

# EchoSonic® LU23-29

Ultrasonic Liquid Level Transmitter



## Application

The general purpose ultrasonic transmitter provides continuous level measurement up to 32.8' (10m) with a 4-20 mA signal output, and is configured via our free WebCal® software. This non-contact liquid level sensor is ideally suited for corrosive, sticky or waste liquids, and is selected for bulk storage, tanker truck, day tank, process tank, waste sump, neutralization tank, open channel, chemical feed and clarifier applications.



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LU27

LU23/28/29

## Features

- Offered in 4 measurement ranges from 9.8' (3m) to 32.8' (10m)
- Configuration is fast and easy via WebCal software and USB adapter
- Narrow 2" or 3" beam width for applications with limited measurement space
- Short 4" or 8" dead band maximizes the measurable filling capacity of the tank
- PVDF transducer and 6P polycarbonate enclosure for corrosive liquids
- Automatic temperature compensation for accurate measurement

## Success

Ultrasonic sensors are often used to measure open channel water flow that's discharged from rivers, streams, creeks, lakes or ponds. Here an EchoSonic level sensor is installed on the upstream side of a weir. The non-contact sensor measures the gravity-fed, liquid surface height as it passes through the V-notch weir, and provides a continuous 4-20 mA signal output. The PLC converts level height into flow volume with rate, totalization and data-logging functions for environmental reporting.



## Compatible Products



LI25-1

**DATALOOP™**

Level Indicator



LI55

**DATAVIEW™**

Level Controller

# EchoSonic® LU23-29

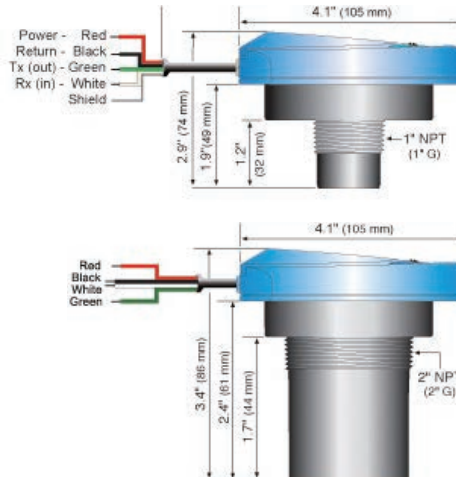
Ultrasonic Liquid Level Transmitter



## Specifications

<b>Range:</b>	LU27: 4" to 9.8' (10cm to 3m) LU23: 8" to 18.0' (20cm to 5.5m) LU28: 8" to 26.2' (20cm to 8m) LU29: 8" to 32.8' (20cm to 10m)
<b>Accuracy:</b>	± 0.2% of range
<b>Resolution:</b>	LU27: 0.019" (0.5mm) LU23: 0.039" (1mm) LU28/29: 0.079" (2mm)
<b>Dead band:</b>	LU27: 4" (10cm) LU23/28/29: 8" (20cm)
<b>Beam width:</b>	LU27: 2" (5cm) LU23/28/29: 3" (7.6cm)
<b>Configuration:</b>	WebCal® PC Windows® USB 2.0
<b>Memory:</b>	Non-volatile
<b>Supply voltage:</b>	24 VDC (loop)
<b>Consumption:</b>	0.5W
<b>Loop resistance:</b>	500 ohms @ 24 VDC
<b>Signal output:</b>	4-20 mA, two-wire
<b>Signal invert:</b>	4-20 mA or 20-4 mA
<b>Signal fail-safe:</b>	4 mA, 20 mA, 21 mA, 22 mA or hold last
<b>Process temp.:</b>	F: -4° to 140° C: -20° to 60°
<b>Temp. comp.:</b>	Automatic
<b>Ambient temp.:</b>	F: -31° to 140° C: -35° to 60°
<b>Pressure:</b>	MWP = 30 PSI (2 bar)
<b>Enclosure rating:</b>	Type 6P, encapsulated, corrosion resistant & submersible
<b>Encl. material:</b>	Polycarbonate
<b>Trans. material:</b>	PVDF
<b>Cable jacket mat:</b>	Polyurethane
<b>Cable type:</b>	4-conductor, shielded
<b>Cable length:</b>	10' (3m)
<b>Process mount:</b>	LU27: 1" NPT (1" G) LU23/28/29: 2" NPT (2" G)
<b>Mount gasket:</b>	Viton®
<b>Classification:</b>	General purpose
<b>Compliance:</b>	CE, RoHS
<b>Approvals:</b>	cFmus

## Dimensions



## Configuration



LI99-1001

The level sensor is configurable via our free WebCal PC software and Fob USB adapter. The sensors are offered with and without Fobs. Fobs are universal and can be used to configure any WebCal compatible product. Download your free copy of WebCal in English or Chinese.

## Fittings

	P/N	DESCRIPTION
	<b>LM52-1400</b>	2" NPT x 1" NPT, PVC, schedule 40
	<b>LM52-2400</b>	3" NPT x 2" NPT, PVC, schedule 40
	<b>LM52-2800</b>	3" NPT x 2" NPT, PVC, schedule 80
	<b>LM52-3800</b>	4" NPT x 2" NPT, PVC, schedule 80
	<b>LM52-1410</b>	2" socket x 1" NPT, PVC, schedule 40
	<b>LM52-2410</b>	3" socket x 2" NPT, PVC, schedule 40
	<b>LM52-3410</b>	4" socket x 2" NPT, PVC, schedule 40
	<b>LM52-2810</b>	3" socket x 2" NPT, PVC, schedule 80
	<b>LM52-3810</b>	4" socket x 2" NPT, PVC, schedule 80
	<b>LM52-2890</b>	2" NPT bulkhead fitting, PVC
	<b>LM50-1001-1</b>	1" NPT side mount bracket, PP
	<b>LM50-1001</b>	2" NPT side mount bracket, PP

## Ordering

	LU2	-		
<b>SENSOR RANGE</b>				
7	3m (9.8')			
3	5.5m (18.0')			
8	8m (26.2')			
9	10m (32.8')			
<b>PROCESS MOUNT (1)</b>				
0	NPT (US)			
1	G (Metric)			
<b>FOB USB ADAPTER (2)</b>				
0	Without Fob			
1	With Fob			

## NOTES

- 1) Install the level sensor using Flowline installation fittings or equivalents.
- 2) The level sensor is configured via our WebCal software and one LI99-1001 Fob USB adapter. The level sensor is offered with and without a Fob. Fobs are universal and can be used to configure any WebCal compatible product. WebCal is a free download from our website.