

ABM300UM

mini

ABM 3 Wire Mini Ultrasonic Level Transmitter

HIGHLIGHTS

- 3 Wire Operation
- Power: 12 to 30 VDC
- Built-in temperature compensation
- Sensor in PVC, Teflon, 316L Stainless steel -sanitary
- Standard 5 feet of interconnection cable
- Optional High Level Alarm relay DPST 5A/230 Vac
- Optional RS485 communications with calibration, diagnostics and data logging software
- Simple push-button calibration
- Output 4 - 20 mA / 20 - 4mA
- Enclosure: PVC-99V0, NEMA 6 (IP68)
- Std. Interconnection Cable - 5'- Belden #9503 : 3 Pair-24AWG

OPERATIONAL

Accuracy: +/- 0.1% of max. range

Response Time: Standard Unit 2 - 3 echoes / sec.

Beam Angle: 10 - 12 degree at -3dB

Loss of Echo: 22mA , or 2 mA

Programmable from 1 min. to 4 min.

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

Mounting 1" NPT with adaptor to 3/4" or 1/2" NPT.

Mounting 1 1/2" or 2" Sanitary tri-clamp.

Pressure: 2 bar (Std. Sensor) / 5 bar (SS316L Ferrule)

Optional: Relay Output, form C contact SPDT, 8A at 240 Vac
(5'- Belden #9493 :3-18 AWG unshielded)

Process Temperature:

PVC :- 40 to 140°F(- 40 to 60°C)

Teflon / SS316L :- 40 to 266°F(- 40 to 130°C)



TECHNICAL SPECIFICATIONS

Range Code	Beam Angle	OPERATING RANGE	Resolution	Mounting
070	12°	0.8 - 33 ft. 0.2 - 10 m	0.03" 0.7 mm	2.0" NPT or 2" Ferrule
080	12°	0.8 - 20 ft. 0.24 - 6 m	0.03" 0.7 mm	2.0" NPT or 2" Ferrule
081	12°	0.6 - 16 ft. 0.18 - 4.9 m	0.07" 1.8 mm	1.5" NPT or 1.5"/ 2" Ferrule
148	12°	0.33 - 6 ft. 0.10 - 1.8 m	0.03" 0.7 mm	1.0" NPT or 1.5"/ 2" Ferrule



**Std. Teflon NPT Mtg.
High Temp. Sensor**

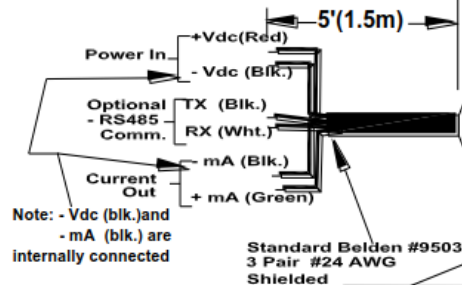


**Std. PVC 1" NPT Mtg. HighTemp. & Pressure Sensor
S.S. Ferrule c/w S.S. Face**

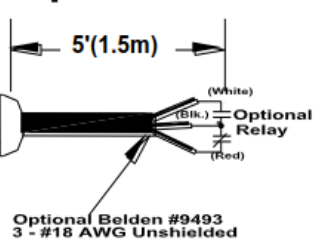


Interconnection Diag.

Standard Cable



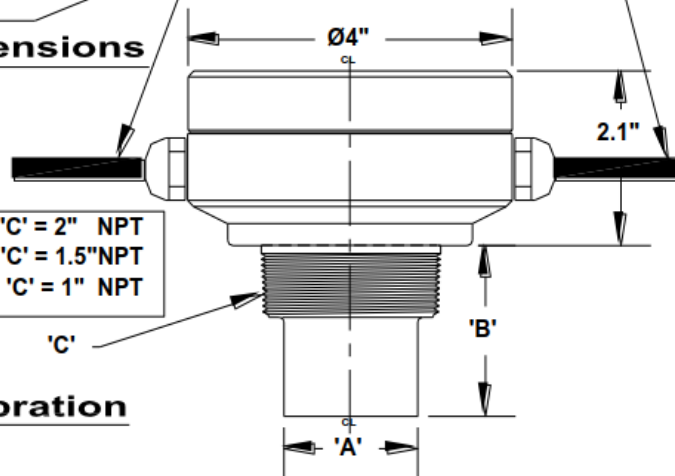
Optional Cable



Calibration Switch

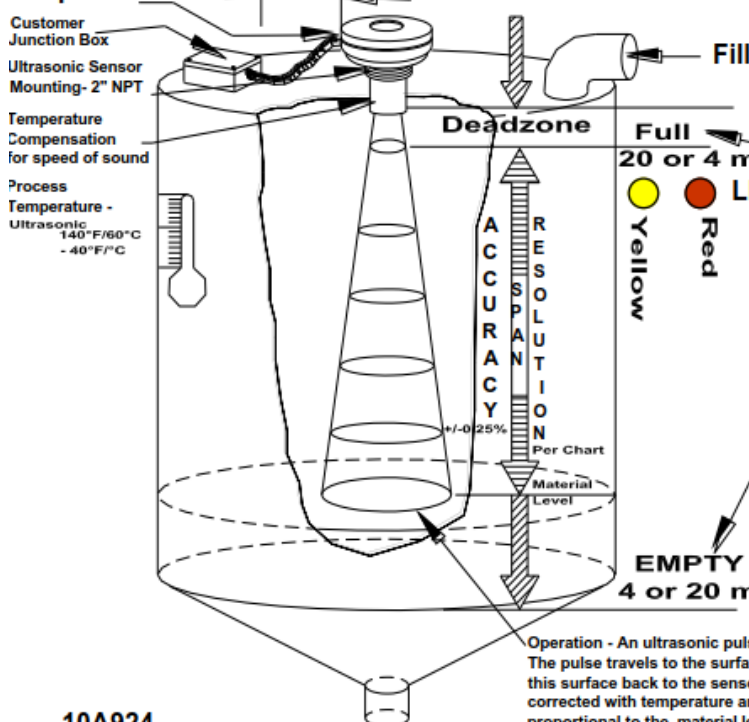
Mounting Dimensions

'A' - 70 & 80KHz = 1.8" Ø 'B' = 2.2" 'C' = 2" NPT
- 81 KHz = 1.5" Ø 'B' = 2.0" 'C' = 1.5" NPT
- 148KHz = 1.125" Ø 'B' = 1.95" 'C' = 1" NPT



Installation & Calibration

Miniprobe



Calibration - 4-20 or 20-4 mA Output

FULL - Calibration 20 mA or 4 mA (Set Near Target)

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

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

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

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, corrected with temperature and converted to an output signal directly proportional to the material level.

10A924

Catalogue Numbering Structure

CATALOGUE NUMBER STRUCTURE

1) 2) 3) 4) 5) 6) 7)
ABM300 - XXX UM C4 - XX YYY - XXXX

1) Supply Voltage: 12 - 30 VDC - Code: **300**

2) Ultrasonic Frequency:

70KHz	Range 0.2 -10m	Code: 070 (2" NPT or 2" Tri-Clamp only)
80KHz	Range 0.24 -6m	Code: 080 (2" NPT or 2" Tri-Clamp only)
81KHz	Range 0.18 -4.9m	Code: 081 (1.5" NPT or 1.5" & 2" Tri-Clamp only)
148KHz	Range 0.1 -1.8m	Code: 148 (1" NPT or 1.5" or 2" Tri-Clamp only)

3) Operating Mode: Miniprobe Code: UM

4) Communications:

RS484 Code: 4

5) Body Material:

PVC Code: PV

6) Transducer Nozzle Material:

PVC Code: PVC

Teflon Code: TEF

Sanitary Mtg. Sensor: 316 SS. Tri-Clamp Mtg.

S15 — 1.5" Sanitary Sensor (*81KHz or 148KHz only)

S20 — 2" Sanitary Sensor

S15- HTP — 1.5" High Temp./High Pressure (*81KHz or 148KHz only)

S20- HTP — 2" High Temp./High Pressure

7) Options:

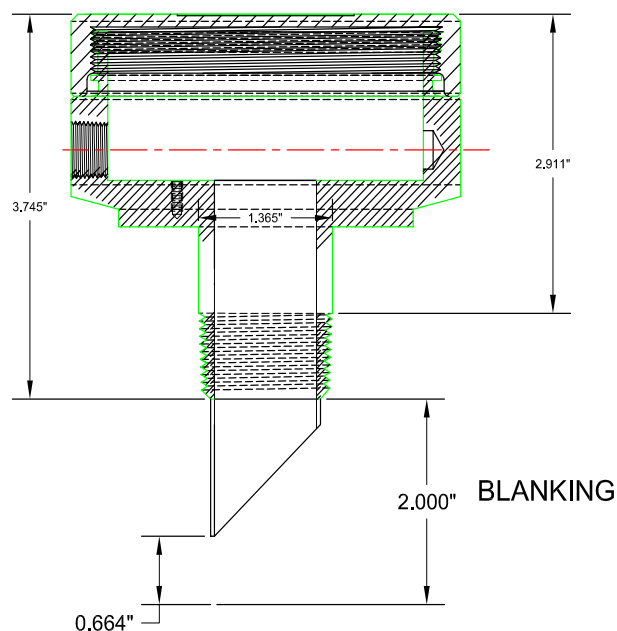
Relay option: Code REL

Top Mounting Txx (xx= cable length in meters)

Short Blanking Mini Sonic" Ultrasonic ↗ Model: **ABM300-148UMC4-PVPVC-SB**

TECHNICAL SPECIFICATIONS

Range	Beam	OPERATING	Resolution	Mounting
148	12°	0.16 - 6 ft. 0.05 - 1.8 m	0.03" 0.7 mm	1.0" NPT



Mini Sonic" Ultrasonic Top Mounting ↗ Top Cable Entry ↗ Model: **ABM300-xxxUMC4-PVPVC-Txx** xx= cable length in meters

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