

LevelPro® — 100 Series
Submersible Level Sensor Transmitter

ICON™ PROCESS CONTROLS Corrosion-Free
Instrumentation Equipment™



LevelPro® — 100 Series

Submersible Level Sensor Transmitter

- ✓ Works on Foam | Vapor | Turbulence | Condensate
- ✓ Ceramic Sensing Diaphragm
- ✓ Integrally Molded Internal Weight | No Floating

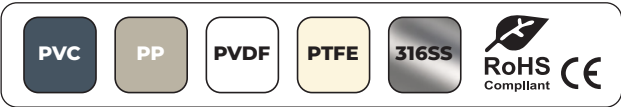


A Submersible Level Sensor for the Toughest Industrial Applications.

The 100 Series Submersible Level Sensor Transmitters are designed to provide an accurate and continuous level measurement for both corrosive and non-corrosive liquids.

Featuring an integrally molded weight, the 100 Series sensor is engineered to sit and remain at the bottom of the tank while measuring the head pressure of the liquid pushing down on its ceramic diaphragm.

Aside from being the industry's simplest and most reliable level sensor, the 100 Series is the perfect solution for tough applications where ultrasonics will not perform.



Features

- ✓ High Accuracy: $\pm 0.5\%$
- ✓ Superior Chemical/Corrosion Resistance
- ✓ PVC | PP | PVDF | 316 SS | PTFE Teflon®
- ✓ Teflon® Jacketed Cable
- ✓ Kalrez® (FFKM) O-Ring Seal
- ✓ Optional Temperature Output (4-20mA)
- ✓ IP68 | NEMA 4X Enclosure

Working Principle



Model Selection

100 Series Submersible Level Sensor		
Size	Part Number	Material
0-34ft 11m	191-1001-A113315	PVC
0-34ft 11m	191-1001-B113315	PP
0-34ft 11m	191-1001-E113315	PVDF
0-34ft 11m	191-1001-T113315	PTFE
0-34ft 11m	191-1001-SS113315	316 SS

Part Above for 34ft Range-11m Cable
Add suffix "-T" for temperature output version

191-1001-A113315-T

Range (ft)	Housing	Output	Cable Length	Temperature Output
1401: 14.0	A: PVC	1: 4-20mA	05: 5m	(Optional)
1201: 20.0	B: PP	2: Ratiometric	10: 11m	
1001: 34.0	E: PVDF	3: Voltage	15: 15m	
4001: 54.0	T: PTFE	4: RS485	20: 20m	
	SS: SS	5: 4-20mA + HART		

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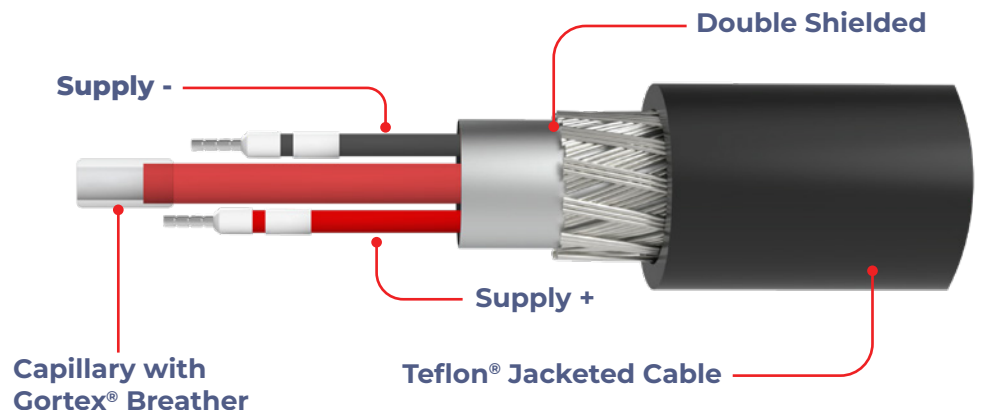
Technical Specifications

Input Pressure Range	
Level ft/H ₂ O	14 20 34 54 *Consult Factory for Levels > 54 ft
Overpressure Psi	210 290 290 380
Output Signal Supply	
Output Signal	4-20mA 4-20mA+Hart 2 Wire 0.5-4.5 VDC Ratiometric 0-5 VDC RS-485 3 Wire 2 x 4-20mA (Temp. Version)
Temperature Output	4-20mA (0 - 100°C)
Power Supply	9-36 VDC 0.5-4.5VDC 5VDC
Performance	
Accuracy	<±0.5% of FS
Permissible Load	$R_{max} = [(V_s - V_{smin}) / 0.02 A] \Omega$
Influence Effects	Supply: 0.05% Full Scale/10V Load: 0.05% Full Scale/K Ω
Long Term Stability	<± 0.1% Full Scale over One Year
Response Time	<10ms
Thermal Effects Offset and Span	
Thermal Drift	<± 0.02% FSO/K in Compensated Range -20 – 170°F
Permissible Temperatures	
Storage/Media Temperatures	PVC: 32°F to 140°F PP: -20°F to 170°F PVDF: -40°F to 170°F PTFE: -40°F to 170°F 316 SS: -40°F to 170°F
Electrical Protection	
Short-Circuit Protection	Permanent
Reverse Polarity Protection	No Damage to Sensor
Electromagnetic Compatibility	Emission Immunity According to EN 61326
Electrical Connection	
Jacketed Cable	PTFE Teflon® -40 to 200°F
3-Wire Cable with Integrated Air Tube for Reference to Atmospheric Pressure	
Materials Wetted	
Housing	PVC PP PVDF PTFE 316 SS
Seal	FFKM - Kalrez®
Diaphragm	Pure Ceramic 96% Al ₂ O ₃ 316 SS
General	
Current Consumption	Max. 25mA
Weight Grams	PVC: 575g PP: 475g PVDF: 825g PTFE: 875g 316 SS: 875g
Ingress Protection	IP 68 NEMA 4X
CE-Conformity	EMC Directive: 2004 108 EC

*Contact Factory for different options

Wiring

2-Wire	
Wire Color	Description
Red	+VDC
Black	-VDC
Temperature Output Version	
Wire Color	Description
Red	Level +VDC
Black	Level -VDC
Yellow	Temp +VDC
Green	Temp -VDC



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LP100 Junction Box

Frequently Ordered With:

- **SP100 Level Display**
LevelPro® ShoPro® Series LED Display & Controller, 4-20mA Input, NEMA 4X Enclosure, Wall Mount, 120VAC
- **LP100 Junction Box**
LevelPro® LP100 Series Junction Box, PP Material, Viton VaporBloc®, NEMA 4X, 2" NPT Connection, Gortex® Breather

The Solution to Tough Applications Where Ultrasonic Sensors Simply DO NOT WORK!

The LevelPro® 100 Series submersible level sensor transmitter and tank level junction box are a perfect pair for applications where ultrasonic sensors aren't going to work.

Accurately measure tank levels with this rugged combination that's simple to use and boasts superior chemical resistance along with industry exclusive features.



100 Series

Ceramic Sensing Diaphragm

Teflon® Jacketed Cable



VaporBloc®
Eliminates Vapor from
Entering Junction Box

VaporBloc® Technology

- ✓ Blocks Out Corrosive Chemical Fumes
- ✓ Pressure Tested to 75 Psi
- ✓ Protects Internal Wiring Connections

Displays

The 100 Series can be easily connected to one of our many displays or to an existing PLC.



ShoPro® SP100 Series

- All in One Controller
- NEMA 4X Enclosure + Cord Grip
- Power Supply Output: 24 VDC