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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 Body Material

303SS (Standard)	B
316 Stainless Steel	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

Flanged units add X at end of model for spec 9014524 for extended vane length.

3 Vane Material

316SS	C

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

5 Housing

Electronic Switch Housing: Class I, Groups A, B, C, D; Divisions 1 & 2 with CS option	EF

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, 316SS. (Attached with 304SS wire to housing. Stamped with customer specified tagging information. 2 lines, 18 characters and spaces per line).
TS***	Taiwan Safety Mark
TT	316SS 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.
**** Nozzle length must be provided for flanged connections.

1520		-		-	C	-		-	EF	-	

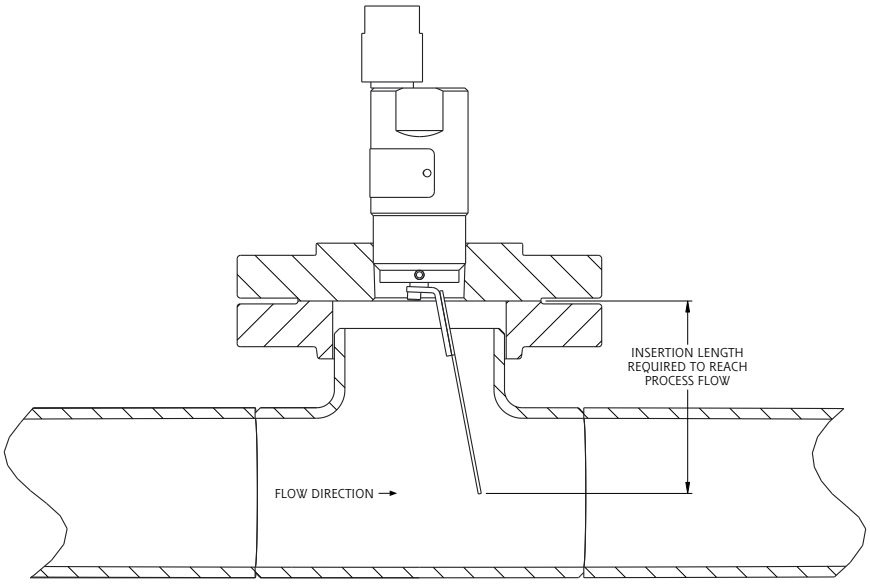
1520C - F5A - C - W9 - EF - NC

Example Model No.

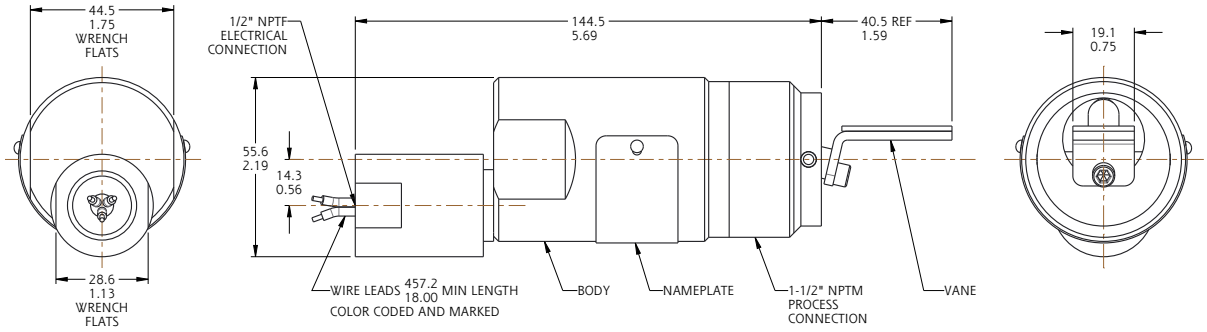
*Options may change specifications and dimensions, contact Customer Service for more information.

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Drawing 4005829



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

Drawing 0390011

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1520 Top Mounted Flow Switch

Certificates

	Certificates	D1	D2	C1	C3	C4	C5	C6	C7	B5	B6	B7
1520 Flow Switch	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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