

MAVERICK IN-TANK TRANSMITTER

QUEST-TEC SOLUTIONS MAGNETOSTRICTIVE TRANSMITTERS FOR MAGNE-TRAC GAGES

The QTS Maverick In-Tank transmitter is configured with a flexible cable constructed of 316L stainless steel that can be ordered in lengths from 120 inches to 866 inches with a 4-20mA. Once installed and calibrated there is no requirement for scheduled maintenance or recalibration.

Features

- Modular design
- High accuracy and repeatability
- Two channel output available
- Multi-drop HART communication
- Explosion-proof and / or intrinsically safe (model dependent)
- No maintenance required
- $\pm 2.7^{\circ}\text{F}$ ($\pm 1.5^{\circ}\text{C}$) accuracy on temperature output

Applications

- Process level measurement
- Bulk storage
- Interface measurement
- Temperature measurement

Markets

- Pharmaceutical
- Biotech
- Semiconductor
- Specialty Chemical
- Process Chemical
- LPG
- Bulk Storage



[Above] Maverick In-Tank Transmitter



[Above] Maverick In-Tank Transmitter layout

LEVEL OUTPUT	
Measured Variable	Product Level/Interface Level
Output	4-20mA, 2 loops with HART
Full Range	Flexible Sensors: 3050 mm (120 in.) to 12192 mm (480 in.)*** Rigid Sensors: 508 mm (20 in.) to 7620 mm (300 in.)
Non-linearity	Flexible Sensor Element: 0.35% F.S. (Independent BSL) or 0.794 mm (1/32 in.)* Rigid Sensors Element: 0.20% F.S. (Independent BSL) or 0.794 mm (1/32 in.)*
Repeatability	Flexible Sensor Element: 0.01% F.S. or 0.381 mm (0.015in.)* Rigid Sensors Element: 0.005% F.S. or 0.127 mm (0.005 in.)*
Sensor Operating Temperature	-40°C (-40°F) to 125°C (257°F)**

*Whichever is greater **Length dependent. Contact Quest-Tec for higher temperatures ***Contact Quest-Tec for longer lengths & higher pressures

MTLT-5000 MAGNETOSTRICTIVE TRANSMITTER

GAGE LOOP			
Input Voltage Range	10.5 to 36.1 Vdc, 28 Vdc maximum for I.S. ATEX approval		
Reverse Polarity Protection	Series diode		
Lighting/Transient Protection	Stage 1: line-to-ground surge suppressors; 2500 Amps peak (8/20 µsec.) Stage 2: line-to-ground and line-to-ground transient suppressors; 1500 Watts peak (10/1000 µsec.)		
CALIBRATION			
Zero Adjust Range	Anywhere within the active length		
Span Adjust Range	Full Scale ≥ 152 mm (6 in.) from zero		
TEMPERATURE OUTPUT			
Type	4-20 mA from 1,000Ω platinum RTD at 0°C		
Repeatability	±0.18 °F (0.1°C)		
Accuracy	±2.7 °F (1.5 °C)		
Drift	±0.9 °F (0.5°C) per year		
Zero Adjust	-40 to 255 °F (-40 to 124 °C)		
Span Adjust	45°F (7.2°C) minimum, full scale (maximum) = 300°F (149 °C)		
ENVIRONMENTAL			
Humidity	0 to 100% R.H., non-condensing		
Electronics Operating Temperature	-34°C (-30°F) to 71°C (160°F)		
Vessel Pressure	Rigid pipe rated at 69 bar (1000 psi), dependent n float pressure rating (19 bar /275 psi) max-flexible outer pipe*		
Materials (wetted parts)	316L stainless steel **		
FIELD INSTALLATION			
Mounting	NPT fitting (3/4 in. rigid, 1 in. flex) or flange mounting		
Wiring	2- wire connection, shielded cable or twisted pair to screw terminals through a 1/2 in. NPT conduit opening NEMA Type 4X: 15ft (457 cm) pigtail integral cable or Daniel Woodhead (Part No. 70807SS) 6 - pin Male 1/4 in. -18MNPT key-way receptacle, 3/4 in. NPT conduit opening of Ex housing		
DISPLAY (OPTIONAL)	HART COMMUNICATIONS		
Measured Variables	Level 1, Level 2, temperature		
Update Rate	3 Seconds		
Size	12.7mm (0.5 in)		
Number of Digits	16		
Method of Communication Frequency Shift Keying (FSK) conforms with Bell 202 Modem Standard with respect to baud rate and digital "1" and "0" frequencies			
Data Byte Structure 1 Start bit, 8 Data bits, 1 Odd Parity bit, 1 Stop bit			
Digital Process Variable Rate Poll/Response Model 2.0 per second			
AGENCY APPROVALS			
Canadian Standards (CSA)	Intrinsically Safe: Class I, Groups A, B, C, D Class II, Groups E, F, G Division 1, NEMA Type 4X Models: All	Explosion-proof: Class I, Groups B, C, D Class II, Groups E, F, G Division 1, NEMA Type 4X Models: Explosion-proof housing req.	Intrinsically safe: EEx ia IIB + T4 EEx ia IIA + T4 (Consult Factory for PTB/ATEX model numbers)

*Contact Quest-Tec Solutions for Higher Pressure **Contact Quest-Tec Solutions for other materials



Quest-Tec Solutions
The New Standard of Level

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