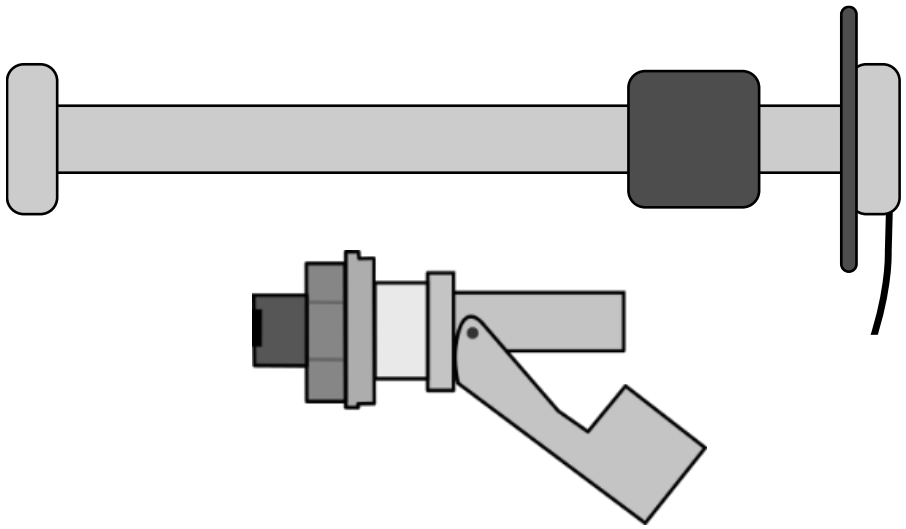
BOBIL VANS LEVEL SENSOR

INSTALLATION INSTRUCTIONS



Important Safety Instructions! Please save these instructions!

This manual contains important safety, installation, and operating instructions for the Level Sensor and Water Gauge.

Bobil Vans accepts no liability for damage by:

- Incorrect assembly.
- Damage resulting from mechanical influences or excess voltage.
- Modification or tampering with the unit/system without expressed permission from the manufacturer.
- Used for purposes other than described in this manual.

General safety

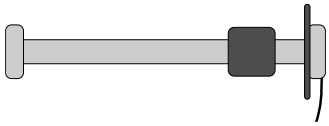
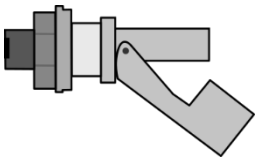
- Firmly secure all cables and hoses.
- In the event of product failure, do not attempt to repair the water heater. Inadequate repairs may cause serious injury.
- Electrical devices are not toys - keep away from children.
- Disconnect the product from the battery and mains power each time before draining, cleaning or maintaining the heater.
- This product is for 12V battery banks only. Make sure your voltage specification is within the input voltage range expressed.
- Do not use the product if physically damaged.

Installation

- Ensure secure location for installation
- If necessary, verify installation with a qualified electrician or installer.
- Lay cables so they cannot be damaged or be a tripping hazard.
- Do not operate in salty, wet, or damp environments; in the vicinity of corrosive fumes; in the vicinity of combustible material; in areas with risks of explosions.
- Ensure proper cable sizing for currents generated, with appropriate fuses.

If you have any questions about your installation, please email us at info@bobilvans.co.uk

What comes in the box?

		
Water Level Sensor	Float Sensor (if ordered)	Water Level Gauge (if ordered)

The water level sensor can be installed in a fresh or grey water tank. Each one needs its own readout gauge to display water level. This can either be the analogue gauges we sell, our smart controller unit, or to something like a Victron Cerbo GX unit.

The float sensor does not need a gauge, and generally is installed in a grey water tank, and only indicates when the water level in the tank has reached the sensor. You can connect this to an LED or buzzer alarm (page 7).

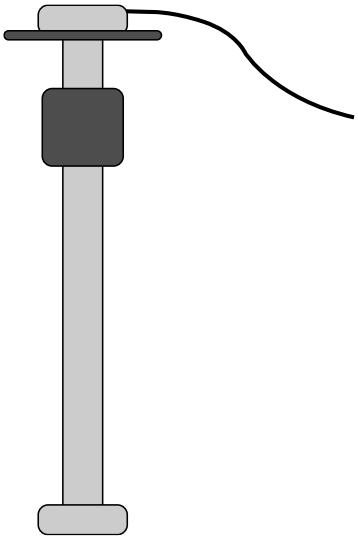
We recommend installing any level sensors to your water tanks before the water tanks are installed, especially if these tanks are underslung. The tanks must be empty of water for installation.

Before you start, add crimped spade connectors to the wires for easy connection to the power and ground wires.

Water Level Sensor Installation

Before installation, please ensure that your level sensor length is LESS then the height of the tank you wish to put it into. Some tanks have internal bevels, shortening the internal height, along with the tank wall thickness. Please double check this before drilling any holes.

To fit the level sensor:

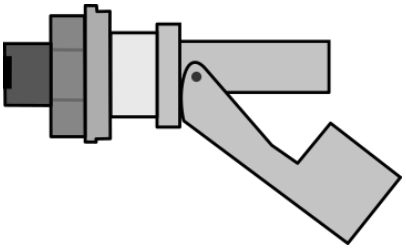


- Drill a 35mm-38mm hole in the top of the tank.
- Drop the sensor in and centre it in the hole.
- Drill a 3.5mm hole underneath one of the holes in the sensor.
- Drive one screw into the hole to form a thread.
- With the sensor in position, drill the other four pilot holes.
- Remove the first screw. Remove any swarf from the sensor and the underside of the hole.
- Replace the sensor and gasket, refitting the first screw.
- Drive the other four screws into the holes to secure the sensor.

An optional spacer is supplied in case the wall of your tank doesn't allow the sensor to sit correctly.

A note: If you have a square tank then these level sensors will accurately show the water volume remaining, so long as the height is correct. If you have a wheel arch tank or other unusually shaped tank, the % level will NOT accurately display the volume of water left, only the level in the tank.

To fit the float sensor (if you ordered one):



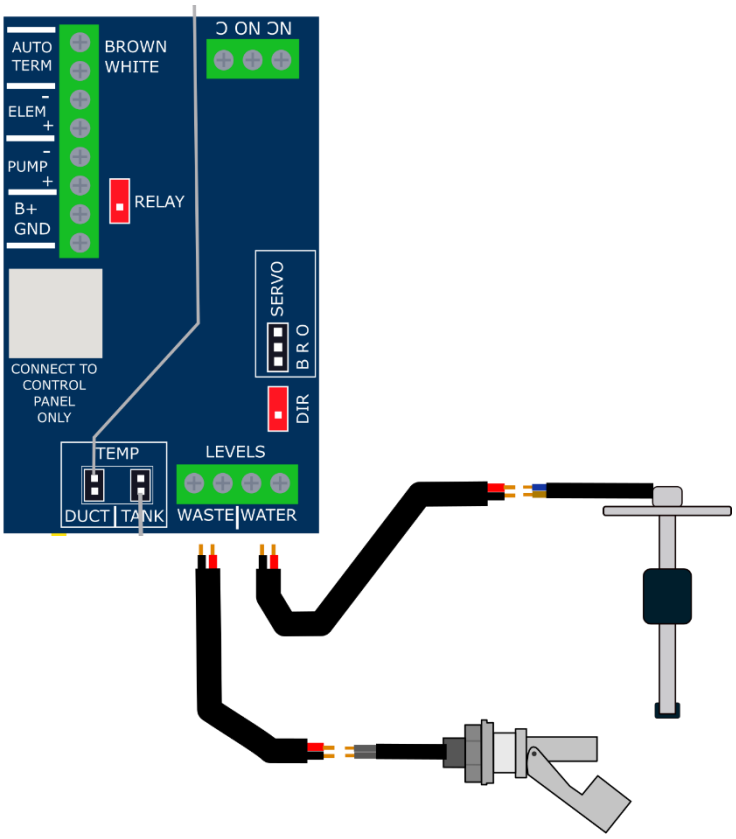
- Drill a 22mm hole in the side of the tank at a level which corresponds to a level of around 80% of the tank volume.
- Once the sensor fits through the hole, tighten the collar on the outside to lock the sensor in place. You should ensure that the sensor is fitted in the orientation shown here.

Level Sensor Wiring – Bobil Smart Controller

If you have ordered the level sensors as a part of the Bobil Smart Controller kit, then these sensors simply connect to the circuit board of the smart controller, as shown.

There is no polarity of the wires when connecting to the board.

With these in place, the Smart Controller outputs the water level inside your fresh water tank, and displays if your grey water tank is full. This is fully explained in your Smart Controller instruction booklet



Below are screenshots of the Smart Controller showing the fresh water sensor display and when the grey water tank is full.

FRESH TANK LEVEL

GREY TANK FULL

Level Sensor Wiring – Cerbo GX or similar

If you have purchased the level sensor(s) to attach to a Victron Cerbo GX, or similar device, these usually have a 2-pin input to connect the level sensors to. Simply extend the wires from the level sensors to reach your unit.

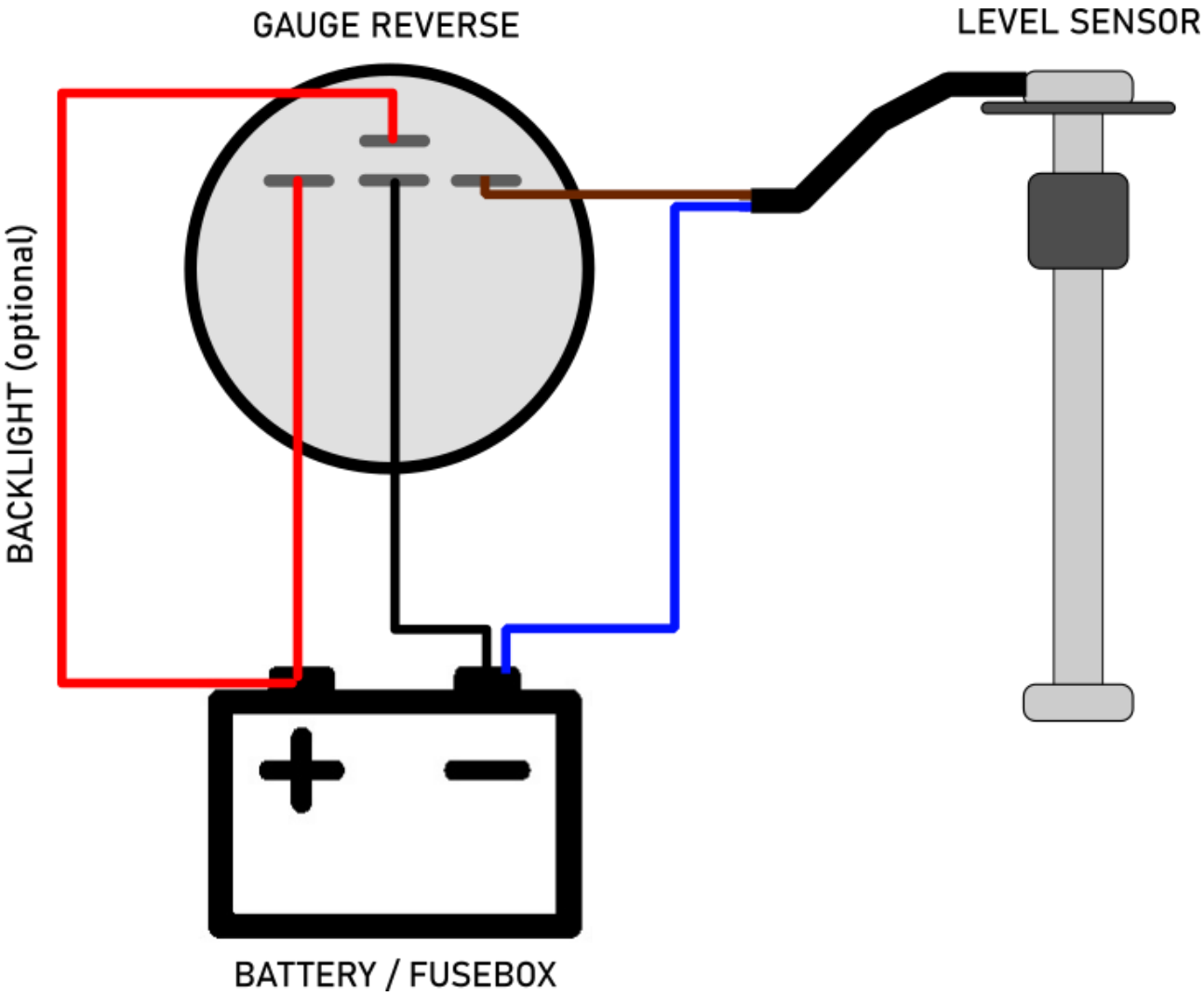
With the Cerbo, you can purchase and connect 2 level sensors, 1 for a fresh tank and 1 for a grey water tank, and the Cerbo can display the water level of each one, rather than just the fresh water tank like our Smart Controller.

Level Sensor Wiring – Water Gauge

To fit the level sensor gauge:

- Drill a 52mm diameter hole in your control board panel.
- Remove the back screw cap, insert the gauge into the hole and tighten the screw cap, ensuring the gauge is straight when viewed.
- We recommend connecting the wires beforehand if the back of your control panel is hard to reach.

- There are 4 ports on the reverse of the gauge.
- There are 2 wires on the level sensor – brown and blue.
- Follow the below diagram to wire in your level sensor to the gauge and to power.
- You can fit a switch on the optional backlight wire, and on the main power wire to turn the gauge and backlight on and off as required.



Further Information

- A 2A fuse on the power line is sufficient for the circuit.
- 0.75mm (18 AWG) cable or higher is adequate for all the wiring.
- The backlight connection is optional. If you do not wish for the backlight, leave this port blank on the gauge.
- You can use spade connectors to connect the wires to the back of the gauge.
- Spade connectors can also be used to connect to the level sensors from the gauge, attaching to the blue/brown wires coming from the level sensor.

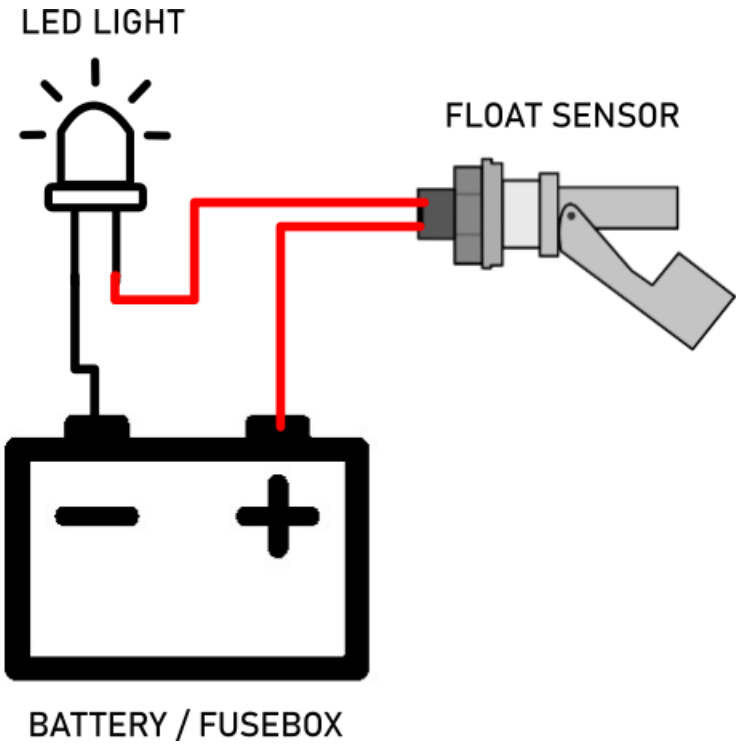
To ensure the sensor works, fill the tank with water and watch the gauge climb to full. Empty the tank, and ensure the gauge reaches empty before the tank runs out of water.

It is normal when the gauge reads EMPTY to still have some water inside the tank, especially if the gauge doesn't reach all the way to the bottom.

Float Sensor Wiring

As mentioned previously, the float sensor can connect to an LED or buzzer to signal when the float sensor is activated.

An example circuit is shown below but can be modified to suit your needs. Ensure the line is fused (2A). 0.75mm (18 AWG) cable is sufficient.



We would love to know what you think!

Please let us know by leaving a review through the link sent through when you made your purchase, or email us at info@bobilvans.co.uk!

You can also share photos of your installation on the 'Bobil Water Heater Users', Facebook page, we'd love to see them!

www.bobilvans.co.uk

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