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› LIGHTEU® Seaflo Automatic Water Level Sensing Bilge Pump SFBP1-G1500-13B User Manual

## lighteu SFBP1-G1500-13B

# LIGHTEU® Seaflo Automatic Water Level Sensing Bilge Pump

Model: SFBP1-G1500-13B

## 1. INTRODUCTION

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The LIGHTEU® Seaflo Automatic Water Level Sensing Bilge Pump is designed for efficient and reliable water removal from bilge spaces. Featuring an integrated water level sensor, this pump automatically activates when water reaches a certain level and deactivates once the water is removed, ensuring a dry bilge without constant manual monitoring. Its compact size, high flow rate, and low current consumption make it an ideal solution for marine applications.

This manual provides essential information for the safe installation, operation, and maintenance of your Seaflo bilge pump. Please read it thoroughly before use.

## 2. SAFETY INSTRUCTIONS

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Always observe the following safety precautions to prevent injury or damage to the pump and vessel:

- **Electrical Safety:** Ensure all electrical connections are properly insulated and protected from water ingress. Use appropriate fuse protection for the pump's current draw. Disconnect power before performing any installation or maintenance.
- **Voltage Compatibility:** This pump operates on 12V DC. Do not connect it to any other voltage supply.
- **Intended Use:** This pump is designed for pumping water only. *Do not use it for pumping oil, gasoline, flammable liquids, or corrosive chemicals.* Doing so can cause fire, explosion, or pump damage.
- **Installation:** Mount the pump securely in the lowest part of the bilge. Ensure the discharge hose is free of kinks and obstructions.
- **Ventilation:** Ensure hidden air vents in the body are not obstructed to prevent airlocks.

## 3. PRODUCT OVERVIEW

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The Seaflo bilge pump features a robust design with an integrated automatic sensor and various connection options.



Figure 3.1: Main view of the LIGHTEU Seaflo Automatic Bilge Pump, showing the pump unit and a separate hose barb fitting.



Figure 3.2: Side view of the bilge pump, highlighting its compact design and integrated sensor housing.

#### Key Components:

- **Pump Body:** Houses the motor and impeller.
- **Integrated Water Level Sensor:** Automatically detects water presence and level.

- **Discharge Port:** Threaded for secure hose connection.
- **Strainer Base:** Removable for easy cleaning and debris removal.
- **Wiring:** Color-coded wires for power and automatic/manual operation.

Motor can be sold separately



Figure 3.3: Exploded view illustrating the pump's modular design, including the motor, pump housing, strainer base, and various fittings. Note that the motor can be sold separately.

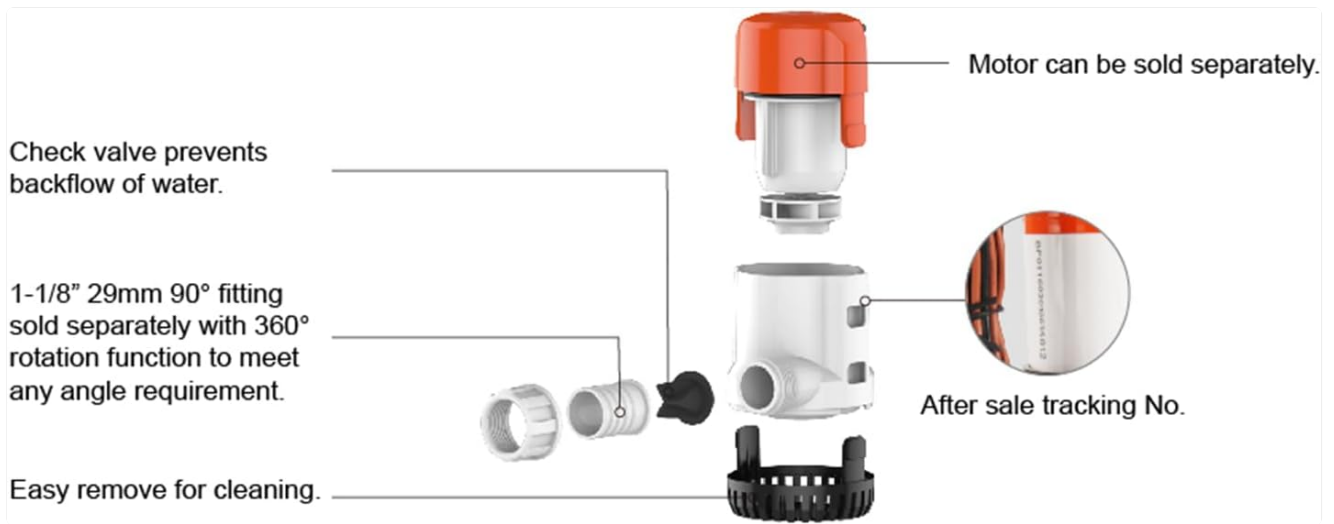


Figure 3.4: A more detailed exploded view, highlighting the check valve which prevents backflow, and showing optional 90-degree fittings with 360-degree rotation for flexible installation. The "After sale tracking No." label indicates a location for a serial or tracking number.

## 4. SETUP AND INSTALLATION

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Proper installation is crucial for the pump's performance and longevity.

### 4.1 Mounting the Pump

1. Select a flat, stable surface in the lowest part of the bilge where water collects.
2. Secure the pump's strainer base to the mounting surface using appropriate fasteners (not included). The split quick-connect joint design allows for easy removal of the pump body from the base without disconnecting plumbing.

### 4.2 Plumbing Connections

1. Attach the discharge hose (not included) to the pump's threaded discharge port. The pump includes removable straight discharge fittings and offers optional angle fittings (1-1/8" or 29mm diameter) for flexible routing.
2. Ensure all hose clamps are tightened securely to prevent leaks.
3. Route the discharge hose upwards to a through-hull fitting, ensuring a continuous upward slope to prevent airlocks and backflow. The integrated check valve helps prevent water from flowing back into the bilge.

### 4.3 Electrical Wiring

**Important:** Disconnect all power before wiring.

- Connect the **brown wire** to the positive (+) 12V DC power source. This wire provides power for manual operation (if applicable) or constant power for the automatic sensor.
- Connect the **black wire** to the negative (-) ground.
- For **automatic mode operation**, connect the **brown and white wire** to the positive (+) 12V DC power source. This enables the integrated sensor to control the pump automatically.
- Install an appropriately sized fuse (e.g., 5A for 1500GPH models) in the positive supply line close to the battery.
- Ensure all connections are waterproof and corrosion-resistant.

## 5. OPERATING INSTRUCTIONS

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The Seaflo bilge pump is designed for automatic operation based on water level detection.

## 5.1 Automatic Operation

When wired for automatic operation (brown and white wire connected to positive), the pump will function as follows:

- The pump starts automatically when the water level reaches approximately 4.5 cm (1.77 inches).
- The pump stops automatically when the water level drops to between 1 cm and 3 cm (0.39 to 1.18 inches).
- The pump may briefly run for 0.5 seconds and then check for water every 2.5 minutes to detect rising water levels.

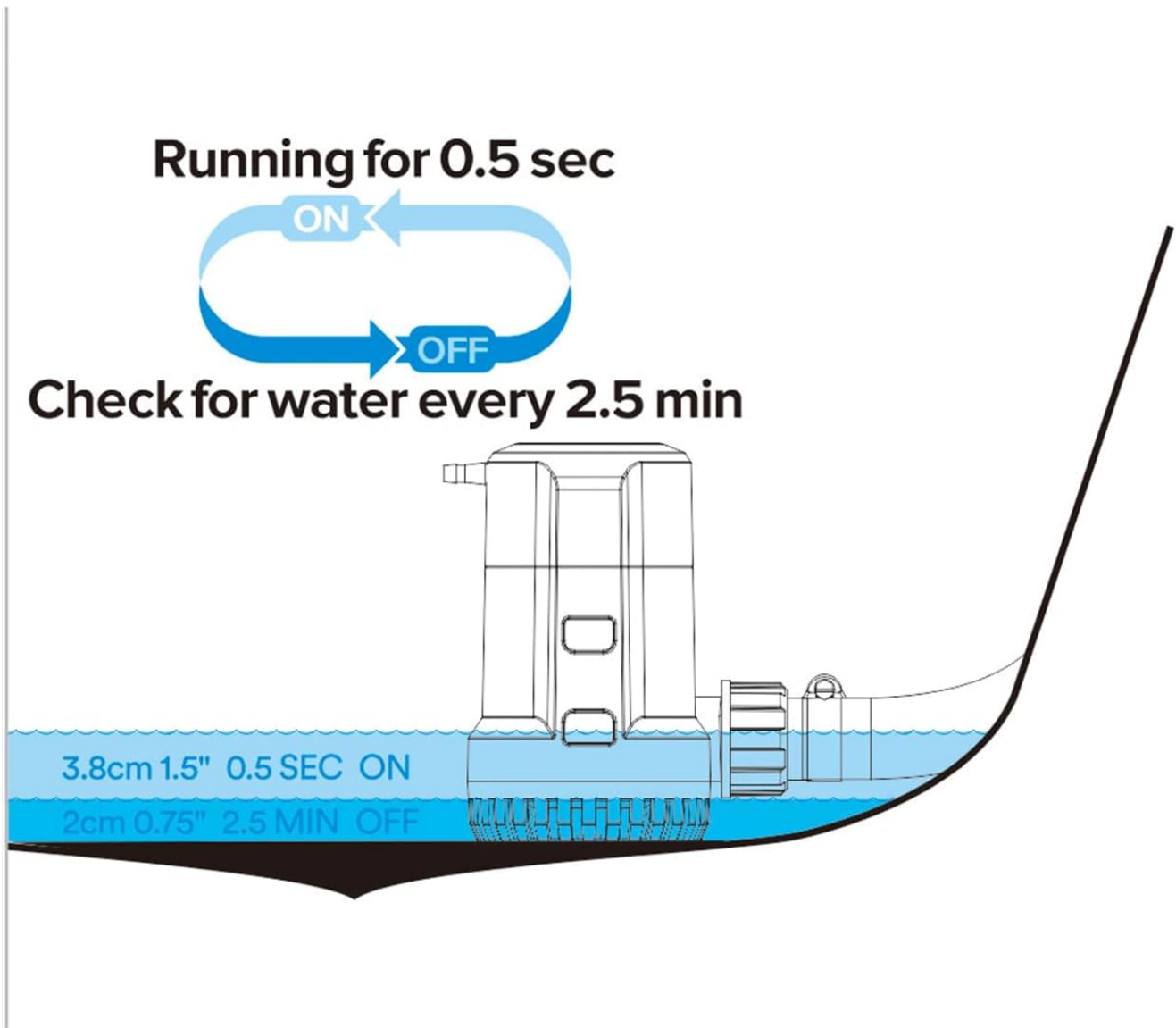


Figure 5.1: Diagram showing the automatic operation cycle: pump turns ON when water reaches 3.8cm (1.5 inches) and runs for 0.5 seconds, then checks for water every 2.5 minutes. The pump will continue to run until the water level drops to a low threshold.

## 5.2 Manual Operation (if applicable)

If your installation includes a manual override switch, you can activate the pump independently of the automatic sensor by supplying power directly to the brown wire (if not already connected for automatic mode) or through a separate switch connected to the brown wire.

## 6. MAINTENANCE

Regular maintenance ensures optimal performance and extends the life of your bilge pump.

- **Cleaning the Strainer Base:** Periodically remove the pump body from the strainer base (split quick-connect joint design) and clean any debris, such as leaves, hair, or other foreign objects, from the strainer and impeller area. This is crucial for preventing blockages and maintaining flow.

- **Check Valve Inspection:** Inspect the integrated check valve for any debris or signs of wear that might prevent it from sealing properly, leading to backflow.
- **Hose Inspection:** Check the discharge hose for kinks, cracks, or blockages. Ensure all hose clamps are secure.
- **Electrical Connections:** Regularly inspect all wiring and connections for corrosion, loose terminals, or damaged insulation. Clean and re-seal as necessary.
- **Functionality Test:** Periodically test the pump's automatic function by adding water to the bilge to ensure it activates and deactivates correctly.

## 7. TROUBLESHOOTING

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If you encounter issues with your bilge pump, refer to the following troubleshooting guide:

Problem	Possible Cause	Solution
Pump does not turn on automatically.	<ul style="list-style-type: none"> <li>◦ Incorrect wiring for automatic mode (brown and white wire not connected to positive).</li> <li>◦ Sensor obstructed or faulty.</li> <li>◦ No power to the pump.</li> <li>◦ Water level too low to activate sensor.</li> </ul>	<ul style="list-style-type: none"> <li>◦ Verify brown and white wire is connected to a constant 12V DC positive source.</li> <li>◦ Clean the sensor area and ensure it's free of debris.</li> <li>◦ Check fuse, battery connections, and wiring for continuity.</li> <li>◦ Ensure water level reaches the activation threshold (approx. 4.5 cm).</li> </ul>
Pump runs continuously or does not turn off.	<ul style="list-style-type: none"> <li>◦ Sensor faulty or stuck in "on" position.</li> <li>◦ Water level not dropping below deactivation threshold.</li> <li>◦ Backflow of water into the bilge.</li> </ul>	<ul style="list-style-type: none"> <li>◦ Inspect and clean the sensor. If faulty, the pump may need replacement.</li> <li>◦ Ensure the pump is mounted at the lowest point and can drain all water.</li> <li>◦ Check the check valve for proper function and clear any obstructions. Ensure discharge hose has proper slope.</li> </ul>
Pump runs but no water is discharged or flow is low.	<ul style="list-style-type: none"> <li>◦ Clogged strainer or impeller.</li> <li>◦ Kinked or obstructed discharge hose.</li> <li>◦ Airlock in the pump or hose.</li> <li>◦ Low voltage.</li> </ul>	<ul style="list-style-type: none"> <li>◦ Remove pump body and clean strainer and impeller.</li> <li>◦ Inspect and clear the discharge hose.</li> <li>◦ Ensure hidden air vents are clear. Briefly lift and lower the pump to dislodge air.</li> <li>◦ Check battery voltage and wiring for voltage drop.</li> </ul>

If the problem persists after following these steps, contact customer support.

## 8. SPECIFICATIONS

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Feature	Specification
Model	SFBP1-G1500-13B
Brand	LIGHTEU®
Voltage	12V DC
Current Draw	4.5A (Nominal)
Flow Rate	1500 GPH (Gallons Per Hour) / 47.3 L/min
Max. Lift Height	5 Meters
Hose Connection	1-1/8" (29 mm)
Cable Length	1 Meter
Dimensions (approx.)	15 x 14 x 8 cm
Weight (approx.)	760 grams

## 9. WARRANTY AND SUPPORT

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Warranty information for your LIGHTEU® Seaflo Bilge Pump is typically provided by the manufacturer or seller at the time of purchase. Please refer to your purchase documentation or contact the seller, LIGHTEU GMBH, for specific warranty terms and conditions.

For technical support, troubleshooting assistance beyond this manual, or spare parts inquiries, please contact LIGHTEU GMBH directly. Ensure you have your product model number (SFBP1-G1500-13B) and purchase details ready when contacting support.

You can often find contact information on the seller's page on Amazon or through the official LIGHTEU website.