

# Continuous 2 Wire Ultrasonic Level Transmitter



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## 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. or Teflon  
 Ingress Protection :NEMA 4X (IP65)

## ENVIRONMENTAL

- Temperature :Std. Unit - 40 to 140°F (-40 to 60°C)  
 Optional :Teflon Xducer.- 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.)  
 Temperature Comp. : In transducer  
 Calibration : Push-button

## ELECTRICAL SPECIFICATIONS

|                        |                                      |
|------------------------|--------------------------------------|
| <b>Power</b><br>ABM200 | 12 to 28 VDC<br>0.025 A max @ 24 Vdc |
| <b>Output</b>          | 4-20 mA Output 6 uA Resolution       |



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



Std. 3" NPT Mtg.  
On Housing

4 3/4"

Dim.

2 bar

Dia.

Refer to Technical Specification Table Below

### 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

**Catalogue Number Refer to Catalogue Number Page for ordering information (example # below)**

**ABM200-XXXYYCX-XXYYY-XX-XXXX**

**Power** **Range Code** (see below)  
(Refer to Electrical spec.)

## TECHNICAL SPECIFICATIONS

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

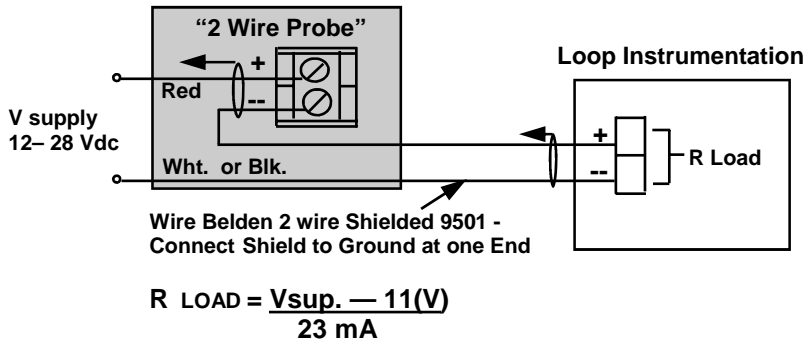
# INSTRUCTION MANUAL 10A419

## For ABM 200 (DC) Sensors

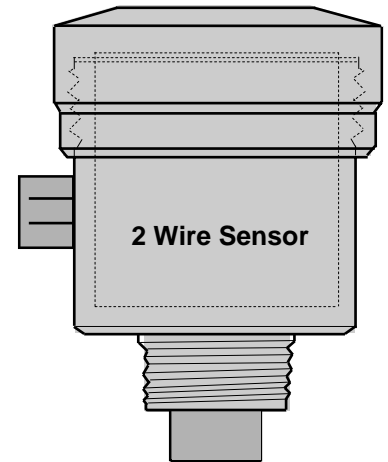
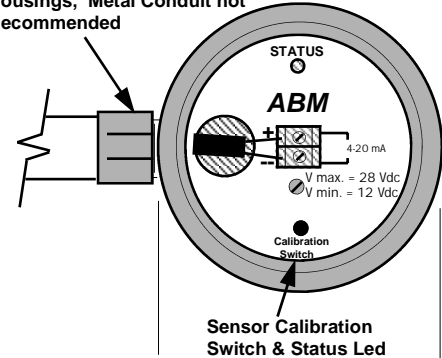


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**Fig. # 1 - "2 Wire Sensor" Wiring Connection**

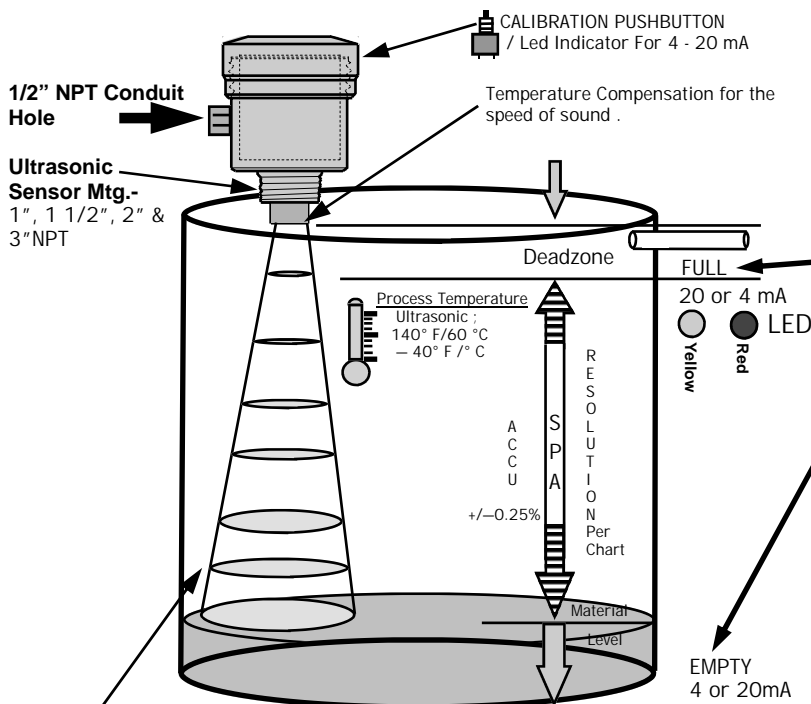


1/2" PVC Conduit Only for PVC Housings, Metal Conduit not Recommended



### 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 .