

Liquid & Solid Level Measurement

Magnetostrictive Level Detection Transmitters

ACCUTRAK SERIES TRANSMITTER FEATURES

- High accuracy .01 or .02% full scale depending on models
- Simple push button calibration with no recalibration necessary
- Set it and forget it. Never needs recalibration
- No drift due to changes in:
 - Dielectric
 - Vapor composition
 - Temperature
 - Pressure
- Vibration isolators for compressor service
- Superior piezo ceramic sensor (patent #5,473,245)
- Stainless steel enclosure
- Replaces
 - Differential pressure transmitters
 - RF / Capacitance transmitters
 - Nuclear transmitters
 - Mechanical cable and pulley gauges
 - Servo gauges
 - Ultrasonic transmitters
- Retrofits on existing displacer chambers and level gauges
- Inventory level measurements

INTERFACE LEVEL MEASUREMENT

K-TEK's new line of Magnetostrictive Level Transmitters feature the finest technology available for liquid level interface measurement and control

K-TEK MLTs actually provide 2 independent outputs: 1 for interface and a 2nd for total level. Designs are available for differences of specific gravity down to .02 difference. Most commonly applied to oil and water separator interface, this technique has applications in many process applications. Others include: HF acid / propane vessels, desalters, and sumps.



K-TEK

Magnetostrictive Level Transmitter Series



	AT100	AT100S	AT500	AT200 with KM26	AT600 with KM26
Microprocessor Based	YES	YES	YES	YES	YES
Total or Interface Level	YES	YES	YES	YES	YES
2nd Level Output Option	YES	YES	NO	YES	NO
Temperature Output Option	YES	YES	NO	YES	N/A
Dual Compartment Housing	YES	YES	NO	YES	NO
HART Protocol Option	YES	YES	NO	YES	NO
Foundation Fieldbus (5.1.0)	YES	YES	NO	YES	NO
Honeywell DE Protocol Option	YES	YES	NO	YES	NO
Integral LCD Available	YES	YES	NO	YES	NO
Glass Viewing Window Option	YES	YES	NO	YES	NO
SS 316 Enclosure Option	YES	YES	316L standard	YES	316L standard
Maximum Length	75 feet / 23m	See product data sheet	75 feet / 23m	75 feet / 23m	75 feet / 23m
Strapping Table (20 Segment)	YES	YES	NO	YES	NO
Encapsulated Electronics	YES	YES	YES, potted	YES	YES, potted
Field Replaceable Electronics	YES	YES	NO	YES	NO
Accuracy	.01% of range	.01% of range	.02% of range	.01% of range	.01% of range
Repeatability	.005% of range	.005% of range	.01% of range	.005% of range	.005% of range
Non-Linearity	.01% of range	.01% of range	.02% of range	.01% of range	.01% of range
Burnout Protection	Field selectable	Field selectable	Field selectable	Field selectable	Field selectable
Repeater Indicator Option	YES	YES	NO	YES	NO
Maximum Temperature	800°F / 427°C	450°F / 232°C	250°F / 121°C	800°F / 427°C	450°F / 232°C
Maximum Pressure	3000 PSI / 207bar	1750 PSI / 120.7bar	950 PSI / 66bar	N/A	N/A

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K-TEK



Magnetostrictive Level Detection

K-TEK

Is a leading global
manufacturer

of state-of-the-art instrumentation for liquids and bulk solids level detection. The company has over 350,000 installations worldwide in such applications as: oil and gas production, chemical processing, pulp and paper processing, mining and construction, food and beverage manufacturing, plastics manufacturing, and power generation. K-TEK operates offices, service locations, and R&D facilities around the world.

K-TEK focuses its extensive engineering, manufacturing and applications expertise exclusively in the area of level measurement. Year after year, the company pushes the leading edge of technological innovation. With its consistent commitment to R&D, it boasts one of the largest investment per revenue ratio of any level company in the world.

K-TEK is also committed to the highest degree of product quality and customer service, which is exemplified in the solutions oriented approach that is taken with each individual customer. K-TEK is set apart from the competition by its ability to design and manufacture equipment for some of the toughest industry applications. The company continues to solidify its position as the world leader in level detection by introducing Ultrasonic Level Measurement devices incorporating GAP technology.

INDUSTRIES SERVED

CHEMICAL

PHARMACEUTICAL

OIL & GAS

POWER GENERATION

BIOTECHNOLOGY

SHIPS / MARINE

WASTEWATER

FOOD & BEVERAGE

IEC61508 CERTIFIED

World's FIRST
*SIL2 Certified

Magnetostrictive Level Transmitter

AccuTrakTM

AT100[™] Magnetostrictive Liquid Level Transmitter

- High accuracy: .01% of full scale
- Simple Calibration: push button or HART protocol with no recalibration required
- Dual compartment housing with separate field terminal compartment
- Loop powered to 30' (7.62M) ML (Standard Probe)
- Optional Pressure to 3000 psi (207 bar), Std. 1800 psi (124.1 bar)
- Temperature range: -320°F to 800°F (-196°C to 427°C) with options
- Field replaceable module
- HART protocol, Honeywell DE or Foundation Fieldbus communications available
- Dual compartment enclosure (optional 316SS enclosure)
- SIL 2 certified
- SIL 3 capable
- Superior piezo ceramic sensor (patent #5,473,245)

AT200[™] Magnetostrictive Level Transmitter

- Designed to mount externally to K-TEK KM26 or other magnetic level gauges
- High accuracy: .01% of full scale
- Superior piezo ceramic sensor (patent #5,473,245)
- Never requires recalibration: set it and forget it
- HART protocol, Honeywell DE or Foundation Fieldbus communications available
- SIL 2 certified
- SIL 3 capable
- Stainless steel enclosure

AT100[™]

KM26[™] Magnetic Liquid Level Gauge

AT 100 with Flexible Sensor

- For applications for longer probe lengths
- Available in Teflon sensor inserted into 1" segmented sensor well
- Available in stainless steel inserted into a 5/8" OD rigid probe to 15' (4.57M)
- Superior piezo ceramic sensor (patent #5,473,245)

AT100S[™] Sanitary Magnetostrictive Level Transmitter

- High accuracy: .01% of full scale
- Simple calibration: push button or HART protocol, Honeywell DE or Foundation Fieldbus communications available
- Dual compartment housing with separate field terminal compartment
- Loop powered to 30' (9M) probe length
- Pressure to 1750 psi (120.7 bar)
- Temperature range: -320°F to 450°F (-196°C to 232.2°C) with options
- Field replaceable module
- HART protocol, Honeywell DE or Foundation Fieldbus communications available
- Dual compartment enclosure (optional 316SS enclosure)
- SIL 2 certified
- SIL 3 capable
- Superior piezo ceramic sensor (patent #5,473,245)

AT500[™] Compact Magnetostrictive Liquid Level Transmitter for Direct Insertion

- High resolution 4-20 mA output
- Simple mounting and installation
- No process piping or valve required
- Calibrates without opening enclosure
- Stainless steel enclosure
- Temperature to 250°F / 121°C
- Superior piezo ceramic sensor (patent #5,473,245)

Magnetostrictive Level Detection for Liquids and Solids

KVIEW100[™] KVIEW100 Digital Controller

- MODBUS RTU communications
- Ability to read 8 ea. 4-20 mA inputs and 4 ea. pulse inputs
- Relay outputs with adjustable dead band
- 2 ea. 4-20 mA programmable outputs
- Large transfective display makes it easy to read indoors or in direct sunlight

KVIEW10[™] KVIEW10 Digital Controller

- MODBUS RTU communications
- Ability to read and power 4 ea. 4-20 mA input signals and 2 ea. pulse inputs
- Relays with adjustable DB and 4 ea. 4-20 mA outputs
- Large transfective display makes it easy to read indoors or in direct sunlight
- Displays in feet and inches, psi, mA, gpm, or custom units

KM26[™] Magnetic Liquid Level Gauge



LPM200[™] Loop Powered Digital Indicator

- Two ranges of zero and span allows calibration in engineering units
- 2.5 volt maximum voltage drop

- Large 3/4 inch, 3.5 digit liquid crystal display
- Operating power derived from current loop
- NEMA 4X or explosion proof versions
- Designed and constructed to FM, UL, NEMA and ANSI / ISA guidelines
- Compact design



DPM100[™] Digital Process Monitor

- 5 digit digital display
- Displays process variable in engineering units
- 2-alarm setpoints with programmable hysteresis

AT600[™] Compact Magnetostrictive Level Transmitter

- High resolution 4-20 mA output
- Simple mounting and installation
- No process piping or valve required
- Calibrates without opening enclosure
- Stainless steel enclosure
- Superior piezo ceramic sensor (patent #5,473,245)

AT100[™] Magnetostrictive Level Transmitter shown with Magwave



AT200[™] Magnetostrictive Level Transmitter shown with Magwave

Typical Applications for Magnetostrictive Transmitters (MLT)



Process Vessels

K-TEK transmitters are used extensively around the world to accurately measure level in process vessels. High accuracy and no maintenance are two of the most common reasons for choosing this technology. With ratings to 800°F / 427°C and 3000 PSI / 207bar, MLTs are suitable for almost any application. Fieldbus, HART and Honeywell DE protocols options make our MLTs easy to connect digitally to most control systems. Internal LCDs provide indication as 4-20 mA, %, or engineering units.



Storage Tanks

Concerns of high accuracy, low maintenance and reasonable cost leads customers to install flexible probe versions of the MLTs in their storage tanks. With the ability to be easily installed to a maximum of 75 feet / 23m, almost any liquid storage application can be handled. Some common liquids include water, acids, caustics, propane, ammonia, oils, fuels, chemicals, or waste liquids. An optional internal 20-segment increment table allows the MLT to provide accurate output in horizontal or round vessels.



KM26 Magnetic Level Gauges

The addition of a MLT to a Magnetic Level Gauge allows a customer to eliminate numerous bridges and process connections, providing benefits to customers. Some of the most common benefits include: ease of maintenance, no calibration, reduced weight, reduced cost, and no contact with the process fluids. It often is the easiest way to replace DP transmitters, "sight glasses," liquid level displacers, or other problematic level instruments.

RI100[™]

K-TEK RI100 Repeat Indicator with AT200 Magnetostrictive Level Transmitter

- Used when second 4-20 mA (analog) output is required
- Loop powered
- LCD display
- Field replaceable module
- Simple calibration

- Dual compartment housing with separate field terminal compartment
- Built in RFI / EMI filter
- 2" pipe stand mounting bracket
- Glass viewing window

K-TEK

*SIL2 certification valid only at Prairieville manufacturing facility.