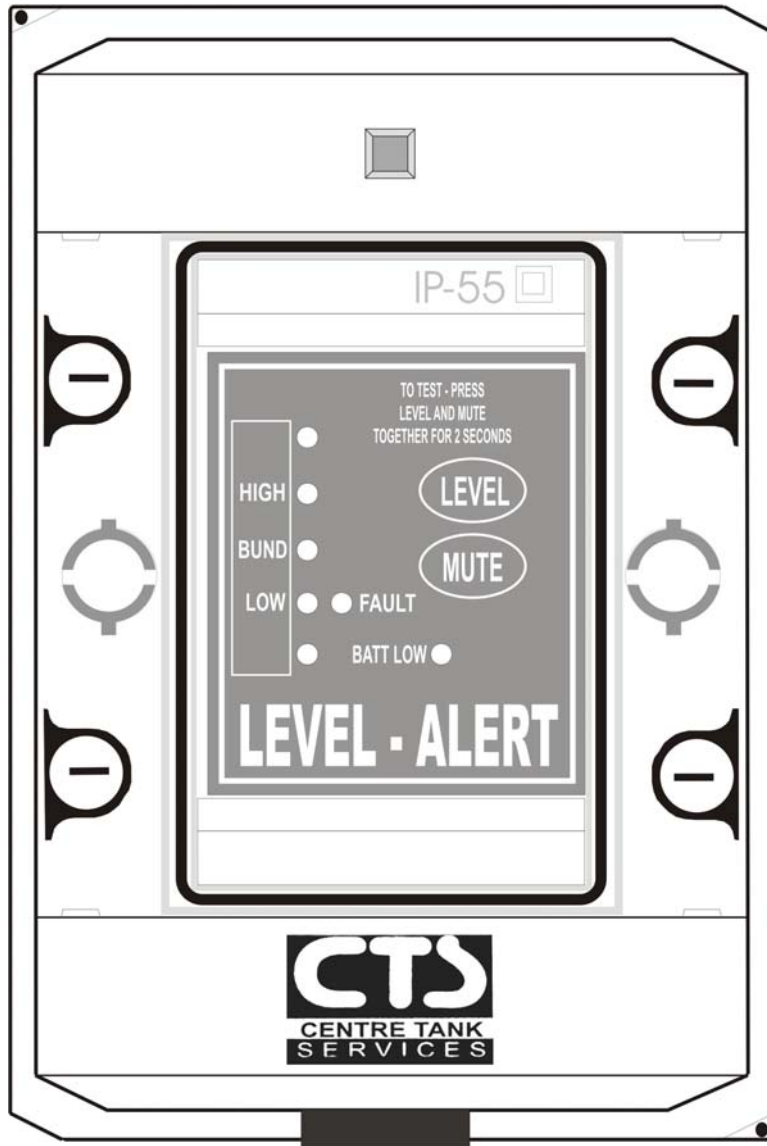


Instructions

Battery Operated Alarm



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Important Installation Note

This alarm is designed to be installed in exposed locations. **Care must be taken at all times** to ensure that the front panel integral seal is not damaged resulting in water ingress.

Technical Specifications

Enclosure	
Dimensions (L x H x D)	145 x 215 x 120 (mm)
Colour	Light Grey RAL 7035
IP Rating	IP 55
Material	Polycarbonate
Float	
Material	Nylon
Specific Gravity	0.70
Operating Temperature	-30°C to +70°C
Cap Mounting Thread	1.5" BSP
Cable Length	5 metres
Sounder	
Sound Output @12V	90 dB
Frequency	2600 Hz
Battery Type	
	6 x AA (1.5V)

CTS

Centre Tank Services Ltd, Unit 41, Minworth Industrial Park,
Forge Lane Minworth, Sutton Coldfield. B76 1AH



Tel: 0121 351 4445 Fax: 0121 351 4442



Mounting and Basic Installation

1. Remove the Perspex door. Open the door by turning the white tab 90° anticlockwise.
2. Remove the front panel by turning the four plastic screws anticlockwise half a turn.
3. When all four screw slots are vertical the front panel can be lifted free from its base. **(N.B. Do not allow the front panel to hang unsupported on its cables.)**
4. Carefully drill out the four mounting holes in the base.
5. Use the holes as a template to mark the mounting surface.
6. Cable entry grommets must be positioned at the bottom.
7. Screw the base to the mounting surface and insert the four sealing caps into the screw recesses to prevent water ingress. **(N.B. When mounting ensure the base is flat and not distorted as this may result in water ingress.)**
8. Pass the sensor probe cable through the grommet and connect to the probe screw terminal. Repeat the procedure for the second probe. (See page 10 for more detail.)
9. Fit the 6 x AA (1.5V size) batteries taking care to observe polarity. (See page 9 for more detail.)
10. Refit the front panel and door, ensuring that all integral seals are undamaged.

Setting Up The Alarm

Preliminary Checks

Now the alarm has been successfully mounted it is worth doing a few preliminary checks to ensure that the installation will run smoothly. It is particularly important to check the probe as an error found after installation is much more time-consuming.

1. Checking the batteries

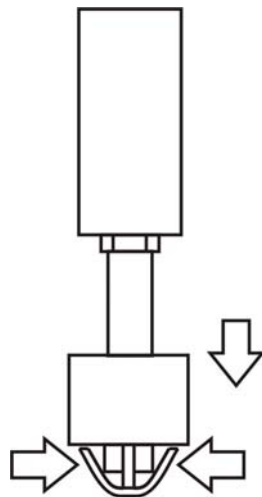
Press the 'mute' and 'level' buttons simultaneously for 2 seconds to ensure the alarm is operational. The alarm will stop when the buttons are released.

2. Checking the probe

Before installing the probe sensors in the tank, manually move the float.

On the Overfill and Bund probes the alarm should sound and the correct lamp illuminate when the float is moved to the top of its shaft.

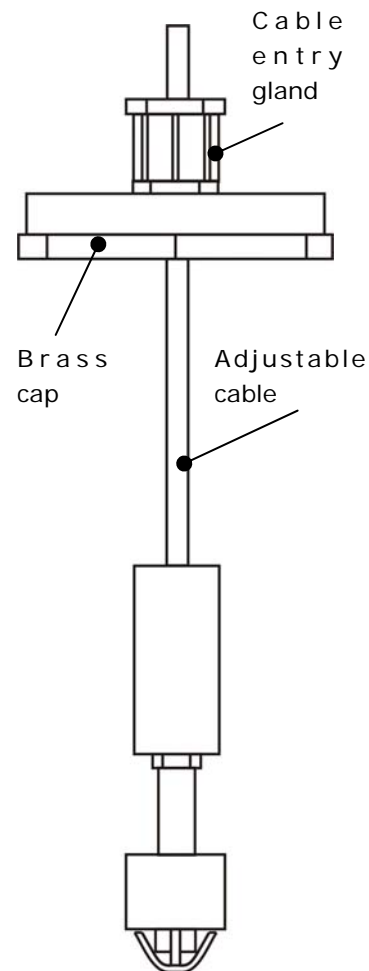
The Low level probe should sound when the float is positioned at the bottom of the shaft.



If on the Overfill or Bund the alarm sounds when the float moves to the bottom of the shaft or if the low level float sounds at the top of the shaft then remove the float by pushing in the sides of the float stop (see diagram). Next rotate the float through 180° and simply push it back onto the shaft.

Setting Up The Alarm

Probe Positioning



The position of the float can be adjusted to the required height by loosening the cable entry gland on the brass cap.

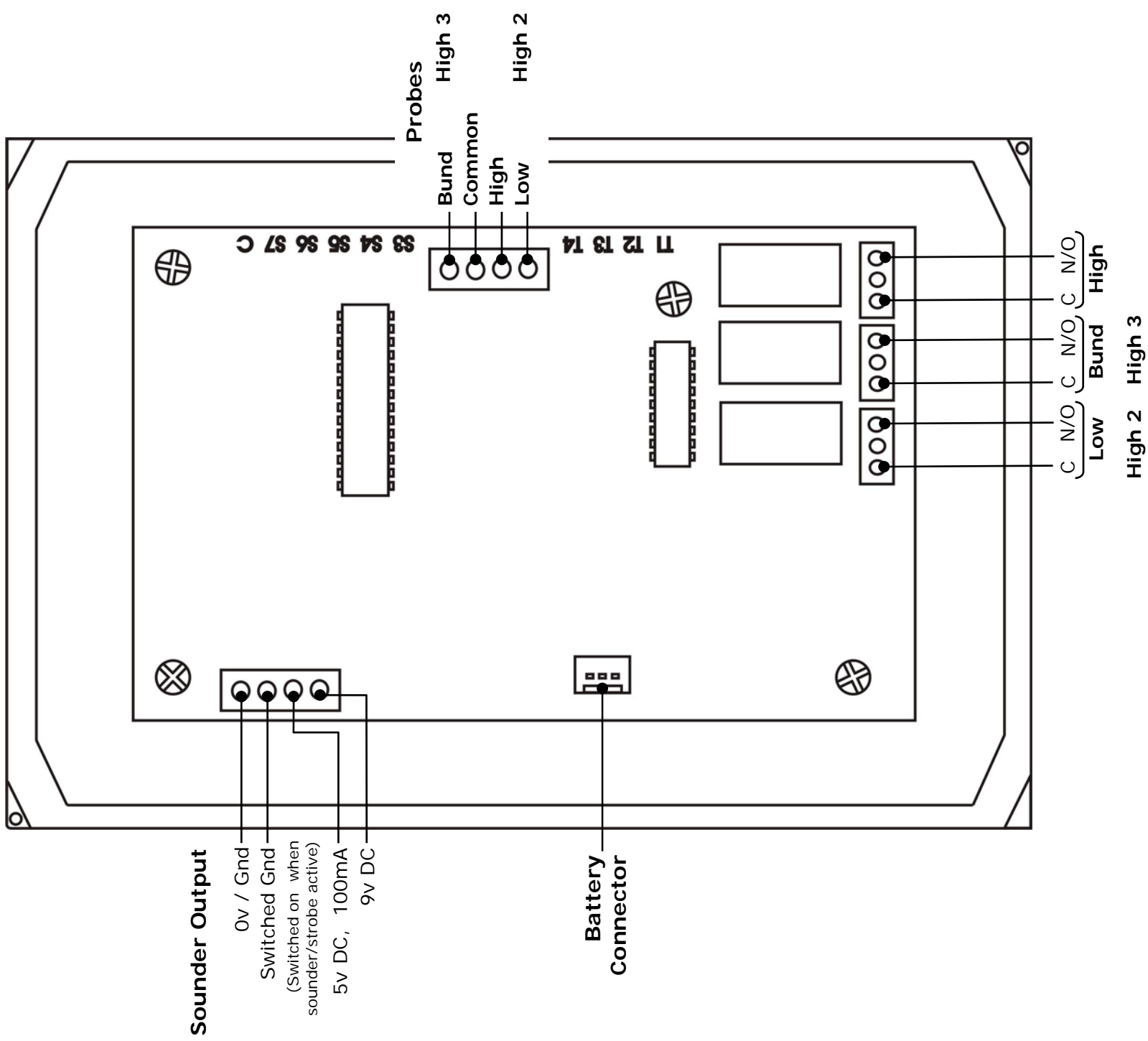
The cap can then be moved up or down the cable until the required height is achieved (see page 9: 'Probe connections' for more detail on positioning the probes in the tanks).

Retighten the cable entry gland and secure the cap to the tank.

To test the alarm press level and mute buttons simultaneously whilst the buttons are pressed all the active zones, fault, strobe and sounder will activate. All lights and sounders will stop when the buttons are released.

Periodically, and specifically before each filling, press the 'mute' and 'level' buttons simultaneously until zones illuminate and sounder and strobe are active to ensure unit has power and is operating correctly.

Internal Layout Diagram



Optional Relays

For more detail of each of the highlighted areas please see the following pages:

Battery Connector: page 9, **Probe Connections:** page 10, **Optional Relays:** page 11

Installation Diagrams

Fitting The Battery

The unit is supplied with 6 x AA (1.5v) alkaline batteries, these can be found loose inside the cardboard box along with the battery holder.

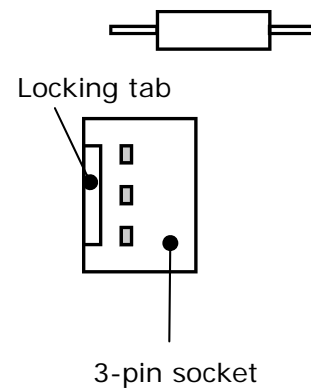
Remove the covers on the 2 battery boxes by sliding the lid towards the wires as indicated by the arrow on the case.

Insert 3 x AA batteries in each battery box making sure the polarity is correct (as per diagram in base of battery box), replace the box lid.

Connect the 3-way plug to the battery socket on the right of the main PCB (as above, see also layout diagram in centre of instructions), the locking tab ensures that the polarity is correct.

When the unit requires a change of batteries it will emit a single 'bleep' every 2 minutes (very similar to a battery smoke alarm). To test the batteries press the "LEVEL" button for 2 seconds, if the batteries are low the "BATT LOW" and "FAULT" lamps will illuminate.

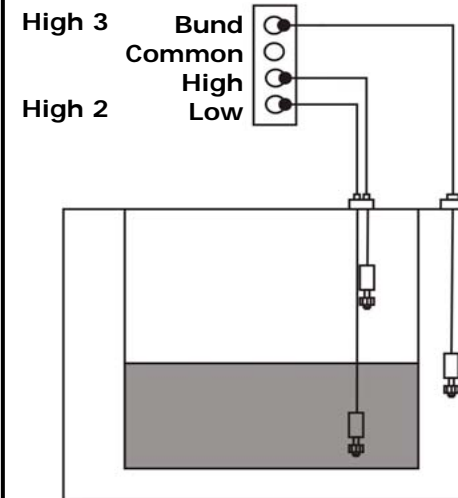
Always replace all the batteries with alkaline cells when required.



Installation Diagrams

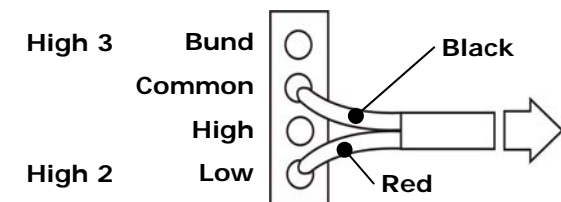
Probe Connections

There are four probe connections, which are located as shown here. The probe wired to the 'High' connection is positioned topmost in the tank, and is used to alert that an overflow has occurred, whereas the probe in the 'Low' connection should be placed near the bottom of the tank, to indicate a low level. The 'Bund' probe is between the two tank 'skins' and is a precaution so situations such as leakage and overflow can quickly be identified.



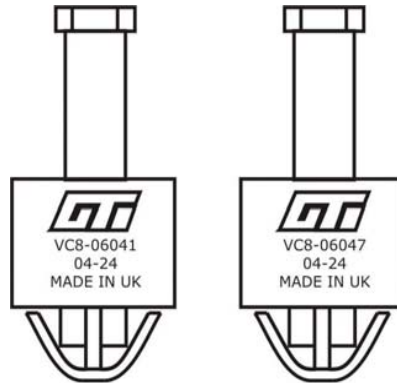
Common Probe Connection

You will notice that in the probe cable there are two wires, one red and one black. One of these wires for **each** of the three probes should be wired to the 'Common' connection. The colour is actually irrelevant but it is suggested for simplicity all wires to the 'Common' connection are kept the same.



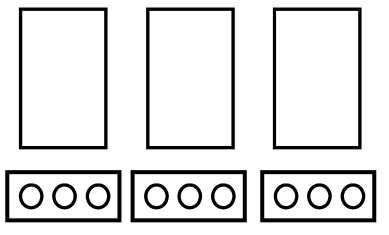
Monitored Probes (Optional)

The alarm can operate with either standard probes (type VC8-06041 see right) or monitored probes (type VC8-06047). If you have purchased the alarm with monitored probes, the alarm will indicate a fault if the probe is cut or a short circuit occurs. If the fault LED is illuminated and a dual tone is heard from the sounder, press the level button to display which probe is faulty.



Test/replace probe where appropriate.

Relay Outputs (Optional)



C N/O C N/O C N/O
LOW BUND HIGH
HIGH 2 HIGH 3

RELAYS

The relay outputs are optional and must be specified at time of order. They allow switching to external equipment when either the High, Bund or Low alert is triggered. For example, a pump is activated in the event of an overfill. 'C' and 'N/O' are printed on the boards for 'Common' and 'Normally Open'. (N/C 'Normally Closed' is not connected on this model.)

It is important to note the **maximum switched voltage** is **250V AC** and the maximum switched current is **1 Amp**.

Troubleshooting

1. If the **battery low indicator** illuminates or sounder fails to respond, then replace the battery (page 9).
2. If the **alarm activates signalling an overfill condition when the tank is not being filled**, this indicates a probe fault. Check cables and the probe assembly, make sure that the probe is in the correct position and not lying horizontal on the bottom of the tank.
3. If the **probe does not register as supplied**, then repeat sequence shown on page 4 (checking the probes).

Troubleshooting (Alarm Conditions)

1. The unit is designed so that all the zones emit a different sound, enabling you to distinguish the alarm zone without having to visualize it - the top zone is the most rapid (or urgent) on the sounder and the bottom is the least.
2. The Overfill Alarm will only activate when the tank has partially emptied and then been refilled.
3. The Bund Alarm indicates leakage from the tank. The outer cavity should be checked and drained if containing fluid.
4. The Low Level Alarm will only activate when the tank has partially filled and then the fuel drained below the low position.