



Series 510 Submersible Level Transmitters

Form 1144

The Series 510 submersible transmitter

is a loop-powered transmitter that accurately and reliably measures levels for many types of liquids. The transmitter indicates level by continuously monitoring the head pressure of the liquid, using a high performance ceramic strain gauge sensor. The 510 has a corrosion-resistant 316 stainless steel housing, Viton seals and a high-density Polyethylene (HDPE) cable jacket for compatibility with most liquids. A PVC self-flushing nose cone on the 510LT prevents clogging and is easily removed for calibration or rigid mounting. The transmitter is vented at the surface (through a tube in the cable) to reference atmospheric pressure.



510LT

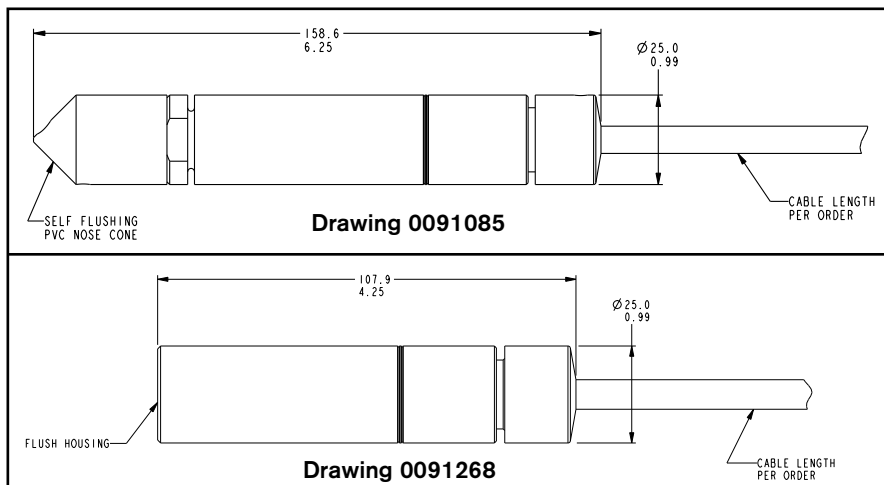
Features and Benefits

- Ranges from 10 feet to 463 feet water column
- 0.25% accuracy
- 4-20mA, loop powered
- Unspliced cable lengths to 3,000 feet
- Intrinsically safe option
- IP68 housing

Product Specifications

Accuracy	0.25% of range (Linearity, Hysteresis and Repeatability)
Zero Offset/Span Offset	±0.5% of range @ 77°F (25°C)
Temperature Range	
Compensated	32 to 176°F (0 to 80°C)
Operating	-4 to 176°F (-20 to 80°C)
Storage	-40 to 176°F (-40 to 80°C)
Temperature Effect	≤1% of range/100°F, Calibrated @ 77°F (25°C)
Long-Term Stability	±0.1% of range per year
Over Pressure Protection	1.5X span
Supply Voltage	10-32 VDC (IS option - 28 VDC maximum)
Output	4 - 20 mA, loop powered
Loop Resistance	700 Ohms maximum @ 24 VDC
Circuit Protection	Reverse polarity protected
Construction	316SS housing & butyl rubber cable gland*, ceramic (Al ₂ O ₃) diaphragm, Viton seals, PVC nose cone (LT Model), HDPE cable jacket
Process Connection	1/4" NPT under nose cone (LT model)
Electrical Connection	20 AWG shielded cable
Maximum Cable Length	3000 feet (914 meters)
Warranty	1 year

* SOR 510 submersible products should not be used in liquids known to have or possibly contain chemical compounds that react with butyl rubber or stainless steel.



Weights

Transmitter: 1.0lb (454 g)
Cable: 0.04lb/ft (60 g/m)

Agency Approvals

ATEX
Intrinsically Safe
EEx ia IIC T4



*Design and specifications are subject to change without notice.
For latest revision, see www.sorinc.com.*

Registered Quality System to ISO 9001:2008

Submersible Level Transmitters

How to Order

Model Number System

510-LT-15-45-C3IS

Series

Model

Span

Cable Length

Test Certs & Accessories

1

Model

- LT** Level transmitter
- SF** Flush level transmitter

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Span

		Sensor Range Bar
10	0-10 ft. w.c. (0-3.0m w.c.)	1
15	0-15 ft. w.c. (0-4.5m w.c.)	1
20	0-20 ft. w.c. (0-6.1m w.c.)	1
25	0-25 ft. w.c. (0-7.6m w.c.)	2
35	0-35 ft. w.c. (0-10.7m w.c.)	2
50	0-50 ft. w.c. (0-15.2m w.c.)	2
75	0-75 ft. w.c. (0-22.8m w.c.)	5
100	0-100 ft. w.c. (0-30.5m w.c.)	5
200	0-200 ft. w.c. (0-61.0m w.c.)	10
400	0-400 ft. w.c. (0-122.0m w.c.)	20
R1	Custom range from 10 to 22.99 ft. w.c. (3.0 to 7.0m w.c.)	1
R2	Custom range from 23 to 49.99 ft. w.c. (7.01 to 15.24m w.c.)	2
R3	Custom range from 50 to 114.99 ft. w.c. (15.25 to 35.04m w.c.)	5
R4	Custom range from 115 to 229.99 ft. w.c. (35.05 to 70.0m w.c.)	10
R5	Custom range from 230 to 463 ft. w.c. (70.1 to 141.1m w.c.)	20

Note: Custom range must be specified.
w.c. = water column

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Cable Length

5	5 ft. (1.5m)
10	10 ft. (3.0m)
15	15 ft. (4.5m)
20	20 ft. (6.0m)
25	25 ft. (7.5m)
30	30 ft. (9.0m)
35	35 ft. (10.5m)
40	40 ft. (12.0m)
45	45 ft. (13.5m)
50	50 ft. (15.0m)
55	55 ft. (16.5m)
60	60 ft. (18.0m)
65	65 ft. (19.5m)
70	70 ft. (21.0m)
75	75 ft. (22.5m)
80	80 ft. (24.0m)
CL	1 to 3000 ft. (0.3 to 914m) custom length (must be specified)

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Test Certifications & Accessories

- C1** Calibration Certificate
- C3** Inspection Report Certificate
- IS** Intrinsically safe (845 ft./257.5m maximum cable length)
- RR** SS tague wired to control with customer-specified information
- P/N 9012-603 – NEMA 4X Junction Box - (Includes terminal block, indicating desiccant and liquid-tight cable gland for sensor)
- P/N 5010-001 – 2" pipe mounting kit
- P/N 9137-104 – Cable clamp for suspension mounting
- P/N 4002-558 – Surge suppression device
- P/N 4002-547 – (1) Indicating desiccant pack
- P/N 4002-553 – (18) Indicating desiccant packs

