

















Model		SP	SM	SB	SF	SS	HW	SX	SH
									
Application	Industry								
	Valve Type	Rotary Valves	Rotary Valves	Rotary Valves	Rotary Valves	Rotary Valves	Rotary Valves	Rotary Valves	Rotary Valves
Material	Housing	Glass reinforced plastic	Nickel plated aluminium	Copper free aluminium	Copper free aluminium	316 stainless steel	Aluminium	Aluminium	Aluminium
	Cover	Polycarbonate	Polycarbonate	Polycarbonate	Aluminium	316 stainless steel	Aluminium	Aluminium	Aluminium
Certification	IP Rating	IP 65	IP 65	IP 67	IP 66 / 67 IP 67M	IP 66 / 67 IP 67M	IP 66 / 67	IP 66 / 67	IP 66 / 67
	SIL Rating up to	SIL2	SIL2	SIL3	SIL3	SIL3	SIL3	SIL3	SIL3
	ATEX, ECEC option	Exia IIC T6	Exia IIC T6	Exia IIC T6	Exia IIC T6	Exia IIC T6	-	Exd IIB T6	Exd IIB+H2 T6
	cULus option	-	-	Safe area or Class 1/2 Div2	Safe area or Class 1/2 Div2	Safe area or Class 1/2 Div2	Safe area or Class 1/2 Div2	Class 1/2 Div 1/2	Class 1/2 Div 1/2
	EAC option	✓	✓	✓	✓	✓	✓	✓	✓
	CCOE option	✓	✓	✓	✓	✓	-	✓	✓
	INMETRO option	-	-	-	-	-	-	✓	✓
	NEPSI option	-	-	-	-	-	-	-	-
Visual Position Indicator	3D	✓	✓	✓	✓	✓	✓	✓	✓
	Flat	✓	✓	✓	✓	✓	✓	✓	✓
	Multi Port Valves	-	-	✓	✓	✓	✓	✓	✓
	None	-	-	-	✓	✓	✓	-	-
Electrical Feedback	Electro-mechanic	✓	✓	✓	✓	✓	✓	✓	✓
	Magnetic	✓	✓	✓	✓	✓	✓	✓	✓
	Inductive	✓	✓	✓	✓	✓	✓	✓	✓
	4-20 mA	-	-	✓	✓	✓	✓	✓	✓
	Comms options Protocol	-	-	✓	✓	✓	✓	✓	✓
Features	Twin Shaft Design	-	-	✓	✓	✓	✓	✓	✓
	Temp. Max Range	-20 to +80 °C (-4 to +176 °F)	-20 to +80 °C (-4 to +176 °F)	-30 to +80° C (-22 to +176 °F)	-60 to +105 °C (-76 to +221 °F)	-60 to +105 °C (-76 to +221 °F)	-60 to +105 °C (-76 to +221 °F)	-20 to +105 °C (-4 to +221 °F)	-20 to +105 °C (-4 to +221 °F)
	Integrated Mounting Kit	✓	✓	-	-	-	✓	-	-

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Rotork Instruments are specialist manufacturers of products for flow control, pressure control, flow measurement and pressure measurement. Our solutions are trusted wherever there is a need for high precision and reliability, including pharmaceutical, biomedical, oil & gas and manufacturing industries.

We have production facilities throughout the world, complemented by a large network of distribution and support centres.

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Worldwide Industry and Application Experience

With nearly 60 years of extensive knowledge and experience, Rotork has provided products and services worldwide for virtually every industrial actuator application.

Rotork Instruments offers a range of precision control and valve accessory products through our prestigious brands, including Fairchild, YTC, Soldo[®], Midland-ACS[™], Bifold[®], Orange, M&M, Alcon and RI Wireless:

Instrument Valves

- Valve actuation accessories
- Solenoid valves
- Piston valves
- Instrument valves
- Medium pressure valves
- Subsea valves and connectors

Controllers

- Valve positioners
- Rail systems
- I/P and E/P converters
- Fire protection

Measurement

- Valve position sensors
- Transmitters and switches

Instrument Pumps

- Pumps
- Intensifiers and accumulators

Rotork Instruments is proud to offer a diverse range of products which serve many different duties in a wide variety of applications. We also offer a factory customisation service to create one-off units to meet specific needs.



Approvals and Marking

Code selection guide

Code: SF 70 2 2 0 - 2 0 A 1 1 A 4

Series: SF, Switch type: 70, Switch Quantity: 2, Terminals: 2, Coating: 0, Cable Entries: 2, Visual Indicator: 0, Approval: A, Marking: 1, IP Rating: 1, Temperature: A, Material: 4

Legend: No SIL approval (light grey), SIL2 approval (medium grey), SIL3 approval (dark grey)

SP/SM	safe area	Weather proof			ATEX			ATEX / IECEx			UL/CSA			EAC			CCOE			INMETRO			NEPSI		
		WD	Z0	Y0	A1	B1	C1	-	-	-	-	-	-	G0	F0	H0	J1	L1	M1	-	-	-	-	-	-
	Intrinsically safe																								
	Non-incandive (BGD Exr)																								

Switch and Sensors

Rotork Instruments offers one of the widest ranges of switch in the market. Rotork always provides the best switch or sensor solution for your specific application.

Soldo limit switch boxes can include mechanical, magnetic or inductive proximity switches to fulfil your plant feedback requirements. With over 20 years experience in valve automation feedback, Soldo offers a complete selection of magnetic limit switches

to meet the most critical and demanding requirements. Inert gas hermetical sealing, high power loops, different contact forms and alternative materials are all satisfied with high quality Soldo switches.

Electro mech. switches


Code: SF 70 2 2 0 - 2 0 A 1 1 A 4

Series: SF, Switch type: 70, Switch Quantity: 2, Terminals: 2, Coating: 0, Cable Entries: 2, Visual Indicator: 0, Approval: A, Marking: 1, IP Rating: 1, Temperature: A, Material: 4


- Suitable for fire fighting applications
- Suitable in arctic application
- Suitable in Exia application
- Hermetically sealed

SPDT switches


Code 01

- SPDT silver plated snap action switch 
- High power loop: rating up to 5A @ 250 VAC – 0,6A @ 125 VDC
- Temperature range: -40 to +125 °C (-40 to +257 °F)

Code 03


- SPDT gold plated snap action switch 
- Rating up to 3A @ 250 VAC – 1mA @ 24 VDC
- Temperature range: -40 to +125 °C (-40 to +257 °F)

Code 5P


- SPDT silver plated snap acting switch 
- High power loop: rating up to 5A @ 250 VAC
- Temperature range: -50 to +204 °C (-58 to 399 °F)
- Short time temperature range: Maximum 250 °C (482 °F) for 2 hours
Maximum 300 °C (572 °F) for 70 minutes

DPDT switches

Code 1F

- DPDT silver plated snap action switch 
- High power loop: rating up to 5A @ 250 VAC, 0.1A @ 80 VDC
- Temperature range: -40 to +120 °C (-40 to +248 °F)

Code 06

- DPDT gold plated snap action switch 
- Rating up to 0.1A @ 250 VAC, 0.1A @ 80 VDC
- Temperature range: -40 to +120 °C (-40 to +248 °F)

SP - SM limit switch box series

Compact limit switch box for industrial, water treatment and light duty applications.

Features

- Integrated mounting kit for NAMUR pattern
- Corrosion free glass reinforced plastic enclosure on SP series
- Nickel plated aluminium body on SM series
- 1 cable entry (SP) or 2 cable entries (SM) either metric or imperial
- Multiple indicator options
- Easy wiring through the terminal PCB board

Approvals

ATEX, EAC, CCOE:

Ex II 2GD Ex ia IIC T4/T5/T6
 Ex ia IIIB T44 °C.....T108 °C Db IP6*
 Ta: -20 °C ≤ Ta ≤ 80 °C

SIL certificate: Up to SIL 2 certified by TÜV

Protection rating: IP 65

IP 67 on request
 Nema 4 4X on request

Temperature:

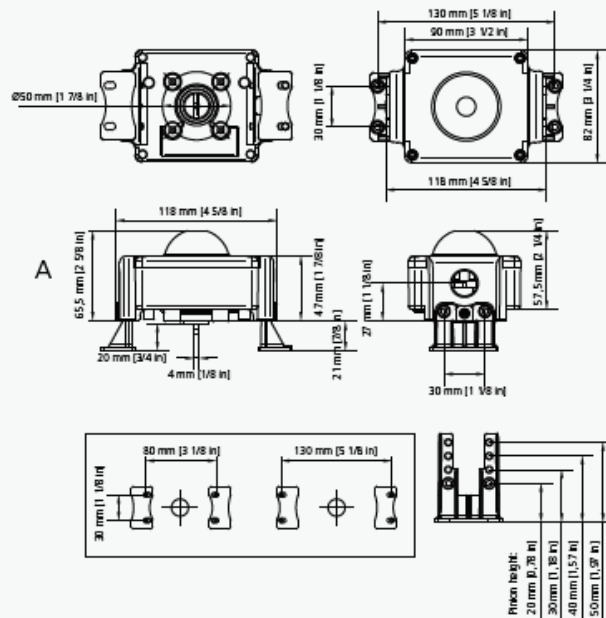
-20 to +80 °C (-4 to +176 °F) standard temperature range



SP limit switch box



SM limit switch box



– SP - SM limit switch box series

Nomenclature

SP N1 2 H 0 - D H W 0 0 R 1

Box

SP = Glass reinforced plastic body with polycarbonate cover
SM = Aluminium body with polycarbonate cover

Switch

01 = SPDT el.mech. switch silver plated contacts
03 = SPDT el.mech. switch gold plated contacts (for Ex'ia')
1F = DPDT el.mech. switch silver plated contacts
C4 = SPDT magnetic hermetically sealed reed switch (for Ex'ia' low temperature)
N1 = SPDT magnetic hermetically sealed silver plated snap acting contacts
N3 = SPDT magnetic hermetically sealed gold plated snap acting contacts (for Ex'ia')
70 = Inductive proximity NAMUR sensor NJ2-V3-N 2 wire NC logic (for Ex'ia')
73 = Inductive proximity sensor model NBB2-V3-E2, 3 wire PNP NO

See additional information and options on pages 14-19

Switch Quantity

2 = 2 switches

Terminals

A = Screw type terminals
4 = Blue screw terminals (for Ex'ia')
0 = Screw terminals with sov connection
2 = Blue screw terminals with sov connection (for Ex'ia')

Coating

0 = Black plastic enclosure (on SP series)
N = Nickel plated aluminium body (on SM series)

Cable Entries

D = 1 cable entry 1/2" NPT
E = 1 cable entry M20 x 1.5
1 = 2 cable entries 1/2" NPT (SM series only)
2 = 2 cable entries M20 x 1.5 (SM series only)

Visual Position Indicator

H = 3D visual position indicator black and yellow
Z = Flat visual position indicator black and yellow

See additional information and options on page 11

Approval

W = Weather proof
A = ATEX certified
G = EAC certification for Russian market

See additional information and options on page 13

Marking

0 = Standard location
1 = Intrinsically safe certification

See additional information and options on page 13

IP Protection rating

0 = Weather proof IP65
7 = Nema 4 and 4X
2 = Weather proof IP67

Temperature

A = Ambient temperature range: -20 to +80 °C (-4 to +176 °F)
B = Ambient temperature range: -20 to +70 °C (-4 to +158 °F) for sensor option 73

Material

1 = Glass reinforced plastic body and polycarbonate cover (on SP series)
2 = Nickel plated aluminium body and polycarbonate cover (on SM series)