

# "SX" Level Transmitter

## Introduction

This line of sensors provide superior signal stability. The field tested performance of the "SX" 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 new 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.

Of course the "SX" 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 Intrinsically Safe requirements, 3-A Sanitary Standards, and are backed by a 2-year warranty.

Complete specifications and ordering information are available on the reverse. For more information please visit our Web Site at [www.anderson-negele.com](http://www.anderson-negele.com), or contact your local Authorized Anderson-Negele Distributor.

## Features

"Driftless" transmitters mean:

- Fewer tune-ups
- No more overflows
- More reliable inventories

Special Features Include:

- Quick Disconnect Receptacles with optional Field Wiring Connectors
- One-Touch Field Calibration



Specifications

**PERFORMANCE**

Level Measurement Ranges:

(Factory calibrated at no charge and easily field calibrated within the parameters listed below)

	Minimum	Maximum (URL*)	Proof Pressure
SX5 Series	0-30 " w.c.**	0-140 " w.c.	10 psig
SX6 Series	0-140.1 " w.c.	0-415 " w.c.	30 psig
SX7 Series	0-415.1 " w.c.	0-830 " w.c.	60 psig
SX8 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

Repeatability: ±0.075% of URL

Hysteresis: ±0.075% of URL

Linearity (BFSL):\*\*\* ±0.05% of URL

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

Resolution: Infinite

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

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

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

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

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

Response Time: 526 mSec

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 32Ra max.

Wetted Parts: 316L stainless steel electropolished to 8Ra max.

Gasket: Anderson Flush Gasket USP VI

Ratings: NEMA 4X, IP66, IP67

**AGENCY APPROVALS**

Hazardous Locations: Intrinsically safe for use in Class 1, Div. 1, Groups A-D

Electromagnetic Compatibility (EMC): CE Compliant  
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.  
CSA B51-03  
CRN# CSA0F9754.5C

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.

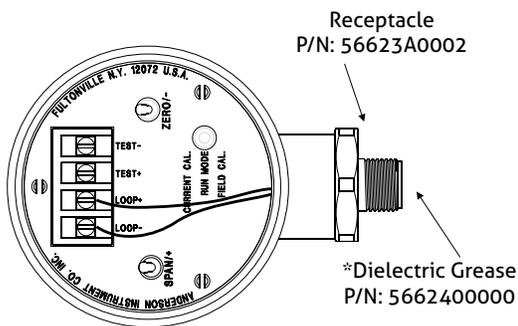
\* URL = Upper Range Limit

\*\* w.c. = water column

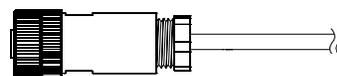
\*\*\* BFSL = Best Fit Straight Line\*\*\*\* -18 °C to 121 °C (0 °F to 250 °F) for fitting options 088, 089, 090, and 091.

Electrical Connections and Wiring Options

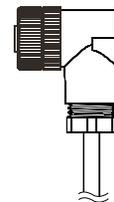
0.17-0.26" Cable Sheath Diameter



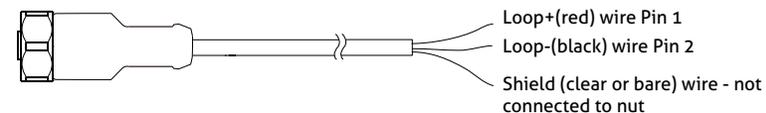
Field Wireable Connector (assembled)  
P/N: 42119B0000 (without cable)



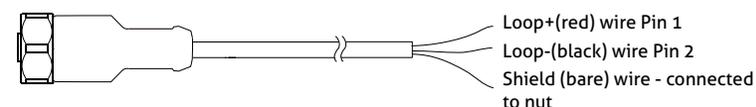
90° Field Wireable Connector (assembled)  
P/N: 42119A0000 (without cable)



Molded Cordset



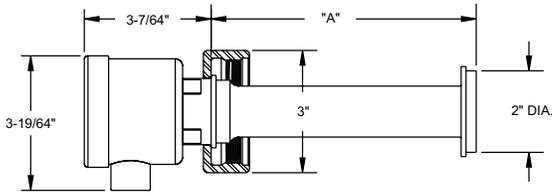
Shield Cordset



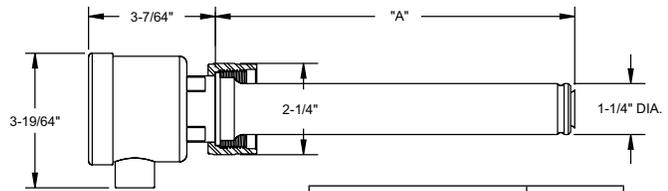
## Order Information

<p><b>SPAN RANGE</b></p> <table border="0"> <tr><td>5</td><td>0-30" min to 0-140" max</td></tr> <tr><td>6</td><td>0-140.1" to 0-415" max</td></tr> <tr><td>7</td><td>0-415.1" to 0-830" max</td></tr> <tr><td>8</td><td>0-830.1" to 0-1385" max</td></tr> </table> <p><b>FITTING</b></p> <table border="0"> <tr><td>089</td><td>Anderson Flush Mount Long - with USP VI gasket (71060-A3, A5, A7, A9)</td></tr> <tr><td>088</td><td>Anderson Flush Mount Short - with USP VI gasket (71060-A4, A6, A8)</td></tr> <tr><td>091</td><td>Cherry Burrell Flush Mount Long (insulated tank)</td></tr> <tr><td>090</td><td>Cherry Burrell Flush Mount Short (uninsulated tank)</td></tr> <tr><td>092</td><td>King Gage Flush Mount Long (1777-3)</td></tr> <tr><td>093</td><td>King Gage Flush Mount Medium (1777-1, -6 Standard)</td></tr> <tr><td>094</td><td>King Gage Flush Mount Short (1777-2 non-insulated)</td></tr> <tr><td>097</td><td>Tank Mate Flush Mount Long<sup>1</sup> (208WVE)</td></tr> <tr><td>096</td><td>Tank Mate Flush Mount Medium<sup>1</sup> (205WVE)</td></tr> <tr><td>095</td><td>Tank Mate Flush Mount Short<sup>1</sup> (200WVE)</td></tr> <tr><td>004</td><td>1-1/2" Tri-Clamp®</td></tr> <tr><td>005</td><td>2" Tri-Clamp®</td></tr> <tr><td>007</td><td>3" Tri-Clamp®</td></tr> <tr><td>059</td><td>1-1/2" NPT<sup>3</sup></td></tr> <tr><td>141</td><td>Rosemount / Foxboro Sanitary Spud - Short</td></tr> <tr><td>142</td><td>Rosemount / Foxboro Sanitary Spud - Long</td></tr> <tr><td>154</td><td>Endress &amp; Hauser Universal Adaptor - short</td></tr> <tr><td>155</td><td>Endress &amp; Hauser Universal Adaptor - long</td></tr> </table> <p><b>DIAPHRAGM</b></p> <table border="0"> <tr><td>1</td><td>SS-316L Electropolished</td></tr> <tr><td>2</td><td>Hastelloy "C" (N/A with King-Gage, Tank Mate, or Endress &amp; Hauser Fittings)</td></tr> </table>	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	089	Anderson Flush Mount Long - with USP VI gasket (71060-A3, A5, A7, A9)	088	Anderson Flush Mount Short - with USP VI gasket (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 (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</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</sup>	141	Rosemount / Foxboro Sanitary Spud - Short	142	Rosemount / Foxboro Sanitary Spud - Long	154	Endress & Hauser Universal Adaptor - short	155	Endress & Hauser Universal Adaptor - long	1	SS-316L Electropolished	2	Hastelloy "C" (N/A with King-Gage, Tank Mate, or Endress & Hauser Fittings)	<p><b>CALIBRATION</b></p> <p>##### Height in inches w.c.<sup>2</sup> (to nearest tenth)</p> <p>00000 Field Calibrated</p> <p><b>Examples:</b></p> <table border="0"> <tr><td>10850</td><td>1,085.0 inches</td></tr> <tr><td>00305</td><td>30.5 inches</td></tr> </table> <p><b>SENSOR WIRING</b></p> <table border="0"> <tr><td>00</td><td>Quick Disconnect Receptacle (QDR) w/No Cable</td></tr> <tr><td>R0</td><td>QDR &amp; 90° FWC w/No Cable</td></tr> <tr><td>01</td><td>QDR &amp; Field Wireable Connector (FWC) w/No Cable</td></tr> <tr><td>05</td><td>QDR w/25 ft Standard Molded Cordset</td></tr> <tr><td>10</td><td>QDR w/25 ft Standard Molded Cordset</td></tr> <tr><td>20</td><td>QDR w/25 ft Standard Molded Cordset</td></tr> <tr><td>99</td><td>1/2" NPTNo QDR, no FWC and no Cable (No sensor warranty for water damage)</td></tr> </table> <p><b>MOUNTING</b></p> <table border="0"> <tr><td>0</td><td>Horizontal</td></tr> <tr><td>1</td><td>Vertical</td></tr> <tr><td>2</td><td>Other (specify angle from vertical or from horizontal)</td></tr> </table> <p><b>ACCESSORIES</b></p> <p><u>Anderson Weld-In Shells for Flush Mount Level Transmitters</u></p> <table border="0"> <tr><td>71060A0003</td><td>Insulated Vessel - Standard Flange - 316L</td></tr> <tr><td>71060A0004</td><td>Uninsulated Vessel - Standard Flange - 316L</td></tr> <tr><td>71060A0005</td><td>Insulated Vessel - Pressure Vessel Flange - 316L</td></tr> <tr><td>71060A0006</td><td>Uninsulated Vessel - Pressure Vessel Flange - 316L</td></tr> <tr><td>71060A0009</td><td>Insulated Vessel - H/D Press. 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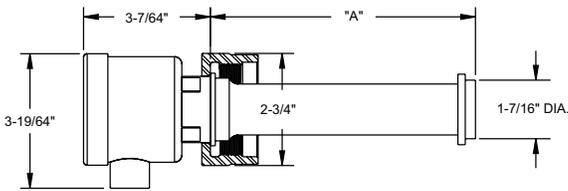
Sensor Fittings and Dimensions



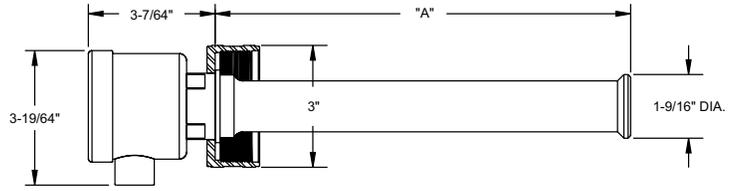
ANDERSON SHELL TYPE	"A"
NON INSULATED	2-3/16
INSULATED	6-1/2



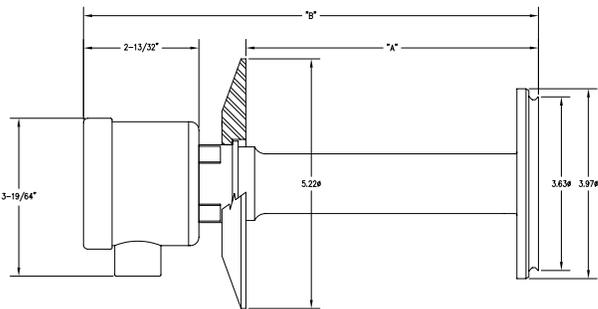
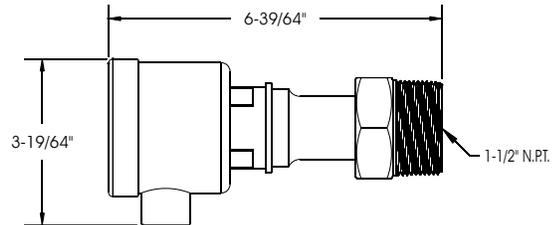
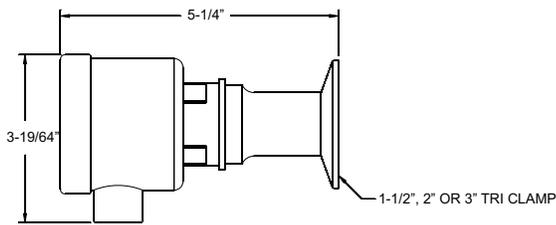
KING SHELL TYPE	"A"
NON INSULATED	2-3/16
STANDARD	6-9/16
LONG	8-13/16



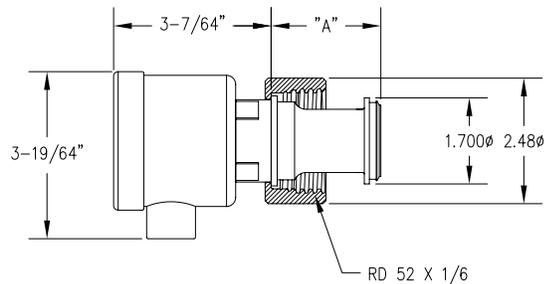
CHERRY BURRELL SHELL TYPE	"A"
NON INSULATED	2-3/16
INSULATED	6-1/2



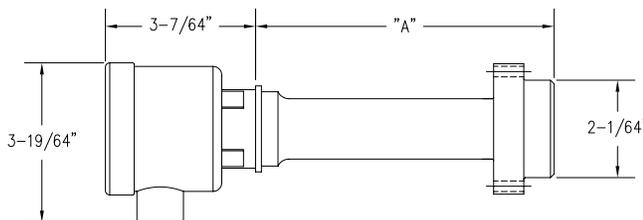
TANK MATE SHELL TYPE	"A"
SHORT	5-7/32
MEDIUM	7-19/64
LONG	10-3/16



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