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ODS2-3

One & Two Zone Fuel Oil Leak Alarm

Installation and Operation Manual



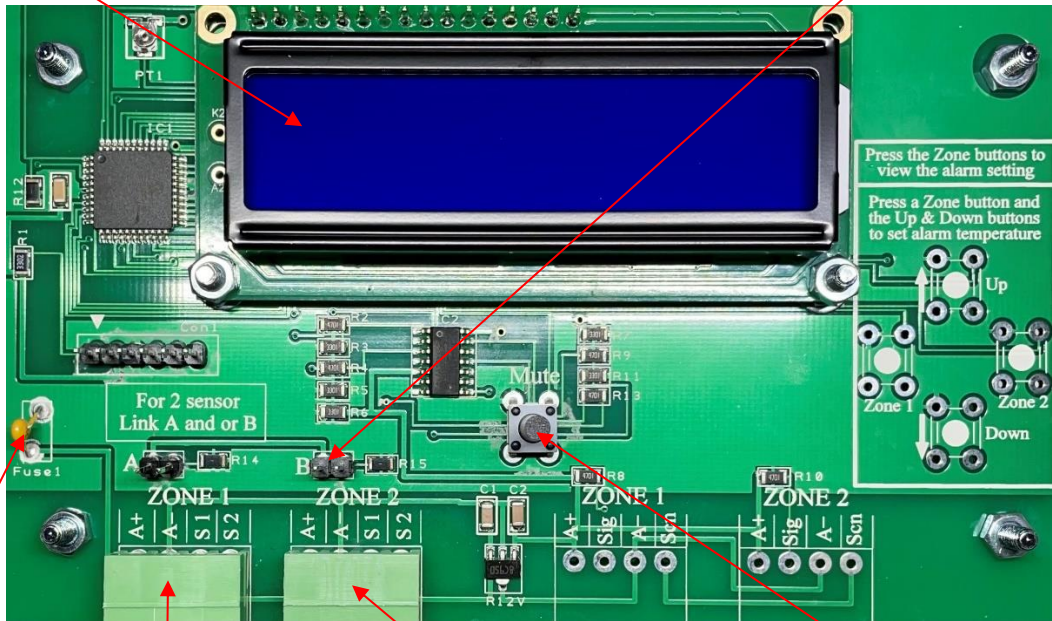
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1. Display and Controls

Zone Status Display

Removable Terminal Block for connection to Leak Sensor (see Item 6b)



Sensor Power Fuse

Mute Alarm Push Button

ZONE 1
Terminal Block
Connected to
ODS-optical sensor or
OSPW sensor or Oil Leak
Detection Cable

ZONE 2
Terminal Block
Connected to
ODS-optical sensor or
OSPW sensor or Oil Leak
Detection Cable

Display Screens

- Normal Operating Screen:



"The System is Clear – No Alarms to Display"

- Leak Detected on a One-Zone Alarm:



"Oil Leak Detected at Zone 1"

- Leak Detected on a Two-Zone Alarm:



"New Leak Detected at Zone 1"



*"Oil Leak Detected on Zone 1.
Alarm has been Muted"*

- Sensor Fuse Blown:



"System Fault – Sensor Fuse Blown"

2. Operation

When no leaks are detected, the system displays:
“**System is Clear – No Leaks Found**”, and the audible alarm remains **OFF**.

3. Alarm Function

When a sensor detects oil:

- The **audible alarm** will sound.
- The **common alarm relay** will close.
- If fitted – the Zone BMS relay will operate; the flashing audible beacon will sound and the SMS system will send an Alarm message.
- The display will show “*A Leak has been detected*”
- Press the “**Mute Alarm**” button to silence the alarm. The display will now show “Zone 1 – Oil Leak; Zone 2 – Normal”
- Once the leak has been cleared and oil removed from the sensor, the system will automatically reset to normal operation.

Note:

The detection cable **does not** have the facility to have **CABLE FAULT ALARM**

The **Oil Leak Detection cable is ONE TIME USE ONLY**. This will need to be replaced after it has absorbed Oil/Fuel/Diesel.

4. Sensor Supply Fuse Trip

If the electronic sensor power fuse trips due to an overload:

- The **audible alarm** will activate.
- The **common fault relay** will de-energize.
- The display will read:
“*System Fault – Sensor Fuse Blown*”

To reset:

Power **OFF** the unit, and then power it **ON** again.

5. Installation

⚠ IMPORTANT

Installation must only be carried out by a **qualified electrician**.

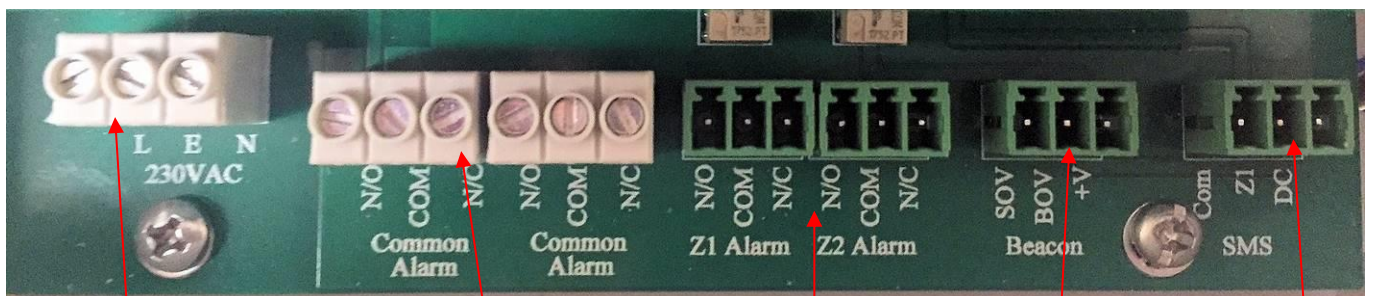
Mounting the Unit:

1. Remove the front cover to access the internal housing.
2. Use the four corner fixing holes to mount the enclosure to the wall.
3. Take care not to damage internal components while drilling.

Power Supply:

- Connect a **120VAC** or **230VAC** supply from a **5A fused spur**.
- Terminate connections to internal terminals marked: **L (Live), E (Earth), N (Neutral)**

Connections within the Alarm Housing



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

Output Volt Free contacts for use by 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 and power fault	Yes	Common Alarm and Power Fault
Oil Leak Alarm Contact 2 any zone and power fault	Yes	Common Fault and Power Fault

BMS relays do not operate for blown fuse or sensor fault

All Zone wiring and volt free alarm / fault relays wiring is to removable screw type terminal blocks.

6. Sensor Wiring

6a. Single Optical Sensor Per Zone

Use a **3-core 0.22mm** cable (or **4-core** for OSPW sensors). Max cable length: **100m**. Do not run signal cable next to any power cables, bus-bars or any source of electrical or radio interference.

ODS Sensor	Cable Colour	OSPW Sensor	Cable Colour
A+	RED	A+	RED & YELLOW
A-	BLACK	A-	BLUE
Sig 1	BLUE	Sig 1	BLACK
Sig 2	DO NOT USE	Sig 2	DO NOT USE

 **Note:** Sensor wire colours differ between ODS and OSPW models.

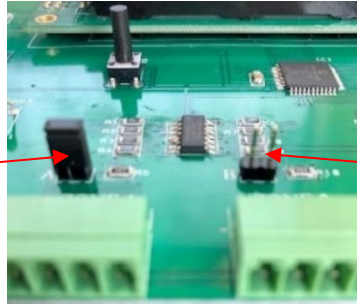
 **Important:**

You will not be able to use the Oil Leak detection cable in the same zone as an optical sensor

6b. Two Optical Sensors Per Zone

Install the **linking connector** between silver pins “A” and/or “B”.

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

Use a **3-core 0.22mm** cable (or **4-core** for OSPW sensors). Max cable length: **100m**. Do not run signal cable next to any power cables, bus-bars or any source of electrical or radio interference.

ODS Sensor	Cable Colour	OSPW Sensor	Cable Colour
A+	RED	A+	RED & YELLOW
A-	BLACK	A-	BLUE
Sig 1	BLUE sensor 1	Sig 1	BLACK sensor 1
Sig 2	BLUE sensor 2	Sig 2	BLACK sensor 2

 **Note:** Sensor wire colours differ between ODS and OSPW models.

6c. Retrofitting an Optical Sensor

1. Power **OFF** the unit.
2. Plug in the **linking connector** (provided) between pins “A” or “B”.
3. Wire the second sensor as described in **6b**.

6d. Oil Leak Detection Cable (P-LFP6000)

Single Cable Per Zone

Only connect the **P-LFP6000** Oil Leak Detection Cable to the correct **designated zone**, which is labelled on the top PCB board.



This zone is **not compatible** with ODS or OSPW sensors. The Oil Leak Detection Cable is connected to a P_LFP68 signal cable via male and female connectors. Using the pluggable 4-way terminal as shown in Item 1 above, connect the signal cable to the alarm unit as follows:

Terminal	Signal Cable Colour
A+	RED
A-	DO NOT USE
Sig 1	BLACK
Sig 2	DO NOT USE

⚠ Important:

You will not be able to use the Oil Leak detection cable in the same zone as an optical sensor

6e. Two Cables Per Zone

1. Install the linking connector as in Section **6b**.
2. Connect the P_LFP68 signal cable to the 4-way terminal as follows:

Terminal	Signal Cable Colour
A+	RED
A-	DO NOT USE
Sig 1	BLACK sensor 1
Sig 2	BLACK sensor 2

 **Important:**

You will not be able to use the Oil Leak detection cable in the same zone as an optical sensor

6f. Adding an additional Oil Leak Detection Cable to a different zone

 **Important:**

You will not be able to use the Oil Leak detection cable on a different zone that you have not originally specified. If you would like to change this option, you will need to send us the Alarm Panel back to CMR Electrical so that it can be re-programmed.

6g. What to do when Oil Leak Detection Cable shows a Leak

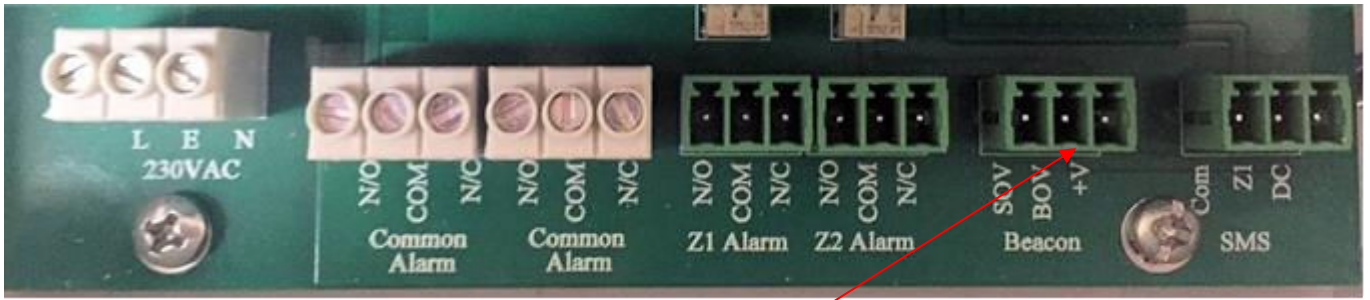
- The **audible alarm** will sound.
- The **common alarm relay** will close.
- The display will indicate the affected zone, *“Zone 2 Oil Leak”*.
- Press the **“Mute Alarm”** button to silence the alarm.

The **Oil Leak Detection cable is ONE TIME USE ONLY**. You will need to replace the cable after it has absorbed Oil/Fuel/Diesel.

Contact CMR Electrical – (+44) 1825 733600 or email: sales@cmrelectrical.com

7. Beacon and Beacon Sounder

Connect beacon/sounder to the 3-way terminal labelled “**Sounder Beacon**”.



Sounder
Beacon
terminal
block

7a. Non-Mutable (Always on Until Alarm Clears)

Terminal Reference	Terminal Reference on Beacon / Beacon Sounder
+V	Beacon +V or Strobe /Tone + terminal
BOV	Beacon -V or Strobe /Tone - terminal
SOV	No connection

Important:

Check that the link between the Strobe (-) and Tone (-) terminals in the sounder unit is removed.

7b. Mutable (Silenced via Mute Button)

Terminal Reference	Terminal Reference on Beacon / Beacon Sounder
+V	Beacon +V or Strobe /Tone + terminal
BOV	No connection
SOV	Beacon -V or Strobe /Tone - terminal

Important:

Check that the link between the Strobe (-) and Tone (-) terminals in the sounder unit is removed.

7c. Mixed (Beacon Always On, Sounder Muted)

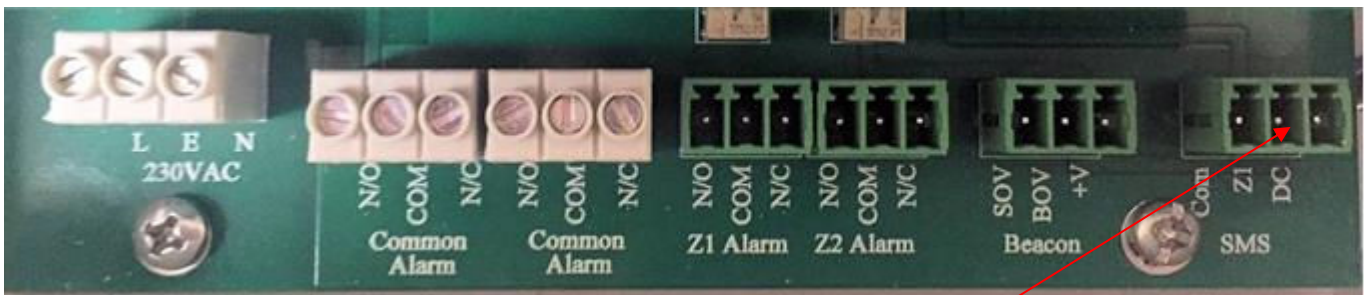
Terminal Reference	Terminal Reference on Beacon / Beacon Sounder
+V	Strobe and Tone + terminal
BOV	Strobe - terminal
SOV	Tone - terminal

⚠ Important:

Check that the link between the Strobe (-) and Tone (-) terminals in the sounder unit is removed.

8. SMS / Email Messaging System

If supplied, connect as follows to the “SMS” terminal block:



SMS
terminal
block

Terminal	Signal Cable Colour
COM	BLACK
Z1	BLUE
DC	RED

9. Commissioning

9a Commissioning of ODS-optical/OSPW sensors

1. Power **ON** the unit. Ensure display reads:
“System Clear – No Leaks Found”
2. Dip each sensor bulb into a small amount of oil:
 - Audible alarm should activate.
 - Display should show corresponding zone alarm.
 - Press “Mute Alarm” to silence.
3. Clean each sensor with soapy water and dry.
4. Confirm the system returns to the “Clear” state.

Repeat for **Zone 2**.

9b Commissioning of Oil Leak Detection Cable:

1. Gently detach the Oil Leak Detection cable from the floor surface.
2. Wrap a small cloth around 5cm section of the Oil Leak Detection Cable.
3. Use some pliers **GENTLY** squeeze the Oil Leak Detection Cable.
 - Audible alarm should activate.
 - Display should show “Zone 1 Alarm”.
 - Press “Mute Alarm” to silence.
4. Unwrap the cloth and replace the cable in exactly the same location.

10. Maintenance

- Perform a **full system test annually** (as in commissioning).
 - **Visually inspect** the ODS- optical sensors or Oil Leak detection cable every 6 months for:
 - Dirt/contamination
 - Physical damage
 - Misalignment or displacement
 - Clean contaminated sensors or Oil Leak detection cable with mild soapy water and dry thoroughly.
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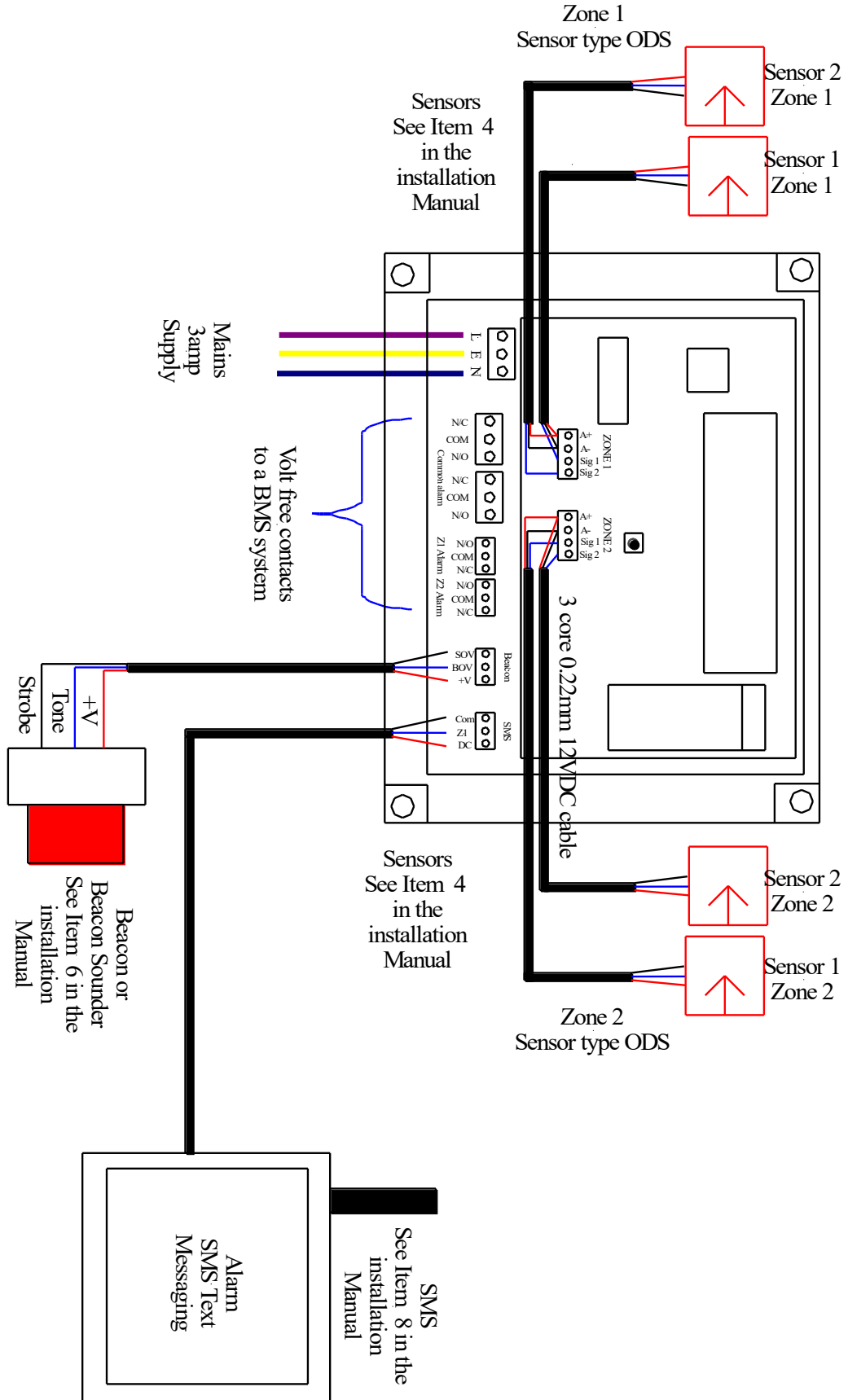
11. Fault Diagnosis

Fault	Possible Reason
Display is OFF and the unit appears dead	<ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> 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	<ol style="list-style-type: none"> 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, <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 which zone.
Horn not working	<ol style="list-style-type: none"> 1) System fault. <i>Return to manufacturer.</i>

11. Installation Drawings

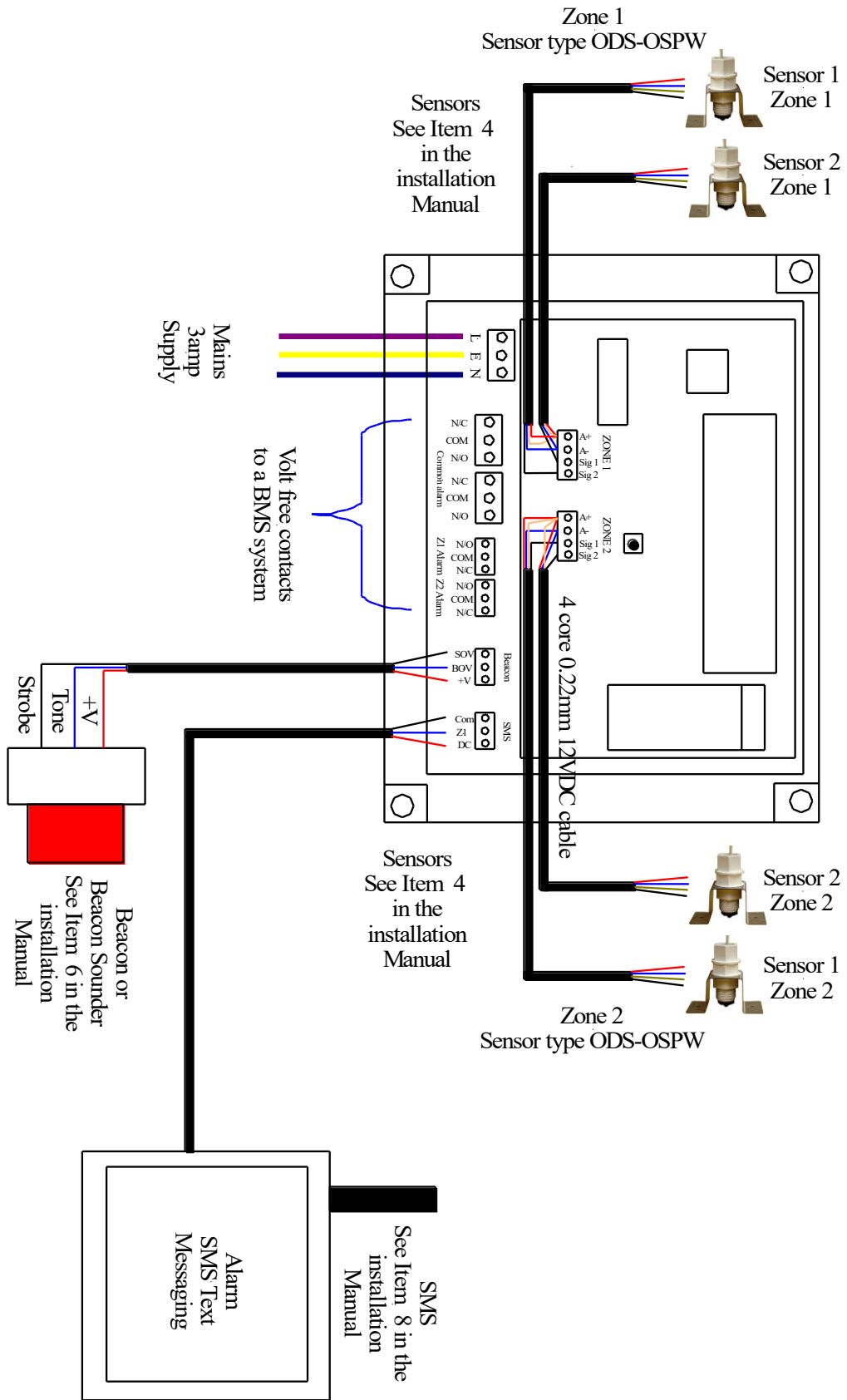
ODS Optical Sensor

Not all the shown devices may be available on your system



OSPW Sensor

Not all the shown devices may be available on your system



Oil Leak Detection Cable

Not all the shown devices may be available on your system

