

## V4 8318 Sealed High-current 83180 Part number made to order



- IP 67 protection
- Nominal ratings 0.1 A to 10 A / 250 VAC
- Minimum rating 1 mA / 4 VDC
- Operating temperature -40 °C to +125 °C
- Choice of actuators with 2 possible fixing positions

### Part numbers

|                      | Type               | Function       | Connections |
|----------------------|--------------------|----------------|-------------|
| <b>MADE TO ORDER</b> | High-current 83180 | I (changeover) | W2S         |

### Specifications

#### Electrical characteristics

|                              |      |
|------------------------------|------|
| Rating nominal / 250 VAC (A) | 10   |
| Rating thermal / 250 VAC (A) | 12,5 |

#### Mechanical characteristics

|  |                 |
|--|-----------------|
| Maximum operating force (N)                                | 3,4             |
| Min. Release force (N)                                     | 1               |
| Maximum total travel force (N)                             | 5               |
| Max. permitted overtravel force (N)                        | 10              |
| Maximum rest position (mm)                                 | 9,3             |
| Operating position (mm)                                    | 8,4 ±0,3        |
| Maximum differential travel (mm)                           | 0,1             |
| Min. overtravel (mm)                                       | 0,6             |
| Ambient operating temperature for blade version (°C)       | -40 → +125      |
| Ambient operating temperature for wires/cable version (°C) | -40 → +105      |
| Mechanical life (operations)                               | 10 <sup>6</sup> |
| Contact gap (mm)   | 0,4             |
| Weight (g) (tags version)                                  | 2               |

### Comments

\* Type 83180 available on request

\*\* Cable version for types 83181, 83183 and 83186

### Additional specifications

#### Components

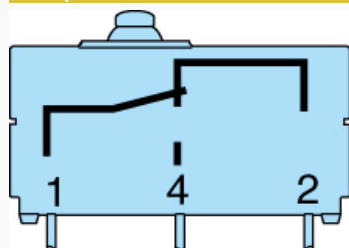
##### Material

- Case : polyester UL 94VO
- Button : polyester
- Membrane : silicon
- Contacts : AgCdO or AgSnO<sub>2</sub> gold-plated AgNi (dual-current)
- Terminals : silver-plated, tinned brass
- Cable/Lead : PVC

##### Levers

- Flat : stainless steel
- Roller : stainless steel, polyamide roller

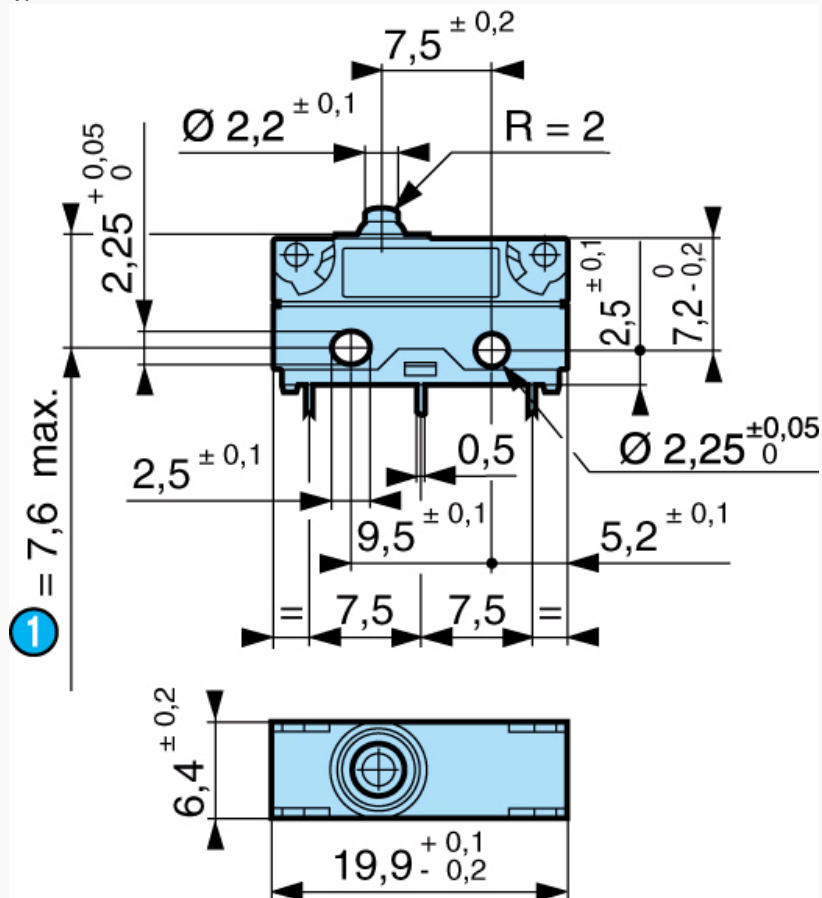
### Principles



## Dimensions (mm)

## Product

Symmetrical version  
types 83180 / 181 / 183 / 186

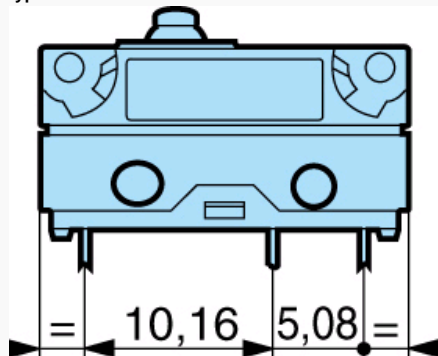


| N° | Legend        |
|----|---------------|
| 1  | OL = 7.6 max. |

## Dimensions (mm)

## Product

Asymmetrical version  
types 83180 / 181 / 183 / 186

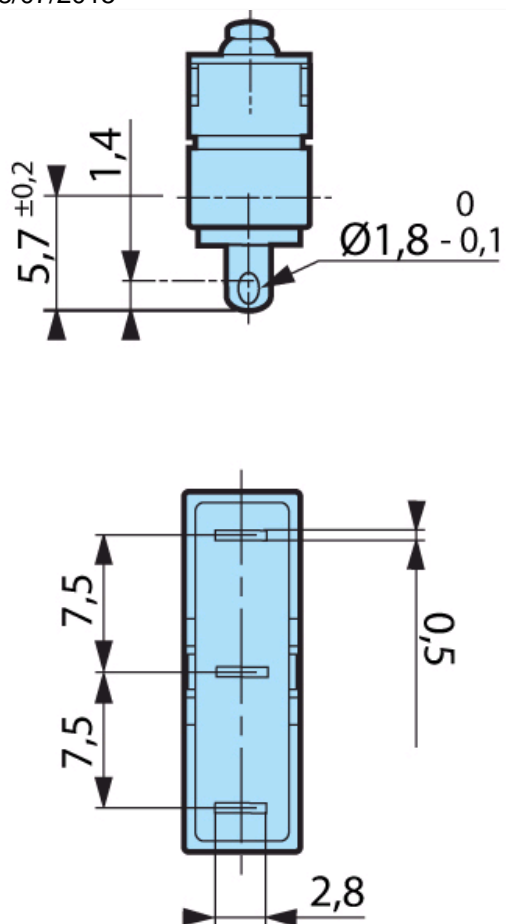


Fixed by 2 M2 screws Torque with screw only : 0.2 Nm, with screw + washer : 0.3 Nm

## Dimensions (mm)

## Connections

W2S  
Solder

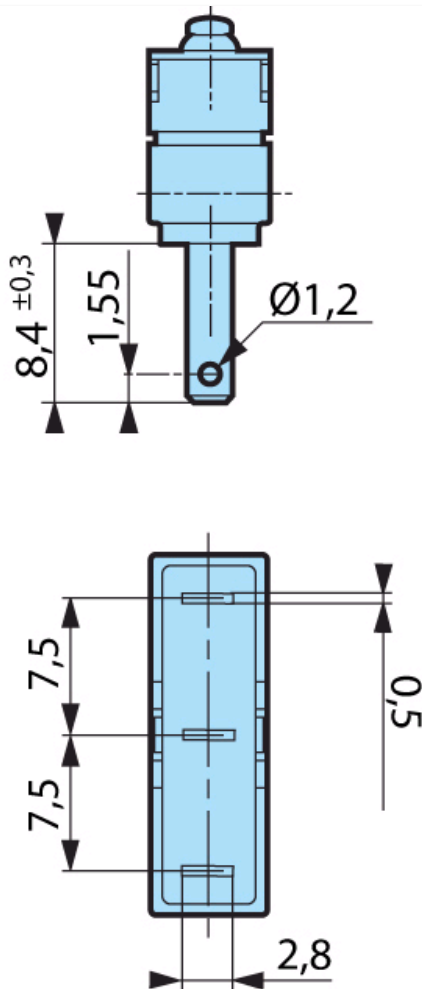


Fixed by 2 M2 screws Torque with screw only : 0.2 Nm, with screw + washer : 0.3 Nm

#### Dimensions (mm)

#### Connections

W7S  
Faston 2.8 x 0.5

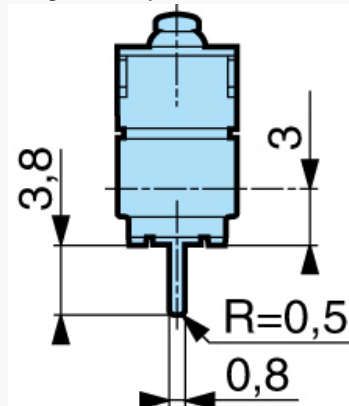


Fixed by 2 M2 screws Torque with screw only : 0.2 Nm, with screw + washer : 0.3 Nm

#### Dimensions (mm)

#### Connections

X1A  
Straight PCB output

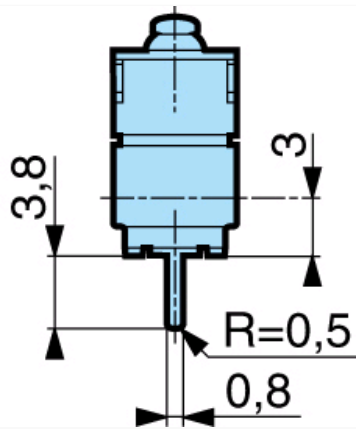


Fixed by 2 M2 screws Torque with screw only : 0.2 Nm, with screw + washer : 0.3 Nm

#### Dimensions (mm)

#### Connections

X1S  
Straight PCB output



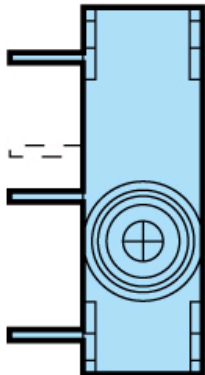
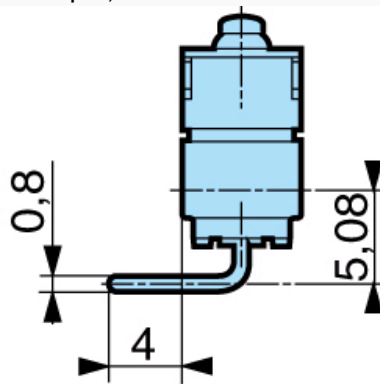
Fixed by 2 M2 screws Torque with screw only : 0.2 Nm, with screw + washer : 0.3 Nm

#### Dimensions (mm)

#### Connections

X2A - X2S

Side outputs, PCB rear



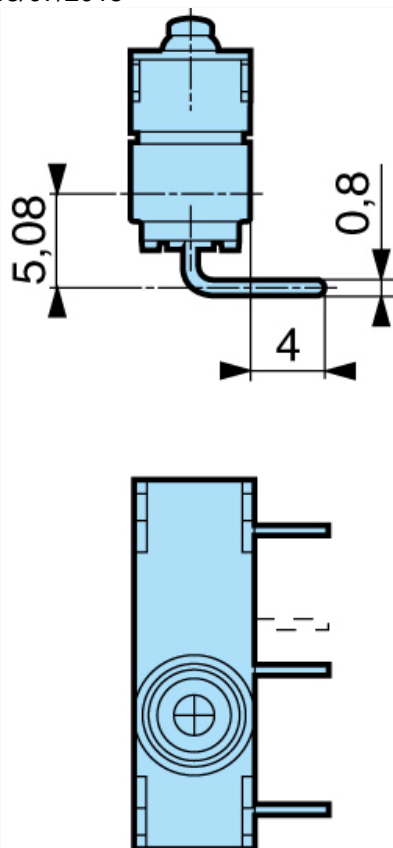
Fixed by 2 M2 screws Torque with screw only : 0.2 Nm, with screw + washer : 0.3 Nm

#### Dimensions (mm)

#### Connections

X3A - X3S

Side outputs, PCB front

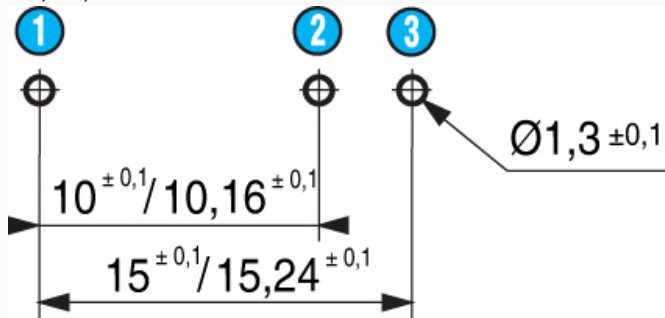


Fixed by 2 M2 screws Torque with screw only : 0.2 Nm, with screw + washer : 0.3 Nm

#### Dimensions (mm)

##### Drilling

Printed circuit board mounting  
Asymmetrical  
X1A, X2A, X3A



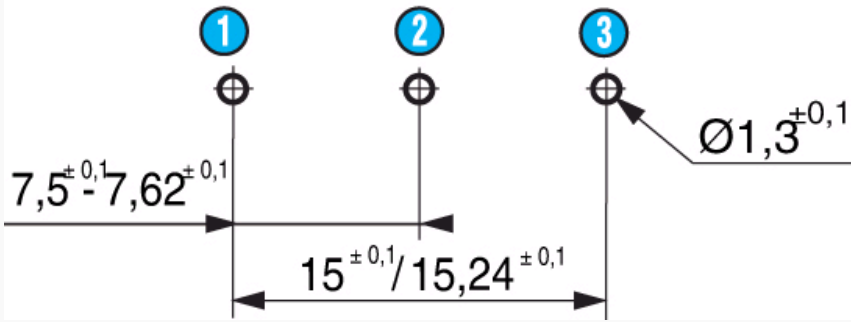
Fixed by 2 M2 screws Torque with screw only : 0.2 Nm, with screw + washer : 0.3 Nm

| N° | Legend |
|----|--------|
| 1  | 1.C    |
| 2  | 4.NO   |
| 3  | 2.NC   |

#### Dimensions (mm)

##### Drilling

Printed circuit board mounting  
Symmetrical  
X1S, X2S, X3S



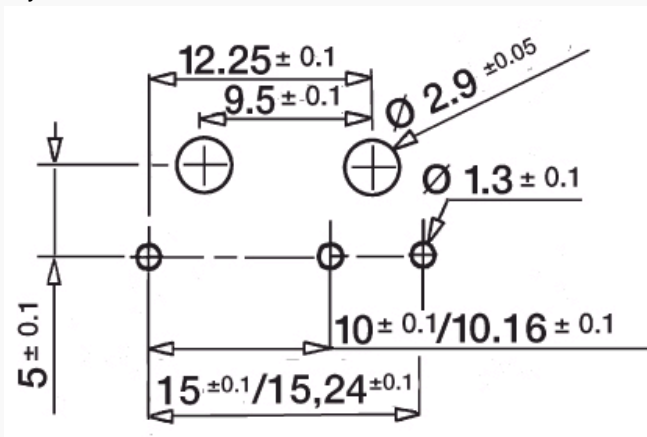
Fixed by 2 M2 screws Torque with screw only : 0.2 Nm, with screw + washer : 0.3 Nm

| N° | Legend |
|----|--------|
| 1  | 1.C    |
| 2  | 4.NO   |
| 3  | 2.NC   |

**Dimensions (mm)**

**Drilling**

Mounting on a printed circuit board with fixing pins  
Asymmetrical

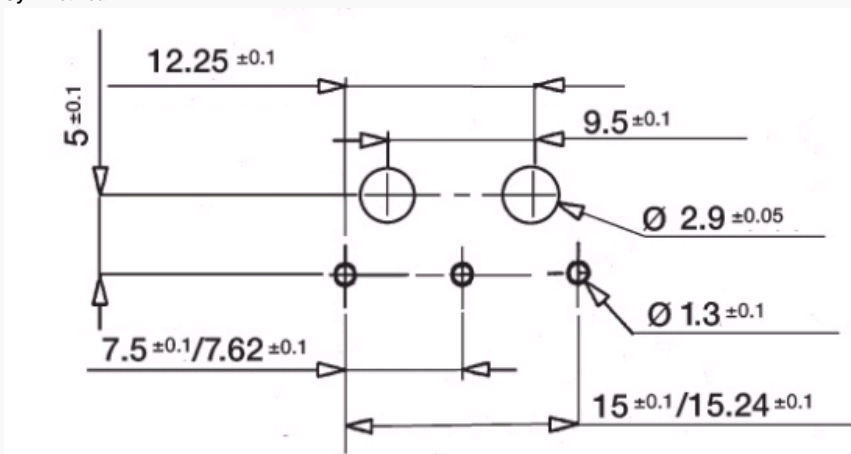


Fixed by 2 M2 screws Torque with screw only : 0.2 Nm, with screw + washer : 0.3 Nm

**Dimensions (mm)**

**Drilling**

Mounting on a printed circuit board with fixing pins  
Symmetrical



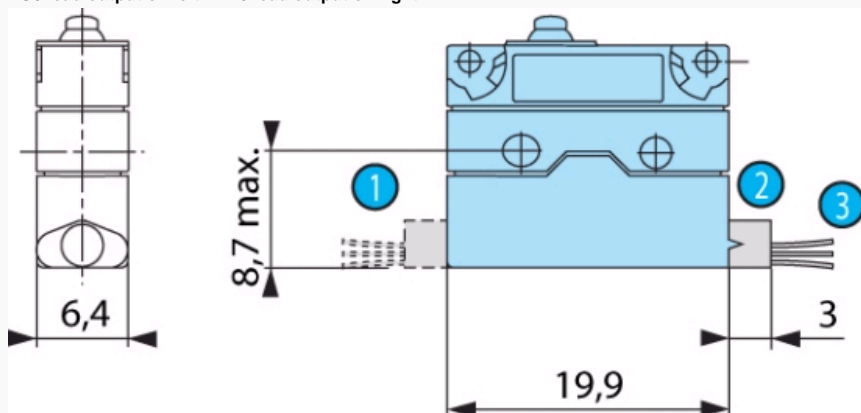
Fixed by 2 M2 screws Torque with screw only : 0.2 Nm, with screw + washer : 0.3 Nm

## Dimensions (mm)

## Connections

## Lead outputs

FG0 lead output on left - FD0 lead output on right

Black = Common Grey = NC Blue = NO Conductor cross-section : 83181 / 83183 / 83186 = 0.5 mm<sup>2</sup> 83180 = 0.75 mm<sup>2</sup>

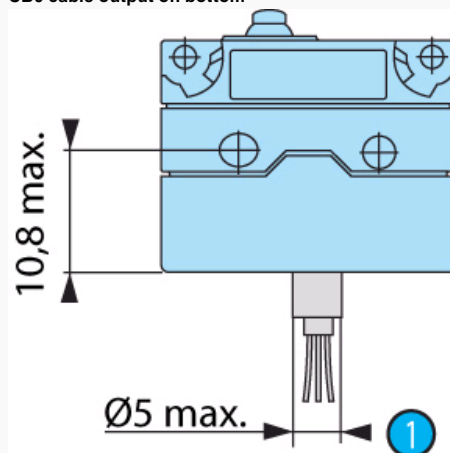
| N° | Legend          |
|----|-----------------|
| 1  | FG0             |
| 2  | FD0             |
| 3  | Standard 500 mm |

## Dimensions (mm)

## Connections

## Lead/cable output

CB0 cable output on bottom

Black = Common Grey = NC Blue = NO Conductor cross-section : 83181 / 83183 / 83186 = 0.5 mm<sup>2</sup> 83180 = 0.75 mm<sup>2</sup>

| N° | Legend          |
|----|-----------------|
| 1  | Standard 500 mm |

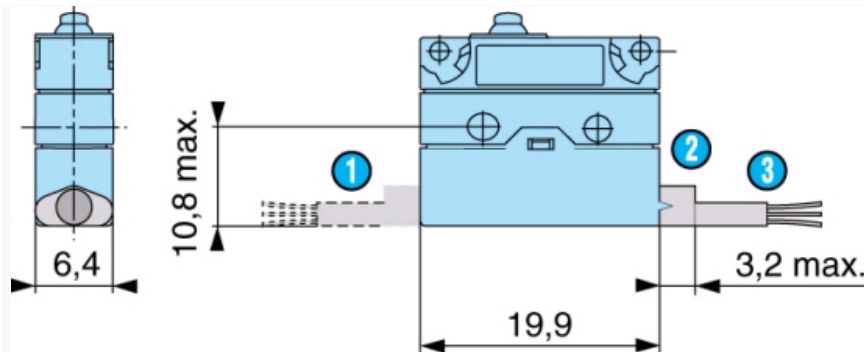
## Dimensions (mm)

## Connections

## Cable outputs

CG0 cable output on left - CD0 cable output on right





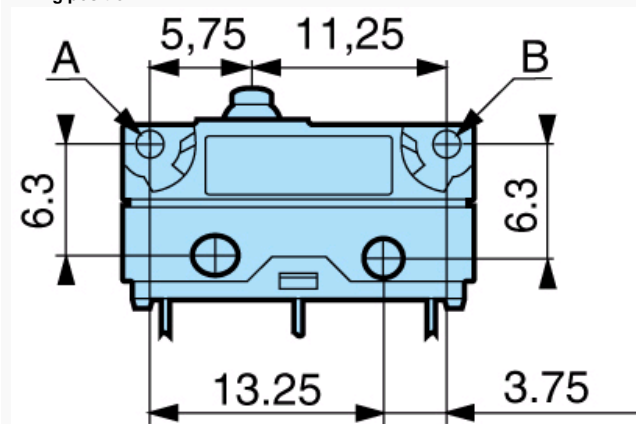
Black = Common Grey = NC Blue = NO Conductor cross-section : 83181 / 83183 / 83186 = 3 x 0,5 mm<sup>2</sup>

| N° | Legend          |
|----|-----------------|
| ①  | CG0             |
| ②  | CD0             |
| ③  | Standard 500 mm |

#### Dimensions (mm)

##### Actuator mounting positions

##### Fixing position

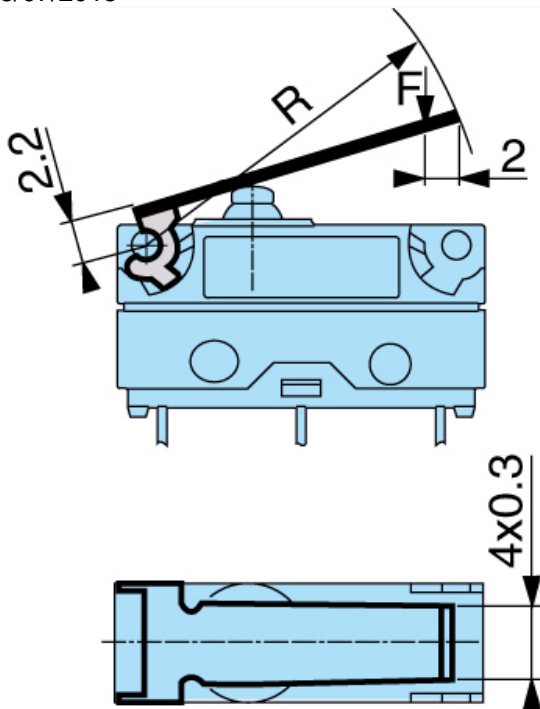


Black = Common Grey = NC Blue = NO Conductor cross-section : 83181 / 83183 / 83186 = 3 x 0,5 mm<sup>2</sup>

#### Dimensions (mm)

##### Actuators

170 A  
Flat

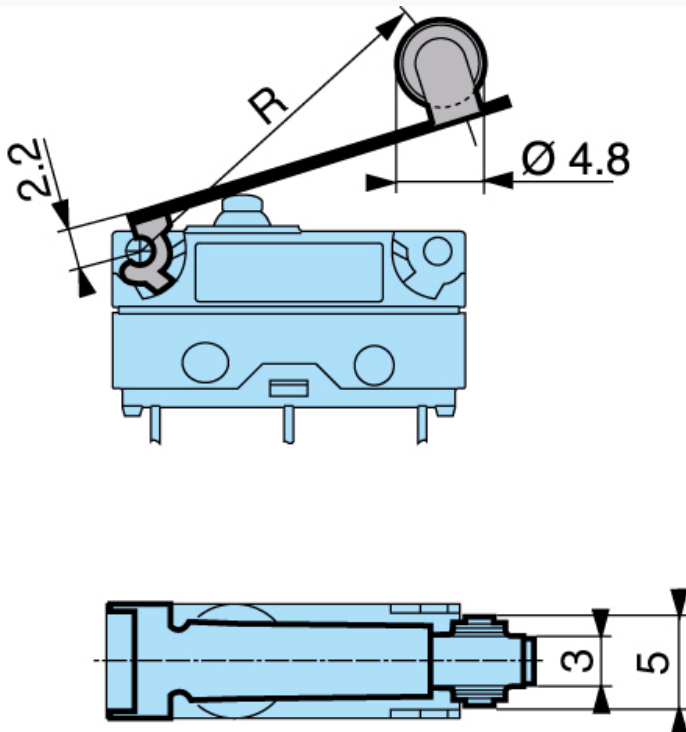


Black = Common Grey = NC Blue = NO Conductor cross-section : 83181 / 83183 / 83186 = 3 x 0.5 mm<sup>2</sup>

#### Dimensions (mm)

##### Actuators

170 E  
Roller

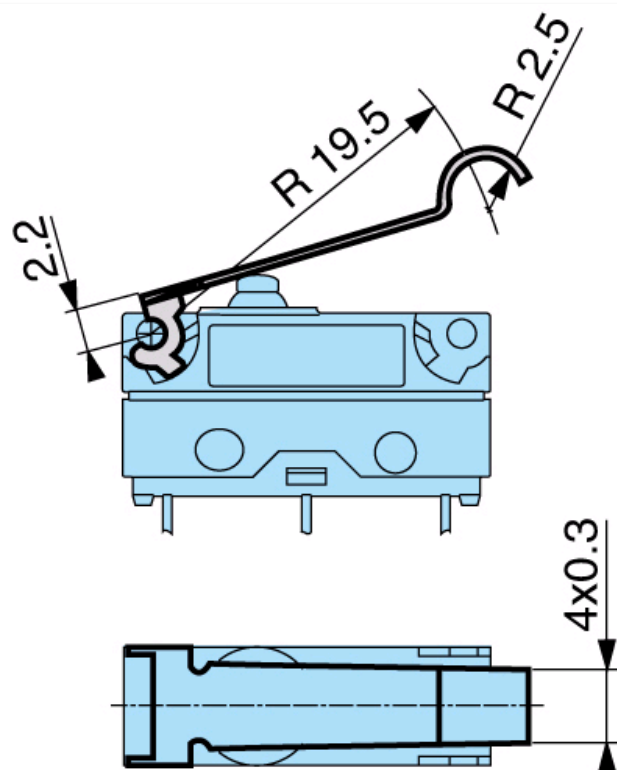


Black = Common Grey = NC Blue = NO Conductor cross-section : 83181 / 83183 / 83186 = 3 x 0.5 mm<sup>2</sup>

#### Dimensions (mm)

##### Actuators

170 F  
Dummy roller

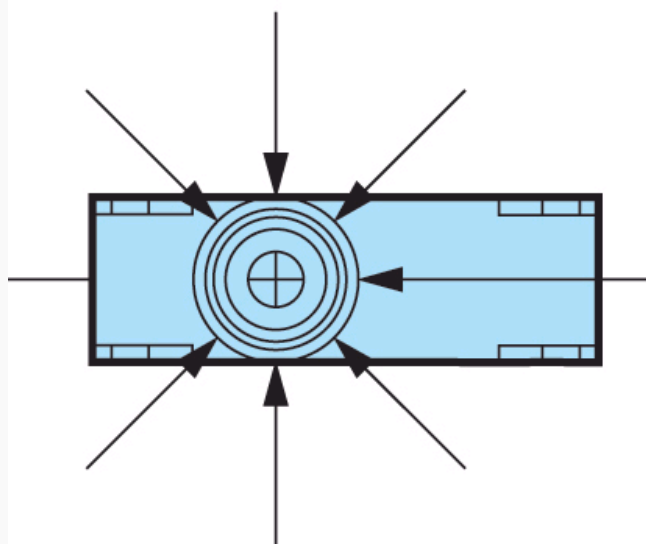
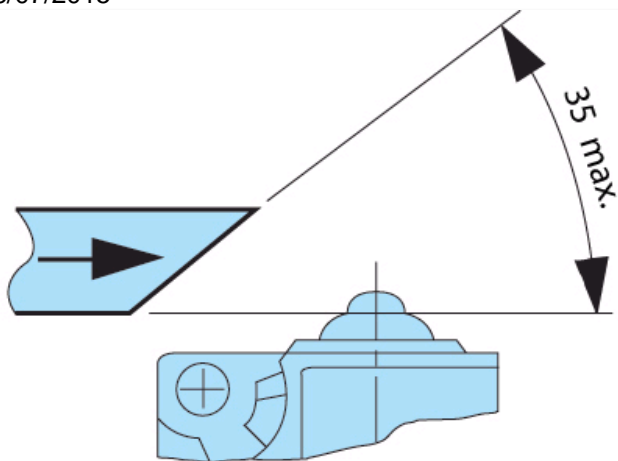


Black = Common Grey = NC Blue = NO Conductor cross-section : 83181 / 83183 / 83186 = 3 x 0.5 mm<sup>2</sup>

#### Dimensions (mm)

#### Actuators

#### Recommendations for operation from the side

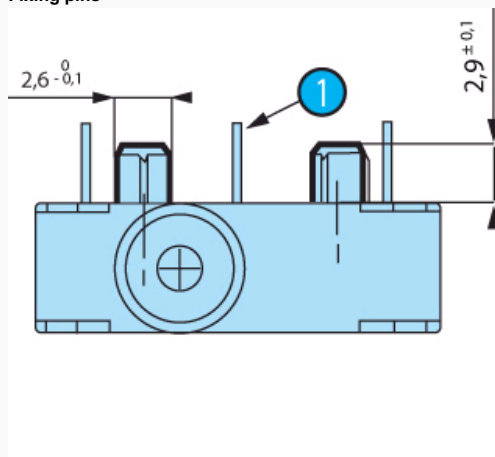


Black = Common Grey = NC Blue = NO Conductor cross-section : 83181 / 83183 / 83186 = 3 x 0.5 mm<sup>2</sup>

#### Dimensions (mm)

#### Mounting accessories

#### Fixing pins



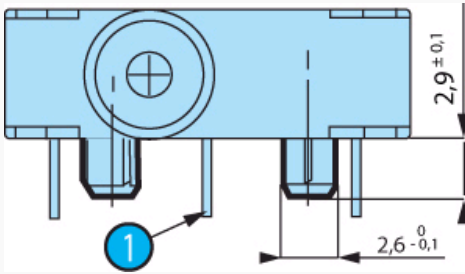
Black = Common Grey = NC Blue = NO Conductor cross-section : 83181 / 83183 / 83186 = 3 x 0.5 mm<sup>2</sup>

| N° | Legend    |
|----|-----------|
| ①  | X2 output |

**Dimensions (mm)**

**Mounting accessories**

**Fixing pins**

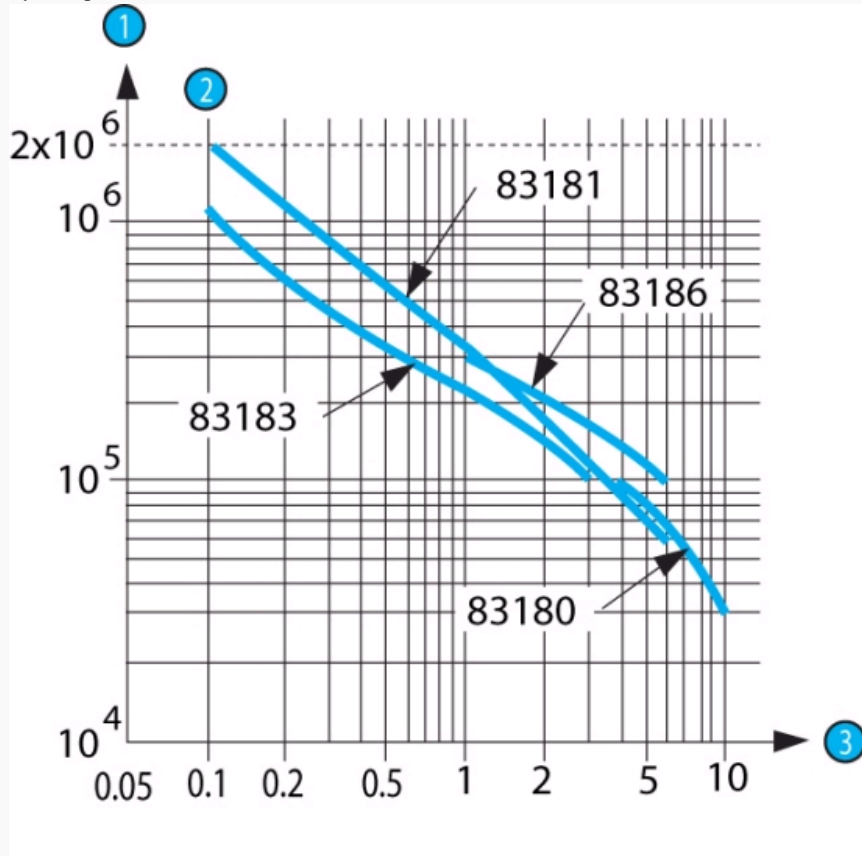


Black = Common Grey = NC Blue = NO Conductor cross-section : 83181 / 83183 / 83186 = 3 x 0.5 mm<sup>2</sup>

| N° | Legend    |
|----|-----------|
| ①  | X3 output |

**Curves**

**Operating curve 250 VAC**



Model 83181 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.

| N° | Legend            |
|----|-------------------|
| ①  | Number of cycles  |
| ②  | Resistive circuit |
| ③  | Current in Amps   |

**Curves**








**Switch rating with DC supply**

|      |                    | 83180 | 83181 | 83183 | 83186 |
|------|--------------------|-------|-------|-------|-------|
| 12 V | Resistive          | 10 A  | 6 A   | 3 A   | 6 A   |
|      | Inductive L/R 5 ms | 10 A  | 6 A   | 3 A   | 6 A   |
| 24 V | Resistive          | 10 A  | 6 A   | 3 A   | 6 A   |
|      | Inductive L/R 5 ms | 5 A   | 5 A   | 3 A   | 5 A   |

Model 83181 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.

## Connections

### Actuators and fixing positions

| Part numbers for standard actuators |  | 79253327  |   | 79253326  |   | 79218454 |  |
|-------------------------------------|--|---|---|---|---|----------|--|
| Actuators                           |  | Flat 170A R18.3   | Flat 170A R24   | Flat 170A R41   | Roller 170E R20   |          |  |
|                                     |  |  |  |  |  |          |  |
| Mounting position                   |  | A B   | A B   | A B   | A B   | A B      |  |
| Coefficient                         |  | 3 1.5   | 4 2   | 7 3.5   | 3 1.5   |          |  |
| Tripping point                      |  | 10 <sup>+1.4</sup> 9.2 <sup>+0.9</sup>  | 10.7 <sup>+1.7</sup> 9.6 <sup>+1.1</sup>  | 12.7 <sup>+1.3</sup> 10.6 <sup>+1.8</sup>   | 15.5 <sup>+1.4</sup> 14.5 <sup>+1.0</sup>   |          |  |
| 83180                               |  |   |   | 11 <sup>+1.1</sup> 8.8 <sup>+1.6</sup>  |   |          |  |
| 83181 / 183 / 186                   |  |   |   | 11.4 <sup>+1.1</sup> 9.3 <sup>+1.6</sup>  |   |          |  |
| Part numbers for standard actuators |  | 79253329  |   |   |   |          |  |
| Actuators                           |  | Dummy roller 170F R19.5   | Screw 170D *  | Transverse roller 170 EL *  |   |          |  |
|                                     |  |  |  |  |   |          |  |
| Mounting position                   |  | A B   |   |   |   |          |  |
| Coefficient                         |  | 3 1.5   |   |   |   |          |  |
| Tripping point                      |  | 12.9 <sup>+1.3</sup> 11.9 <sup>+1.7</sup>   |   |   |   |          |  |

Except where otherwise indicated, levers are supplied unmounted.

For factory mounting, specify fixing position A or B.

\* To special order

## Other information

### Mounting - Operation

See basic technical concepts

### Degree of protection

- Tag version :

→ casing = IP67

→ terminals = IP00

- Lead/cable version :

→ output/casing = IP67

**To calculate force** : divide the switch force by the coefficient in the table.

**To calculate travel** : multiply the switch travel by the same coefficient.

## Product adaptations



- Special levers
- Specific fixings
- Special leads, cables, cable harnesses
- NF - UL - cUL approvals

Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Компания «Океан Электроники» является официальным дистрибьютором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения «JONHON», а так же официальным дистрибьютором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов «FORSTAR».



## JONHON

«JONHON» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«FORSTAR» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели,  
кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).



Телефон: 8 (812) 309-75-97 (многоканальный)

Факс: 8 (812) 320-03-32

Электронная почта: [ocean@oceanchips.ru](mailto:ocean@oceanchips.ru)

Web: <http://oceanchips.ru/>

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, д. 2, корп. 4, лит. А