

## Product Features

- *Simple push-button calibration*
- *Output 2-wire 4-20 mA / 20-4 mA*
- *Built-in temperature compensation*
- *Compact size for easy mounting*
- *Optional 4<sup>1</sup>/<sub>2</sub>-digit LCD display available*
- *HART Communication available*

## Description

The new LTU20 series 2-wire ultrasonic transducers provide non-contact level measurement up to 15 m (50 ft) and are ideally suited for challenging corrosive, coating or waste liquids. Featuring very high efficiency narrow beams and wide frequency bandwidth, they work in many conditions over wide temperature range. LTU20 series transducers provide a self-cleaning operation, so their faces eliminate almost any buildup and condensation. The ultrasonic probes adapt to most environmental conditions as their power and receiver sensitivity adjust automatically to any distance and reflecting object thus keeping the same echo amplitude over the operating range.

LTU20's can be calibrated, in process or outside process, with simple push-button calibration. Optional 3<sup>1</sup>/<sub>2</sub>-digit LCD display is available.

Standard construction is PVC (Aluminum optional) for housing with PVC mounting fitting. For severe applications, other materials, such as Teflon, are available for the mounting fitting (and transducer).

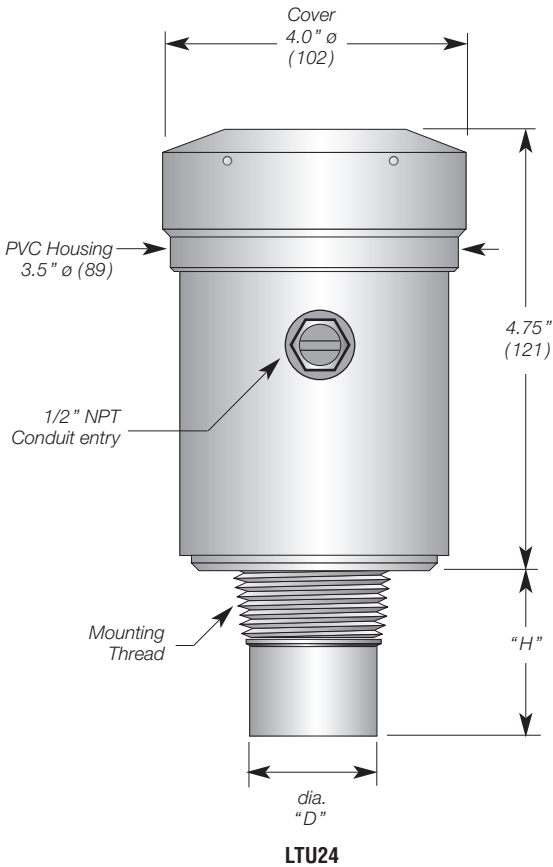
## Applications

- *Food and beverages*
- *Water / Wastewater*
- *Chemicals*
- *Oils*
- *Oils Metal plating*



# LTU20-24 SERIES

2-wire Loop Powered Ultrasonic Level Transmitter



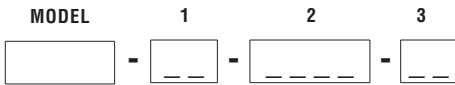
<b>Supply Voltage :</b>	12 to 28 VDC
<b>Power Consumption :</b>	0.025 A max @ 24VDC
<b>Output :</b>	4-20 mA
<b>Maximum Load :</b>	(Vsupply - 11V) / 23 mA
<b>Output Resolution :</b>	0.006 mA
<b>Accuracy :</b>	$\pm 0.1\%$ of max. span under controlled conditions $\pm 0.25\%$ of max. span typically in the field
<b>Beam Angle :</b>	10 to 12 degree at -3dB
<b>Loss of Echo :</b>	Hold for 30 seconds, 3.5 mA or 22 mA.
<b>Temperature Compensation :</b>	Integrated in transducer
<b>Calibration :</b>	Push button
<b>Conduit Entry :</b>	1/2" NPTF Conduit connection
<b>Enclosure :</b>	PVC-94V0, Aluminum
<b>Sensor :</b>	PVC
<b>Ingress Protection :</b>	NEMA 4X (IP65)
<b>Operating Temperature :</b>	-40 to 60°C
<b>Maximum Pressure :</b>	2 bar (29 PSI)
<b>Approvals :</b>	Intrinsically Safe approvals pending
<b>Installation Category :</b>	Class II

**Optional Loop Powered Display :**

<b>Display :</b>	4 1/2 Digit LCD 1/2" high
<b>Voltage Drop :</b>	0.95V @ 20 mA
<b>Accuracy :</b>	Reading $\pm 0.5\%$
<b>Humidity :</b>	0-95 % Non-condensing
<b>Range :</b>	3.5 mA to 22 mA 22 mA and above = LOE (Loss Of Echo)
<b>Maximum current:</b>	150 mA

Model	Operating Frequency	Dimension "H"	Dimension "D"
LTU20	52 KHz	2.25" (57mm)	1.8" (46mm)
LTU21	70 KHz	2.25" (57mm)	1.8" (46mm)
LTU22	80 KHz	2.25" (57mm)	1.8" (46mm)
LTU23	81 KHz	2.1" (53mm)	1.5" (38mm)
LTU24	148 KHz	2.0" (51 mm)	1.1" (28mm)

## Custom Builder



Model	Range	Resolution
LTU20	0.9 - 50 ft (0.27 - 15.2m)	0.23" (5.7mm)
LTU21	0.8 - 30 ft (0.24 - 9.1 m)	0.13" (3.4mm)
LTU22	0.7 - 20 ft (0.21 - 6.1 m)	0.088" (2.2mm)
LTU23	0.6 - 16 ft (0.18 - 4.9m)	0.07" (1.8mm)
LTU24	0.4 - 9 ft (0.12 - 2.7m)	0.04" (0.98mm)

BOX1 CODE	Supply Voltage
LP	12 to 28 VDC 0.025 A max. @ 24VDC

	BOX2 CODE	Enclosure Material	Mounting Thread	Fitting Material
LTU20	P20P	PVC	2" NPT	PVC
	A20P	Aluminum	2" NPT	PVC
LTU21	P20P	PVC	2" NPT	PVC
	A20P	Aluminum	2" NPT	PVC
LTU22	P20P	PVC	2" NPT	PVC
	A20P	Aluminum	2" NPT	PVC
LTU23	P15P	PVC	1.5" NPT	PVC
	A15P	Aluminum	1.5" NPT	PVC
LTU24	P10P	PVC	1" NPT	PVC
	A10P	Aluminum	1" NPT	PVC

Note: Std. material for fitting/sensor is PVC. Other materials available, consult factory. Ex.: P20T = fitting/sensor in Teflon

BOX3 CODE	Options
0	None
D1	Head Mounted LCD Display
N6	NEMA 6 (IP68)
H	HART Communication