USER MANUAL

Series PBLT2

Submersible Level Transducer



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L-27_v12_EN_1026

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Series PBLT2

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1. Specifications – Installation and Operating Instructions

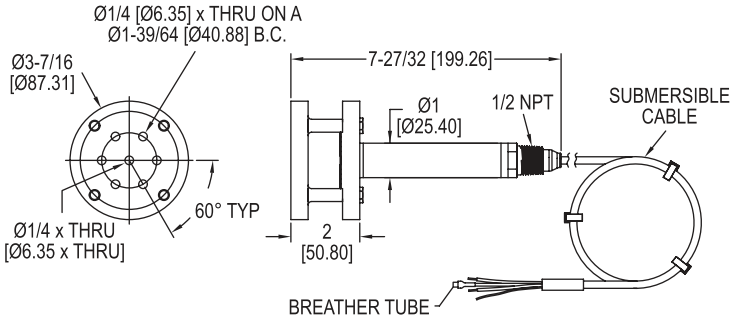


Figure 1 *Specifications*

The **Series PBLT2 Submersible Level Transducer** is manufactured for years of trouble free service in the harshest applications. The PBLT2 measures the height of liquid above its position in the tank referenced to atmospheric pressure. The transducer consists of a piezoresistive sensing element, encased in a 316 SS housing. Perfect for wastewater and slurry applications with features to protect the unit from these demanding applications. Superior lightning and surge protection utilizing dual arrestor technology, grounded to case, eliminating both power supply surges and lightning ground strike transients (surge protection is not guaranteed and is not covered by warranty). Large diameter 316 SS diaphragm seal is non-clogging and damage resistant to floating solids.

Comes equipped with a 270-pound tensile strength, shielded, vented cable. Ventilation tube in the cable automatically compensates for changes in atmospheric pressure above the tank. The vent tube has a filter attached to the end that will block particles, such as dust, dirt, and water droplets, from entering the tube.

2. Applications

- Wastewater: sludge pits, clarifiers, digesters; Alum tanks; Chemical storage tanks; Oil tanks; Lime slurry; Sumps; Reservoirs.

3. Electrical Installation

An external power supply delivering 13–30 VDC with minimum current capability of 40mA DC (per transmitter) is required to power the control loop. See figure below for connection of the power supply, transmitter and receiver.

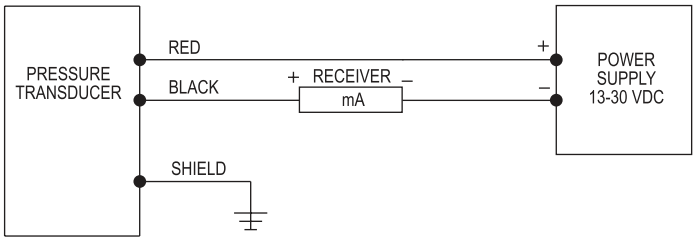


Figure 2 *Electrical Installation*

The maximum receiver load resistance (RLmax) for the DC power supply voltage (Vsup) is expressed by the formula:

$$RLmax = \frac{Vsup - 13\ V}{0.02A}$$

Shielded cable is recommended for control loop wiring.

4. Specifications

Service	Compatible liquids.
Wetted Materials	Body: 316 SS, 316L SS; Cable: Polyether polyurethane or ETFE; Seals: Fluoroelastomer.
Accuracy	±0.25% FS.
Temperature Limits	0 to 200 °F (–18 to 93 °C).
Compensated Temperature Range	0 to 180 °F (–18 to 82 °C).
Thermal Effect	Less than ±0.02%/°F.
Pressure Limit	2X FS.
Power Requirement	13–30 VDC.
Output Signal	4–20mA DC, two wire.
Response Time	50 msec.
Loop Resistance	850 Ω at 30 VDC.
Electrical Connection	Wire pigtail.
Mounting Orientation	Suspended in tank below level being measured. Can be placed on the bottom of the tank on its side.
Weight:	4.3 lb (2.0 kg).
Electrical Protection	Lightning and surge protection.
Agency Approvals	CE.

Table 1 *Specifications*

5. Warning

A voltage potential between the ground wire of the unit and the ground of other equipment can lead to electrolytic corrosion. Always ensure the grounding system provides an equipotential between the transmitter and the earthing ground connection. Avoid using the power system protective ground since this will often have a significant potential difference to the transmitter ground. Also note that dissimilar metals in the ground system may cause electrolysis corrosion of the transmitter or other components in the ground system.

During installation, connect a voltmeter or ammeter between the shield ground wire and the grounding connection. If there is a measurable voltage or current electrolytic corrosion may be a serious possibility. If there is a potential difference then some isolation system will be required. Improper grounding may lead to damage or poor.

Model Chart					
Example	**PBLT2**	**–20**	**–40**		**PBLT2–20–40**
Construction	PBLT2				Cage style submersible level transmitter, ETFE cable
Range		XXX			In psi (5000 psi maximum)
Cable Length			XXX		In feet (1500 feet maximum)
Options				PU	Polyurethane cable

Table 2 *Warning*

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