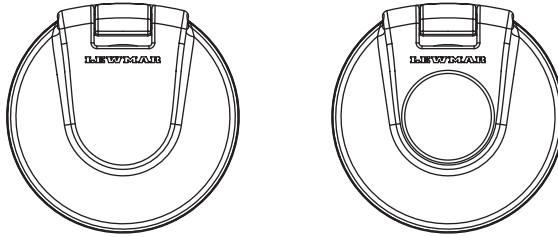


Custom Switch Instruction

To be retained in the Owners manual



Switches should be fitted in accordance with these instructions
AND Lewmar instruction manual for the equipment being operated

This deck switch is for use with Lewmar 12V & 24V DC product control systems

Applicable to Custom Switch Models:

Blasted

48000258 Custom Deck Switch Open

48000259 Custom Deck Switch Closed

Polished

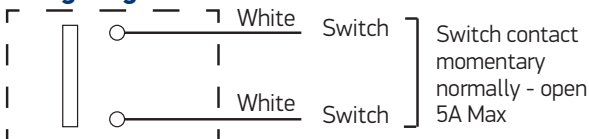
48000256 Custom Deck Switch Open

48000257 Custom Deck Switch Closed

Specification

Operating Voltage Range:	9v to 28v DC Only.
Max switching current:	5 Amps resistive, 2.75 A Inductive (L/R 0.026)
Switch Type:	Normally-Open Momentary contact
Wire Size:	1mm ²
Switch contact life	100,000 operations
Ingress Protection	IP67 above deck (subject to installation) IP65 below deck (subject to installation)

Wiring diagram



Installation

WARNING!

All electrical equipment work must be carried out by a qualified electrician
All electrical power must be isolated before work is carried out

- Disconnect Power
- Switches must be fitted to a flat surface $\pm 1\text{mm}$
- Use supplied mounting template/information below – drill a 25mm (1") dia central hole through deck
- Locate switch & mark fixing points then drill holes suitable for chosen fixings – screw or bolt heads must be countersunk to match hole form in switch to be flush.
- Use a sealing compound suitable to mate switch and deck surfaces to maintain IP67 and compound must be suitable to survive in environment.
- Use an even force on all 3 fixings, do not over-tighten.
- Make electrical connections as per product manual
- Follow relevant standards and guidelines for electrical installations; use ISO 10133 as minimum requirement.
- See Inspection & Maintenance instructions before use.

Notes:

- Switch is for use in DC voltage systems only
- If installed in vessel containing AC circuits follow ISO 10133 for correct wiring installation
- Switch is not intended for use in ignition protected areas
- It is the responsibility of installer to maintain IP67 sealing through deck upon installation.

Operation

- Operation of switch must be in accordance with instructions and warnings from product manual
- Deck switches are designed to be used in conjunction with Lewmar equipment only.
- Deck switches should only be operated with fingers, bare feet or soft soled shoes.
Switch may be finger operated through lid on open access version
Lift lid to operate switch by foot, close lid after use
Do not use hard soled shoes or sharp objects to operate switch
- Switches should be left with the lid closed to minimise environmental degradation and the potential for accidental operation or impact damage.
- Powered deck equipment should always be isolated when not in use to prevent accidental start up.
- The instructions for the equipment being operated should always be read and followed.
- Power washers should not be used on or near any switch.
- It is acknowledged that deck switches will need to be washed down as part of a deck cleaning process. However, direct flow from a non pressure hose should not be aimed at the switch.
- The deck switch itself should only be cleaned with a mild soap and washed off immediately with a light application of fresh water.
- The following (non exhaustive) list of substances should not be applied, or used on or near any deck switch. Products include but are not limited to:-
 - Chemicals
 - Deck cleaners
 - Petroleum based fluids/cleaners
 - Deck polish
 - Deck brightener
 - Varnish/lacquers/paints
 - Oil

Warnings and Good Practice

Electric deck switches operate in a hostile environment and are subject to salt water, extremes of temperature, direct sunlight and UV effect. They are also susceptible to wear and tear following repeated use and can in some instances suffer accidental damage during boat operations. It is therefore recommended that regular visual and functional inspection of the switch, the circuitry and the equipment being controlled is carried out by a competent qualified person on a regular basis.

If any defects are noted on the switch (see point 2.0 below), replacement is mandatory so as to avoid the possibility of a malfunction. It is further recommended that an item of this nature is not intended to remain in service forever. The lifespan will depend upon the weather and UV conditions to which the switch is exposed as well as the amount of use. Therefore, a service lifespan of 3 to 5 years from date of purchase can be expected, after which time it should be replaced. Shorter lifespans could be experienced and the following inspection recommendations are therefore important in ensuring continuing safe operation.

Inspection

- 1.0 - The deck switch and the system it controls should be fully tested in a 'No Load' condition prior to full functional operation as per it's design purpose, before every trip, activity or task. Only after the skipper has satisfied themselves of the safe and functional operations should the equipment be used.
- 2.0 - The deck switch should be inspected pre-departure or use paying particular attention to the following:
 - 2.1 Ensure there is no visible damage to the switch
 - 2.2 Ensure there is no noticeable wear to the switch, housing, button or fixings
 - 2.3 Ensure the rubber membrane over the switch is not sticky or has any deposits or residue from cleaning fluids or other prohibited materials
 - 2.4 Ensure the rubber membrane over the switch does not show any signs of cracks, splits or signs of degradation.
 - 2.5 The main switch housing should not have any visible chips or cracks
 - 2.6 The switch should have a smooth positive feel with a distinct click that can be felt at the point of operation
 - 2.7 There should be no signs of water ingress on any part of the switch assembly
 - 2.8 Ensure that the fixings screws and seal to the deck bulkhead or coach roof are secure, and remain effective in both securing the switch and preventing water ingress
 - 2.9 The switch should not feel spongy and should not make a squelch or bubbling noise due to water ingress when depressed and operated

Maintenance

If any of the points highlighted in 2.0 through to 2.9 are detected during inspection, the deck switches should not be used and should be replaced.

- 3.0 - On an annual basis the deck switch should be removed by a qualified electrical technician to carry out the following:
 - 3.1 All the checks detailed in 2.0 – 2.9 above
 - 3.2 Inspect the underside of the deck switch for signs of corrosion, damage or water ingress
 - 3.3 Inspect the wiring for signs of loose connections or corrosion

-
- 3.4 In open circuit mode (OFF) condition the resistance should be checked for a recording on the test meter beyond measurement to confirm no electrical connection.
 - 3.5 In closed circuit mode (ON) condition, the resistance should be less than 3 Ω (ohms)
 - 3.6 If the switch shows any signs of excessive wear, degradation in it's action, water ingress or loss in electrical resistance properties, it should be changed immediately

Additional Guidance

- 4.0 - It is the responsibility of the skipper to ensure that crew members are trained in the operation of powered deck equipment and use it in a safe and appropriate way within it's designed operating parameters. This includes what to do in an emergency.
- 4.1- It is the responsibility of the skipper to ensure that crew members are appropriately briefed on all three methods of equipment isolation in event of emergency, i.e :-
 - 4.1.1 The switch itself and it's operation
 - 4.1.2 The circuit breaker on main panel
 - 4.1.3 The main battery isolation
- 4.2- Crew briefings should always cover the following issues pertaining to deck switch operated equipment:-
 - 4.2.1 Safe operation of any powered deck equipment.
 - 4.2.2 What to do in the event of an emergency
 - 4.2.3 What not to do in event of emergency
 - 4.2.4 A practical demonstration of the effective isolation of deck equipment as highlighted in point 2 above

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