

OWLINE EchoSpan® & EchoSwitch® **Ultrasonic Liquid Level Sensors**





Overview



The, EchoSpan and EchoSwitch are innovative ultrasonic liquid level sensor families that replace float, conductance and pressure sensors that fail due to contact with dirty, sticky and scaling media in small, medium and large capacity tanks. Applied in chemical, water and wastewater applications, these general purpose non-contact sensors are available with single and multi-function capabilities including continuous level measurement, switching and control.

For input to a PLC or other controller, measurement outputs include current, voltage and frequency. Models with three relays can be configured for level alarms and/or standalone level control such as automatic fill or empty functions using the embedded level controller. Units are easily configured using built-in pushbuttons.

EchoSpan & EchoSwitch Ultrasonic Liquid Level Sensors General Specifications								
Model	LU80-5101	<u>LU81-5101</u>	LU83-5101	<u>LU84-5101</u>	LU77-5004	LU74-5004	<u>LU78-5004</u>	
Price	\$800.00	\$950.00	\$975.00	\$1,145.00	\$1,035.00	\$1,100.00	\$1,165.00	
Туре	EchoSpan				EchoSwitch			
Class	General Purpose (non-hazardous)							
Range	4in to 9.8 ft (10cm to 3m)	8in to 18ft (20cm to 5.5 m)	8in to 26.2 ft (20cm to 8m)	12in to 32.8 ft (30cm to 10m)	4in to 9.8 ft (10cm to 3m)	8in to 18 ft (20cm to 5.5 m)	8in to 26.2 ft (20cm to 8m)	
Output Types	4-20 mA, two-wire				(1) SPDT relay, (2) SPST relays 4-20 mA, two-wire			
Install	Vertical, top of tank							
Mounting	1in MNPT 2in MNPT			1in MNPT	2in MNPT			
Relays	No relay				(1) SPDT relay, (2) SPST relays			
Configuration	Pushbutton / LCD							
Ambient Temperature	-40° to 160°F (-40° to 71°C)							
Process Temperature	-4° to 140°F (-20° to 60°C)							
Pressure	30 PSI (2 bar) MAX							

Pushbutton Configuration

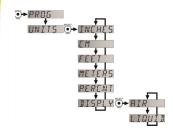
With no software or PC required EchoSpan, and EchoSwitch ultrasonic level sensors are easily configured using integral pushbuttons and LCD digital display. Configuration parameters are organized in a simple menu structure so that parameter values are easily accessed and set or changed as needed. Parameters are stored in non-volatile memory so the setting values are not lost when the sensor is powered down, allowing configuration before installation in the field.



Click on the thumbnail or go to https://www.automationdirect.com/ VID-LE-0002 for a short video introduction to Flowline EchoSpan, EchoSwitch and PodView product

Example - EchoSpan Display and Menu







OWLINE EchoSpan® LU Series Ultrasonic



Level Transmitters

Overview

The EchoSpan LU series ultrasonic level transmitters provide continuous level measurement up to 32.8 ft (10m) with a 4-20 mA signal output, and is configured via its integral pushbutton display module. 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.





Part No. LU81-/83/84-5101

Features

- 4 measurement ranges from 9.8 ft (3m) to 32.8 ft (10m)
- Configuration is simple via integral pushbutton display module
- LCD display indicates level in inches, centimeters and percentages
- Narrow 2 inch or 3 inch beam width for applications with limited measurement space
- Fail-safe intelligence and diagnostic feedback for simple troubleshooting
- PVDF transducer and NEMA 4X / IP65 polycarbonate enclosure for corrosive liquids
- Automatic temperature compensation for accurate measurement
- 2-year warranty







Part NO. 2000-3101	Fait No. 2001-703/04-3101							
	LU80 Series Technical Specifications							
Model	<u>LU80-5101</u>	<u>LU81-5101</u>	<u>LU83-5101</u>	<u>LU84-5101</u>				
Price	\$800.00	\$950.00	\$975.00	\$1,145.00				
Range	4in to 9.8 ft (10cm to 3m)	8in to 18ft (20cm to 5.5 m)	8in to 26.2 ft (20cm to 8m)	12in to 32.8 ft (30cm to 10m)				
Accuracy	± 0.2% of range							
Resolution	0.019 in (0.5 mm) 0.039 in (1mm) 0.078 in (2							
Sensing Dead Band*	4in (10cm)	8in (20cm) 12in (30						
Beam Width	2in (5.1 cm) 3in (7.6 cm)							
Configuration	Pushbutton / LCD							
Memory	Non-volatile							
Display Type	LCD, 6-digit							
Display Units	Inch, cm and percent							
Supply Voltage	12 - 28 VDC**							
Loop Resistance	500Ω @ 24VDC							
Signal Output	4-20 mA, two-wire							
Signal Invert	4-20 mA or 20-4 mA							
Signal Fail-Safe	4mA, 20mA, 21mA, 22mA or hold last							
Terminal Block	26-12 AWG (tighten torque, 0.5 Nm)							
Process Temperature	-4° to 140°F (-20° to 60°C)							
Temp. Compensation	Automatic							
Ambient Temperature	-40° to 160°F (-40° to 71°C)							
Pressure	30 PSI (2 bar) MAX							
Enclosure Rating	NEMA Type 4X (IP65)							
Enclosure Material	Polycarbonate							
Enclosure Hardware	Brass & stainless steel							
Enclosure Vent	Water tight membrane							
Conduit Entrance	Dual, 1/2 in FNPT							
Transducer Material	Polyvinylidene Fluoride							
Process Mount	1in MNPT (See accessories for installation fittings) 2in MNPT (See accessories for installation fittings)							
Mount Gasket	Viton (included, replacement part number 200128) Viton (included, replacement part number 200129)							
Weight (lbs)	1.5							
Classification	General purpose							
Compliance	CE, RoHS							
* Dood hourd in the mainiments	listance the sensor must be mounted abo	ve the may limited level						

^{*} Dead band is the minimum distance the sensor must be mounted above the max liquid level.

^{**} If supply exceeds 28 VDC damage to the transmitter may occur.

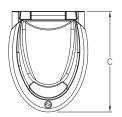


LOWLINE EchoSpan® LU Series Ultrasonic **Level Transmitters**

Dimensions

inches [mm]

LU80 Series

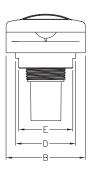


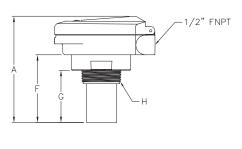
Configuration

The transmitter is configured using the three buttons (UP, DOWN and SELECT) and the transmitter's LCD on the transmitters face.

More information about configuring the LU series sensors can be found at www.AutomationDirect.com







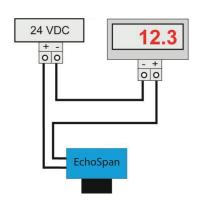
See our website www.AutomationDirect.com for complete Engineering drawings.

Dimensions	А	В	С	D	Ε	F	G	Н
LU80	3.90 [99.1]	4.10 [104.1]	5.20 [132.1]	3.10 [78.8]	2.80 [71.1]	1.90 [48.3]	1.25 [31.8]	1 in MNPT
LU81, 83 & 84	5.50 [139.6]	4.10 104.1]	5.20 [132.1]	3.10 [78.8]	2.80 [71.1]	3.40 [86.4]	2.70 [68.6]	2 in MNPT

When installing the 1 inch NPT level sensors care should be used to mechanically isolate the sensor housing from the tank. This can easily be done by using any of the Flowline mounting accessories which are designed to provide the isolation needed.

Wiring

Typical Loop Powered Display



Typical Generic PLC

