

# HTM

## SL ULTRASONIC LEVEL TRANSMITTER

### INTRODUCTION

HTM SL level transmitter is a versatile, low cost and compact ultrasonic level sensing instrument that is suitable for measuring levels of water & any non-corrosive fluids. The unit can also be re-calibrated to measure distance from a flat surface. Each set of SL level transmitter consists of a sensor housed in a sealed UPVC enclosure and a signal converter housed in an IP65 wall mounted enclosure. It has a built-in lightning surge arrester and is fully tropicalised for reliable operations.

### PRINCIPLE OF OPERATION

HTM SL level transmitter is a non contact type level sensor which utilizes the time taken for an ultrasonic wave to be reflected from the measured surface to the sensor to compute the distance of the surface from the sensor. This signal is converted into level signal and then scaled & conditioned into 4-20mA current output for instrumentation purpose. An integral 3 ½ digit LCD display provides a direct read out of the level measured in metres or any other units.

### FEATURES

#### **Built-in lightning surge arrester**

HTM SL ultrasonic level transmitter is truly designed for tropical environment where lightning surge is a major destructive factor in instrumentation systems. The SL has a built in 2 stage lightning surge arrester which protect the electronic circuit in the event of lightning surges. This effectively reduced the risk of level transmitter damage and hence down time of the instrument.

#### **Three wire operation**

HTM SL level transmitter is a three wire instrument which shares the power common with signal common. This enables lesser



number of cables to be used

#### **Low cost & repairable**

HTM SL level transmitters are low cost & yet reliable instrument designed to be repairable in the event of failure. Faulty modules can be replaced easily without complete unit replacement.

#### **Humidity/Dew Immunity**

The major electronic components of SL level transmitters are housed in an IP65 rated converter housing and tropicalised. This eliminates the risk of electronic failure due to Humidity.

#### **Ease of calibration & Repair**

The 'Range full scale', 'Range zero', 'Zero offset', '4mA' & '20mA' adjustment potentiometers and ultrasonic module of the SL level transmitter can be easily accessed by open up the locking screws of the converter. Calibration and repairs can be carried out without any hassles.

## SPECIFICATIONS

Power supply: 18 to 36Vdc  
 Power consumption : 2W  
 Display : 12.7mm ht 3 ½ digit LCD  
 Accuracy : +/- 0.1% FS  
 Linearity & Repeatability : +/-0.25% FS  
 Resolution : 10mm  
 Long term stability : +/-0.25% FS  
 Transient protection : 10kV, 10kA@8/20µS  
 Calibrated ranges : 4M, 10Mwg std  
 Range turn down ratio : 0.4:1.0  
 Measurable range : 0.3 to 12M  
 Frequency : 50kHz  
 Beam pattern : 15° nominal  
 Temperature : -20 to + 80°C  
 Temperature compensation : Built in  
 Dimensions :  
     Converter : 120 X 120 X 90 (mm)  
     Sensor : 60dia. X 146mm  
 Wiring connection : 3 wires  
 Degree of protection :  
     Converter : IP65  
     Sensor : IP67

Outputs : 4-20mA, max 600 Ohms@24Vdc

Materials of construction :

Converter : ABS  
 Sensor housing : UPVC  
 Sensor surface : 304 SS  
 Cable : PVC

Cable type : RG62

Diameter of cable : 6mm

Cable gland : 2 X M16 IP68 Nylon glands

Cable length : 5M std, optional up to 50M

Std accessories : Sensor mounting L bracket

Weight : Converter : 440g

Sensor : 210g

Cable : 40g/M

L bracket : 250g

Shipping : 1.1kg

Compliance: EN61326-1:2006, EN55011:1998

+A1:1999 +A2:2002, EN61000-4-

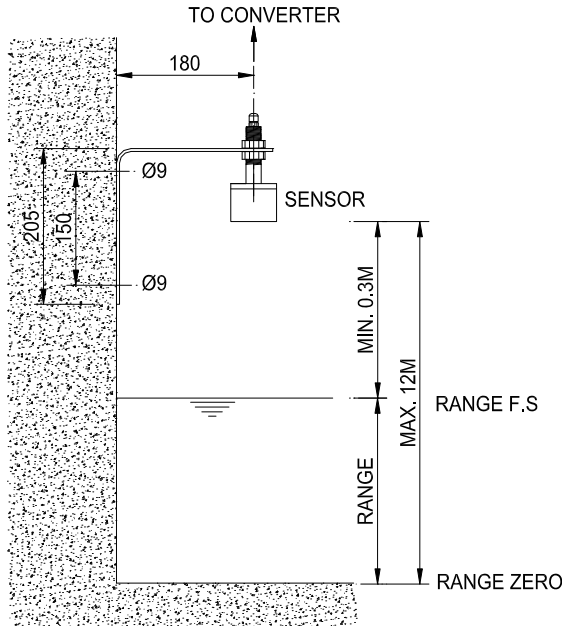
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3:2006, EN61000-4-4:2004, EN61000-4-

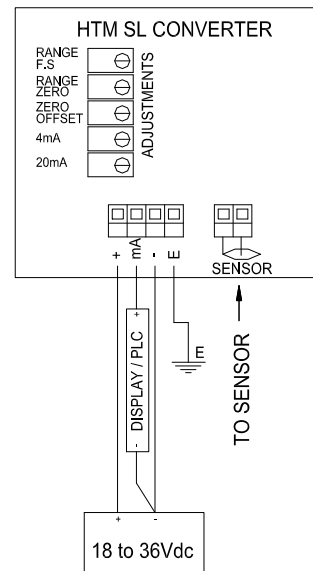
5:2006, EN61000-4-6:2007

Conformance: CE, EC Directive 2004/108/EC

## SENSOR MOUNTING DETAILS



## WIRING DIAGRAM AND ADJUSTMENTS



Manufactured by :

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