

New Feature

"Mini Sonic" Ultrasonic Transmitters

- Short Blanking
- Model: ABM300-148UMC4-PVPVC-SB



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FEATURES

Standard 6 feet of interconnection cable
 Simple push-button calibration
 Output 4- 20 mA / 20- 4 mA
 Built-in temperature compensation
 Optional High Level Alarm relay
 dual pole output 5A/230 Vac
 Optional RS485 communications
 with calibration, diagnostics and data
 logging software
 PLC compatible
 Three Wire Operation

APPLICATIONS

Any liquids without foam and no fumes/vapours

ENVIRONMENTAL

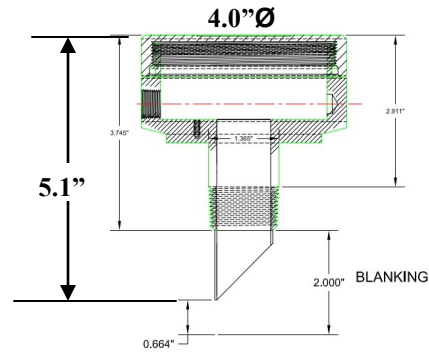
Temperature :
 Electronics Enclosure :- 40 to 140°F (- 40 to 60°C)
 Continuous Operation
 Pressure : 5 bar Max.
 Installation Category: Class II

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

ELECTRICAL SPECIFICATIONS

Power DC	12 to 30 VDC , 0.07 A max @ 24 Vdc R load = (Vs — 6) / 24 mA
Output Optional	4-20 mA Output 6.1 uA resolution - communications port RS485 - Relay DPST 5A / 230 Vac



New ! Fast Motion Detector
 10 echoes / sec. Or Higher

OPERATIONAL

Accuracy : +/-0.10% of max. range
 (in lab using 4-20 Ma current output)
 +/-0.25% of max. range (typically in field)
Response Time: Standard Unit 2 - 3 echoes / sec.
 : Std. with less damping 6 echoes / sec.
 : Fast Protocol **I.R. 10 echoes / sec.
 Or More ** IF Required
Beam Angle : 10 - 12 degree at -3dB
Loss of Echo : Programmable from 1 min. to 4 min.
 (Default = 1 min.) 22mA or 2 mA output
Temp. Comp. : In transducer
Calibration : Push-button or programmable
 via optional communications port
Diagnostics : (Echo Profile) via communications port
High Level Alarm 5A. Relay has hysteresis and delay
 of 5% of the tank height, this can be adjusted using
 communications software. Relay's state changes at
 20mA calibration point or at 4 mA calibration point. To
 switch the above "push-button" or "communication
 software" can be used . Using push-button press and
 hold until the light goes off. Continuous green light in-
 dicates alarm at 20mA, blinking green indicates alarm
 at 4 mA. Relay "ON" set point is adjustable using
 communications software.

MECHANICAL

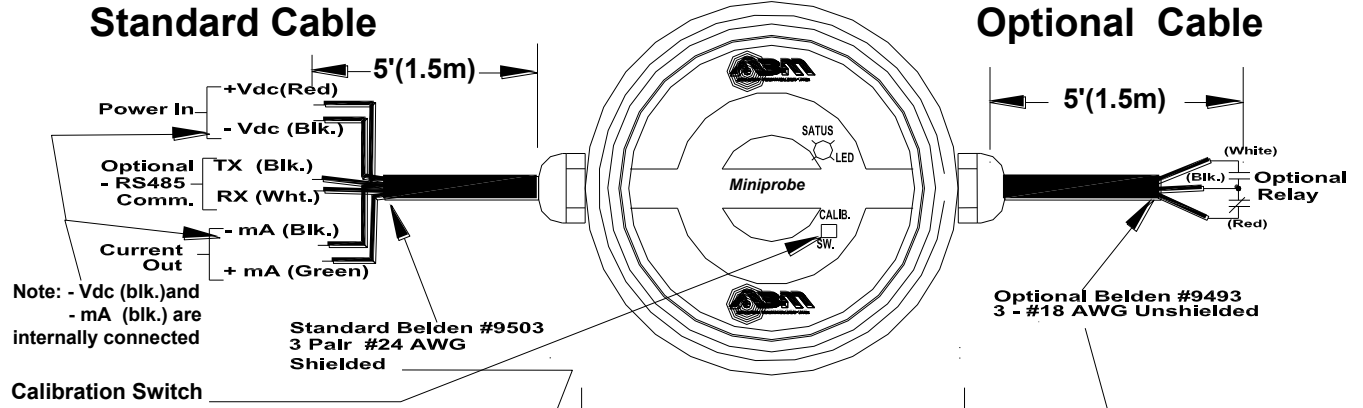
Std. Interconnection Cable -
 6'- Belden #9503 : 3 Pair-24AWG
 1) Supply 12 - 30 Vdc 1 pair shielded (Red/Blk.)
 2) Output 4 - 20 mA 1 Pair shielded (Blk./Green)
 3) Comm. RS485 (optional) 1 Pair Shielded (Blk./Wht.)
Optional Relay Cable -
 5'- Belden #9493 :3-18 AWG unshielded
 1) Relay (optional) SPDT 5A /230Vac
Enclosure PVC-94V0
 Ingress Protection: NEMA 6 (IP68)

"Mini Sonic" Std. Mtg. Ultrasonic Transmitters Interconnection Diagram



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Interconnection Diag.



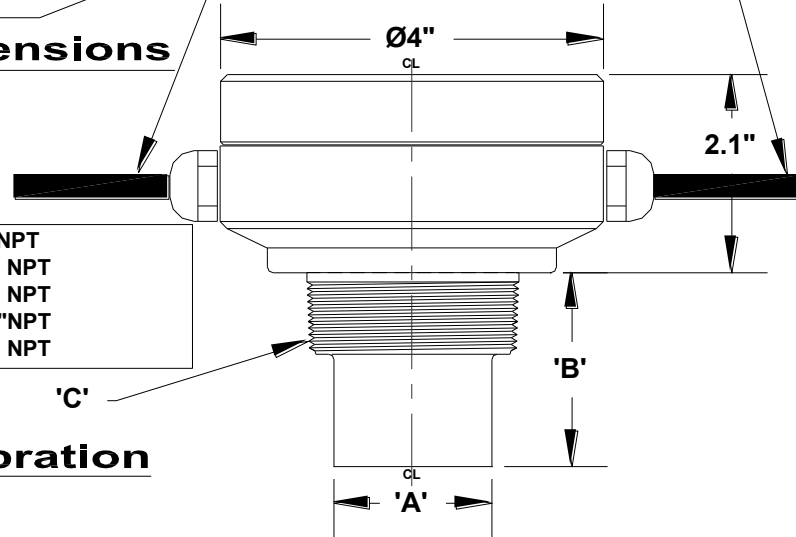
Note: -Vdc (blk.) and -mA (blk.) are internally connected

Standard Belden #9503
3 Pair #24 AWG
Shielded

Optional Belden #9493
3 - #18 AWG Unshielded

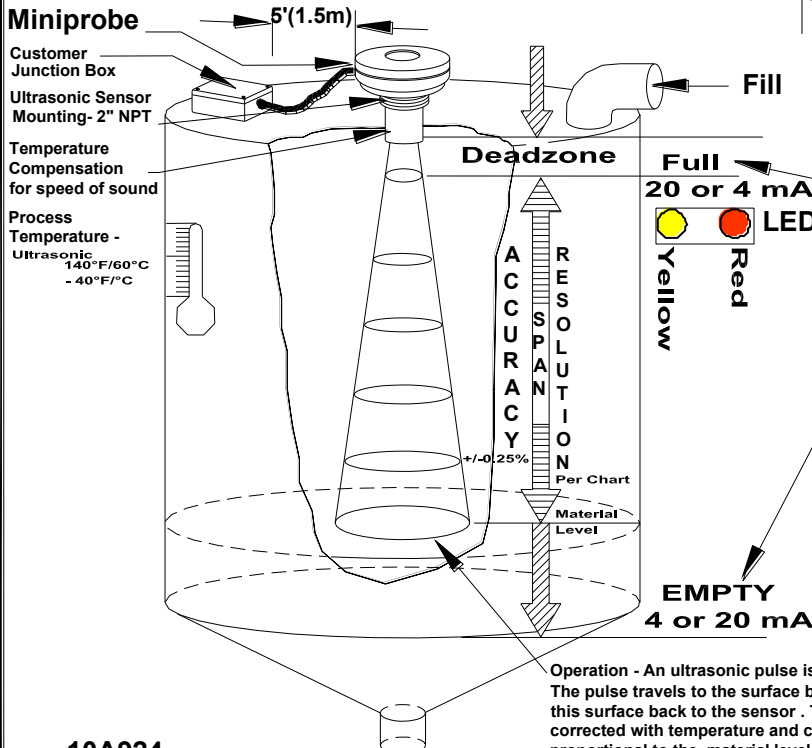
Calibration Switch

Mounting Dimensions



'A' - 52 KHz = 2" Ø	'B' = 2.75"	'C' = 2" NPT
- 70 KHz = 1.8" Ø	'B' = 2.2"	'C' = 2" NPT
- 80 KHz = 1.8" Ø	'B' = 2.2"	'C' = 2" NPT
- 81 KHz = 1.5" Ø	'B' = 2.0"	'C' = 1.5" NPT
- 148 KHz = 1 1/8" Ø	'B' = 1.95"	'C' = 1" NPT

Installation & Calibration



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.

"Mini Sonic" Sanitary Mtg. Ultrasonic Transmitters

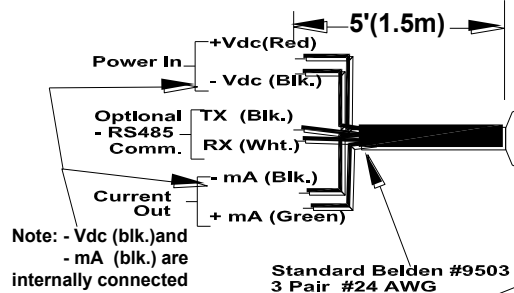
Interconnection Diagram



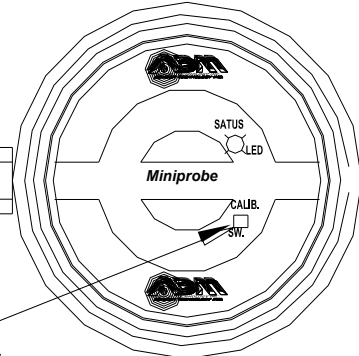
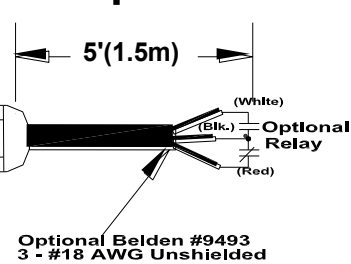
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Interconnection Diag.

Standard Cable

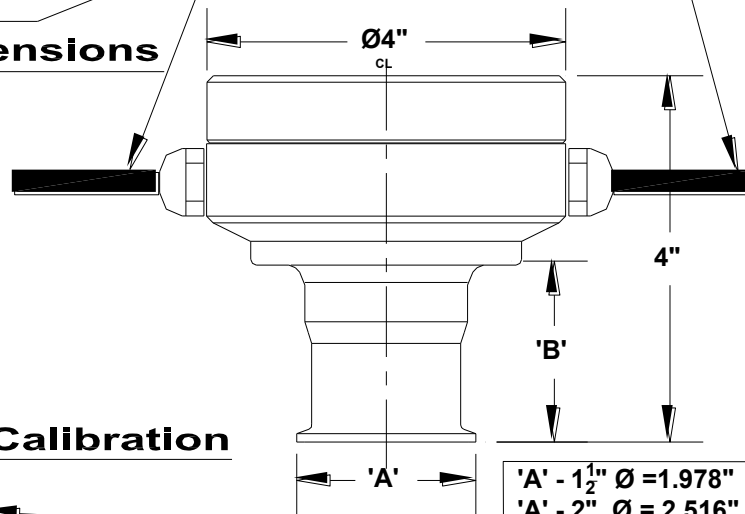


Optional Cable

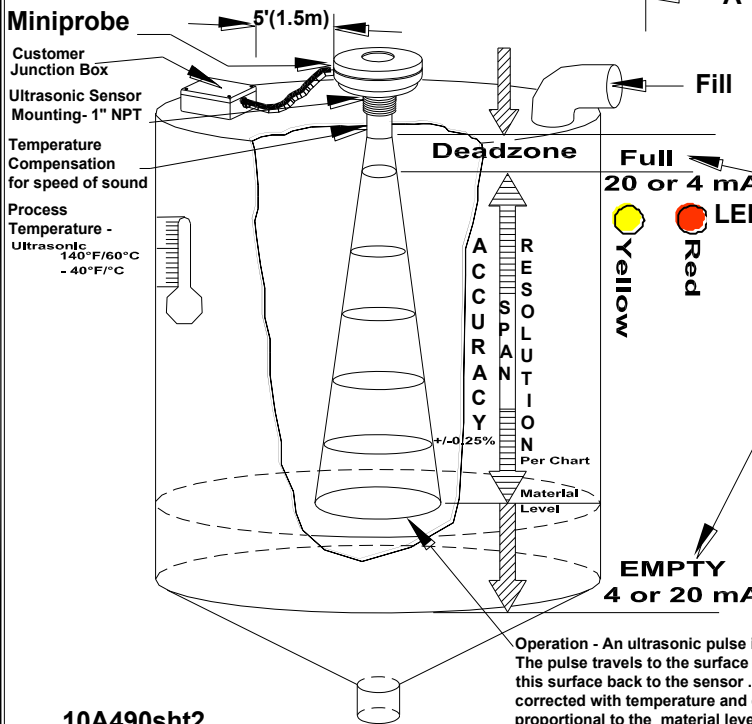


Calibration Switch

Mounting Dimensions



Installation & Calibration



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.

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