

## LED Transmitter Versions – Miniature Size

- ▶ LED indicators ideal in low or no ambient light
- ▶ Integral transmitter with choice of signal conditioned output
- ▶ Lengths to 10 feet (3 meters)
- ▶ Pressures to 400 PSI (27 bar) – Temperature to 300°F (149°C)

These Mini SureSite Indicators excel where zero and low ambient light make visual indicators difficult to read. These mini indicators feature all the benefits of a SureSite, like safe and durable stainless steel process fluid containment, while combining a continuous output transmitter with a bright LED channel.

The LED indicator assembly integrates a continuous level transmitter reducing overall footprint. A variety of signal conditioners provide the output you require. Forget the flashlights and squinting required to view antiquated sightglasses.

### Typical Applications

- Pharmaceuticals • Medical Equipment • Food and Beverages
- Marine • Rail • Boilers

### Specifications

<b>Indication Length</b>	5" to 120" (13 to 305 cm) in 0.5" (13 mm) increments
<b>Media</b>	Waters, Coolants, Light Oils, Diesel, Hydraulics
<b>Specific Gravity</b>	Minimum 0.8 SG to 1.2 SG
<b>Materials</b>	
<b>Chamber Housing</b>	316/316L Stainless Steel
<b>Float</b>	316/316L Stainless Steel
<b>Shroud</b>	Polycarbonate
<b>O-Ring (Wetted)</b>	Viton®, unless otherwise specified
<b>J-Box Enclosure</b>	Die cast Aluminum
<b>Reliability and Durability</b>	Expected 10 year service life
<b>Performance</b>	
<b>Resolution</b>	3/8" (9.5 mm)
<b>Accuracy</b>	±1/2" (13 mm)
<b>Output Signal</b>	4-20 mA to within ±3% of full scale
<b>Temperature Ranges</b>	
<b>Process</b>	-40°F to +300°F (-40°C to +149°C)
<b>Ambient</b>	-40°F to +160°F (-40°C to +71°C)
<b>Operating Pressure</b>	Vacuum to 400 psig (27.6 bar)
<b>Environmental</b>	Enclosure: NEMA 4X IP65 (Water Resistant)
<b>Input Power</b>	20 to 28VDC, @100mA. Consult Factory for other voltages
<b>Outputs</b>	4-20 mA continuous current loop (3 wire) 0-5 V continuous (3 wire) 0-10 V continuous (3 wire)
<b>Mechanical Interface</b>	Custom configured for tank (per mini SureSite offering), 1/2" NPT to junction box
<b>Mounting Orientation</b>	
<b>Unit Positions</b>	AM-L, BM-L, CM-L, DM-L
<b>Shroud Position</b>	See Selection Guide; Step 2 for Codes
<b>Calibration</b>	Field Adjustment Null and Span/Factory Calibrated



### 1. Mounting Configuration Type

Based on process connection locations.

	Type AM-L Top and Bottom Process Connections	Type BM-L Side and Side Process Connections	Type CM-L Top and Side Process Connections	Type DM-L Side and Bottom Process Connections
<p>L = Length of Visual Indication</p> <p>C to C = Length between process connections.* Gems will aid in determining this value.</p>				
	<p>Typical Lengths*</p> <p>C to C = L + 9.5" (241 mm)</p>	C to C = L	C to C = L + 6" (152 mm)	C to C = L + 6" (152 mm)
<p>Length of Indication (Uninterrupted)</p>	120" (305 cm), Maximum			

\* Formula provided is for approximation only. Final dimensions will vary due to connections type, position, cable or junction box location, and specific gravity of process liquid. Gems will confirm final dimensions before manufacturing.

### 2. LED Transmitter Assembly Location

Position relative to process connection location. All illustration views are from the top. Codes with "+" indicate views when 3/4" side ports are used.

Transmitter Assembly Location Code						
A	A+	B	C	D	E	E+

Approximate angle of view - 270°

### 3. J-Box Location

Drawings are typical, and for reference only. Final, specific locations are determined at time of manufacture.

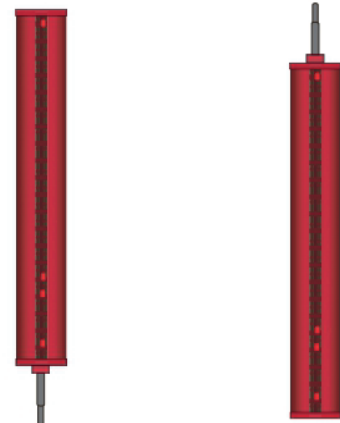
J-Box Location Code		
1 Side Mount Below Bottom Port	2 Side Mount Above Top Port	3* Top Mount

\* Requires a Blind Fixed Top Connection. See Connection Code T1 in the chart on next page.

### LED Assembly Cable Egress

For J-Box Location 1, LED Transmitter Assembly cable will egress from the bottom of the assembly.

For J-Box Locations 2 and 3, the cable will egress from the top of the assembly.



4. Connection Codes

(See complete descriptions below)

	Blind	NPT				Flange		Weld		
		Fixed		Removable		Fixed	Removable	Socket Butt	Removable Butt	
		Female	Male	Female	Male					
<b>Standard Connections</b>	Fixed T1	Removable T10	Female T2	Male T3	Female T11	Male T12	Fixed T19	Removable T20	Socket Butt T18	Removable Butt T13
<b>Sanitary Connections</b>							Fixed T7	Removable T8		

	Blind	NPT		Flange	Sanitary Flange	Buttweld Nipple
		Male	Female			
S1						
S2						
S3						
S4						
S5						
S6						

	Blind	NPT				Flange		Weld		
		Fixed		Removable		Fixed	Removable	Socket Butt	Removable Butt	
		Female	Male	Female	Male					
<b>Standard Connections</b>	Fixed B1	Removable B10	Female B2	Male B3	Female B11	Male B12	Fixed B19	Removable B20	Socket Butt B18	Removable Butt B13
<b>Sanitary Connections</b>							Fixed B7	Removable B8		

— Connection Codes and Materials background-shaded in this color are stocked by Gems. Select these connections where possible to obtain the most economical SureSite Indicators with prompt delivery.

Note: Gems recommends a removable top and/or bottom connection for float access.

Connection Code Descriptions

Please provide all connections when completing the **OrderIt!** Product Check List (located on the following page).

**Note:** Before selecting your connections, consider incorporating your vent and drain requirements.

T & B (Top and Bottom)

- T/B 1. Welded cap
- T/B 2. Welded cap with FNPT
- T/B 3. Welded cap with MNPT
- T/B 7. Sanitary flange
- T/B 8. Sanitary flange with mating blind flange
- T/B 10. Standard fixed flange/mating blind flange
- T/B 11. Standard fixed flange/mating FNPT reducing flange

- T/B 12. Standard fixed flange/mating flange with MNPT nipple
- T/B 13. Standard fixed flange/mating flange with butt weld nipple
- T/B 18. Welded cap with butt weld nipple
- T/B 19. Welded cap with ANSI flange
- T/B 20. Standard fixed flange/mating reducing flange spool with ANSI flange

Sa & Sb (Sides)

- S1. No connection
- S2. MNPT nipple
- S3. FNPT coupling
- S4. ANSI flange
- S5. Sanitary flange
- S6. Buttweld nipple

5. Signal Conditioner Assemblies

Gems signal conditioners provide outputs for direct connection to a wide range of instrumentation. They are ideal for large, multi-tank complexes. Units with 4-20 mA outputs are particularly well suited for instrumentation control loops. Consult LED SureSite Installation, Operation and Maintenance bulletin.

