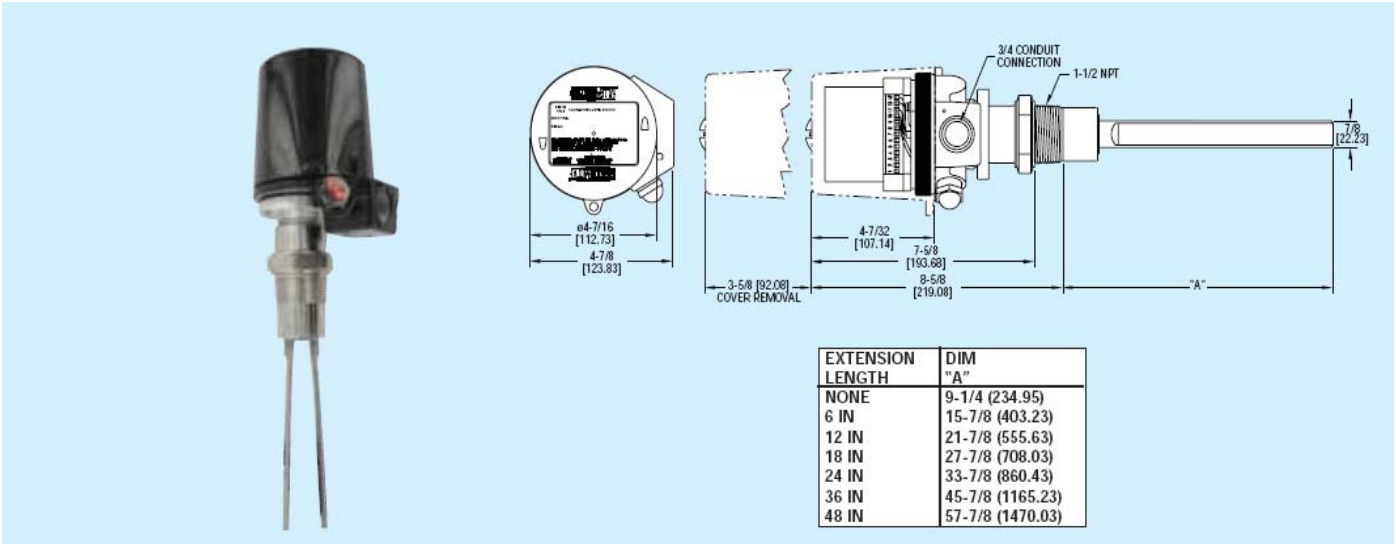
MODEL TF
TUNING FORK LEVEL SWITCH

Perfect for Sensing Low Bulk Density or Low Dielectric Materials



EXTENSION LENGTH	DIM "A"
NONE	9-1/4 (234.95)
6 IN	15-7/8 (403.23)
12 IN	21-7/8 (555.63)
18 IN	27-7/8 (708.03)
24 IN	33-7/8 (860.43)
36 IN	45-7/8 (1165.23)
48 IN	57-7/8 (1470.03)

Bulk Pro Systems Model TF Tuning Fork Level Switch is ideal for level control of powders and fine grained solids, especially those with low bulk densities. The TF incorporates a piezoelectric crystal that vibrates the fork at its natural frequency. When the fork comes in contact with material the vibration is dampened and the switch changes state. As the fork becomes free of material the switch changes back to its normal state. Featured in the TF is user selectable fail-safe operation of the contacts. This unit is not affected by vibration from conveying systems, motors or the movement of material. It can be mounted in any position and is available with factory built extensions for mounting on top of the storage vessel.

The TF is easy to use with no calibration required and with no mechanical moving parts there is no routine maintenance required. The TF is unaffected by the dielectric constant of the sensed material making it superior to a capacitance level switch. It works great in applications where the dielectric constant is too low, where there is more than one material being used in one vessel or when the material moisture content can change. The TF works on applications where the bulk density is too low for a rotating paddle switch. It can also detect granular material submerged in liquids of low viscosity. An example would be sand, gravel or polyester chips in submerged in water.

Features:

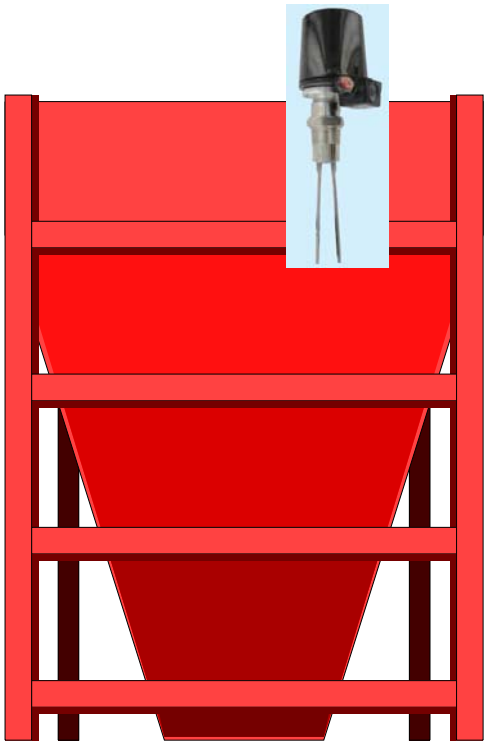
- **No Calibration Required**
- **Vibrating Fork Design:** Great for low bulk density and low dielectric constant materials. Will detect products down to 1.8 lb/ft³ (30 g/l)
- **Universal Power Supply:** One model works with 90 to 265 VAC and 24 VDC.
- **Adjustable Sensitivity:** Can be set to ignore lighter bulk density products and only detect heavier products, such as sand in water.
- **Status Indications Light:** External LED switch indicators for normal and alarm status.
- **Failsafe Setting:** Output switch can be set for Normally Open or Normally Closed condition on loss of power.
- **Time Delay:** Prevent false alarms for material surges.

SPECIFICATIONS

- **Service:** Dry powder or Bulk Materials compatible with wetted materials. Can detect bulk materials submerged in liquid.
- **Sensitivity:** Minimum bulk density of 1.8 lb/ft³ (30 g/l), maximum particle size 0.4 in (10mm)
- **Wetted Materials:** 316 SS
- **Temperature Limits:** Ambient: -40 to 140°F (-20 to 60°C), Process: -4 to 176°F (-20 to 80°C)
- **Pressure Limit:** 145 PSIG (10 bar)
- **Power Requirements:** 90 to 265 VAC, 50/60 Hz: 24 VDC
- **Power Consumption:** 4 VA
- **Enclosure:** Aluminum, powder coated
- **Enclosure Rating:** Weatherproof, NEMA-4X
- **Switch Type:** SPDT
- **Electrical Rating:** 5 Amps @ 230 VAC
- **Electrical Connection:** Screw terminals
- **Conduit Entry:** 3/4" female NPT
- **Process Connection:** 1-1/4" male NPT, optional mounting flange available
- **Weight:** 5.5 lbs (2.5 kg)
- **Indication Light:** External red LED, internal green and red LED's
- **Sensing Delay** (Maximum) covered probe: 2 seconds, uncovered probe: 3-7 seconds
- **Time Delay:** Separate settings for covering and uncovering the probe. Adjustable from 2 to 20 seconds

APPLICATIONS:

- Lime
- Styrofoam
- Tobacco
- Dry Cereals
- Sugar
- Animal Feed
- Milk Powder
- Flour
- Insulation
- Cement
- Paper Shavings
- Plastic Granules
- Sawdust
- Carbon Black
- Light Fibers
- Detergent Powders
- Dyes
- Chalk
- Silica
- Wood Chips



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