

Invasive Point Level System



Description

The Ultrasonic Point Level System 1670 Series is an ideal solution for detecting the interface level of two non-homogenous liquids, or the interface level of solids suspended in liquid. The probe is constructed in 316LSS material. The electronic module is captured in a plastic cassette and is mounted in a NEMA 4/ 7 explosion proof housing. An LED indicator on the electronic module offers a visual status of the system. Field selectable Fail safe allows for the relays to be energized on power up or in normal condition to close when liquid is present. A Demand Push button self-test feature on the electronic module assures the user the system is functioning correctly.

Operation

The 1670 Series unit consists of two piezoelectric elements mounted in the housing of the sensor. These elements convert mechanical energy in the form of high frequency sound to electrical energy and vice versa. They are mounted parallel and opposite each other across the 6" gap of the sensor. The sensor is normally mounted horizontal in the application. Sound waves are transmitted from one side across the gap of the sensor to be received on the other side. Thin or clear liquids exhibits less attenuation than do viscous liquids, emulsions or liquids with entrained solids. The control unit senses the change in the percent solid in the liquid by means of the attenuation of the sonic energy being transmitted through the liquid. This attenuation is detected by the control system, the amplifier gain adjustment in the control unit is set so that the relays energize only when the suspended solid is within the path of the ultrasonic signal of the sensor.

When the interface of two non-homogenous liquids is to be determined the sensor is mounted horizontally at an angle of 10° this is to break the beam of sonic energy from reaching the receiver. , the amplifier gain adjustment in the control unit is set so that the relays energize only when the interface is within the path of the ultrasonic signal of the sensor.

How to Order HT167- - - - -

Input 24VDC -	0							
90 to 240VAC -	1							
9-30VDC -	2							
Output: 10 ADPDT -	--	0						
Mounting Integral -	--	--	1	0				
Remote -	--	--	2	/				
Cable (remote) in feet -	--	--	--	01				
Actuation point inches (01"std) -	--	--	--	--	01			
Gap dimension (6" std)-	--	--	--	--	--	6		
Process connection (3/4"std) -	--	--	--	--	--	--	3	
Flange ANSI 150# -	--	--	--	--	--	--	--	A
Flange ANSI 300# -	--	--	--	--	--	--	--	B
Flange Sanitary -	--	--	--	--	--	--	--	C
Flange size 1" -	--	--	--	--	--	--	--	1
1.5" -	--	--	--	--	--	--	--	0
2" -	--	--	--	--	--	--	--	2



Specifications

Repeatability: 5mm or better.

Delay (on): 0.5 seconds Standard.

Electronic mounting : Integral or Remote

Enclosure: Nema 4 / 7, Nema 4

Field Select Fail-Safe Option

Input options: 24VDC, 90 to 240VAC, 9-30VDC

LED Output Indicator

Probe material: 316SS Standard.

Sensor Temperature: -20 to 240°C

Sensor Pressure: 1000 PSIG 316SS.

Liquid viscosity : From 1 to 150,000 cps

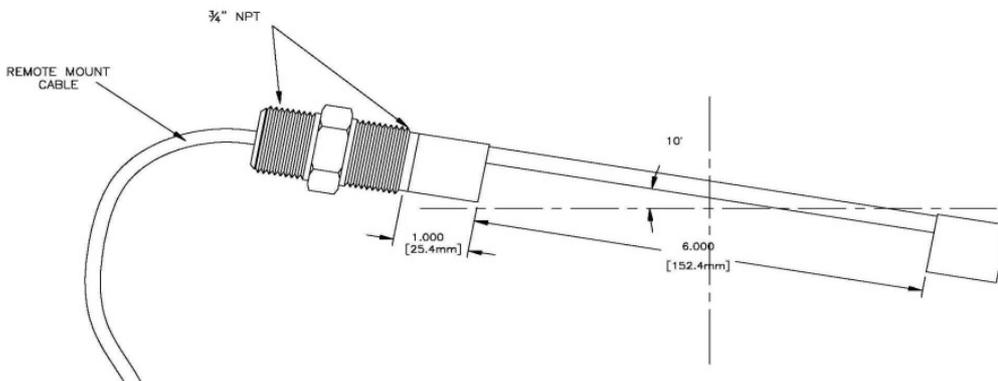
Process connection: 3/4" NPT Standard.

Output Opt: 10A DPDT Loop Power 4-16mA

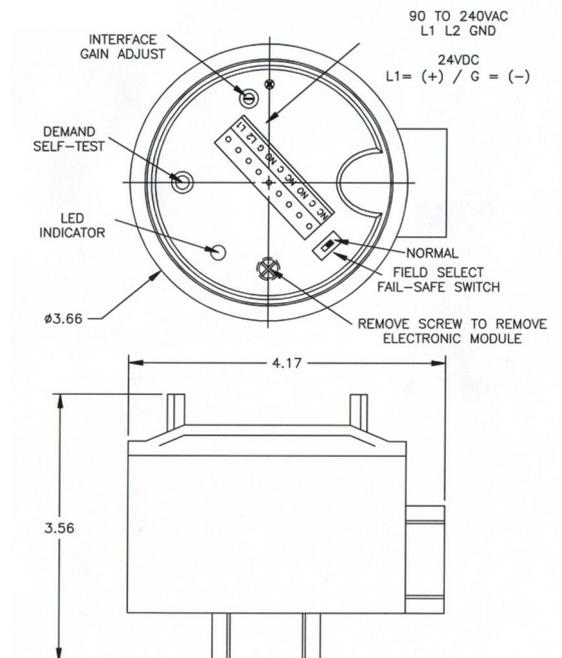
Push Button Demand Self-Test

Dimensions

SENSOR DIMENSIONS



ELECTRONIC MODULE ENCLOSURE DIMENSIONS



Warranty

HiTECH' level sensors are warranted against intrinsic defects for a period of two years from the date of shipment.

Performance Guarantee

Within 30 days of delivery should the unit not perform as we claim and was properly installed in the application that does not exceed our stated performance specifications. The unit may be returned for a full credit.

Designed to meet intrinsic safety for Hazardous locations. UL Approval pending.