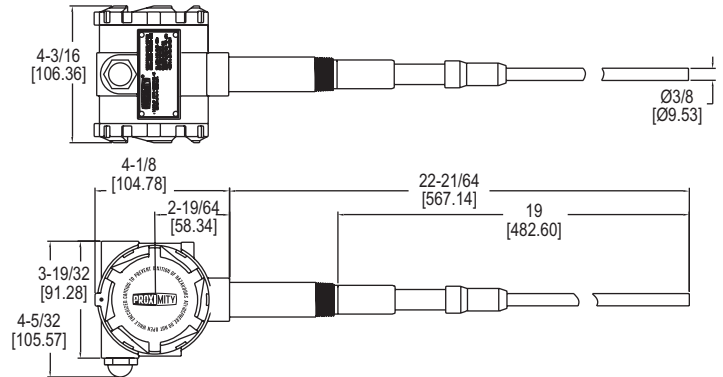


# CAPACITIVE LEVEL SWITCH

Powder, Bulk, or Liquids, Auto-Calibration



The **SERIES CLS2** Capacitive Level Switches is a capacitive technology level switch which can be used for liquids, powders and bulk materials. It is offered with PVDF and 316 SS wetted material, weatherproof enclosure, DPDT output and a variety of process connections.

**FEATURES/BENEFITS**

- No moving parts permitting for no jams, no wear, nothing to break, and no maintenance
- Impulse RF admittance measurement combined with an active guard, provides excellent level measurement and stability while being insensitive to material buildup
- Immune to external RF sources like walkie-talkies and cell phones as well as minimal interference with radio communication or other electronic systems
- Automatic calibration with no need to turn calibration pots, just push the calibration button and an external magnet to activate the calibration without having to open the enclosure saving time
- Coat guard probe is not affected by sticky, dusty, or clingy materials that coat or build preventing false alarms
- Status indication via an 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)
- Can be used for liquid interface applications to detect the level of two immiscible liquids that have different dielectric constants such as oil and water
- Failsafe setting with output switches that can be set for NO or NC condition on loss of power
- Time delay prevents false alarms from material splashing, agitation, etc.
- Removable terminal block snaps in and out enabling easy wiring outside of the enclosure
- Universal power supply with one model that works from 12 to 240 VAC/DC without any jumpers or change of setting
- Wetted materials of PVDF and 316 SS assure great chemical compatibility and meet food grade requirements

**APPLICATIONS**

- Sewage and wastewater
- Food and beverage
- Pharmaceuticals
- Sumps
- Level monitoring in receivers
- Boilers and steam generators
- Caustics and acids
- Reservoirs
- Level indication in silos
- Transporters in pneumatic conveying systems

**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 (IP66).  
**Switch Type:** DPDT (two form C).  
**Electrical Rating:** 8 A @ 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 s.  
**Time Delay:** Adjustable, 0 to 60 s.  
**Spark/Static Protection:** 10 M Ω 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).  
**Agency Approvals:** CE, cULus.

Level Switches,  
Capacitive

MODEL CHART										
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 8 A @ 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 47" (1.2 m) field extensions.*) Cable: 316 SS with weight
Insulator Material							K			PVDF
Process Connection								1		3/4" male NPT
								2		1" male NPT
								3		1-1/2" male NPT
								4		3/4" BSPT
								5		1" BSPT
								6		1-1/2" BSPT
								8		1-1/2" sanitary clamp
								9		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	M20 conduit connection with cable gland
									WC	Window cap
<b>Example:</b> CLS2-W11RK1-019.										
*Extension rods sold separately.										