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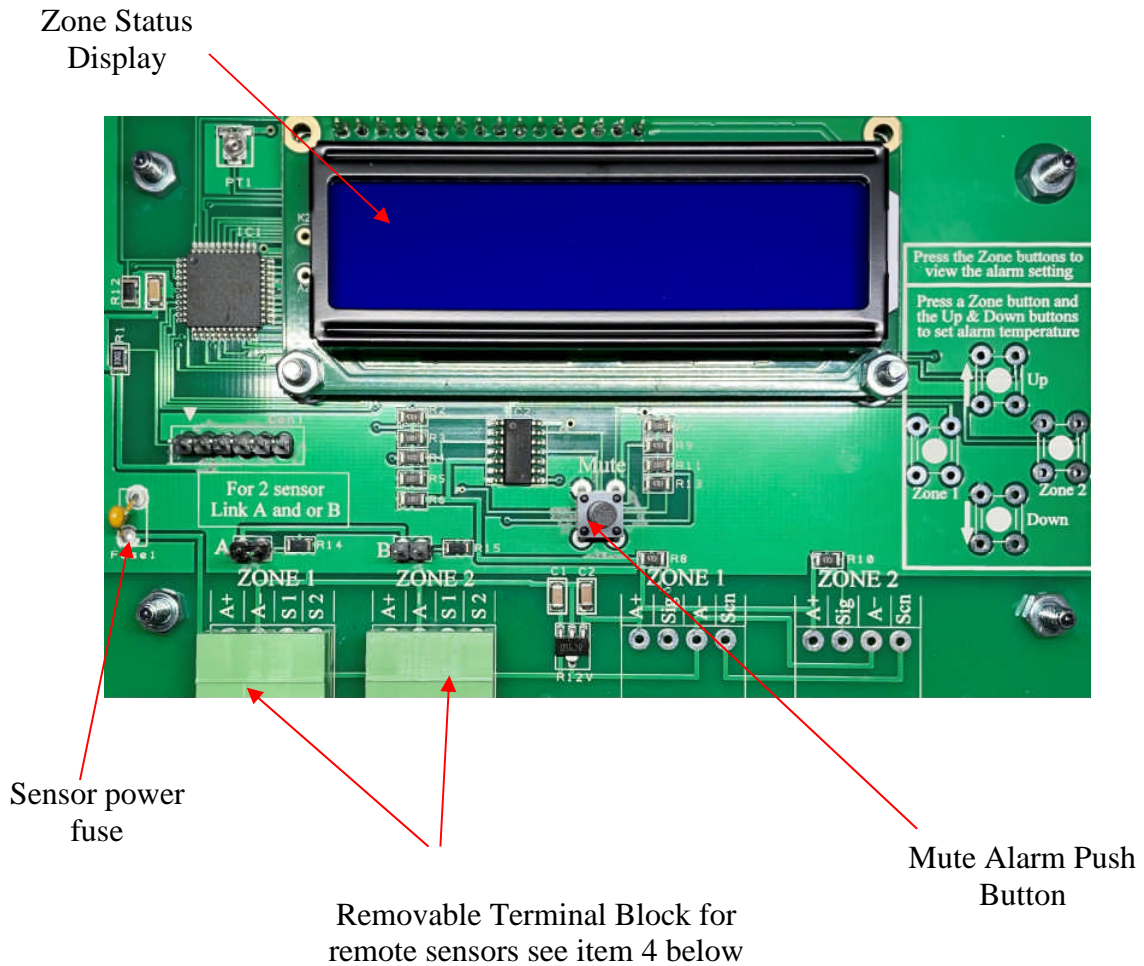
# 1 and 2 Oil Leak Alarm Installation and Operation Manual



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## 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 below. When one of the oil sensors detects a leak, the audible warning will start pulsing, the display will show the zone in alarm, see screens 2, the common alarm BMS contact will operate, if fitted the zone BMS relay will operate, if fitted, the remote beacon/beacon sounder will operate and if fitted the SMS will send an Alarm message. The unit will remain in this mode until the “Mute” button has been pressed when the display will change to show both zones, see screen 3, 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 a leak alarm, see 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 sensor power fuse blows or is removed, the audible warning will sound, and the display will show screen 4 below. The unit will remain in this mode until the “Mute” button is pressed. Once the sensor fuse has been rectified, the system will automatically revert to normal running provided the “mute” button has been operated.

### 3) Display Screens

*Screen 1*



No leaks have been detected

*Screen 2*

*One Zone*



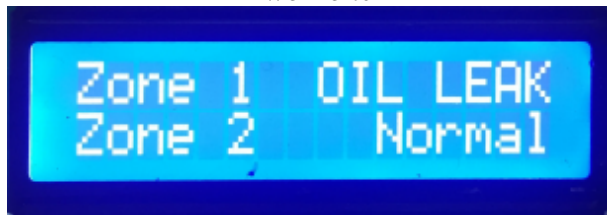
*Two Zone*



New oil leak found on zone 1

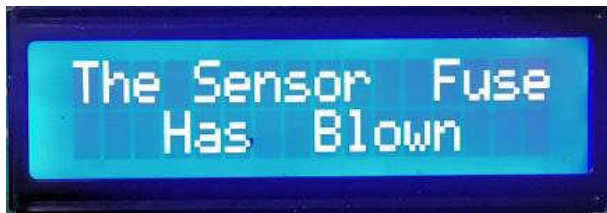
*Screen 3*

*Two Zone*



Oil leak on zone 1, Alarm has been Muted

*Screen 4*



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 4 core 0.22mm cable such as RS 8124725. 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.

##### ODS Sensor

<i>Alarm unit Terminal reference</i>	<i>Sensor Cable colour</i>
<i>A+</i>	<i>Red</i>
<i>A-</i>	<i>Black</i>
<i>Sig 1</i>	<i>Blue sensor 1</i>
<i>Sig 2</i>	<i><b>DO NOT USE</b></i>

##### ODS-OSPW Sensor

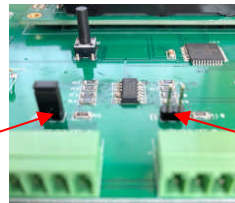
<i>Alarm unit Terminal reference</i>	<i>Sensor Cable colour</i>
<i>A+</i>	<i>Red and Yellow</i>
<i>A-</i>	<i>Blue</i>
<i>Sig 1</i>	<i>Black sensor 1</i>
<i>Sig 2</i>	<i><b>DO NOT USE</b></i>

Please note; the difference in the Black & Blue sensor wiring between the ODS and OSPW

##### 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 two sensors can be used on this zone



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

Using the pluggable 4 way terminals as shown in Item 1 above, connect the sensor to the alarm unit as follows using a 4 core 0.22mm cable such as RS 8124725. 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.

##### ODS Sensor

<i>Alarm unit Terminal reference</i>	<i>Sensor Cable colour</i>
<i>A+</i>	<i>Red</i>
<i>A-</i>	<i>Black</i>
<i>Sig 1</i>	<i>Blue sensor 1</i>
<i>Sig 2</i>	<i>Blue sensor 2</i>

##### ODS-OSPW Sensor

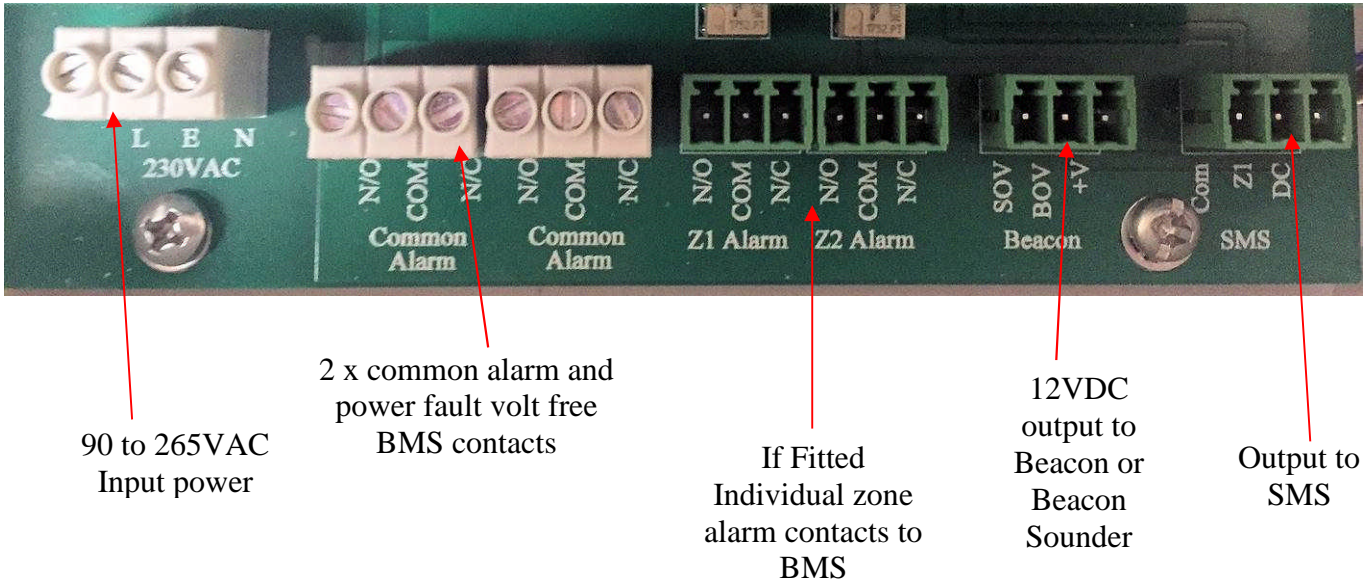
<i>Alarm unit Terminal reference</i>	<i>Sensor Cable colour</i>
<i>A+</i>	<i>Red and Yellow</i>
<i>A-</i>	<i>Blue</i>
<i>Sig 1</i>	<i>Black sensor 1</i>
<i>Sig 2</i>	<i>Black sensor 2</i>

Please note; the difference in the Black & Blue sensor wiring between the ODS and OSPW

##### 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



**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 by a Building Management System.**

<i>Function Required</i>	<i>Fitted as Standard</i>	<i>Relay Output Terminals</i>
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 / Email 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	<b>BLUE</b>
COM	<b>BLACK</b>
DC	<b>RED</b>

### **8) Commissioning**

Having connected the unit as described above, turn on the mains power to the unit. The display should illuminate display screen 1. Dip zone 1 sensor into a small amount of oil and ensure that the alarm unit goes into zone 1 alarm as described in item 2 above. Repeat for zone 2.

### **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, soapy water, dried off with clean tissue paper and re-tested using the commissioning procedure.

## 10) Fault Diagnoses

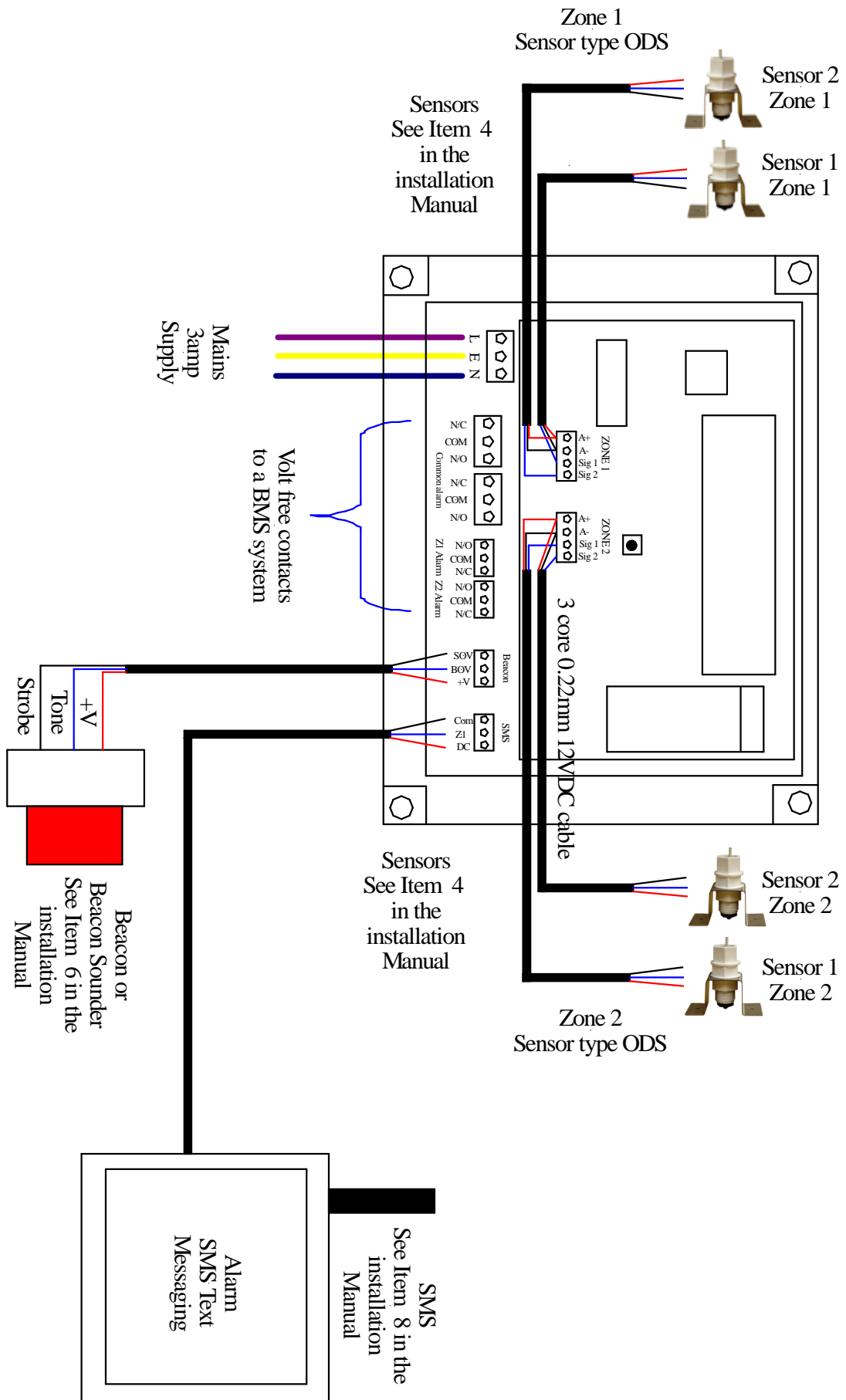
<b><i>Fault</i></b>		<b><i>Possible Reason</i></b>
Display is OFF and the unit appears dead		1) No power to the control unit. <i>Test with a meter</i> 2) The power fuse has blown. <i>Test the fuse with a meter</i>
Unit displays a leak even though the sensor is clean with no oil touching the sensor.		1) Check the alarm units 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. Unplug 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, <i>Return unit to manufacturer</i> . If it does appear, plug each zone sensor back in one at a time noting if the fuse blows again and on what zone.
Horn not working		1) System fault. <i>Return to manufacture</i>



11) Installation Drawings

OSP sensor

Not all the shown devices may be available on your system



12) Installation Drawings

OSPW sensor

Not all the shown devices may be available on your system

