

FUZYPRO Sensor Technology Inc.

Product Documentation



"Mini Sonic" Ultrasonic Transmitters - Standard Mtg.

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FEATURES

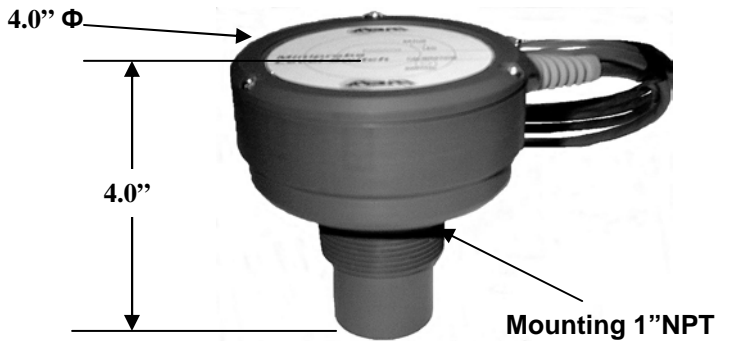
- Standard 5 feet of interconnection cable
- Simple push-button calibration
- Output 4- 20 mA / 20- 4 mA
- Built-in temperature compensation
- Optional High Level Alarm relay dual pole output 5A/230 Vac
- Optional RS485 communications with calibration, diagnostics and data logging software
- PLC compatible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

APPLICATIONS

- Food and Beverages
- Water
- Pharmaceutical

Mounting Options

Mounting Adaptors Available:
 1"- 3/4" NPT or 1"- 1/2" NPT



OPERATIONAL

- Accuracy : +/-0.10% of max. range (in lab using 4-20 Ma current output)
 +/-0.25% of max. range (typically in field)
- 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 indicates alarm at 20mA. ,blinking green indicates alarm is 4 mA. Relay "ON" set point is adjustable using communications software.

ENVIRONMENTAL

- Temperature : - 40 to 140°F(- 40 to 60°C) PVC Body
- Pressure : 1 –10 bar
- Installation Category : Class II

CATALOGUE # - On the Web return to Home Page & Refer to Catalogue Number Structure for Ordering information. In Product Documentation refer to page 3.

MECHANICAL

- Std. Interconnection Cable :**
 - 5'- 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) DPST 5A /230Vac
- Enclosure :** PVC-94V0
 Ingress Protection : NEMA 4X (IP65)

ELECTRICAL SPECIFICATIONS

Power DC ABM300	12 to 30 VDC , 0.07 A max @ 24 Vdc R load = (Vs — 6) / 24 mA
Output	4-20 mA Output 6.1 uA resolution
Optional	- communications port RS485 - Relay DPST 5A / 230 Vac

TECHNICAL SPECIFICATIONS

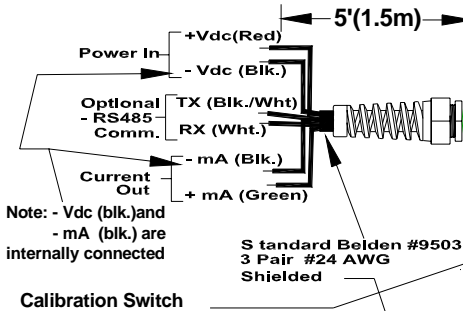
Range Code	Operating Range in Liquids	Resolution	Mounting NPT
148	0.33 - 6 ft. 0.10 - 1.8 m	0.03" 0.7 mm	1"

"Mini Sonic" Ultrasonic Transmitters Interconnection Diagram

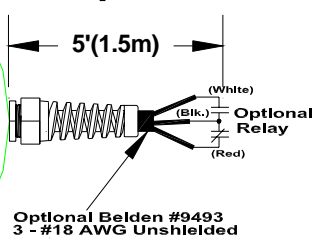
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Interconnection Diag.

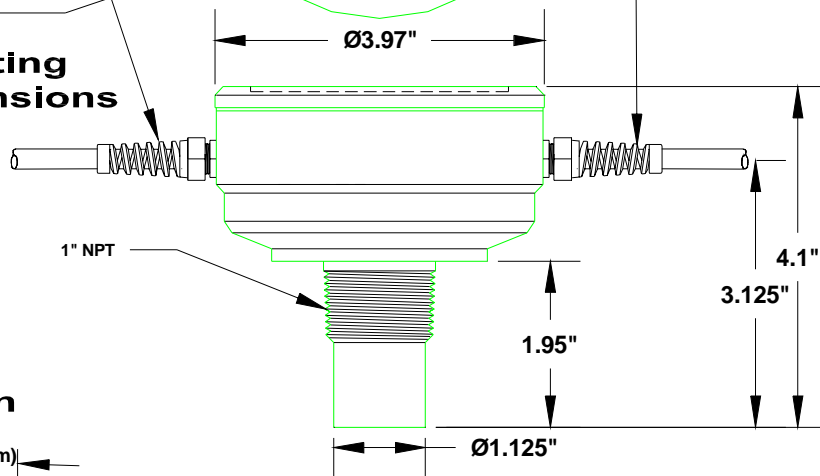
Standard Cable



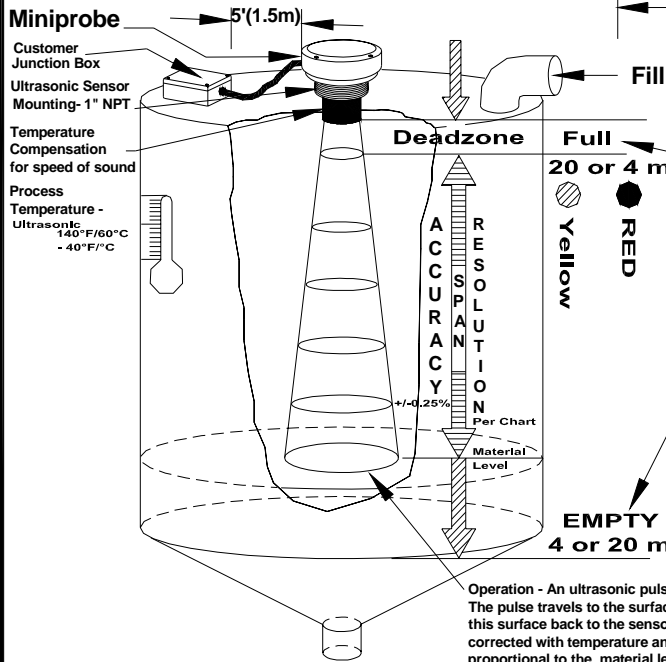
Optional Cable



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.