

# INSTRUCTION MANUAL For Model U3M Ultrasonic Sensors

## FEATURES

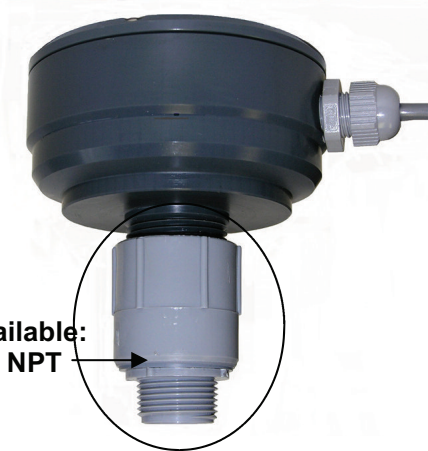
- Standard 5 feet of interconnection cable
- Simple push-button calibration
- Output 4- 20 mA / 20- 4 mA
- Built-in temperature compensation
- Optional High Level Alarm relay
- dual pole output 5A/230 Vac
- Optional RS485 communications with calibration, diagnostics and data logging software
- PLC compatible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

## APPLICATIONS

- Food and Beverages
- Water
- Pharmaceutical

## Mounting Options

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



## ENVIRONMENTAL

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

## MECHANICAL

### Std. Interconnection Cable :

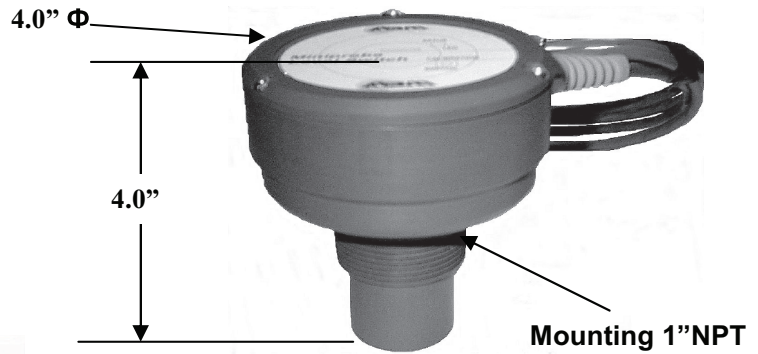
- 5'- Belden #9503 : 3 Pair-24AWG
- 1) Supply : 12 - 30 Vdc 1 pair shielded (Red/Blk.)
- 2) Output : 4 - 20 mA 1 Pair shielded (Blk./Green)
- 3) Comm.:RS485 (optional) 1 Pair Shielded (Blk./Wht.)

### Optional Relay Cable :

- 5'- Belden #9493 : 3-18 AWG unshielded
- 1) Relay (optional) DPST 5A /230Vac

### Enclosure : PVC-94V0

Ingress Protection : NEMA 4X (IP65)



**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 higher \*\* 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 indicates alarm at 20mA. ,blinking green indicates alarm at 4 mA. Relay "ON" set point is adjustable using communications software.

## ELECTRICAL SPECIFICATIONS

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

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

## 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"

**Radar Standard and Exp. Proof Sensors c/w Horn Dimensional Dtl.**  
**Interconnection Diag.**

