MODEL MGT-6000
MAGNETOSTRICTIVE LEVEL TRANSMITTER
For Magnetic Liquid Level Indicators

Description

Jogler's MGT-6000 series liquid level transmitter is the latest development in magnetostrictive liquid level sensing technology that is designed exclusively for magnetic level indicators. The MGT-6000 contains a low profile waveguide that is mounted external to the level gauge chamber. This design isolates the waveguide from excessive vibration and temperature. Due to enhanced sensor technology, the output signal is very sensitive, fast, stable, and accurate. The MGT-6000 can be mounted and retrofitted to most magnetic liquid level indicators.

Technology

The MGT-6000 operates based on the magnetostrictive principle. The transmitter sends fixed interval current pulses (start pulse) down the length of the sensing wire, creating an electromagnetic field. When this electromagnetic field is interrupted by the magnetic field of the float, magnetostriction occurs. A constant-velocity torsional stress wave propogates along the length of the sensing wire from the position of the magnetic float. The piezoceramic sensing element converts the torsional stress to an electrical pulse (end pulse). The transmitter electronics measures the time interval between start and end pulses and uses this time to calculate the float position.

Standard Features

- 24 VDC nominal, two wire, loop powered
- LCD display in 4-20 mA, in, cm, and/or percent
- HART protocol field communication
- Local programmability allows for easy parameter changes
- Quick-Cal function for simple recalibration to any span
- Non wetted 316 SS low profile waveguide
- Isolated from excessive process temperature and vibration
- Top, bottom or remote transmitter enclosure mounting locations
- Short offset mounting dimension of 8.00 inches
- Accuracy of 0.01% of total span from enhanced sensitivity
- Very durable with a strong, stable, and noise free output
- State of the art sensor and transmitter electronics
- Unique electronics module design for ease of maintenance
- Maximum transmitter length of 35 feet
- Will retrofit to most magnetic level indicators
- Capable of extreme process operating temperatures
- Explosion proof enclosure, NEMA Type 4X
- FM Approval (U.S. & Canada)
- ATEX and IEC (Approvals pending)

SPECIFICATIONS

Performance

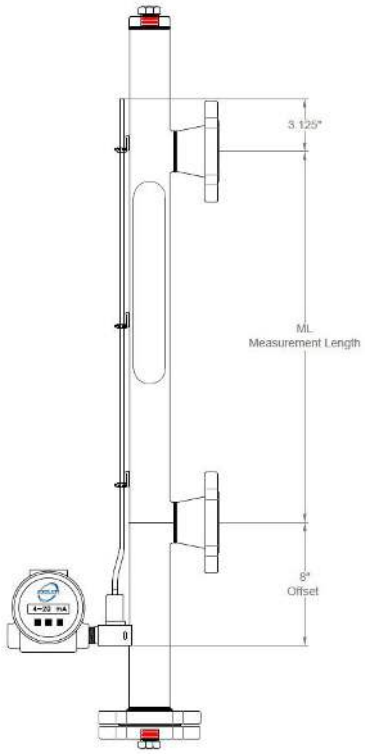
Accuracy	+/- 0.015 inches
Repeatability	0.001% of full span
Linearity	0.020% of full span
Refresh rate	10x per second
Initiation	0.00 seconds
Damping	0.00 to 1.00 @ 0.01 seconds 1.00 to 25.0 @ 1.00 seconds

Electrical

Input	14-30 VDC (24 VDC nominal)
Output	4-20 mA, HART
Resistance	600 Ohms (max) @ 24 VDC
Power	0.66 watts (30 VDC x 0.022 amps)
Error signal	3.60 mA (low) or 22.0 mA (high)
Interface	3 button keypad
Software	HART
Display	2 line, 8 character LCD
Connection	0.75 inch FNPT (Conduit)

Ratings

MAWP	Not applicable (non-invasive)
Ambient temp.	-40° to +158°F (-40° to +70° C)
Process temp.	-150° to +250°F (-100° to +121° C); (Standard) Options to 850°F (454°C)
Approvals	FM Factory Mutual Research Corporation XP / I / 1 / ABCD / T6 Ta = -40°C to +70°C; Type 4X DIP / II / III / EFG / T6 Ta = -40°C to +70°C; Type 4X IS / I / II / III / 1 / ABCDEFG / T4 Ta = -40°C to +70°C NI / I,II,III / 2 / ABCDEFG / T4 Ta = -40°C to +70°C; Type 4X C FM US APPROVED



ORDERING INFORMATION

Model Number: MGT-6000/a/b/c/d/e/f Magnetostrictive Level Transmitter

/A Enclosure Type

S	Single compartment powder coated aluminum
D	Dual compartment powder coated aluminum (pending)
SD	Dual compartment 316 stainless steel (pending)

/B Mounting Position

BL	Bottom mounted electronics left of MLG indicator (standard)
BR	Bottom mounted electronics right of MLG indicator
TL	Top mounted electronics left of MLG indicator
TR	Top mounted electronics right of MLG indicator

/C Probe Type

S1	Rated for process temperature to 250° F without chamber insulation.
S2	Rated for process temperature to 500° F with insulation pad or chamber insulation.
HT90	90 degree bend in waveguide for high temperature service Rated for process temperature 850° F with chamber insulation.
LT	Transmitter housing offset from probe with vapor seal for cryogenic insulation.
LT90	Transmitter housing offset from probe with 90 degree bend in probe for cryogenic service.

/D Options

VI	Vibration isolation mounting brackets
SW	Sensor well to allow removal of probe for cryogenic service
D	Dual level measurement (Interface and total level) (One output 4-20mA; one output HART)

/E Approvals

FM	Standard FM Approval (US & Canada)
ATEX	ATEX Approval (pending)

/F Measuring Length

	Measuring length in inches or mm

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