

# "SL" Hydrostatic Level Transmitter

## Introduction

Anderson-Negele's "SL" Level Transmitter is the latest innovation for measuring liquid level in sanitary applications. The "SL" Transmitter incorporates state of the art design to provide superior accuracy and long term signal stability. The field tested performance of the "SL" transmitter means the elimination of expensive, repetitive re-calibrations along with protection against costly overflow/run-dry situations that can occur with less stable level transmitters. The 0.2% accuracy experienced at installation can now be expected a year later!

We've also incorporated a field calibration feature that provides "one-touch" sensor zeroing as well as simple range calibration, without the need for special tools and fixtures, pressure sources, or removal of the transmitter from the tank. This translates to real cost savings during installation or when adjusting for new application requirements. With the addition of our standard quick disconnect receptacles; we have even extended our two-year warranty to cover water ingress.

Of course the "SL" Transmitter is available in all standard fitting and range combinations you'll need to fit any sanitary tank application. All variations are CE compliant, meet applicable 3-A Sanitary Standards, and are backed by a 2-year warranty.



## Authorizations



## Features

- Fewer tune-ups
  - No more overflows
  - More reliable inventories
  - 3-A compliant; Third party verified
- Special Features Include:
- Quick Disconnect Receptacles with optional Field Wiring Connectors
  - One-Touch Field Calibration
  - Available with Hart Communication

## Applications

- Inventory Control
- Batching/Mixing Control
- Both Conductive and Non Conductive Fluids

Specifications

PERFORMANCE

Level Measurement  
 Ranges: (Factory calibrated at no charge and easily field calibrated within the parameters listed below)

	Minimum	Maximum (URL*)	Proof Pressure
SL1 & SL5 Series	0-30 " w.c.**	0-140 " w.c.	10 psig
SL2 & SL6 Series	0-140.1 " w.c.	0-415 " w.c.	30 psig
SL3 & SL7 Series	0-415.1 " w.c.	0-830 " w.c.	60 psig
SL4 & SL8 Series	0-830.1 " w.c.	0-1385 " w.c.	100 psig

Ranges to accommodate vacuum available on request

Calibrated Accuracy: (includes repeatability, hysteresis, and linearity)  
 ± 0.20% of URL at stable calibration temperature

Calibration Stability: Within ±0.2% of URL for one (1) year minimum

Resolution: Infinite

Process Temperature Limits: 0°F to 265°F (-18°C to 130°C)

Ambient Temperature Limits: 15°F to 120°F (-9°C to 49°C)

Compensated Temp. Range: 0°F to 250°F (-18°C to 121°C) (process)

Temperature Stability: ±0.2% of Upper Range Limit (URL) per 10°F (5.5°C)

Over-Range Capacity: 2 times the URL (see table above)

Response Time: 526 mSec

COMMUNICATION

Standard: Analog, 4-20mA output  
 Optional: Analog + Hart digital protocol.  
 Does not support Multidrop mode

\* URL = Upper Range Limit  
 \*\* w.c. = water column

POWER SIGNAL

Loop Power  
 Excitation: 24 VAC (12-36 vdc)  
 Input Current Rating: 35mA  
 Output: 4-20mA dc, 2-wire. Internal test points supplied

Loop Resistance: 1550 ohms (max.) at 40 vdc, 750 ohms (max) at 24 vdc

Cable Recommended: 2 conductor, stranded, 18-24 AWG, shielded with ground.  
 0.17 - 0.26" Cable Sheath OD for use with field wiring connector.  
 Anderson molded cord set recommended for best EMI and water protection.

Receptacle: 5-pin M12 Quick Disconnect Receptacle

**MATERIALS/CONSTRUCTION**  
 Housing Material: 304 and 316 stainless steel finished to 32Ra max  
 Wetted Parts: 316L stainless steel electropolished to 15Ra max

Enclosure Protection: Designed and factory tested to NEMA 4X, IP66, IP67; Suitable for use in wet locations at up to 100% relative humidity.

AGENCY APPROVALS

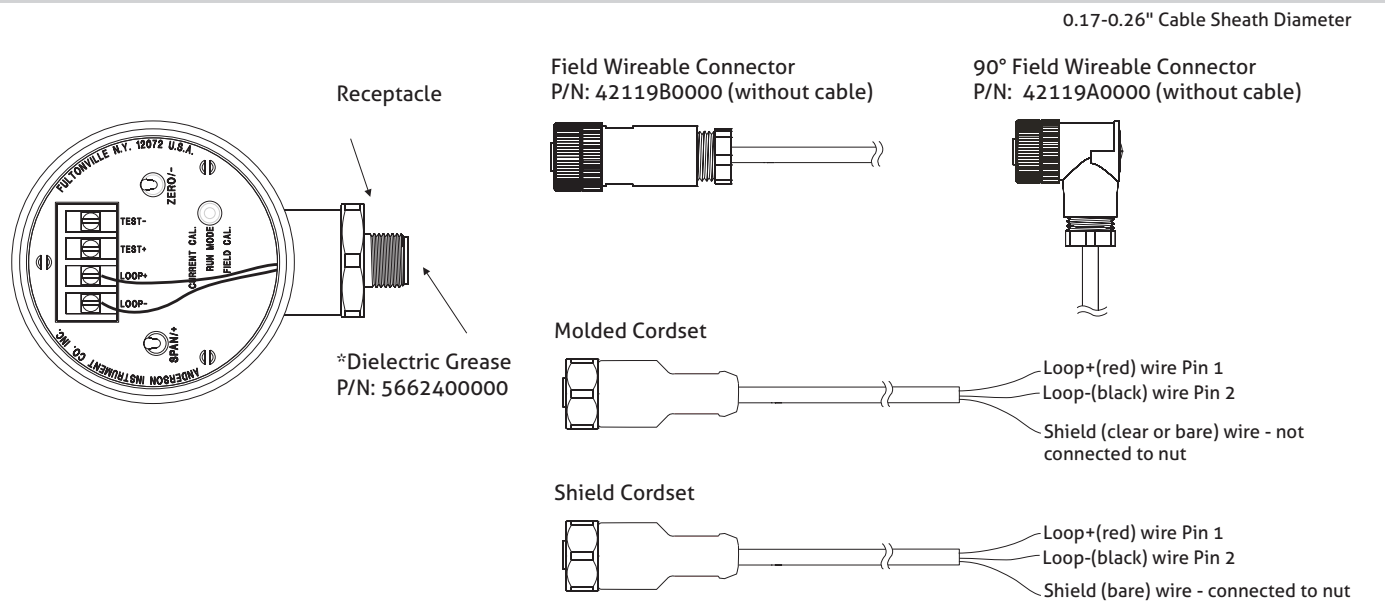
Electromagnetic Compatibility (EMC): Fully CE Compliant when equipped with shielded molded cord set

Standards: 3-A compliant; Third Party Verified  
 Designed and manufactured to sound engineering practices in accordance with Article 3.3 of the PED 97/23/EC

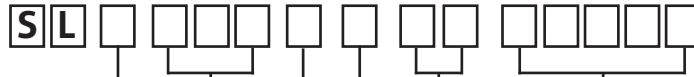
ETL Listed  
 Conforms to UL Std 61010-1 3rd Ed(with Hart options)  
 Certified to CSA Std C22.2 61010-1 3rd Ed(with Hart options)

Warranty: All units are covered by a two (2) year warranty against defects in material and workmanship when installed and maintained according to the instruction manual provided

Electrical Connections and Wiring Options



Order Information



**SPAN RANGE**

- 1 0-30" min to 0-140" max with Hart
- 2 0-140.1" to 0-415" max with Hart
- 3 0-415.1" to 0-830" max with Hart
- 4 0-830.1" to 0-1385" max with Hart
- 5 0-30" min to 0-140" max
- 6 0-140.1" to 0-415" max
- 7 0-415.1" to 0-830" max
- 8 0-830.1" to 0-1385" max

**FITTING**

- 089 Anderson Flush Mount Long (71060-A3, A5, A7, A9)
- 088 Anderson Flush Mount Short (71060-A4, A6, A8)
- 091 Cherry Burrell Flush Mount Long (insulated tank)
- 090 Cherry Burrell Flush Mount Short (uninsulated tank)
- 092 King Gage Flush Mount Long<sup>3</sup> (1777-3)
- 093 King Gage Flush Mount Medium (1777-1, -6 Standard)
- 094 King Gage Flush Mount Short (1777-2 non-insulated)
- 097 Tank Mate Flush Mount Long<sup>1,3</sup> (208WVE)
- 096 Tank Mate Flush Mount Medium<sup>1</sup> (205WVE)
- 095 Tank Mate Flush Mount Short<sup>1</sup> (200WVE)
- 004 1-1/2" Tri-Clamp
- 005 2" Tri-Clamp
- 007 3" Tri-Clamp
- 059 1-1/2" NPT<sup>3,4</sup>
- 147 Continental (long)
- 146 Continental (short)<sup>3</sup>
- 141 Rosemount / Foxboro Sanitary Spud - Short<sup>3</sup>
- 142 Rosemount / Foxboro Sanitary Spud - Long<sup>3</sup>
- 154 Endress & Hauser Universal Adaptor - Short
- 155 Endress & Hauser Universal Adaptor - Long
- 169 Liquid Scale Flush Mount Medium<sup>2,3</sup>

**DIAPHRAGM**

- 1 SS-316L Electropolished
- 2 Hastelloy "C"  
(N/A with King-Gage, Tank Mate, or Endress & Hauser Fittings)

<sup>1</sup> Requires Tank Mate Shell Adapter: 57200A0001 (insulated) 57200A0002 (uninsulated)  
<sup>2</sup> Requires Liquid Scale Shell Adaptor: 4593600000  
<sup>3</sup> Sensors with these fittings are non-cancellable/ non-returnable for credit  
<sup>4</sup> Not 3-A compliant

**\*Note:**  
 Calibration of span is in units "inches water column".  
 Consult factory for assistance.

**\*\*Note:**  
 Orders not accepted without calibration data or completed worksheet.

**CALIBRATION \*\***

##### Height in inches w.c.\*  
 (to nearest tenth)  
 00000 Field Calibrated

**Examples:**

10850 1,085.0 inches  
 00305 30.5 inches

**SENSOR WIRING**

- 01 Quick Disconnect Receptacle (QDR) & Field Wireable Connector (FWC) w/No Cable (std.)
- R0 QDR & 90° FWC w/No Cable
- 00 QDR w/No Cable, no FWC
- 05 QDR w/25 ft Standard Molded Cordset
- 10 QDR w/50 ft Standard Molded Cordset
- 20 QDR w/100 ft Standard Molded Cordset
- 99 1/2" NPT No QDR, no FWC and no Cable (No sensor warranty for water damage)

**MOUNTING**

- 0 Horizontal
- 1 Vertical
- 2 Other (specify angle from vertical or from horizontal)

**ACCESSORIES**

Anderson Weld-In Shells for Flush Mount Level Transmitters  
 71060A0003 Insulated Vessel - Standard Flange - 316L  
 71060A0004 Uninsulated Vessel - Standard Flange - 316L  
 71060A0005 Insulated Vessel - Pressure Vessel Flange - 316L  
 71060A0006 Uninsulated Vessel - Pressure Vessel Flange - 316L  
 71060A0009 Insulated Vessel - H/D Press. Vessel Flange - 316L

**Shell Adaptor**

Tank Mate, uninsulated 57200A0002  
 Tank Mate, insulated 57200A0001

**Gaskets for Flush Mount Level Transmitters**

Anderson 44348A0001  
 Cherry Burrell 44292A0001  
 King Gage 36240S3212  
 Tank Mate 36240S3123  
 Continental 5658900000  
 Rosemount 36240S3341

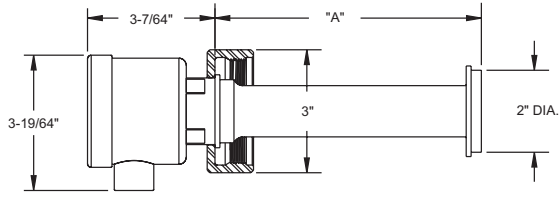
**Sensor Calibration Adaptors**

Anderson fitting 73198A0001  
 Cherry Burrell fitting 73198A0002  
 King Gage Fitting 73198A0003  
 Tankmate 73198A0004

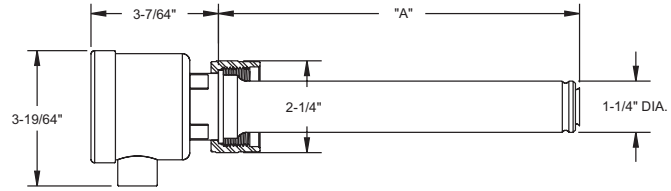
**Cord Sets**

Molded w/25' cable 42117K0025  
 Molded w/50' cable 42117K0050  
 Molded w/100' cable 42117K0100  
 5-Conductor w/25' cable 42117H0025  
 5-Conductor w/50' cable 42117H0050  
 5-Conductor w/100' cable 42117H0100

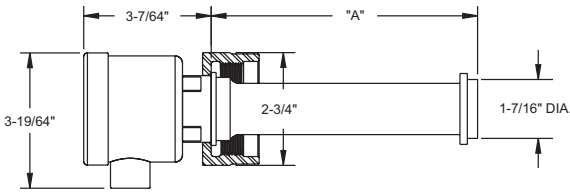
Sensor Fittings and Dimensions



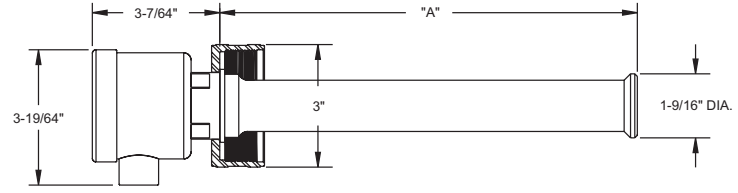
ANDERSON SHELL TYPE	"A"
NON INSULATED	2-3/16
INSULATED	6-1/2



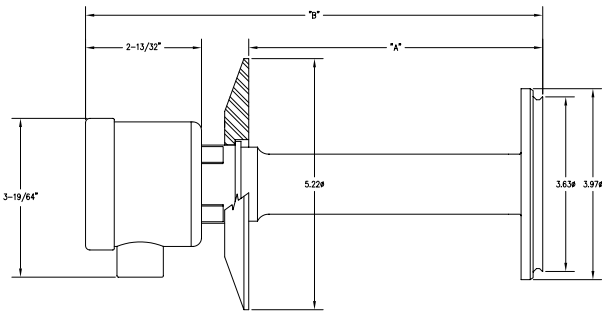
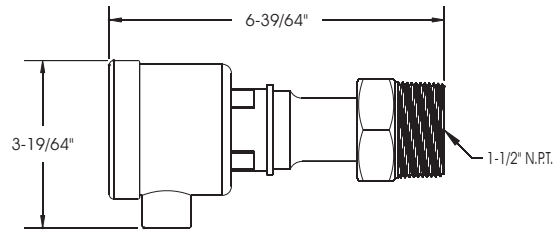
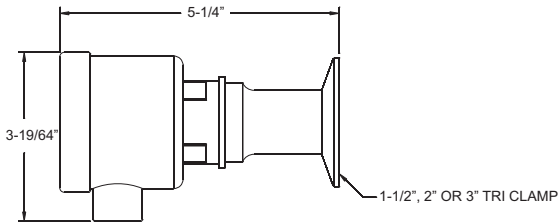
KING SHELL TYPE	"A"
NON INSULATED	2-3/16
STANDARD	6-9/16
LONG	8-13/16



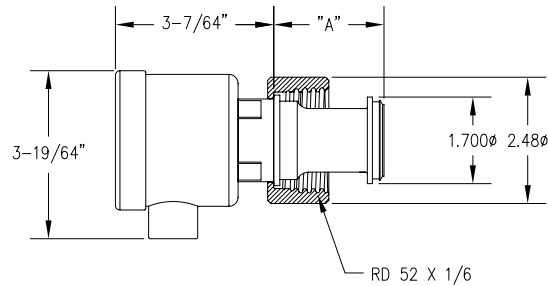
CHERRY BURRELL SHELL TYPE	"A"
NON INSULATED	2-3/16
INSULATED	6-1/2



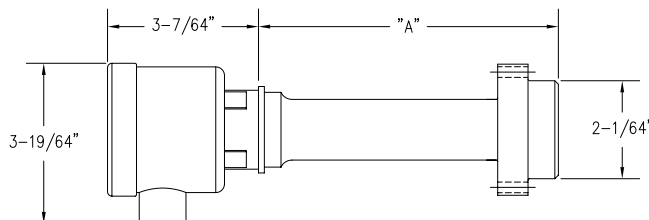
TANK MATE SHELL TYPE	"A"
SHORT	5-7/32
MEDIUM	7-19/64
LONG	10-3/16



FITTING	"A" DIM.	"B" DIM.
ROSEMOUNT SHORT	2.11"	5-1/2"
ROSEMOUNT LONG	6.11"	9-1/2"



DESCRIPTION - USE	"A" DIM.
E+H LONG (6" SHELL)	6.60
E+H SHORT (1-9/16" SHELL)	2.16



CONTINENTAL SHELL TYPE	"A"
NON INSULATED	2-5/32
INSULATED	6-3/16