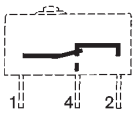
General specifications

Layout



Components

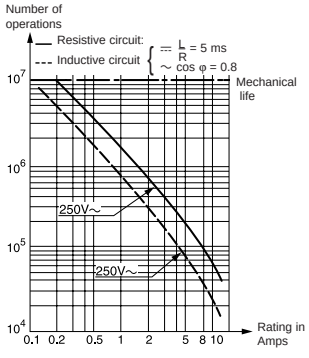
Material
- Case : polyester UL 94 VO
- Button : glass-filled polyamide
- Contacts : AgNi, gold-plated AgNi (dual-current)
- Terminals : copper-nickel

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

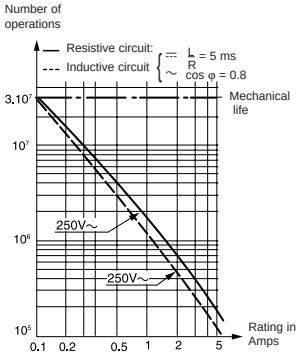
Approvals: NF - UL - cUL

Operating curve

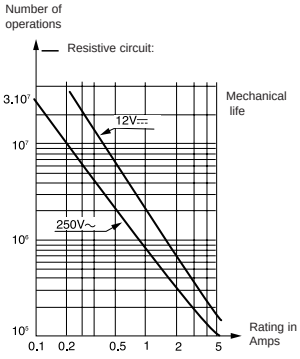
For type 83 170 0



For type 83 170 4



For type 83 170 9



Model 83 170 9 is designed to operate equally well on dual-current (1 mA 4 V minimum) or medium-current (5 A maximum) circuits. However, a given product should only be used to switch one type of circuit during its working life.

Types

Part numbers for standard products (no lever) terminal type	1
	2
	3

Features

Electrical characteristics		
Current rating at 250 V	Nominal	A
	Thermal	A
Mechanical characteristics		
Operating force - max.		N (oz.)
Release force - min.		N (oz.)
Total travel force - max.		N (oz.)
Permitted overtravel force - max.		N (oz.)
Maximum rest position		mm (in.)
Tripping point		mm (in.)
Differential travel		mm (in.)
Overtravel - min.		mm (in.)
Ambient operating temperature		°C
Mechanical endurance		Operations
Contact gap		mm (in.)
Weight		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 positions	
Coefficient	
Tripping point	mm (in.)

Mounting positions

Except where otherwise indicated, actuators are supplied unmounted. For factory mounting, specify mounting 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

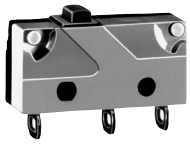
See page 3/9.

Other information

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

Normally stocked items

Catalog products produced to order



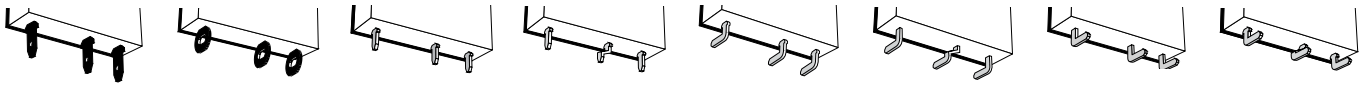
1

83170.0	83170.4	83170.9	83170.4 SP 4967	83170.4	83170.9
831700C1.0	**831704C1.0**	**831709C1.0**	**831704C2.MBSP**	**831704C1.MB**	**831709C1.MB**
831700C2.0	**831704C2.0**	**831709C2.0**	**831704C3.MBSP**	**831704C2.MB**	**831709C2.MB**
831700C3.0	**831704C3.0**	**831709C3.0**	**831704C1.MBSP**	**831704C3.MB**	**831709C3.MB**
High current	Standard	Low current	High force	Standard	Low current
10	5	0.1	5	5	0.1
12.5	6		6	6	
1.5 (5.3)	0.6 (2.2)	0.6 (2.2)	1.5 (5.3)	0.6 (2.2)	0.6 (2.2)
0.3 (1)	0.1 (.04)	0.1 (.04)	0.3 (1)	0.1 (.04)	0.1 (.04)
1.8 (6.3)	1 (3.5)	1 (3.5)	1.8 (6.3)	1 (3.5)	1 (3.5)
10 (35.3)	10 (35.3)	10 (35.3)	10 (35.3)	10 (35.3)	10 (35.3)
9.2 (.36)	9.2 (.36)	9.2 (.36)	10.8 (.425)	10.8 (.425)	10.8 (.425)
$8.4^{\pm0.3}$ ($.33^{\pm.01}$)	$8.4^{\pm0.3}$ ($.33^{\pm.01}$)	$8.4^{\pm0.3}$ ($.33^{\pm.01}$)	$9.9^{\pm0.3}$ ($.39^{\pm.01}$)	$9.9^{\pm0.3}$ ($.39^{\pm.01}$)	$9.9^{\pm0.3}$ ($.39^{\pm.01}$)
0.15 (.006)	0.15 (.006)	0.15 (.006)	0.15 (.006)	0.15 (.006)	0.15 (.006)
0.5 (.02)	0.5 (.02)	0.5 (.02)	0.5 (.02)	0.5 (.02)	0.5 (.02)
-20 to130 (-4 to 266)	-20 to130 (-4 to 266)	-20 to130 (-4 to 266)	-20 to130 (-4 to 266)	-20 to130 (-4 to 266)	-20 to130 (-4 to 266)
10^7	3.10^7	3.10^7	10^6	10^6	10^6
0.4 (.016)	0.4 (.016)	0.4 (.016)	0.4 (.016)	0.4 (.016)	0.4 (.016)
1.7 (.06)	1.7 (.06)	1.7 (.06)	1.7 (.06)	1.7 (.06)	1.7 (.06)

2

C	**C**	**C**	**C**	**C**	**C**
B	**B**	**B**	**B**	**B**	**B**
A	**A**	**A**	**A**	**A**	**A**

3



1 **2** **3** **4** **5** **6** **7** **8**

4

A **79 253 327**

Flat **170A** R18.3 (.72)

L	R
3	1.5
$10.4^{\pm1.2}$ ($.41^{\pm.05}$)	$9.2^{\pm0.6}$ ($.36^{\pm.24}$)

B **79 253 326**

Flat **170A** R24 (.94)

L	R
4	2
$11.1^{\pm1.2}$ ($.44^{\pm.05}$)	$9.6^{\pm0.6}$ ($.38^{\pm.24}$)

C **79 253 328**

Flat **170A** R41 (1.61)

L	R
7	3.5
$13.2^{\pm2.5}$ ($.52^{\pm.1}$)	$10.7^{\pm1.2}$ ($.42^{\pm.05}$)

E **79 218 454**

Roller **170E** R20 (.79)

L	R
3	1.5
$15.4^{\pm1.2}$ ($.61^{\pm.05}$)	$14.5^{\pm0.6}$ ($.57^{\pm.24}$)

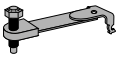
F **79 253 329**

Dummy roller **170F** R19.5 (.77)

L	R
3	1.5
$13^{\pm1.2}$ ($.51^{\pm.05}$)	$12^{\pm0.6}$ ($.47^{\pm.24}$)

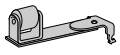
D **79 218 491**

Screw **170D** R20 (.79)



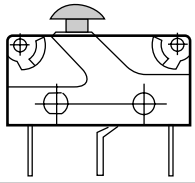
L **79 218 493**

Transverse roller **170L** R20 (.79)



Characteristics available upon request.

MB



Ø No Actuator

5

To order please specify :

Example : 831700 C 2 • C L

1 Switch Type

831700
831704
831709

2 Contact Type

A
B
C

3 Connection

1 5
2 6
3 7
4 8

4 Actuators

A E
B F
C L
D MB
Ø MB SP4967

5 Actuator Position

L - Left (Standard)
R - Right

To order actuators separately, use the 8 digit P/N

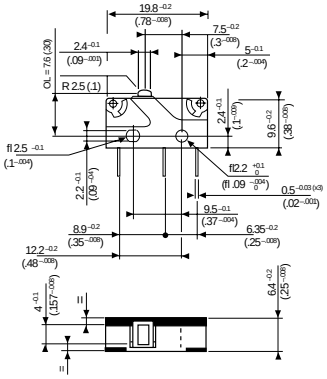
Example P/N is 831700 SPDT solder terminals "C" actuator mounted on the left.

3

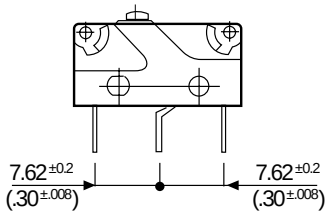
Subminiature Switches DIN 41635 B

Dimensions

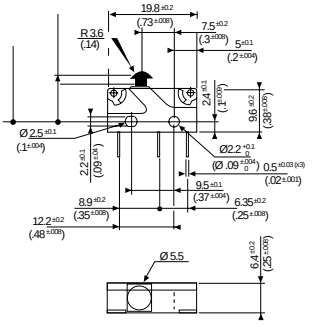
83 170 Asymmetric



83 170 Symmetric



83 170 with MB Button

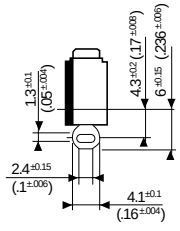


Mounting by M2 screws
Torque : 2 cm daN

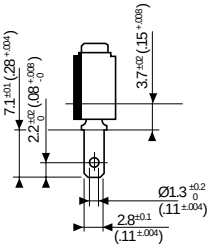
mm (in)

Connections

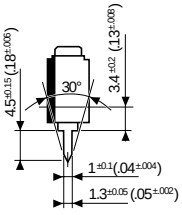
2
Solder



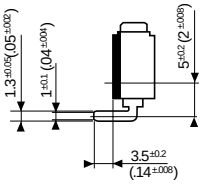
1
.11x.02 Quick Connects



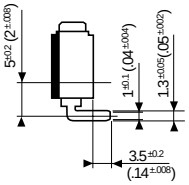
3-4
Straight PCB



5-6
Side Output PCB Rear



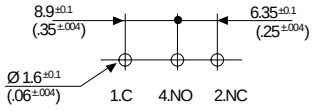
7-8
Side Output PCB Front



Printed circuit board mounting

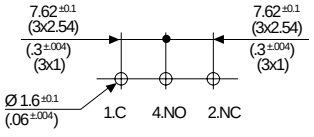
Asymmetric

3 5 7



Symmetric

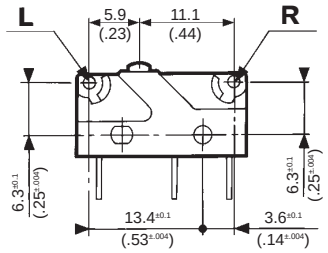
4 6 8



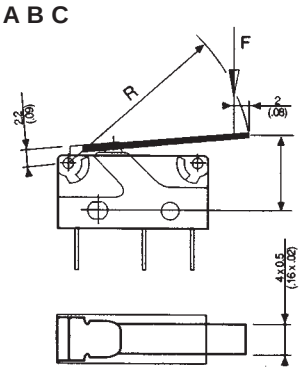
mm (in)

Actuators

Actuator mounting positions

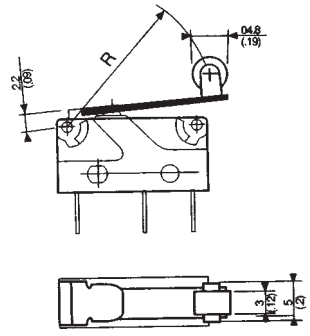


A B C

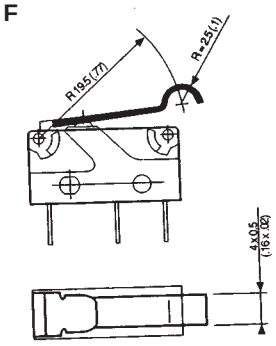


TP (Tripping Point)
Refer to pages 3/6 & 3/7.

E



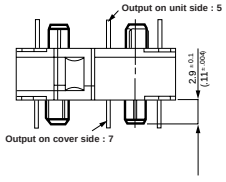
F



mm (in.)

Mounting accessories

Mounting pins



mm (in.)