



NON-INTRUSIVE CAPACITANCE LEVEL SWITCH



- The ultrapure switch solution for non-contact level detection
- Detects liquid through non-metallic tank up to 1" thick
- Offered in both general purpose and intrinsically safe configurations
- Tank mounting bracket ensures fast and simple installation
- Polysulfone enclosure rated NEMA 4X with 1/2" conduit connection
- LED indicator provides ongoing liquid and calibration feedback.
- Relay or FET switch output for interface with PLC, SCADA or alarms
- Selectable normally open or normally closed switch states



The non-intrusive RF capacitance switch detects the presence of liquids or air by measuring the conductive or dielectric values which are present in all materials. An electrical capacitor is formed between the level switch and the outer tank wall. As liquid rises and falls against the inner wall, the capacitance effect is greatly increased and the FET switch changes state.

SPECIFICATIONS

Accuracy: ± 1 mm in water
 Repeatability: ± .5 mm in water
 Dielectric range: < 10 constants
 Conductive range: > 100 micromhos
 Supply voltage: 12-36 VDC
 Consumption: Relay: 25mA
 FET: 5mA (dry)
 19mA (wet)
 Relay rating: 60 VAC/VDC @ 1A
 FET rating: 36 VDC @ 100 mA
 Switch output: Selectable NO or NC states
 Temp. rating: F: -40° to 194°
 C: -40° to 90°
 Tank compatibility: Non-metallic
 Tank wall thickness: Up to 1" (25 mm) max.
 Enclosure material: Polysulfone
 Sensor rating: NEMA 4X (IP68)
 Bracket material: Standard: PE
 Option: PP
 Bracket mounting: 3M adhesive or thermal weld
 Conduit connection: 1/2" NPT
 Cable type: 8 ft. (2.5 m), 4-wire (relay) or 3-wire (FET), 22 gauge with ground, shield & PP or PFA jacket

APPLICATION

The non-intrusive capacitance level switch mounts on the exterior wall of non-metallic tanks and is an excellent choice for clean, conductive, non-coating or scaling type liquids. The relay or FET output provides a reliable switch interface with remote devices such as PLC, SCADA or alarm. For maximum flexibility, the sensor is offered in general purpose and intrinsically safe versions.

General Purpose	Yes	Non-conductive	No
Bubbles	Yes	Dirty	No
Conductive	Yes	Foam	No
Clean	Yes	PFA sensor	No
Non-coating	Yes	Metallic tank	No
Non-metallic tank	Yes	Reed	No
PS sensor	Yes	Light coating	No
Relay	Option	Medium coating	No
FET	Option	Heavy coating	No
Intrinsically safe	Option		

Approvals

CSA approval: Class I, Groups A, B, C & D; Class II, Groups E, F & G

CSA entity parameters: Vmax = 32 VDC
 Imax = 0.5 A
 Ci = 0
 Li = 0

CSA certificate: LR79326-4

CE compliance: EN 50082-2 immunity
 EN 55011 emission

Capacitance Level Switch		STARTS FROM
LP50 - 600		\$ 195
Switch Output (1) (2) (3) (4) <ul style="list-style-type: none"> 0 - Intrinsically safe (add \$40) 2 - FET, N-channel 3 - FET, P-channel 5 - Relay, SPDT (add \$20) 		Add \$ _____
		Total \$ _____

To order a 25' or 50' sensor cable, place the cable length at the end of the part number (ex: LP50-6002-25') and add the following: 25' add \$15.00; 50' add \$30.00.

Each sensor comes with one LP95-6001 PE bracket. Additional brackets may be purchased separately for \$20.00. For a PP bracket, order the LP95-1001.

The LM90-1001 liquid tight cable connector may be purchased separately for \$5.00.

The intrinsically safe output is a current loop (dry: 5 mA, wet 19 mA). Package the intrinsically safe sensor with isolation controllers or a matching CSA approved intrinsically safe barrier.