1520 is a vertically mounted, vane-operated flow switch suitable for plant and OEM applications where open or closed contacts are required to signal flow or no flow conditions. The vane extension arm moves a magnet that actuates (deactuates) a hermetically sealed reed switch.

**Product Specifications**

- **Mounting**
  - Orientation: Vertical mount only
  - Connection Size: 1-1/2" through 6"
  - Connection Type: NPT(M) or Flanged

- **Maximum Process Pressure**
  - 5000 psi (345 bar)

- **Process Temperature Range**
  - –40 to 400°F
  - (~–40 to 204°C)

- **Electrical**
  - Switch Type: Hermetically sealed reed switch with 18" 20 AWG wire leads
  - Housing: Class I, Group A, B, C & D; Division 1 & 2 with CS option
  - Optional Relay Housing: Class I, Groups C & D, Divisions 1 & 2 with CS option
  - Connection Size: 1/2" NPT(F)
  - Minimum Flow Rate: 1 FPS
  - Design Code: ANSI B31.3
  - Shipping 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).

**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).

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

**Dimensions**

[Diagram showing dimensions and parts of the 1520 Top Mounted Flow Switch]

Drawing 0390011

*Design and specifications are subject to change without notice. For latest revision, see sorinc.com.*
1520 Top Mounted Flow Switch

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.

**How to Order**

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.

*HT* 316 stainless steel terminal block housing. FM approved and CSA Certified Class I, Groups A, B, C & D; Class II, Groups E, F, G, Class III; Division 1 (NEMA 4X)

*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.)

*TS* Taiwan Safety Mark

*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.

** Not available with L9 or L1 switch options.

*** Requires use of CK or CL option.

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**Example Model No.**

1520 - B - F5A-C-W9-EF-NC

*Options may change specifications and dimensions, contact Customer Service for more information.*
1520 Top Mounted Flow Switch

**Certificates**

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<tr>
<th>1520 Flow Switch</th>
<th>Certificates</th>
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<th>C3</th>
<th>C4</th>
<th>C5</th>
<th>C6</th>
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<th>B5</th>
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**Replacement Parts**

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<th>Description</th>
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<td>3130 - 106</td>
<td>W9 - SPST Hermetically Sealed Switch Capsule</td>
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<tr>
<td>3130 - 245</td>
<td>W1 - SPDT Hermetically Sealed Switch Capsule</td>
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<tr>
<td>3130 - 107</td>
<td>L9 - SPST Hermetically Sealed Switch Capsule</td>
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<td>3130 - 244</td>
<td>L1 - SPDT Hermetically Sealed Switch Capsule</td>
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<td>3130 - 118</td>
<td>316SS Vane Assembly</td>
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<td>3130 - 403</td>
<td>Actuator Arm Replacement Kit (1-1/2” NPT and flanged process connections)</td>
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<tr>
<td>3130 - 404</td>
<td>Actuator Arm Replacement Kit (2” NPT process connection)</td>
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</table>

**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.