

# 2 Wire Continuous Ultrasonic Transmitters - Standard and Sanitary Mtg.



## FEATURES

- Simple push-button calibration
- Output 4-20 mA ,20-4 mA
- Built-in temperature compensation
- Compact Size for Easy Mounting

## APPLICATIONS

- Food and Beverages
- Water/Wastewater
- Chemicals
- Oils

## MECHANICAL

- Conduit Entry : 1/2" NPT Hole (PVC Conduit only)
- Enclosure : PVC-94V0
- Sensor : Standard - PVC,  
Optional - S.S. (sanitary only)  
- Teflon (standard mtg. only)

Ingress Protection :NEMA 4X (IP65)

## ENVIRONMENTAL

- Temperature : - 40 to 140°F (-40 to 60°C)  
Optional : - 40 to 266°F(-40 to 130°C)
- Pressure : - Std. Sensor 2 bar  
- Optional Sensor 5 bar max.  
(High Temp./Pressure Transducer)

Approvals : Intrinsic Pending  
Installation Category : Class II

## OPERATIONAL

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

Beam Angle :10 -12 degree at -3dB  
Loss of Echo:Hold 30 seconds,22 or 3.5 mA (avg.)

**Catalogue Number** - On the Web return to Home Page & Refer to Catalogue Number Structure for ordering Information. In Product Documentation refer to page 3.

## ELECTRICAL SPECIFICATIONS

Power ABM200	12 to 28 VDC 0.025 A max @ 24 Vdc
Output	4-20 mA Output 6 uA Resolution



Sanitary High Pressure /Temp.  
2" S.S. Ferrule Mounting

Std. 3" NPT  
Mtg. On

4 3/4"

Dim. 'H'

Refer to Technical  
Specification Table Below

2 bar

Dia. Φ

**Calibration — 4 -20 or 20 - 4 mA Output**

**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, 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, observe LED flashes to acknowledge the calibration.

**LOSS OF ECHO—22mA or 3.5 mA**

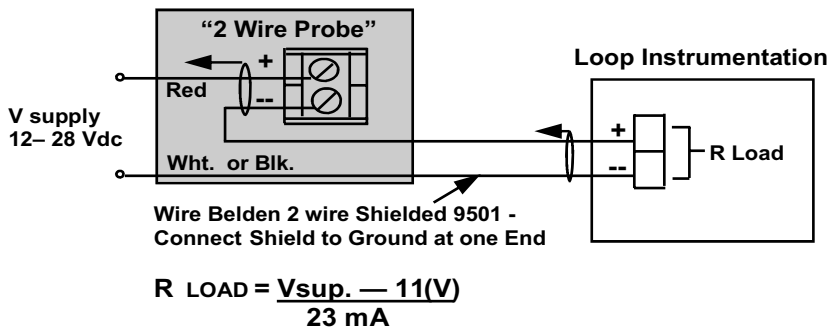
1. To choose 22mA press and hold button until the light goes off—2 flashes
2. To choose 3.5mA press and hold button until the light goes off—1 flash

Range Code	OPERATING RANGE In Liquids	Resolution	Mounting
052	0.9 - 50 ft. 0.27 - 15.2 m	0.23" 5.7mm	2.0" NPT 1.8"Ø x 2.25"H
070	0.8 - 30 ft. 0.24 - 9.1 m	0.13" 3.4 mm	2.0" NPT 1.8"Ø x 2.25"H
080	0.7 - 20 ft. 0.21 - 6.1 m	0.088" 2.2 mm	2.0" NPT 1.8"Ø x 2.25"H
081	0.6 - 16 ft. 0.18 - 4.9 m	0.07" 1.8 mm	1.5" NPT 1.5"Ø x 2.1" H
148	0.4 - 9 ft. 0.12 - 2.7 m	0.04" 0.98	1.0" NPT 1.1"Ø x 2.0" H

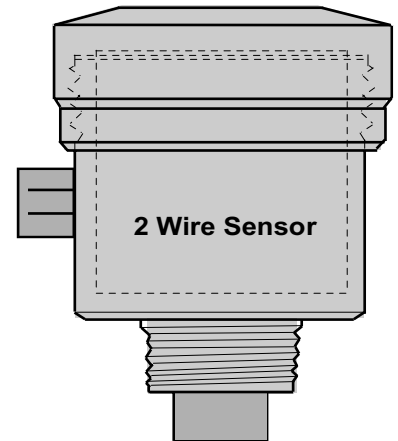
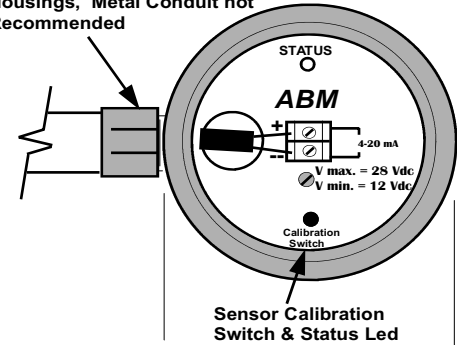
# 2 Wire Ultrasonic Transmitter User Instruction Manual



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

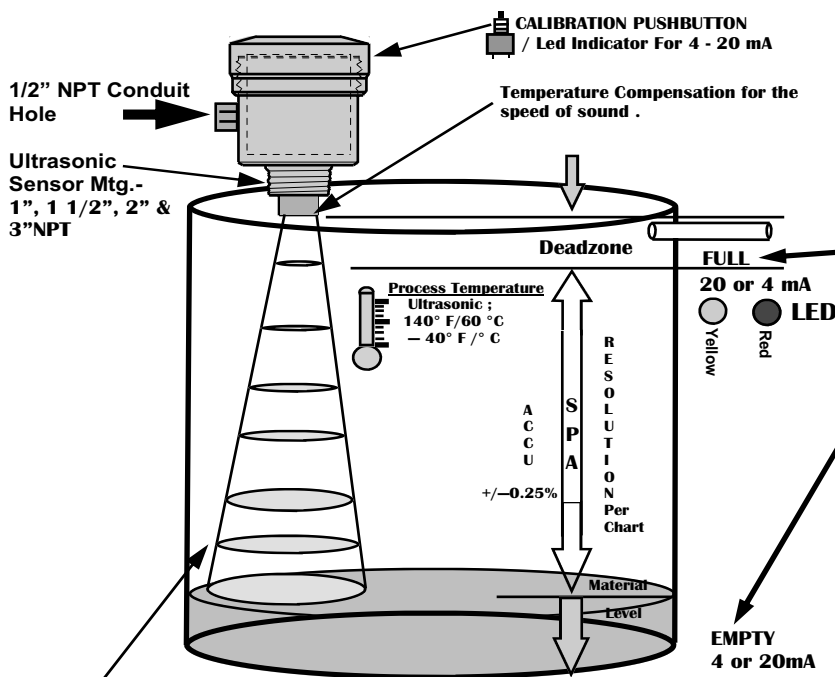


1/2" PVC Conduit Only for PVC Housings, Metal Conduit not Recommended



## Typical Installation

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



## Calibration — 4 -20 or 20 - 4 mA Output

**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, 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, 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

**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 .**

DWG 10A419

Continuous efforts for product development may necessitate changes in these details without notice

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## JAYCEE TECHNOLOGIES PVT. LTD.

Shed No.7, Nanekar Industries Building, Survey No. 79/2, Dangat Industrial Estate, Shivane, Pune - 411 023, India. ■ Tel. : 020 - 64703186 ■ Tel./Fax : 020 - 25290744

■ Email : [Jayceetech@vsnl.net](mailto:Jayceetech@vsnl.net) ■ [Jayceetech@gmail.com](mailto:Jayceetech@gmail.com)