



**Sensaras**

**PLS1670 Series**

**Sound Steadfast Solutions**

Made in the U.S.A

**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 de-energized 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. The elements 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 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 PLS167- - - - -**

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**

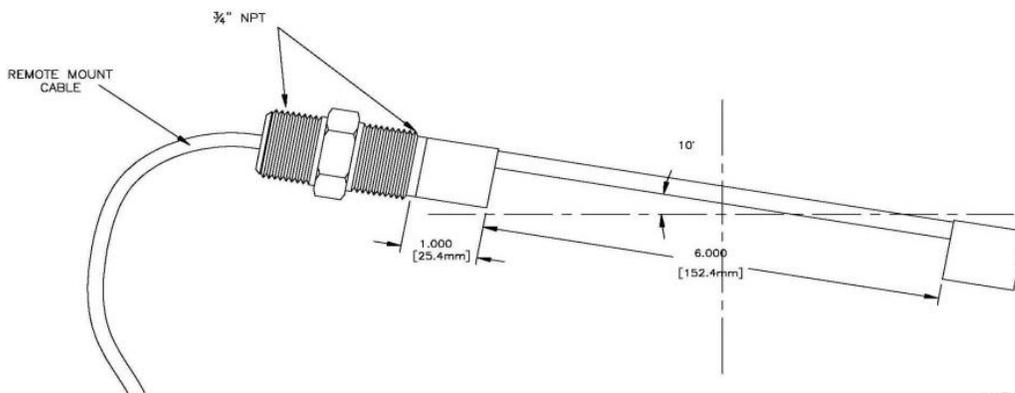
**Process connection: 3/4" NPT Standard.**

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

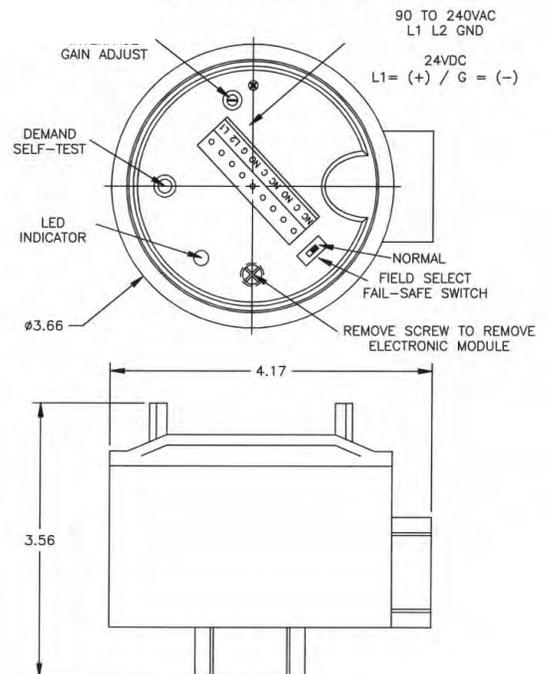
**Push Button Demand Self-Test**

# Dimensions

SENSOR DIMENSIONS



ELECTRONIC MODULE ENCLOSURE DIMENSIONS



# Warranty

*Sensaras' level sensors are warranted against inherent defects for a period of 24 months from the date of shipment.*

# Performance Guarantee

*Should the unit not perform as we claim within 45 days of delivery and was properly installed consistent with our stated requirements and specifications Sensaras will gladly accept a return of the unit for a full credit.*

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

Disclaimer: Due to technical progress all Data Sheets are subject to change without notice. Sensaras believes all information in this Data Sheet is correct but is not responsible for any inaccuracies. Sensaras is not liable for any damages. It is the customer's responsibility to install, operate and maintain products properly.