These sensors have been designed for pipe in pipe water, oil or chemical leak detection including bunded tanks or any application where monitoring of an internal bunded area is required. The sensors fit all 15mm or 22mm plastic fittings and have been designed to detect the presence of any liquid including water, fuel oil etc. and energise an internal relay to provide a signal to existing alarm systems, Building Management Systems or SMS messaging systems.

The mode of operation is the principle of total internal reflection. An LED and photo-transistor are housed in a plastic (Polysulfone) dome. When no liquid is present, light from the LED is internally reflected from the dome to the photo-transistor. When a liquid covers the dome, the effective refractive index at the dome-oil boundary changes allowing some light from the LED to escape. Thus the amount of light received by the photo-transistor is reduced indicating the presence of a liquid.

Sensors can be connected together to give a common alarm within an area or connected individually to provide exact location of a leak.
The sensor will fit any standard 15 or 22mm plastic push fit pipe fittings.

**Internal wiring**

![Internal wiring diagram]

**Specification**

- **Housing type**: ABS Plastic
- **Size**: 15mm
- **Colour**: Grey
- **Input power**: 13 to 24 VDC or 12 to 24VAC
- **Power Consumption**: 0.84W @ 27.1VAC, 0.5W @ 24VDC
- **Connections to Sensor**: 3 metre long 4 core signal cable
- **Relay contact**: Normally Open, (close in alarm) 1 amp 30VDC volt free contact

**Connection Details**

- **+13-24 VDC, 12-24VAC**: Red, Black, Yellow, Blue
- **0VDC, 0VAC**: Red, Green, Blue

**Note**

Continual development may result in products and specifications being changed without prior notice.