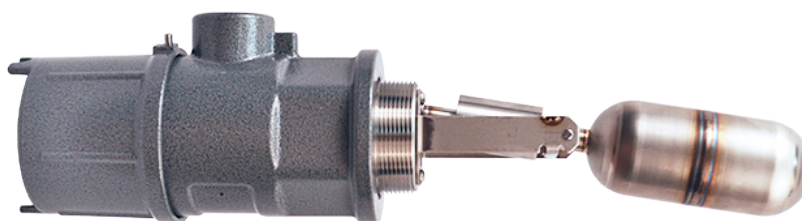


1710 Side Mounted Level Switch

1710 is a horizontally oriented, float-operated level switch suitable for plant and OEM applications where open or closed contacts are required to signal the presence or absence of liquid at a discrete level. The float extension arm moves a magnet which actuates (de-actuates) an electromechanical switching element.



The 1710 may be used on a wider variety of applications and process conditions than any other single model of mechanical level switch currently offered by SOR®. The flexibility in this design is critical to customers all over the world in a wide variety of industries.

The 1710 side mounted level switch is suitable for most point level applications.

- boilers
- storage vessels
- high or low alarm

Features and Benefits

- Five-year warranty
- Low maintenance costs
- Compact design
- Worldwide approvals & certifications
- Withstands temperatures up to 700°F (371°C)
- Withstands pressures up to 1500 psig (103 bar)
- External chambers available
- ASME Section IX and AWS D2.1 qualified welding system
- Designed to ANSI/ASME B31.1 and B31.3 guidelines
- Stainless steel switching mechanisms
- All stainless steel wetted parts
- Quick worldwide delivery
- Only ASTM grade materials with certified mill test reports used
- FM, ATEX and IECEx certified for hazardous locations in US and Canada
- GOST certified. Certifications available upon request
- **Safety Certified to IEC 61508 (SIL)**
SOR products are certified to IEC 61508 for non-redundant use in SIL1 and SIL2 Safety Instrumented Systems for most models. For more details or values applicable to a specific product, see the Safety Integrity Level Quick Guide (Form 1528).

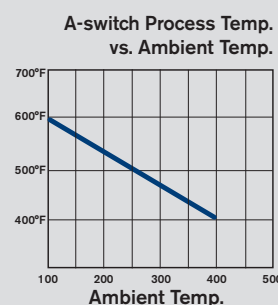
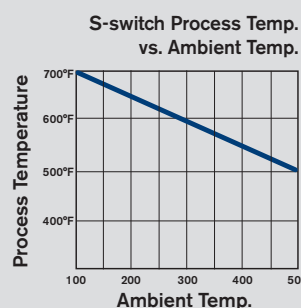
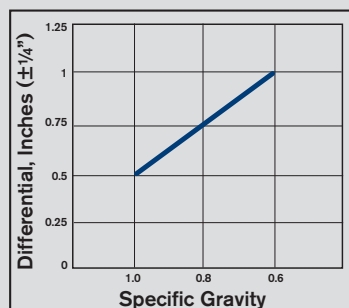
1710 Side Mounted Level Switch

Specifications

Product Specifications

Mounting	
Orientation	Horizontal mount only
Float Material	
Stainless Steel	
Maximum Process Pressure	
at 100°F (38°C) 1500 psig (103 bar)	
Process Temperature Range	
-40 to 700°F (-40 to 371°C)	
Electrical	
Switch type	SPDT or DPDT snap switch
Housing material	
Aluminum	
Conduit connection size	1" NPT
Minimum Specific Gravity	
0.60 SG	
Chamber Design Code	
ANSI B31.1 or ANSI B31.3 Certificate available	
*Standard Approvals	
CSA (US & Canada) ATEX/IECEX	
Weight	
Standard	7.3 lbs. (3.2 kg)
With Chamber	22 lbs. (10 kg)

Differential (Dead Band)



Note: For other variations please consult factory.

*See page 3 for details

Maximum Operating Pressure Ratings*

Process Connection	Description	Pressure at Listed Temperature in psig (bar)						
		100°F (38°C)	200°F (93°C)	300°F (149°C)	400°F (204°C)	500°F (260°C)	600°F (316°C)	700°F (371°C)
G2A	2" NPT(M)	1500 (103)	1500 (103)	1500 (103)	1500 (103)	1500 (103)	1500 (103)	1500 (103)
G3C	3" 150# RF Flange (316SS)	275 (19)	235 (16)	215 (15)	195 (13)	170 (12)	140 (10)	110 (8)
G3D	3" 300# RF Flange (316SS)	720 (50)	620 (42)	560 (39)	515 (36)	480 (33)	450 (31)	435 (30)
G4C	4" 150# RF Flange (316SS)	275 (19)	235 (16)	215 (15)	195 (13)	170 (12)	140 (10)	110 (8)
G4D	4" 300# RF Flange (316SS)	720 (50)	620 (42)	560 (39)	515 (36)	480 (33)	450 (31)	430 (30)

With External Chamber

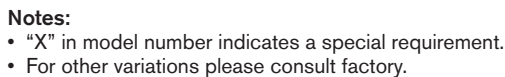
Chamber Designator	Description	Pressure at Listed Temperature in psig (bar)						
		100°F (38°C)	200°F (93°C)	300°F (149°C)	400°F (204°C)	500°F (260°C)	600°F (316°C)	700°F (371°C)
EE	4" S40 316/316L SS	1500 (103)	1500 (103)	1397 (96)	1282 (88)	1196 (82)	1129 (78)	1081 (75)
EG	4" S40 Carbon Steel	1435 (99)	1435 (99)	1435 (99)	1435 (99)	1435 (99)	1435 (99)	1378 (95)

* Maximum operating pressure is limited by the float or chamber, depending on the temperature.

For exact material description, see page 3.

How to Order

Below is the SOR quick select model number tree that provides you with all the options to configure and order a product for your application. You must select a designator for each component.








* Requires use of EE or EG options.
 ** See page 2 for chamber details.
 *** Special conditions for safe use: When the equipment is installed, particular precautions shall be taken to ensure, taking into account the effect of the process temperature, that the ambient temperature of the overall liquid level control switch assembly is between -40°C to +80°C.
 **** Requires use of ZZ option.

1710 Side Mounted Level Switch

Specifications

Agency Approvals

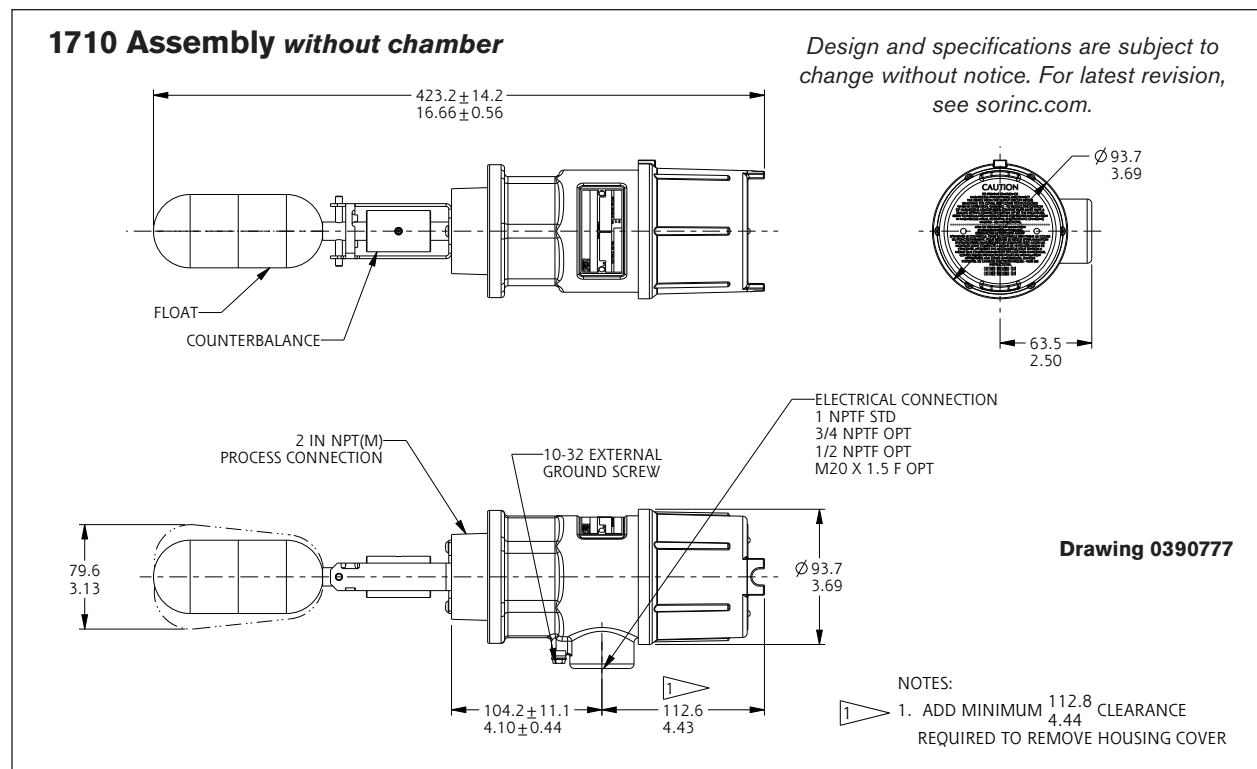
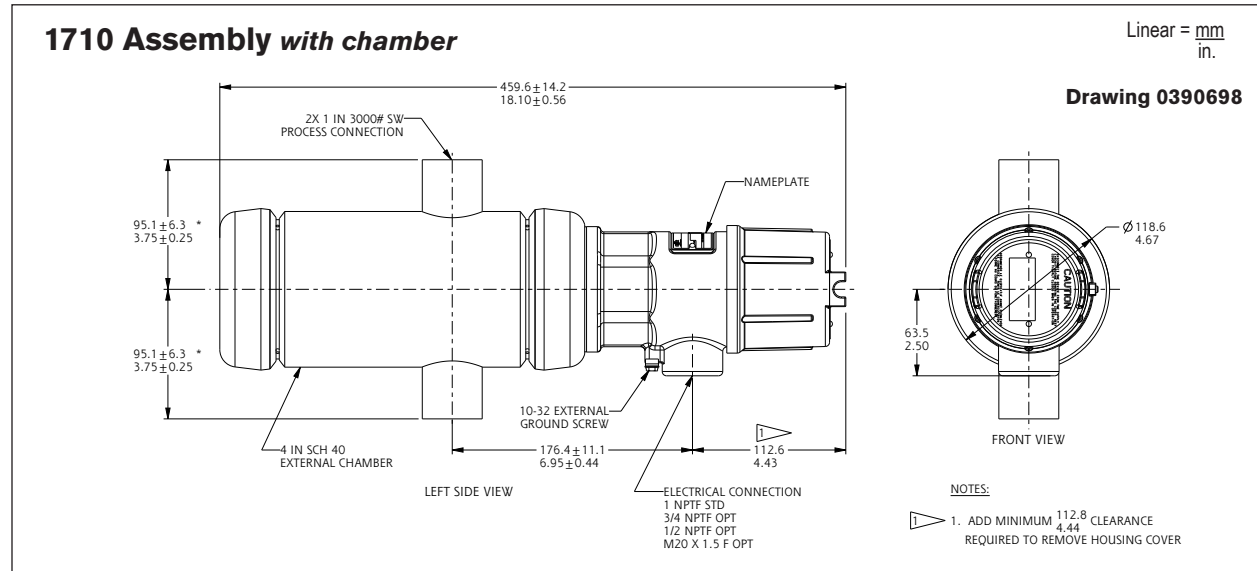
Agency	Approved Model	Protection	Area Classification
ATEX/IECEX 	1710X-GXX-X-XX-XX-ZZ	Flameproof	Ex d IIC T5 Gb; Ex tb IIIC T90°C Db (-40°C ≤ Tamb ≤ +80°C)
	1710X-EXX-X-XX-XX-ZZ		Ex d IIB +Hydrogen T5 Gb; Ex tb IIIC T90°C Db (-40°C ≤ Tamb ≤ +80°C)
CSA 	1710X-GXX-X-XX-XX-ZZ	Explosion Proof	Class I, II, III; Groups B,C,D,E,F,G; Type 4X Class I, Zone 1, AEx/Ex d IIC T5 Gb Zone 21, AEx/Ex tb IIIC T90°C Db; IP66
	1710X-EXX-X-XX-XX-ZZ		Class I, II, III; Groups B,C,D,E,F,G; Type 4X Class I, Zone 1, AEx/Ex d IIB +Hydrogen T5 Gb Zone 21, AEx/Ex tb IIIC T90°C Db; IP66
GOST R 	Certificate available upon request. Contact customer service for custom model number configuration.	Flameproof	Ex d IIC T5 (-40°C ≤ Tamb ≤ +80°C)
KOSHA 	Certificate available upon request.	Flameproof	Ex d IIC T5 (-40°C ≤ Tamb ≤ +80°C)
Safety Integrity Level 	Certificate available upon request.	Type A Component with HFT0 Low Demand Mode	SIL2

1710 Side Mounted Level Switch

Dimensions

The 1710 unit allows for a smaller installation foot print, making it more compact and economical than most traditional vertical chambers. Although the 1710 is more compact, it provides the rugged reliability customers have come to expect from SOR.

The design starts with a high pressure float counter-weighted with a magnet. The magnet is coupled with another magnet inside the housing which is attached to the switching mechanism. The key is that the two magnets are separated by a pressure retaining wall of non-magnetic material. The magnets interact with each other as the float goes up and down, providing a safe and reliable system you can depend on for the most critical of applications.





MEASUREMENT AND CONTROL

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