

# BABBITT INTERNATIONAL

## ABM Series Ultrasonic Level Transmitters

### FEATURES

- Simple push-button calibration
- 4-20 mA or 20-4 mA output
- Non-volatile memory-batteries not required
- Microprocessor based reliability
- Ignores peripheral obstructions
- Built-in temperature compensation
- Field or bench calibration
- Self-cleaning face eliminates condensation

### APPLICATIONS

- Water / Wastewater
- Chemicals / Oils
- Viscous Fluids / Slurries
- Food and Beverages

### GENERAL

Ultrasonic Level Transmitters allow simple and reliable non-contact level measurement of fluids in a tank, sump or other container. The microprocessor-controlled circuit generates a pulse that is transmitted from the transducer face. This pulse is reflected back from the fluid surface and the transit time is converted into a current output directly proportional to the fluids level.

Because the speed of sound through air changes as the air temperature changes, each transducer has built-in temperature compensation, thus increasing the accuracy of the output.

Our proprietary circuit automatically filters out false echoes that may be produced by peripheral obstructions in the tank. This unique feature allows the unit to work in a standpipe over the full range of operation.

### OUTPUT

The current output can power a load of up to 750 ohms. The output may be proportional or inversely proportional (either 4-20 mA or 20-4mA). The output is isolated on AC powered units. Lost echo hold time is 30 seconds, then an output of 22mA.



### CALIBRATION

A single push-button is used to set the zero and span.

Calibration can be done in the vessel by varying the fluid level or the unit can be calibrated on the bench by aiming the transducer at a target. Factory pre-calibrated units are available.

The zero and span points are independent of each other, fully adjustable over the units range and stored in non-volatile memory. Calibration feed back is via a "green-yellow-red" LED.

Model Number	Operating Range	Operating Frequency	Mounting Thread
ABM300/400-45U	12" to 60'	45 KHz	3" NPT
ABM300/400-52U	11" to 50'	52 KHz	3"/ 2" NPT
ABM300/400-70U	10" to 30'	70 KHz	2" NPT
ABM300/400-80U	8.5" to 20'	80 KHz	2" NPT
ABM300/400-81U	7" to 16'	81 KHz	1.5" NPT
ABM300/400-148U	5" to 9'	148 KHz	1" NPT

# SPECIFICATIONS

## ELECTRICAL

Power (+/-20%): 115VAC/60 Hz  
230VAC/50 Hz (Optional)  
12-30 VDC

Output: 4/20mA or 20-4mA,  
6.1uA resolution  
750 ohms  
Isolated w/ AC supply  
Non-isolated w/ DC supply

Fuse: 0.125A/250V type 2AG

## MECHANICAL

Process Entry: Threaded per chart

Conduit Entry: 1/2" NPT - plastic conduit

Transducer: PVC

Enclosure: PVC-94VO

## ENVIRONMENTAL

Temperature: -40°F to 140°F  
(Transducer & Electronics)

Pressure: 15 PSIG Max.

Area: ENTELA Certified #8294  
- CSA1010.1  
- UL 61010A-1  
- IEC 61010

## OPERATIONAL

Dead Zone / Range Model dependent,  
see chart on front.

Accuracy: +/- 0.25% of span

Lost Echo Hold Time: 30 seconds: output 22mA

Temp. Compensation: In transducer

*Specifications subject to change without notice.*

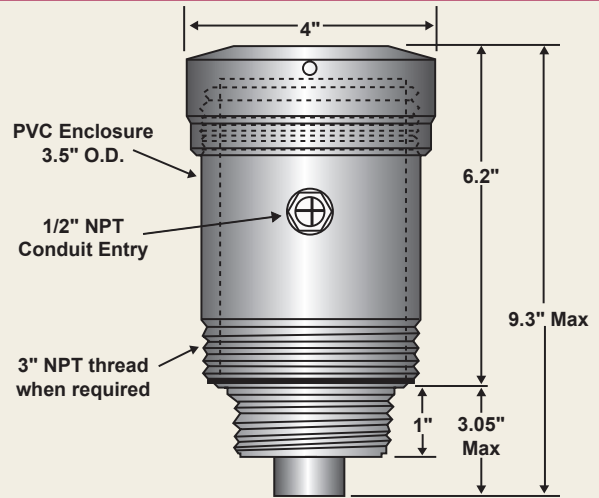
## ORDERING INFORMATION

300 = 3 Wire, DC Power

400 = 4 Wire, AC Power

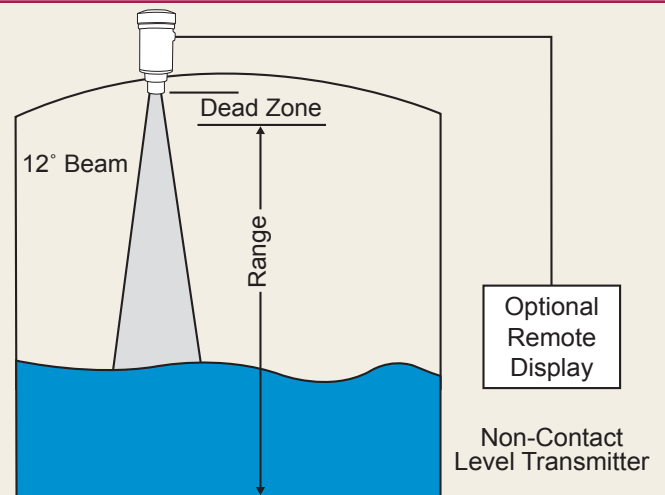
Operating Frequency  
(see chart on front)

ABM - xxx - xxx U



## CALIBRATION

	SET 20 mA	LED COLOR	TIME
	1. Push button	Green	0 seconds
	2. Release button	Yellow	3 seconds
	3. Observe	Flash to Acknowledge	
	SET 4 mA	LED COLOR	TIME
	1. Push button	Green	0 seconds
	2. Release button	Red	7 seconds
	3. Observe	Flash to Acknowledge	



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P.O. Box 70094  
Houston, Texas 77270  
(800)835-8012  
www.babbittlevel.com  
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