

# Реле боковые. Серия 1510. Описание.

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## 1510 Side Mounted Level Switch

**1510** 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 (deactuates) a hermetically sealed reed switch. Actuation (deactuation) can be reversed by rotating the unit 180 degrees.



### Product Specifications

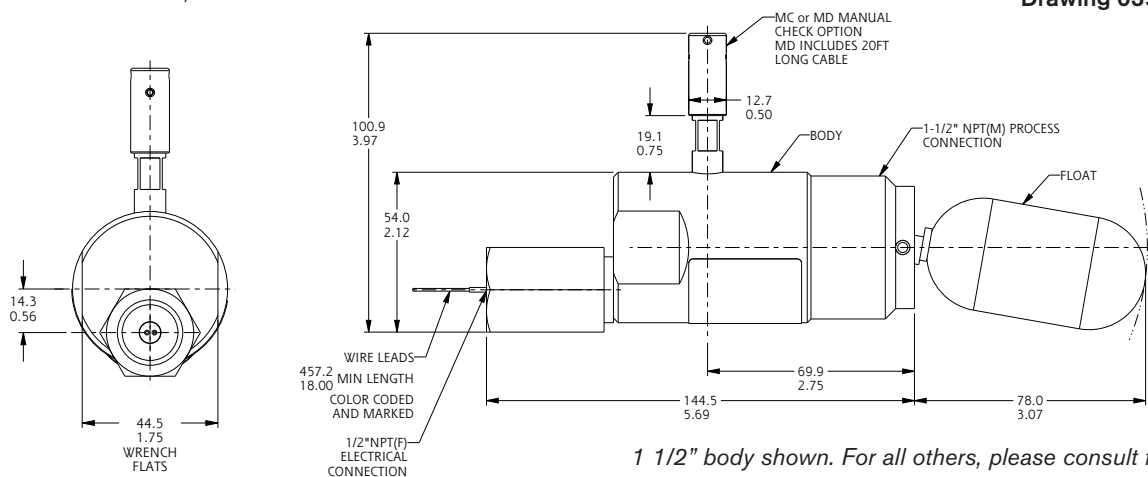
|                                                                                                                                                                                                                                                  |                                                                                                                                                                                                         |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Mounting</b>                                                                                                                                                                                                                                  |                                                                                                                                                                                                         |
| Orientation                                                                                                                                                                                                                                      | Horizontal mount only                                                                                                                                                                                   |
| Connection Size                                                                                                                                                                                                                                  | 1-1/2" through 6"                                                                                                                                                                                       |
| Connection Type                                                                                                                                                                                                                                  | NPT(M) or Flanged                                                                                                                                                                                       |
| <b>Maximum Process Pressure*</b> up to 5000 psi (345 bar)                                                                                                                                                                                        |                                                                                                                                                                                                         |
| <b>Process Temperature Range</b> -40 to 400°F (-40 to 204°C)                                                                                                                                                                                     |                                                                                                                                                                                                         |
| <b>Electrical</b>                                                                                                                                                                                                                                |                                                                                                                                                                                                         |
| Switch Type                                                                                                                                                                                                                                      | Hermetically sealed reed switch with 18" 20 AWG wire leads                                                                                                                                              |
| Housing                                                                                                                                                                                                                                          | Class I, Groups A, B, C & D; Divisions 1 & 2 with CS option                                                                                                                                             |
| Relay Housing                                                                                                                                                                                                                                    | Class I, Groups C & D; Divisions 1 & 2 with CS option                                                                                                                                                   |
| Connection Size                                                                                                                                                                                                                                  | 1/2" NPT(F)                                                                                                                                                                                             |
| Minimum Specific Gravity                                                                                                                                                                                                                         | 0.45                                                                                                                                                                                                    |
| Design Code                                                                                                                                                                                                                                      | ANSI B31.3                                                                                                                                                                                              |
| Weight                                                                                                                                                                                                                                           | Approximately 6 lbs. (3 kg)                                                                                                                                                                             |
| Agency Listing*                                                                                                                                                                                                                                  | CSA Certified (US & Canada) and ANSI/ISA 12.27.01, ATEX and IEC or INMETRO approved (optional). See page 2. GOST R and Rostechnadzor (RTN) Certified (Standard). Certifications available upon request. |
| <b>Safety Certified to IEC 61508 (SIL)</b>                                                                                                                                                                                                       |                                                                                                                                                                                                         |
| 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). |                                                                                                                                                                                                         |

### Dimensions

*Design and specifications are subject to change without notice.  
For latest revision, see [sorinc.com](http://sorinc.com).*

Linear = mm/inches

**Drawing 0390693**



1 1/2" body shown. For all others, please consult factory.

\*Agency certifications may affect ratings. See Accessories for details.

# 1510 Side Mounted Level Switch

## 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
- Reference tables, charts and additional information are provided throughout the catalog to help you make your selections.

| Switch Mechanisms                                                                   |                                                    |                                                         |   | 4  |                                                                                                                                                                                                                   |    |    |                |
|-------------------------------------------------------------------------------------|----------------------------------------------------|---------------------------------------------------------|---|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|----|----------------|
| Amperages based on resistive loads                                                  |                                                    |                                                         |   |    |                                                                                                                                                                                                                   |    |    |                |
| General Purpose                                                                     | SPST                                               | 0.9A @ 110 VAC Max<br>3A @ 28 VDC Max<br>3 Watt Minimum |   | W9 |                                                                                                                                                                                                                   |    |    |                |
| General Purpose                                                                     | SPDT                                               | 0.9A @ 110 VAC Max<br>3A @ 28 VDC Max<br>3 Watt Minimum |   | W1 |                                                                                                                                                                                                                   |    |    |                |
| Low Power                                                                           | SPST                                               | 25 Watts Max                                            |   | L9 |                                                                                                                                                                                                                   |    |    |                |
| Low Power                                                                           | SPDT                                               | 25 Watts Max                                            |   | L1 |                                                                                                                                                                                                                   |    |    |                |
| Float Material                                                                      |                                                    |                                                         |   | 3  |                                                                                                                                                                                                                   |    |    |                |
| 316SS (Standard)                                                                    | 1500 psig (103 bar)<br>-40 to 400°F (-40 to 204°C) |                                                         | C |    |                                                                                                                                                                                                                   |    |    |                |
| Monel                                                                               | 900 psig (62 bar)<br>-40 to 400°F (-40 to 204°C)   |                                                         | M |    |                                                                                                                                                                                                                   |    |    |                |
| Polypropylene                                                                       | 5000 psig (345 bar)<br>-40 to 150°F (-40 to 65°C)  |                                                         | S |    |                                                                                                                                                                                                                   |    |    |                |
| Process Connections                                                                 |                                                    |                                                         |   | 2  |                                                                                                                                                                                                                   |    |    |                |
| Threaded:                                                                           | 1 1/2" NPT(M)                                      | 5A                                                      |   |    |                                                                                                                                                                                                                   |    |    |                |
|                                                                                     | 2" NPT(M)                                          | 2A                                                      |   |    |                                                                                                                                                                                                                   |    |    |                |
| Flanged: (Available with 316SS body only)                                           |                                                    |                                                         |   |    |                                                                                                                                                                                                                   |    |    |                |
| May affect process                                                                  | 2 1/2" 150#                                        | 7C                                                      |   |    |                                                                                                                                                                                                                   |    |    |                |
| pressure rating.                                                                    | 300#                                               | 7D                                                      |   |    |                                                                                                                                                                                                                   |    |    |                |
|                                                                                     | 600#                                               | 7E                                                      |   |    |                                                                                                                                                                                                                   |    |    |                |
|                                                                                     | 3" 150#                                            | 3C                                                      |   |    |                                                                                                                                                                                                                   |    |    |                |
|                                                                                     | 300#                                               | 3D                                                      |   |    |                                                                                                                                                                                                                   |    |    |                |
|                                                                                     | 600#                                               | 3E                                                      |   |    |                                                                                                                                                                                                                   |    |    |                |
|                                                                                     | 4" 150#                                            | 4C                                                      |   |    |                                                                                                                                                                                                                   |    |    |                |
|                                                                                     | 300#                                               | 4D                                                      |   |    |                                                                                                                                                                                                                   |    |    |                |
|                                                                                     | 6" 150#                                            | 6C                                                      |   |    |                                                                                                                                                                                                                   |    |    |                |
|                                                                                     | 300#                                               | 6D                                                      |   |    |                                                                                                                                                                                                                   |    |    |                |
| Body Material                                                                       |                                                    |                                                         |   | 1  |                                                                                                                                                                                                                   |    |    |                |
| 303SS (Standard)                                                                    | B                                                  |                                                         |   |    |                                                                                                                                                                                                                   |    |    |                |
| 316 Stainless Steel                                                                 | C                                                  |                                                         |   |    |                                                                                                                                                                                                                   |    |    |                |
|  | 1510                                               | B                                                       | G | 5A | C                                                                                                                                                                                                                 | W9 | ES | MC             |
|                                                                                     |                                                    |                                                         |   |    |                                                                                                                                                                                                                   |    |    | ← Model Number |
|                                                                                     |                                                    |                                                         |   | 5  | Optional Accessories                                                                                                                                                                                              |    |    |                |
|                                                                                     |                                                    |                                                         |   |    | Insert accessory designator(s) as needed                                                                                                                                                                          |    |    |                |
|                                                                                     |                                                    |                                                         |   |    | CK* ATEX and IECEx dual approved. Ex d IIC Ga/Gb T4 (-40°C < Ta < +90°C), T5 (-40°C < Ta < +75°C) and Ex ia IIC T3 (-40°C < Ta < +125°C)                                                                          |    |    |                |
|                                                                                     |                                                    |                                                         |   |    | CL* ATEX and IECEx approved. Ex ia IIC T3 (-40°C < Ta < +125°C)                                                                                                                                                   |    |    |                |
|                                                                                     |                                                    |                                                         |   |    | CR 3/4" NPT(F) conduit connection                                                                                                                                                                                 |    |    |                |
|                                                                                     |                                                    |                                                         |   |    | CS* CSA Certified. Class 1, Group A, B, C, D; Divisions 1 & 2. For relay option; Class 1, Group C & D, Divisions 1 & 2. Single seal ambient & process temperatures -40°C to +125°C. Additional seal not required. |    |    |                |
|                                                                                     |                                                    |                                                         |   |    | CV Canadian Registration Number (CRN). Consult the factory for applicable pressure and additional information.                                                                                                    |    |    |                |
|                                                                                     |                                                    |                                                         |   |    | MC** Manual check accessory (uses Viton GLT o-rings - not available with polypropylene floats)                                                                                                                    |    |    |                |
|                                                                                     |                                                    |                                                         |   |    | MD** Manual check accessory (uses Viton GLT o-rings - not available with polypropylene floats) with 20' remote cable                                                                                              |    |    |                |
|                                                                                     |                                                    |                                                         |   |    | MR Mill Test Report                                                                                                                                                                                               |    |    |                |
|                                                                                     |                                                    |                                                         |   |    | NC NACE construction - MR 01-75 / ISO 15156 2003. Available only with 316SS materials of construction                                                                                                             |    |    |                |
|                                                                                     |                                                    |                                                         |   |    | NM* INMETRO approved. Ex ia IIC T3 (-40°C < Ta < +125°C)                                                                                                                                                          |    |    |                |
|                                                                                     |                                                    |                                                         |   |    | RB*** 24 VDC powered DPDT relay in explosion proof terminal box. Contact rating: 10 amps @ 115 VAC. Class I, Group C, D; Divisions 1 & 2.                                                                         |    |    |                |
|                                                                                     |                                                    |                                                         |   |    | RC*** 120 VAC powered DPDT relay in explosion proof terminal box. Contact rating: 10 amps @ 115 VAC. Class I, Group C, D; Divisions 1 & 2                                                                         |    |    |                |
|                                                                                     |                                                    |                                                         |   |    | 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.)                                        |    |    |                |
|                                                                                     |                                                    |                                                         |   |    | TT Stainless steel nameplate permanently attached to housing. Stamped with customer specified tagging information.                                                                                                |    |    |                |
|                                                                                     |                                                    |                                                         |   |    | *CK, CL, CS or NM option is required on all flange mounted units.                                                                                                                                                 |    |    |                |
|                                                                                     |                                                    |                                                         |   |    | **Manufacturer limits on Viton GLT are -40 to 400°F.                                                                                                                                                              |    |    |                |
|                                                                                     |                                                    |                                                         |   |    | ***Not available with L9 or L1 switch options.                                                                                                                                                                    |    |    |                |

# 1510 Side Mounted Level Switch

## Test Certificates

| 1510 Level Switch | Certificates             | C1 | C3 | C4 | C5 | C6 | C7 | B5 | B6 | B7 |
|-------------------|--------------------------|----|----|----|----|----|----|----|----|----|
|                   | Calibration              | ◆  |    |    |    |    |    | ◆  | ◆  | ◆  |
|                   | Inspection Report        |    | ◆  |    |    |    |    | ◆  | ◆  | ◆  |
|                   | Compliance / Conformance |    |    | ◆  |    |    |    |    |    | ◆  |
|                   | Dielectric Test          |    |    |    | ◆  |    |    | ◆  |    |    |
|                   | Insulation Resistance    |    |    |    |    | ◆  |    | ◆  | ◆  |    |
|                   | QA Test Report           |    |    |    |    |    | ◆  |    |    |    |
|                   |                          |    |    |    |    |    |    |    |    |    |

## Replacement Parts

| Part Number | Description                                                          |
|-------------|----------------------------------------------------------------------|
| 3130-106    | W9 - SPST Hermetically Sealed Switch Capsule                         |
| 3130-245    | W1 - SPDT Hermetically Sealed Switch Capsule                         |
| 3130-107    | L9 - SPST Hermetically Sealed Switch Capsule                         |
| 3130-244    | L1 - SPDT Hermetically Sealed Switch Capsule                         |
| 3130-052    | 316SS Float Assembly                                                 |
| 3130-040    | 20' Remote Cable with two cable crimps*                              |
| 9227-024    | Manual Check Accessory (MC) (2" NPT only)*                           |
| 9227-025    | Manual Check Accessory with 20' remote cable (MD) (2" NPT only)*     |
| 9227-028    | Manual Check Accessory (MC) (1 1/2" NPT only)*                       |
| 9227-029    | Manual Check Accessory with 20' remote cable (MD) (1 1/2" NPT only)* |

\*Unit must have originally been supplied with MC or MD option.

## Limited Warranty

SOR® agrees to repair or replace any switch found to be defective in material or workmanship within five years from date of shipment. The limited warranty is valid only if the switch was installed in accordance with published factory installation instructions, operated within the design limitations stated on the nameplate, and returned to the factory for inspection, freight prepaid, within the warranty period. Contact the factory for return authorization. No claim for labor or consequential damages will be allowed.



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