

## 1520 Top Mounted Flow Switch

**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.

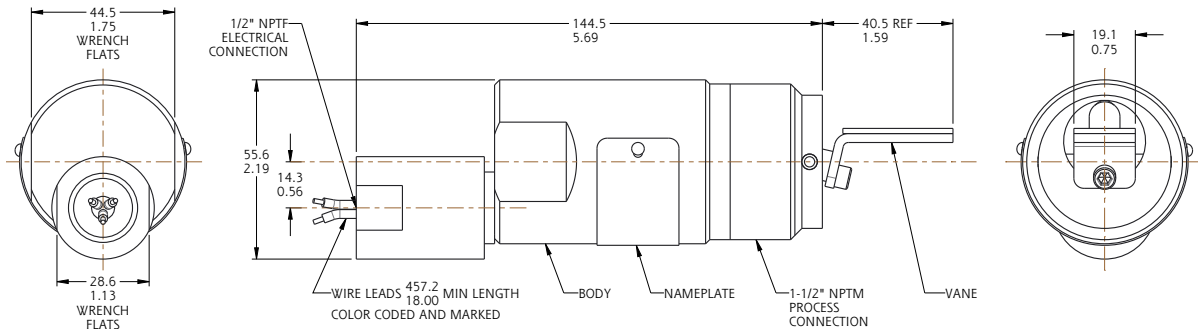


### Product Specifications

<b>Mounting</b>	
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)
<b>Electrical</b>	
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). (Certificate 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).	

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

### Dimensions



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

Drawing 0390011

# 1520 Top Mounted Flow Switch

## How to Order

### Model Number System

1520 - B - F - 5A - C - W9 - EF - NC

### Switch Mechanisms

3

Amperages based on resistive loads

General Purpose	SPST	0.9A @ 110 VAC Max 3A @ 28 VDC Max 3 Watt Minimum	W9
General Purpose	SPDT	0.9A @ 110 VAC Max 3A @ 28 VDC Max 3 Watt Minimum	W1
Low Power	SPST	25 Watts Max	L9
Low Power	SPDT	25 Watts Max	L1

### Process Connections

2

Threaded:	1 1/2" NPT(M)	5A
	2" NPT(M)	2A
Flanged: (Available with 316SS body only) May affect process pressure rating.	2 1/2" 150#	7C
	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

4

### 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.
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.)
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.



1520 B F 5A C W9 EF NC

← Model Number

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## Certificates

	Certificates	C1	C3	C4	C5	C6	C7	B5	B6	B7
1520 Flow Switch	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 - 118	316SS Vane Assembly
3130 - 403	Actuator Arm Replacement Kit (1-1/2" NPT and flanged process connections)
3130 - 404	Actuator Arm Replacement Kit (2" NPT process connection)

## 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.



MEASUREMENT AND CONTROL

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**REGIONAL OFFICES**

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