In the case of more than one control panel installed never use two or more panels at once. Whenever the thruster is engaged, the LED on the other steering positions will blink intermittently with a green colour.

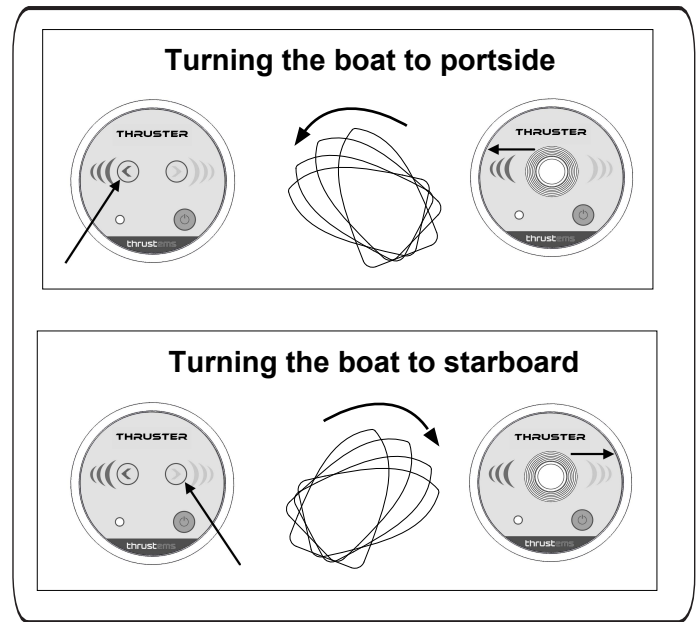


Figure 22

- If the directional switch is operated during more than 2 minutes continuously, the Thruster will, dependent on the setting in use:

- not be switched off (factory setting); the LED indicator and the buzzer are activated.

- be switched off; the LED indicator and the buzzer are activated. If the joystick/push button is released, the bow thruster can be operated again thereafter.

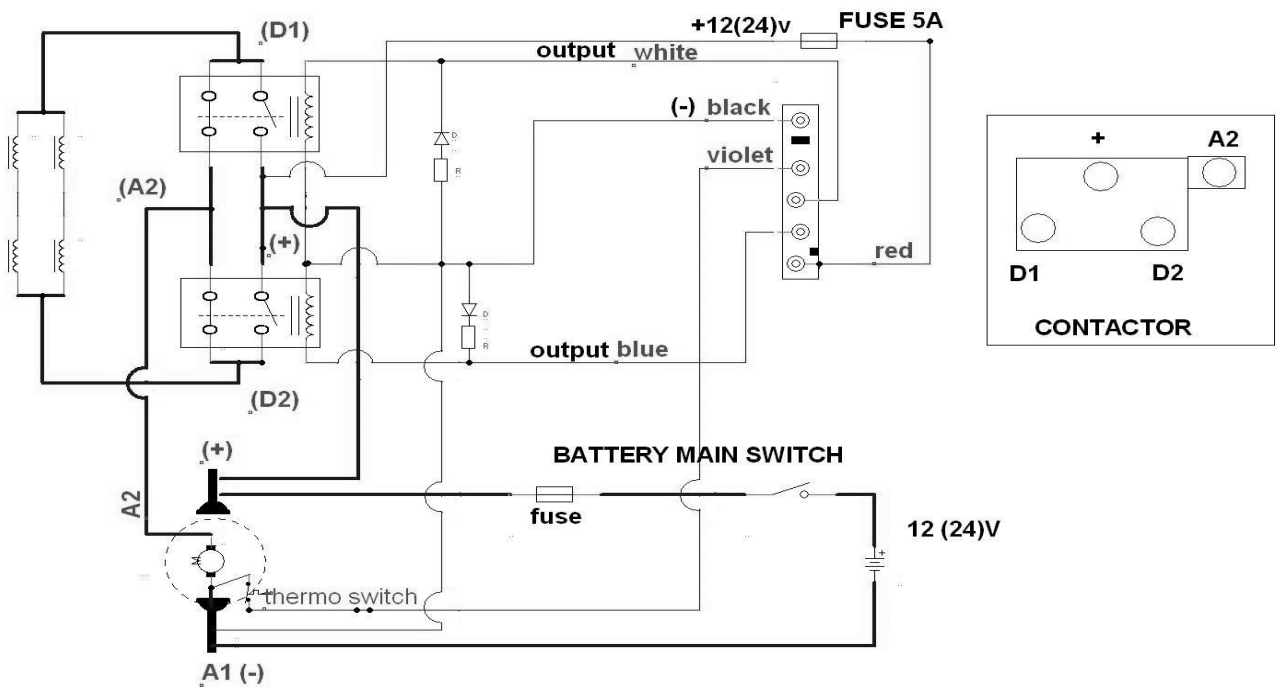


The maximum engagement time amounts to 3-4 minutes per hour for Standard and 12 minutes per hour for Performance Series thrusters.

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- Each thruster motor is provided with a temperature safety switch. If the temperature of the motor becomes excessively high, the electric motor will be disengaged automatically.
- However, in emergency situations, the thruster can still be activated (after every time lapse of 3 seconds) in a pulsating fashion. This will require first the release of the directional switch.
- If the Thruster is activated directly thereafter, it will operate during 3 seconds maximum, after which the temperature safety switch will disengage the thruster again. By releasing and engaging the directional switch again, the thruster will be operative for another 3 seconds. And so on and so forth.

5. Electrical Wiring Diagram



Pin configuration of 5 pole connector:

- Pin1: RED = Positive voltage for control panel
- Pin2: BLUE = Output 1 to solenoid
- Pin3: WHITE = Output 2 to solenoid
- Pin4: VIOLET = Thermal Overrun Switch (on Motor)
- Pin5: BLACK = Ground