FLOW
LEVEL
PRESSURE
ANALYTICAL
TEMPERATURE
INSTRUMENTATION
PASTEURIZATION CONTROLS

# "SL" Level Transmitter

## New technology proven to eliminate long-term signal drift — provides substantial savings in all inventory applications!

- *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**

Anderson Instrument Company'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 ingression.

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.

ANDERSON INSTRUMENT CO., INC • 156 AURIESVILLE RD. • FULTONVILLE, NY 12072 • USA • 800-833-0081 • FAX 518-922-8997
ANDERSON INSTRUMENT CO. LP • 400 BRITANNIA RD. EAST, UNIT 1 • MISSISSAUGA, ONTARIO L4Z 1X9 • CANADA • 905-603-4358 • FAX 905-568-1652
NEGELE MESSTECHNIK GmbH • RAIFFEISENWEG 7 • D-87743 EGG A. D. GÜNZ • GERMANY • +49 (0) 8333/9204-0 • FAX +49 (0) 8333/9204-49

www.andinst.com

# SL 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 accomodate 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): 12-40 vdc
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 $32R_a$ max
Wetted Parts: 316L stainless steel electropolished to $15R_a$ max
Ratings: NEMA 4X, IP-66, IP-67

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

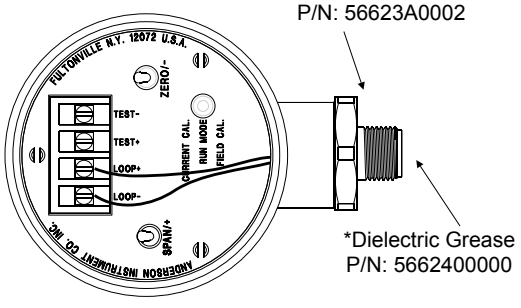
Standards: 3-A compliant; Third Party Verified

Designed and manufactured to sound engineering practices in accordance with Article 3.3 of the PED 97/23/EC

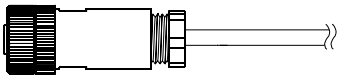
Warranty: All units are covered by a two (2) year warranty against defects in material and workmanship when installed and maintained according to the instruction manual provided

## Electrical Connections and Wiring Options

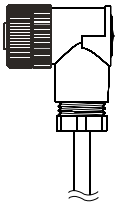
0.17-0.26" Cable Sheath Diameter



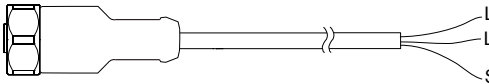

Field Wireable Connector
P/N: 42119B0000 (without cable)



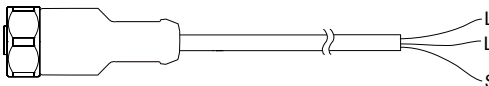
90° Field Wireable Connector
P/N: 42119A0000 (without cable)



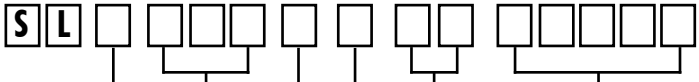
Molded Cordset




Heavy Duty Connected Shield Cordset



# How to Order




**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 [3] (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 [1,3] (208WVE)
096 Tank Mate Flush Mount Medium [1] (205WVE)
095 Tank Mate Flush Mount Short [1] (200WVE)
004 1-1/2” Tri-Clamp
005 2” Tri-Clamp
007 3” Tri-Clamp
059 1-1/2” NPT [3, 4]
147 Continental (long)
146 Continental (short) [3]
141 Rosemount / Foxboro Sanitary Spud - Short [3]
142 Rosemount / Foxboro Sanitary Spud - Long [3]
154 Endress & Hauser Universal Adaptor - Short
155 Endress & Hauser Universal Adaptor - Long
169 Liquid Scale Flush Mount Medium [2,3]

**DIAPHRAGM**

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

**MOUNTING**

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

**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)

**CALIBRATION ****

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

**Examples:**

10850 1,085.0 inches
00305 30.5 inches

[1] Requires Tank Mate Shell Adapter:
57200A0001 (insulated)
57200A0002 (uninsulated)

[2] Requires Liquid Scale Shell Adaptor: 4593600000

[3] Sensors with these fittings are non-cancellable/non-returnable for credit

[4] 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.*

**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 | 36240S0212 |
| Tank Mate | 36240S0123 |
| Continental | 5658900000 |

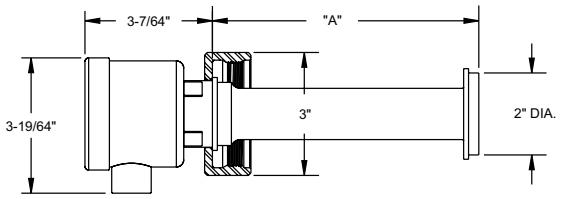
Sensor Calibration Adaptors

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

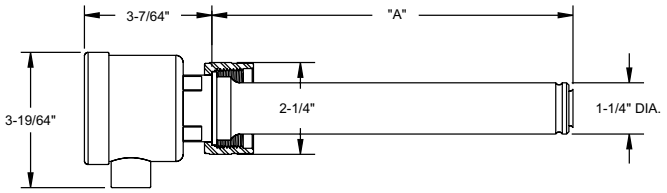
Cord Sets

| | |
|---|---|
| Molded w/25’ cable | 42117K0025 |
| Molded w/50’ cable | 42117K0050 |
| Molded w/100’ cable | 42117K0100 |
| Heavy Duty Shielded w/25’ cable | 42117F0025 |
| Heavy Duty Shielded w/50’ cable | 42117F0050 |
| Heavy Duty Shielded w/100’ cable | 42117F0100 |

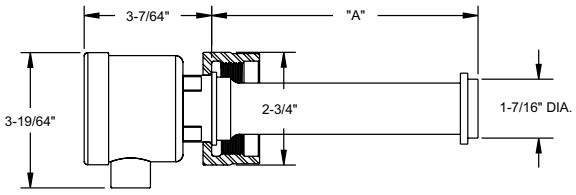
# Sensor Fittings and Dimensions



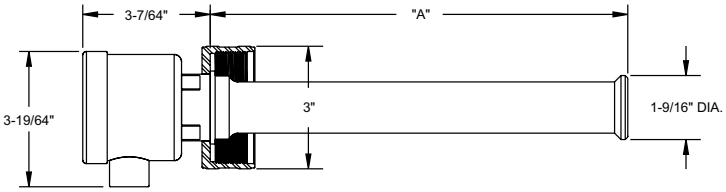

| ANDERSON SHELL TYPE | "A" |
|---|---|
| NON INSULATED | 2-3/16 |
| INSULATED | 6-1/2 |



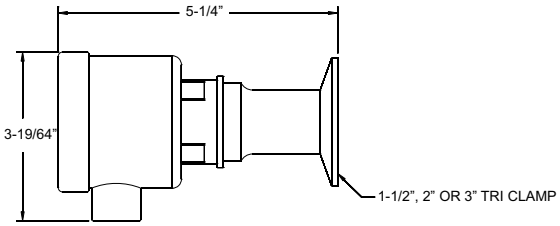

| KING SHELL TYPE | "A" |
|---|---|
| NON INSULATED | 2-3/16 |
| STANDARD | 6-9/16 |
| LONG | 8-13/16 |

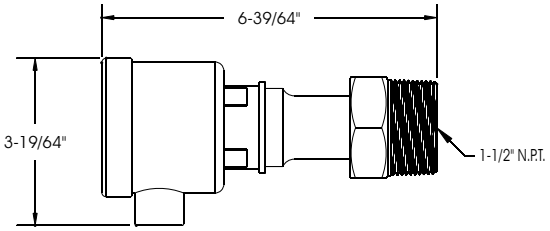


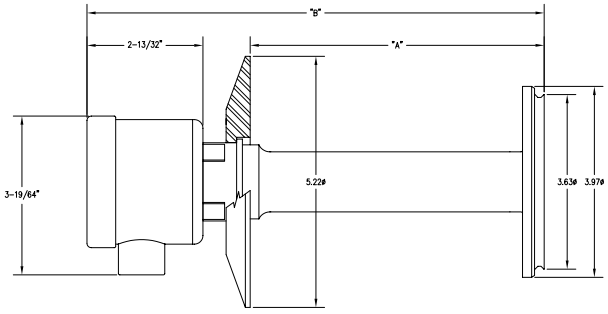

| CHERRY BURRELL SHELL TYPE | "A" |
|---|---|
| NON INSULATED | 2-3/16 |
| INSULATED | 6-1/2 |



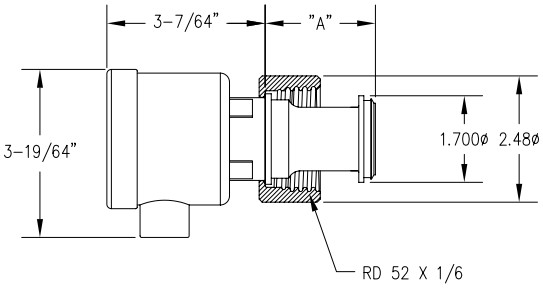

| TANK MATE SHELL TYPE | "A" |
|---|---|
| SHORT | 5-7/32 |
| MEDIUM | 7-19/64 |
| LONG | 10-3/16 |



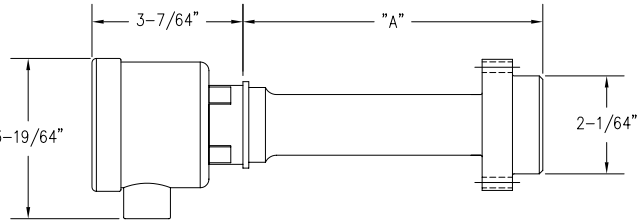




| FITTING | "A" DIM. | "B" DIM. |
|---|---|---|
| ROSEMOUNT SHORT | 2.11" | 5-1/2" |
| ROSEMOUNT LONG | 6.11" | 9-1/2" |




| 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 |

FORM AIC5006

Revised: November 2012
Supersedes: January 2012