

INTRODUCTION

HTM PS420 is a versatile, low cost and compact piezoresistive level sensor suitable for measuring levels of water and any other non-corrosive liquid. The unit is housed in a submersible stainless steel enclosure for immersion to the bottom of water tanks for level sensing. It has a built-in lightning surge arrester and is fully tropicalised for reliable operations.

PRINCIPLE OF OPERATION

The HTM PS420 is a immersion level sensor that is based on the hydrostatic forces of the liquid for which it is measuring. The level sensor consists of a precision piezoresistive sensor, which converts the pressure exerted on the sensor diaphragm into electrical signal. This signal is then scaled and conditioned into 4-20mA current output for instrumentation purpose. The internal pressure of the sensor is vented to the atmosphere through a venting tube embedded in the signal cable.

FEATURES**Built-In Lightning Surge Arrester**

HTM PS420 is truly designed for tropical environment where lightning surge is a major destructive factor in instrumentation system. The PS420 has a built-in 2-stage lightning surge arrester that protects the electronic circuit in the event of a lightning surge. This effectively reduces the risk of level sensor damage and hence down-time of the instrument.

**Two-Wire Operation**

HTM PS420 is a two-wire level sensor, which is loop powered. This enables low power consumption and hence can be operated in solar powered and battery operated system without using large battery banks.

Low Cost and Repairable

HTM PS420 level sensors are low cost and yet reliable instrument designed to be repairable in the event of failure. Complete sensor replacement due to component failure is eliminated.

Humidity/Dew Immunity

The major electronic components of PS420 level sensor are potted with removable gel-type compound. This eliminates the risk of electronic failure due to humidity.

Ease of Calibration and Repair

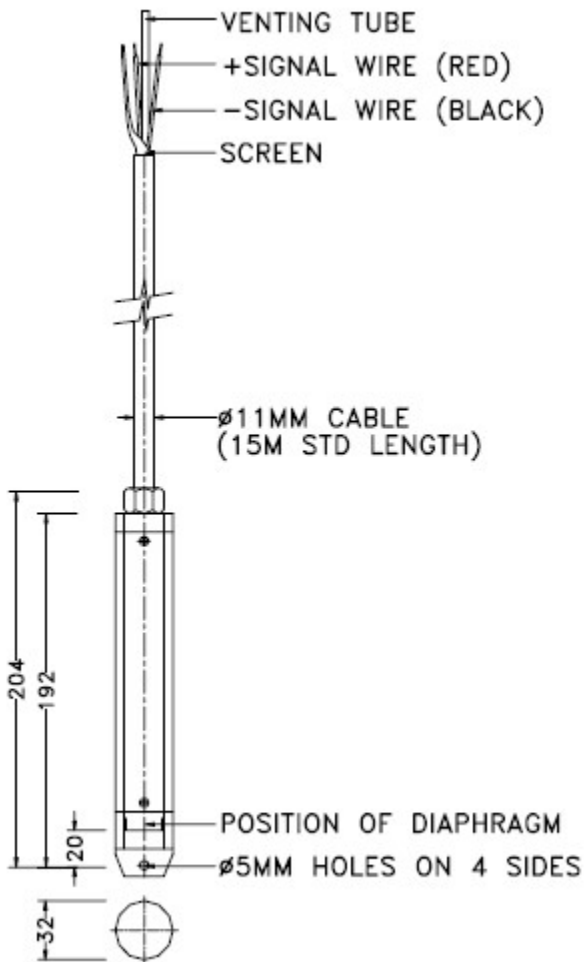
The *Zero* and *Span* adjustment as well as electronic components of the PS420 can be easily accessed by opening up the locking screws of the sensor body. Calibration and repairs can be carried out without hassle.

SPECIFICATIONS

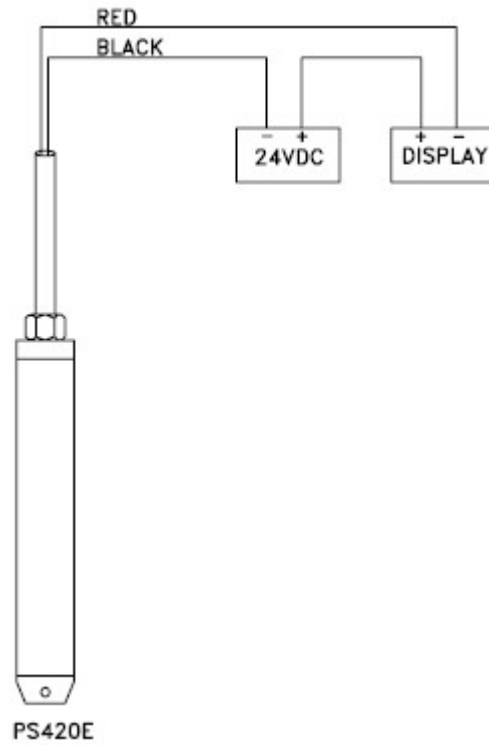
Power supply	12 to 36VDC
Accuracy	± 0.25% FS
Linearity and repeatability	± 0.25% FS
Long term stability	± 0.25% FS
Transient protection	10kV, 10kA @ 8/20µS
Ranges	10Mwg std, other ranges optional
Max. over pressure	200%
Outputs	4-20mA, max. 600Ω @ 24VDC
Materials of construction:	
Body	Stainless steel 316L
Diaphragm	Stainless steel 316L
Cable	PVC

Dimensions	32mm dia. x 192mm L
Cable type	Screened 4-wire, 2-wire used
Cable diameter	11mm
Cable length	15m std, longer length optional
Enclosure	IP68
Temperature	-20 to 70°C
Weight	600g
Cable weight	95g/m

DIMENSIONS



WIRING DIAGRAM



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