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Water Leak Detection Sensor For Drip Trays Type DTS



The sensor has been designed to detect the presence of water in drip trays and energise an internal relay to provide a volt free contact signal to existing alarm systems, Building Management Systems or SMS messaging systems.

Unlike other sensors on the market, the DTS sensor does not have external metal parts and therefore is not susceptible to false alarms from contact with the metal drip tray or other sensors via earth. The DTS sensor is fully potted, enabling it to be rated to IP66 and capable of being submerged in water without any detrimental effect.

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 boundary changes allowing some light from the LED to escape. Thus the amount of light received by the photo-transistor is reduced indicating the presents of a liquid.

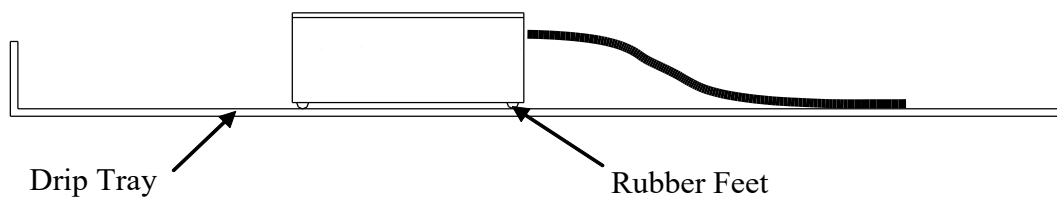
Sensors can be connected together to give a common alarm within an area or connected individually to provide the exact location of a leak.

Installation

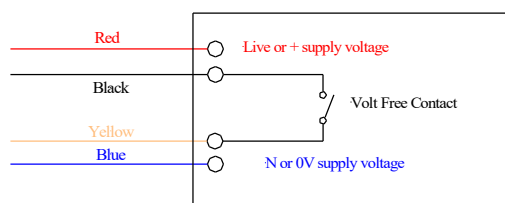
Installation is simple, just place the sensor on the drip tray so that the rubber feet are in contact with the tray and terminate the 3 metre long cable to the power supply and existing alarm system as shown below

NOTE;

This sensor does NOT work on shinny or mirrored surfaces. On this type of surface use the black sticky label provided under the sensors detecting bulb.



Sensor wiring



Connections

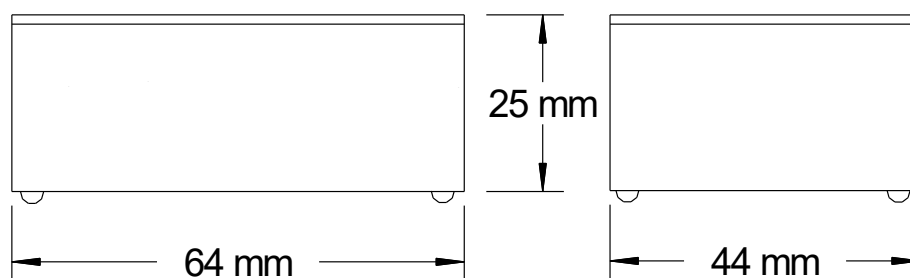
Red Wire = 12-24VAC live or 13-24VDC +

Black Wire = Volt free Contact common

Yellow Wire = Volt Free Contact Normally Open, Close in alarm

Blue Wire = 12 - 24VAC Neutral or 13 - 24VDC negative

Size



Specification

Housing type
Size excluding bracket
Colour
Input power
Power Consumption
Connections to Sensor
Relay contact
IP Rating

ABS Plastic
25mm High x 64mm long x 44mm deep
Black
12 to 24 VAC or 13 to 24VDC
0.84W @ 27.1VAC, 0.5W @ 24VDC
3 metre long 4 core signal cable
Normally Open , (close in alarm) 1 amp 30VDC volt free contact
IP65