



www.ktekcorp.com



# LOOP POWERED RF LEVEL TRANSMITTER

## Model A38



### FEATURES

- Low Cost Loop Powered, 4-20 mA<sub>dc</sub> Output
- Integral Transmitter with Dual Compartment Housing
- Solid State, Microprocessor Based - No Moving Parts
- Complete Digital Calibration - Eliminates Analog Pots
- External Magnet Calibration - No Need to Open Case
- Partial Fill Tank Calibration - 2 Points With Only Partial Fill
- Explosion Proof Enclosure, Intrinsically Safe Probes
- Rugged Probe Designs
- Eliminates Explosion Proof Conduit Seal Requirement

### OPTIONS

- Remote Mounting up to 200 Ft. / 61 m
- External Power Supply / Field Indicators
- Variety of Probes Available
- 316L SS Dual Compartment Housing

### APPLICATIONS

- |  |   |  |
|--|---|--|
| <ul style="list-style-type: none"> <li>• Finished Goods with Stable Dielectric</li> <li>• Interface Measurement</li> <li>• Slurries</li> <li>• Open Channel flow</li> <li>• Foams</li> </ul> | <ul style="list-style-type: none"> <li>• Conductive Products</li> <li>• Non-Conductive Products</li> <li>• Organic</li> <li>• Inorganic</li> <li>• High or Low Level Alarm</li> </ul> | <p><b>Special Applications:</b></p> <ul style="list-style-type: none"> <li>• High Temperature</li> <li>• Corrosive Environments</li> <li>• High Pressure</li> <li>• Special Probe Materials</li> </ul> |
|--|---|--|

### SPECIFICATIONS

#### Electronic Transmitter

Housing	Explosion Proof Powder Coated Cast Aluminum, Dual Compartment
Accuracy	±0.25% full scale, 5 to 150°F / -15 to 65°C
Linearity	±0.25% full scale
Minimum Dielectric	1.7
Sensitivity	50 to 10,000 pF
Static Protection	Maximum Surge Current: 100 Amps
Remote Mounting	Up to 200 ft. / 61 m
Input Power	10 to 36 VDC (17 to 30 VDC with FMX Option)
Output Signal	4 – 20 mA <sub>dc</sub>
Max Load Resistance	$R_{max} = (V_S - 10) / 0.021$ , { $R_{max} = (V_S - 17) / 0.021$ with FMX Option} where $V_S$ = Input Power

Ambient Temp -40 to 170°F / -40 to 77°C

Reference SLG-0005-1 Table 1B for pressure / temperature ratings of probes  
 Factory Mutual System (FM) & Canadian Standards Association (CSA)  
 XP CLI, DIV1 & 2, ABCD, CLII, III, EFG, I/O, AExdIIC T6@ Ta = 77°C  
 I.S CLI, DIV1 & 2, ABCD, CLII, DIV1, EFG, CLII, DIV2, FG, CLIII  
 I/O, AExialIIC T4@ Ta = 77°C  
 FM NEMA 4X CSA Type 4X

### Approvals



**ORDERING INFORMATION:**

**A38 / a / b / c / d / e / f / g:**

**/a Transmitter Configuration**

- L** Local Transmitter -40 to 250°F / -40 to 121°C **Standard**
- H6** Above 250°F / 121°C; Electronics enclosure is extended 6" above process connection. Refer to RF Capacitance Probe Selection Guide (SLG-0005-1) for maximum process temperatures.
- R1xxx** Remote Mounted Electronics in Standard Dual Compartment Transmitter Housing & Local Sensing Probe in Explosion Proof Single Compartment Enclosure; RG62 with PVC insulation cable rated to 185° F / 85° C specify length "xxx" in feet (max lengths listed in Table 1)
- R2xxx** Remote Mounted Electronics in Standard Dual Compartment Transmitter Housing & Local Sensing Probe in Explosion Proof Single Compartment Enclosure; RG62 with Teflon insulation cable rated to 450°F / 232° C specify length "xxx" in feet (max lengths listed in Table 1)

Table 1	
Pf Range	Max. Cable Length
0-75 pf	25 ft.
76-300 pf	50 ft.
301-1200 pf	100 ft.
1201-4800 pf	200 ft.

**/b Transmitter Housing**

- A** Aluminum Housing **Standard**
- S** 316L Stainless Steel Housing

**/c Probe Type**

- xxxxx** Probe configuration from RF Capacitance Probe Selection Guide (SLG-0005-1)
- xxxxx** Probe Type Code (1 to 5 digits from SLG-0005-1 Table 1A)
- y** Seal Code: **V** = Viton O-Ring Seal **Standard**; **K** = Kalrez O-Ring Seal

**/d Probe Length**

- xxx** Insertion length from bottom of process connection in inches (**standard**) or centimeters (cm)

**/e Process Connection**

Note: a dual probe assembly is recommended to compensate for non-linear tank (spherical, bullet, cone shaped bins) or non-metallic tank configurations

- P1** Single Probe Process Connection (SLG-0005-1 Table 1A) **Standard**
- P2** Dual Probe Process Connection (SLG-0005-1 Table 1A)
- FL** Flange Shipped Loose; Specify from Flange Chart (SLG-0001-1)
- FLD** Dual Sensor integrally mounted on flange (4" minimum) with primary probe
- WP** Flange Welded; Specify from Flange Chart (SLG-0001-1)
- WPD** Dual Sensor integrally mounted on flange (4" minimum) with primary probe
- Tnn** Tri-Clamp; Specify "nn" as follows: 10 = 1", 15 = 1.5", 20 = 2.0", 25 = 2.5" up to 6"

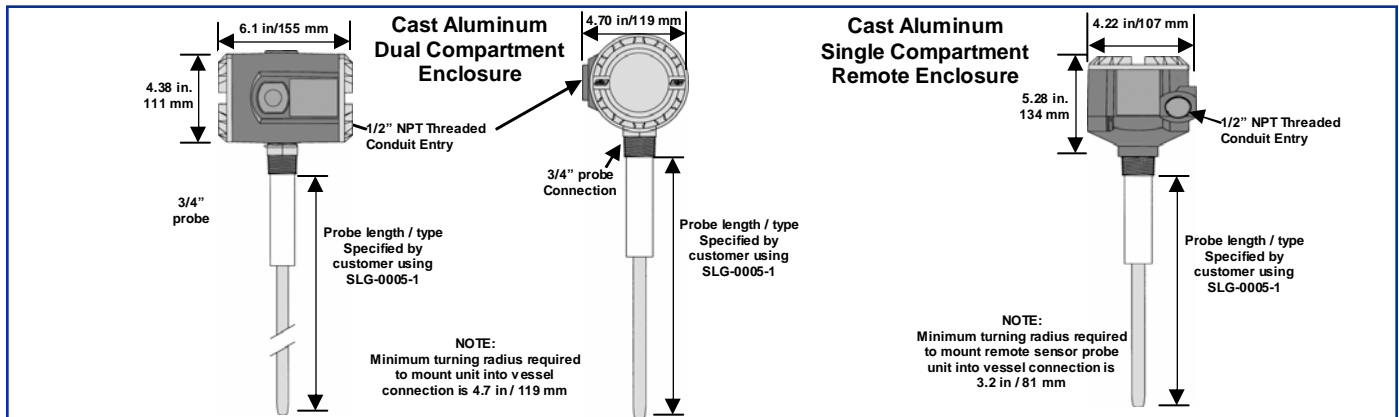
**/f Options**

- X** None **Standard**
- ETI** Extended Teflon Insulator (specify extension length in inches or mm)
- EDI** Extended Delrin Insulator

**/g Approvals**

- X** No Approvals
- FMI** Factory Mutual (FM) & Canadian Standards Association (CSA) Intrinsically Safe
- FMX** Factory Mutual (FM) Flame Proof **Standard**

**Dimensional Information**



**AVAILABLE ACCESSORIES**

- M20 ISO FITTING** M20 Female Electrical Connection
- TN** 3/4" NPT Teflon Mounting Nipple for Type R Probe only

Contact the Factory for Applications not covered above.

**K-TEK**  
 18321 Swamp Road  
 Prairieville, Louisiana 70769  
 USA  
 Telephone: (1) 225-673-6100  
 Fax: (1) 225-673-2525

A38-0202-1 rev d (01-2007)  
 DCN#0066  
 For latest version of this data sheet,  
 visit [www.ktekcorp.com](http://www.ktekcorp.com).



Email: [sales@ktekcorp.com](mailto:sales@ktekcorp.com)  
 Website: [www.ktekcorp.com](http://www.ktekcorp.com)