

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 |
|----------------------|--------------------|----------------|-------------|
| MADE TO ORDER | 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 ⁶ |
| 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

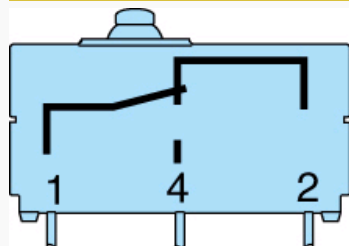
Material

- Case : polyester UL 94VO
- Button : polyester
- Membrane : silicon
- Contacts : AgCdO or AgSnO₂ gold-plated AgNi (dual-current)
- Terminals : silver-plated, tinned brass
- Cable/Lead : PVC

Levers

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

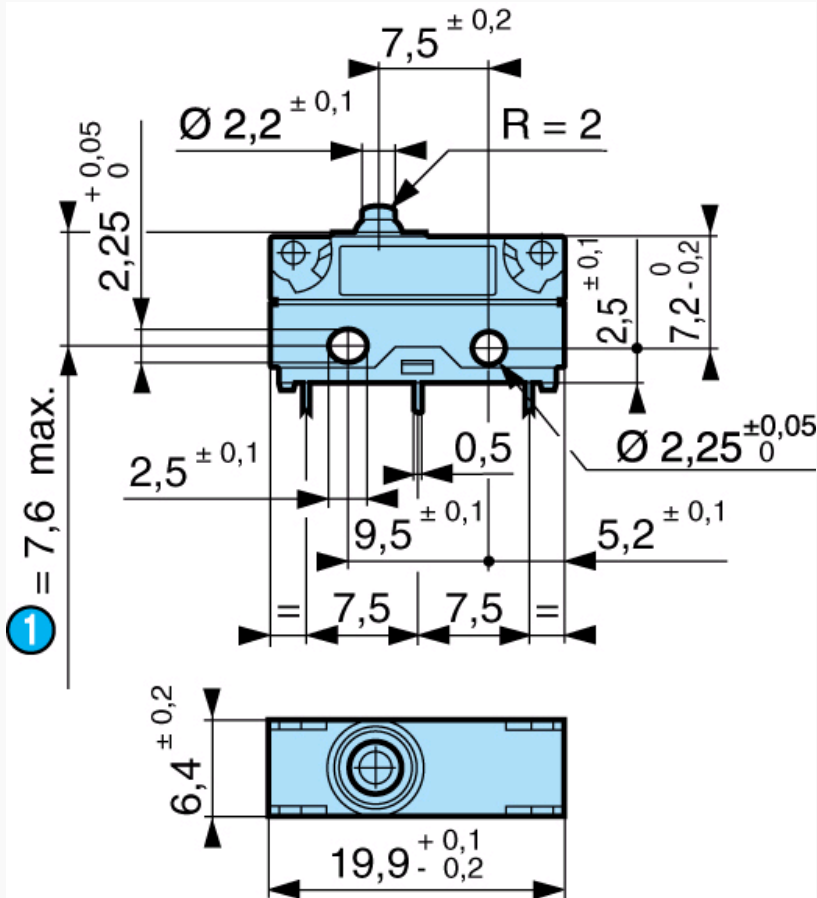
Principles



Dimensions (mm)

Product

Symmetrical version
types 83180 / 181 / 183 / 186

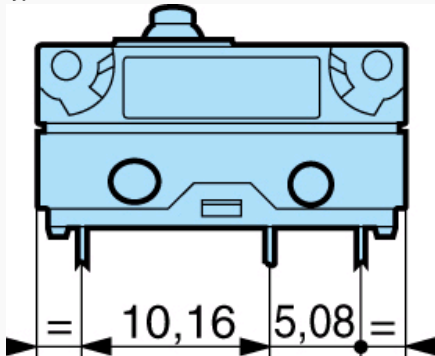


| N° | Legend |
|-------------------|---------------|
| $\textcircled{1}$ | OL = 7.6 max. |

Dimensions (mm)

Product

Asymmetrical version
types 83180 / 181 / 183 / 186

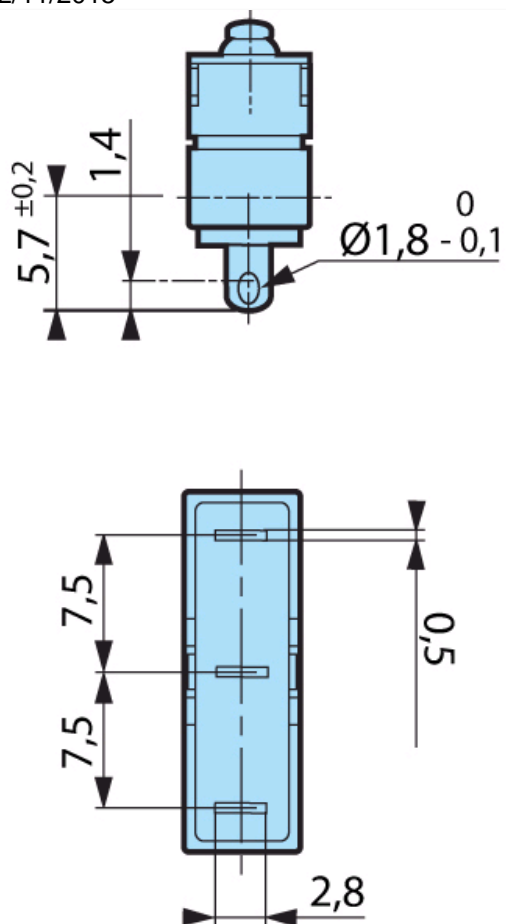


Fixed by 2 M2 screws Torque with screw only : 0.2 Nm, with screw + washer : 0.3 Nm

Dimensions (mm)

Connections

W2S
Solder

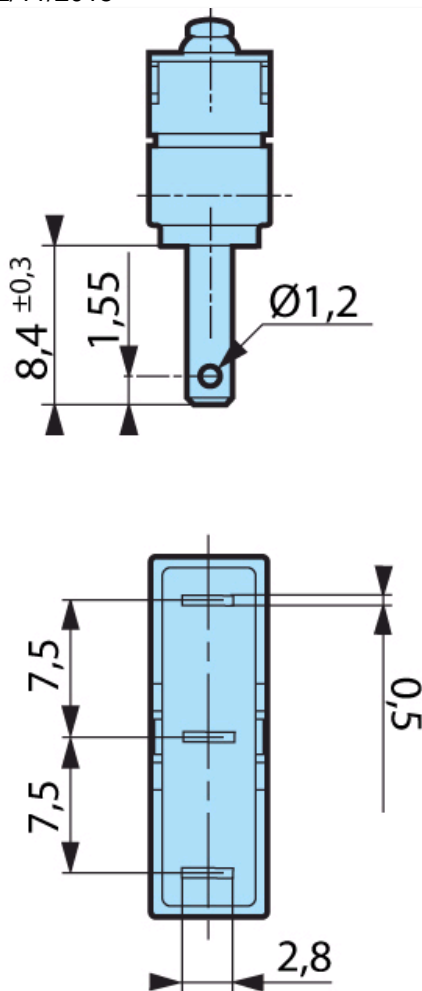


Fixed by 2 M2 screws Torque with screw only : 0.2 Nm, with screw + washer : 0.3 Nm

Dimensions (mm)

Connections

W7S
Faston 2.8 x 0.5

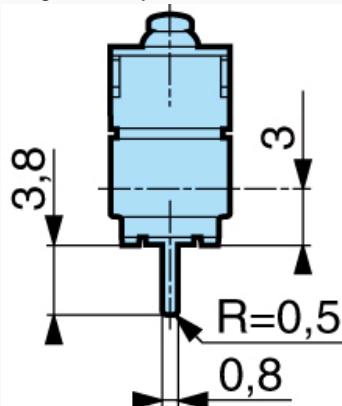


Fixed by 2 M2 screws Torque with screw only : 0.2 Nm, with screw + washer : 0.3 Nm

Dimensions (mm)

Connections

X1A
Straight PCB output

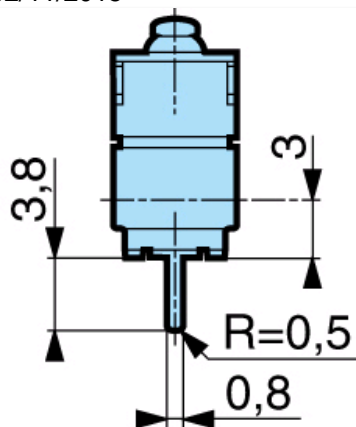


Fixed by 2 M2 screws Torque with screw only : 0.2 Nm, with screw + washer : 0.3 Nm

Dimensions (mm)

Connections

X1S
Straight PCB output

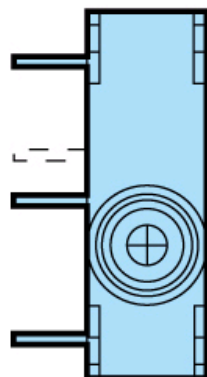
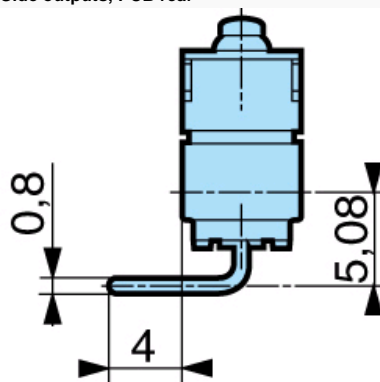


Fixed by 2 M2 screws Torque with screw only : 0.2 Nm, with screw + washer : 0.3 Nm

Dimensions (mm)

Connections

X2A - X2S
Side outputs, PCB rear

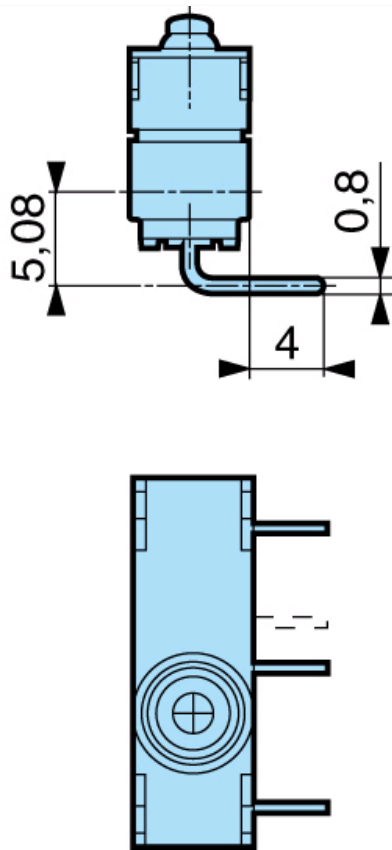


Fixed by 2 M2 screws Torque with screw only : 0.2 Nm, with screw + washer : 0.3 Nm

Dimensions (mm)

Connections

X3A - X3S
Side outputs, PCB front

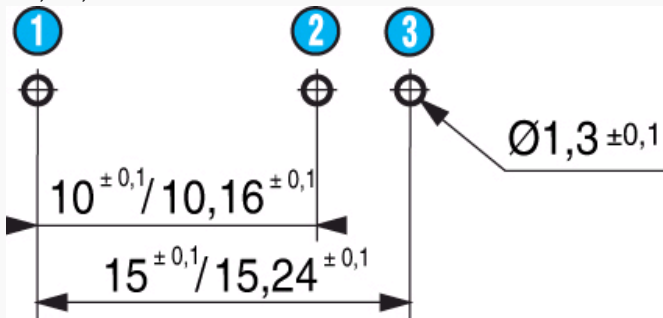


Fixed by 2 M2 screws Torque with screw only : 0.2 Nm, with screw + washer : 0.3 Nm

Dimensions (mm)

Drilling

Printed circuit board mounting
Asymmetrical
X1A, X2A, X3A



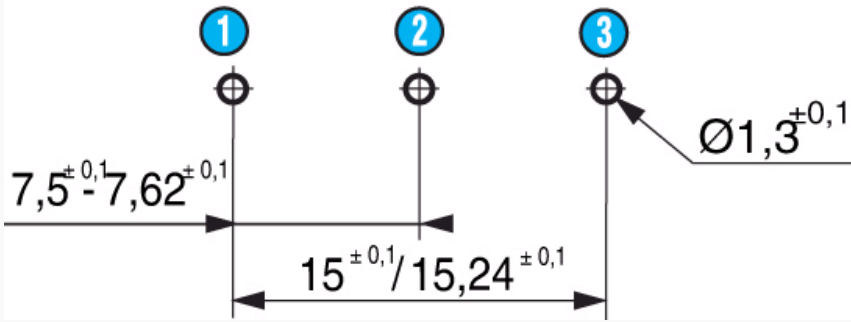
Fixed by 2 M2 screws Torque with screw only : 0.2 Nm, with screw + washer : 0.3 Nm

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

Dimensions (mm)

Drilling

Printed circuit board mounting
Symmetrical
X1S, X2S, X3S



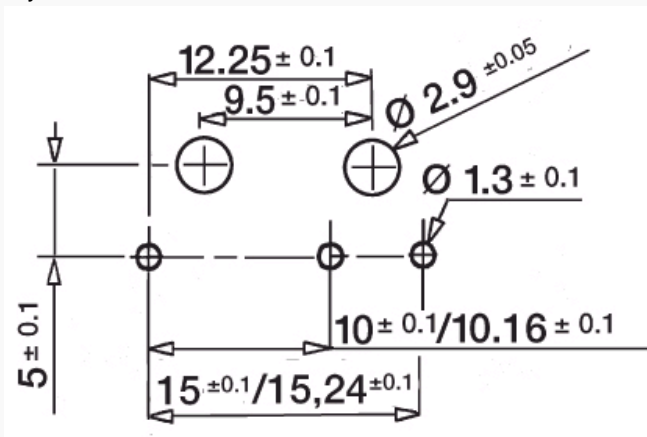
Fixed by 2 M2 screws Torque with screw only : 0.2 Nm, with screw + washer : 0.3 Nm

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

Dimensions (mm)

Drilling

Mounting on a printed circuit board with fixing pins
Asymmetrical

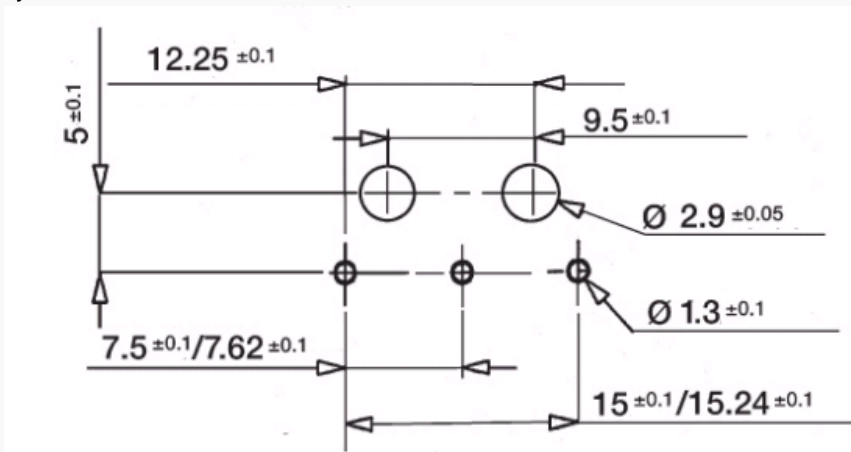


Fixed by 2 M2 screws Torque with screw only : 0.2 Nm, with screw + washer : 0.3 Nm

Dimensions (mm)

Drilling

Mounting on a printed circuit board with fixing pins
Symmetrical



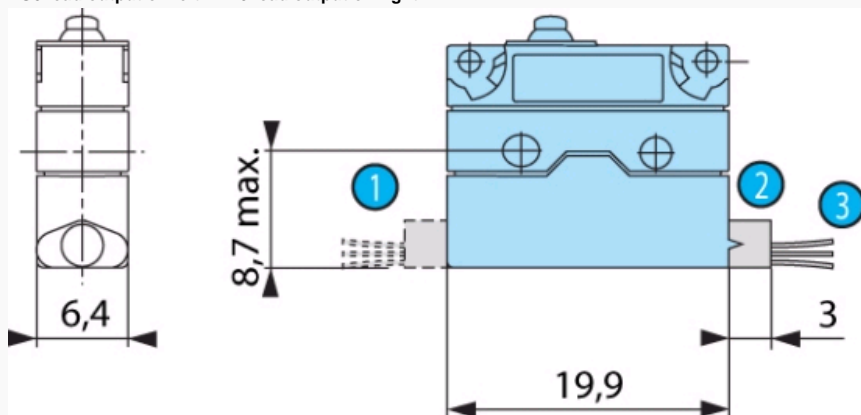
Fixed by 2 M2 screws Torque with screw only : 0.2 Nm, with screw + washer : 0.3 Nm

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 mm² 83180 = 0.75 mm²

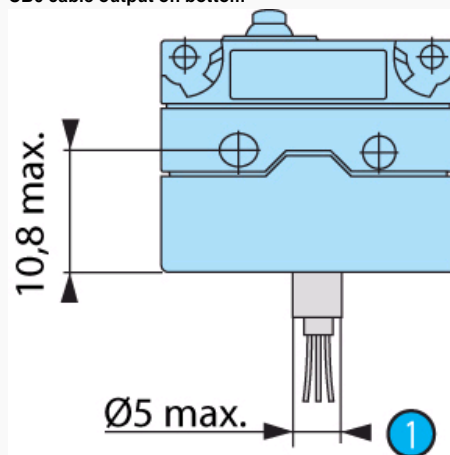
| N° | Legend |
|----|-----------------|
| 1 | FG0 |
| 2 | FD0 |
| 3 | Standard 500 mm |

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 mm² 83180 = 0.75 mm²

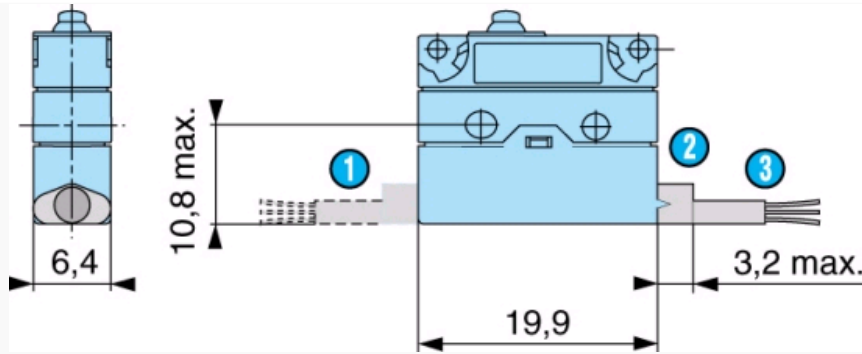
| N° | Legend |
|----|-----------------|
| 1 | Standard 500 mm |

Dimensions (mm)

Connections

Cable outputs

CG0 cable output on left - CD0 cable output on right



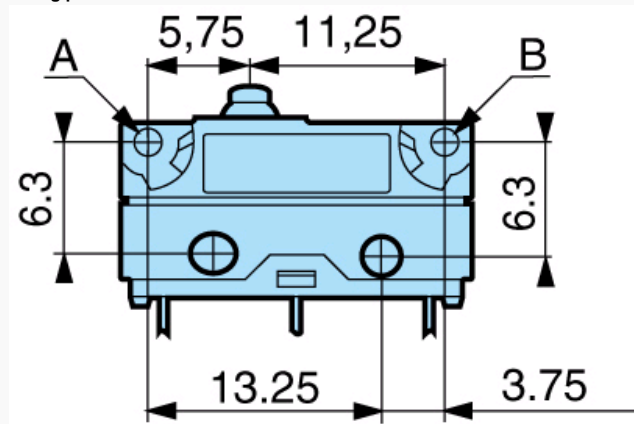
Black = Common Grey = NC Blue = NO Conductor cross-section : 83181 / 83183 / 83186 = 3 x 0,5 mm²

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

Dimensions (mm)

Actuator mounting positions

Fixing position

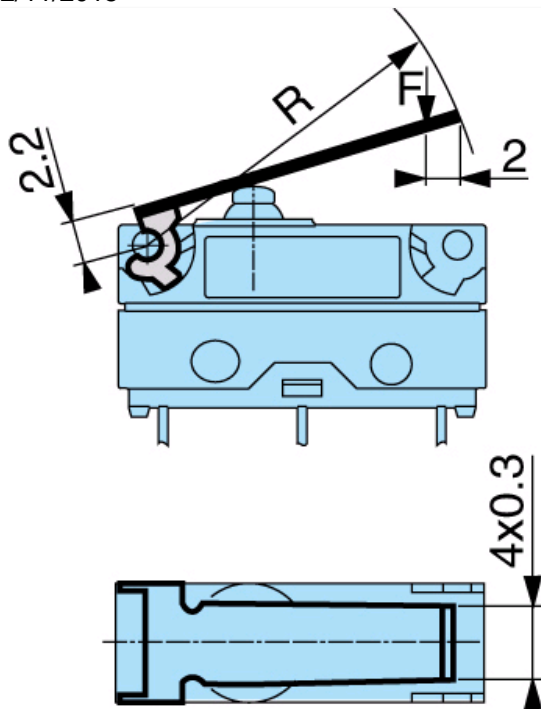


Black = Common Grey = NC Blue = NO Conductor cross-section : 83181 / 83183 / 83186 = 3 x 0,5 mm²

Dimensions (mm)

Actuators

170 A
Flat

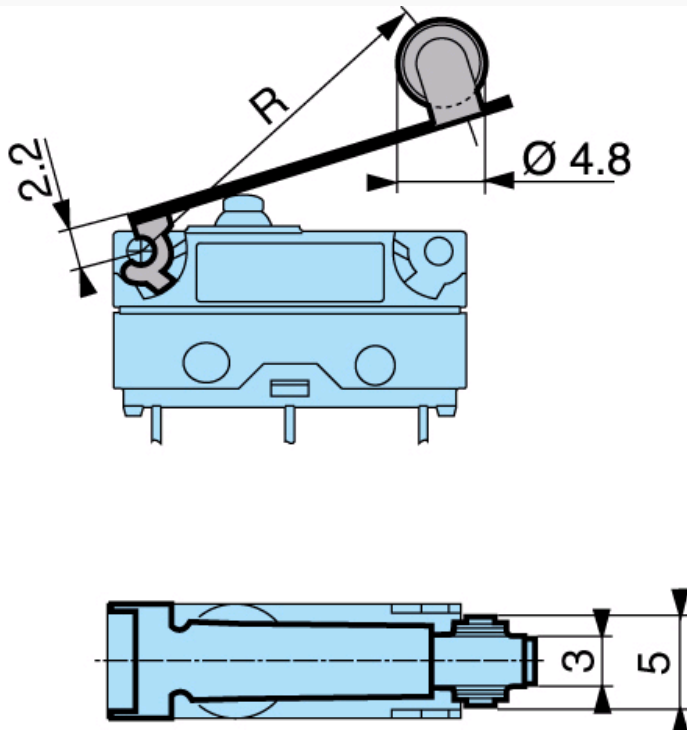


Black = Common Grey = NC Blue = NO Conductor cross-section : 83181 / 83183 / 83186 = 3 x 0.5 mm²

Dimensions (mm)

Actuators

170 E
Roller

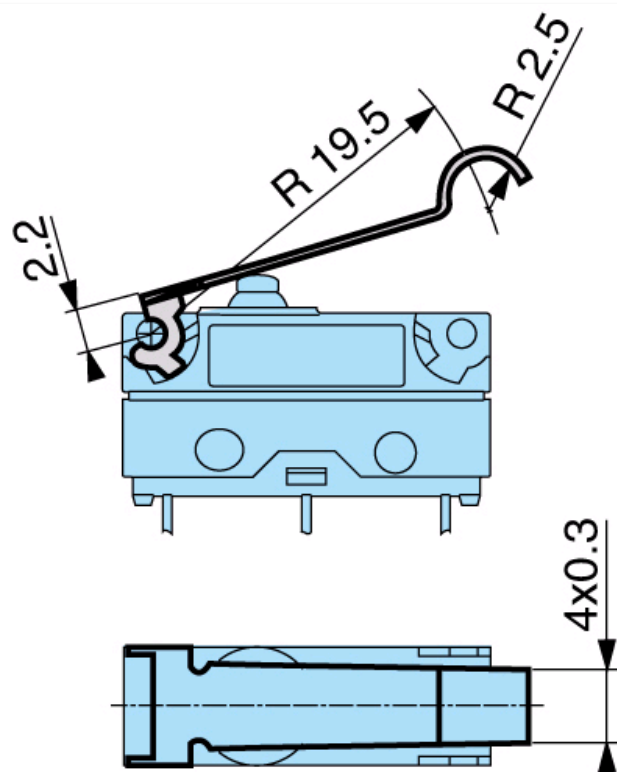


Black = Common Grey = NC Blue = NO Conductor cross-section : 83181 / 83183 / 83186 = 3 x 0.5 mm²

Dimensions (mm)

Actuators

170 F
Dummy roller

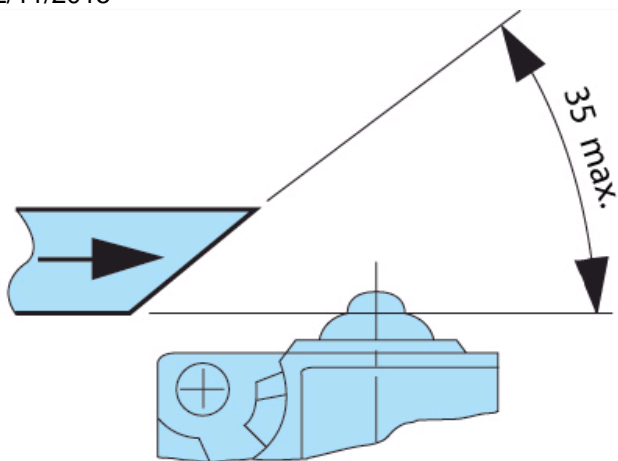


Black = Common Grey = NC Blue = NO Conductor cross-section : 83181 / 83183 / 83186 = 3 x 0.5 mm²

Dimensions (mm)

Actuators

Recommendations for operation from the side

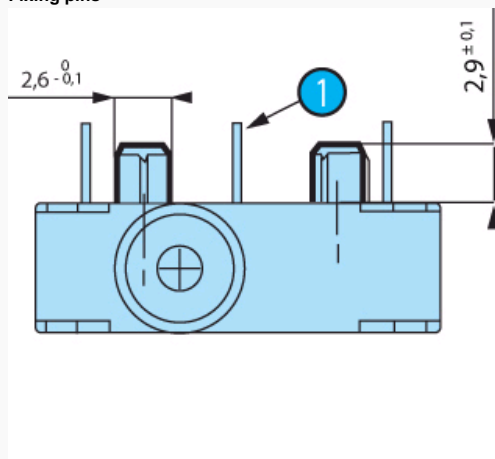


Black = Common Grey = NC Blue = NO Conductor cross-section : 83181 / 83183 / 83186 = 3 x 0.5 mm²

Dimensions (mm)

Mounting accessories

Fixing pins



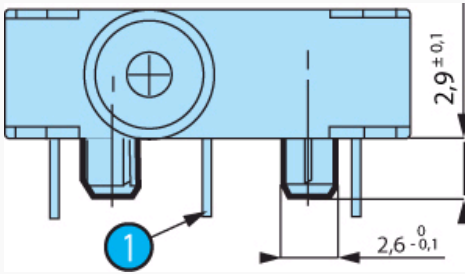
Black = Common Grey = NC Blue = NO Conductor cross-section : 83181 / 83183 / 83186 = 3 x 0.5 mm²

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

Dimensions (mm)

Mounting accessories

Fixing pins

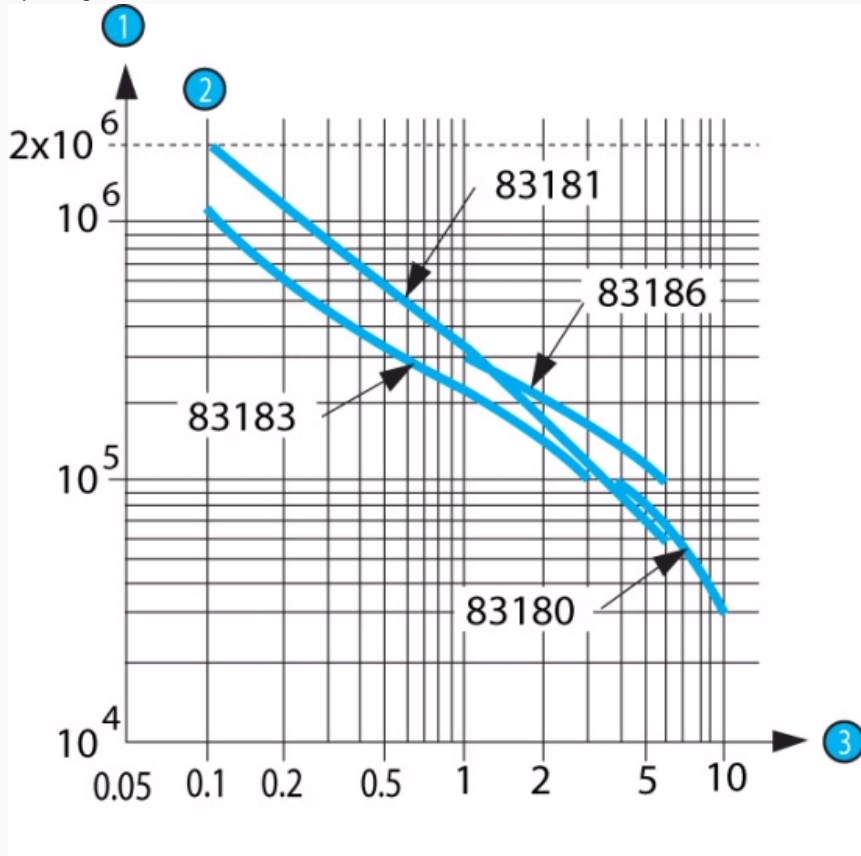


Black = Common Grey = NC Blue = NO Conductor cross-section : 83181 / 83183 / 83186 = 3 x 0.5 mm²

| 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 | |
| |  | |  | |  | |
| Actuators | Roller 170E R20 | |  | | | |
| Mounting position | A | B | A | B | A | B |
| Coefficient | 3 | 1.5 | 4 | 2 | 7 | 3.5 |
| Tripping point | 10 ^{+1.4} | 9.2 ^{+0.9} | 10.7 ^{+1.7} | 9.6 ^{+1.1} | 12.7 ^{+1.3} | 10.6 ^{+1.8} |
| 83180 | | | | | 11 ^{+1.1} | 8.8 ^{+1.8} |
| 83181 / 183 / 186 | | | | | 11.4 ^{+1.1} | 9.3 ^{+1.8} |
| 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 ^{+1.3} | 11.9 ^{+1.7} | | | | |

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