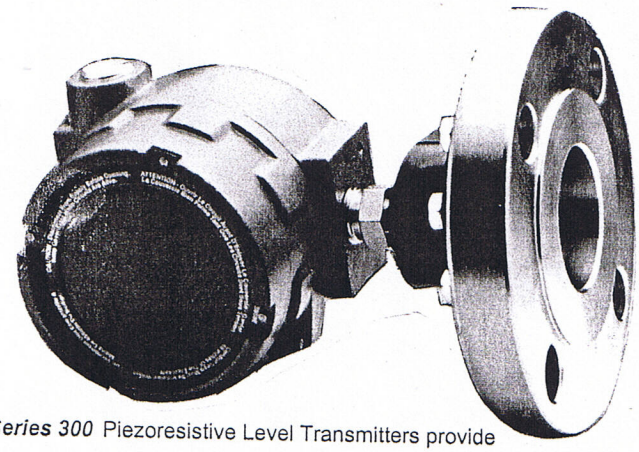
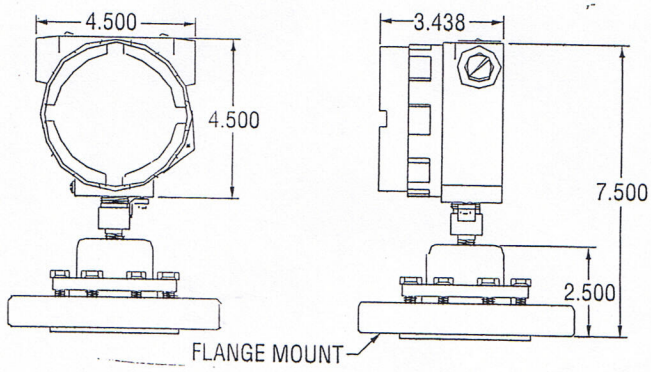
Series 300

Specifications - Installation and Operating Instructions





The ***Series 300*** Piezoresistive Level Transmitters provide reliable measurement and control of process levels by sensing the hydrostatic pressure in a tank. The pressure is dependent on the level in the tank and the specific gravity of the liquid. The loop-powered level transmitter delivers a proportional 4 to 20 mA output signal for indicating, recording or control purposes. Units are equipped with EMI and reverse polarity protection.

INSTALLATION

The standard ***Series 300*** transmitters include a dual diaphragm assembly to isolate the process from the sensor. The diaphragm is located inside the process connection (flange or female NPT) and can easily be deformed by uneven pressure. Even pressure should be applied across the entire surface of the diaphragm. Touching the diaphragm with your finger or any other object may damage the diaphragm. Do not apply any undue mechanical stress to the transmitter (strike, twist, or abuse).

The ***Series 300*** transmitters should be mounted in a horizontal position. The transmitters are factory calibrated and failure to mount the unit horizontally will result in inaccurate measurements. If mounting the unit vertically, the unit must be calibrated. See "Calibration" section.

It is strongly recommended to install an isolation valve and drain between the transmitter and the tank or process pipe. The isolation valve should be a ball valve of appropriate size. The drain should be installed between the valve and the transmitter. See *figure 1.* Field calibration is simpler with a valve and drain system installed. The tank will not require draining if the transmitter must be removed for service. When installing the transmitter at the top of a pipe or elbow, point the drain valve upwards to allow any trapped air or gas to escape. Trapped air bubbles can cause incorrect readings. To release trapped air or gas, open the isolation valve and open the drain valve until all the trapped air has escaped. Be sure to close the drain valve before operation.
Note: An isolation/drain valve system cannot be installed with units having an extended diaphragm.

PHYSICAL DATA

Accuracy: ± 0.25% of calibrated span
Repeatability & Hysterisis: ± 0.10% full scale
Overrange: 300% upper range limit
Supply Voltage: 18 to 40 VDC
Output: 4 - 20 mA, 2-wire
Maximum Loop Resistance: 1000Ω
Zero Elevation: 25% standard
Zero Suppression: 25% standard
Vibration Limits: ± 1g, 10 to 200 Hz
Temperature Compensation: 0-180°f (-18 to 82°C).
Operating Temperature: 0-200°F (-18 to 93° C).
Fill Solution: Silicon oil
Wetted Parts: 304 stainless steel
Housing: NEMA 4, 7, & 9. Explosion proof; Class I, Groups B, C, D; Class II, Groups E, F, G; Class III
Mounting: 1" NPT (F) or 150# flange
Electrical Connection: 1/2" NPT (F) conduit connection

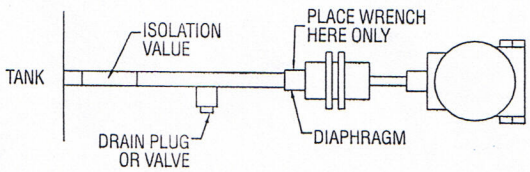


Figure 1

Flange Mounted Transmitters

When mounting a transmitter with flange be sure all bolts are straight and mounting is clear of obstructions. Tighten bolts evenly and torque in increasing steps to insure a secure mounting. If it is necessary to apply force to mount the transmitter, apply force only to the flange itself. (If necessary use a hammer and place a block of wood between the flange and the hammer).