

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.

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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.

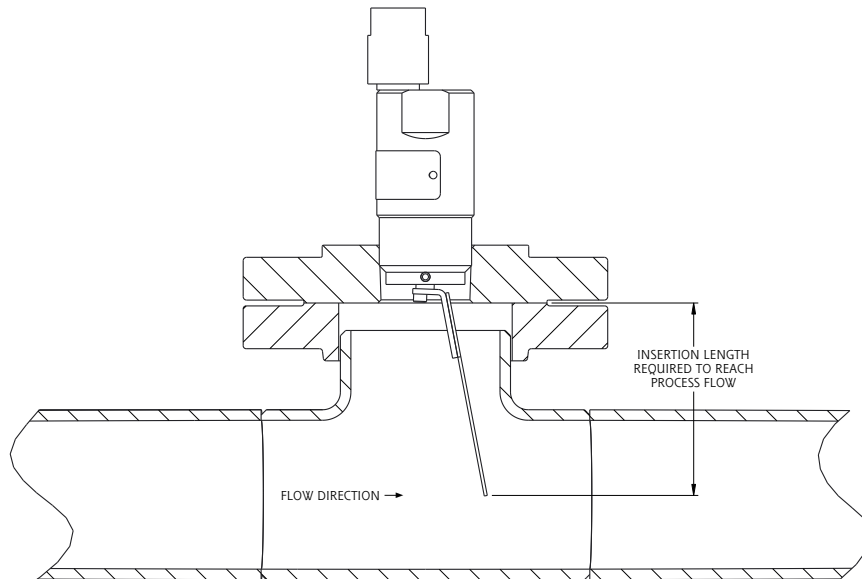
- You must select a designator for each component
- Reference tables, charts and additional information are provided throughout the catalog to help you make your selections.

1		2		3		4		5		6	
Body Material		Process Connections		Vane Material		Switch Mechanisms		Housing		Accessories	
303SS (Standard)	B	Threaded: 1 1/2" NPT(M)	F5A	316SS	C	General Purpose SPST	W9	Electronic Switch Housing: Class I, Groups A, B, C, D; Divisions 1 & 2 with CS option	EF	CK*	Insert accessory designator(s) as needed
316 Stainless Steel	C	2 1/2" 150#	F7C			General Purpose SPDT	W1			CL*	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)
		300#	F7D			3 Watt Minimum 3A @ 28 VDC Max				CR	ATEX and IECEx approved. Ex ia IIC T3 (-40°C < Ta < +125 °C)
		600#	F7E							CS*	3/4" NPT(F) conduit connection
		3" 150#	F3C			General Purpose SPDT	L9			CV	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.
		300#	F3D			Low Power SPST	L1			HT	Canadian Registration Number (CRN). Consult the factory for applicable pressure and additional information.
		600#	F3E			Low Power SPDT				MR	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)
		4" 150#	F4C							NC	Mill Test Report
		300#	F4D							NM*	NACE construction - MR 01-75 / ISO 15156 2003. Available only with 316SS materials of construction
		6" 150#	F6C							RB**	INMETRO approved. Ex ia IIC T3 (-40°C < Ta < +125°C)
		300#	F6D							RC**	24 VDC powered DPDT relay in explosion proof terminal box. Contact rating: 10 amps @ 115 VAC. Class I, Group C, D; Divisions 1 & 2.
										RR	120 VAC powered DPDT relay in explosion proof terminal box. Contact rating: 10 amps @ 115 VAC. Class I, Group C, D; Divisions 1 & 2.
										TS***	Tag, 316SS. (Attached with 304SS wire to housing. Stamped with customer specified tagging information. 2 lines, 18 characters and spaces per line).
										TT	Taiwan Safety Mark
											316SS nameplate permanently attached to housing. Stamped with customer specified tagging information.
1520											
* 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. **** Nozzle length must be provided for flanged connections.											
Example Model No. 1520C - F5A - C - W9 - EF - NC											

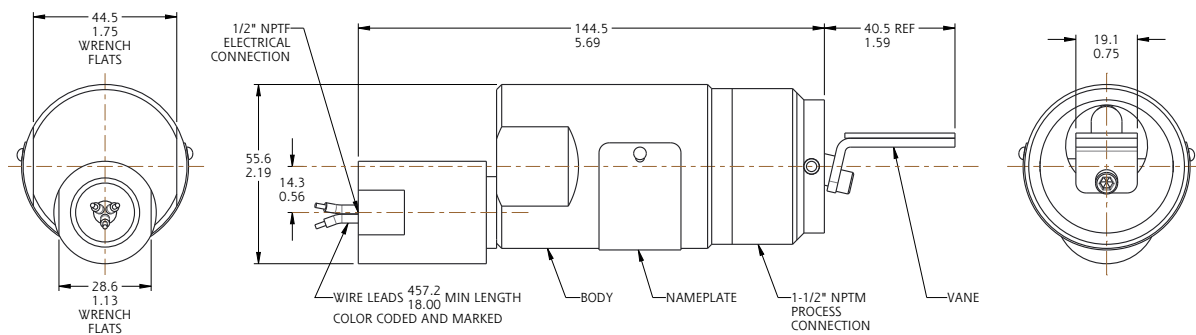
*Options may change specifications and dimensions, contact Customer Service for more information.

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Dimensions



Drawing 4005829



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

Drawing 0390011

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Certificates

1520 Flow Switch	Certificates	D1	D2	C1	C3	C4	C5	C6	C7	B5	B6	B7
	Calibration			◆						◆	◆	◆
	Inspection Report				◆					◆	◆	◆
	Compliance / Conformance					◆						◆
	Dielectric Test						◆			◆		
	Insulation Resistance							◆		◆	◆	
	QA Test Report								◆			
	Certificate of Origin	◆										
	Manufacturer's Certification		◆									

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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