

# ABM200/300 /400

## ABM 2, 3 or 4 Wire "Smart" Sanitary Ultrasonic Level Transmitter

### HIGHLIGHTS

- 2, 3 or 4 Wire Operation
- Power: ABM 400: 115VAC / ABM300: 12 to 30VDC / ABM200: 12 to 28 VDC
- Self Adjusting Ultrasonic sensor
- Programmable and Simple push-button calibration
- Built-in temperature compensation
- Output 4 - 20 mA / 20 - 4mA
- Communication with HART, RS232 or RS485
- Food Grade Stainless Steel 316L Face  
c/w Tri-Clamp Mtg. Base

### OPERATIONAL

**Accuracy:** +/- 0.1% of max. range

**Frequency:** 6.3 GHz.

**Loss of Echo**

**Current:** Default 22mA , or 2 mA

**Approvals :** CAN/CSA: C22.2 No. 1010.1-M92 +A2

**Ambient Temperature:-** 40 to 140°F (- 40 to 60°C)

**Process Temperature:**

**Standard Sanitary nozzle:** - 40 to 140°F (- 40 to 60°C)  
(No Steam Cleaning)

**Hi-Temperature Sanitary nozzle:** - 40 to 266°F (- 40 to 130°C)  
(1/2 Hr Steam Cleaning)

**Pressure:** max. 2 bar, 5 bar Max. using Hi-Temp Sensor

**Process Connection:** Sanitary 1-1/2" & 2" Tri-Clamp

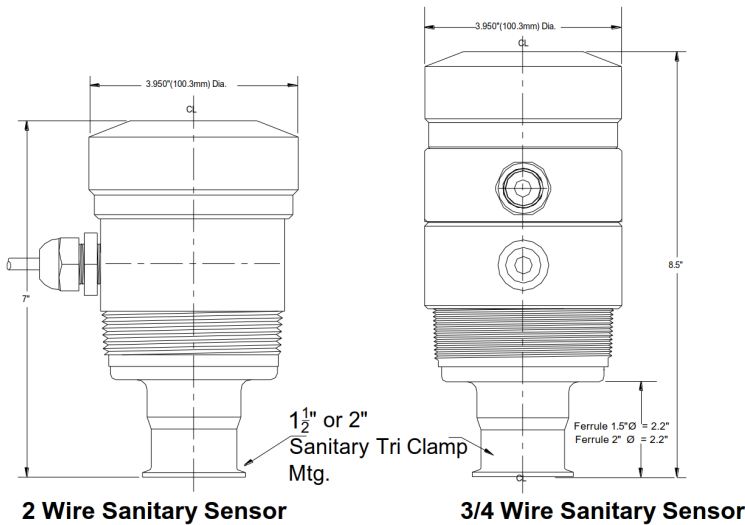
**Enclosure:** PVC, Aluminum or SS316L. : NEMA 6 (IP68)

**Conduit Entry:** 1/2" NPT x 2



| Range Code | Beam Angle | Operating Range In Liquids   | Resolution       | Mounting Ferrule |
|------------|------------|------------------------------|------------------|------------------|
| 070        | 12°        | 0.8 - 30 ft.<br>0.24 - 9.1 m | 0.13"<br>3.4 mm  | 2.0"             |
| 080        | 12°        | 0.8 - 20 ft.<br>0.24 - 6.1 m | 0.088"<br>2.2 mm | 2.0"             |
| 081        | 12°        | 0.6 - 16 ft.<br>0.18 - 4.9 m | 0.07"<br>1.8 mm  | 2.0"/1.5"        |
| 148        | 12°        | 0.4 - 9 ft.<br>0.12 - 2.7 m  | 0.04"<br>0.98 mm | 2.0"/1.5"        |

## DIMENSIONS



## ELECTRICAL SPECIFICATIONS

|                                  |                                                                              |
|----------------------------------|------------------------------------------------------------------------------|
| <b>Power Input</b><br>AC- ABM400 | 115 VAC 60 Hz or 230 VAC 50 Hz<br>(+/-20%) , 1.7 VA                          |
| DC- ABM300                       | 12 to 30 VDC , 0.07 A max @ 24 Vdc<br>R load = $(V_s - V_f) / 24 \text{ mA}$ |
| Loop Power<br>- ABM200           | 12 to 28 VDC , 0.025 A max @ 24 Vdc                                          |
| <b>Output</b>                    | 4-20 mA Output 6.1 uA Resolution                                             |
|                                  | 750 Ohms (Isolated on 4 Wire only)                                           |
|                                  | Optional RS232 or RS485 communications port.(3 & 4 Wire Only)                |

## Catalogue Numbering Structure

### - Sanitary "Smart" Ultrasonic Sensors

### ABMXXX-YYY-UL-CX-HH-A-Z

**Supply Voltage:**

XXX = 200 - 2 Wire 12-28 Vdc  
300 - 3 Wire 12-30 Vdc  
400 - 4 Wire 120 Vac or 230 Vac

**Maximim Range :**

YYY = 070 = 30ft (9.1m)  
080 = 20ft (6.1m)  
081 = 16ft (4.9m)  
148 = 9ft (2.7m)

UL = Ultrasonic sensor

**Communications:**

C = 4 = RS485  
2 = RS232  
H = HART \* Available only for 2 wire version

**Housing Material:**

HH = PV- PVC Enclosure Housing  
AL- Aluminum Enclosure Housing  
SS- SS316L Enclosure Housing

**Sensor Material:**

A = S15 \* - 1-1/2" SS316L Sanitary Tri clamp Mounting  
\* available for range codes 081 & 148 only  
S20 - 2" SS316L Sanitary Tri clamp Mounting

**Options:**

Z = HTP : High Pressure/High Temperature Sensor  
-40C to +130C (-40F to +266F); Pressure ≤ 5 Bar; CIP for 1/2 hr

**Benefits -**

- Enclosures are suitable for IP68 environmental conditions.
- Self adjusting Monitors inside tank's environment and adjusts its power and sensitivity to receive one echo only.
- Enclosures are available in different materials to withstand any environment
- Very narrow radiation beam which allows installation very close to tank's wall.
- Works at any Temperature