

# EchoSafe® XP88-89

Ultrasonic Liquid Level Transmitter



## Application

The explosion proof ultrasonic transmitter provides continuous level measurement up to 32.8' (10m) with a 4-20 mA signal output, and is configured via its integral push button display module. This non-contact liquid level sensor is well suited for corrosive, sticky or waste liquids, and is selected for bulk storage, day tank and process tank applications located within a classified area.



**SCIENCE GATE**  
Your Automation Partner



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## Features

- Explosion proof level transmitter for use in hazardous areas
- Offered in 2 measurement ranges from 24.6' (7.5m) to 32.8' (10m)
- Configuration is simple via integral push button display module
- Type 4X aluminum XP windowed enclosure with dual conduit ports
- LCD display indicates level in inches, centimeters or percent of span
- Narrow 3" beam width for applications with limited measurement space
- Rugged PVDF transducer and process mounting plug for corrosive liquids
- Automatic temperature compensation for accurate measurement

## Success

Refined chemicals are the building blocks of modern products from plastic to aspirin, paint to fertilizer and clothing to detergent. Worldwide there are 2900 petrochemical plants in 4300 locations that manufacture refined chemicals from petroleum and hydrocarbon based material. Chemical plants are hazardous environments that require explosion proof or intrinsically safe certified instrumentation. Here, an EchoSafe ultrasonic level transmitter is installed on the man-way cover of a below grade wastewater storage tank. Our patented digital signal processing features an industry leading 3" beam width that enables installation next to their 6" suction pipe.



## Compatible Products



300500

### FLUIDWELL™

Level Indicator

CSA approved explosion proof for hazardous environments, the loop powered level indicator displays engineering units connected in series with one 4-20 mA continuous level transmitter. The windowed enclosure is easily wall mounted.

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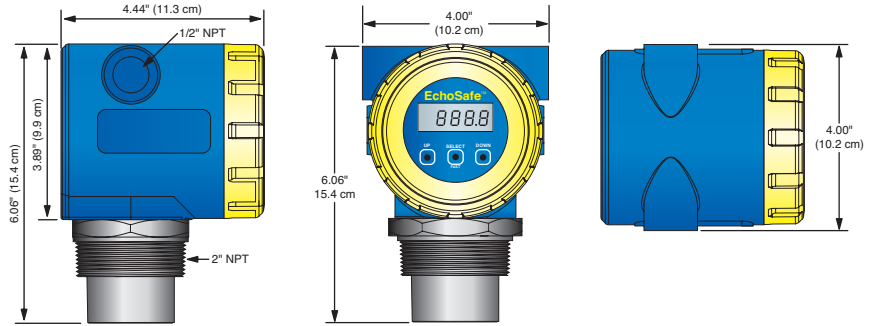
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## Specifications

|                          |   |
|--------------------------|---|
| <b>Range:</b>            | XP88: 8" to 26.2'<br>(20cm to 8m)<br>XP89: 8" to 32.8'<br>(20cm to 10m)           |
| <b>Accuracy:</b>         | ± 0.2% of range   |
| <b>Resolution:</b>       | 0.079" (2mm)  |
| <b>Dead band:</b>        | 8" (20cm)   |
| <b>Beam width:</b>       | 3" (7.6cm)  |
| <b>Configuration:</b>    | Push button   |
| <b>Memory:</b>           | Non-volatile  |
| <b>Display type:</b>     | LCD, 6-digit  |
| <b>Display units:</b>    | Inch, cm, percent,<br>feet or meter   |
| <b>Supply voltage:</b>   | 18-28 VDC (loop)  |
| <b>Loop resist.:</b>     | 250 Ohms max @ 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, 20mA, 21 mA, 22 mA<br>or hold last  |
| <b>Process temp.:</b>    | F: -4° to 140°<br>C: -20° to 60°  |
| <b>Temp. comp.:</b>      | Automatic   |
| <b>Ambient temp.:</b>    | F: -40° to 160°<br>C: -40° to 71°   |
| <b>Pressure:</b>         | MWP = 30 psi (2 bar)  |
| <b>Enclosure rating:</b> | Type 4X   |
| <b>Encl. material:</b>   | Aluminum  |
| <b>Window material:</b>  | Glass   |
| <b>Conduit entrance:</b> | Dual, 1/2" NPT  |
| <b>Trans. material:</b>  | PVDF  |
| <b>Process mount:</b>    | 2" NPT  |
| <b>Mount gasket:</b>     | Viton®  |
| <b>Classification:</b>   | Explosion proof   |
| <b>Compliance:</b>       | CE, RoHS  |
| <b>Approvals:</b>        | FM: Class I, Div I<br>Groups A, B, C, D<br>Class II/III, Div I,<br>Groups E, F, G |

## Dimensions



## Fittings

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

|  | P/N              | DESCRIPTION                          |
|--|------------------|--------------------------------------|
|  | <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>LM52-2410</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, PVC                 |
|  | <b>LM52-2850</b> | 2" ANSI x 2" NPT, CPVC, schedule 80  |
|  | <b>LM50-1001</b> | 2" NPT side mount bracket, PP        |

## Ordering

XP8    -0

### SENSOR RANGE (1) (2)

|          |             |
|----------|-------------|
| <b>8</b> | 8m (26.2')  |
| <b>9</b> | 10m (32.8') |

## NOTES

- 1) Install the level sensor using Flowline installation fittings or equivalents.
- 2) For explosion proof level indication, package the level sensor with the DataKeep indicator.