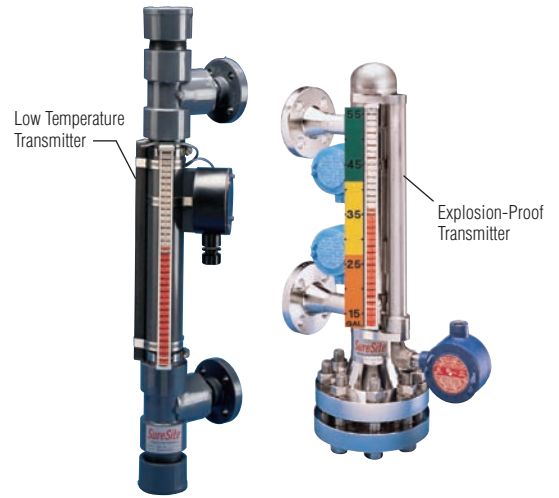


Continuous Electrical Output Transmitters for *all* SureSite Indicators



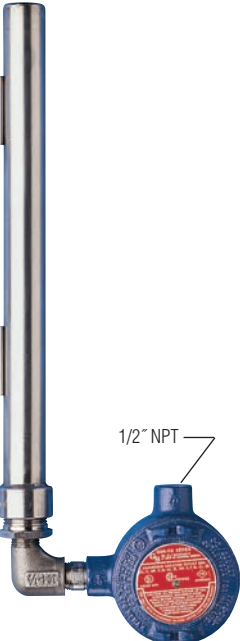
Broaden the SureSite Indicator's capabilities; add one of these transmitters. You can have visual indication and a continuous electrical output too without additional tank penetrations. Use them to know what's in your tank remotely, send the signal to your controller, schedule your next inventory.

These transmitters are compatible with the readout displays at the end of this Section (D-24 to D-26) or can interface directly to your equipment by specifying the appropriate output.

Select your transmitter preference on the SureSite Product Check List (pages D-6, D-9, D-12 and D-15).



LEVEL INDICATORS – VISUAL

	Low Temperature Transmitter	Explosion-Proof Transmitter	Explosion-Proof / High Temperature Transmitter
			
Compatible SureSite Types	Plastic and Standard Alloy Units	Mini Alloys	Standard Alloy and High Performance Alloy Units
Operating Temperature, Max.	+300°F (149°C)	+300°F (149°C)	+750°F (399°C)
Housing Materials	Polysulfone	316 Stainless Steel	
Output Termination	Cable	Junction Box (Feralloy Iron)	
Transmitter Resolution		3/8" (9.5 mm)	
Accuracy		3/8" (9.5 mm)	

Signal Conditioned Modules

Gems offers a variety of electrical Junction Boxes with built-in Signal Conditioners to increase the versatility of SureSite Indicators. Voltage outputs available:

- 0-5VDC
- 0-10VDC
- 0-12 VDC

Current output available:

- 4-20mA (loop powered)

Electrical specifications and ordering information for these units are found on Page D-17. Junction boxes with terminal blocks are also on Page D-17.

Intrinsic Safety



Operation is intrinsically safe when transmitters are properly connected with a Gems, or other appropriate, zener barrier in Section L.

Signal Conditioning Modules, 0-5 VDC, 0-12 VDC and 4-20 mA Outputs

Provide signal conditioning as an integral part of the SureSite® Level Indicators

- ▶ Stem Mounted
- ▶ J-Box Enclosed
- ▶ Panel Mounted

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. No intermediate receiver is required.

Specifications (Not included in table below)



Operating Temperature	+5°F to +160°F (-15°C to +71°C)
Storage Temperature	-40°F to +212°F (-40°C to +100°C)
Output Temperature Coefficient (% of full scale, max.)	±0.00388%/°F (±0.007%/°C)
4-20 mA Types	To within ±1% of 16 mA

Excitation Required for Transmitters using 4-20 mA Signal Conditioners

The minimum excitation required for operation of transmitters with 4-20 mA, DC signal converters (See chart at right) can be determined for a given total loop resistance from the graph shown. (Total loop resistance = the sum of the DC termination resistance plus loop resistance.) For optimum operation, which is a function of source voltage (+V_A) and total loop resistance, the source voltage value used should be above the minimum load line for the related loop resistance.

How To Order

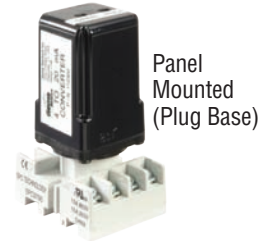
Select Part Number based on Output Signal desired and SureSite Indicator being used.

Electrical Termination Method	Output Signal	Input Voltage	Module Part Numbers For:	
			SureSite Low Temperature	SureSite High Temperature
 Junction Box	0-5 VDC	8-24 VDC	86156	52536
	0-12 VDC	15-30 VDC	85997	52537
	4-20 mA	10-40 VDC	86158	152800
 Panel Mount with Plug-In Base	4-20 mA	10-40 VDC	112300 ⚡	112300 ⚡

⚡ = Stock item



J-Box Enclosure

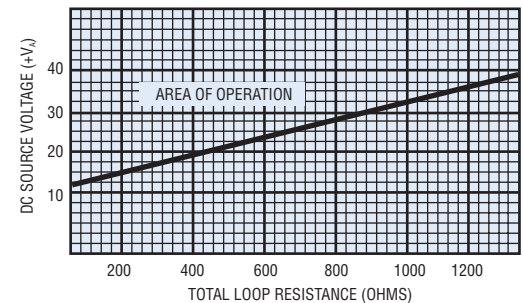


Panel Mounted (Plug Base)

Power Supply Module

Input Power	Part Number
115 VAC, 60 Hz	52560
230 VAC, 60 Hz	52570

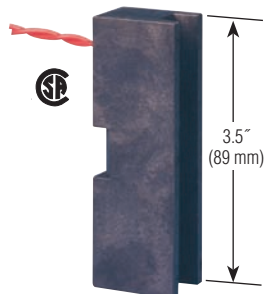
Operates on 115 VAC or 230 VAC inputs to supply a regulated 24 VDC to the signal conditioned transmitter where external VDC power is not available. Maximum Load: 70 mA.



LEVEL INDICATORS – VISUAL

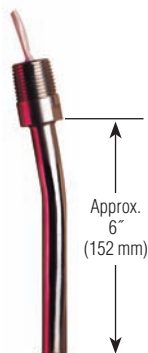
Switch Modules Provide High-, Low- or Intermediate-Level Alarms or Control Logic

Standard Switch Modules



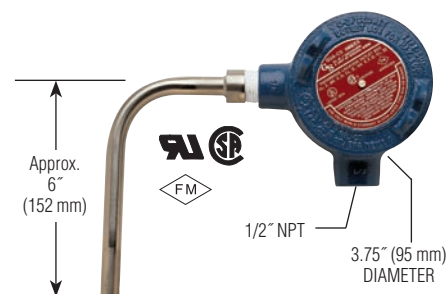
- CSA Approved
- Includes Stainless Steel Mounting Clamp
- Polysulfone Housing
- Withstands Temperatures to 300°F (148.9°C)
- Connection: 1/4" FNPT

High Temperature Switch Module



- Withstands Temperatures of 750°F (399°C)
- 316 Stainless Steel Construction
- 1/2" MNPT Conn.
- Includes Stainless Steel Mounting Clamp

Explosion-Proof Switch Module



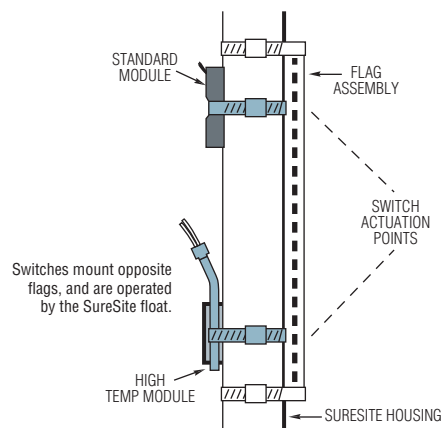
- UL, CSA, FM Approved
- Withstands Temperatures of 750°F (399°C)
- J-Box Terminated
- Stainless Steel Construction
- Includes Stainless Steel Mounting Clamp

Switch Logic (All Models)

	Lead Wires Up	Switch closes on rising level and remains closed until opened by falling level.	For Intrinsic Safety... These switch modules can be rendered intrinsically safe with the use of GEMS SAFE-PAKS® and Zener Barriers. See Section L.
	Lead Wires Down	Switch opens on rising level and remains open until closed by falling level.	

Mounting

Switches mount opposite flags (180°) and may be positioned next to each other for multiple actuation requirements.



How To Order

Switch modules can be added to any SureSite Indicator at any time. Specify the Part Number and quantity of switches desired on Product Check List.

Switch Type		Rating*	Part Numbers – Based on SureSite Version		
			Alloy & ASME SureSite	Mini SureSite	Plastic SureSite
Standard	SPST	20VA	86435 ⚡	86567 ⚡	80469
Hi-Temp	SPST	20VA	83150	83150-M	83150-P
	SPDT	20VA	84320	84320-M	84320-P
Explosion-Proof	SPST	20VA	83130	83130-M	83130-P
	SPDT	20VA	84330	84330-M	84330-P
	DPDT, 120 VAC	10A	83100	83100-M	83100-P
	DTDT, 24 VDC	10A	83110	83110-M	83110-P

* See "Electrical Data" on Page X-5 for more information.

⚡ = Stock item

Indicating Scales

These optional stainless steel indicating scales provide a numerical readout of the liquid level in addition to the flag indication. They mount alongside the flag assembly for easy viewing.

- Available in 1.5" and 3" wide versions.
- Markings: Feet and Inches
Inches
Metric (Decameter, centimeter, millimeter)

Custom marked graduations such as gallons, liters or percentage available.

