



www.ktekcorp.com



AccuTrak™

Model AT200

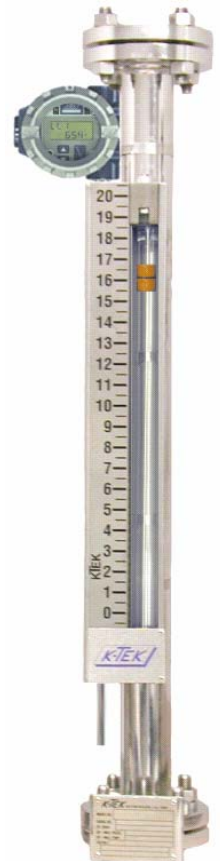
EXTERNAL MOUNTED MAGNETOSTRICTIVE LEVEL TRANSMITTER

FEATURES

- Designed to Mount Externally to K-TEK KM26 or Other Magnetic Level Gauge
- High Accuracy: .01% of Full Scale
- Superior Piezo Ceramic Sensor (Patent # 5,473,245)
- Simple Calibration
- Never Requires Recalibration: Set It & Forget It
- Dual Compartment Housing with Separate Field Terminal Compartment
- Total and/or Interface Level Measurement
- Process Temperature Range -320° F to 800° F (-196 to 427°C) with options
- Field Replaceable Module
- Built In RFI / EMI Filter

OPTIONS

- Local Indication with LCD Display
- Two Level Indications
- HART Protocol
- Honeywell DE Output
- Foundation Fieldbus Output
- Glass Viewing Window
- 316L SS Enclosure
- 20 Point Strapping Table



SPECIFICATIONS

Electronic Transmitter

Housing type	Explosion Proof Powder Coated Cast Aluminum or Stainless Steel Dual Compartment
Electrical Connection	1/2" FNPT or M20
Repeatability	.005% of full scale or 0.015", whichever is greater
Non-Linearity	.01% of full scale or .035", whichever is greater
Accuracy	.01% of full scale or 0.050", whichever is greater
Supply Voltage	13.5 to 36 VDC - Loop Powered ; 9 to 32 VDC - Foundation Fieldbus
Reverse Polarity Protection	Diode in series with loop
Output	Standard 4-20 mA DC Loop HART protocol (optional) Foundation Fieldbus (optional) <ul style="list-style-type: none"> • ITK4.01 Compliant • 5 AI and 5 PID blocks • 12.5 mA Quiescent Current Draw • LAS Capable Honeywell DE (optional)
Dampening	Field adjustable by means of pushbuttons. Range: 0.1 to 36 seconds
Burnout	Jumper selectable upscale (21 mA) or downscale (3.6mA)
Temperature	-40 to 170°F (-40 to 77°C) ambient
Humidity	0 to 100% R.H., non-condensing



SPECIFICATIONS

Sensor Tube

- Material** 316L SS
- Process Temp.** -320 to 250°F (-196 to 121°C) ; 800°F (427°C) with options
- Measuring Range** 1 to 50 feet (304.8mm to 15.24m) ; 90 degree probes 1 to 25 feet (304.8mm to 7.62m)
- Mounting** Stainless steel clamps for KM26 Magnetic Level Gauge chamber (included)

Approvals:



FM Factory Mutual Research Corporation
 XP / I / 1 / ABCD / T6; DIP / II, III / 1 / EFG / T6
 IS / I / 1 / CD / T4 - ELE0001¹
 IS / I / 1 / ABCD / T4 - ELE1036^{1,2}
 NI / I / 2 / ABCD / T4
 TYPE 4X



CSA Canadian Standards Association
 XP / I / 1 / ABCD / T6; DIP / II, III / 1 / EFG / T6
 IS / I / 1 / CD / T4 - ELE0001¹
 NI / I / 2 / ABCD / T4
 TYPE 4X



ATEX
 FP: Ⓢ II 1/2 GD EEx d IIC T6 T80°C; Ⓣ02 ATEX 132659
 IS: Ⓢ II 1/2 GD EEx ia IIB T6 T80°C; Ⓣ02 ATEX 132658¹
 IS: Ⓢ II 1/2 GD EEx ia IIC T4 T80°C; Ⓣ02 ATEX 132658^{1,2}
 Ingress protection: IP67



GOST Russia
 FP: 1ExdIICT6
 IS: 0ExialIBT6¹
 Ingress protection: IP67
 Sanitary Hygienic Certificate



IEC International Electromechanical Commission
 IS: EX ia IIB T4 ; IECEx ULD 06.0013X¹



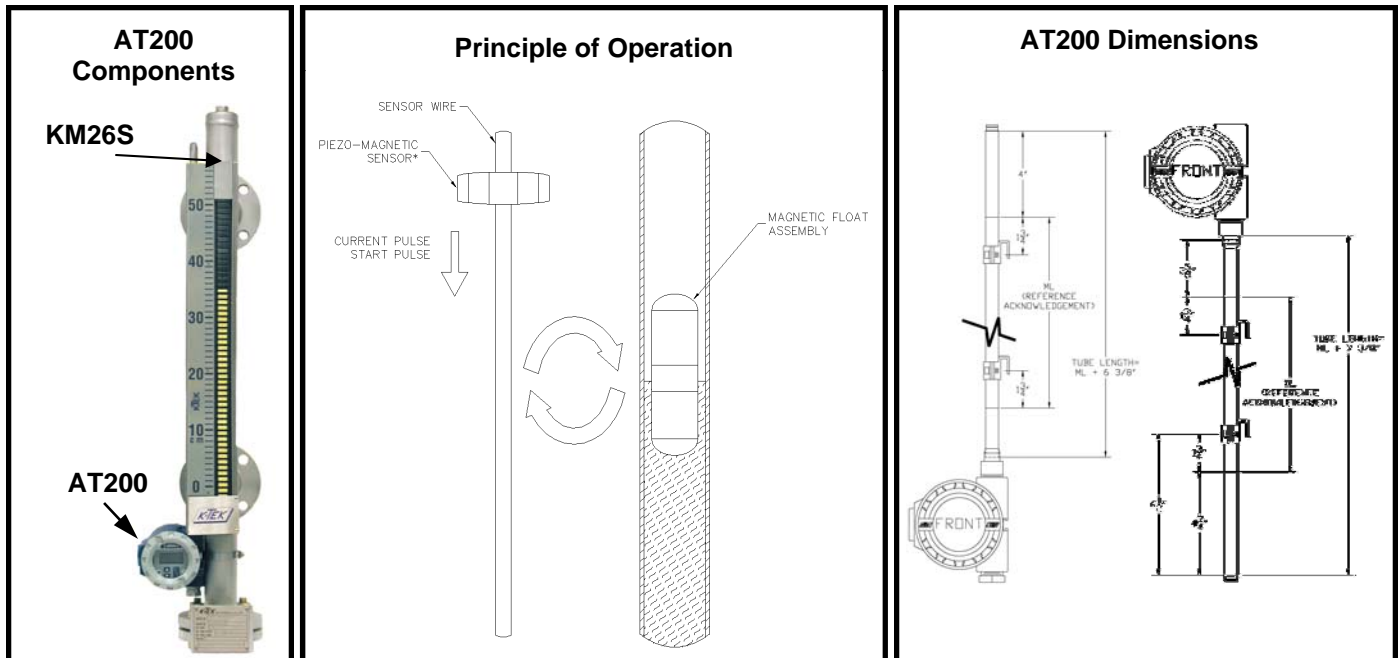
Chinese Approvals Available
 when purchased through
 K-TEK (Tianjin) Level Co. LTD.
 TEDA-Tianjin, China +86 (22) 598 13078

- Notes:** 1. Excludes RI (secondary analog output) & Honeywell DE options.
 2. Fieldbus & FISCO

Safety Third Party Certified Safety Integrity Level (SIL) data (FMEDA analysis) for Safety Instrument Systems

PRINCIPLE OF OPERATION:

The AT200 is based upon the magnetostrictive principle. The sensing tube contains a wire which is pulsed at fixed time intervals creating a magnetic field around the wire. The interaction of the magnetic field around the wire and 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 ceramic 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 position measurement which is proportional to the level of the float.



ORDERING INFORMATION

AT200/a/b/c/d/e/f/g/h:

/a Mounting

- B** Bottom Connected Electronic Housing
- BW** Bottom Connected Electronic Housing with Window Cover
- T** Top Connected Electronic Housing
- TW** Top Connected Electronic Housing with Window Cover

/b Transmitter Configuration

- L** Standard Local Transmitter Housing
Note: Process Temperature up to 200°F (93°C) or 300°F (149°C) with insulation pad or KM26 chamber insulation.
 - L9** Transmitter Housing Mounted to Extended Sensing Tube with 90°, 3" Radius Bend
Notes: 1. Required For High Process Temperature up to:
 - A. 300°F (149°C) without insulation pad or chamber insulation
 - B. 450°F (232°C) with insulation pad or chamber insulation
 - C. 800°F (427°C) with KM26 chamber insulation2. Order insulation pad or KM26 chamber insulation separately
 - 3. 25 ft. (7.6m) maximum measuring length
 - 4. LCD Indicators will be visible at 90° from horizontal
- C** Offset Transmitter Housing with Vapor Seal for service below ambient. (Use with IW probe type.)
- L9C** Offset Transmitter Housing with Vapor Seal Mounted to Extended Sensing Tube with 90°, 3" Radius Bend for service below ambient
Note: LCD Indicators will be visible at 90° from horizontal

/c Transmitter Housing Type

- A** Dual Compartment Aluminum Housing (Standard)
- S** Dual Compartment Stainless Steel Housing

/d Probe Type

- R1** Standard 5/8" OD Probe
- H2** High Temperature Sensing Tube Option for process temperature above 450°F (232°C) (requires /L9 and KM26 chamber insulation).
- IW** Insulation Well to allow the insertion and removal of the probe when mounted to a cryogenic insulated level gauge (this is the preferred configuration for cryogenic service when there is no flange on top of the KM26).

/e Electronic Module with One Analog Output

- X** None
- M1** One Level
- M2** One Level, LCD Indicator ²
- M3** One Level, HART Protocol
- M4A** One Level, LCD Indicator, Communications ^{1,2,3,4}
- M4B** Two Levels, LCD Indicator, Communications ^{1,2,3,4}

- Notes: 1. Default Communication is HART Protocol
2. Add "D" suffix to module option for Honeywell DE (class 0 support)
3. Add "F" suffix to module option for Foundation Fieldbus ITK 4.01 compliant
4. Add "S" suffix to module option for 20 Point Strapping Table (not available with "D" suffix)



/f Second Analog Output

- X** None
- RI** Second Electronic Module with One Analog Output and LCD Indicator
Notes: 1. Not available with M1, M2 & M3 Module types
2. Only for use with HART Protocol equipped electronics modules
3. The RI100 is only approved as an Explosion Proof device
4. Analog output field selectable to any of the two levels
5. Housing type will be same as primary transmitter housing (/c above)

/g Approval

- FM** Factory Mutual
- CSA** Canadian Standard Association
- CEX** ATEX Flameproof
- CEI** ATEX I.S.
- IEI** International Electromechanical Commission I.S.
- GR** GOST Russia



Note: Intrinsically Safe Approvals exclude RI (secondary analog output) & Honeywell DE options.

/h Measuring Length

- ML** Specify the measuring length in inches or mm

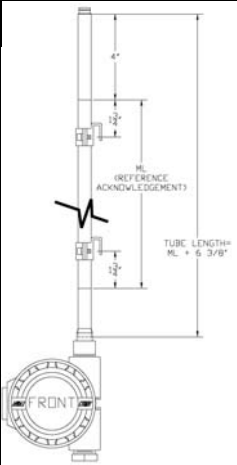
Available Accessories:

- VI-TRANSMITTER:** Vibration Isolators for use on extreme vibration applications (compressor skids, etc.)
- M20 ISO FITTING:** M20 Female Electrical Connection (Brass or Stainless Steel)
 - MM** Brass
 - MMS** Stainless Steel

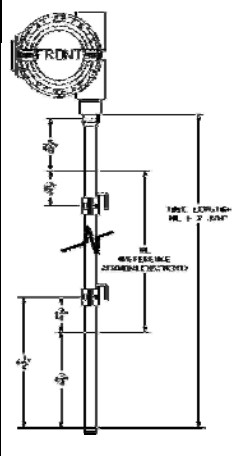
QuikShip Ordering Information

Quick Shipments are available (see models below). Please provide the Serial Number to the existing AT200 or KM26. For new units, provide the Maximum Temperature and the level gauge "A" dimension. This information must be provided with the Purchase Order to ensure a 1-5 working day shipment. No deviation from the QuikShip configuration will be accepted. Incomplete inquiries will not be processed. Please replace the word "approval" with all applicable approvals.

Bottom Mounted Configurations

Model Number:	AT200/BW/L/A/R1/M4A/X/"approval"/"ML"		
QuikShip #	"ML" Measuring Length		
AT200QS1	12" / 305mm		
AT200QS2	24" / 610mm		
AT200QS3	36" / 914mm		
AT200QS4	48" / 1219mm		
AT200QS5	60" / 1524mm		
AT200QS6	72" / 1829mm		
AT200QS7	84" / 2134mm		
AT200QS8	96" / 2438mm		
			<p>Replace the word "approval" with the required approval code: FM, CSA, CEX, CEI, IEI, or GR</p>

Top Mounted Configurations

Model Number:	AT200/TW/L/A/R1/M4A/X/"approval"/"ML"		
QuikShip #	"ML" Measuring Length		
AT200QS9	12" / 305mm		
AT200QS10	24" / 610mm		
AT200QS11	36" / 914mm		
AT200QS12	48" / 1219mm		
AT200QS13	60" / 1524mm		
AT200QS14	72" / 1829mm		
AT200QS15	84" / 2134mm		
AT200QS16	96" / 2438mm		
			<p>Replace the word "approval" with the required approval code: FM, CSA, CEX, CEI, IEI, or GR</p>