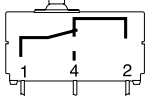


General specifications

Layout



Components

Material

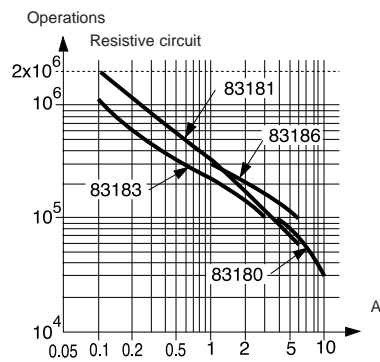
- Case : UL 94VO glass-filled polyester
- Button : Polyester
- Membrane : silicon
- Contacts : AgCdO
AgNi (dual current),
- Terminals : tinned brass
- Cable : PVC (IP 67)
- Leads : PVC

Actuators

- flat : stainless steel
- roller : stainless steel with polyamide roller

Approvals 83 180/83 186 : NF. UL - cUL on request

Operating curve 250 V~



Switch rating with DC supply

		83 180	83 181	83 183	83 186
12 V	Resistive load	10 A	6 A	3 A	6 A
	Inductive L/R 5 ms	10 A	6 A	3 A	6 A
24 V	Resistive load	10 A	6 A	3 A	6 A
	Inductive L/R 5 ms	5 A	5 A	3 A	5 A

Model 83 181 is designed to operate equally well on dual-current (1 mA 4 V minimum) or medium-current (6 A maximum) circuits. However, a given product should only be used to switch one type of circuit during its working life.

Degree of protection

- Tag version : casing = IP67
terminals = IP00
- Lead / cable version : outlet / casing = IP67

Types

Part numbers for standard products with connection of type

1
2
FD0

Features

Electrical characteristics

	Nominal Hp	A
Current rating at 250 V		1/2

Mechanical characteristics

Operating force - max.		N (oz.)
Release force - min.		N (oz.)
Total travel force - max.		N (oz.)
Permitted overtravel force - max.		N (oz.)
Rest position - max.		mm (in.)
Tripping point		mm (in.)
Differential travel		mm (in.)
Overtravel - min.		mm (in.)
Ambient operating temperature	for tag version	°C (°F)
	for lead / cable version	°C (°F)
Mechanical durability		Operations
Contact gap		mm (in.)
Weight (tag version)		g (oz.)

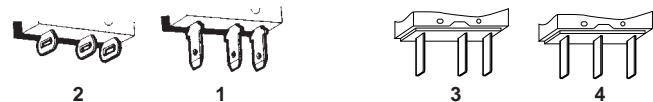
Contact Type

C (Form C) SPDT

B (Form B) SPNC not available in PC terminals

A (Form A) SPNO not available in PC terminals

Connections



Actuators and mounting positions

Part numbers for standard actuators

Actuators - Length mm (in.)

Mounting position

Coefficient

Tripping point mm (in.)

83 180

83 181/183/186

Part numbers for standard actuators

Actuators - Length mm (in.)

Mounting positions

Coefficient

Tripping point

Except where otherwise indicated, actuators are supplied unmounted.

For factory mounting, specify fixing position L or R.

- To calculate force : take the force quoted for the switch and divide by the coefficient given in the table.

- To calculate travel : take the travel quoted for the switch and multiply by the same coefficient.

Mounting accessories for PCB mounting : 5 / 6 / 7 / 8

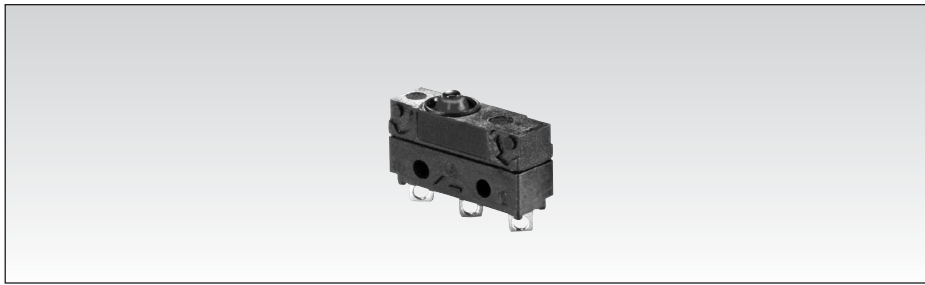
See page 3/9.

Other information

For other forces, actuators, connections and temperatures, please consult us.

Normally stocked items

Catalog products produced to order

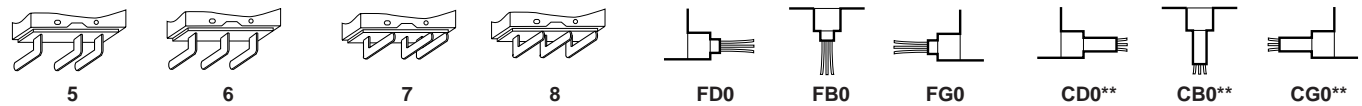


1

83180	83181	83183	83186
831800C1.0	831810C1.0	831830C1.0	831860C1.0
831800C2.0	831810C2.0	831830C2.0	831860C2.0
831800CFD0.0	831810CFD0.0	831830CFD0.0	831860CFD0.0
High current	Dual current	Medium current	Standard
10	6	3	6
12.5	7.5	4	7.5

3.4 (12)	2.5 (8.8)	2.5 (8.8)	2.5 (8.8)
1 (3.5)	0.8 (2.8)	0.8 (2.8)	0.8 (2.8)
5 (17.6)	4.2 (14.1)	4.2 (14.1)	4.2 (14.1)
10 (35.3)	10 (35.3)	10 (35.3)	10 (35.3)
9.3 (.37)	9.3 (.37)	9.3 (.37)	9.3 (.37)
8.4 ±0.3 (.33 ±0.012)	8.4 ±0.3 (.33 ±0.012)	8.4 ±0.3 (.33 ±0.012)	8.4 ±0.3 (.33 ±0.012)
0.10 (.004)	0.10 (.004)	0.10 (.004)	0.10 (.004)
0.6 (.024)	0.6 (.024)	0.6 (.024)	0.6 (.024)
-40 +125 (-40 +257)	-40 +125 (-40 +257)	-40 +125 (-40 +257)	-40 +125 (-40 +257)
-40 +105 (-40 +221)	-40 +105 (-40 +221)	-40 +105 (-40 +221)	-40 +105 (-40 +221)
10 ⁶	2 x 10 ⁶	2 x 10 ⁶	2 x 10 ⁶
0.4 (.016)	0.4 (.016)	0.4 (.016)	0.4 (.016)
2 (.07)	2 (.07)	2 (.07)	2 (.07)

C	C	C	C
B	B	B	B
A	A	A	A



4

A 79 253 327	B 79 253 326	C 79 253 328	E 79 218 454
Flat 170A R18.3 (.72)	Flat 170A R24 (.94)	Flat 170A R41 (1.61)	Roller 170E R20 (.79)
L 3 10.4 ^{+1.2} (.41 ^{+0.05})	L 4 11.1 ^{+1.2} (.44 ^{+0.05})	L 7 13.2 ^{+2.5} (.52 ⁺¹)	L 3 15.4 ^{+1.2} (.61 ^{+0.05})
R 1.5 9.2 ^{+0.6} (.36 ⁺²⁴)	R 2 9.6 ^{+0.6} (.38 ^{+0.24})	R 3.5 10.7 ^{+1.2} (.42 ^{+0.05})	R 1.5 14.5 ^{+0.6} (.57 ⁺²⁴)

F 79 253 329	D *	L *
Dummy roller 170F R19.5 (.77)	Screw 170D	Transverse roller 170EL *
L 3 13 ^{+1.2} (.51 ^{+0.05})		
R 1.5 12 ^{+0.6} (.47 ⁺²⁴)		

Ø No Actuator

5

* Special order, contact us for part number
 ** Cable version for types 83 181, 83 183 and 83 186

To order please specify :

1 Switch Type 831810 831830 831860 831800	2 Contact Type A B C	3 Connection Example : 831810 C 2 • Ø 1 6 2 7 3 8 4 FDØ 5 FGØ FBØ	4 Actuators Ø A B C D E	5 Actuator Position L - Left (Standard) R - Right
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To order actuators separately, use the 8 digit P/N Example P/N is 831810 SPDT solder terminals with no actuator.

Products and specifications subject to change without notice.

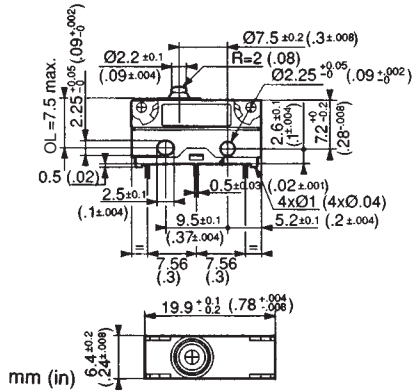
Order/Technical Support – Tel: (800) 677-5311 / FAX: (800) 677-3865 / www.crouzet-usa.com



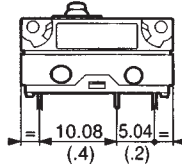
Sealed Subminiature Switches DIN 41635 B

Dimensions

Symmetric



Asymmetric



Fixed by 2 x M2 screws

Torque for

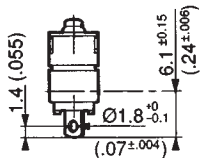
screw alone: 0.2 Nm (1.75 in. lbs.)

screw + washer: 0.3 Nm (2.65 in. lbs.)

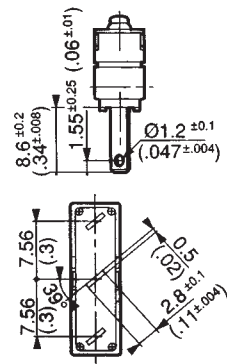
Connections

Terminals

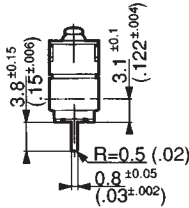
2 Solder



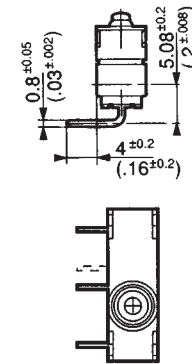
1 Faston 2.8 x 0.5
.110" Quick Connects



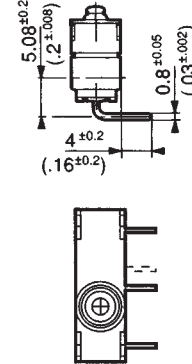
3 - 4 Straight PCB output



5 - 6 Side output, PCB rear

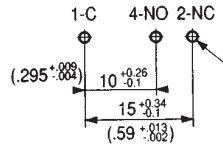


7 - 8 Side output, PCB front

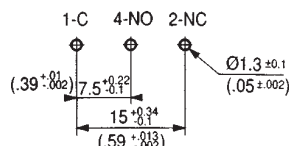


Printed circuit board mounting

Asymmetric
3, 5, 7

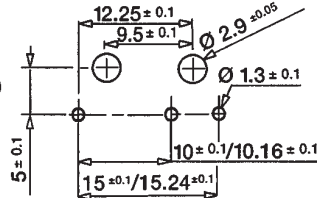


Symmetric
4, 6, 8

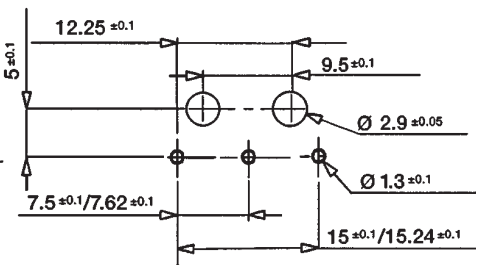


Mounting on a printed circuit board with mounting pins

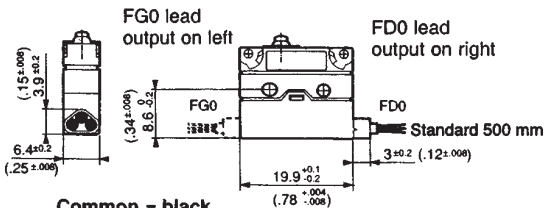
Asymmetric



Symmetric



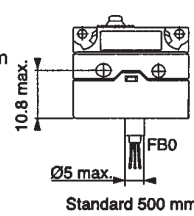
Lead output



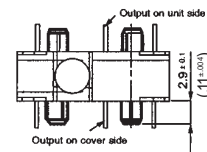
Common = black
NC = brown
NO = blue
mm (in)

Conductor cross-section:
83181 / 83183 / 83186 = 3 x 0.5 mm² (.12 x .02 in²)
83180 = 3 x 0.75 mm² (.12 x .03 in²)

FB0 lead output on bottom



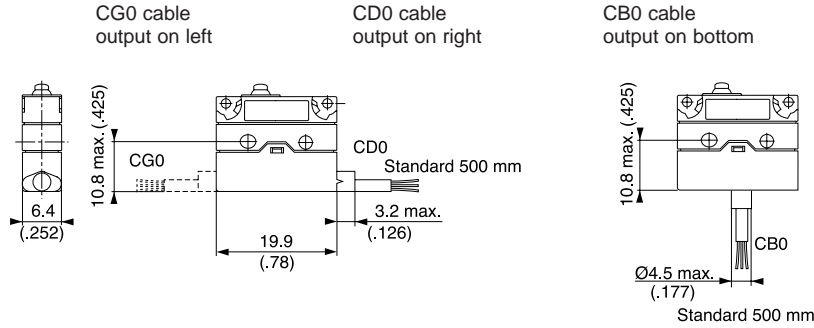
Mounting pins



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Cable output



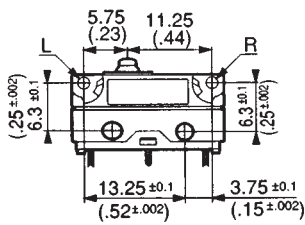
Conductor cross-section :
 83181 / 83183 / 83186 = 3 x 0.5 mm²
 (.12 x .02 in²)

Common = black
 NC = brown
 NO = blue

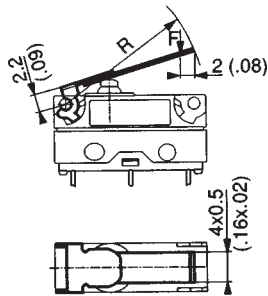
mm (in.)

Actuators

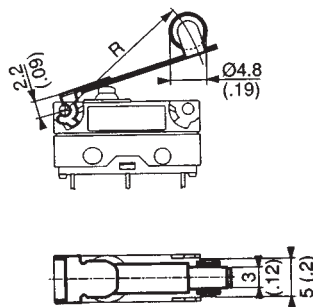
Mounting positions



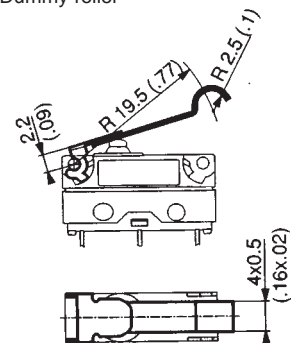
A, B, C
Flat



E
Roller



F
Dummy roller



mm (in.)

Recommendations for operation from the side



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