

## General specifications

### Layout



### Components

#### Material

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

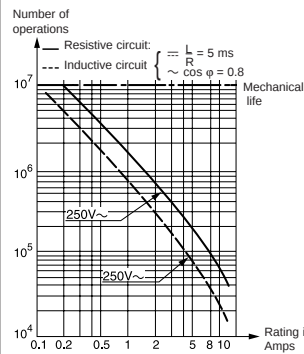
#### Actuators

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

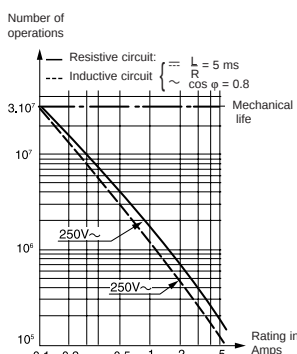
Approvals: NF - UL - cUL

### Operating curve

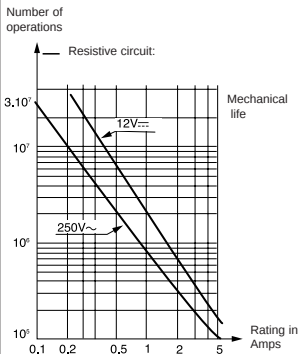
For type 83 170 0



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

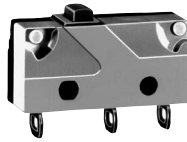
For other forces, actuators, connections and temperatures, please consult us.

Normally stocked items

Catalog products produced to order

Products and specifications subject to change without notice.

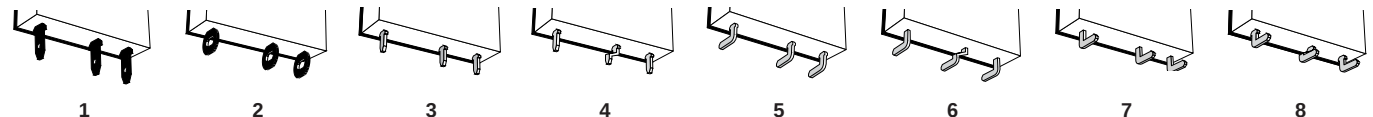
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**1**

| 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<br>12.5                                                                                                                                                                                                   | 5<br>6                                                                                                                                                                                                         | 0.1                                                                                                                                                                                                            | 5<br>6                                                                                                                                                                                                         | 5<br>6                                                                                                                                                                                                         | 0.1                                                                                                                                                                                                            |
| 1.5 (5.3)<br>0.3 (1)<br>1.8 (6.3)<br>10 (35.3)<br>9.2 (.36)<br>8.4 <sup>+0.3</sup> (.33 <sup>+0.1</sup> )<br>0.15 (.006)<br>0.5 (.02)<br>-20 to130 (-4 to 266)<br>10 <sup>7</sup><br>0.4 (.016)<br>1.7 (.06) | 0.6 (2.2)<br>0.1 (.04)<br>1 (3.5)<br>10 (35.3)<br>9.2 (.36)<br>8.4 <sup>+0.3</sup> (.33 <sup>+0.1</sup> )<br>0.15 (.006)<br>0.5 (.02)<br>-20 to130 (-4 to 266)<br>3.10 <sup>7</sup><br>0.4 (.016)<br>1.7 (.06) | 0.6 (2.2)<br>0.1 (.04)<br>1 (3.5)<br>10 (35.3)<br>9.2 (.36)<br>8.4 <sup>+0.3</sup> (.33 <sup>+0.1</sup> )<br>0.15 (.006)<br>0.5 (.02)<br>-20 to130 (-4 to 266)<br>3.10 <sup>7</sup><br>0.4 (.016)<br>1.7 (.06) | 1.5 (5.3)<br>0.3 (1)<br>1.8 (6.3)<br>10 (35.3)<br>10.8 (.425)<br>9.9 <sup>+0.3</sup> (.39 <sup>+0.1</sup> )<br>0.15 (.006)<br>0.5 (.02)<br>-20 to130 (-4 to 266)<br>10 <sup>6</sup><br>0.4 (.016)<br>1.7 (.06) | 0.6 (2.2)<br>0.1 (.04)<br>1 (3.5)<br>10 (35.3)<br>10.8 (.425)<br>9.9 <sup>+0.3</sup> (.39 <sup>+0.1</sup> )<br>0.15 (.006)<br>0.5 (.02)<br>-20 to130 (-4 to 266)<br>10 <sup>6</sup><br>0.4 (.016)<br>1.7 (.06) | 0.6 (2.2)<br>0.1 (.04)<br>1 (3.5)<br>10 (35.3)<br>10.8 (.425)<br>9.9 <sup>+0.3</sup> (.39 <sup>+0.1</sup> )<br>0.15 (.006)<br>0.5 (.02)<br>-20 to130 (-4 to 266)<br>10 <sup>6</sup><br>0.4 (.016)<br>1.7 (.06) |

**2**

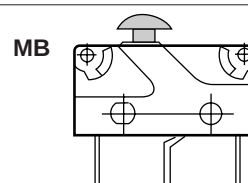
| C | C | C | C | C | C |
|---|---|---|---|---|---|
| B | B | B | B | B | B |
| A | A | A | A | A | A |

**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>±0.05</sup> ) | L 4<br>11.1 <sup>±1.2</sup> (.44 <sup>±0.05</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>±0.05</sup> )  | L 3<br>13 <sup>±1.2</sup> (.51 <sup>±0.05</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.



Ø No  
Actuator

**5**

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 | 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. |                       |                                  |

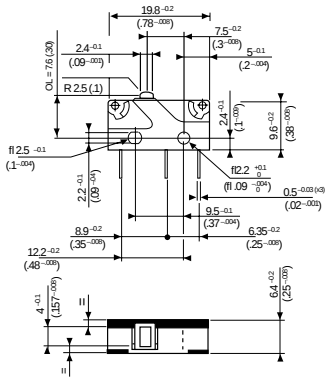
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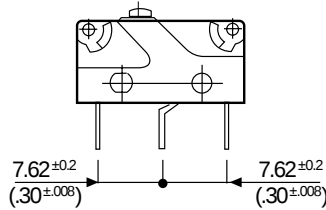
# Subminiature Switches DIN 41635 B

## Dimensions

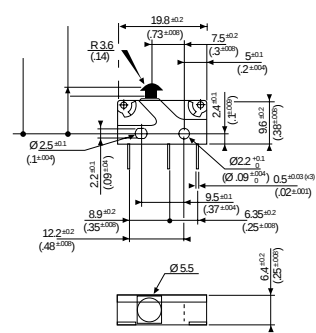
### 83 170 Asymmetric



### 83 170 Symmetric



### 83 170 with MB Button



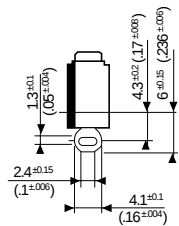
Mounting by M2 screws  
Torque : 2 cm daN

mm (in)

## Connections

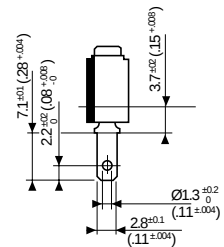
### 2

Solder



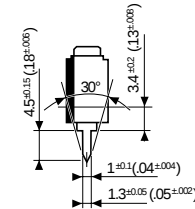
### 1

.11x.02 Quick Connects



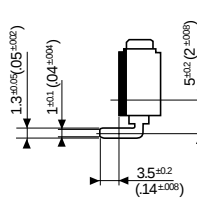
### 3-4

Straight PCB



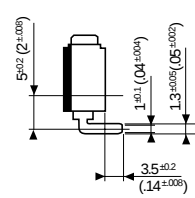
### 5-6

Side Output PCB Rear



### 7-8

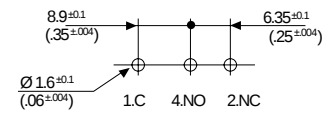
Side Output PCB Front



## Printed circuit board mounting

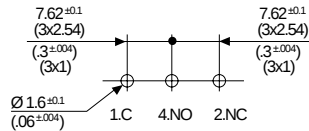
Asymmetric

3 5 7



Symmetric

4 6 8



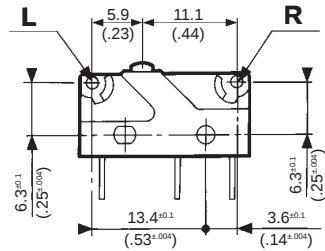
mm (in)

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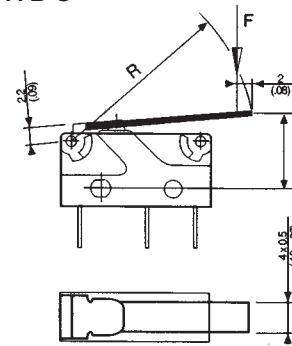
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## Actuators

### Actuator mounting positions

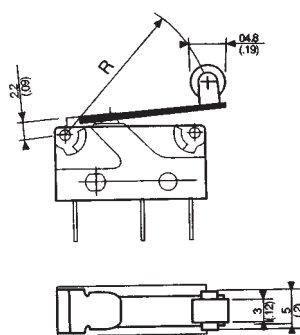


A B C

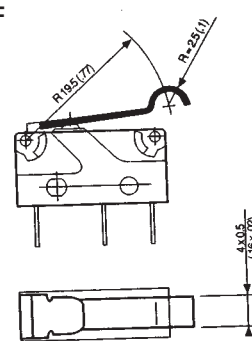


TP (Tripping Point)  
Refer to pages 3/6 & 3/7.

E



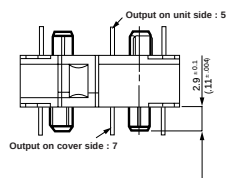
F



mm (in.)

## Mounting accessories

### Mounting pins



mm (in.)

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