BABBITT INTERNATIONAL

Magnetostrictive Direct Insertion Transmitters

- Precision Accuracy up to .01% F.S. (.005% Repeatability)
- Dual 4-20 mA Output (simultaneous) for Level and Interface or Level and Temperature
- Smart Transmitter for HART Protocol
- Diagnostics with Field-replaceable Electronics
- No Maintenance or Recalibration Required
- Field Adjustable Zero and Span
- Remote Reading and Local Indicator Options
- Digital Outputs
- AMS (Automated Management System)







Description

LTM Series Magnetostrictive Level Transmitters may be used as stand-alone top-mounted level transmitters or mounted externally on the LG Series magnetic level gage. They are typically used in applications where precision accuracy / high repeatability are required.

LTM transmitters are calibrated in seconds and never drift due to changes in dielectric, temperature or pressure. Installation is simple using standard conduit piping procedures. A variety of probe and housing options are available.

Features / Benefits

- Loop-powered single or dual 4-20 mA output(s)
- Push button calibration and HART Protocol
- Local indicator options
- Temperatures to 800°F (427°C), (gage mtd. option)
- Dual output options for interface or temperature
- Accuracy up to 0.01% FS (0.005% repeatability)
- Self diagnostics with field replaceable electronics
- 1-26 sec. adjustable time delay
- Special alloy sensors (Monel, Hastalloy, Kynar, etc.)
- Mounts from tank top via flange or coupling or
- externally to magnetic level gage Integral digital display (LTM-200D/300)

Sensor Tube Twist Float Waveguide Magnets Magnetic Field Float from Float Magnets

Typical Applications

- Underground tank gaging
- Batching processes

Waveguide

Inventory control

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- Process level control
- Interface levels
- Corrosive service
- High pressure service (2,000 psi)
- Sanitary service (CIP/SIP)

LTM Series Order Information						
Model (Example): LTM-300-316 -3/4" - 0.60 - 150 - 300 - 30" - X						
100 200D (Dual Housing) 200 (Single Housing) 300 Probe Material 316 = 316 SS TFE = Teflon Sleeve KYN = Kynar Sleeve Specified Materials (Spell Out) Mounting Connections 3/4" NPT Standard or Specify Connection Type & Size Min. Op. Specific Gravity Max. Op. Temp. (°F) Ma. Op. Pressure (PSIG) Measuring Length in Inches (See Drawing)						
Model	LTM-100	LTM-200/200D	LTM-300			
X = HART Output X = Temperature Output	4-20 mA	No	res Digital			
X = Interface (Specify both Gravities)	Yes	No	Yes			
X = Dual Outputs	Yes	No	Yes			
X = Flange Mounted	Yes	Yes	Yes			
X = Stilling Well	Yes	Yes	Yes			
X = Electropolish / 3A	Yes	Yes	Yes			
X = Digital Readout Option	Yes	Yes	Yes			
X = Remote Mounted Electronics	Yes	Yes	Yes			
Note: For information on non-int gages consult factory.	rusive LTM transn	nitters mounted to	o magnetic level			



Level / Interface **Application**

Two outputs available on a single sensor; one for total fluid level and one for interface level.

Magnetostrictive Direct Insertion Transmitters

Applications

- Oil & Gas
- Petrochemicals
- Power Industry
- Maritime
- Biotechnology
- Food Processing
- Beverages
- Pharmaceuticals
- Coatings
- Industrial Gasses
- ... and more



LTM Series Feature List

Model	LTM-100	LTM-200	LTM-200D	LTM-300
Microprocessor Based	Yes	Yes	Yes	Yes
Total or Interface Level	Yes	Yes	Yes	Yes
2nd Output Option	Analog	No	No	Digital
Temp. Output Option	Analog	No	No	Digital
Dual Compartment Housing	No	No	Yes	Yes
HART Protocol Option	Yes	No	No	Standard
Integral LCD Available	Yes	Yes	Yes	Standard
Viewing Glass Option	Yes	Yes	Yes	Yes
316 SS Enclosure	Option	Option	No	No
Volume Correction Option	No	No	Yes	No
Encapsulated Electronics	No	No	Yes	Yes
Field Replaceable Electronics	Yes	Yes	Yes	Yes
Accuracy	.01% of Range	.02% of Range	.01% of Range	.01% of Range
Repeatability	.005% of Range	.01% of Range	.01% of Range	.005% of Range
Non-Linearity	.01% of Range	.02% of Range	.01% of Range	.01% of Range
Failsafe	Field Selectable	Field Selectable	Field Selectable	Field Selectable
Remote Indicator	Option	Option	Option	Option
Damping	Field Adjustable	Field Adjustable	Field Adjustable	Field Adjustable
Ingress Protection	NEMA 4X/IP 67	NEMA 4X/IP 67	NEMA 4X/IP 67	NEMA 4X/IP 67
	XP/I/I/BCD/T3	XP/I/I/BCD/T3	XP/I/I/BCD/T3	XP/I/I/BCD/T3
SP	DIP/II, III/EFG/T3	DIP/II, III/EFG/T3	DIP/II, III/EFG/T3 IS/I/I/CD/T3	DIP/II, III/EFG/T3 IS/I/I/CD/T3



LTM Series Specifications

Model	LTM-100	LTM-200/200D	LTM-300		
Electronics					
Supply Voltage: Temperature:	15-36 VDC -40 to 150°F -40 to 66°C	15-36 VDC -40 to 150°F -40 to 66°C	15-36 VDC -40 to 150°F -40 to 66°C		
Damping: Diagnostics:	1-15 Seconds Onboard	1-15 Seconds/1-25 Onboard	1-25 Seconds Via HART (AMS)		
Primary Output: Secondary Output:	Pushbutton Pushbutton	Pushbutton Pushbutton	Pushbutton Via HART		
Sensor Tube Assembly					
Material: Operating Temperature: Maximum Pressure: Maximum Length:	 316 SS, 5/8" t ubing standard, other materials available -50 to 300° F (higher pressure on gage mounted) 2,000 psig @ 300° F (higher pressure on gage mounted) 30 feet 3/4" MNPT compression fitting standard; flanged available (2" min. nozzle size for float entry) 				
Mounting:					
Stilling Well					
For sensor lengths over 1 Consult factory for drawi	0 ft. or in agitated nos and specification	service, a stilling well is i ons.	recommended.		

Options

Displacer Replacers

Use **Babbitt** magnetostrictive transmitters to retro-fit or replace existing displacers.

Non-Invasive Level Transmitters

Babbitt's non-invasive transmitters are easily mounted to our magnetic level gages. They provide a continuous 4-20 mA control signal proportional to liquid level and are easily retrofitted to existing gages in the field.

Local Indicators

Numerous local indicator options are available from **Babbitt**. Contact your factory representative for full details.



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