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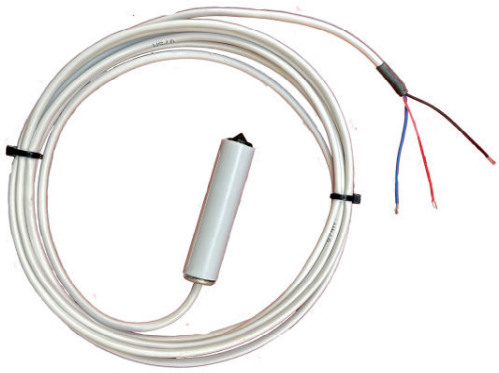
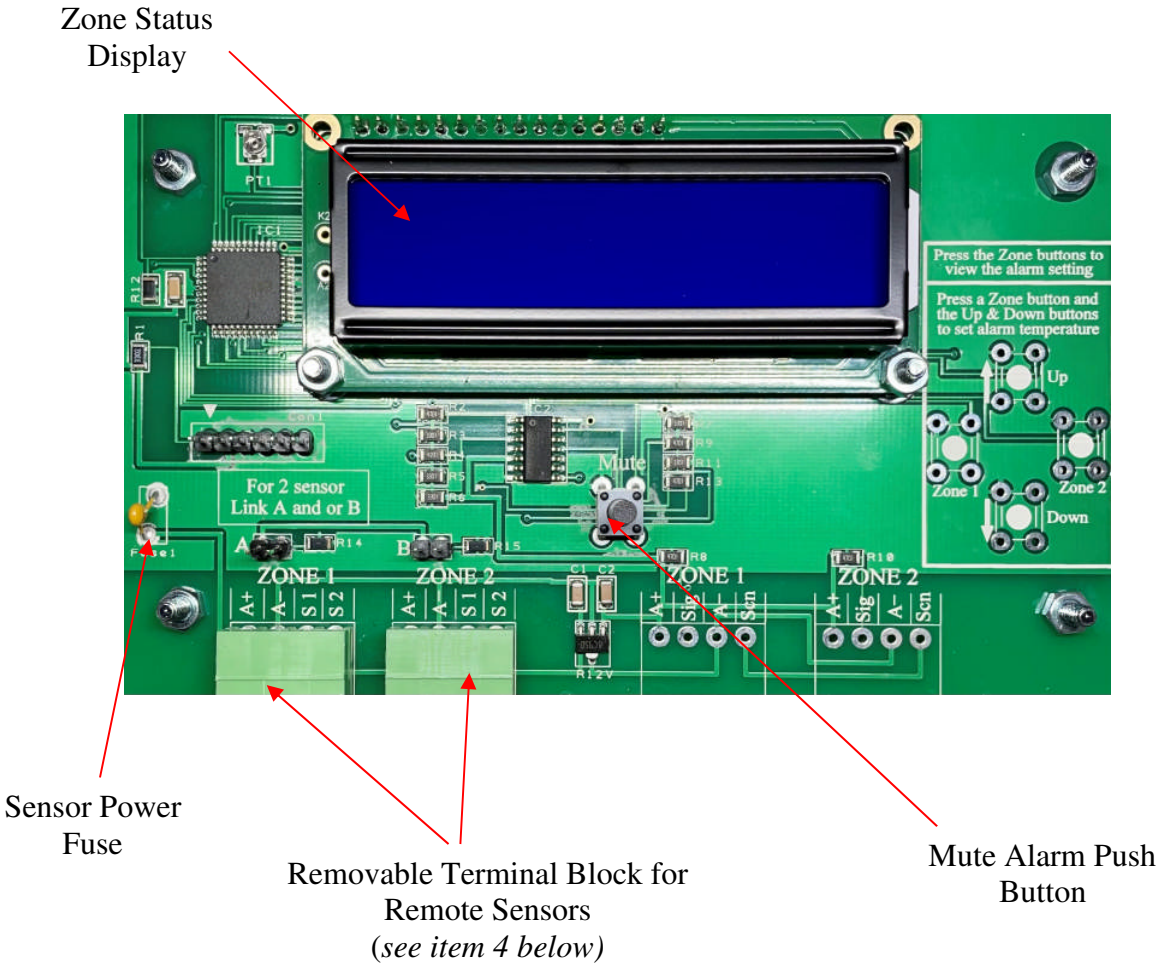
Made In Britain

Bunded Tank Oil Leak Alarm Type: ODT2-1 Installation and Operation Manual



Contents

1) Display and Control



2) Operation

In normal operation with no alarms or faults, the audible warning device will be OFF and the display will be showing screen 1 *(see below).*

When the sensor detects a leak, the audible warning will start pulsing, the display will show screen 2 below, and if fitted, the following optional features will operate:

- Common alarm BMS contact
- BMS relay
- Remote beacon or beacon sounder
- SMS system will send an Alarm message

The unit will remain in this mode until the "Mute" button has been pressed. On muting the alarm, the display will stop pulsing, the audible warning will stop and if fitted, the remote sounder will stop. Once the leak has been cleared up and oil removed from the sensor, the system will automatically reset to normal operation. If a sensor becomes disconnected or damaged, the audible warning will sound, and the display will show screen 2. The unit will remain in this mode until the "Mute" button is pressed. Once the sensor fault has been rectified, the system will automatically revert to normal running provided the "mute" button has been operated.

If the electronic sensor power fuse operates, the audible warning will sound, and the display will show screen 3 *(see below).* The unit will remain in this mode until the "mute" button is pressed. To reset the fuse, turn off and on the alarm unit, the system will automatically revert to normal running provided the "mute" button has been operated.

Display Screens

Screen 1

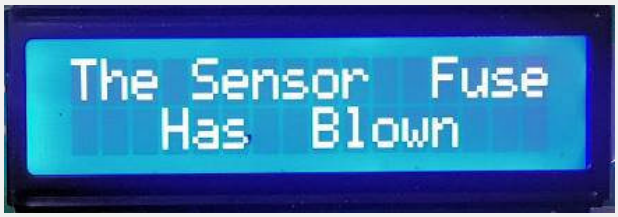
No leaks have been detected

Screen 2

One Zone

New oil leak found or sensor fault

Screen 3



The sensor power fuse has blown

4) Sensor Wiring

4a) Only one sensor fitted to each zone

Only fit one sensor per zone to "Sig 1" terminal, do not use "Sig 2" terminals. Using the pluggable 4 way terminals as shown in Item 1 above, connect the sensor to the alarm unit as follows using a 3 core 0.22mm cable. The sensor cable should not exceed 100m in length, and should not be run in parallel to, or near, any power cables, bus-bars or any source of electrical or radio interference.

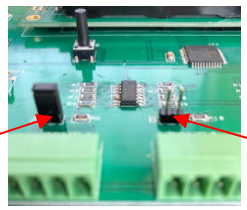
ODT2 Sensor

Alarm Unit Terminal Reference	**Sensor Cable Colour**
A+	***Red***
A-	***Black***
Sig 1	***Blue sensor 1***
Sig 2	***DO NOT USE***

4b) Two sensors fitted to each zone

To be able to fit two sensors to each zone, the two silver pins marked "A" and or "B" must be fitted with a linking connector.

Linking connector fitted so that two sensors can be used on this zone



Linking connector NOT fitted, only one sensor can be used on this zone

Using the pluggable 4 way terminals as shown in Item 1 above, connect the sensors to the alarm unit using a 3 core 0.22mm cable as below. The sensor cable should not exceed 100m in length, and should not be run in parallel to, or near, any power cables, bus-bars or any source of electrical or radio interference.

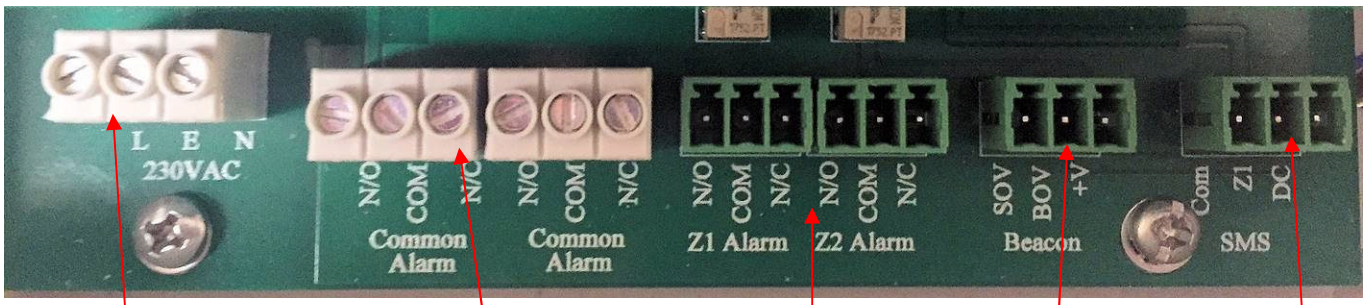
ODT2 Sensor

Alarm Unit Terminal Reference	Sensor Cable Colour
A+	***Red***
A-	***Black***
Sig 1	***Blue sensor 1***
Sig 2	***Blue sensor 2***

4c) Retrofitting an additional sensor to a zone

You would have received with the additional sensor a small black (sometimes grey) linking connector *(see above picture).* First power down the unit and plug the linking connector so it shorts out the two silver pins ("A" or "B") to the zone you are adding a sensor to, (*see above picture).* Wire in the additional sensor as outlined in Item 4b.

5) Power, BMS, Beacon and SMS Connections



90 to 265VAC Input power

If Fitted
2 x common alarm and power fault volt free BMS contacts

If Fitted
Individual zone alarm contacts to BMS

If Fitted
12VDC output to Beacon or Beacon Sounder

If Fitted
Output to SMS

The Common alarm relay is normally energised, de-energised in alarm or power fault, therefore both "Common Alarm" contacts are identified correctly when the unit is powered and has no current alarms.

Output Volt Free contacts for use with a Building Management System

Function Required	Fitted as Standard	Relay Output Terminals
Zone 1 Alarm	No	Z1 Alarm
Zone 2 Alarm	No	Z2 Alarm
Oil leak alarm contact 1 any zone & power fault	Yes	Common Alarm & Power Fault
Oil leak alarm contact 2 any zone & power fault	Yes	Common Alarm & Power Fault

BMS relays do not operate for blown fuse or sensor fault

6) Beacon and Beacon Sounder

If a beacon or beacon sounder is supplied, connect to the three terminals identified as "Beacon" as follows;

6a) Non Mutable Beacon or Beacon Sounder

If the beacon or the beacon sounder is to be active (on all the time) until the water leak alarm has cleared, connect as follows:

Terminal Reference		Connect Beacon / Beacon Sounder terminals to the following terminals
+V		Beacon +V or Strobe /Tone + terminal
BOV		Beacon -V or Strobe /Tone - terminal
SOV		NO connection to this terminal

6b) Mutable Beacon or beacon sounder

If the beacon or the beacon sounder is to turn off when the "Mute" push button is pressed, connect as follows:

Terminal Reference		Connect Beacon / Beacon Sounder terminals to the following terminals
+V		Beacon +V or Strobe /Tone + terminal
BOV		NO connection to this terminal
SOV		Beacon -V or Strobe /Tone - terminal

6c) Mutable sounder Beacon on all the time

If the beacon is to remain alight all the time an alarm is current, but the sounder is to be turned off when the "Mute" push button is pressed, connect as follows:

Terminal Reference		Connect Beacon / Beacon Sounder terminals to the following terminals
+V		Strobe and Tone + terminal
BOV		Strobe - terminal
SOV		Tone - terminal

Warning; if the above option "6c" is required, **remove** the electrical link connected between the second (Strobe -) & third terminals (Tone -) terminals within the sounder.

7) Fitting an SMS Messaging System

If an SMS text messaging or Email messaging unit is supplied, connect it as follows to the 3 way terminal block identified as "SMS":

Terminal Reference		Cable wire colours fitted to the messaging system
Z1		**BLUE**
COM		**BLACK**
DC		**RED**

8) Commissioning

Once the unit has been connect as described above, turn on the mains power to the unit. The display should illuminate display screen 1. Dip the sensor into a small about of oil and ensure that the alarm unit goes into alarm as described in item 2 above.

9) Maintenance

The system should be fully tested using the commissioning procedure at least once a year for correct operation. A check should also be made on a regular basis or at least every six months to ensure that the sensor is not contaminated with dirt, damaged or has been moved away from its correct location. If the sensor is found to be contaminated with dirt, it should be cleaned using a brush and soapy water, then dried using clean tissue paper. Re-test using the commission procedure.

10) Fault Diagnosis

Fault		Possible Reason
Display is OFF and the unit appears dead		1) No power to the control unit. *Test with a meter.* 2) The power fuse has blown. *Test the fuse with a meter.*
Unit displays a leak even though the sensor is clean with no oil touching the sensor		1) Check the alarm unit terminal blocks for bad connections 2) Check the field wiring for open or short circuit. 3) Using a short cable link terminal, "A+" & "Sig", the alarm should clear. If it does the field wiring or sensor is faulty. 4) Disconnect the sensor and wire direct to the alarm unit to eliminate the field wiring.
Screen 4 appears in the display		1) The internal sensor fuse has blown due to over current. Un-plug both 3 way sensor terminal connections and check the sensor wiring for short circuits. Before re-connecting the sensors, replace the 100mA fuse, the display should change and display zone 1 and 2 as alarm (screen 2). If this screen does not appear, *Return unit to manufacturer.* If it does appear, plug each zone sensor back in one at a time, noting if the fuse blows again and on which zone.
Horn not working		1) System fault. *Return to manufacturer.*

11) Installation Drawings *ODT2 Sensor*

Not all the shown devices may be available on your system