

TRM Sensors LLC

TRM-ALOS

Any Liquid Optical Sensor



Product Description

The TRM-ALOS is a leak detection sensor designed to detect liquids spreading across a flat surface. The system consists of two components: the **TRM-ALOS**, “hockey puck” style optical probe and a monitoring device such as **TRM-Wall-Alarm** or a **TRM-Easy5-Relay**. The optical probe detects the presence of liquid on the floor or collecting in a drip pan with a minimum activation height of approximately 1 mm. The sensor does not discriminate between water and hydrocarbons. Virtually any liquid will trigger an alarm response.

The TRM-ALOS is made with a hard rubber body and a polysulfone conical prism optical sensor that protrudes a few millimeters below the bottom of the hockey puck. Rubber legs hold the sensor and probe tip at the optimum detection level. There are no moving parts or exposed conductive parts. Detection is immediate and reset is usually instant once the probe is removed from the liquid.

The optical probe is energized and monitored from monitoring unit.

Overall chemical resistance for both the sensor body and the optical element is excellent. See a complete chemical compatibility list [here](#).

The TRM-Wall-Alarm is a self-contained monitoring and alarm unit that includes a 95 dB piezo buzzer, a red lighted SILENCE push button and two independent SPDT (Form-C) output relays that can be used for signaling additional alarm monitoring devices or systems. It can monitor from 1 to 4 of the TRM-ALOS probes.

The TRM-Easy5-Relay can monitor up to 8 sensors but its output is limited to relay contacts only. Alarm enunciation requires a Wall Alarm or connection to the facility BMS or similar alarm monitoring system

Key Features

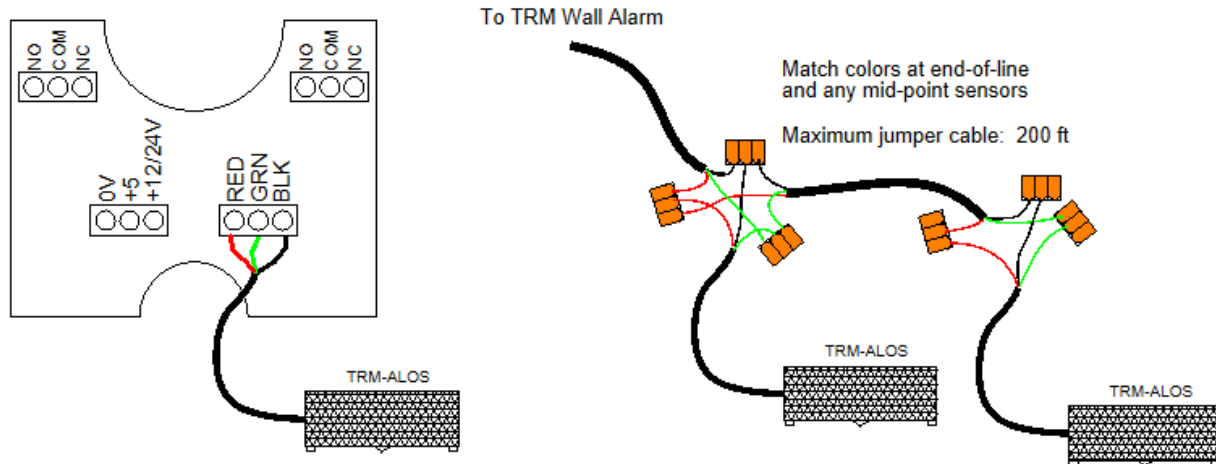
- Broad range of liquid detection capability
- Very low activation height, typically less than 1 mm puddle depth required to trigger the probe.
- Good chemical resistance to most industrial fluids. (Check further [here](#))
- Optical sensor is isolated from local earth ground to prevent galvanic corrosion
- Quick and easy clean-up and reset

Specifications:

- Probe material: polysulfone
- Operating voltage: 5 to 12 Vdc
- Power consumption: less than 0.1 W per probe.
- Operating temperature: –25C to +80C (Notes: Extended temperature range, -40C to +125C available as special order; some liquids freeze well above the operational limit and may not be detected)
- Dimensions: body: 3” dia by 1” thick (76mm by 25 mm) probe tip and rubber feet extend below body by 1/4” (7 mm)
- Weight: 7 oz (200 gm)
- 6 ft (2 m) leader cable
- Use TRM-DFS-3-SSHD Stainless Steel Hold Down to fix sensor in place on floor or drip pan

INSTALLATION AND WIRING INSTRUCTIONS ON REVERSE

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For wiring connections to TRM-Easy5-Relay or Panel see the instrument's data sheets

Probe Installation:

1. Position the TRM-ALOS optical probe unit on the floor or in a drip pan in the area to be monitored. For open floor surfaces it may prove advantageous to use 3/4" plastic angle to create a mini-containment around the potential leak source with the probe mounted inside the containment.
2. Use TRM-DFS-3-SSHD stainless steel hold down fixture to secure the probe to the floor. Note the SSHD is permanently attached to the floor in the desired location but the probe can be slid in and out of the hold down for inspection or service when needed.
3. Visually check the clearance between the floor and the probe tip (mirror or cell phone camera recommended) to assure that any liquid puddle will contact the probe tip as early as possible
4. Using the supplied Lever Nuts splice the leader cable to 22 AWG (minimum) jumper cable to reach the TRM-Wall Alarm or similar monitor device. (note that 4 x 22 AWG jumper cable is a common commodity but only 3 conductors are needed for TRM-ALOS probes.
5. If installing more than one probe, follow the wiring diagram above to connect up to four probes to the same TRM-Wall-Alarm.
6. See separate wiring instructions for connections to TRM-Easy5-Relay or Panel included with the monitoring equipment.

Probe Cleaning:

Recommended cleaning materials are water, freon and alcohol.. Contact cleaner such as [Caig Products Contact Cleaner VAI-U Wash](#) may prove useful. Avoid acetone or chlorinated solvents as they may damage the probe surface.