



COMPACT MAGNETOSTRICTIVE LEVEL TRANSMITTER FOR EXTERNAL MOUNT



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ISO9001 Certified

Model AT600

FEATURES:

- Designed to Mount Externally to K-TEK KM26 or Other Magnetic Level Gauge
- High Resolution 4-20 mA DC Output
- Simple Mounting and installation
- No Process Piping or Valve Required
- Very Compact Design
- Suitable for High Temperature Applications
- Calibrates Without Opening Enclosure
- Stainless Steel Enclosure

SPECIFICATIONS

Electronic Transmitter

Housing type	Explosion Proof 316L Stainless steel with 1/2" FNPT Connection
Mounting	Stainless steel clamps for KM26 chamber
Measuring Range	1 to 16 ft./4.9m (12" increments standard)
Repeatability	.01% of full scale or 0.030", whichever is greater
Non-Linearity	.02% of full scale or .07", whichever is greater
Accuracy	.02% of full scale or .10", whichever is greater
Loop Supply Voltage	13.5 to 36 VDC
Polarity Protection	Diode in series with loop
Output	Standard 4-20 mA DC; Calibration via magnets
Failsafe	Field Selectable: Upscale or Downscale
Operating Temperature	-40 to 170°F / -40 to 77°C Ambient
Humidity	0 to 100% R.H., non-condensing

Sensor Tube

Material	316L Stainless Steel standard, 5/8" O.D.
Process Temperature	-40 to 500°F / -40 to 260°C with options

Approvals

Factory Mutual Research Corporation:

XP/II/1/ABCD/T6 Ta=77°C; I/1/AEx d IIC/T6 Ta=77°C;
DIP / II , III / 1 / EFG / T6 Ta=77°C

IS/II/1/ABCD/T4 Ta=77°C; I/0/AEx ia IIC/T4 Ta=77°C-ELE 0035/NC; Entity;
NI/II/2/ABCD/T4 Ta=77°C; S/II,III/2/FG/T5 Ta=77°C; Type 4X

CSA International:

Hazardous Locations

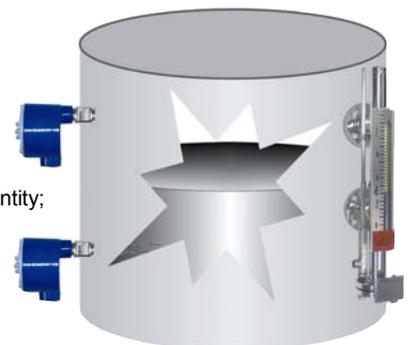
Class I, Div. 1, Grps A,B,C,D; Class II, Div. 1, Grps E,F,G; Class III;
Class I, Zone 1, Ex d, IIC T6:

Intrinsically Safe Entity - For Hazardous Locations:

Class I, Div. 1, Grps A,B,C,D, Temp. Code T4;
Class I, Zone 0, Ex ia IIC T4 when installed per drawing ELE0035,
Max. operating temp. 77°C, Encl. Type 4X.

Cenelec :

Flameproof: EEx d IIC T1-T6
Intrinsically Safe: EEX ia IIC T1-T6



Sample Application
AT600 Mounted on KM26 Level Gauge
for Total Level Indication with VF-30 for
Hi / Low Alarm

ORDERING INFORMATION:

AT600/a/b/c/d/e/f:

/a Mounting (*Not field changeable*)

- /B Bottom Connected Electronic Housing **Standard**
- /T Top Connected Electronic Housing

/b Transmitter Configuration

- /L Local Transmitter; Process Temperature up to 200°F (93°C) or 300°F (149°C) with insulation **Standard**
- /L9 Transmitter Mounted to Extended Sensing Tube with 90°, 3" Radius. Required For High Process Temperature up to 300°F (149°C) without insulation, 450°F (232°C) with insulation pad, 500°F (260°C) with KM26 chamber insulation (order insulation pad or KM26 chamber insulation separately).

/c Probe Type

- /R1 5/8" OD Probe **Standard**

/d Electrical Connection

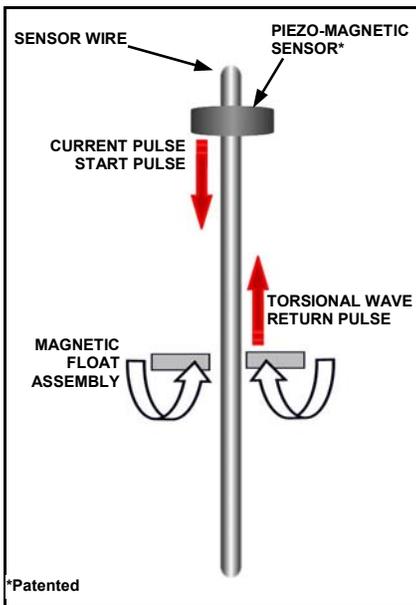
- /F5 1/2" FNPT **Standard**
- /M2 M20 Connection
- /RF RFI Filter with 1/2 in. MNPT connection and flying leads

/e Approvals

- /FM Factory Mutual and CSA Canadian Standard Association
- /CE Cenelec

/f Measuring Length

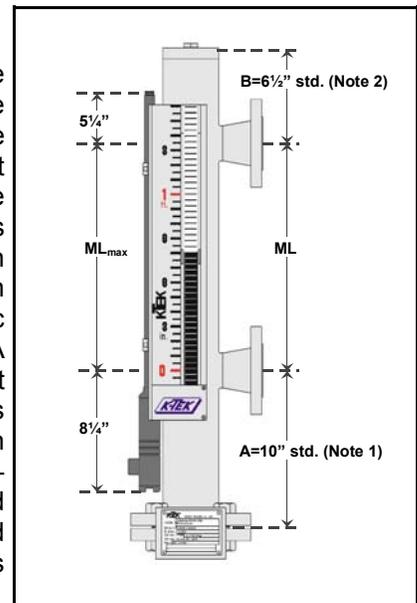
- /ML **Standard Lengths** 1 to 12 feet in 1 foot increments
Custom Lengths to 16 feet; specify in inches or millimeters



PRINCIPLE OF OPERATION

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The AT600 is based upon the magnetostrictive principle. The sensing tube contains a wire which is pulsed at fixed time intervals. The interaction of the current pulse with the magnetic field created by the magnetic float causes a torsional stress wave to be induced in the wire. This torsion propagates along the wire at a known velocity, from the position of the magnetic float and toward both ends of the wire. A patented piezo-magnetic sensing element placed in the transmitter assembly converts the received mechanical torsion into an electrical return pulse. The microprocessor-based electronics measures the elapsed time between the start and return pulses and converts it into a 4-20 mA DC output which is proportional to the level being measured.



DIMENSIONS

NOTE 1: This dimension will need to be extended for:

- a. KM26 with shuttle indicator and ANSI 600# or higher flange rating.
- b. KM26 with magnetic bargraph indicator and ANSI 300# or higher flange rating or 2 1/2" float chamber with 150# weld neck flanges.

NOTE 2: This dimension may need to be extended for a KM26 with flanged top closure.

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