

## LED SURESITE® LEVEL INDICATORS

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



LEVEL INDICATORS – VISUAL



## 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><math>L</math> = Length of Visual Indication</p> <p><math>C</math> to <math>C</math> = Length between process connections.* Gems will aid in determining this value.</p>				
<b>Typical Lengths*</b>	$C$ to $C$ = $L + 9.5"$ (241 mm)	$C$ to $C$ = $L$	$C$ to $C$ = $L + 6"$ (152 mm)	$C$ to $C$ = $L + 6"$ (152 mm)
<b>Length of Indication (Uninterrupted)</b>	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.



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### 4. Connection Codes

(See complete descriptions below)

		Blind		NPT				Flange		Weld	
		Fixed	Removable	Fixed		Removable		Fixed	Removable	Socket Butt	Removable Butt
				Female	Male	Female	Male				
TOP  T	Standard Connections	 T1	 T10	 T2	 T3	 T11	 T12	 T19	 T20	 T18	 T13
	Sanitary Connections							 T7	 T8		
SIDE  Sa											
SIDE  Sb											
BOTTOM  B	Standard Connections	 B1	 B10	 B2	 B3	 B11	 B12	 B19	 B20	 B18	 B13
	Sanitary Connections							 B7	 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 **Order!** 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. Butt weld 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.

