

## INTRODUCTION

HTM FR Floatless Relays are versatile and compact floatless relays that are suitable for pumping system control and level alarm annunciations. Standard units are housed in DIN enclosures and can be configured as controller for water supply or drainage control system. HTM FR Floatless Relays utilise a safe control voltage for level sensing via level electrodes located in the field.

## PRINCIPLE OF OPERATION

The floatless relay is a level controller that detects water level based on the conductivity of the medium measured by using conductive electrodes. When a relay senses a liquid level measured, the output contacts of the relay are energised and latched. These latched outputs are released when the latching electrode is brought out of the medium measured. The operation repeats as the medium's level changes to achieve a continuous level control system.

## FEATURES

### **Built-In Lightning Surge Arrester**

HTM FR is a floatless relay truly designed for tropical environment where lightning surge is a major destructive factor in instrumentation. Each FR floatless relay has a built-in 2-stage lightning surge arrester that protects the controller in the event of a lightning surge. This effectively reduces the down-time of the relay.



### **Battery Operation**

FR Floatless Relay can be powered by 115VAC, 230VAC, 12VDC, 24VDC, 48VDC and hence can be operated in solar powered and battery operated system without the need of a power converter.

### **Indication**

Two-state LED indicators for *High* (red/activated) and *Low* (green/deactivated).

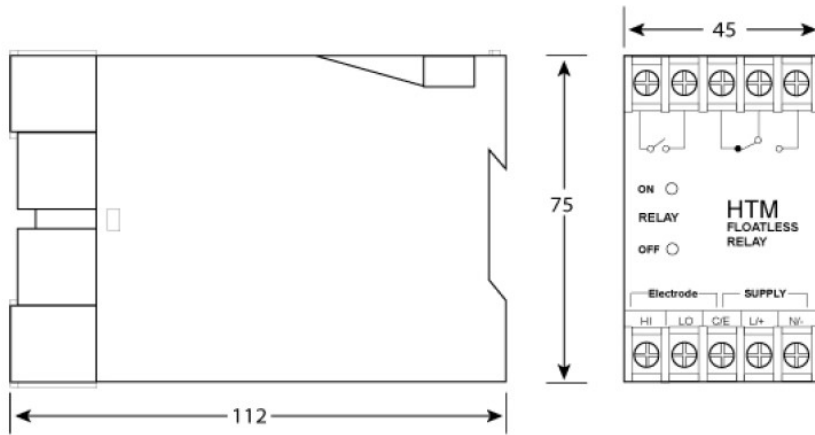
### **Adjustable Sensitivity**

The sensitivity level of all HTM FR Floatless Relays are adjustable to suit different working conditions.

## SPECIFICATIONS

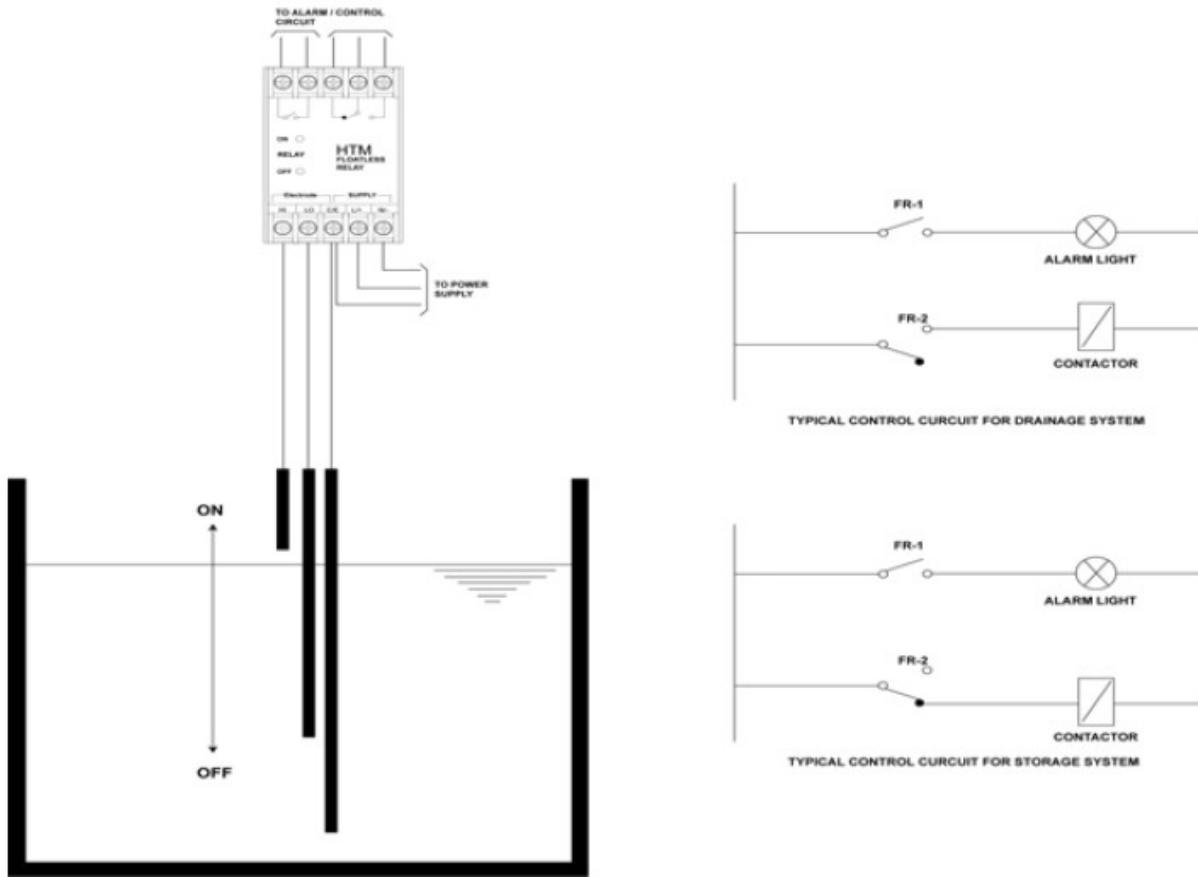
Sensing voltage	10VDC
Output	1SPDT and 1SPST
Contact rating	1A @ 230VAC
Power supply:	
VDC	12, 24, 48
VAC	110, 115, 220, 230
Casing	ABS shell Polycarbonate cover
Enclosure	IP10
Terminal size	2.5mm <sup>2</sup> cable
Temperature	-10 to 60°C
Mounting	DIN rail or panel mount

**DIMENSIONS**



All dimensions in mm

**TYPICAL WIRING DIAGRAM**



Note: Do not connect LO electrode if latching of low level is not required.

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Manufactured by :



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