Application

LU27   **LU23/28/29**

Offered in a type 6P enclosure with cable interface, the general purpose ultrasonic level 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, ultrapure, sticky or dirty liquids, and is broadly selected for bulk storage, day tank, lift station and process tank level applications.

RoHS Compliant   CE   FM APPROVED

Features

☑ Offered in 4 measurement ranges from 9.8' (3m) to 32.8' (10m)

☑ DSP auto adaptive filters enable plug and play operation optimizing signal output filtering and obstacle recognition

☑ Submersible type 6P enclosure is ideal for sump and below grade installations

☑ 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 level sensors are often used to measure open channel water flow thats discharged from rivers, streams, creeks, lakes or ponds. Here an EchoSonic II 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, 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 wastewater treatment and environmental reporting.

Compatible Products

DataLoop™
Level Indicator

DataView™
Level Controller

Commander™
Multi-Tank Level Controller

DataPoint™
Level Controller

LI25   **LI55**   **LI90**   **LC52**

Specifications

Range: 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)

Accuracy: ± 0.2% of range

Resolution: LU27: 0.019" (0.5mm)
LU23: 0.039" (1mm)
LU28/29: 0.079" (2mm)

Dead band: LU27: 4" (10cm)
LU23/28/29: 8" (20cm)

Beam width: LU27: 2" (5cm)
LU23/28/29: 3" (7.6cm)

Configuration: WebCal® PC
Windows® USB 2.0

Memory: Non-volatile
Supply voltage: 24 VDC (loop)
Consumption: 0.5W
Loop resistance: 500 ohms @ 24 VDC
Signal output: 4-20 mA, two-wire
Signal invert: 4-20 mA or 20-4 mA
Signal fail-safe: 4 mA, 20 mA, 21 mA,
22 mA or hold last
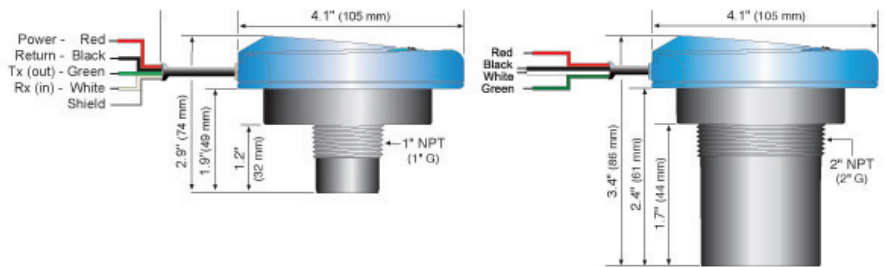
Process temp.: F: -4° to 140°
C: -20° to 60°

Temp. comp.: Automatic

Ambient temp.: F: -31° to 140°
C: -35° to 60°

Pressure: MWP = 30 PSI (2 bar)

Enclosure rating: Type 6P, encapsulated,
corrosion resistant &
submersible

Encl. material: Polycarbonate
Trans. material: PVDF
Cable jacket mat: Polyurethane
Cable type: 4-conductor, shielded
Cable length: 10' (3m)

Process mount: LU27: 1" NPT (1" G)
LU23/28/29: 2" NPT (2" G)

Mount gasket: Viton®
Classification: General purpose
Compliance: CE, RoHS
Approvals: cFMus

Dimensions

Power - Red
Return - Black
Tx (out) - Green
Rx (in) - White
Shield

4.1" (105 mm)
2.9" (74 mm)
1.9" (49 mm)
1.2" (32 mm)
1" NPT (1" G)

Red
Black
White
Green

4.1" (105 mm)
3.4" (86 mm)
2.4" (61 mm)
1.7" (44 mm)
2" NPT (2" G)

Configuration

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 at www.flowline.com/webcal.php.

LI99-1001

Fittings

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

P/N	Description
LM52-1400	2" NPT x 1" NPT (Sch. 40)
LM52-2400	3" NPT x 2" NPT (Sch. 40)
LM52-2800	3" NPT x 2" NPT (Sch. 80)
LM52-3800	4" NPT x 2" NPT (Sch. 80)
LM52-1410	2" Socket x 1" NPT (Sch. 40)
LM52-2410	3" Socket x 2" NPT (Sch. 40)
LM52-3410	4" Socket x 2" NPT (Sch. 40)
LM52-2810	3" Socket x 2" NPT (Sch. 80)
LM52-3810	4" Socket x 2" NPT (Sch. 80)
LM52-2890	2" NPT Bulkhead Fitting, PVC
LM50-1001-1	1" NPT Bracket, Polypropylene
LM50-1001	2" NPT Bracket, Polypropylene

Ordering

LU2☐-☐☐

Sensor range
7   3m (9.8')
3   5.5m (18.0')
8   8m (26.2')
9   10m (32.8')

Process mount (1)
0   NPT (US)
1   G (Metric)

Fob USB adapter (2)
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 at www.flowline.com/webcal.php.