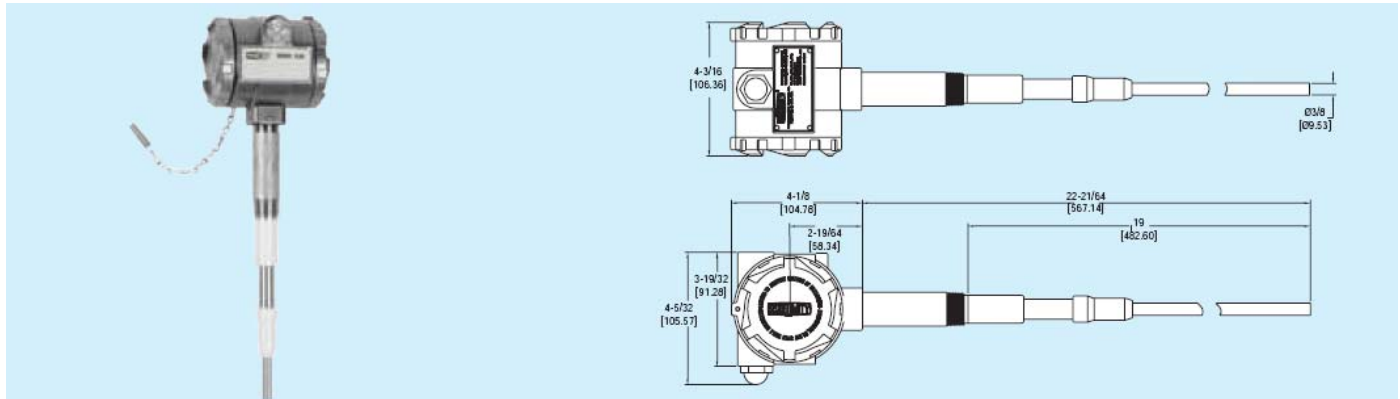


# MODEL CL CAPACITIVE LEVEL SWITCH



Perfect for Sensing Bulk Materials, Powders and Liquids



**Bulk Pro Systems Model CL Capacitive Level Switch** is ideal for level control of bulk materials, powders and liquids. The CL capacitive level switch does not have any moving parts. It will not jam, wear or break and requires no maintenance. State of the art sensing technology in the CL, using impulse RF admittance measurement combined with an active guard provides excellent level measurement and stability while not being sensitive to material build-up. This technology also provides immunity to external RF sources like walkie-talkies and cell phones as well as minimal interference with radio communication or other electronic systems.

Capacitive level technology can be used on bulk materials, powders and liquids. It works great on difficult applications such as slurries and coating products. The CL capacitive level switch is ideal for level indication in silos, receivers and transporters in pneumatic conveying systems. It can also be used for liquid interface applications to detect the level of two immiscible liquids that have different dielectric constants such as oil and water. Wetted materials of PVDF and 316SS assure great chemical compatibility and meet food grade requirements.

## **Features:**

- **Automatic Calibration:** No need to turn calibration pots, just push the calibration button. The CL even has an external magnet to activate the calibration without having to open the enclosure.
- **Universal Power Supply:** One model works with 12-240 VAC/DC without any jumpers or settings.
- **Coat Guard:** Unit is not affected by sticky, dusty or clingy materials that might coat or build-up on the probe which prevents false alarms.
- **Failsafe Setting:** Output switches can be set for Normally Open or Normally Closed condition on loss of power.
- **Status Indications:** Ultra high brightness external red LED switch status indicator. Internal indicators for power, sensor and switch status that can be seen externally with window cap option (external LED on weatherproof model only).
- **Time Delay:** Prevents false alarms from material splashing, agitation, sluffing, etc.
- **Removable Terminals:** Removable terminal block snaps in and out enabling easy wiring.

# SPECIFICATIONS

- **Service:** Bulk Materials, Liquids and Powders compatible with wetted materials.
- **Sensitivity:** Minimum bulk density of 1.8 lb/ft<sup>3</sup> (30 g/l), maximum particle size 0.4 in (10mm)
- **Wetted Materials:** 316 SS and Polyvinylidene Fluoride (PVDF)
- **Temperature Limits:** Ambient: -40 to 185°F (-40 to 85°C), -40 to 185°F (-40 to 85°C) with under 24 VAC/DC power supply, Process: -40 to 250°F (-40 to 121°C)
- **Pressure Limit:** 365 PSIG (25 bar)
- **Power Requirements:** 12 to 240 VAC/DC
- **Power Consumption:** 2.8 watts max
- **Enclosure Rating:** Weatherproof, NEMA-4X (Consult factory for explosion proof)
- **Switch Type:** DPDT (two form C)
- **Electrical Rating:** 8 Amps @ 120/240 VAC res., 30 VDC, 1/2 hp @ 120 VAC and 1/4 hp @ 240 VAC ind.
- **Electrical Connection:** Screw terminals with removable terminal block
- **Conduit Entry:** 1/2" NPT
- **Process Connection:** See model chart
- **Mounting Orientation:** Vertical or horizontal
- **Set Point Adjustment:** Trips when product contacts probe. Cut or extend probe to length of desired trip point. Can be cut as short as 1" and can be extended by welding on to probe. (Minimum length will be effected by material being sensed).
- **Response Time:** 0.2 seconds
- **Spark/Static Protection:** 10 MEG Ohm dissipation resistance with spark gap. Surge current to 100 Amp max.
- **Time Delay:** Adjustable, 0 to 60 seconds
- **Sensitivity:** 8 selectable settings, 1, 2, 4, 6, 8, 14 & 20 pF (at 30 pF nominal free capacitance)

## APPLICATIONS:

- Plug chute detection
- High, medium and low level detection
- Redundant high level detection

