

Universal Sonic™ Series

Ultrasonic Level Transmitter



Two-Wire Loop Powered Unit

- 30 foot range
- Explosion Proof Approvals

30 second set up

- with or without power.

Automatic Profiling - *i.e. tank mapping*

- No user adjustments

2-Inch Nozzle

- Recessed mounting allows measurement to top of tank

Bench Configuration

- Eliminates need to move material or targets for calibration

Now with a 2 Year Warranty!

Affordable, Two-Wire, Level Transmitter with the performance of premium, line-powered transmitters!

User Friendly

Set the measurement range directly in inches (or centimeters), with or without power, in 30 seconds. No detailed procedures, no cryptic codes, no excuses.

Automatic Profiling

Eliminates interfering signals from agitators and other obstructions in the vessel without the need to empty the vessel.

2-inch Nozzle Mounting

Compact transducer design allows mounting in any 2-inch nozzle. It also allows for a recessed nozzle mounting, and enables the user to measure from the very top of the tank.

Ideal in Explosion-hazard Areas

Configure the unit at the vessel or in the shop. Can be completely set up before placing the unit in a hazardous area.

Compatibility with the future

Over a half million field instruments supplied by over 70 manufacturers to process plants all over the world use the HART protocol. The Universal Sonic transmitter is also compatible with Allen Bradley PLCs through their Smart Transmitter Interface products.

Continuous Level Measurement



Continuous Level Measurement

Universal Sonic™ 505-2400 Series

Specifications

Input Power

19 Vdc @ 4 mA minimum
30 Vdc maximum

Output Signal

4-20 mAdc (isolated)
HART® protocol

Output Mode

Height (level) (standard)
Distance (field-selectable)

Range

1 to 30 feet (.3 to 9 m)

Near/Dead Zone

12 inches (304 mm)

Minimum Span

3 inches (76 mm)

Maximum Span

30 feet (9 m) (405-2400 electronic unit)
99.9 inches (2.5 m) (405-2100 electronic unit)

Repeatability

0.1 (3 mm)

Resolution

0.125 inch (3mm)

Response Time

approximately two seconds

Accuracy

± 0.5% of full scale range

Ambient Temperature Limits

-40°F to 185°F (-40°C to 85°C)

Temperature Compensation

built-in, automatic

Failsafe

22 mA

Calibration

Zero and span range switches with inch or cm settings;
HART® protocol

Auto Profiling™

standard

Maximum Loop Resistance

575 ohms

Sensing Element Connection

2-inch NPT fitting, CPVC
Flange mounting (optional on some systems)

Frequency

50 kHz

Beam Angle

Conical, 12°, 3dB down

Electrical Enclosure

NEMA 4X (IP-65) explosion proof, powder coated, cast aluminum (standard)

Approvals

FM, CSA, and CE Mark for explosionproof installations in indoor and outdoor hazardous locations in Class I, Groups A, B, C, D; Groups E, F, and G; Class III using enclosure type 1, 4, 4X, 12, and 13.

Model Number of Electronics

405 - 2 **4** 0 0 - **F** 0 **9** Electronic Unit

Denotes default value

Unit Type

1 = High Resolution
4 = Standard Resolution

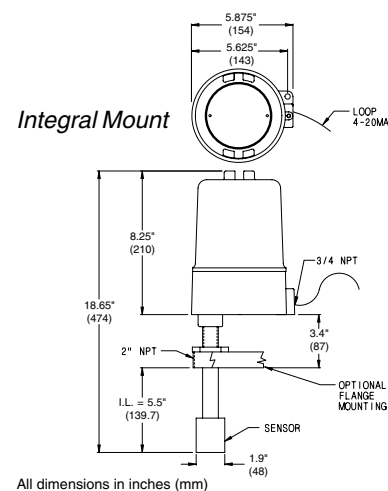
Approvals

0 = No Approvals
F = FM and CSA Approved

Housing options

8 = Integral Nema 4X Explosionproof with Drexelcote
9 = Integral Nema 4X Explosionproof
F = Integral Nema 4X Explosionproof with Viewport Dome and Digital Meter

Dimensions



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