TEKTROL
Technology Solutions

TEK-SOUND 4200B

Two Wire Ultrasonic Level Transmitter With Display

LEVEL

www.tek-trol.com

Introduction

The Tek-Sound 4200B Two Wire Ultrasonic Level Transmitter With Display utilizes enhanced ultrasonic technology to measure liquid level in various applications with superior accuracy and reliability.

Measuring Principle

Ultrasonic pulses generated by the transducer (antenna) system travel at the speed of sound toward the target medium. These pulses are reflected by the surface of the medium and received by the transducer system again. Due to the fact that the measurable time lapse between pulse emission and reception by antenna is proportional to the distance between antenna and highest level of target medium, the principle of ultrasonic level instrument can be illustrated as the following equation:
S = C x T/2, S: distance, C: velocity of sound, T: time lapse.

Features

- The advanced microprocessor and unique Echo Discovery echo processing technology, the ultrasonic level instruments can be used under various complex conditions.
- The false echo storage function assures that the instrument can detect the right echo even with the presence of multiple false echoes and present accurate measurement results eventually.
- The built-in temperature sensor inside the transducer can complete temperature compensation for measurement results.
- Ultrasonic transducer has adopted patented sonic matching technology, which helps it strengthen its emission power, enhance the signal intensity and eventually achieve accurate measurement.

Applications

- Water and Wastewater industry
- Pharmaceutical industry
- Chemical industry
- Beverage industry

Specifications

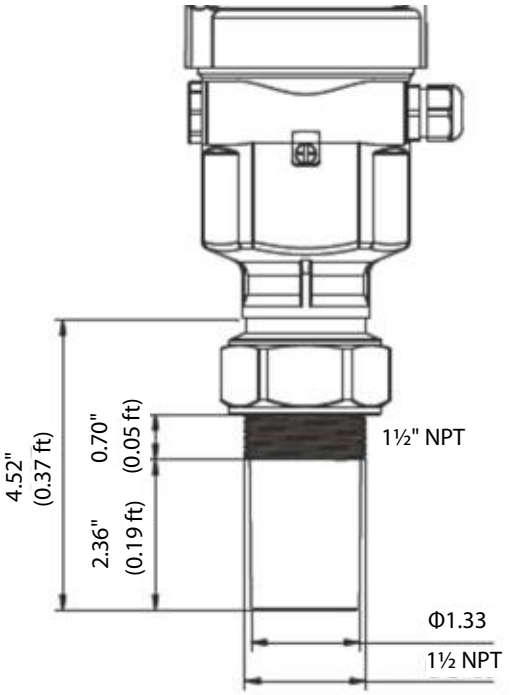
We offer two different types of product. The 4200B-1and the 4200B-2, measuring differential level as well as respective level measurement.

Model	4200B-1	4200B-2
Measuring Ranges	Liquid: 0.82 ft to 13.12 ft	Liquid: 1.31 ft to 26.24 ft
Process Connection	1½" NPT	2" NPT
Material for Transducer Housing	PTFE, PU/PC	PTFE, PU/PC
Process Temperature	-40°F to 160°F (-40°C to 71°C)	-40°F to 160°F (-40°C to 71°C)
Process Pressure	-0.02 to 0.1MPa	-0.02 to 0.1MPa
Signal Output	4 to 20 mA/HART two-wire	4 to 20 mA/HART two-wire
Power	2-Wire (24VDC)	2-Wire (24VDC)
Protection Level	IP65	IP65
Housing	Aluminum	Aluminum
Cable Entry	2½" FNPT	2½" FNPT

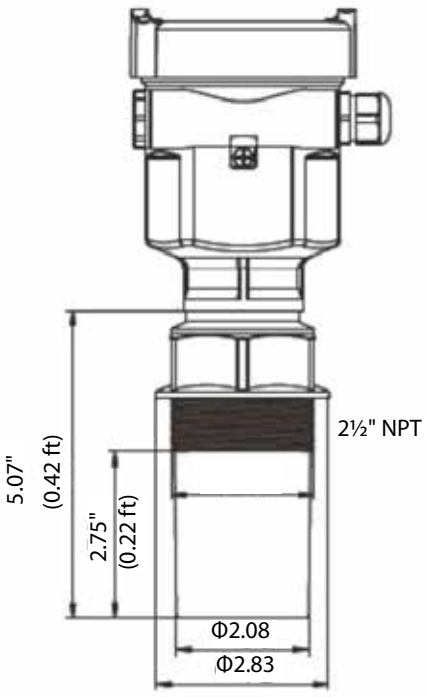
Range	4200B-1:6" to 12", 4200B-2: 12:"to 25"
Accuracy	±0.25% of range
Resolution	4200B-1:0.019", 4200B-2: 0.039"
Blanking Zone	4200B: 6" (10cm), 4200B-2: 12" (20cm)
Beam width	4200B-1:2" (5cm), 4200B-2:3" (7.6cm)
Configuration	Push button
Memory	Non-volatile
Display type	LCD, 6-digit
Display units	Inch, cm, feet, meters, and percentage
Supply voltage	12-28VDC
Loop resist	500Ohms @ 24VDC
Signal invert	4-20 mA, 20-4 mA
Temp. comp	Automatic
Ambient temp	F: -40°F to 160°F (-40°C to 71°C)
Pressure	30 psi (2bar)
Enclosure rating	NEMA 4X (IP65)
Encl. material	Power Coated Aluminum
Conduit entrance	two, 1/2" NPT
Trans. material	PTFE
Process mount	4200B-1: 1.5" NPT, 4200B-2: 2" NPT
Mount gasket	Viton*
Classification	General purpose

Dimensional Drawing

Tek-Sound 4200B-1



Tek-Sound 4200B-2



Popular Model Chart

4200B-P-B-B-A-N-A-1	10" to 13" range, 1.5" NPT Process connector
4200B-P-B-B-A-N-A-2	16" to 25" range, 2" NPT Process connector

Customer Service and Support

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