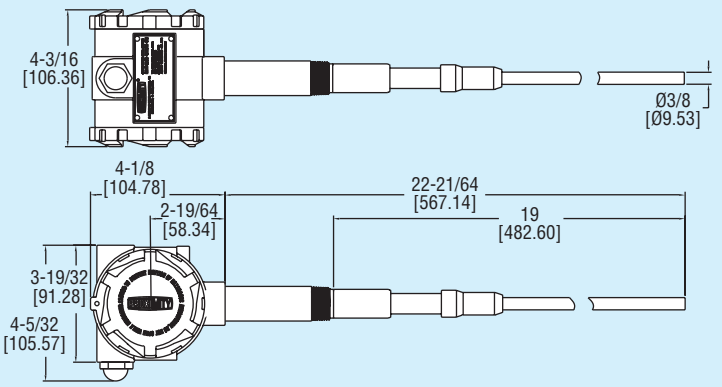
PROXIMITY®

Series CLS2

Capacitive Level Switch

Powder, Bulk, or Liquids, Auto-Calibration



The CLS2 is a capacitive technology level switch that does not have any moving parts - no jams, no wear, nothing to break, and no maintenance. State of the art sensing technology in the CLS2, using impulse RF admittance measurement combined with an active guard, provides excellent level measurement and stability while being insensitive to material buildup. 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 for liquids, powders, and bulk materials and is great for difficult applications such as slurries, coating products, and liquids with solids. The CLS2 is ideal for level indication in silos, receivers, and transporters in pneumatic conveying systems. The CLS2 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 316 SS assure great chemical compatibility and meet food grade requirements.

FEATURES

- **Automatic Calibration:** No need to turn calibration pots, just push the calibration button. The CLS2 even has an external magnet to activate the calibration without having to open the enclosure.
- **Universal Power Supply:** One model works from 12 to 240 VAC/DC without any jumpers or settings.
- **Coat Guard:** Unit is not affected by sticky, dusty, or clingy materials that coat or build up on the probe, preventing false alarms.
- **Failsafe Setting:** Output switches can be set for Normally Open or Normally Closed condition on loss of power.
- **Status Indication:** Ultra high brightness external red LED switch status indicator, and 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:** Prevent false alarms from material splashing, agitation, etc.
- **Removable Terminals:** Removable terminal block snaps in and out enabling easy wiring outside of the enclosure.

Example Models
CLS2-W11RK1-019

SPECIFICATIONS

Service: Liquids, powder, and bulk materials compatible with wetted materials.
Wetted Materials: 316 SS and polyvinylidene fluoride (PVDF).
Temperature Limits: Ambient: -40 to 185°F (-40 to 85°C), -4 to 185°F (-20 to 85°C) with under 24 VAC/DC power supply; Process: -40 to 250°F (-40 to 121°C).
Pressure Limit: 365 psi (25 bar).
Enclosure Rating: Weatherproof, NEMA 4X.
Switch Type: DPDT (two form C).
Electrical Rating: 8A @ 120/240 VAC res., 30 VDC. 1/2 hp @ 120 VAC and 1/4 hp @ 240 VAC ind.
Power Requirements: 12 to 240 VAC/DC.
Power Consumption: 2.8 watts max.
Electrical Connection: 1/2″ NPT conduit opening, screw termination with removable terminal block.
Process Connection: See model chart.
Mounting Orientation: Vertical or horizontal.
Set Point Adjustment: Trips when product touches 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.
Time Delay: Adjustable, 0 to 60 seconds.
Spark/Static Protection: 10 MEG Ohm dissipation resistance with spark gap. Surge current to 100A max.
Sensitivity: 8 Selectable settings, 1, 2, 4, 6, 8, 10, 14, 20 pF (at 30 pF nominal free capacitance).

Example	CLS2	W	1	1	R	K	1	019	M20	CLS2-W11RK1-019-M20
Series	CLS2									Capacitive Level Switch
Enclosure		W								Weatherproof
Switch			1							DPDT rated 8A @ 12/240 VAC, 30 VDC res.
Power Supply				1						12-240 VAC/DC
Probe Type					R T C					Standard Rod: 316 SS, .375″ diameter Threaded Rod: 316 SS (can attach field extensions.) Cable: 316 SS with weight
Insulator Material						K				PVDF
Process Connection							1 2 3 4 5 6 8 9			3/4″ male NPT 1″ male NPT 1-1/2″ male NPT 3/4″ BSPT 1″ BSPT 1-1/2″ BSPT 1-1/2″ sanitary clamp 2″ sanitary clamp
Probe Length								XXX		Insertion length in inches. Example 019 is 19″ length. (Minimum length is 6″, with 3/4″ sensing tip)
Options									M20 WC	M20 conduit connection with cable gland Window Cap