Invasive Point Level System

Description

The Ultrasonic Point Level System 1610 Series is an ideal solution for detecting liquid in storage vessels, tanks and pipes. With integrated electronics it is a designed for almost any liquid level application. 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. No calibration for the system is required. 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. A 0.5 second delay is added from WET to DRY to avoid false trip due to wave action.

Operation

The 1610 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 5/16" gap in the probe. A high frequency sent from the electronics to the transmitting element, this vibrates the element at 2 to 4 MHz. Neither Air nor gases will carry sound at this high frequency and will not travel across the sensor gap. When the gap is filled with liquid, the sound will travel across the gap to vibrate the receiving element. The vibration generates an electrical signal that is amplified and is read by the detector circuit in the electronics as a "wet" signal. The signal is converted to a relay output or a shift in milliamp output.

How to Order	PLS161-__-__-__ __ __-__-__	Applications	Industries Served

							Applications	Industries Served
Input 24VDC -	0						High Level / Overflow Alarm	Upstream Oil & Gas
90 to 240VAC -	1						Low Level / Pump Protection	Midstream Oil & Gas
9-30VDC -	2						Condensate Pots	Water & Waste- Water
Output: 10A DPDT - --	0						Sump Water / Oil Detection	Chemical & Petrochemical
Loop Power (4-20mA) - --	1						Lubricant Circulation Equipment	Pulp & Paper
Mounting Integral. - -- --	1 0					Fill Machine Level Control	Food & Beverage
Remote - -- --	2					Pump Leak Detection	Military, Subsea / Surface
Cable (remote) in feet - -- -- --	01					Maritime Shipping
Actuation point inches (01"std) -- -- -- --	01				Inland Barges, ERC Cargo
Process connection (1/2"NPT) - -- -- -- -- --	2	
(3/4" NPT) - -- -- -- -- --	3	
Flange ANSI 150# - -- -- -- -- --	A	
Flange ANSI 300# - -- -- -- -- --	B	
Flange Sanitary - -- -- -- -- --	C	
Flange size 1" - -- -- -- -- -- --	1
1.5" - -- -- -- -- -- --	0
2" — -- -- -- -- -- --	2

Order from: **C A Briggs Company;** 622 Mary Street; Suite 101 - Warminster, PA 18974   *Hauppauge, NY 11788*
Phone: 267-673-8117 - 800-352-6265 - Fax: 267-673-8118; E-Mail: Sales@cabriggs.com - www.cabriggs.com

Repeatability: 2mm or better.

Delay (on): 0.5 seconds Standard.
Options available.

Probe material: 316SS Standard.
Optional material available.

Actuation point: 1.0" Standard.
Up to 99" available.

Sensor Temperature: -20 to 200°C

Sensor Pressure: 1000 PSIG 316SS.

Liquid viscosity : From 1 to 50,000 cps

Process connection: ¾" NPT Standard.
Flanges available.

Electronic mounting : Integral or Remote

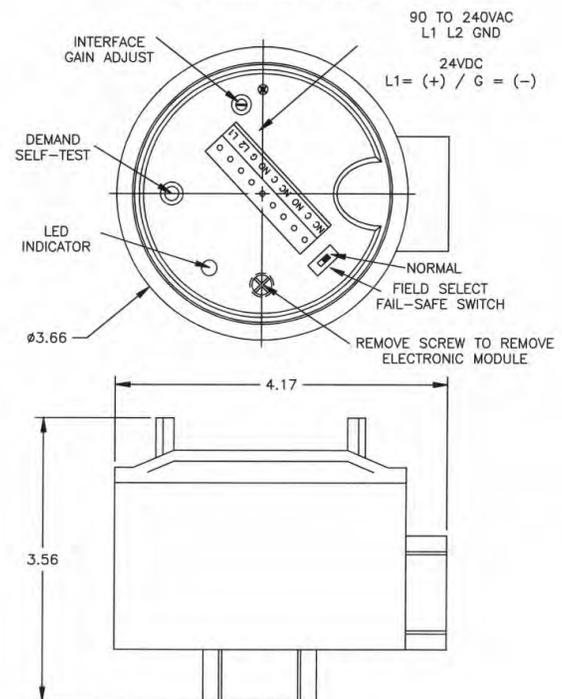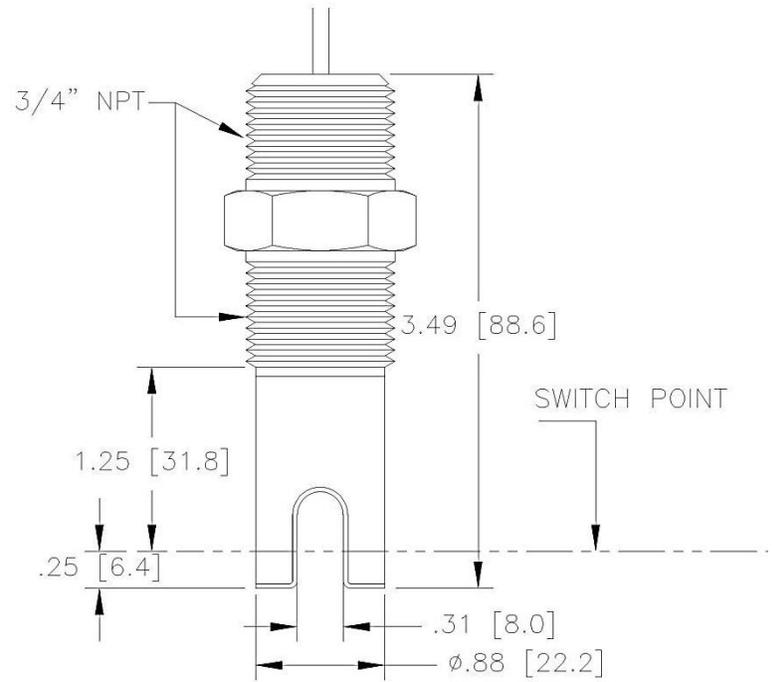*Input options: 24VDC,   90 to 240VAC,*
9-30VDC

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

Enclosure: Nema 4 / 7

Push Button Demand Self-Test

Field Select Fail-Safe Option

LED Output Indicator

Warranty

Sensaras' level sensors are warranted against inherent defects for a period of two years 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

3/4" NPT

3.49 [88.6]

SWITCH POINT

1.25 [31.8]

.25 [6.4]

.31 [8.0]

Ø.88 [22.2]

ELECTRONIC MODULE
ENCLOSURE DIMENSIONS

INTERFACE
GAIN ADJUST

90 TO 240VAC
L1 L2 GND

24VDC
L1= (+) / G = (−)

DEMAND
SELF-TEST

LED
INDICATOR

NORMAL
FIELD SELECT
FAIL-SAFE SWITCH

REMOVE SCREW TO REMOVE
ELECTRONIC MODULE

Ø3.66

4.17

3.56