

BABBITT INTERNATIONAL

Pulsed Radar Level Transmitters

FEATURES

- Simple push-button calibration
- 4-20mA or 20-4mA output
- Not effected by vapors and fumes
- Optional communication – RS232 or RS485
- PLC compatible – (Modbus RTU)
- Non-volatile memory – batteries not required

APPLICATIONS

- Water / Wastewater
- Chemicals / Acids / Caustics
- Slurries
- Food and Beverage

GENERAL

Radar level transmitters allow simple and reliable non-contact level measurement of fluids in a metal tank. The microprocessor-controlled electronics transmit a 6.3 GHz electromagnetic pulse at the fluid's surface, which is then reflected back to the antenna. The "round trip" time of flight is then calculated to determine the fluid level in the container.

Pulsed radar can "see through" environments that would normally interfere with an ultrasonic type sensor, thus fuming and foams can be ignored in the field.

Our proprietary software senses and analyzes the amplitude and shape of the received echoes. This enables the units automatic gain control to track the process level and also eliminate false echoes from unwanted obstructions such as standpipes or tank walls.

The dielectric constant of a material is important to the proper operation of radar units. Each unit has the ability to work with materials that have a dielectric constant greater than 2.



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 unit at a suitable target. Factory pre-calibrated units are available.

With the optional communication software, the unit can be programmed with any personal computer. This software also enables diagnostics, data logging and special calibration, such as configuring the unit to work in a narrow pipe.

The zero and span points are independent of each other and fully adjustable over the units range.

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

SPECIFICATIONS

ELECTRICAL

Power: AC: 115 VAC 60Hz (+/- 20%)
 230 VAC 50Hz (Optional)
 DC: 12 to 30 VDC
 Output: 4-20 or 20-4 mA
 6.1uA resolution
 750 ohms (Isolated on AC units)
 Fuse: 0.125A / 250V type 2AG

MECHANICAL

Process Entry: 2" NPT
 Conduit Entry: 1/2" NPT
 Antenna: Polypropylene (Standard)
 Teflon (Optional)
 Enclosure: Aluminum (Standard)
 Stainless Steel (Optional)
 NEMA 4 (IP65)

ENVIRONMENTAL

Temperature: Electronics: -40° to 140° F
 PP Antenna: -40° to 190° F
 Teflon Ant.: -40° to 250° F
 Pressure: 150 PSIG Maximum
 Approvals: FCC Part 15 - Low Power
 Communication Device

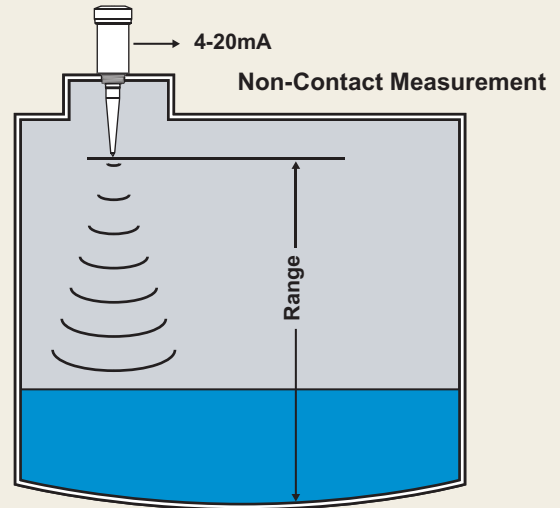
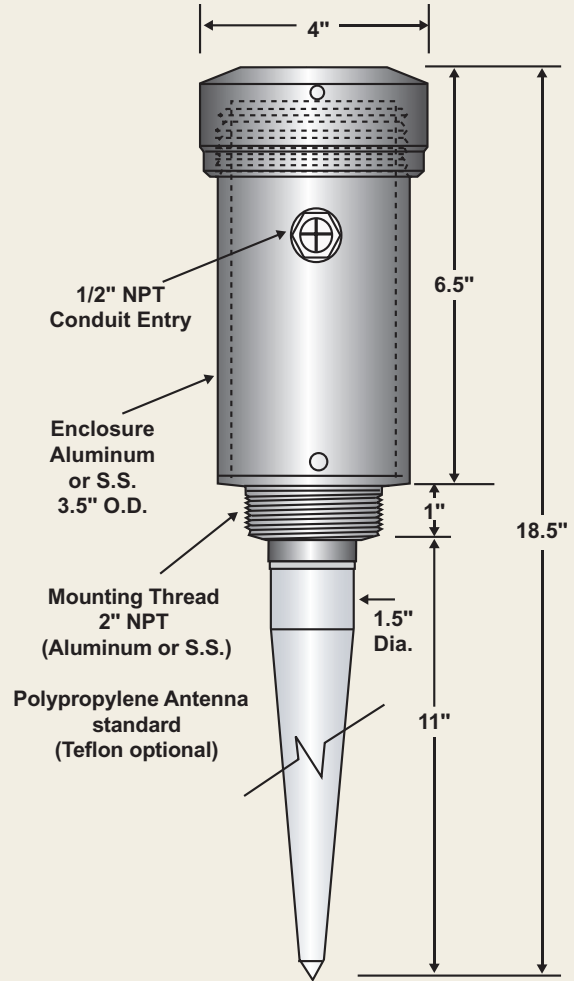
OPERATIONAL

Range: 50 or 100 feet – model dependent
 Accuracy: +/- 0.25% of maximum target
 range in air
 Frequency: 6.3 GHz
 Transmitter Power: 50 uW average
 Loss Echo: 30 sec. hold time, then 22mA output

Specifications subject to change without notice.

ORDERING INFORMATION

300 = 3 Wire, DC Power | ABM-xxx-xxx-R-x
 400 = 4 Wire, AC Power |
 Maximum Range |
 050 = 50 feet |
 100 = 100 feet |
 Options (spell out)
 • Teflon Antenna • SS Housing and Process Conn.
 • 230VAC Power • SS Process Connection Only
 • Communication (choose one) RS232 or RS485



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