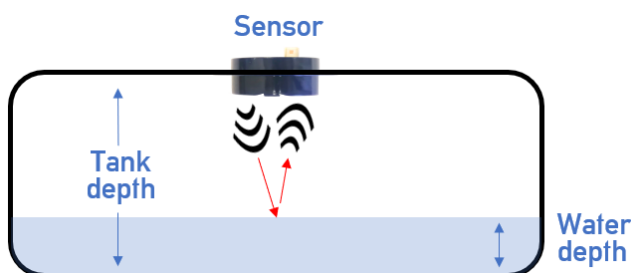


Ultrasonic Water Sensors – Troubleshooting Guide

Overview

The ultrasonic water sensors work in a similar way to car parking sensors by transmitting a high frequency audio signal, which is then reflected back to a receiver. Depending on the time taken, the distance travelled can then be calculated.



In order to calibrate and operate correctly, the ultrasonic water sensors need to see a flat reflecting surface such as the bottom of the tank or surface of the water. If the surface is uneven then the reflected signal will be scattered or weakened and the chance of an incorrect calibration or reading increases.

The following guide provides a few checks, should the sensors not be providing the expected readings.

1. Check PSU & Control Panel is updated

If the PSU or Control Panel is not updated to the required version, then the water level sensor may not function correctly. The minimum versions for each are shown below,
EC600 / EC700 PSU: V49

Modular System PSU: V13

EC940 Control Panel: V112

EC970 Control Panel: V120

2. Check the relevant sensor is enabled in Advanced Settings

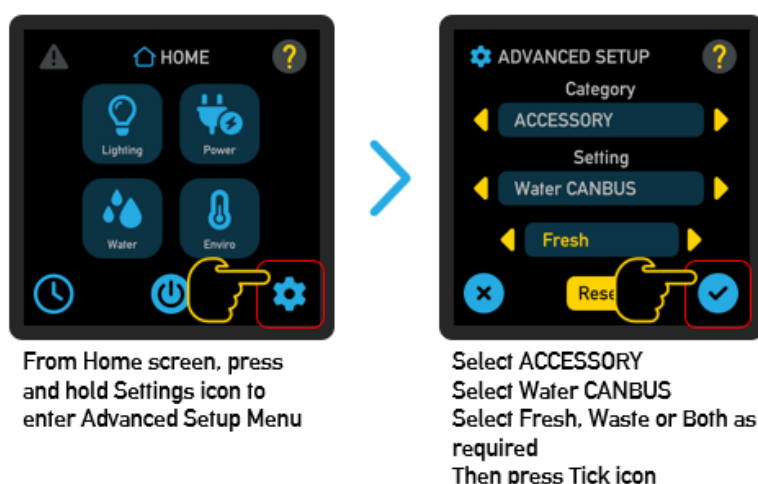
Press and hold the settings (cog button) to enter advanced settings

Select ACCESSORY > Water CANBUS

Select Fresh , Waste or Both as required then press 'Tick' button

Note:- If the sensors are set to 'None' they will be disabled and will not work

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Symptoms

One or both of the sensors will not calibrate and sensor will permanently show 0%
After attempting calibration the sensor may show a low value e.g. 3cm

3. Ensure two sensors of the same type have not been fitted

If either 2 x fresh (blue) or 2 x waste (grey) sensors have been fitted accidentally, then erratic readings will result.



Symptoms

If 2 x fresh sensors fitted

- Fresh reading may regularly change between two values*
- Waste reading will always be zero

If 2 x waste sensors fitted

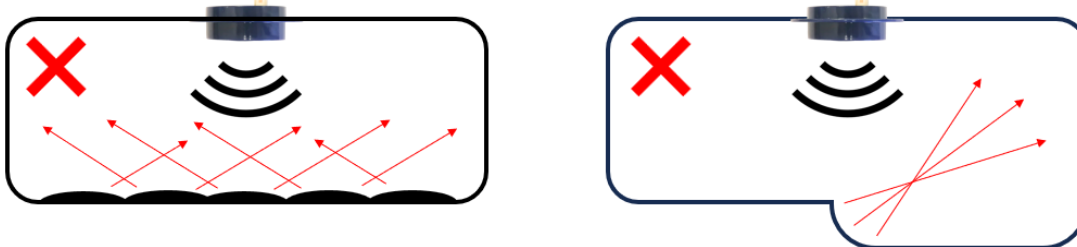
- Waste reading may regularly change between two values*
- Fresh reading will always be zero

* - These two values will be the water currently in the fresh and waste tanks

Ultrasonic Water Sensors – Troubleshooting Guide

4. Check the reflecting face under the sensor is flat

If the face of the tank directly under the sensor is not totally flat it may stop the sensor from calibrating correctly. Check the internal tank face is totally flat with no bumps, steps or debris within view of the sensor which may affect the reflected signal.



Symptoms

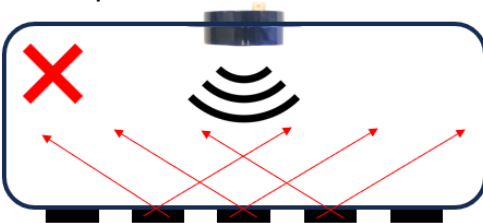
The sensors may struggle to calibrate when using the AUTO calibration mode or return an incorrect value for the depth of tank e.g. 20cm returned when tank is 10cm

Tank may then fill more slowly or quickly than expected due to incorrect depth being set

Tank may then show zero when there is still water in the tank

5. Check the tank thickness does not vary

If the thickness of the tank material varies under the sensor, it may also affect the reflected signal and cause issues with calibration. In this case use Manual Mode to set the tank depth.



Symptoms

The sensors may struggle to calibrate when using the AUTO calibration mode or return an incorrect value for the depth of tank e.g. 20cm returned when tank is 10cm

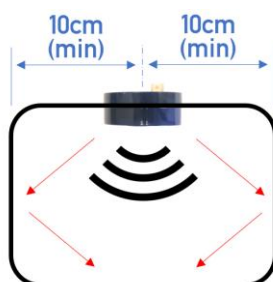
Tank may then fill more slowly or quickly than expected due to incorrect depth being set

Tank may then show zero when there is still water in the tank

6. Ensure sensor is not mounted too close to the side wall

If the sensor is mounted too close to the side of the tank or the tank is too small, internal reflections may overpower the reflected signal from the bottom of the tank causing erratic readings

Ultrasonic Water Sensors – Troubleshooting Guide



Symptoms

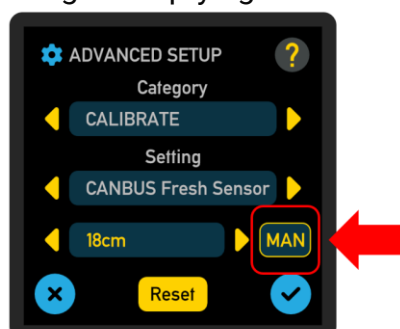
The sensors may struggle to calibrate when using the AUTO calibration mode or return an incorrect value for the depth of tank e.g. 20cm returned when tank is 10cm

Tank may then fill more slowly or quickly than expected due to incorrect depth being set

Tank may then show zero when there is still water in the tank

7. Check the sensor has not accidentally been set to Manual Mode

If the sensor has been accidentally set to Manual Mode it will use the tank depth shown in the adjacent box. This may be more or less than required and will affect readings when filling or emptying the tank.



Symptoms

Tank may fill more slowly or quickly than expected due to incorrect depth being set

Tank may show zero when there is still water in the tank

It is only suggested to use Manual Mode when the automatic calibration cannot be used, for example when the bottom of the tank is not totally flat.

8. On Rev1 sensors – check rubber washers are pushed into place

If the sensors have serial numbers beginning 240517XXXX or earlier, they will be fitted with rubber washers around the ultrasonic transmitter and receiver. If these rubber washers are not pushed fully into place, it may cause the sensor not to calibrate correctly

Ultrasonic Water Sensors – Troubleshooting Guide



Rev1 – Washers fitted
up to 240517XXXX



Rev2 – Without washers
from 250819XXXX

Symptoms

After an AUTO calibration, the tank depth does not change to show the new depth.