



Type 1710 Horizontal Electric Level Switch

Form 864

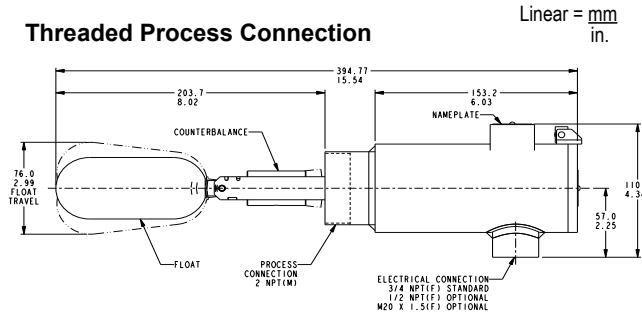
Type 1710 is a horizontally mounted, float-operated level switch suitable for plant and OEM applications where open or closed contacts are required to signal presence or absence of liquid at a discrete level. The float extension arm moves a magnet which actuates (de-actuates) a microswitch.



Dimensions

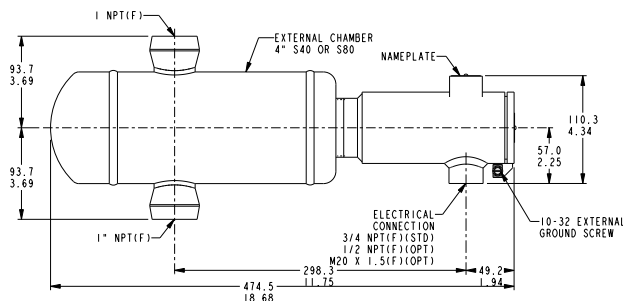
Design and specifications are subject to change without notice. For latest revision, see www.sorinc.com.

Threaded Process Connection



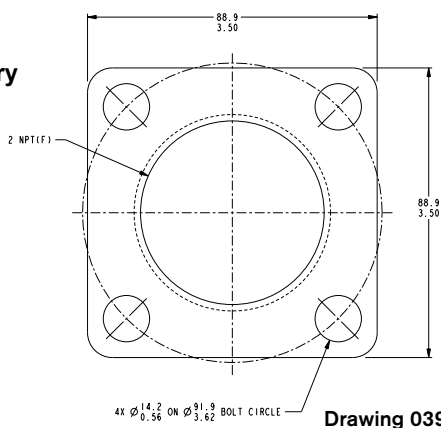
Drawing 0390485

External Chamber Accessory



Drawing 0390508

Square Flange Accessory



Drawing 0390664

Product Specifications

Mounting

| | |
|-----------------|---|
| Orientation | Horizontal mount only |
| Connection size | 2" NPT(M) Standard |
| | (*See process connection table on page 2 for flange option designators) |

Float Material

316SS

Maximum Process Pressure

at 400°F (204°C)

| | |
|-------------------------|--------------------|
| Threaded connection | 1000 psi (69 bar) |
| 150# Flanged connection | 195 psi (13.4 bar) |
| 300# Flanged connection | 515 psi (35.5 bar) |

Process Temperature Range

-40 to 400°F
(-40 to 204°C)

(See Switch Configurations on page 2)

Electrical

| | |
|-------------|--|
| Switch type | SPDT or DPDT snap switch |
| | (See switch table on page 2 for optional switches) |

Housing Material Carbon Steel

Optional Housing Material Stainless Steel

Connection size 3/4" NPT(F)

Specific gravity @ 400°F (204°C) 0.6 SG, 1000 psig (69 bar)

Design Code

ANSI B31.1 or ANSI B31.3
Certificate available when accessory
CY or CZ is specified

Weight

7.3 lbs. (3.2 kg)

Agency Listing

ATEX Ex II 1/2 G Exd IIC T5
(Tamb -40°C ≤ ta ≤ +80°C)

Agency Approvals

ATEX
Flameproof
 Ex II 1/2 G Exd IIC T5
(Tamb -40°C ≤ ta ≤ +80°C)



Type 1710 Horizontal Electric Level Switch

How to Order

Model Number System

1710 - A - G - 2A - C - A1 - H1 - CL - CP

| Switch Configurations | | | 3 | 4 | Optional Accessories |
|---|---|--------------|----------|---|--|
| Amperages based on resistive loads | | | | | |
| General Purpose 250°F/121°C | 125 or 250 VAC 15 amps 125 VDC 0.5 amp 250 VDC 0.25 amp | SPDT | A1 | | CP Insert accessory designator(s) as needed |
| General Purpose 300°F/149°C | 125 or 250 VAC 10 amps Not recommended for DC service | DPDT | A4 | | CN 1/2" NPT(F) conduit reducer |
| High Temp. 400°F/204°C 400 hours | 125 or 250 VAC 5 amps 125 VDC 0.5 amp 250 VDC 0.25 amp | SPDT | B1 | | CY Conduit Reducer M20 x 1.5(F) |
| Gold Contacts 180°F/82°C | 125 VAC 1 amp Not recommended for DC service | SPDT | C1 | | CZ Certificate of Conformance to ANSI B31.1 design standards |
| Hermetically Sealed 250°F/121°C | 115 VAC 1 amp 28 VDC 3 amps | SPDT DPDT | L1 L4 | | *CZ *Certificate of Conformance to ANSI B31.3 design standards (see page 3) |
| Hermetically Sealed Gold Contacts 250°F/121°C | 28 VDC 1 amp May affect lead time for switches Not recommended for AC service | SPDT DPDT | S1 S4 | | EE External chamber stainless steel schedule 40 |
| Hermetically Sealed High Temperature 400°F/204°C | 115 VAC 1 amp 28 VDC 3 amps May affect lead time for switches | SPDT DPDT | V1 V4 | | EF External chamber stainless steel schedule 80 |
| | | | | | EG External chamber carbon steel schedule 40 |
| | | | | | EH External chamber carbon steel schedule 80 |
| | | | | | MR Mill Test Report |
| | | | | | NC NACE construction - MR 01-75 (Available only with 316SS materials of construction) |
| | | | | | PP Tag, fiber. (Attached with plastic wire to housing. Stamped with customer specified tagging information.) |
| | | | | | PY Powder coat epoxy coating. No coating on stainless steel parts or plated screws. (500 hours-salt spray) |
| | | | | | RR Tag, stainless steel. (Attached with stainless steel wire to housing. Stamped with customer specified tagging information. 2 lines, 18 characters and spaces per line.) |
| | | | | | SF Square Flange 316SS 12.7mm/.5" thick rated 250 psi 400°F/17 bar @ 204°C (for use with 2" NPT process connection only). |
| | | | | | VV Fungicidal varnish. Covers exterior except working parts. |
| | | | | | YY Epoxy coating, exterior only. Polyamide epoxy with 316SS pigment. (200 hours-salt spray) |
| | | | | | Note: All adapters are brass |
| | | | | | ← Model Number |

Process Connections 2

| | |
|--|----|
| Threaded 2" NPT(M) Standard | 2A |
| Optional Raised Face Flanges (316SS) | |
| 3" 150# | 3C |
| 300# | 3D |
| Consult factory for flanges not shown. | |
| 4" 150# | 4C |
| 300# | 4D |

Housing Materials 1

| | |
|----------------------------|---|
| Carbon Steel (standard) | A |
| 300 Series Stainless Steel | C |



1710

A

G

2A

C

A1

H1

CL

CP

Type 1710 Horizontal Electric Level Switch

How to Order

Test Certificates

| | Certificates | C1 | C3 | C4 | C5 | C6 | C7 | B5 | B6 | B7 |
|---------------------------------------|--------------------------|----|----|----|----|----|----|----|----|----|
| 1710 Horizontal Electric Level Switch | Calibration | ◆ | | | | | | ◆ | ◆ | ◆ |
| | Inspection Report | | ◆ | | | | | ◆ | ◆ | ◆ |
| | Compliance / Conformance | | | ◆ | | | | | | ◆ |
| | Dielectric Test | | | | ◆ | | | ◆ | | |
| | Insulation Resistance | | | | | ◆ | | ◆ | ◆ | |
| | QA Test Report | | | | | | ◆ | | | |

If certification to B31.3 is required, SOR® must know the fluid category per the chart below. Refer to the ASME/ANSI B31.3 Fluid Category Section to determine the applicable category.

*ANSI/ASME B31.3 Fluid Category

- Normal** A fluid service not subject to the following four categories.
- Category D** A fluid service in which all of the following apply:
1. The fluid handled is non-flammable, non-toxic, and not damaging to human skin.
 2. The design gage pressure does not exceed 150 psi.
 3. The design temperature is between -20°F and 366°F.
- Category M** A fluid service in which the potential for personnel exposure is judged to be significant and in which a single exposure to a very small quantity of a toxic fluid, caused by leakage, can produce serious irreversible harm to persons on breathing or bodily contact, even when prompt restorative measures are taken.
- Severe Cyclic High Pressure** A fluid service with high-cycle rates that cause extreme stress on components. Pressure in excess of that allowed by the ASME B16.5 Class 2500 rating for the specified temperature and material group or any piping so designated by the customer.

SOR® offers a full line of commercial-grade process instruments.

**echOsonix®
Level Transmitters**



**Level
Switches**



Level

**Temperature
Switches**



Temperature Pressure

**Flow
Switches**



Flow



Process Instrumentation

**Pressure
Switches**



We Deliver Quality On Time

SOR Inc.

14685 West 105th Street
Lenexa, Kansas 66215

Phone 913-888-2630
Toll Free 800-676-6794
Fax 913-888-0767

sorinc.com

SOR Europe, Ltd.

Farren Court
Cowfold
West Sussex RH13 8BP
United Kingdom

Phone +44 (0) 1403 864000
Fax +44 (0) 1403 864040

SOR - China

Room 903, No. 10 Building
Wan Da Plaza
No. 93 Jian Guo Road
Chao Yang District
Beijing, China 100022

Phone +86 (10) 5820 8767
Fax +86 (10) 58 20 8770

Registered Quality System to ISO 9001:2008

Form 864 (02.11) ©2011 SOR Inc.