



# THE DIFFERENCE IS CLEARLY VISIBLE

**MAGNA-SITE  
MAGNETIC LIQUID LEVEL GAUGE**



# MAGNA-SITE MAGNETIC LIQUID LEVEL GAUGE FROM KENCO

## GAUGE FEATURES

- Maximum safety – No glass is used in the construction
- Optimum visibility – Fluorescent flags are visible from great distances
- Float with 360 degree magnetic flux—Maintains a strong magnetic field in all directions to provide constant interaction with flag assembly, level switches and magnetostrictive transmitter
- Float is internally weighted based on specific gravity so that location of magnets inside float coincide with liquid level in gauge
- Double flag protection—Flags are hermetically sealed inside a Teflon® encapsulated assembly which is shrouded by a 300 series stainless steel enclosure on three sides with a UV-stabilized high-impact clear polycarbonate shield
- Adjustable viewing angles—Flag assembly can be rotated to any angle to provide maximum visibility
- Multiple mounting options—Engineered construction allows for a variety of mounting configurations
- Compatibility—A broad range of materials can be used to withstand harsh chemicals
- Remote level indication—Intrinsically safe or Explosion-proof magnetostrictive level sensor/transmitter provides an output signal via Analog (4-20mA) with HART®, Modbus RTU (Remote Terminal Unit) or DDA (Direct Digital Access)
- Height scale—304 stainless steel with no. 3 finish and large etched characters/lines for easy reading
- High/Low level switches—Explosion-proof switches can signal an alarm, operate a pump/valve or act as an emergency shut down
- Convenience—Easy installation and very low maintenance
- Warranty—Two year guarantee against defects
- Reliability—KENCO has been building magnetic liquid level indicators since 1985

## OPERATING PRINCIPLE

The KENCO Magna-Site is a magnetic liquid level gauge used to determine the volume of liquid contained within a tank. Because the Magna-Site eliminates the need for glass, high pressure applications and hazardous locations are protected from the danger of a chemical spill due to glass failure.

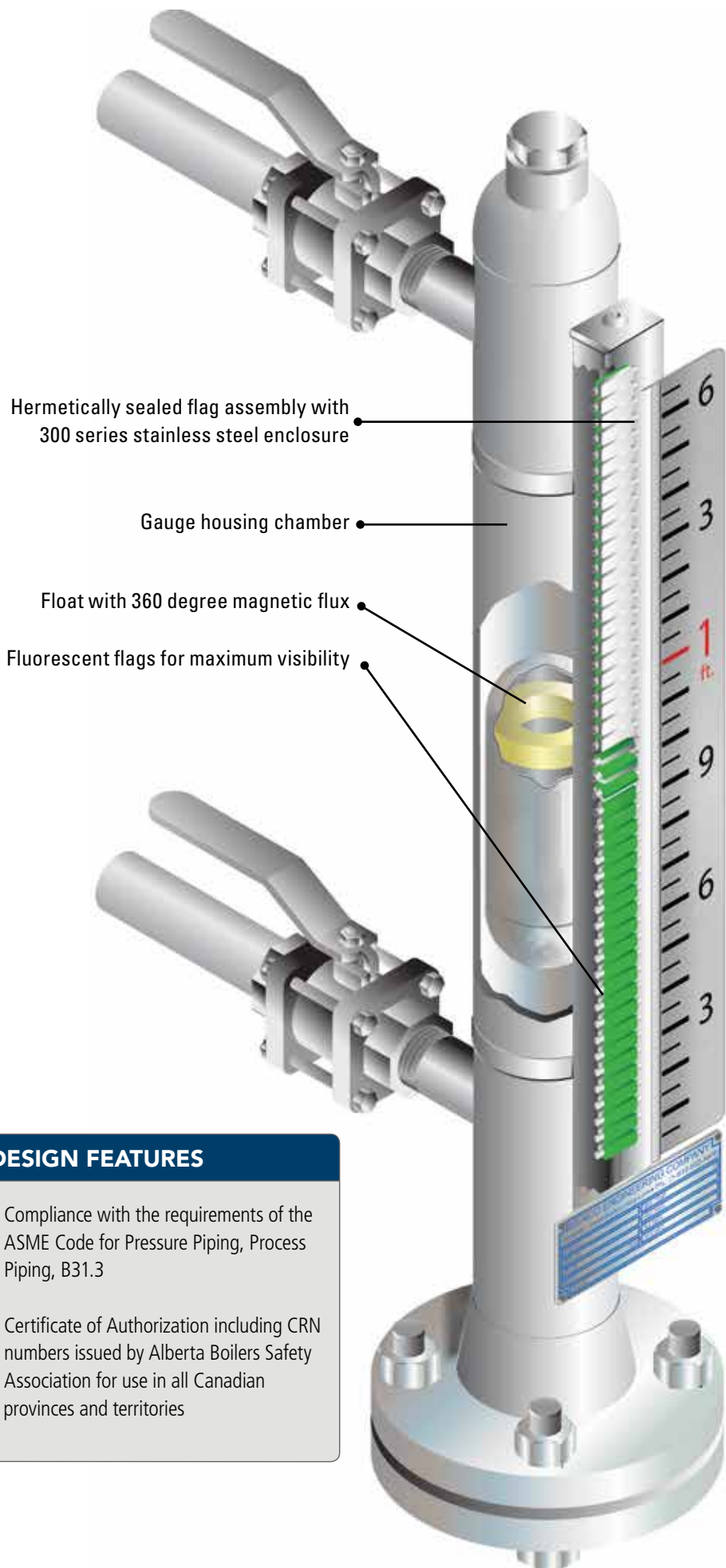
The KENCO Magna-Site utilizes three major components: the gauge housing chamber, the magnetic float, and the magnetic flag assembly.

The gauge housing chamber is typically mounted adjacent to the side of the tank. It is constructed to withstand the same temperatures and pressures as the tank itself. It is equipped with the appropriate tank mounting connections for easy installation and to allow equalization of liquid level in tank and gauge.

Inside the gauge housing chamber is the magnetic float, which contains radially-positioned magnets to provide a 360 degree magnetic flux field. Each float is internally weighted based on specific gravity so that the liquid level in the gauge coincides with the location of the magnets inside the float.

Attached to the gauge housing chamber is the magnetic flag assembly. This is the visual means of liquid level indication for the KENCO Magna-Site. The assembly is made up of a series of bicolored, fluorescent flags. As the magnetic float rises and falls with the liquid level in the gauge housing chamber, a magnet embedded in each flag reacts to the 360 degree magnetic flux of the float. This magnetic interaction causes each flag to rotate 180 degrees. The flags below the magnetic flux of the float will flip to fluorescent green, while those flags above the float level remain bright white. Other colors are available upon request.

When your application priorities are safety, visibility, and accuracy, the KENCO Magna-Site is the low-maintenance, cost-effective solution.



Hermetically sealed flag assembly with 300 series stainless steel enclosure

Gauge housing chamber

Float with 360 degree magnetic flux

Fluorescent flags for maximum visibility

**DESIGN FEATURES**

- Compliance with the requirements of the ASME Code for Pressure Piping, Process Piping, B31.3
- Certificate of Authorization including CRN numbers issued by Alberta Boilers Safety Association for use in all Canadian provinces and territories

**INDUSTRIES SERVED**

- Chemical and Petrochemical Refineries
- Water and Waste Treatment
- Pulp and Paper Processing
- Power Plants
- Pharmaceutical Processing
- Food and Beverage Processing

**COMMON APPLICATIONS**

- Fuels and Solvents
- Oil Production and Refining
- Lubrication Oils
- Detergents and Soaps
- Boiler Feedwater Tanks
- Fertilizers and Pesticides
- Ammonia Tanks
- Scrubber Tanks
- Storage Tanks
- Acid Tanks

## FLOAT CHARACTERISTICS

- 360 degree magnetic flux field provides constant interaction with flag assembly, level switches and magnetostrictive transmitter
- Internally weighted based on specific gravity so that location of magnets inside float coincide with liquid level in gauge
- Cylindrical geometric shape ensures more accuracy in interface specific gravity applications
- Rare earth magnet assembly has an unusually high energy output and is highly resistant to demagnetization; they will not demagnetize at high temperatures like ceramic magnets
- Standard float material is 316 stainless steel. Other float materials are available. Contact KENCO for applications requiring special float materials
- Standard float good to a minimum specific gravity of 0.50. Contact KENCO for applications requiring lower specific gravities
- Float is non-vented, so vapors cannot condense inside float
- Compact length minimizes ground clearance requirements



## FLAG ASSEMBLY FEATURES

- Fluorescent flags for maximum visibility
- No glass in flag assembly
- Shield is UV-stabilized high-impact clear polycarbonate
- Enclosure is hermetically sealed and nitrogen filled to prevent internal condensation and ensure 100% flag rotation every time
- Totally enclosed with clear F.E.P. Teflon® tubing for maximum chemical resistance
- 300 series stainless steel chamber provides maximum protection from puncture of F.E.P Teflon® tubing
- 300 series stainless steel enclosure is more compatible with corrosive environments than aluminum
- Double O-ring seal assures that the flag assembly will not lose its nitrogen filled atmosphere
- Each flag contains an Alnico 8 magnet, making each flag highly resistant to demagnetization
- Flags are UV-stabilized, high-temperature thermoplastic and molded in color to prevent fading
- No ceramic magnets are used
- Maximum constant service temperature of 400 °F
- About the sealing process:  
The end block on one end of the flag rail is equipped with a positive stop charge valve to allow the flag assembly to be hermetically sealed. The flag assembly is attached to a vacuum pump through a manifold which is connected to a cylinder of ultra high-purity nitrogen gas. We evacuate the flag assembly with a vacuum pump to 28" Hg and then internally pressurize it with ultra high-purity nitrogen gas.

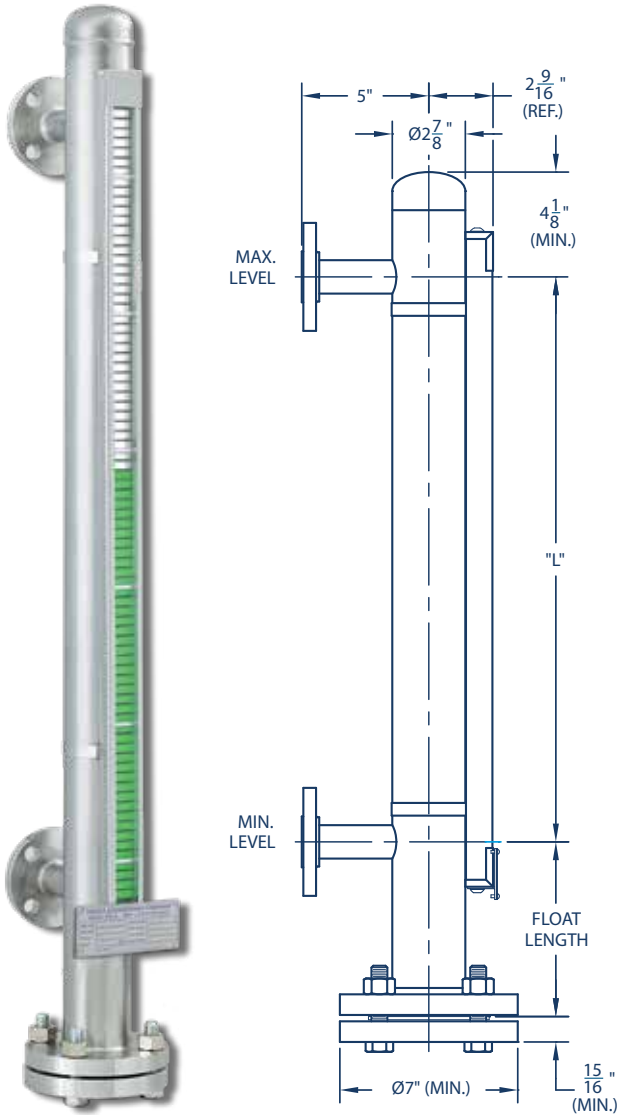
## HIGH-TEMPERATURE FLAG ASSEMBLY FEATURES

- Flags are 316 stainless steel
- Flag color is heat cured at 400°F with heat resistant paint
- All 300 series stainless steel flag assemblies are ideal for severe environments
- Alnico 8 magnets are nickel plated to withstand severe environments



# MOUNTING STYLE OPTIONS

## KMLG-C: Flanged Side Connections



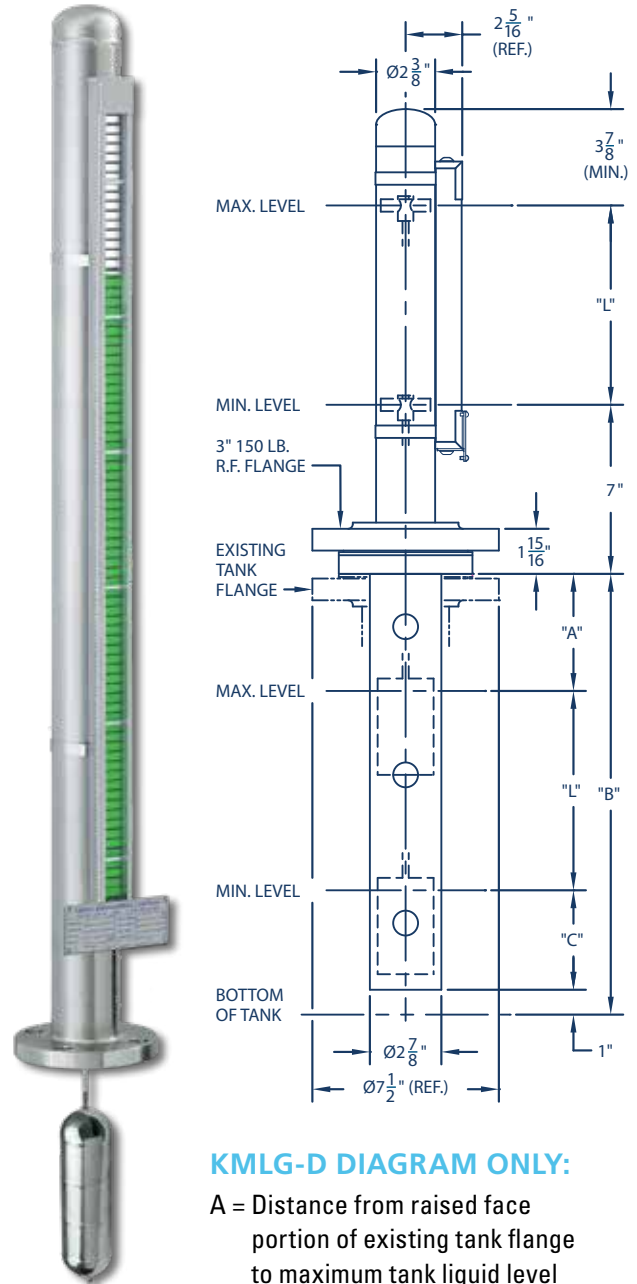
### ALL KMLG DIAGRAMS:

L = Length of indication  
(supplied by customer)

### Dimensional Note:

All dimensions are for reference purposes only and are subject to change at any time without notice.

## KMLG-D: Tank Top Mounted Flange Connection



### KMLG-D DIAGRAM ONLY:

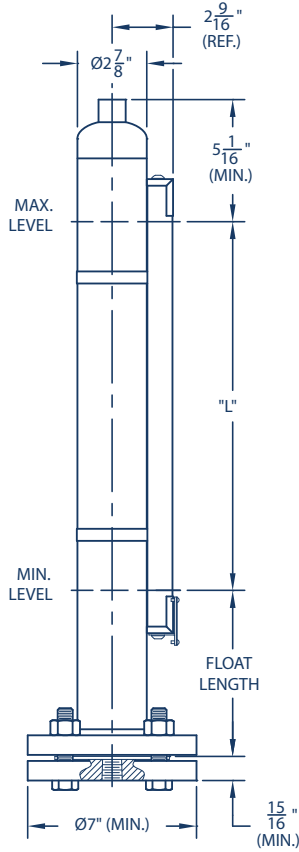
A = Distance from raised face portion of existing tank flange to maximum tank liquid level (supplied by customer)

B = Distance from raised face portion of existing tank flange to inside bottom surface of tank (supplied by customer)

C = Submerged float length (dimension will vary depending on liquid specific gravity)

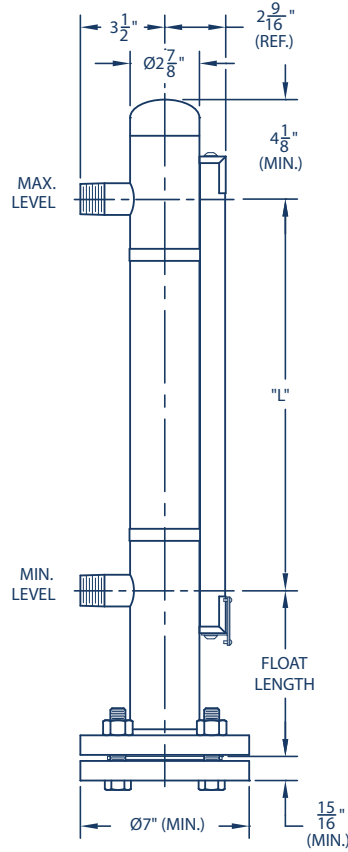
**KMLG-A**

**Female NPT End Connections**



**KMLG-B**

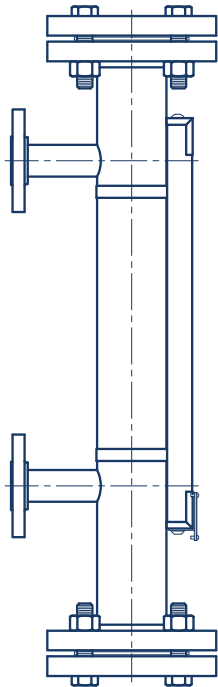
**Male NPT Side Connections**



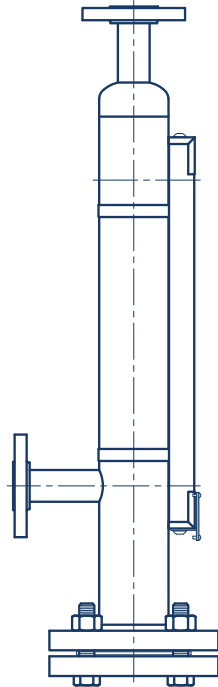
Welding specifications, x-rays, weld maps, dye penetrant testing, pmi testing, hydrotest reports, material certifications, and certified drawings are available upon request.

**OTHER GAUGE HOUSING CONFIGURATIONS**

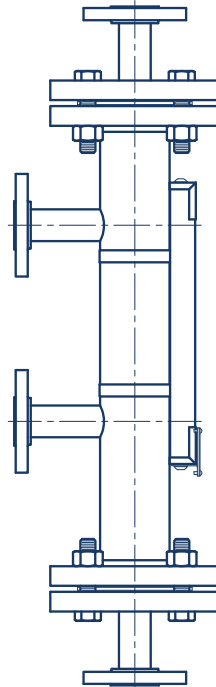
(Housing can be modified as required to meet your specific needs)



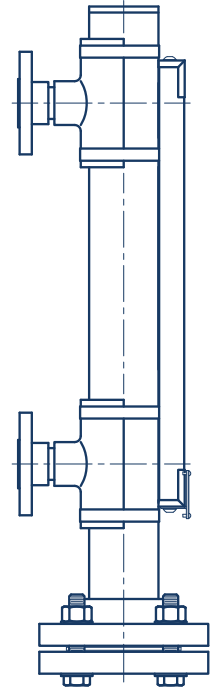
**KMLG-E**  
Removable Flange  
Top Connection



**KMLG-F**  
Fixed Flange  
Vent Connection



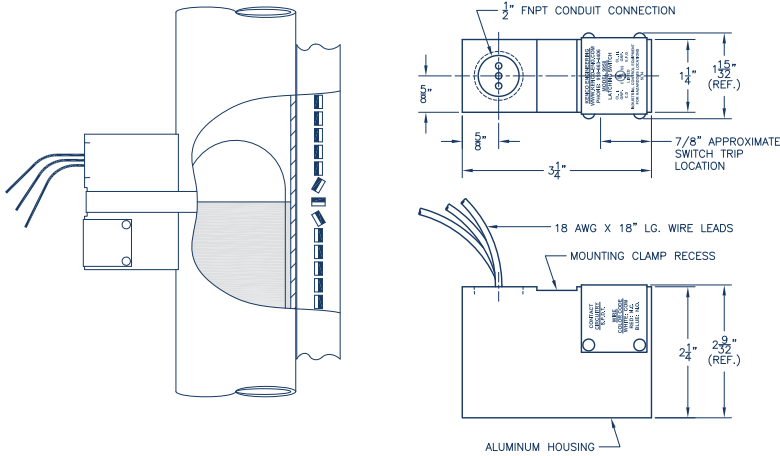
**KMLG-G**  
Removable Flange  
Vent Connection



**KMLG-C**  
PVC/CPVC  
Gauge Housing

# MAGNA-SITE ACCESSORIES

## EXPLOSION-PROOF HIGH OR LOW LEVEL SWITCHES



- Can activate alarms, pumps, or valves when the liquid reaches high or low levels
- Does not come in contact with process liquid



### HEIGHT SCALES

- Standard scales are 304 stainless steel with no. 3 finish
- Standard scales show height in feet/inches or meters/centimeters
- Large numerical characters offer increased visibility
- Standard scale division marks/characters are etched and paint filled
- Can be calibrated for any unit of measure
- Laser etched 316 Stainless Steel available upon request

## SPECIFICATIONS:

### MODEL NUMBER 9958 – LATCHING SWITCH

- C-UL-US approved for Class I, Div. 1, Div. 2, Groups C & D; Class II, Div. 1, Div. 2, Groups E, F, & G
- Housing material: Aluminum (other materials available)
- Switch: SPDT, latching reed normally open or normally closed form C contacts
- Maximum temperature: 221°F or 105°C. (Contact KENCO for higher temperatures).
- Maximum switching voltage: 100 Vdc, 140 Vac
- Maximum switch current: 0.20 Amps DC, 0.14 Amps AC
- Maximum power: 4 watts
- Conduit connection: 1/2" female NPT with 18 AWG x 18" long wire leads

### MODEL 9959 – NON-LATCHING SWITCH

- C-UL-US approved for Class I, Div. 1, Div. 2, Groups C & D; Class II, Div. 1, Div. 2, Groups E, F, & G
- Housing material: Aluminum (other materials available)
- Switch: SPST, non-latching reed normally open form A contacts
- Maximum temperature: 221°F or 105°C. (Consult factory for higher temperatures).
- Maximum switching voltage: 100 Vdc, 140 Vac
- Maximum switch current: 0.25 Amps DC, 0.18 Amps AC
- Maximum power: 7 watts
- Conduit connection: 1/2" female NPT with 18 AWG x 18" long wire leads

### INSULATION BLANKET

- Withstands temperatures up to 750°F
- Standard shell material is silicone impregnated fiberglass cloth
- Also available in other materials based on application
- Steam tracing also available





# ORDERING GUIDE

## Magna-site Magnetic Liquid Level Gauge

REQUESTED BY: \_\_\_\_\_ COMPANY: \_\_\_\_\_

ADDRESS: \_\_\_\_\_ CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_

PHONE: \_\_\_\_\_ FAX: \_\_\_\_\_ EMAIL: \_\_\_\_\_

<b>KMLG</b>					
<b>Kenco Gauge Style: Kenco Magnetic Level Gauge</b>	<b>*Mounting Style Options</b> <b>A</b> = FNPT End Connections <b>B</b> = MNPT Side Connections <b>C</b> = Flanged Side Connections <b>D</b> = Top of Tank (Consult Factory) <b>E</b> = Removable Flange Top Connection <b>F</b> = Fixed Flange Vent Connection <b>G</b> = Removable Flange Vent Connection <b>X</b> = Special Configuration (Describe in Comments Box Below)  <i>*Note: See pages 6-7</i>	<b>Indication Length (L)</b> (In Inches)  <b>0.5</b> = 1/2" <b>0.75</b> = 3/4" <b>1</b> = 1" <b>1.5</b> = 1-1/2" <b>2</b> = 2" <b>2.5</b> = 2-1/2" <b>3</b> = 3" <b>4</b> = 4" <b>6</b> = 6"	<b>Process Connection Size</b>  <b>0.5</b> = 1/2" <b>0.75</b> = 3/4" <b>1</b> = 1" <b>1.5</b> = 1-1/2" <b>2</b> = 2" <b>2.5</b> = 2-1/2" <b>3</b> = 3" <b>4</b> = 4" <b>6</b> = 6"	<b>*Pipe Flange Class</b>  <b>150</b> = 150# <b>300</b> = 300# <b>600</b> = 600# <b>900</b> = 900# <b>1500</b> = 1500# <b>2500</b> = 2500#  <i>*Note: Flanges are raised face unless otherwise specified</i>	<b>Construction Material</b>  <b>A</b> = 316 SS <b>B</b> = 316 SS; Carbon Steel Flanges <b>C</b> = 304 SS <b>D</b> = 304 SS; Carbon Steel Flanges <b>E</b> = PVC <b>F</b> = CPVC <b>L</b> = Alloy 20 <b>N</b> = Hastelloy C-276

<b>*Liquid Specific Gravity (s)</b> 0.50 and up Consult factory for lower specific gravities  <i>*Interface Applications: To read the level of the lower liquid, please list the specific gravity of upper/lower liquids. Example = 0.85/1.0           Note: Difference between upper/lower liquid specific gravities must be at least 0.1.</i>	<b>Maximum Working Pressure (psig)</b>	<b>Maximum Operating Temperature (°F)</b>	<b>*Vent/Drain Options</b> <b>N</b> = None <b>TVD</b> = FNPT Vent/Drain <b>TD</b> = FNPT Drain only <b>TV</b> = FNPT Vent only <b>FVD</b> = Flanged Vent/Drain <b>FD</b> = Flanged Drain only <b>FV</b> = Flanged Vent only <b>X</b> = Other (Please Specify in Comments Box Below)  <i>* Note: Not applicable on Mounting Style Option "A".</i>	<b>*Vent/Drain Size</b> <b>N</b> = None <b>0.25</b> = 1/4" <b>0.5</b> = 1/2" <b>0.75</b> = 3/4" <b>1</b> = 1" <b>X</b> = Other (Please Specify in Comments Box Below)  <i>* Note: Not applicable on Mounting Style Option "A".</i>	<b>Scale</b> <b>N</b> = None <b>HS</b> = 304 SS Height Scale in Feet/Inches* <b>MHS</b> = 304 SS Height Scale in Meters/Centimeters* <b>XS</b> = 316 SS Percent Scale* <b>SHS</b> = Other special Scale (Describe in Comments Box Below)*  <i>* Note: Zero at the beginning of visual on lower end of gauge unless otherwise specified.</i>	<b>Other Gauge Options</b> <b>*KTC</b> = KENCO Magnetostrictive Transmitter <b>40</b> = SCH. 40 Gauge Housing Pipe (SCH. 10 Standard on metal gauge housings) <b>LS</b> = 9958 Latching Switches (Specify Quantity) <b>NLS</b> = 9959 Non-Latching Switches (Specify Quantity) <b>IB</b> = Insulation Blanket <b>ST</b> = Steam Tracing <b>X</b> = Other (Describe in Comments Box Below)  <i>* Note: See Page 14 for KTC ordering information.</i>

<b>Option 1</b>	<b>Option 2</b>	<b>Option 3</b>	<b>Option 4</b>

<b>Liquid in Tank</b>	<b>Comments</b>

**Example:** [KMLG – C – 36 – 2 – 150 – A – 0.71 – 175 – 100 – TVD – 0.5 – HS – LS(2)] is a Magna-Site with flanged side connections, 36" indication length (L), 2" 150 lb. R.F. flanged process connections, 316 stainless steel construction, float specific gravity of 0.71, a maximum working pressure of 175 psig at 100°F, 1/2" FNPT vent/drain, a 304 stainless steel height scale in feet/inches, and (2) 9958 latching switches.

# CHAMBER MOUNTED MODEL KTC MAGNETOSTRICTIVE TRANSMITTER

The KTC chamber mounted liquid level transmitter is a continuous multi-functional magnetostrictive transmitter that provides product level to the user via Analog (4-20mA) with HART®, Modbus RTU (Remote Terminal Unit) or DDA (Direct Digital Access). Magnetostrictive technology is one of the most accurate and repeatable level technologies available to date.

## INTENDED USE

The liquid level transmitter is intended to be used to measure the level of liquid(s) when mounted to the chamber of a Kenco Magnetic Level Gauge (KMLG).

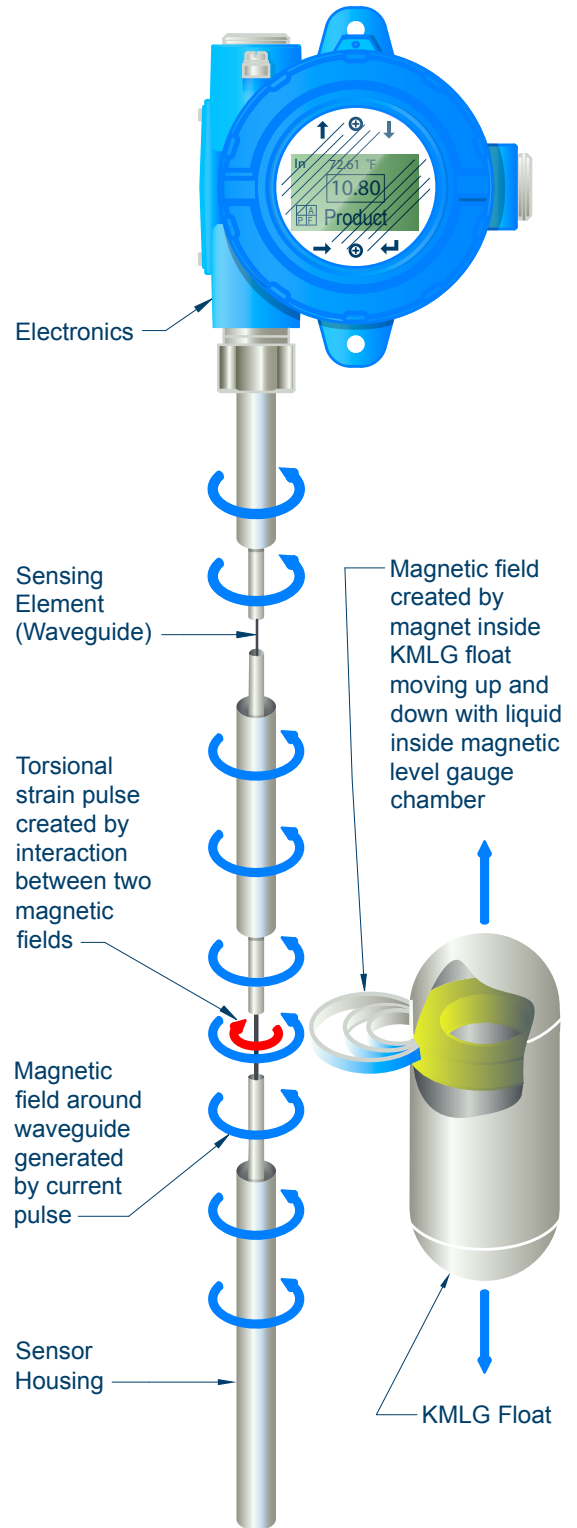
FEATURES
• No Scheduled Maintenance or Recalibration
• Field Repairable
• Inherent Accuracy $\pm 0.039"$ ( $\pm 1$ mm)
• Integral Display
• Password Protected Data Entry
• Hazardous Area Certified
• Intrinsically Safe

## PRINCIPLE OF OPERATION

The principles of magnetostriction are used to create a reliable position measurement system for use in industrial environments. Inside the sensor, a torsional strain pulse is induced in a specially designed magnetostrictive waveguide by the momentary interaction of two magnetic fields. One field comes from a magnet located inside a float which moves up and down inside the KMLG magnetic level gauge chamber. The other field is generated from a current pulse which is applied to the waveguide. The interaction between these two magnetic fields produces a strain pulse which travels at sonic speed along the sensor waveguide until the pulse is detected at the head of the transducer. The position of the moving float magnet is precisely determined by measuring the elapsed time between the application of the current pulse and the arrival of the strain pulse. As a result, a reliable position measurement system is created that is capable of providing an accurate and repeatable measurement.

## MEASUREMENT CYCLE

- Electronics transmits a current pulse to the waveguide to create a magnetic field around it.
- Magnetic field from KMLG float interacts with waveguide magnetic field and creates a torsional strain pulse.
- Torsional strain pulse in waveguide propagates back to the electronics at sonic speed.
- Electronics detects and measures the elapsed time between the application of the current pulse and the arrival of the torsional strain pulse and converts it to a measurement.
- Measurement reflects the liquid level location of the KMLG float inside the KMLG magnetic level gauge chamber.



# COMPONENTS

The KTC chamber mounted liquid level transmitter consists of three main components: a housing, a sensor tube and internal electronics. Varying the components of the transmitter allows it to be customized to almost any application.

## HOUSING

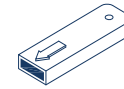
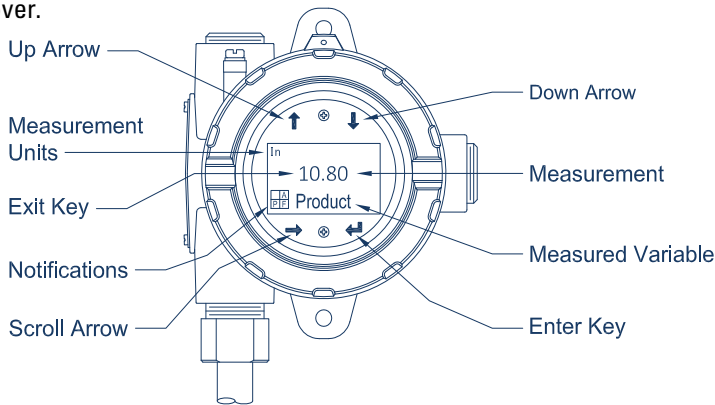
The transmitter housing is available with an explosion-proof single cavity or an explosion-proof dual cavity configuration. The single cavity housing is available in epoxy coated aluminum or 316 stainless steel while the dual cavity housing is available in epoxy coated aluminum.

## SENSOR TUBE

The sensor tube is rigid and constructed of Ø5/8" (Ø16 mm) 316 stainless steel tubing.

## INTERNAL ELECTRONICS

All transmitters come with two electronic components: a sensing element and a board set. The sensing element on the model KTC is rigid. The board set consists of up to three electronic boards and an LCD display. The display is password protected and is capable of displaying the product level and more. The product level measurement unit options are length, current, percent and volume. Designed into the display are five buttons for local setup of the level transmitter. Each transmitter is supplied with a menu stylus used to activate the display buttons during local setup to allow programming without removing the transmitter housing cover.



**Menu Stylus**  
Used to activate the display buttons during local setup to allow programming without removing the transmitter housing cover.

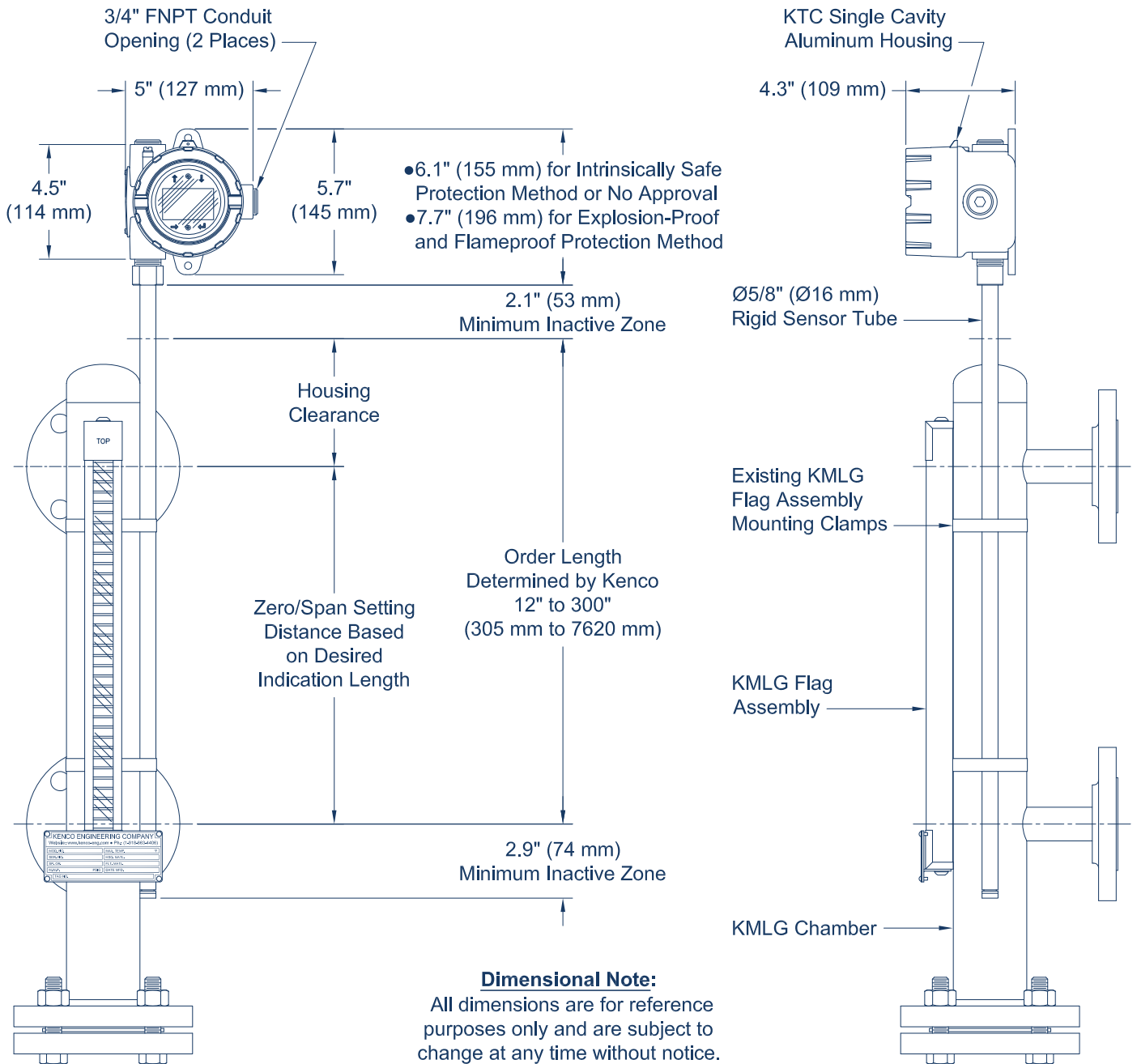
# AGENCY APPROVALS

NOTIFIED BODY	PROTECTION METHOD	CLASSIFICATIONS	STANDARDS
CEC (Canadian Electrical Code)	Intrinsic Safety	Class I, Division 1, Groups A, B, C, D T4; Class I, Zone 0/1; Ex ia IIC T4; Ta = -50° C to +71° C; IP65	CAN C22.2 No. 157-92: 2012; CSA C22.2 No. 1010.1: 2004; CAN/CSA C22.2 No. 60079-0: 2011; CAN/CSA C22.2 No. 60079-11: 2014; CAN/CSA C22.2 No. 60529: 2005
	Explosion-Proof and Flameproof	Class I, Division 1, Groups B, C, D T6...T3; Ex db IIB+H2 T6...T3 Ga/Gb; Ta = -40° C to +71° C; IP65	CSA C22.2 No. 0.4-04: R2013; CSA C22.2 No. 0.5: R2012; CSA C22.2 No. 0-10: R2015; CSA C22.2 No. 30: R2012; CAN/CSA C22.2 No. 60079-0: 2015; CAN/CSA C22.2 No. 60079-1: 2016; CAN/CSA C22.2 No. 60079-26: 2016; CAN/CSA C22.2 No. 61010.1: 2012; CSA C22.2 No. 60529: R2010
NEC (National Electrical Code)	Intrinsic Safety	Class I, Division 1, Groups A, B, C, D T4; Class I, Zone 0/1; AEx ia IIC T4; Ta = -50° C to +71° C; IP65	FM 3600: 2011; FM 3610: 2010; FM 3810: 2005; ANSI/ISA 60079-0: 2013; ANSI/ISA 60079-11: 2014; ANSI/IEC 60529: 2004
	Explosion-Proof and Flameproof	*Class I, Division 1, Groups A, B, C, D T6...T3; *Class I, Division 1, Groups B, C, D T6...T3; Class I, Zone 0/1; AEx db IIB+H2 T6...T3 Ga/Gb; Ta = -40° C to +71° C; IP65	FM 3600: 2011; FM 3615: 2006; FM 3810: 2005; ANSI/ISA 60079-0: 2013; ANSI/UL 60079-1: 2015; ANSI/UL 60079-26: 2017; ANSI/IEC 60529: 2004

\*Note: Epoxy Coated Aluminum Housings are rated for Groups A, B, C, & D while 316 Stainless Steel Housing is rated for Groups B, C, & D.

# TECHNICAL DRAWING

## KTC Magnetostrictive Transmitter mounted on Kenco Magnetic Level Gauge



### MOUNTING

The KTC magnetostrictive transmitter is mounted directly to the Kenco Magnetic Level Gauge (KMLG). The method of mounting the transmitter is dependent on the style of the magnetic level gauge. It can be installed anywhere around the perimeter of the KMLG chamber pipe that does not interfere with the gauge flag assembly or process connections. A typical installation utilizes the existing KMLG flag assembly mounting clamps. If separate mounting clamps are used, it is extremely important to ensure that they are not magnetic, as this will interfere with the magnetic field of the KMLG float. Consult Kenco for details on ordering separate mounting clamps. Before tightening the mounting clamps around the rigid sensor tube of the transmitter, allow for the minimum inactive zone at the bottom of the rigid sensor tube by placing the bottom of the sensor tube at least 2.9" (74 mm) below the centerline of bottom gauge process connection as shown above. Also, when the head of the transmitter is located above the top of the KMLG magnetic level gauge as shown above, the transmitter sensor tube can be rotated 360° to achieve the desired orientation of the transmitter housing. The transmitter may also be installed with the transmitter head at the bottom of the gauge housing. Contact Kenco for details.

# PRODUCT SPECIFICATIONS

LEVEL OUTPUT		SPECIFICATIONS
Measured Variable		Product level
Output Signal / Protocol		Analog (4-20mA) with HART® / Modbus RTU / DDA
Order Length (Not including Inactive Zones)		12" to 300" (305 mm to 7620 mm)
Inherent Accuracy		±0.039" (±1 mm)
Repeatability (Any Direction)		0.001% F.S. or 0.015" (0.381 mm); whichever is greater

ELECTRONICS		SPECIFICATIONS
Input Voltage		10.5 to 28 Vdc
Fail Safe	Analog (4-20mA) with HART®	Low (3.5 mA default) or High (22.8 mA)
	Modbus RTU / DDA	High, Full scale
Reverse Polarity Protection		Series diode
EMC (Electromagnetic Compatibility)		EN 61326-1, EN 61326-2-3, EN 61326-3-2, EN 61000-6-2, EN 61000-6-3, EN 61000-4-2, EN 61000-4-3, EN 61000-4-4, EN 61000-4-5, EN 61000-4-6, EN 61000-4-8

ENVIRONMENTAL		SPECIFICATIONS
Enclosure Rating		IP65
Humidity		0 to 100% relative humidity, non-condensing
Operating Temperatures	Electronics	-40° F to 160° F (-40° C to 71° C)
	Sensing Element	-40° F to 257° F (-40° C to 125° C); Contact factory for specific temp. ranges.
Materials	Sensor Housing	316L stainless steel; Contact factory for other materials.
	Electrical Housing	Epoxy coated aluminum or 316 stainless steel

ELECTRICAL HOUSING DIMENSIONS		SPECIFICATIONS
Single Cavity (Epoxy Coated Aluminum)		5.7" W x 5" D x 4.3" H (145 mm W x 127 mm D x 109 mm H)
Dual Cavity (Epoxy Coated Aluminum)		4.6" W x 5" D x 8.1" H (117 mm W x 127 mm D x 206 mm H)
Single Cavity (316 Stainless Steel)		7" W x 5.3" D x 6" H (178 mm W x 135 mm D x 152 mm H)

MOUNTING CONNECTIONS		SPECIFICATIONS
Rigid Sensor Tube		Existing non-magnetic stainless steel band clamps on magnetic level gauge. Separate mounting clamps can be provided. Contact factory for details.

WIRING		SPECIFICATIONS
Connections		4-wire shielded cable or twisted pair, Daniel Woodhead 6-pin male connector, 180" (4570 mm) integral cable with pigtail

ELECTRICAL HOUSING CONNECTIONS		SPECIFICATIONS
Single and Dual Cavity		3/4" FNPT conduit opening

ELECTRICAL HOUSING LCD DISPLAY		SPECIFICATIONS
Measured Variables		Product level

# ORDERING GUIDE

## Chamber Mounted Model KTC Magnetostrictive Transmitter

REQUESTED BY: \_\_\_\_\_ COMPANY: \_\_\_\_\_

ADDRESS: \_\_\_\_\_ CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_

PHONE: \_\_\_\_\_ FAX: \_\_\_\_\_ EMAIL: \_\_\_\_\_

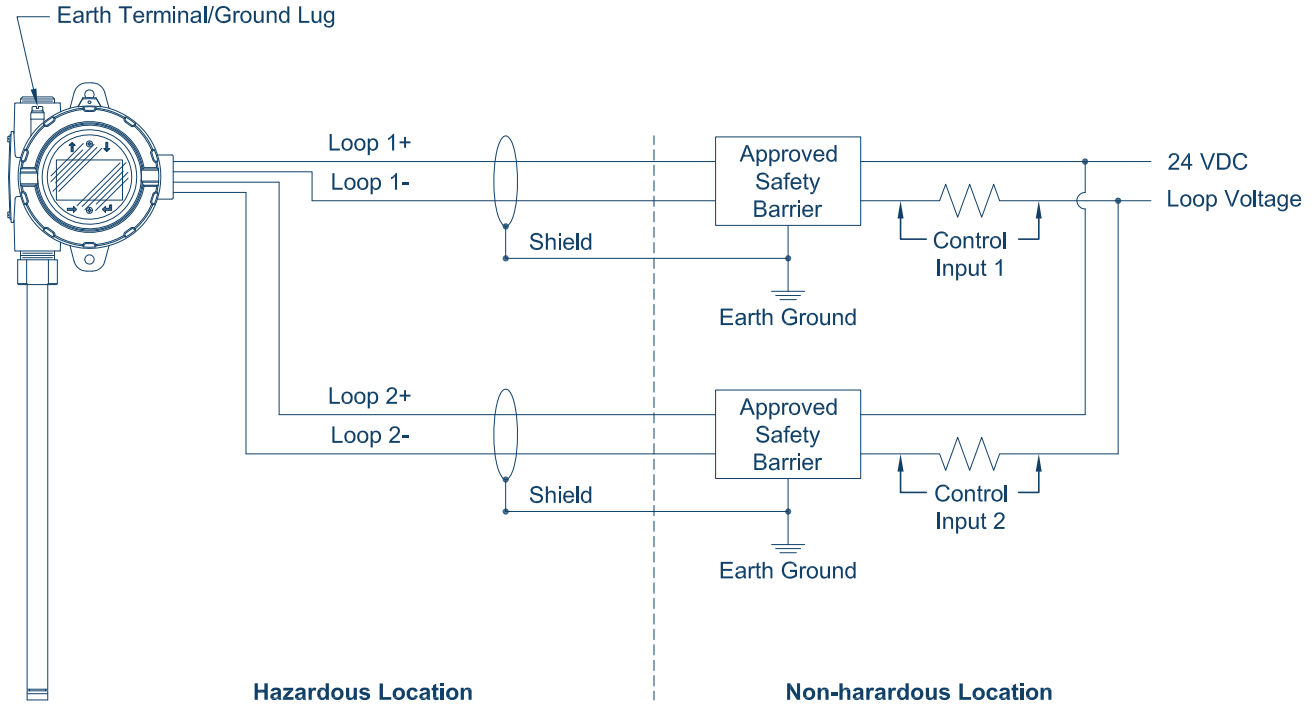
<b>KTC</b>			
<p><b>Kenco Transmitter Style</b>  <b>KTC</b> = Chamber Mounted Sensor Housing</p>	<p><b>Output</b>  <b>3</b> = 1 Loop with HART®  <b>6</b> = 1 Loop with HART® and SIL2  <b>M</b> = Modbus RTU (Remote Terminal Unit)  <b>D</b> = DDA (Direct Digital Access)</p>	<p><b>Housing Type</b>  <b>D</b> = Single Cavity with Display (Epoxy Coated Aluminum)  <b>E</b> = Dual Cavity with Display (Epoxy Coated Aluminum)  <b>L</b> = Single Cavity with Display (316 Stainless Steel)</p>	<p><b>Electronics Mounting</b>  <b>7</b> = Top Mount  <b>8</b> = Bottom Mount</p>
<b>B</b>	<b>1</b>	<b>X</b>	<b>X</b>
<p><b>Sensor Housing</b>  <b>B</b> = Rigid Ø5/8" (Ø16 mm) Tube</p>	<p><b>*Sensor Housing Material</b>  <b>1</b> = 316L Stainless Steel                       *Contact factory for other available materials.</p>	<p><b>Mounting Connection Type</b>  <b>X</b> = None</p>	<p><b>Mounting Connection Size</b>  <b>X</b> = None</p>
<b>0</b>	<b>X</b>		
<p><b>Digital Thermometer Quantity</b>  <b>0</b> = None</p>	<p><b>Digital Thermometer Placement</b>  <b>X</b> = None</p>	<p><b>*Notified Body</b>  <b>C</b> = CEC (FMC)  <b>F</b> = NEC (FM)  <b>X</b> = None                       *Other certifications available upon request.</p>	<p><b>Protection Method</b>  <b>F</b> = Explosion-Proof and Flameproof  <b>I</b> = Intrinsically Safe  <b>X</b> = No Approval</p>
		<b>To Be Determined by Kenco</b>	<b>S</b>
<p><b>Gas Group</b>  <b>A</b> = Group A (Not available with Notified Body "C" and Protection Method "F")  <b>B</b> = Group B  <b>C</b> = Group C  <b>D</b> = Group D  <b>3</b> = IIC (Intrinsically Safe only)  <b>4</b> = IIB+H2 (Explosion-Proof and Flameproof only)  <b>X</b> = None</p>	<p><b>Order Length Unit of Measure</b>  <b>U</b> = US Customary (Inches)  <b>M</b> = Metric (Millimeters)</p>	<p><b>*Order Length</b>  <b>XXXXX</b> = Inches (12 to 300)                      Enter Length Code as 01200 to 30000  <b>XXXXX</b> = mm (305 to 7620)                      Enter Length Code as 00305 to 07620                       *Order Length equals measurement range plus housing clearance, but does not include inactive zones.</p>	<p><b>Special</b>  <b>S</b> = Standard Product</p>

**Example Model Designation:** KTC-3-D-7-B-1-X-X-0-X-X-X-X-U-01200-S

**Ordering Notes:** Accessories such as cables, remote displays, and separate mounting clamps can be provided, but have to be ordered separately. Contact factory for details.

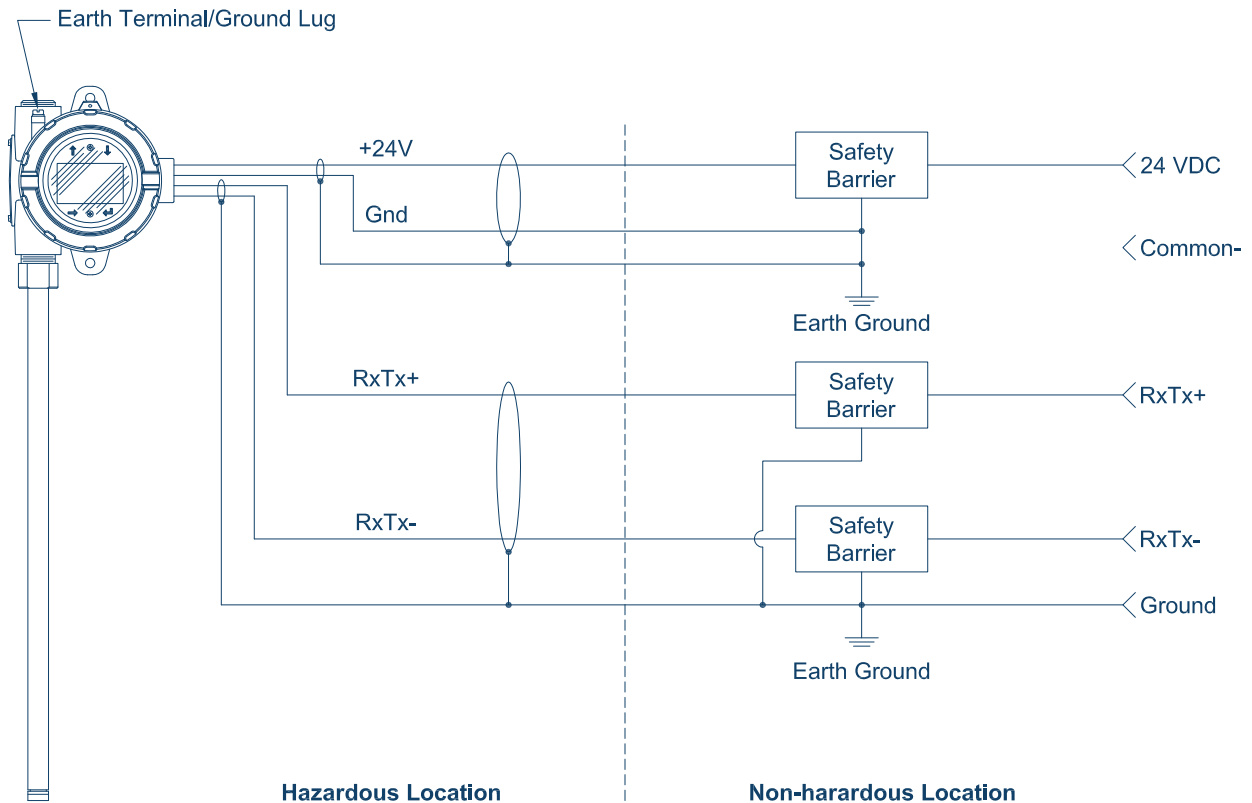
# WIRING SCHEMATIC

## Intrinsically Safe Analog Output



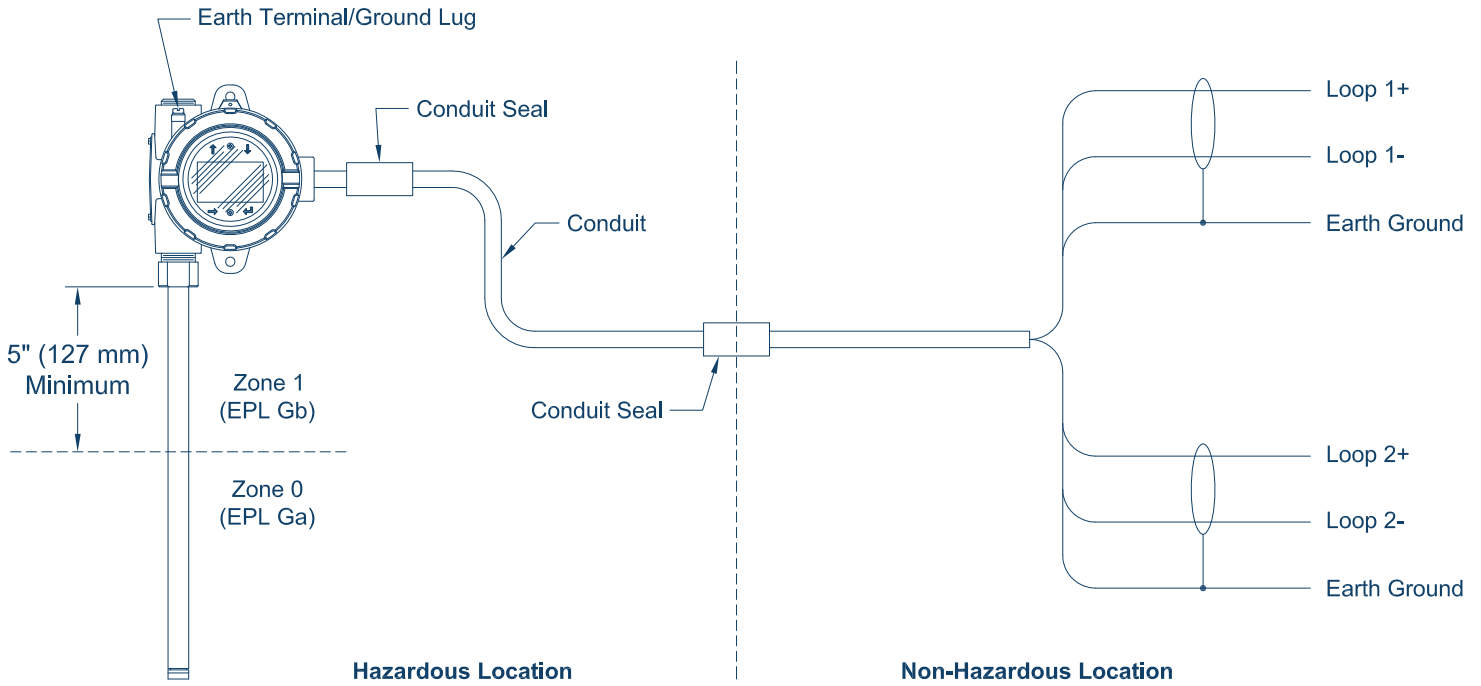
# WIRING SCHEMATIC

## Intrinsically Safe Digital Output



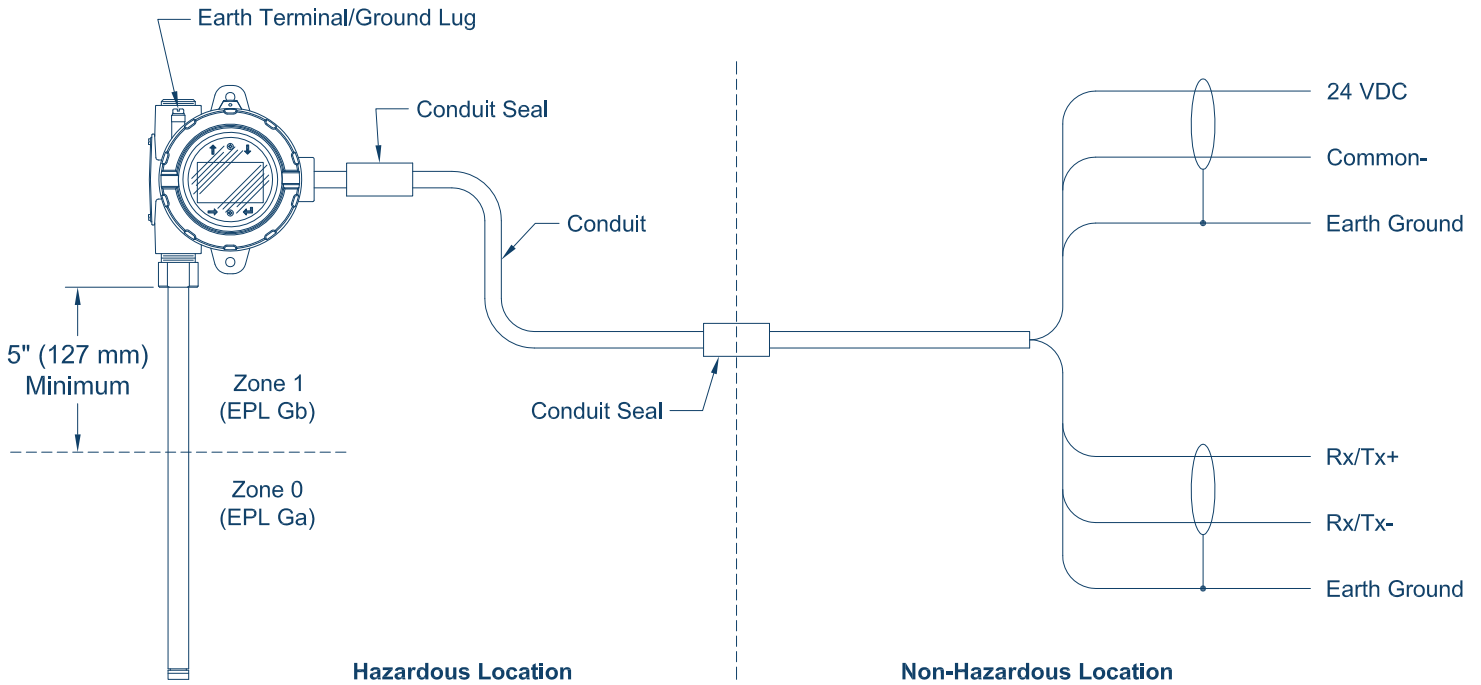
# WIRING SCHEMATIC

## Explosion-Proof/ Flameproof Analog Output



# WIRING SCHEMATIC

## Explosion-Proof/ Flameproof Digital Output



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