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Water Leak Detection Sensor For Drip Trays Type DTS



The sensor has been designed to detect the presence 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.

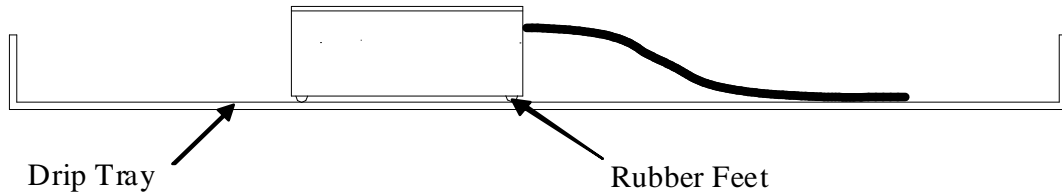
Unlike other sensor on the market, the DTS sensor has no external metal parts used to detect the presents of water and therefore is not susceptible to false alarms from contact with the metal drip tray or other sensors via earth. Being fully potted, the sensor is rated to IP 66 and capable of being submerged 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-liquid 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.

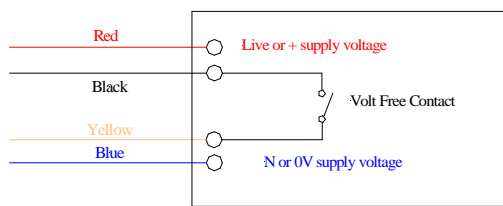
Sensors can be connected together to give a common alarm within an area or connected individually to provided exact location of a leak.

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

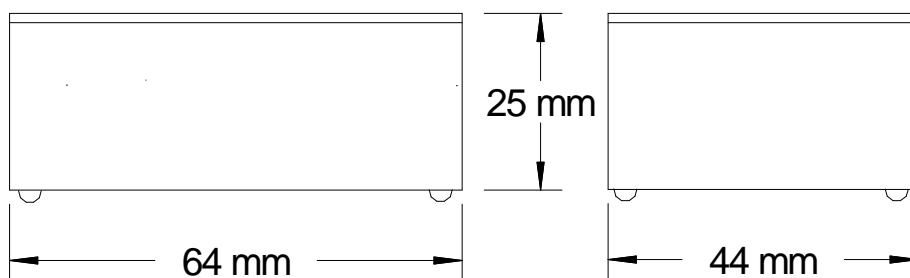


Sensor wiring



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	ABS Plastic
Size excluding bracket	25mm High x 64mm long x 44mm deep
Colour	Black
Input power	12 to 24 VAC or 13 to 24VDC
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
IP Rating	IP65