

INTRODUCTION

HTM SL level transmitter is a versatile, low cost and compact ultrasonic level sensing instrument that is suitable for measuring levels of water and 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

The SL level transmitter is a non contact type level sensor which utilises 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 and 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 metre or any other units.

FEATURES

Built-In Lightning Surge Arrester

HTM SL 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 protects the electronic circuit in the event of lightning surges. This effectively reduces the risk of level transmitter damage and hence down time of the instrument.



Three-Wire Operation

The SL level transmitter is a three-wire instrument that shares power common with signal common. This reduces number of cables used.

Humidity/Dew Immunity

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

Ease of Calibration and Repair

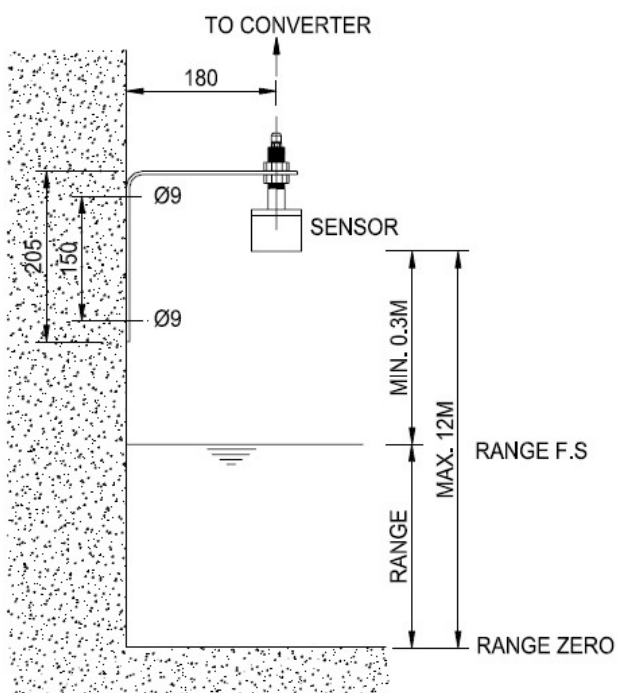
The *Range Full Scale*, *Range Zero*, *Zero Offset*, *4mA* and *20mA* adjustment potentiometers and ultrasonic module of the SL level transmitter can be easily accessed by opening up the locking screws of the converter. Calibration and repairs can be carried out without hassle.

SPECIFICATIONS

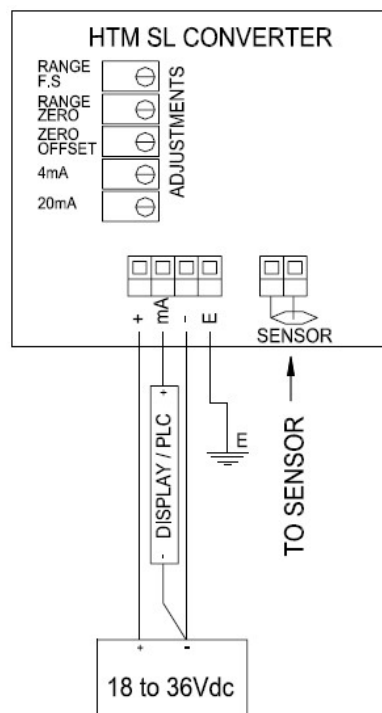
Power supply	18 - 36VDC
Power consumption	2W
Display	12.7mm ht 3 ½ digit LCD
Accuracy	± 0.1% FS
Linearity and repeatability	± 0.25% FS
Resolution	10mm
Long term stability	± 0.25% FS
Transient protection	10kV, 10kA@8/20µS
Calibrated ranges	4M, 10Mwg std
Range turn down ratio	0.4:1.0
Measurable range	0.3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

Outputs	4-20mA, max 600Ω @ 24VDC
Materials of construction:	
Converter	ABS
Sensor housing	UPVC
Sensor surface	304 SS
Cable	PVC
Degree of protection:	
Converter	IP65
Sensor	IP67
Cable type	RG62
Cable diameter	6mm
Cable gland	2 x M16 IP68 nylon glands
Cable length	5m std, optional up to 50m
Standard accessories	Sensor mounting L bracket
Weight:	
Converter	440g
Sensor	210g
Cable	40g/M
L bracket	250g
Shipping	1.1kg

SENSOR MOUNTING DETAILS



WIRING DIAGRAM AND ADJUSTMENTS



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