



ODS4-3

Three & Four Zone Fuel Oil Leak Alarm

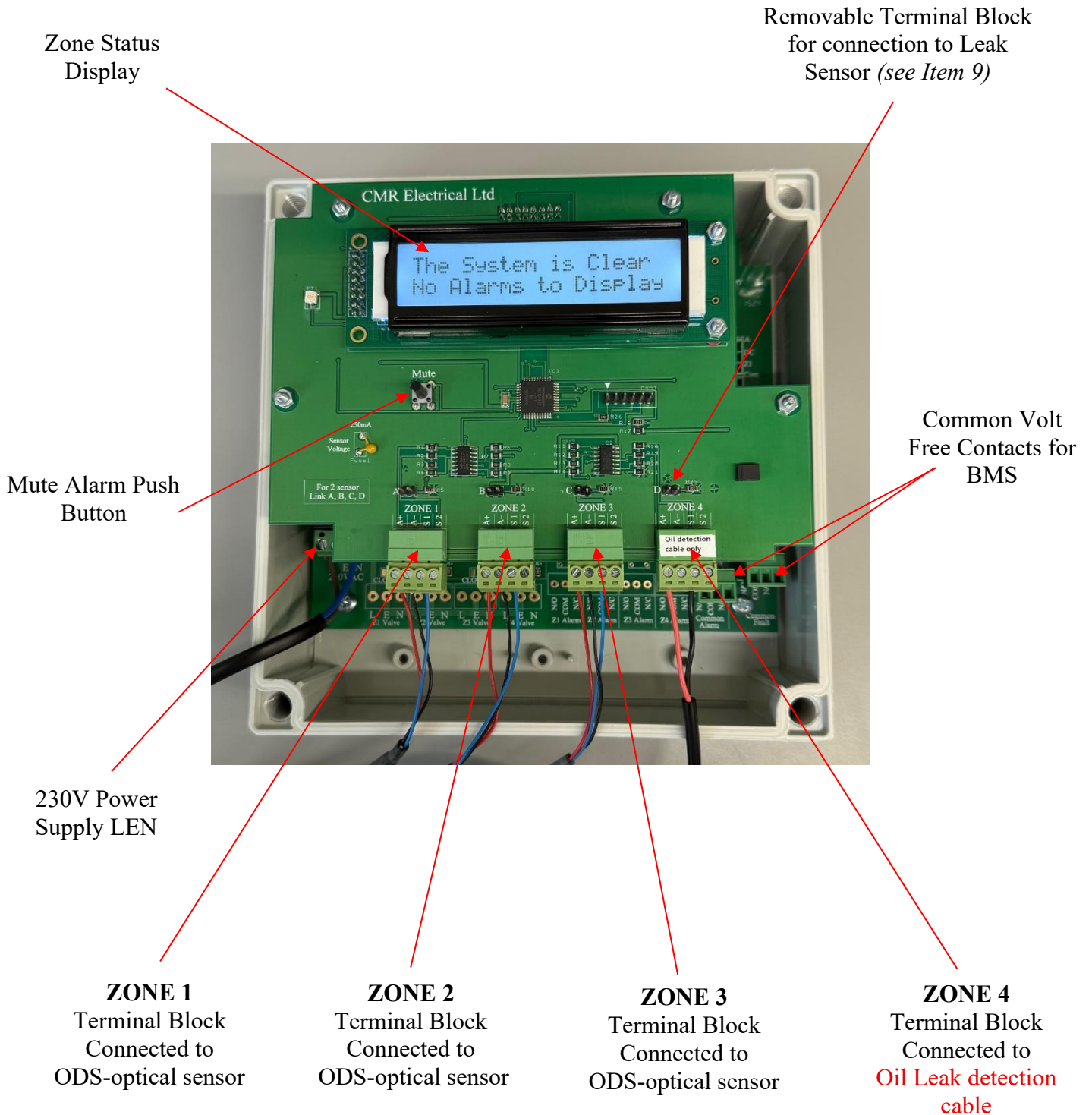
Installation and Operation Manual



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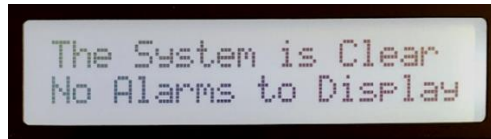
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1. Display and Controls



Display Screens

- **Normal Operating Screen:**



"The System is Clear – No Alarms to Display"

- **Leak Detected (e.g., Zone 1):**



"Oil Leak Detected at Zone 1"

- **Sensor Fuse Blown:**



"System Fault – Sensor Fuse Blown"

2. Operation

When no leaks are detected, the system displays:

"The System is Clear – No Alarms to Display", and the audible alarm remains **OFF**.

3. Alarm Function

When a sensor detects oil:

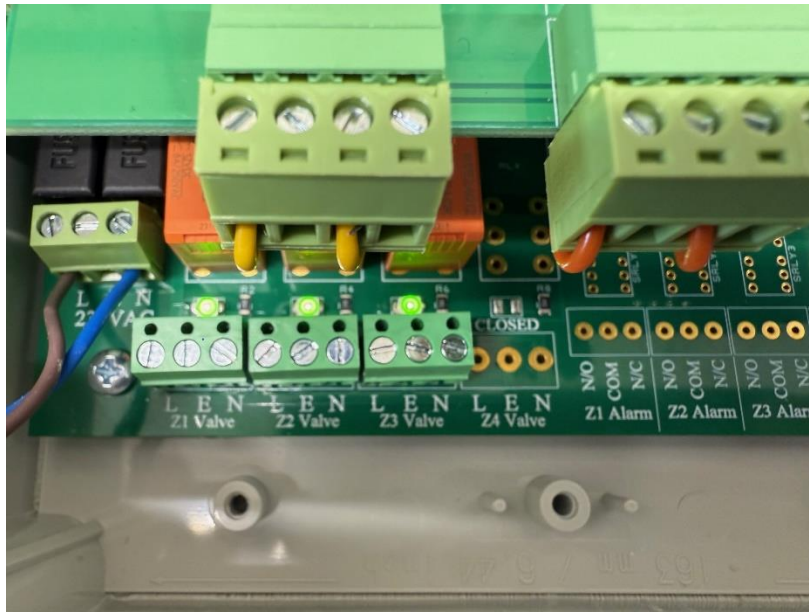
- The **audible alarm** will sound.
- The **common alarm relay** will close.
- The display will indicate the affected zone (e.g., *"Oil Leak Detected at Zone 1"*).
- Press the **"Mute Alarm"** button to silence the alarm.

Note:

The display will latch onto the lowest numbered zone in alarm. After pressing "Mute Alarm", the display will shift to the next zone in alarm (if applicable), and the alarm will sound again until muted.

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

4. Valve Control Function (optional)



If your system includes valve control, each zone will be equipped with a 12V power relay, an indicator LED, and a three-way terminal block mounted on the bottom PSU board (one set per zone).

You can choose to have 230VAC valves configured as either normally open (NO) or normally closed (NC).

Note: The valve mode (NO or NC) must be specified when ordering and is programmed at our factory.

In the example shown, the ODS4-3 Alarm Panel has been configured for normally open valves. In this configuration, the LEDs are illuminated to indicate that the valves in each zone are open, allowing liquid to flow to the corresponding zones.

When an oil leak is detected by a sensor:

- The audible alarm will sound.
- The common alarm relay will close.
- The display will identify the affected zone (e.g., *"Oil Leak Detected at Zone 1"*).
- The LED for the affected zone will turn off.
- The power supply to the valve will be cut.
- The 230VAC valve will close, shutting off the water supply to that zone.

5. Sensor Supply Fuse Trip

If the sensor supply 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, replace/reset the fuse, then power it **ON** again.

6. Common Fault Relay

The common fault relay is **normally energized**. It will de-energize in either of the following scenarios:

- Loss of power to the unit.
- Blown fuse in the sensor power supply (see Section 4).

Please note that the Common Fault Relay will **NOT detect Cable Fault** i.e. if the ODS-optical sensor and/or Oil Leak Detection Cable is removed. Instead, it will show “Oil Leak Detected at Zone 1” and will close the common alarm relay.

7. Display Freeze

When multiple zones are in alarm, the display will cycle through each zone every 2 seconds. To **freeze** the display on a specific zone, press and **hold** the “Mute Alarm” button.

8. Installation

IMPORTANT

Installation must only be carried out by a qualified electrician.

Mounting the Unit:

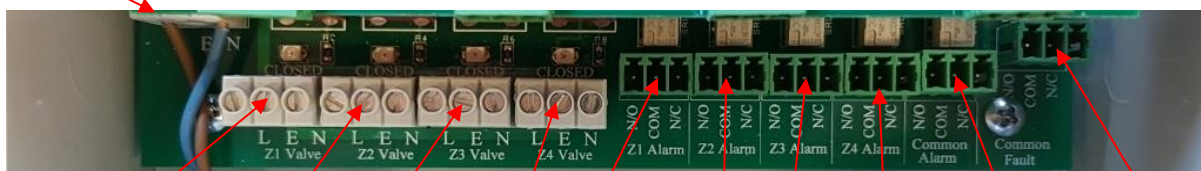
1. Remove the front cover to access the internal housing.
2. Use the four corner fixing holes to mount the enclosure to the wall.
3. Take care not to damage internal components while drilling.

Power Supply:

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

230VAC SUPPLY

Connections within the Alarm Housing



If Fitted
230VAC
To Zone 1
Shutdown
Valve

If Fitted
230VAC
To Zone 3
Shutdown
Valve

If Fitted
Zone 1
Output
Alarm
Contact

If Fitted
Zone 3
Output
Alarm
Contact

Common
Alarm
Output
Alarm
Contact

Common
Fault
Output
Alarm
Contact

If Fitted
230VAC
To Zone 2
Shutdown
Valve

If Fitted
230VAC
To Zone 4
Shutdown
Valve

If Fitted
Zone 2
Output
Alarm
Contact

If Fitted
Zone 4
Output
Alarm
Contact

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
Zone 3 alarm	No	Z3 Alarm
Zone 4 alarm	No	Z4 Alarm
Common Alarm (any zone in alarm)	Yes	Common Alarm
Common Fault (Power fault, Blown sensor fuse)	Yes	Common Fault


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

9. Sensor Wiring

9a. Single Sensor Per Zone

Use a **3-core 0.22mm²** cable (or **4-core** for OSPW sensors). Max cable length: **100m**.

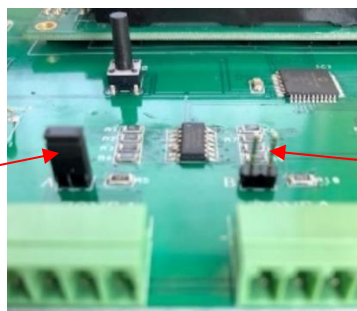
ODS Sensor	Cable Colour	OSPW Sensor	Cable Colour
A+	RED	A+	RED & YELLOW
A-	BLACK	A-	BLUE
Sig 1	BLUE	Sig 1	BLACK
Sig 2	DO NOT USE	Sig 2	DO NOT USE

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

9b. Two 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 0.22mm²** cable (or **4-core** for OSPW sensors). Max cable length: **100m**.

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.

9c. Retrofitting a 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 **8b**.
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9d. 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

9e. Two Cables Per Zone

Install the linking connector as in Section **8b**, then connect 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

9f. 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.

9g. 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, *“Oil Leak Detected at Zone 4”*.
- Press the **“Mute Alarm”** button to silence the alarm.

The **Oil Leak Detection cable** is **ONE 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

10. Beacon and Beacon Sounder

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



Sounder
Beacon
terminal
block

10a. 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.

10b. 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.

10c. 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

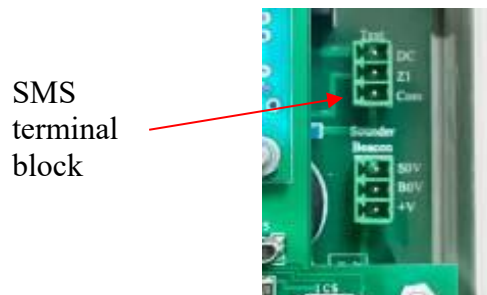


Important:

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

11. SMS / Email Messaging System

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



Terminal	Signal Cable Colour
Z1	BLUE
COM	BLACK
DC	RED

12. Commissioning

12a Commissioning of ODS-optical sensors for Zones 1-3:

1. Power **ON** the unit. Ensure display reads:
“The System is Clear – No Alarms to Display”
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 **Zones 1 to 3.**

12b Commissioning of Oil Leak Detection Cable for Zone 4:

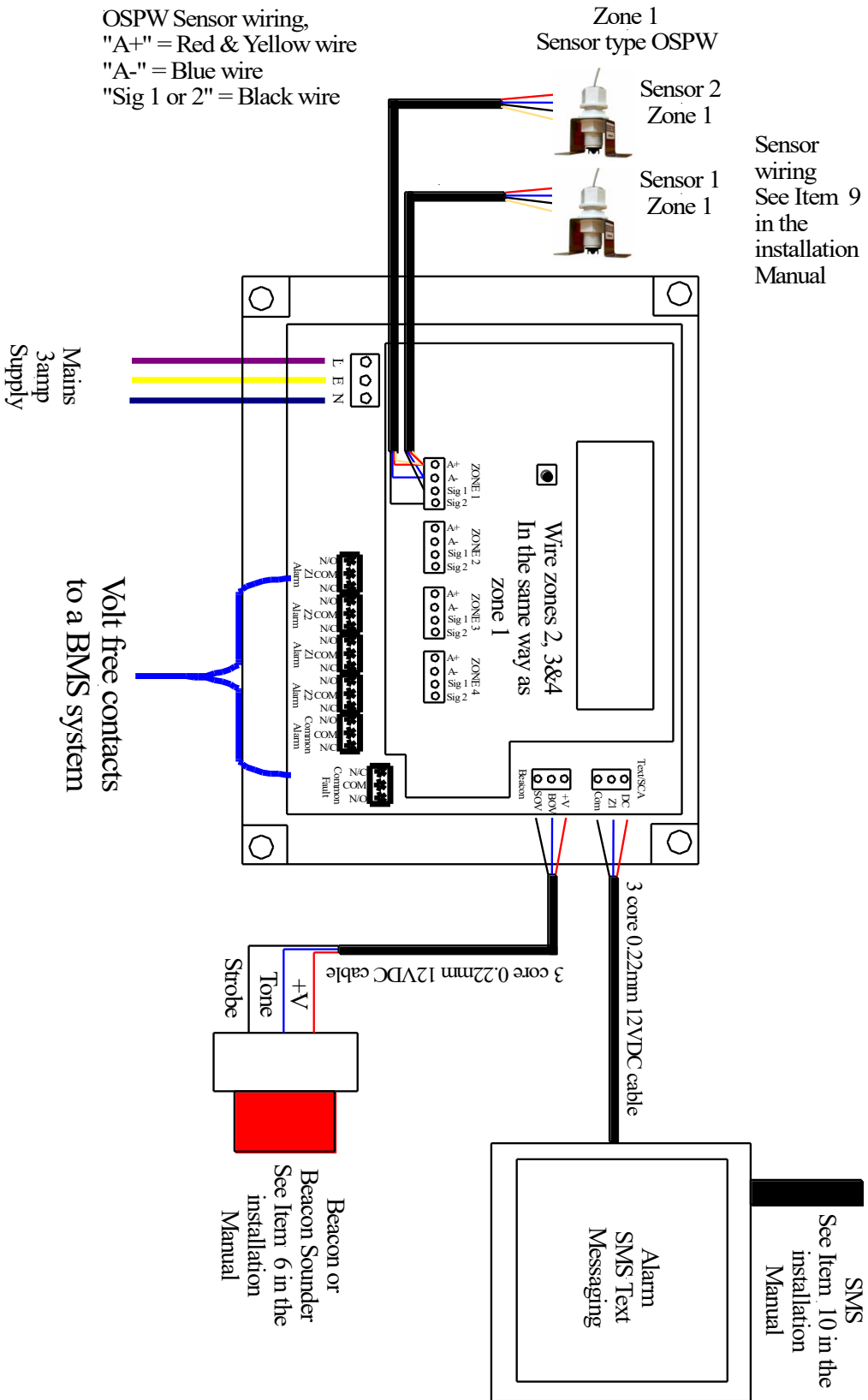
1. Gently detach the Oil Leak Detection cable on Zone 4 from the floor surface.
 2. Wrap a small cloth around 5cm section of the Oil Leak Detection Cable.
 3. Use some pliers **GENTLY** squeeze the Oil Leak Detection Cable.
 - Audible alarm should activate.
 - Display should show zone 4 alarm.
 - Press “Mute Alarm” to silence.
 4. Unwrap the cloth and replace the cable in exactly the same location.
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13. 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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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

