



Universal Sonic™ Series

Line Powered, Ultrasonic,
Level Transmitter



The AMETEK Drexelbrook Universal Sonic, Continuous Level, System gives you the superior performance of higher priced competitive units.

2 & 4 Inch Nozzle Mountings Available

Compact transducer design allows mounting in any 2 or 4 inch nozzle (Model Dependant). It also allows for a recessed nozzle mounting, and enables the user to measure from the very top of the tank.

Calibration in less than 90 seconds

This microprocessor based unit is calibrated in less than 90 seconds with virtually no training needed. The two-step zero and span calibration is set directly in inches and allows you to verify the calibration quickly. The simple rotary switch settings require no change in process level.

Ideal in Explosion-Hazard Areas

Now you can calibrate without power. The explosion-proof housing can be opened for calibration without power to the unit, eliminating the need to sniff the area. Or, you can calibrate in the shop, before the unit is in the hazardous area.

Automatic Profiling

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

Integral or Remote

versions are available with standard explosion-proof and NEMA 4X housings.

Calibrates in under 90 seconds

Bench Calibration

2 Inch nozzle mounting

Measures to the top of tank

Automatic Profiling (ie. tank mapping)

Guaranteed Performance Available

Continuous Level Measurement



Continuous Level Measurement

Universal Sonic™ 505-1XXX Series

Specifications

Sensor

Mounting:

2" NPT fitting, CPVC std.
flange mounts available

Sensor Material:

CPVC std., PFA & SS optional.
Other materials, consult factory

Frequency:

50 KHz

Beam Angle:

Conical, 12 deg., typical, 3dB down

Near/Dead Zone*:

12 Inches

Temperature Range:

-40 o to 160 o F (-40 o to 70 o C) for CPVC
-40 o to 200 o F (-40 o to 93 o C) for PFA
For higher temperatures, consult factory
For temperatures below -20 o F (-30 o C), consult factory

Temperature Comp.:

Built-in, automatic

Pressure:

-10 to +50 PSIG (-1 to 3 BAR)

Electronics

Full scale operating range:

1-31 feet (.3-9m)
505-5100 Series, 1-80 feet (.3-24.4m)
For longer range, consult factory

Minimum Span:

10% of max. range

Repeatability:

0.10 inch (3mm)

Resolution:

0.10 inch (3mm)

Accuracy:**

+/- 0.5% of F.S. range

Ambient Temperature:***

-40 o F to 160 o F (-40 o C to 70 o C)

Calibration:

Zero & Span range switches, ranges are set directly in inches

Input Power:

120 or 240Vac, 50/60 Hz, or 24Vdc

Output Signal:

4-20 mA dc (isolated) Source or sink, field selectable

Signal Damping:

0, 15 or 45 seconds (field selectable)

Output Mode:

Height (level) std. or distance, field selectable

Max. Loop Resistance:

1000 OHMS

Response Time:

2 seconds (approx.)

Electrical Enclosure:

NEMA 4X (IP-65) cast aluminum

Approvals:





FM approved explosionproof CSA approved explosionproof

* Sensor can be recessed to measure from the top of the tank.

** Accuracy: Includes linearity, hysteresis, repeatability, resolution, and temperature effect at reference conditions of atmospheric pressure and still air above the liquid surface.

*** Unit will operate above 160 o F (70 o C) with reduced component life.

Model Numbering

405 - 11  0 - 0   -  0

Power

0 = 120 Vac
1 = 24 Vdc
3 = 240 Vac

Fail Safe

0 = Level
1 = Distance

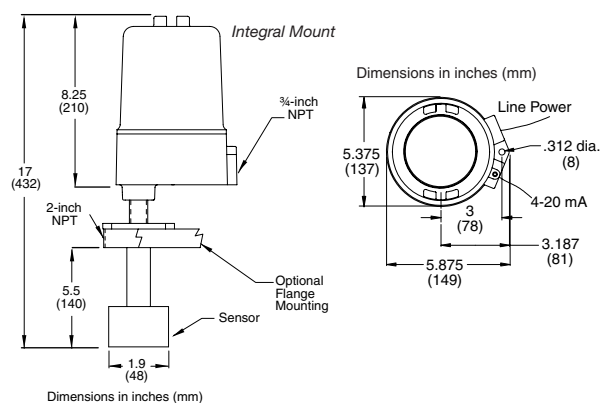
Housing options

4 = 5" Remote
6 = 5" Remote with Drexelcote
8 = 5" Integral with Drexelcote
9 = 5" Integral

24 Vdc Outputs

2 = Near Zone and Lost Echo
3 = Near Zone, Lost Echo and 2 Control Points

Dimensions



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