

1520 Top Mounted Flow Switch

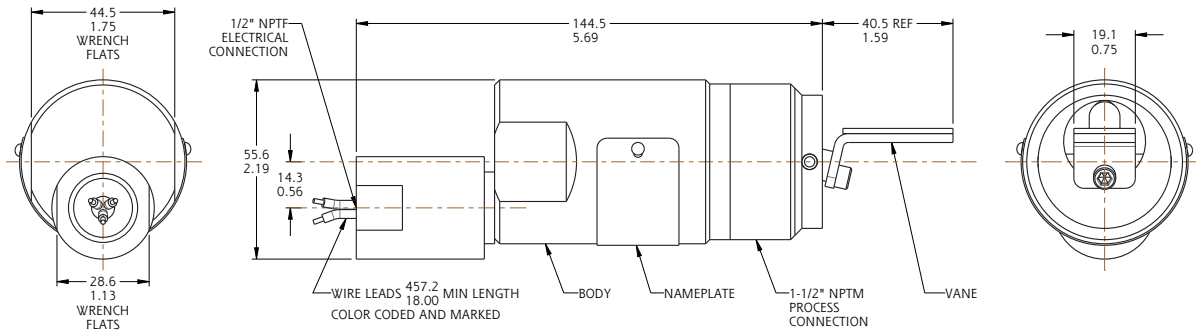
1520 is a vertically mounted, vane-operated flow switch suitable for plant and OEM applications where open or closed contacts are required to signal flow or no flow conditions. The vane extension arm moves a magnet that actuates (deactuates) a hermetically sealed reed switch.



Product Specifications	
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). (Certificate 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).	

*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.

Drawing 0390011

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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.

		6 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.)
		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.
		5 Housing	
		Electronic Switch Housing: Class I, Groups A, B, C, D; Divisions 1 & 2 with CS option	
		4 Switch Mechanisms	
		Amperages based on resistive loads	
		General Purpose SPST 0.9A @ 110 VAC Max 3 Watt Minimum 3A @ 28 VDC Max W9	
		General Purpose SPDT 0.9A @ 110 VAC Max 3 Watt Minimum 3A @ 28 VDC Max W1	
		Low Power SPST 25 Watts Max L9	
		Low Power SPDT 25 Watts Max L1	
		3 Vane Material	
		316SS C	
		2 Process Connections	
		Threaded: 1 1/2" NPT(M) F5A 2" NPT(M) F2A	
		Flanged: (Available with 316SS body only) May affect process pressure rating. 2 1/2" 150# F7C 300# F7D 600# F7E	
		3" 150# F3C 300# F3D 600# F3E	
		4" 150# F4C 300# F4D	
		6" 150# F6C 300# F6D	
		1 Body Material	
		303SS (Standard) B	
		316 Stainless Steel C	
1520 -		-	- C -
		-	- EF -
		-	- NC
		-	- W9 -
		-	- F5A -
		-	- B -
		-	- 1520
1520 - B - F5A - C - W9 - EF - NC			
		Example Model No.	

*Options may change specifications and dimensions, contact Customer Service for more information.

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Certificates

1520 Flow 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 - 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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