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SOR
MEASUREMENT AND CONTROL

510 Submersible Level Transmitter

The 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

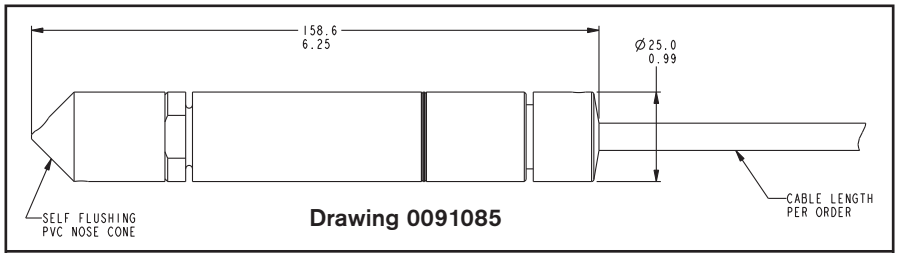
Features and Benefits

- 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

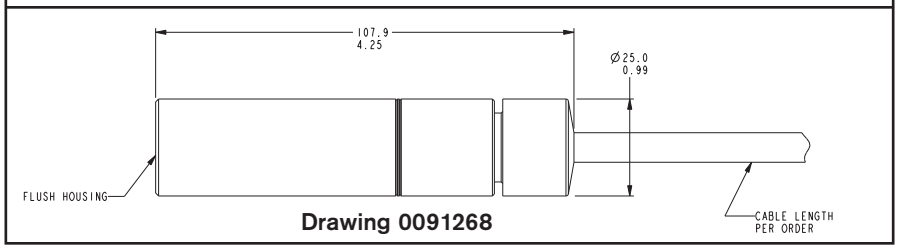
Product Specifications

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_2O_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.



Drawing 0091085



Drawing 0091268

Weight

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.

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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

2 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

3 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)

4 Test Certifications & Accessories

C1	Calibration Certificate
C3	Inspection Report Certificate
IS	Instrinsically safe (845 ft./257.5m maximum cable length)
RR	316SS tage wired to control with customer-specified information
	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

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