



7100 Leak Detect Stik™ Data Sheet

Proven Magnetostrictive Sensing Performance in a Revolutionary New Package

The 7100 Stik Liquid Level Sensor takes field proven magnetostrictive sensing technology and packages it in a revolutionary new way for greater reliability and for easy installation and mounting. It is ideal for liquid level monitoring of product level, interface level and leak detection in a wide variety of liquid media in both above ground and below ground storage tanks.

All The Electronics Are Down The Tube

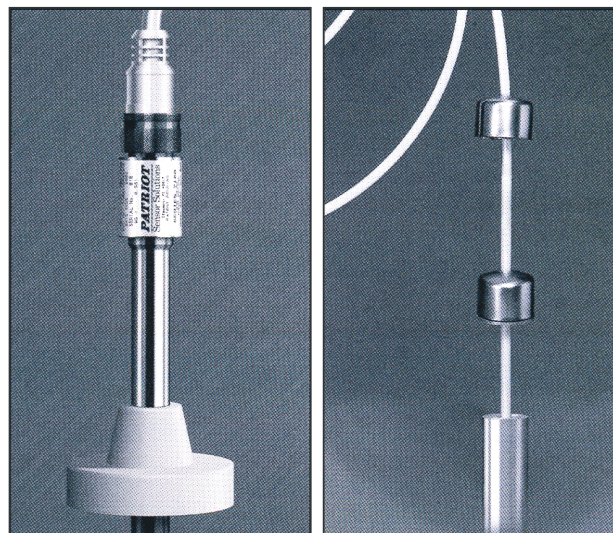
All sensor electronics are SMT components integrated into the 5/8" diameter sensing tube. Sensors are available in stainless steel or flexible PVDF housings. The stainless steel version has either a mini connector or a right angle conduit fitting. The flexible PVDF version is available with a threaded fitting and a 2' cable (see dimensional drawing on reverse side for connector details).

This breakthrough in package design eliminates the bulky electronics enclosure at the top of the sensor and offers you greater options for insertion and mounting in tanks and vessels. In addition, standard float packages are available which allow sensor insertion into tank openings as small as two inches.

The 316 stainless steel version is a totally welded construction, and has a cathodic protection boot for use in a wide variety of applications. The Flex-Stik™ version employs a flexible housing and provides cost effective level monitoring in deep tanks.

The all SMT electronics have PPM (Pulse Position Modulated) outputs for product and interface level and for temperature measurement, which are all superimposed on the two wire power line. All units are Intrinsically Safe and approved for use in hazardous locations.

The 7100 Liquid Level Sensor's inherently lower cost design provides more options, offers savings on installation and mounting and has the ultimate in "designed-in" reliability.



Specifications	
Input Voltage	16 to 31 VDC
Sensor Length	Stainless Steel up to 24' PVDF up to 50'
Enclosure Rating	Material 316 SS or PVDF, IP 68
Typical Level Resolution (Controller Dependent)	0.010" Inventory Mode 0.001" Leak Detection Mode
Linearity	+/- 0.01% of Full Scale +/- 0.010", whichever is greater
Repeatability	+/- 0.001% of Full Scale +/- 0.00025", whichever is greater
Temperature Measurement	Up to 5 along the sensor span
Temperature Accuracy, Absolute	+/- 2°F
Typical Temperature Resolution (Controller Dependent)	+/- 0.01°F
Temperature Sensing Range	- 40°F to +158°F or -40°C to 70°C
Operating Temperature Range	- 40°F to +158°F or -40°C to 70°C
Sensor Output	Pulse Position Modulated
Distance to Monitor	Over 1000' using twisted pair wire
Floats (not included)	Specs based on 4" standard floats
Approvals	<div style="display: flex; flex-direction: column; align-items: flex-start;"> <div style="display: flex; align-items: center; margin-bottom: 5px;"> ⊠ II 1G Ex ia IIB T4 (7100 M/R)</div> <div style="display: flex; align-items: center; margin-bottom: 5px;"> ⊠ II 1G Ex ia IIA T4 (7100 K/V)</div> <div style="display: flex; align-items: center; margin-bottom: 5px;"> CE 0344 ⊠ II 1G</div> <div style="display: flex; align-items: center; margin-top: 10px;"> UL US</div> </div> <p>UL 913, CSA C22.2 No. 157-92</p>
Specifications are subject to change without notice. Patented.	

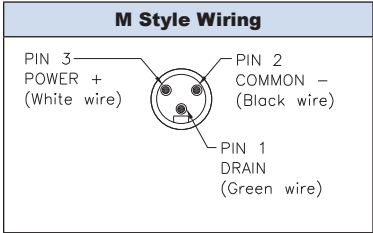
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Part Numbering

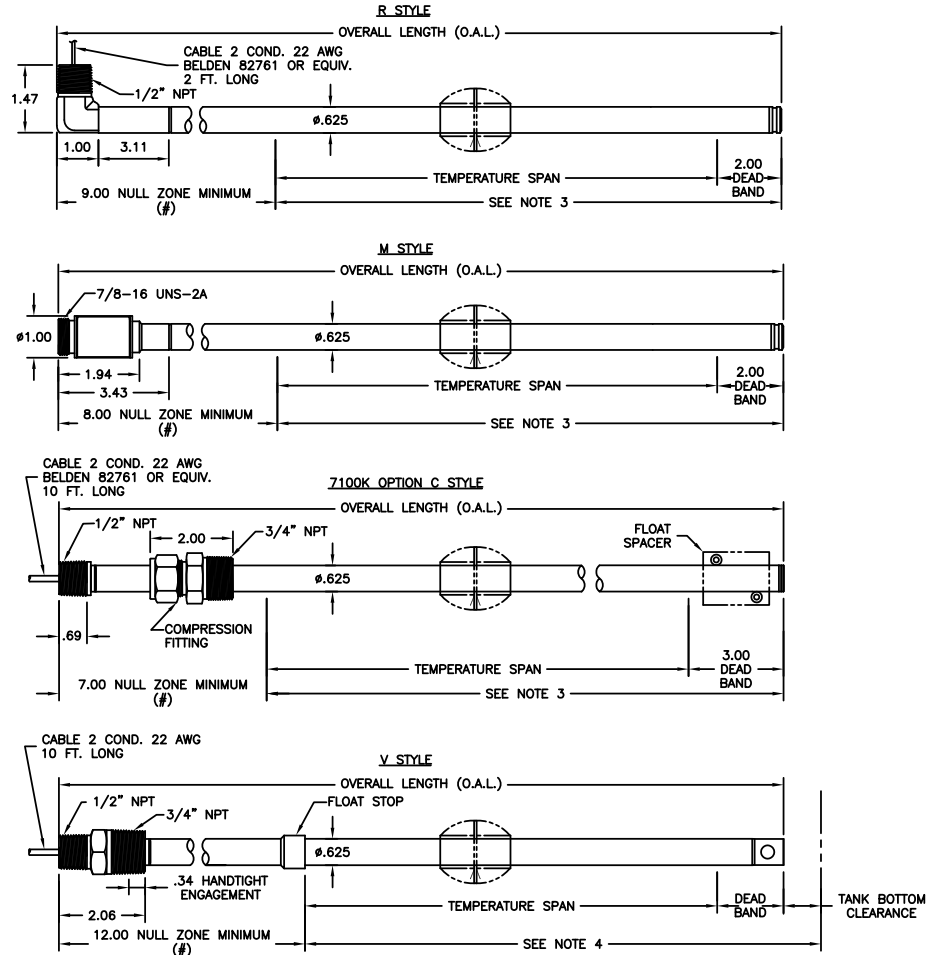
7100	M	048	R5	X	F	LXXX
Liquid Level Sensor PPM Output		Temperature Span Insert temperature span in whole inches. Enter as a three-place number. Example: A 48" span enters as 048.		Tank Mounting Method X = None. C = Limited temperature range with compression fitting. B = Fixed bottom probe, consult factory. R = Replacement probe		Overall Length Insert overall length in inches in place of XXX. Data below includes nominal null and dead zones. Longer custom lengths are available in 1' increments.
Connector Style M = Stainless steel tube with mini-connector. R = Stainless steel tube with right angle NPT fitting.* V = PVDF flexible tube with male NPT conduit fitting.* K = PVDF semi-flexible tube, limited temperature range 0 to 40°C (Tank mounting method must be option C).*		Number of Thermistors R1 = Single temperature sensor, 18" from bottom of sensor. For V Style, consult factory. T1 = Single temperature sensor, 4" from bottom of sensor. For V Style, consult factory. R5 = Five temperature sensors spaced equally in temperature span.		# of Float Outputs F1 = One float output. F2 = Two float output.		
*R, V & K - 2' PVC jacketed Teflon insulated wires.						

Dimension Drawing

R, K & V Styles Wiring		
Signal Name	Mating Cordset	Pigtail
Drain	Green	Drain
Common -	Black	Black
Power +	White	Red



Install per installation drawing No. E0234300



EXPANSION CLEARANCE REQ'D AT BOTTOM OF TANK (V STYLE):
 MIN. CLEARANCE = (O.A.L.) X (MAX. OPERATING TEMP(°C) - 20) X (.00014)
 OVERALL LENGTH = TANK HEIGHT - CLEARANCE + 1"

O.A.L. (in)	DEAD BAND(in)	TANK BOTTOM CLEARANCE(in)
51-144	6.00	1.00
145-288	8.00	2.00
289-432	12.00	3.00
433-600	15.00	4.00
601-720	17.00	5.00
721-840	19.00	6.00

NOTES: UNLESS OTHERWISE SPECIFIED

- OPERATING TEMPERATURE OF K-C STYLE PROBE IS 0-40°C (32-104°F)
- ALL DIMENSIONS ARE FOR REFERENCE ONLY.
- THERMISTORS ARE SPACED EQUALLY OVER RANGE SPECIFIED.
- THERMISTORS ARE SPACED EQUALLY OVER TEMPERATURE SPAN + DEAD BAND + TANK BOTTOM CLEARANCE