

Application



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.



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
- ✓ 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 measureable filling capacity of the tank
- ✓ PVDF transducer and NEMA 4X polycarbonate enclosure for corrosive liquids
- ✓ Automatic temperature compensation for accurate measurement

Success



Ultrasonic level sensors are often used to measure open channel water flow that's 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



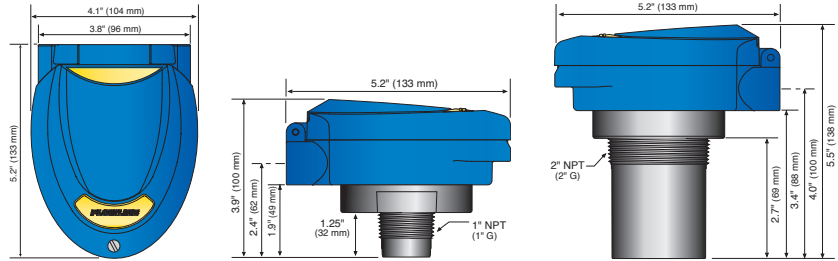
DataPoint™
Level Controller



Specifications

| | |
|-------------------|--|
| Range: | LU27: 4" to 9.8' (10cm to 3m) |
| | LU23: 8" to 18.0' (20cm to 5.5m) |
| | LU28: 8" to 24.6' (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: | NEMA 4X (IP65) |
| Encl. material: | Polycarbonate |
| Trans. material: | PVDF |
| Cable jacket mat: | Polyurethane |
| Cable type: | 4-conductor, shielded |
| 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



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, PP |
| | LM50-1001 | 2" NPT Bracket, PP |

Ordering

LU2 -

| | |
|----------------------------|--------------|
| Sensor range | |
| 7 | 3m (9.8') |
| 3 | 5.5m (18.0') |
| 8 | 8m (26.2') |
| 9 | 10m (32.8') |
| Process mount (1) | |
| 4 | NPT (US) |
| 5 | 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.