

MAINTENANCE

This SEAFLO electric field sensor is designed to only require minimal maintenance.

Warning: ensure that the switch is disconnected from electrics and that the system is fully drained prior to maintenance.

For optimal performance

- ensure the switch is clear of debris.
- keep fuse and wiring connections high and dry.

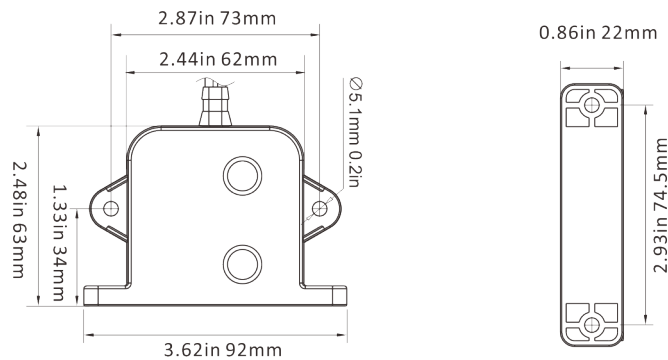
Annual checks

- SEAFLO advises that the vessel plumbing system is checked annually for leaks and obstructions. A full boat electrics check by a marine electrician is also recommended.
- SEAFLO advises testing your switch as per section 7.4 on an annual basis.

Winterizing

Fully drain system for winterising. Failure to winterise your system may invalidate the product warranty.

DIMENSION DRAWING



SEAFLO[®]

Electric Field Bilge Switch

Instruction Manual



SFBS-20-06

Voltage	Current	Wire Gauge Size /length	N.W.
12V/24V DC	20A at 12V or 10A at 24V	16AWG/1000mm	0.1KG

TO THE FITTER

Check that the product is suitable for the intended application, follow installation instructions and ensure all relevant personnel read the points listed below. Also ensure these instructions are passed on to the end user.

TO THE USER

Read the following instructions carefully.

WARNING: Please note that incorrect installation may invalidate the warranty.

APPLICATION

This SEAFLO electric field sensor senses water level and automatically controls a 12 or 24 volt bilge pump. The switch turns on when it senses 41mm (1.6") water level and turns off when water is below 9.5mm (0.37"). This product is designed for use in pleasure boat applications, and is not intended to be used in commercial boating applications or for any other use.

⚠ WARNINGS

With all applications, it is important that a system of safe working practice is applied to installation, use and maintenance. Ensure the electric supply is turned off and waste water system is drained before installation.

1. Not suitable for use with flammable liquids, diesel, chemicals etc.
2. Suitable for only freshwater or bilge water. If it is intended for any other purpose or with any other liquid, it is the users responsibility to ensure that the switch is suitable for the intended use and, in particular, that the materials are fully compatible with the liquids to be used.
3. Failure to fuse and connect wires according to these instructions will void product warranty and may cause damage or serious injury.
4. Connect in-line fuse (Note: Fit the appropriate amperage specified for your pump model).
5. Correct voltage range is 10.5 V d.c. to 28.8 V d.c. DO NOT use with other voltage, or with A.C., or A.C.to D.C. converted power sources.
6. The Electric Field Sensor may draw up to a maximum of 20 amps.
7. **NOTE** - Maximum operating temperature ~ 60°. Maximum flash temperature ~ 90°.

INSTALLATION

Location

1. Mount the switch vertically as shown in fig. 1 (wires located uppermost). Locate the switch as close to the pump as possible to ensure the same water level.
2. Prepare a mounting block. Do not fasten switch directly to the hull. Mounting block should be minimum 10mm(3/8") thick marine plywood epoxied to the hull.
3. Switch base may be located up to 6mm (1/4") higher, but NEVER located lower than base of the pump.

Mounting

1. Use switch base (Fig. 1) or mounting ears (Fig. 2) as a template to mark pilot holes in mounting block.
2. Set drill depth gauge to avoid drilling through hull. Drill two 3mm (1/8") diameter pilot holes.
3. Fasten switch onto mounting block with #8 x 1/2"(3.5mm diameter x 13mm) stainless steel screws (not supplied).

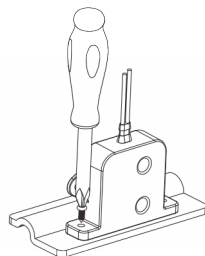


Fig 1 Using Switch Base

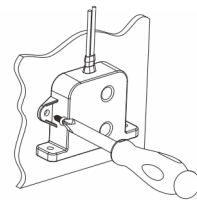


Fig 2 Using Mounting Ears

Wiring

WARNING: Fire hazard. Wiring must comply with applicable electrical standards and include a properly rated circuit breaker (Fuse rating must be rated for the pump used in the system. Check the pump installation manual for the specific fuse size).

WARNING: Improper wiring can cause a fire resulting in injury or death.

NOTE: Switch off the power prior to making connections. Suggested wiring information is given as a guide only. For full information, refer to the USCG, ABYC and ISO regulations for marine applications and wiring gauges, connectors and fuse protection.

1. Follow the wiring diagram (Fig 3). All fuses and the circuit breaker must be properly rated for the bilge pump within the circuit (see pump instruction manual for guidance). The maximum circuit breaker must be 20 Amps.

2. The wiring is as follows:

- **Manual** terminal directly to **brown (+)** pump wire and electronic water level switch **black** (signal output) wire
- **Automatic** terminal to electronic water level switch **brown (+)** stripe
- **Black (-)** pump wire to negative battery terminal

Switch Wire	Colour
Positive	Brown
Signal Out	Black

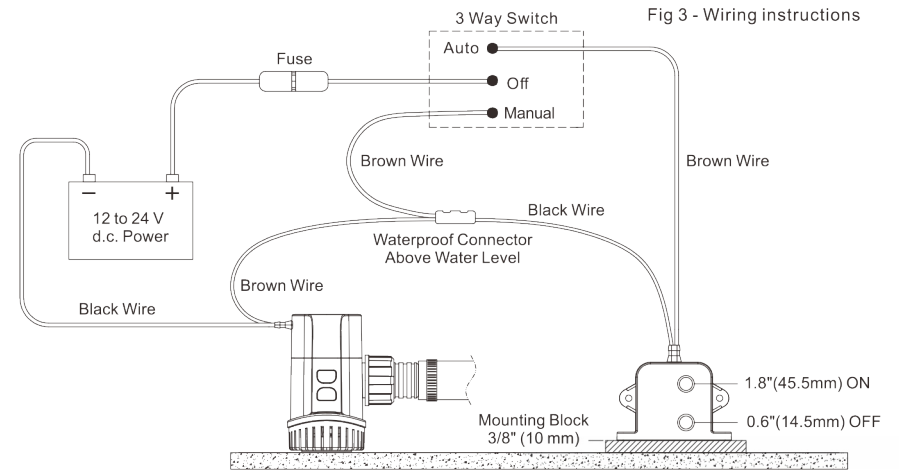


Fig 3 - Wiring instructions

3. Make all wiring connections above highest water level, using permanent waterproof terminals. Coat terminals with liquid electrical tape.

Testing

1. After installation, press and hold your finger in the two recessed places for 3 seconds.
 - If wiring is correct, pump activates.
 - Remove top finger, pump stays on.
 - Remove bottom finger, pump should turn off after a short delay.
2. Test with water in bilge to confirm that pump turns on and off properly. If not, reposition the switch to allow for activation.
3. Regularly touch the two sensing points with your finger to check whether the function is valid.
4. When there is dirt residue on the sensing point after long-term use, please clean it up in time to avoid the failure of the switch function.

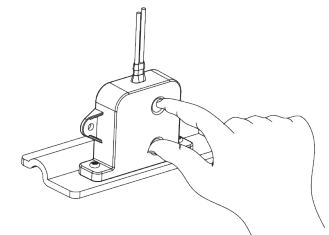


Fig 4 - Testing Switch