DS/LST400_EN Rev.A

LST400
Ultrasonic Level / Open Channel Flow Transmitter

The LST400 is an Ultrasonic Level Transmitter capable of measuring liquid level or solid applications up to 50 ft. / 15 meters or flow rates in all types of open channel flow applications. The transmitter has a single 4-20 mADC analog output with HART 7 and five (5) relay outputs. A transducer is fitted to the top of a silo or tank, facing down towards the material being measured.

The transmitter's microprocessor simultaneously fires an electronic pulse to the transducer and starts a timer. The transducer converts this electronic pulse to an acoustic pulse, which is directed toward the surface of the material being measured. When the acoustic pulse contacts the surface of the material, energy is reflected back to the transducer, which converts this reflected energy back to an electronic pulse. This pulse is sent back to the microprocessor, which stops the timer and determines the "time of flight" of the signal. By combining the speed of sound through air and the "time of flight" of the pulse, the microprocessor accurately determines the level of the product. Powerful software removes false echoes from the signal and electronic filters remove ambient noise.

SPECIFICATIONS

Enclosure	IP65, Glass Loaded Polycarbonate
Power Supply	110 VAC or 240 VAC; ±15% 50/60 Hz, 5VA Standard 20 - 30VDC, 4VA
Dimensions	7.56×9.06×3.7 inches / 192×230×94 mm
Weight	2.11 lbs / 1 Kg
Temperature Range	-4 to 149°F /-20 to 65°C (Environment & Process)
Output	Analog: 4-20 mADC Isolated (max impedance 750 ohms) with 16 bit resolution with HART 7 Relay: 5 ea. SPDT, 8 amp, 240 VAC; Fully Configurable
Range	50 ft. / 15 m
Accuracy	0.25% full span with temperature compensation
Local Indication	128 x 64 dot graphic display
Configuration	5 touch button keys
Blanking Distance	0.5m
Rate of Change	0.03 to 65 ft / minute; 0.01 to 20 m / minute
Sensor	IP68 suitable for potable and waste water applications. Glass Loaded Polyester (housing), Glass Reinforced Epoxy (acoustic window)
Sensor specifications	Beam Angle: 7° , Operating Frequency 41kHz
Classification	General Purpose
CE Mark	2006/95/EC(IEC 61010-1) 2004/108/EC(IEC 61326-3 for measurement devices)

FEATURES

- Range to 50 ft. / 15 m
- Isolated 4 - 20 mA Output with HART 7
- Graphic LCD Display
- Integrated Analytical Software
- 5 Configurable Relays / 8 Amp
- Configurable as Open Channel Flow Meter
- Pump Cycling and Pump Monitoring
- Remote Totalizer Count Outputs
- Automatic Variable Gain & Power for Difficult Applications

APPLICATIONS

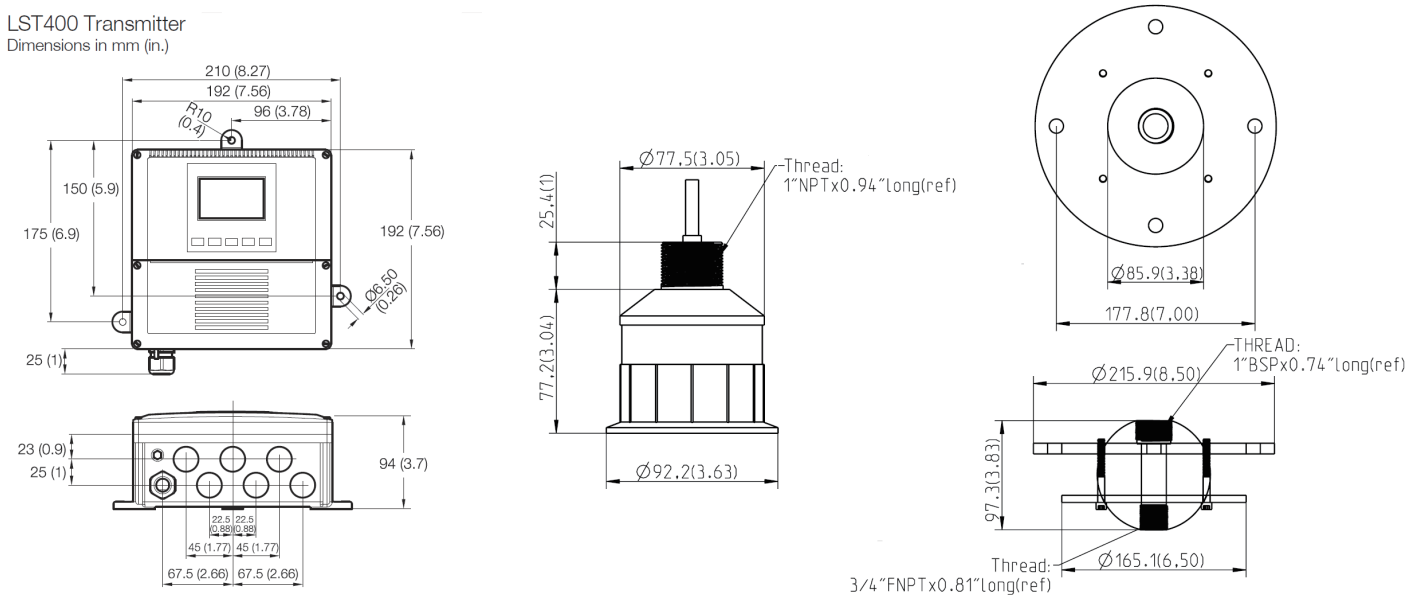
- Various Liquids Including Water Storage Tanks
- Moderate Range Solids Such as Loading & Bagging Hoppers
- Mineral Oil
- Open Channel Flow Measurement in the following configurations
  - V-Notch
  - Flumes
  - Weirs

OPTIONS

- Transducers for Liquids & Solids
- Cable length of 10m, 20m, 30m 40m or 50m
- Aiming Kit

Power and productivity
for a better world™

DIMENSIONS



DS/LST400-EN Rev.A 05.2013

SPECIFICATIONS

Ultrasonic Level Transmitter LST400

Ordering information

	LST400	X	X	X	X	X	X	X
Explosion Protection Certification General Purpose		Y0						
Sensor Type and Range Standard transducer, 15 m range Foam face transducer, 15 m range, for solids No transducer			S15 F15 Y00					
Process Connection Type 1 in. NPT, 0.94 in. long				N1				
Housing Material / Cable Glands Polycarbonate / 2 pcs. metric, M20 x 1.5, cable glands mounted					P3			
Power Supply 115...230 V AC or 24 V DC						A1		
Outout Signal HART digital communication and 4...20 mA							H1	

Additional Options	
Signal Cable Length	
Without signal cable	SC0
10 m (approx. 30 ft)	SC2
20 m (approx. 66 ft)	SC4
30 m (approx. 98 ft)	SC6
40 m (approx. 131 ft)	SC8
50 m (approx. 164 ft)	SCA
Sensor Options	
Aiming Kit	SEK

HART® COMMUNICATION PROTOCOL

CE

For more information please contact:

ABB Engineering (Shanghai) Ltd
No.5, Lane 369, Chuangye Rd.,
Pudong New District,
Shanghai 201319, P. R. China
Tel: +86 21 6105 6666
Fax: +86 21 6105 6677
www.abb.com/level

Power and productivity for a better world™

ABB