

## General specifications

### Layout



### Components

#### Material

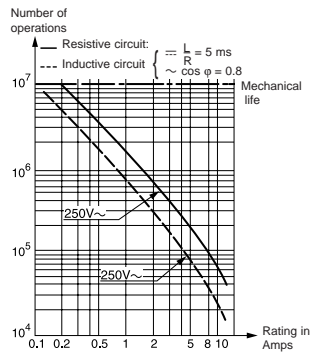
- Case : polyester UL 94 VO
- Button : glass-filled polyamide
- Contacts : AgNi, gold-plated AgNi (dual-current)
- Terminals : copper-nickel

#### Actuators

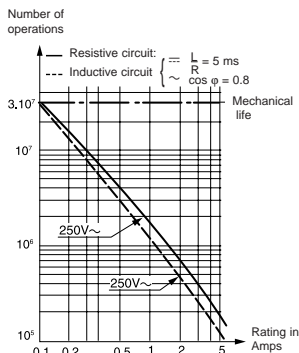
- flat : stainless steel
- roller : stainless steel with polyamide roller

Approvals: NF - UL - cUL

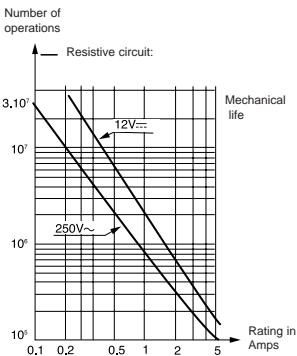
### Operating curve For type 83 170 0



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

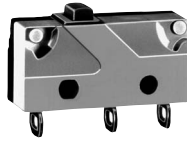
For other forces, actuators, connections and temperatures, please consult us.

Normally stocked items

Catalog products produced to order

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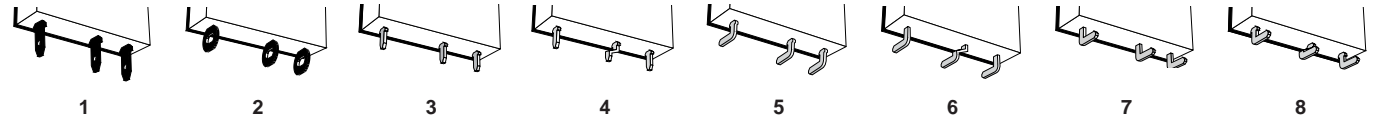


**1**

| 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 <sup>+0.3</sup> (.33 <sup>+0.01</sup> ) | 8.4 <sup>+0.3</sup> (.33 <sup>+0.01</sup> ) | 8.4 <sup>+0.3</sup> (.33 <sup>+0.01</sup> ) | 9.9 <sup>+0.3</sup> (.39 <sup>+0.01</sup> ) | 9.9 <sup>+0.3</sup> (.39 <sup>+0.01</sup> ) | 9.9 <sup>+0.3</sup> (.39 <sup>+0.01</sup> ) |
| 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 <sup>7</sup>                             | 3.10 <sup>7</sup>                           | 3.10 <sup>7</sup>                           | 10 <sup>6</sup>                             | 10 <sup>6</sup>                             | 10 <sup>6</sup>                             |
| 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)                                   |

| C | C | C | C | C | C |
|---|---|---|---|---|---|
| B | B | B | B | B | B |
| A | A | A | A | A | A |

**3**



**4**

| A 79 253 327  | B 79 253 326                                       | C 79 253 328   | E 79 218 454   | F 79 253 329                                       |
|---|--|--|--|--|
| Flat 170A R18.3 (.72)                               | Flat 170A R24 (.94)                                | Flat 170A R41 (1.61)                                 | Roller 170E R20 (.79)                                | Dummy roller 170F R19.5 (.77)                      |
|   |  |  |  |  |
| L 3<br>10.4 <sup>±1.2</sup> (.41 <sup>±.05</sup> )  | L 4<br>11.1 <sup>±1.2</sup> (.44 <sup>±.05</sup> ) | L 7<br>13.2 <sup>±2.5</sup> (.52 <sup>±.1</sup> )    | L 3<br>15.4 <sup>±1.2</sup> (.61 <sup>±.05</sup> )   | L 3<br>13 <sup>±1.2</sup> (.51 <sup>±.05</sup> )   |
| R 1.5<br>9.2 <sup>±0.6</sup> (.36 <sup>±.24</sup> ) | R 2<br>9.6 <sup>±0.6</sup> (.38 <sup>±.24</sup> )  | R 3.5<br>10.7 <sup>±1.2</sup> (.42 <sup>±.05</sup> ) | R 1.5<br>14.5 <sup>±0.6</sup> (.57 <sup>±.24</sup> ) | R 1.5<br>12 <sup>±0.6</sup> (.47 <sup>±.24</sup> ) |

| D 79 218 491                            | L 79 218 493                     |
|---|----------------------------------|
| Screw 170D R20 (.79)                    | Transverse roller 170L R20 (.79) |
|   |                                  |
| Characteristics available upon request. |                                  |



To order please specify :

|   |                       |                          |   |                                  |
|---|-----------------------|--------------------------|---|----------------------------------|
| <b>1</b> Switch Type  | <b>2</b> Contact Type | <b>3</b> Connection      | <b>4</b> Actuators                                      | <b>5</b> Actuator Position       |
| 831700<br>831704<br>831709  | A<br>B<br>C           | 1 5<br>2 6<br>3 7<br>4 8 | A<br>B<br>C<br>D<br>Ø<br>E<br>F<br>L<br>MB<br>MB SP4967 | L - Left (Standard)<br>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. |                       |                          |   |                                  |

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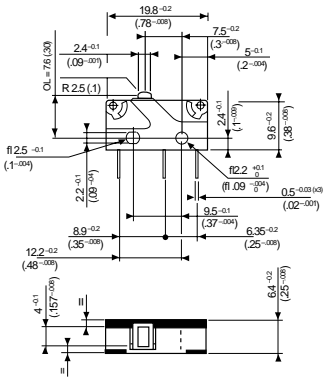
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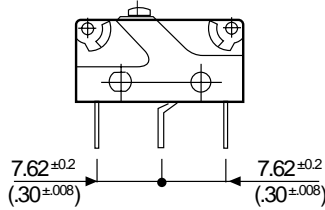
# Subminiature Switches DIN 41635 B

## Dimensions

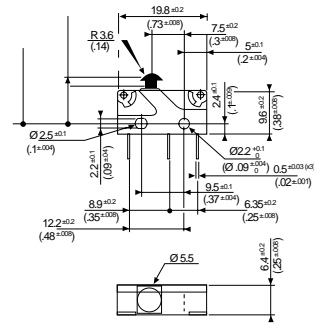
### 83 170 Asymmetric



### 83 170 Symmetric



### 83 170 with MB Button

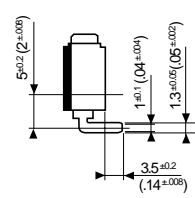
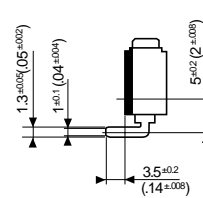
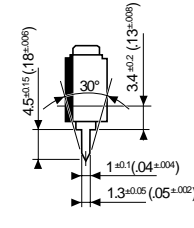
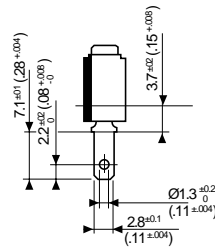
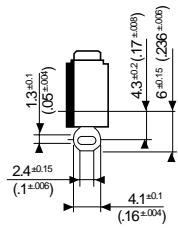


Mounting by M2 screws  
Torque : 2 cm daN

mm (in)

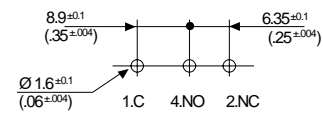
## Connections

- 2** Solder
- 1** .11x.02 Quick Connects
- 3-4** Straight PCB
- 5-6** Side Output PCB Rear
- 7-8** Side Output PCB Front

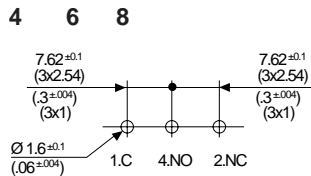


## Printed circuit board mounting

### Asymmetric



### Symmetric



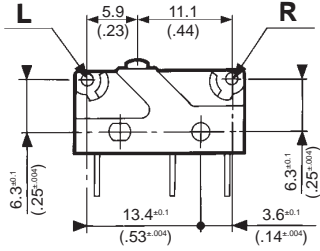
mm (in)

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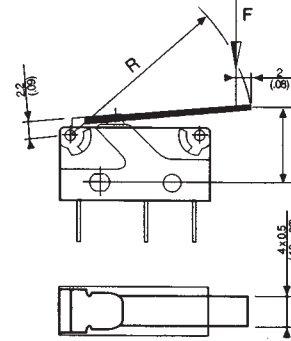
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## Actuators

### Actuator mounting positions

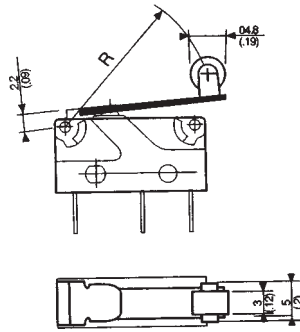


A B C

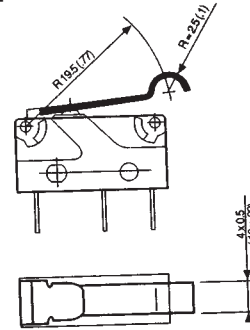


TP (Tripping Point)  
Refer to pages 3/6 & 3/7.

E



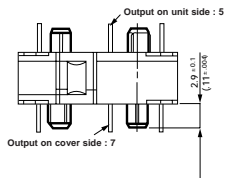
F



mm (in.)

## Mounting accessories

### Mounting pins



mm (in.)

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