EchoPro® LR21

Pulse Radar Liquid Level Transmitter

FLOWLINE™ LEVEL BEST

Application

The intrinsically safe 26 GHz. pulse radar transmitter provides continuous level measurement up to 65.6' (20m) with a 4-20 mA analog and HART digital signal output, and is configured via its integral push button display module or HART communicator. The non-contact liquid level sensor is intended for chemical storage or process applications in above or below grade tanks of any material. Select this sensor for challenging process conditions with corrosive media, light surface foam or agitation, higher temperature or pressure, condensation or vapor, and installation in a flange fitting. Typical applications include bulk storage and process tanks.



LR21-5321-30-00
Shown

Features

- 316L antenna with PTFE inner shield for corrosive media
- Configuration via push button display or HART communicator
- 26 GHz. pulse radar is unaffected by vapor or condensation
- 12" (30cm) dead band enables utilization of the entire tank
- LCD displays level in feet or meters with percent of span bar
- Optional display mode indicates the echo signal return curve
- Fail-safe diagnostics with selectable signal fail-safe outputs
- Recognition, storage and rejection of false echo signal returns
- IP67 stainless enclosure with polycarbonate display window

PTFE Shield

Sufuric and nitric acids are strong mineral acids that are widely used in industrial and commercial applications. Highly vaporous and corrosive, they're difficult to measure and harsh on equipment. The non-contact LR21 is an excellent choice for this media, as its 26 GHz. pulse radar measurement is unaffected by extreme vapor, and the antenna's PTFE inner shield, provides reliable corrosion resistance.





Push Button
Display Module

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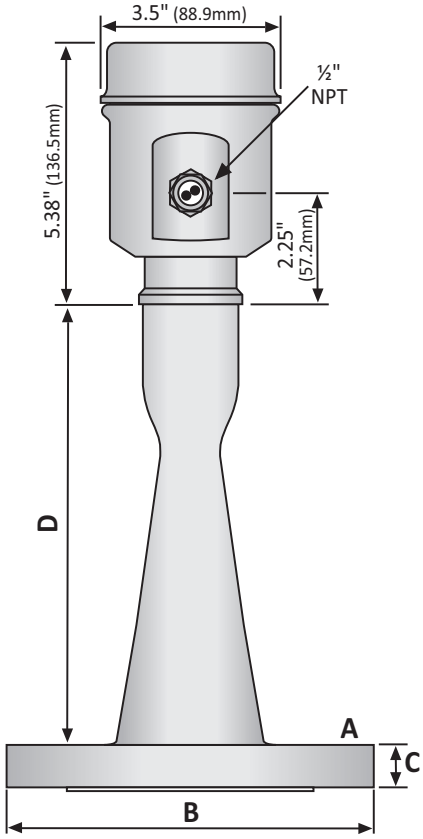
Specifications

Range:	12” to 65.6’ (30cm to 20m)
Frequency:	26 GHz.
Accuracy:	± 3mm
Dead band:	12” (30cm)
Beam angle:	-30: 12°
	-40: 8°
Configuration:	Push button, HART 7
Memory:	Non-volatile
Display type:	LCD, dot matrix
Display units:	Feet and meters
Display bar:	Percent of span
Display graph:	Echo signal curve
Supply voltage:	21.6 to 26.4 VDC
Max. consumption:	22.5 mA
Signal output:	4-20 mA, two-wire, HART 7
Signal invert:	4-20 mA, 20-4 mA
Signal fail-safe:	3.9 mA, 20.5 mA, 22 mA
Process temp.:	F: -40° to 302°
	C: -40° to 150°
Temp. comp.:	Automatic
Storage temp.:	F: -40° to 176°
	C: -40° to 80°
Pressure:	-14.5 to 72 psi (-1 to 5 bar)
Enclosure rating:	IP67
Encl. material:	316L stainless steel w/silicone gasket
Encl. window mat.:	Polycarbonate
Conduit entrance:	(1) 1/2” NPT connector
Antenna material:	316L w/PTFE inner shield
Process mount:	- 30: 3” flange (ANSI)
	- 40: 4” flange (ANSI)
Classification:	Intrinsically safe
Approvals:	ATEX Ⓔ IIG Ex ia II C T6...T3 Ga
	IEC Ex ia IIC T6...T3 Ga
	CSA Class I, Div 1, Groups A, B, C & D; Class II, Div 1, Groups E, F & G; (T6... T3); Class I Zone 0 AEx ia IIC (T6... T3) Ga & Zone 20 AEx ia IIIC (T76°C to T146°C) Da; Ex ia IIC (T6...T3) Ga & Ex ia IIIC (T76°C to T146°C) Ga
Certification:	FCC
Compliance:	CE, CRN, RoHS

Dimensions

FLANGE / ANTENNA

P/N	-30	-40
A	3” ANSI	4” ANSI
B	7.5” (190.5mm)	9” (228.6mm)
C	0.88” (22.3mm)	0.88” (22.3mm)
D	9” (228.6mm)	10.5” (266.7mm)





Echo Signal Return Curve

Level Indicator



LI24-1001

DATALOOP™

Intrinsically Safe Level Indicator

UL approved intrinsically safe, the loop powered level indicator displays engineering units connected in series with one 4-20 mA level transmitter. Select the LI24-1001 level indicator for hazardous applications with an intrinsically safe sensor. For field mount installation, add a single or two indicator NEMA box.

Ordering

LR21-5321- [ ] **0-00**

FLANGE SIZE (1)

3 3” ANSI

4 4” ANSI

NOTES

1) If you want help in selecting a sensor for your application, please go to our website and submit a Level Questionnaire. An engineer will review your requirements and suggest a product solution via email.