# Switch-Tek™ LU10 Ultrasonic Level Switch

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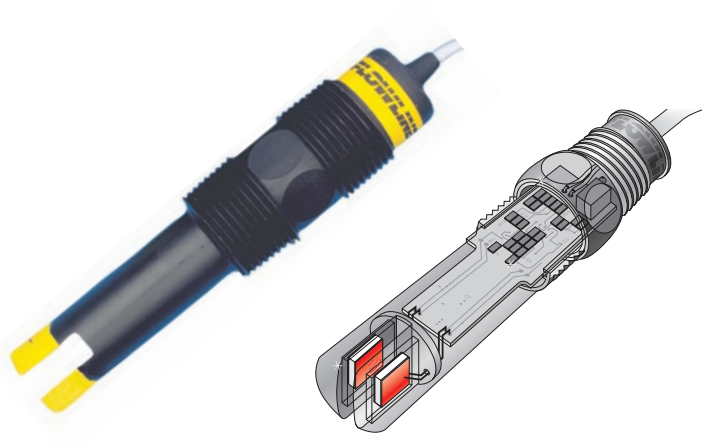
## Application



CSA approved for hazardous environments, the intrinsically safe ultrasonic point level switch provides reliable liquid level detection of chemical, solvent, hydrocarbon and petroleum based liquids with a 1A relay output. Media examples include fuel, acetone and hydrochloric acid. The submersible polypropylene or PFA liquid level sensor is universally mounted through the tank wall or inside the tank as a high level alarm or low level alarm.

## Features

- CSA approved intrinsically safe for use in hazardous environments
- Submersible polypropylene or PFA Teflon® sensor and cable for corrosive liquids
- 60VA relay selectable NO or NC via power supply wiring polarity
- Compatible with Smart Trak and Switch-Pak installation fittings

## Key Benefits

- Ideal for highly corrosive liquids
- Able to mount through the side wall or top wall of tank
- Compatible with Smart Track or Switch-Pak mounting options
- Use as redundant alarm in classified applications

## Compatible Products

### Switch-Pro™
Remote Level Controller

LCXX

### Application

Available in CSA approved general purpose (LC4X) or isolation (with built-in intrinsic safety barriers for use with associated apparatus, LC9X) classifications, the level controller is offered in three configurations for pump and valve control. The LC40/90 accepts one level sensor input and provides one 10A relay. The LC41 accepts two level sensor inputs and provides one latching 10A relay for automatic fill or empty control. The LC42/92 accepts three level sensor inputs with one latching 10A relay output for automatic fill or empty control, and a second non-latching 10A relay for high level alarm or low level alarm. For field mount installation, add a single or dual indicator NEMA box.

### Switch-Pro™
Compact Level Controller

LC1X

### Application

The general purpose level controller is offered in two configurations for pump and valve control. The LC10 accepts one level sensor input and provides one 16A relay for high level control or low level control. The LC11 accepts two level sensor inputs and provides one latching 16A relay for automatic fill or empty control. The optional flash alarm brings attention to level alarm conditions. Package this level controller with our liquid level switch sensors and fittings.

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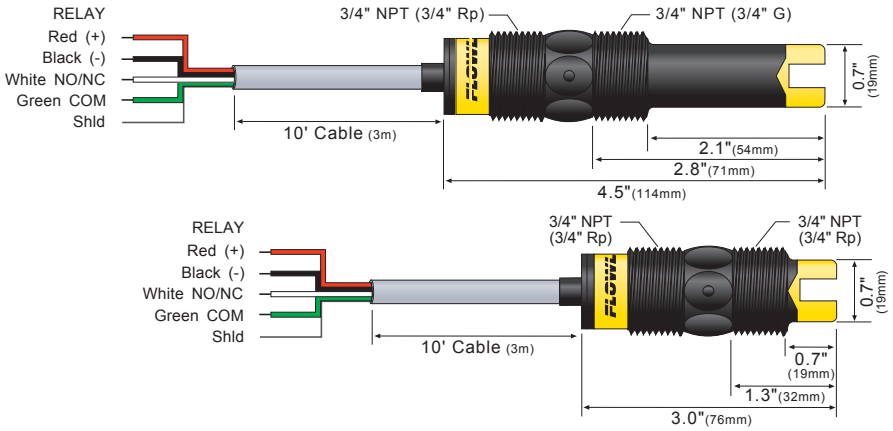
# Switch-Tek™ LU10 Ultrasonic Level Switch

## Specifications

| | |
|---|---|
| Orientation: | Universal |
| Accuracy: | ± 1mm in water |
| Repeatability: | ± 0.5mm in water |
| Supply voltage: | 12-36 VDC |
| Consumption: | 25 mA maximum |
| Contact type: | (1) SPST relay |
| Contact rating: | GP: 60 VA<br>IS: 32 VDC @ 0.5A |
| Contact output: | Selectable NO / NC |
| Process temp.: | F: -40° to 176°<br>C: -40° to 80° |
| Pressure: | 150 psi (10 bar) @ 25º C, derated @ 1.667 psi (0.113 bar) per ºC above 25º C |
| Sensor rating: | -1XX5: NEMA 6 (IP68)<br>-2XX5: NEMA 4X (IP65) |
| Sensor material: | -1XX5: PP<br>-2XX5: PFA |
| Cable jack. mat.: | -1XX5: PP<br>-2XX5: PFA |
| Cable type: | 4-conductor, #22 AWG, shielded |
| Cable length: | 10’ (3m) |
| Process mount: | 3/4” NPT (3/4”” G / Rp) |
| Mount. gasket: | Viton® |
| Classification: | Intrinsically safe |
| Certificate: | CSA, LR 79326 |
| Compliance: | CE |
| Approvals: | Class I, Groups A, B, C & D; Class II, Groups E, F & G; Class III |
| Parameters: | Vmax = 32V, Imax = 300 mA, Pmax = 1.3W, Ci = 0 µF, Li = 0 µH |

## Dimensions




## Fittings

For optimum performance, install the level sensor using the below recommended or direct equivalent fittings.

| P/N | Description |
|---|---|
| **Switch-Pak Single-Point Switch Fitting** | |
| LM45-7001 | 2” NPT Plug, 3/4” NPT Adapter & Nipple, PVC |
| LM45-1001 | 2” NPT Plug, 3/4” NPT Adapter & Nipple, PP |
| LM45-5001 | 2” NPT Plug, 3/4” NPT Adapter & Nipple, PVDF |

| | |
|---|---|
| **Smart Trak Multi-Point Switch Fitting** | |
| LM10-1201 | 2’ Track, 2” NPT Plug, 3/4” NPT Nipple, PP |
| LM10-1401 | 4’ Track, 2” NPT Plug, 3/4” NPT Nipple, PP |
| LM10-1601 | 6’ Track, 2” NPT Plug, 3/4” NPT Nipple, PP |
| LM10-1801 | 8’ Track, 2” NPT Plug, 3/4” NPT Nipple, PP |
| LM10-1001 | 10’ Track, 2” NPT Plug, 3/4” NPT Nipple, PP |
| LM10-1101 | 1m Track, 2” NPT Plug, 3/4” NPT Nipple, PP |
| LM10-1301 | 2m Track, 2” NPT Plug, 3/4” NPT Nipple, PP |
| LM10-1701 | 3m Track, 2” NPT Plug, 3/4” NPT Nipple, PP |

| | |
|---|---|
| **Smart Trak Level Switch Car Kit** | |
| LM30-1001 | Switch Car Kit, 3/4” NPT, Polypropylene |
| LM30-1061 | Switch Car Kit, 3/4” Rp, Polypropylene |
| LM52-2890 | 2” NPT Bulkhead Fitting, PVC |

## Ordering

LU10-□□□5

***Sensor material (1)***
- *1 PP*
- *2 PFA*

***Sensor length***
- *3 Short*
- *4 Long*

***Process mount (2)***
- *0 NPT (US)*
- *2 G / Rp (Metric)*

### Notes

1) To special order a 25’ (7.6m) or 50’ (15.2 m) level sensor cable, place the cable length at the end of the part number (ie: LU10-1305-25’). For PP, add $20 for 25’ (7.6m) or $40 for 50’ (15.2m) to the price. For PFA, add $75 for 25’ (7.6m) or $150 for 50’ (15.2m) to the price.
2) The short Metric level sensor has conical Rp threads on both sides of the wrench flat. The long Metric level sensor has straight G threads on the sensing side and conical Rp threads on the cable side of the wrench flat.

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