



The Fastest 2 Wire Ultrasonic Transmitters - c/w HART 7 Standard and Sanitary Mtg.



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FEATURES

- 1) Self adjusting, eliminates unwanted echoes.
- 2) Plug and play, only 4 mA and 20 mA calibration is needed.
- 3) Self cleaning no build-up on transducers faces.
- 4) The shortest blanking; range up to 100 Ft.
- 5) At least 3 updates per second (other brands offer one update per several seconds)
- 6) Temperature from - 40 C to 120°C.
- 7) Sanitary mounting available.
- 8) PVC, SS316L or TEFLON materials for transducers.
- 9) PVC, Aluminum or SS316L for electronics enclosures
- 10) The fastest "HART 7" Communication
- 11) Free communication software with diagnostics, Tools and graphics.



APPLICATIONS

- 1) Any liquids and solids.
- 2) Food and pharmaceutical.
- 3) High temperature applications.
- 4) Sanitary
- 5) Any slow or fast process, other brands are limited due to their slow response .

MECHANICAL

Conduit Entry : 1/2" NPT Hole
 (PVC Conduit only for PVC Housing)
 Enclosure : Aluminum - 94V0
 : PVC or SS316L
 Sensor : Standard - PVC,
 High Temp. : Optional - Teflon (standard mtg. only)
 HTP. (5 Bar) : S.S. (1 1/2" or 2" sanitary only)
 Ingress Protection: NEMA 6 (IP68)

ENVIRONMENTAL

Temperature :
 Electronics Enclosure :- 40 to 140°F(- 40 to 60°C)
 Continuous Operation

PVC & Std. Sanitary Nozzle
 :- 40 to 140°F(- 40 to 60°C)
 Teflon Nozzle :- 40 to 266°F(- 40 to 130 °C)
 S.S. HTP Sanitary :- 40 to 266°F(- 40 to 130°C)
 for 1/2 Hr. Steam Cleaning.
 Remove sensor for longer Cleaning cycle ,recommended.
 Not for Continuous Operation.

Pressure Std. : 2 bar
 Optional : 5 bar max. using HTP Sanitary Sensor or special HP- PVC Sensor.

Installation Category : Class II

ELECTRICAL SPEC.

Power ABM200	12 to 30 VDC 0.025 A max @ 24 Vdc
Output	4-20 mA Output 6 uA Resolution Optional Communications with "HART 7"

Approvals : Intrinsic Pending

FM(USA):
 FM3810 (2005) Electrical Electronic Test, Measuring and Process Control Equipment
 ANSI/NEMA 250 (1991) :Enclosures for Electrical Equipment

FM(CAN.):
 CSA C22.2 No. 1010.1 (2004) Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use - Part 1: General Requirements
 CSA C22.2 No. 94 (2011) Special Purpose Enclosures

OPERATIONAL

Accuracy : +/-0.1% of Max. span
 (in lab using 4- 20mA current output)
 +/-0.25% of max. range (typically in field)

Response Time: Standard Unit 3 echo's / sec.

Loss of Echo : Programmable 1 to 4 min.

Calibration : Push-button or
 "HART 7" Communication

Temperature Comp. : In transducer

Communications: on the following page.

CATALOGUE # - On the Web return to Home Page & Refer to Catalogue Number Structure for ordering Information.

TECHNICAL SPECIFICATIONS

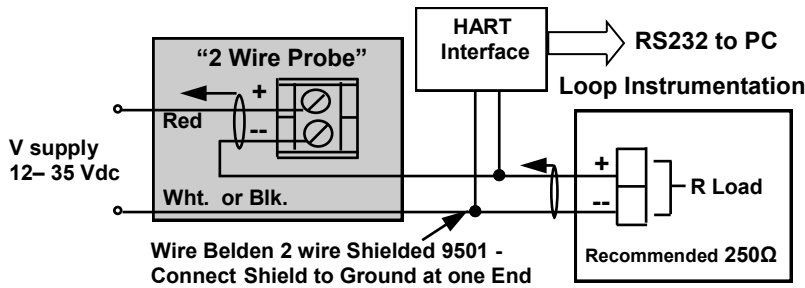
Range Code	Beam Angle	OPERATING RANGE In Liquids	Resolution	Mounting
025	6°	1.4 - 100 ft. 0.40 - 30 m	0.41" 10 mm	6.0"/1.0" NPT 7.3"Ø x 7.6" H
045	9°	1.0 - 60 ft. 0.30 - 18.2 m	0.27" 6.8mm	3.0" NPT 3.0"Ø x 3.0" H
052	12°	0.9 - 50 ft. 0.27 - 15.2 m	0.23" 5.7mm	3.0"/ 2.0" NPT 2.0"Ø x 2.7" H
070	12°	0.8 - 30 ft.	0.13"	3.0"/ 2.0" NPT
080	12°	0.7 - 20 ft. 0.21 - 6.1 m	0.088" 2.2 mm	3.0"/ 2.0" NPT 1.8"Ø x 2.25" H
081	12°	0.6 - 16 ft. 0.18 - 4.9 m	0.07" 1.8 mm	3.0"/ 1.5" NPT 1.5"Ø x 2.1" H
148	12°	0.4 - 9 ft. 0.12 - 2.7 m	0.04" 0.98 mm	3.0"/ 1.0" NPT 1.1"Ø x 2.0" H

2 Wire Ultrasonic Transmitter User Instruction Manual

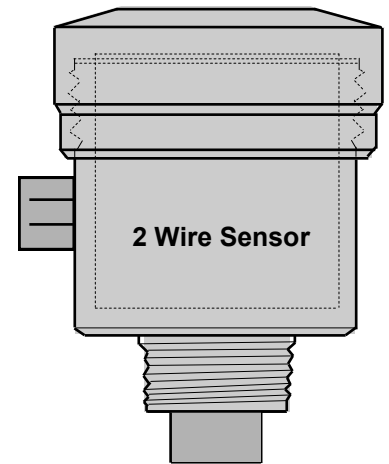
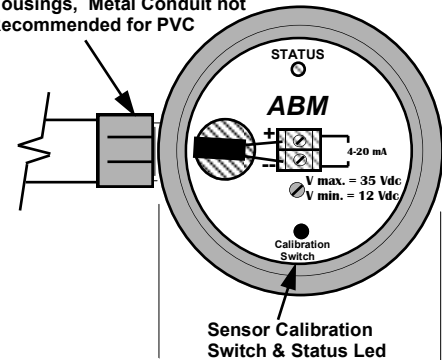


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Fig. # 1 - "2 Wire Sensor" Wiring Connection

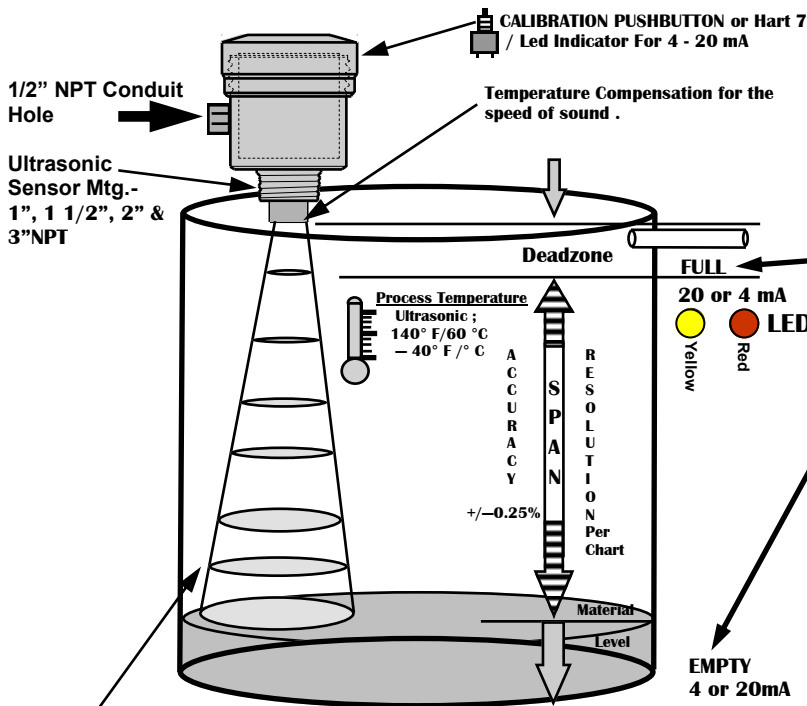


1/2" PVC Conduit Only for PVC Housings, Metal Conduit not Recommended for PVC



Typical Installation

- 1) DIRECT MOUNTING ULTRASONIC SENSOR - SIMPLY THREAD SENSOR DIRECTLY INTO METAL OR PLASTIC NOZZLE.



Calibration: 4 -20 or 20 -4 mA Output - use Push-button FULL – Calibrate 20 mA or 4mA (Set Near Target)

1. Calibration mode LED color is Blinking Green.
2. Push button and hold until LED turns Yellow (20 mA) or push button and hold until LED turns Red (4 mA)
3. Release button at Yellow or Red and observe LED flashes to acknowledge the calibration.

EMPTY– Calibrate 4 mA or 20 mA (Set Far Target)

1. Calibration mode LED color is Blinking Green.
2. Push button and hold until LED turns Red (4 mA) or push button and hold until LED turns Yellow (20 mA)
3. Release button at Yellow or Red and observe LED flashes to acknowledge the calibration.

LOSS OF ECHO–22mA or 3.5 mA

1. To choose 22mA press and hold button until the light goes off–2 flashes
2. To choose 3.5mA press and hold button until the light goes off–1 flash

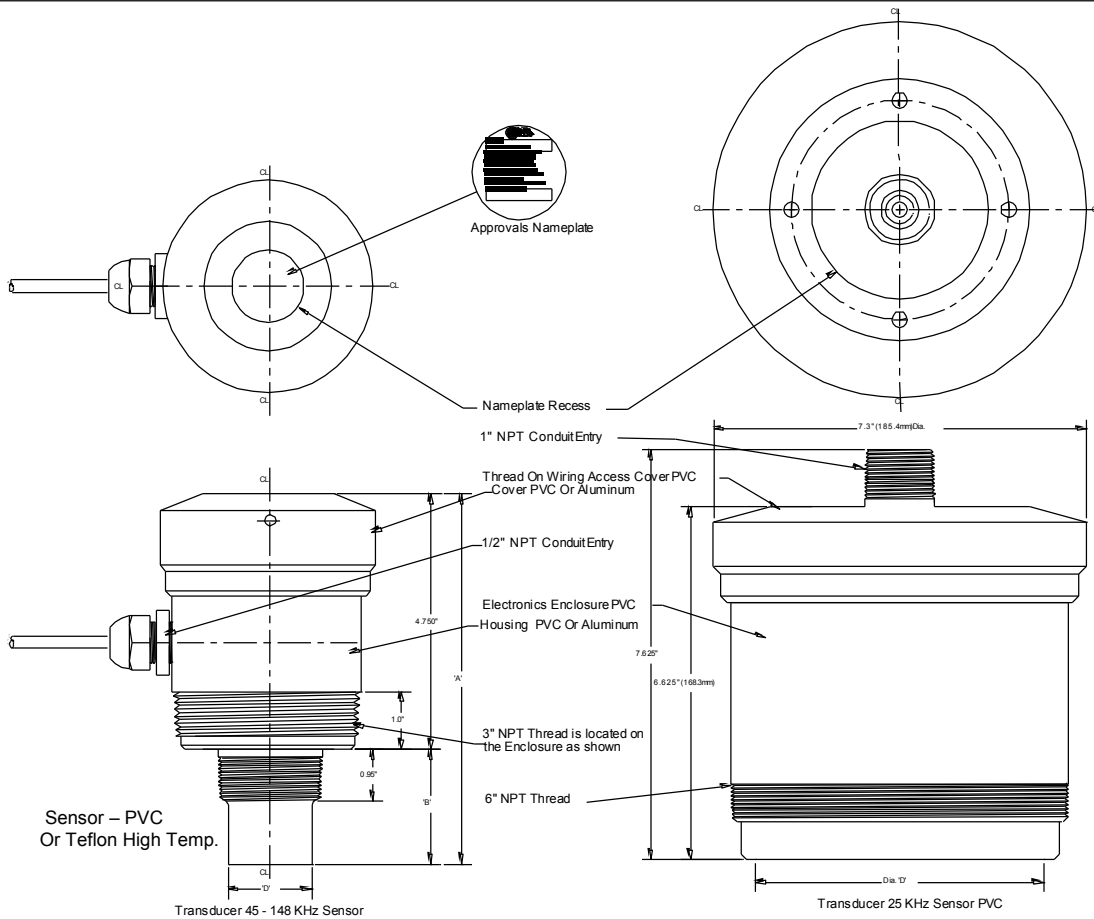
- Or use HART 7 (Fig. # 1)

Operation - An ultrasonic pulse is transmitted from the ABM sensor . The pulse travels to the surface being monitored and is reflected off this surface back to the sensor . The time of flight is divided by 2 and converted to an output signal directly proportional to the material level .

2 Wire Standard Mount Level Measurement Sensors Outline Dimensional Dtl.



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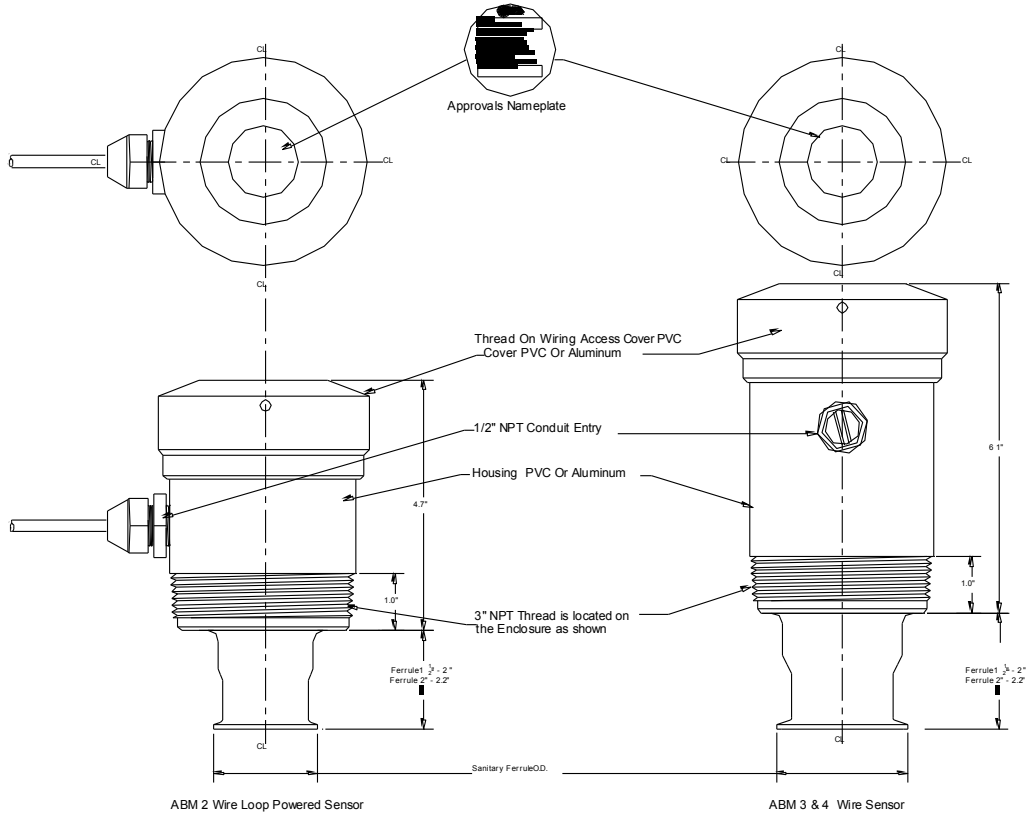


Model #	Operating Range	Operating Frequency	Mounting Thread NPT	Dimension 'A'	Dimension 'B'	Dimension 'D'
ABM200-025UL	90' (27.4m)	25 KHz	6"/1"	7.625"(194mm)	N/A	5.75"(146mm)
ABM200-045UL	60' (18.2m)	45 KHz	3"	7.75"(197mm)	3.0"(76.2mm)	3.0"(76.2mm)
ABM200-052UL	50' (15.2m)	52 KHz	3"/2"	7.8"(198mm)	3.05"(77.5mm)	2.2"(55.9mm)
ABM200-070UL	30' (9.1m)	70 KHz	3"/2"	7.0"(178mm)	2.25"(57.2mm)	1.8"(45.7mm)
ABM200-080UL	20' (6.1m)	80 KHz	3"/2"	7.0"(178mm)	2.25"(57.2mm)	1.8"(45.7mm)
ABM200-081UL	16' (4.9m)	81 KHz	3"/1.5"	6.85"(174mm)	2.1"(53.3mm)	1.5"(38.1mm)
ABM200-148UL	9' (2.7m)	148 KHz	1"	6.75"(172mm)	2.0"(50.8mm)	1.1"(27.9mm)

2, 3 & 4 Wire Sanitary Ultrasonic Sensors Outline Dimensional Dtl.



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Model #	Operating Range	Operating Frequency	Sanitary Ferrule O.D.	
			1 1/2"	2"
ABMXXX-070	30' (9.1 m)	70 KHz	N/A	2.5"
ABMXXX-080	20' (6.1 m)	80 KHz	N/A	2.5"
ABMXXX-081	16' (4.9 m)	81 KHz	1.9"	2.5"
ABMXXX-148	9' (2.7 m)	148 KHz	1.9"	2.5"