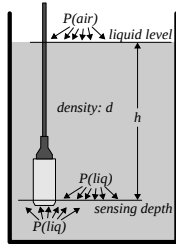


TLH: (Loop Powered) Hydrostatic Two Wire Level Transmitter



Operating Principle



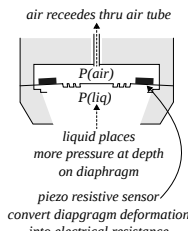
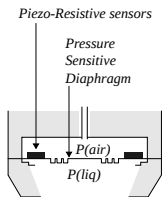
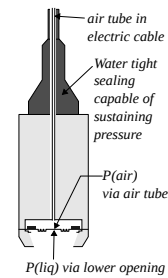
Pressure $P(liq)$ on any surface and container walls at depth h , by the liquid of density d , is:

$$P(liq) = d \times g \times h + P(air)$$

where $P(air)$ is the air pressure and g is the acceleration due to gravity (constant for a given place) at the place of liquid container. Replacing constants the equation becomes:

$$P(liq) - P(air) = K \times h$$

in short: Pressure difference represents liquid level. One convenient unit that clubs pressure with level is mH₂O (pressure felt at depth in meters while being immersed in water)



Trumen hydrostatic pressure transmitter utilizes pressure exerted by liquid $P(liq)$ and subtract it by air pressure $P(air)$ using a single pressure sensitive diaphragm and air-vent in connection cable.

As Trumen hydrostatic pressure transducer is immersed deeper in the liquid, the $P(liq)$ becomes higher than $P(air)$ and the diaphragm minutely deforms.

This diaphragm deformation can't be seen visibly, but it is caught by piezo-resistive sensors secured on the sensitive diaphragm.

Thus pressure exerted by liquid is sensed by Trumen hydrostatic sensor which is directly denotes the depth from the surface of liquid.

Specifications

Sensor Supply:	14 to 36VDC
Output:	4-20mA
Load:	250 Ohm @14V to 1100 Ohm @ 36V
Max Measurement	1: 180mm 2: 480mm
Water Level Range	3: 980mm 4: 1,980mm 5: 4,980mm 6: 9,980mm 7: 1,9980mm 8: 49,980mm 9: 9,9980mm 10: 199,980mm
Accuracy	± 0.25% (standard) ± 0.5% minimum % of Full Scale
Long-Term Stability:	< ± 0.5% of Full Scale per Year
Response Time:	<2 mili seconds
Temperature	1. Storage -40°C to +100°C 2. Usable 0°C to +80°C 3. Compensated 0°C to +50°C
Sense Diaphragm Material	SS316L
Wetted Sensor Material	SS316
Cable Insulation	Polycarbonate/Polyurathene
Submersible Protection Class	IP68
Protection Head	1. Material Aluminum Pressure Die-Cast 2. Paint Eopxy Polyurathene Coated 3. Protection Class IP-68 4. Process Threaded: NPT/BSP 1" to 2" Connection Flanged: ANSI/JIS/DIN/ASA

* Specifications are subject to change without prior notice

Compact Size

Durable Construction

Trusted Principle of Operation

Liquid Inventory Assessment

Easy Installation

Order Code

- TLH Two Wire (Loop Powered) Hydrostatic Level Sensor
- Px Protection Head Process Connection Type
(PFL: Flanged Type – description of flange - FL -at the end of order code)
(PB1: BSP 1", PB2: BSP 1 ½", PB4: BSP 1 ¼", PB5: BSP 2")
(PN1: NPT 1", PN2: NPT 1 ½", PN4: NPT 1 ¼", PN5: NPT 2")
- Cx Protection Head Process Connection Material
(CM: Mild Steel, C2: SS-202, C4: SS-304, C6: SS-316, CL: SS-316L)
- Dxxxx Specific Gravity (Density) of Material (Water : 1.000, Code : D1000)
- Lxxxxxxx Level Measurement Length (Code L000180mm to L199980mm)
- FLxx Flange type and bore size specified for ASA/ANSI/JIS/DIN/Custom

