

Universal Sonic™ 505-1320 Series

Line Powered, Ultrasonic,
Open Channel Flowmeter



The 505-1320 series ultrasonic open channel flow transmitter provides non-contact measurement of the flow through various flumes and weirs. The unit features simple 90-second calibrations, field selection of the most popular flumes and weirs and a 4-20 mA output that corresponds to your choic

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.

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

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Specifications

Input Power

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

Output Signal

4-20 mA (isolated)

Output Mode

Directly proportional to flow or level,
field-selectable

Full Scale Operating Range

12 to 99.9 inches (7.6 to 254 cm)

Near/Dead Zone

12 Inches

Minimum Span

10% of range or 0 to 3 inches,
whichever is greater

Repeatability

0.10-inch (3mm)

Resolution

0.10 inch (3mm)

Beam Angle

Conical, 12°, 3dB down

Accuracy

± 0.5% of fullscale range

Ambient Temperature

- 40°F to 160°F (- 40°C to 70°C)

Temperature Compensation

Built-in, automatic

Response Time

approximately two seconds

Frequency

50 kHz

Calibration

Zero and span ranges switches set
directly in 0.1 inch increments. Flume
and weir type and size are
user-selectable.

Maximum Loop Resistance

1000 ohms

Sensing Element Connection

2-inch NPT fitting, CPVC
Flange mounting optional

Electrical Enclosure

NEMA 4X (IP-65) explosionproof cast
aluminum (standard)

24 Vdc Alarm Outputs

Lost Echo and Near Zone (standard)
Flow Alarm (optional)

Options

Over-flume Mounting Bracket,
Loss of Echo, Near Zone, and
High Flow alarms

Model Number of Electronics

405 - 13 **0** 2 - 0 **0** **9** - **0** 2 Electronic Unit

Power

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

Fail Safe

0 = Low Level Fail Safe
1 = High Level Fail Safe

Housing options

4 = Remote Nema 4X Explosionproof
6 = Remote Nema 4X Explosionproof with Drexelcote
8 = Integral Nema 4X Explosionproof with Drexelcote
9 = Integral Nema 4X Explosionproof

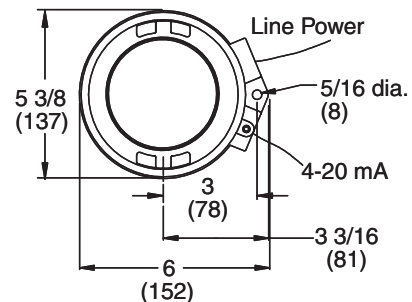
24 Vdc Outputs

2 = Near Zone and Lost Echo
4 = Near Zone, Lost Echo and 1 Control Point

Denotes default value

Dimensions

Dimensions in inches (mm)



U.S.A. Sales: 800-553-9092 • 24-Hour Service: 800-527-6297 • International Support: 215-674-1234 • Fax: 215-674-2731

AMETEK®
DREXELBROOK

205 Keith Valley Road
Horsham PA 19044 U.S.A.

E-mail - drexelbrook.info@ametek.com
Web - www.drexelbrook.com

AMETEK Nihon Drexelbrook
2 Chome • 12-7 Minami Gyotoku
Ichikawa City • Chiba 27201 Japan
Phone: 81-473-56-6513
Fax: 81-473-56-6535
E-mail: nd@nihon-drexelbrook.co.jp

AMETEK Singapore Pte. Ltd.
10 Ang Mo Kio Street 65
#05-12 Techpoint • 569059 Singapore
Phone: 65-6484-2388
Fax: 65-6481-6588
E-mail: aspl@ametek.com.sg

AMETEK Precision Instruments Europe
Rudolf-Diesel-Strasse 16
D-40670 Meerbusch Germany
Phone: 49-2159-9136-0
Fax: 49-2159-9136-39
Web: www.ametek.de