# Echotouch® LU20

Ultrasonic Level Transmitter

**FLOWLINE™**
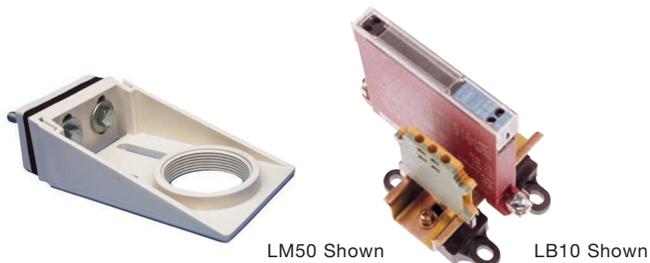LEVEL BEST

CE · IP65 · CSA NRTL/C

## Application

Intrinsically safe for use in hazardous locations, the ultrasonic transmitter provides continuous level measurement up to 18' (5.4m), and is configured via its integral push button display module. This non-contact liquid level sensor is ideally suited for corrosive, sticky or waste liquids, and is selected for bulk storage, day tank, skid or machine and process tank applications located within a classified area.

## Features

- LCD digital display indicates level in inches or centimeters
- PP enclosure rated NEMA 4X with rugged Kynar® transducer
- EasyCal simple push button calibration for all user set points
- Adjustable dead band and range filters eliminate false echo returns

LM50 Shown          LB10 Shown

## Specifications

| | |
|---|---|
| **Range:** | 6" to 18' (15cm to 5.4m) |
| **Accuracy:** | ± 0.25% of range |
| **Resolution:** | 0.125" (3mm) |
| **Dead band:** | 6" (15cm) |
| **Beam width:** | 8° conical |
| **Configuration:** | Push button |
| **Memory:** | Non-volatile |
| **Display type:** | LCD, 4-digit |
| **Display units:** | Inch or cm |
| **Supply voltage:** | 12-32 VDC |
| **Loop resist.:** | 600 Ohms @ 24 VDC |
| **Signal output:** | 4-20 mA, two-wire |
| **Signal invert:** | 4-20 mA, 20-4 mA |
| **Signal fail-safe:** | Reverts to safe state during echo loss |
| **Process temp.:** | F: -4° to 140° |
| | C: -20° to 60° |
| **Temp. comp.:** | Automatic |
| **Ambient temp.:** | F: -40° to 140° |
| | C: -40° to 60° |
| **Pressure:** | 30 psi (2 bar) @ 25° C, derated @ 1.667 psi (.113 bar) per °C above 25° C |
| **Enclosure rating:** | NEMA 4X (IP65) |
| **Encl. material:** | PP, UL94VO |
| **Conduit entrance:** | Single, 1/2" NPT |
| **Trans. material:** | PVDF |
| **Process mount:** | 2" NPT (2" G) |
| **Mount gasket:** | Viton® |
| **Classification:** | Intrinsically safe |
| **Compliance:** | CE |
| **Approvals:** | CSA: Class I, Groups A, B, C, D; Class II, Groups E, F, G; Class III; T3C |
| **Parameters:** | CSA: Vmax < 32.0 V; Imax < 130 mA; Ca = 0 uF; La = 0 uH |
| **Certificates:** | CSA: LR 79326 |

## Ordering

LU20-50 [ ] 1-IS

**PROCESS MOUNT (1) (2) (3)**

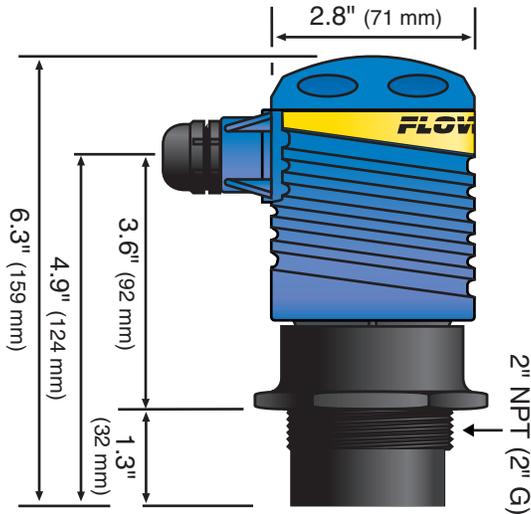| | |
|---|---|
| **0** | 2" NPT (US) |
| **6** | 2" G (Metric) |

### NOTES

1) The straight G thread version seals with an included Viton® mounting gasket.
2) For installation on open tanks, order the LM50-1001 (2" NPT) or LM50-1061 (2" G) side mount bracket. Locate the bracket far enough inboard form teh side wall to avoid sensor beam width conflicts.
3) To order the general purpose transmitter, do not specify the last two digits (ie: LU20-5001).
4) To complete your IS transmitter, add the LB10-1001 intrinsic safety barrier.

# Echotouch® LU20

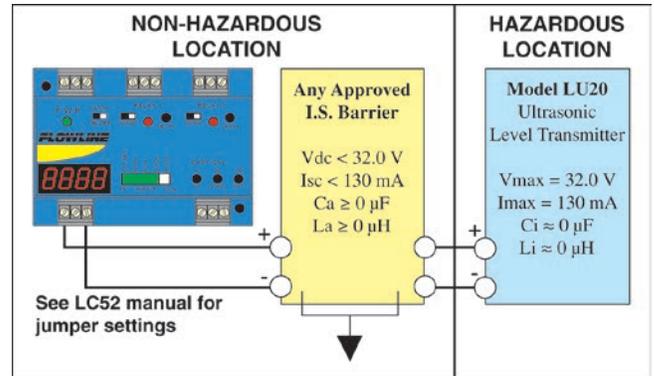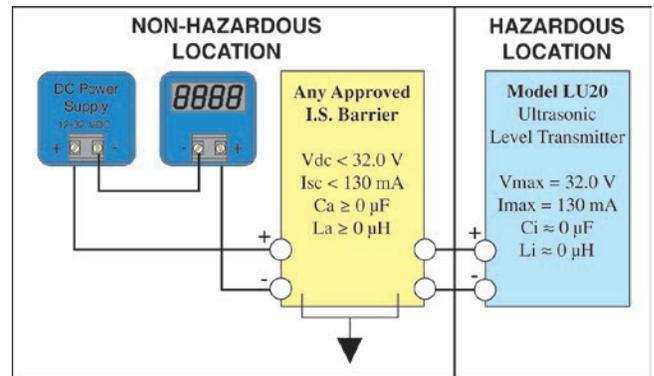Ultrasonic Level Transmitter

## Dimensions

2.8" (71 mm)

6.3" (159 mm)

4.9" (124 mm)

3.6" (92 mm)

1.3" (32 mm)

2" NPT (2" G)

## Beam Width

| Depth (Feet) | Radius (Inches) | Radius (cm) |
|---|---|---|
| 2 | 2.1 | 5.3 |
| 4 | 3.7 | 9.4 |
| 6 | 5.4 | 13.7 |
| 8 | 7.1 | 18.0 |
| 10 | 8.8 | 22.4 |
| 12 | 10.4 | 26.4 |
| 14 | 12.1 | 30.7 |
| 16 | 13.8 | 35.0 |
| 18 | 15.5 | 39.4 |

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## LC52 Relay Controller

**NON-HAZARDOUS LOCATION**

**HAZARDOUS LOCATION**

**Any Approved I.S. Barrier**
$Vdc < 32.0$ V
$Isc < 130$ mA
$Ca \geq 0$ µF
$La \geq 0$ µH

**Model LU20**
Ultrasonic Level Transmitter
$Vmax = 32.0$ V
$Imax = 130$ mA
$Ci \approx 0$ µF
$Li \approx 0$ µH

See LC52 manual for jumper settings

## Loop Powered Indicator

**NON-HAZARDOUS LOCATION**

**HAZARDOUS LOCATION**

DC Power Supply 12-32 VDC

**Any Approved I.S. Barrier**
$Vdc < 32.0$ V
$Isc < 130$ mA
$Ca \geq 0$ µF
$La \geq 0$ µH

**Model LU20**
Ultrasonic Level Transmitter
$Vmax = 32.0$ V
$Imax = 130$ mA
$Ci \approx 0$ µF
$Li \approx 0$ µH

## PLC

**NON-HAZARDOUS LOCATION**

**HAZARDOUS LOCATION**

Typical PLC

DC Power Supply 12-32 VDC

**Any Approved I.S. Barrier**
$Vdc < 32.0$ V
$Isc < 130$ mA
$Ca \geq 0$ µF
$La \geq 0$ µH

**Model LU20**
Ultrasonic Level Transmitter
$Vmax = 32.0$ V
$Imax = 130$ mA
$Ci \approx 0$ µF
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