

Protected

→ 83 106

- Double break switching
- Options for operation in stable positions
- Choice of actuators and mounting accessories



Main specifications

| | Standard 83 106 0 | 2 stable lever positions 83 106 4 | 2 stable plunger positions 83 106 7 |
|-------------------------------------|-----------------------------|--------------------------------------|---|
| Function | | | |
| I (changeover) | W3 | | |
| I (changeover) | W1 - W2 | | |
| R (normally closed) | W1 - W2 - W3 | | |
| C (normally open) | W1 - W2 - W3 | | |
| Electrical characteristics | | | |
| Rating nominal / 250 V AC (A) | 5 | 5 | 5 |
| Rating thermal / 250 V AC (A) | 17.5 | 17.5 | 17.5 |
| Mechanical characteristics | | | |
| Maximum operating force (N) | 4 | 0.45 | 2 |
| Min. Release force (N) | 1 | - | - |
| Tripping point (mm) | 11.45 ^{+0.2 -0.25} | - | - |
| Min. overtravel (mm) | 0.7 | - | - |
| Mechanical life (operations) | 10 ⁷ | 10 ⁶ | 10 ⁶ |
| Max. permitted overtravel force (N) | 20 | - | - |
| Rest position max. (mm) | 12.75 | - | - |
| Differential travel (mm) | 0.5 ^{+0.2} | - | - |
| Ambient operating temperature (°C) | -40 → +85 | -40 → +85 | -40 → +85 |
| Contact gap (mm) | 0.4 x 2 | 0.4 x 2 | 0.4 x 2 |
| Weight (g) | 8 | 9 | 8 |

Additional specifications

Components

Material

- Case : polyamide UL94V2 (83 106)
- Contacts : nickel silver

Levers

- Mild steel (zinc)
- Roller : polyamide
- Adjusting screws : self-retaining
- Plates : iridescent passivated mild steel (zinc)

NB : Fixing holes for these microswitches have metal ferrules.

Product adaptations



- Special levers
- Reinforced spring
- Special contacts
- High operating temperature: 125 °C
- Approvals : UL - cUL

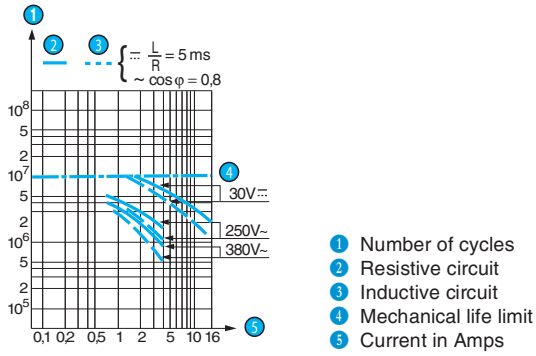
Principles

Double break changeover snap-action switch



Curves

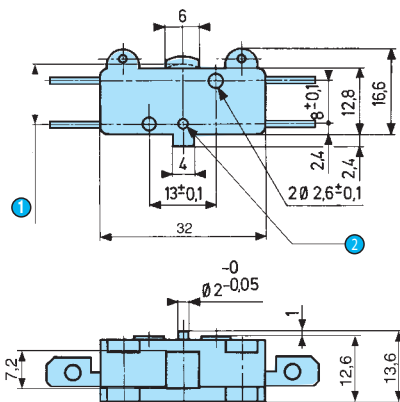
Operating curve for types 83 106 0 / 4 / 7



Dimensions

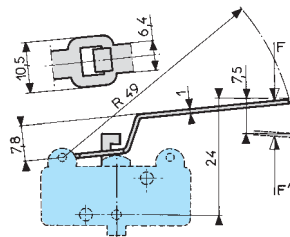
→ Product

83 106

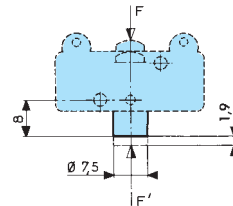


- ① OL = 10.65
- ② Ø 2^{+0.01 +0.65} Depth 1.2

83 106 4

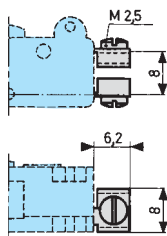


83 106 7

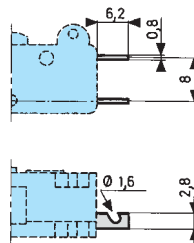


→ Connections

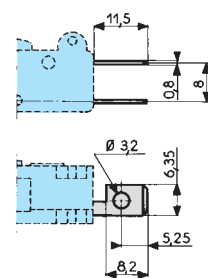
W1 screw



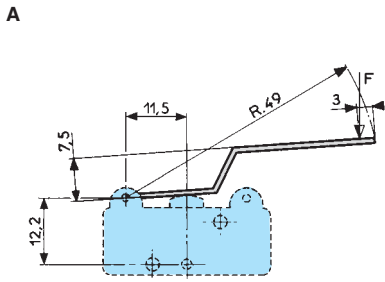
W2 solder



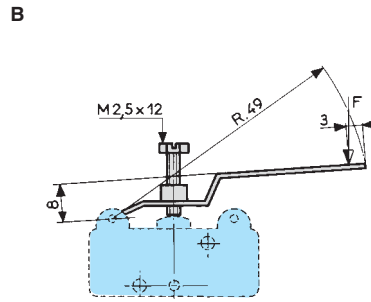
W3 for 6.35 mm clips



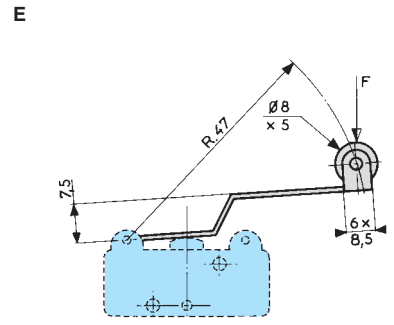
→ Actuators



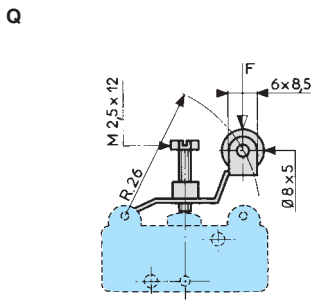
Lever cross-section 1 x 6.4 mm



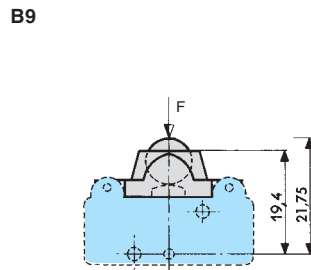
Lever cross-section 1 x 6.4 mm



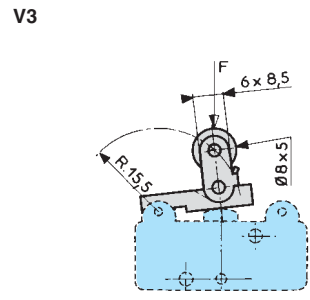
Lever cross-section 1 x 6.4 mm



Lever cross-section 1 x 6.4 mm



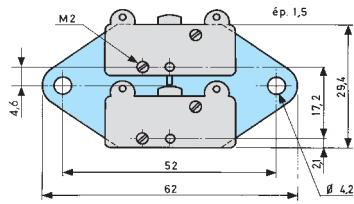
B9



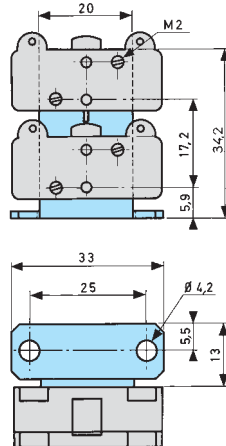
Lever cross-section 1 x 6.4 mm

→ Mounting accessories

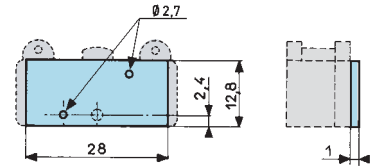
O2 2-pole side mounting plate



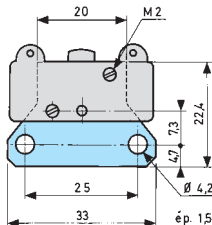
K2 2-pole vertical mounting plate



Y Side plate









H Horizontal single-pole mounting plate




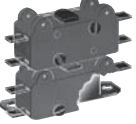


Unless indicated, the thickness of plates is 1.5 mm

Actuators and mounting accessories

| Actuators | | 70500888 | 70500828 | 70500813 | 70500840 | 70500870 | 70500170 |
|------------------------|----|---|---|---|---|---|---|
| | | AR49 | BR49 | ER47 | Q | V3 R15.5 | E9 |
| | |  |  |  |  |  |  |
| Operating force - max. | N | 1.2 | 1.2 | 1.2 | 2.8 | 4 | 4 |
| Release force - min. | N | 0.25 | 0.25 | 0.2 | 0.45 | 0.8 | 1 |
| Pre-travel - max. | mm | 6.2 | 6.2 | 6.2 | 3.2 | 1.45 | 1.5 |
| Differential travel | mm | 2.1 ±0.9 | 2.1 ±0.9 | 2.1 ±0.9 | 1.05 ±0.4 | 0.5 ±0.2 | 0.5 ±0.2 |
| Total travel max. | mm | 7.5 | 8.4 | 7.5 | 4.5 | 1.9 | 1.9 |

Except where otherwise indicated, the flat and roller levers are mounted as shown in the dimensional drawings (mounted on the left).

| Mounting accessories | | 70500206 | 70500208 | 70500218 | 70500216 |
|----------------------|--|---|---|--|---|
| | | Y Side plate | H Horizontal single-pole mounting plate | O2 2-pole side mounting plate | K2 2-pole vertical mounting plate |
| | |  |  |  |  |

| | | |
|----------------|------|----------|
| Screws: Length | 14.5 | 70599106 |
| | 16 | 70599102 |
| | 27.5 | 70599110 |

Other information

Mounting - Operation

See basic technical concepts

To ensure protection against electric shock after installation in the application, please consult us when conductive parts are located less than 3mm from case/cover rear mating surfaces, opposite to button side.

Protected

→ 83 109

- Double break switching
- Front connections
- Options for operation in stable positions
- Choice of actuators and mounting accessories



Main specifications

| | | Outputs on front face 83 109 0 |
|-------------------------------------|--------------------|-----------------------------------|
| Function | Connections | |
| I (changeover) | W2 | |
| R (normally closed) | W2 | |
| C (normally open) | W2 | |
| Electrical characteristics | | |
| Rating nominal / 250 V AC (A) | | 5 |
| Rating thermal / 250 V AC (A) | | 17.5 |
| Mechanical characteristics | | |
| Maximum operating force (N) | | 4 |
| Min. Release force (N) | | 1 |
| Tripping point (mm) | | 11.45 ^{+0.2 - 0.25} |
| Min. overtravel (mm) | | 0.7 |
| Mechanical life (operations) | | 10 ⁷ |
| Max. permitted overtravel force (N) | | 20 |
| Rest position max. (mm) | | 12.75 |
| differential travel (mm) | | 0.5 ^{-0.2} |
| Ambient operating temperature (°C) | | - 40 → +85 |
| Contact gap (mm) | | 0.4 x 2 |
| Weight (g) | | 8 |

Additional specifications

Components

Material

- Case : polyamide UL94V2
- Contacts : nickel silver

Levers

- Mild steel (zinc)
- Roller : polyamide
- Adjusting screws : self-retaining
- Plates : iridescent passivated mild steel (zinc)

NB : Fixing holes for these microswitches have metal ferrules.

Product adaptations



- Special levers
- Reinforced spring
- Special contacts
- Approvals : UL - cUL

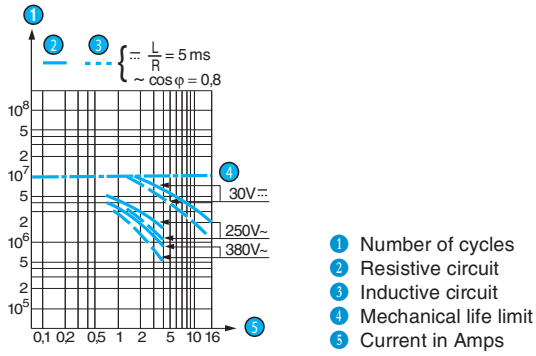
Principles

Double break changeover snap-action switch



Curves

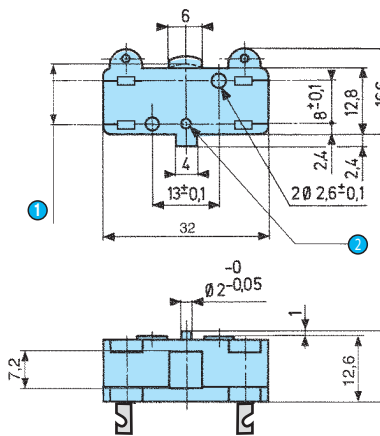
Operating curve for type 83 109 0



Dimensions

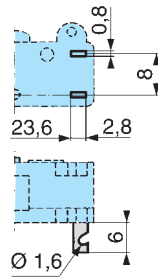
→ Product

83 109 0



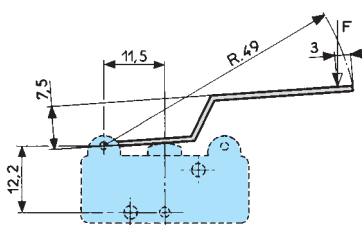
→ Connections

W2 solder



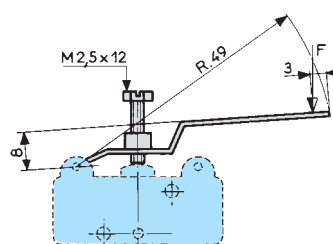
→ Actuators

A



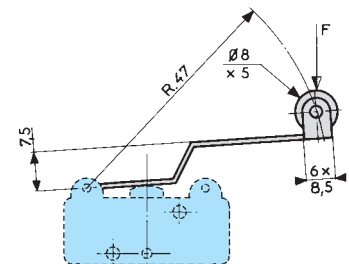
Lever cross-section 1 x 6.4 mm

B

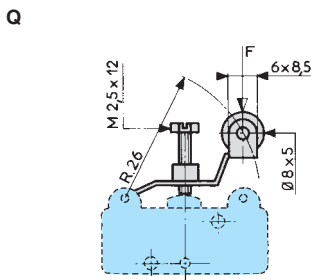


Lever cross-section 1 x 6.4 mm

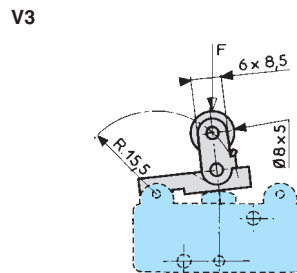
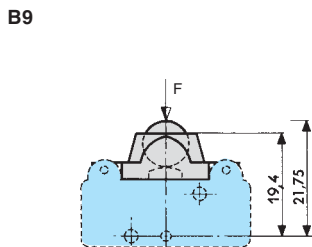
E



Lever cross-section 1 x 6.4 mm



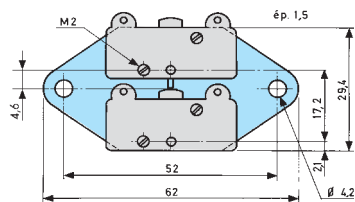
Lever cross-section 1 x 6.4 mm



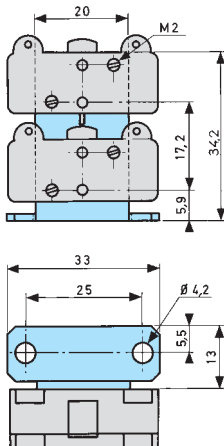
Lever cross-section 1 x 6.4 mm

→ Mounting accessories

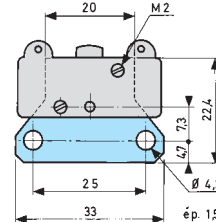
O2 2-pole side mounting plate



K2 2-pole vertical mounting plate









H Horizontal single-pole mounting plate



Unless indicated, the thickness of plates is 1.5 mm

Actuators and mounting accessories

| Actuators | 70500888 | 70500828 | 70500813 | 70500840 | 70500870 | 70500170 |
|------------------------|---|---|---|---|---|---|
| | AR49 | BR49 | ER47 | Q | V3 R15.5 | B9 |
| |  |  |  |  |  |  |
| Operating force - max. | N 1.2 | 1.2 | 1.2 | 2.8 | 4 | 4 |
| Release force - min. | N 0.25 | 0.25 | 0.2 | 0.45 | 0.8 | 1 |
| Pre-travel - max. | mm 6.2 | 6.2 | 6.2 | 3.2 | 1.45 | 1.5 |
| Differential travel | mm 2.1 ±0.9 | 2.1 ±0.9 | 2.1 ±0.9 | 1.05 ±0.4 | 0.5 ±0.2 | 0.5 ±0.2 |
| Total travel max. | mm 7.5 | 8.4 | 7.5 | 4.5 | 1.9 | 1.9 |

Except where otherwise indicated, the flat and roller levers are mounted as shown in the dimensional drawings (mounted on the left)..

| Mounting accessories | 70500208 | 70500218 | 70500216 |
|----------------------|---|--|---|
| | H Horizontal single-pole mounting plate | O2 2-pole side mounting plate | K2 2-pole vertical mounting plate |
| |  |  |  |
| Screws: Length | 14.5 | 70599106 | |

Other information

Mounting - Operation

See basic technical concepts

To ensure protection against electric shock after installation in the application, please consult us when conductive parts are located less than 3mm from case/cover rear mating surfaces, opposite to button side.

Protected

→ 83 111

- Double break switching
- Rear-fixing via nuts or clips
- Choice of actuators



Main specifications

| Function | Connections | Rear-fixing by nuts 83 111 0 | Rear-fixing by clips 83 111 5 |
|-------------------------------------|--------------|---------------------------------|----------------------------------|
| | | 83 111 001 | 83 111 525 |
| I (changeover) | W3 | ● | ● |
| I (changeover) | W1 - W2 | ● | ● |
| R (normally closed) | W1 - W2 - W3 | ● | ● |
| C (normally open) | W1 - W2 - W3 | ● | ● |
| Electrical characteristics | | | |
| Rating nominal / 250 V AC (A) | | 5 | 5 |
| Rating thermal / 250 V AC (A) | | 17.5 | 17.5 |
| Mechanical characteristics | | | |
| Maximum operating force (N) | | 4 | 4 |
| Min. Release force (N) | | 1 | 1 |
| Tripping point (mm) | | 11.45 ^{+0.2 - 0.25} | 11.45 + 0.2 - 0.25 |
| Min. overtravel (mm) | | 0.7 | 0.7 |
| Mechanical life (operations) | | 10 ⁷ | 10 ⁷ |
| Max. permitted overtravel force (N) | | 20 | 20 |
| Rest position max. (mm) | | - | - |
| Maximum differential travel (mm) | | 0.5 ^{+0.2} | 0.5 ^{+0.2} |
| Ambient operating temperature (°C) | | - 40 → +85 | - 40 → +85 |
| Contact gap (mm) | | 0.4 x 2 | 0.4 x 2 |
| Weight (g) | | 8 | 8 |

Additional specifications

Components

Material

- Case : polyamide UL94V2
- Contacts : nickel silver

Levers

- Mild steel (zinc)
- Roller : polyamide
- Adjusting screws : self-retaining
- Plates : iridescent passivated mild steel (zinc)

NB : Fixing holes for these microswitches have metal ferrules.

Product adaptations



- Special levers
- Reinforced spring
- Special contacts
- Approvals : UL - cUL

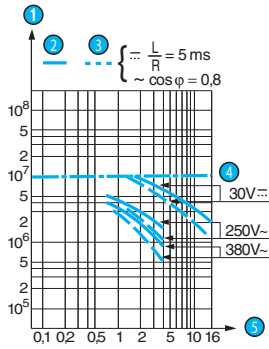
Principles

Double break changeover snap-action switch



Curves

Operating curve for types 83 111 0 - 83 111 5

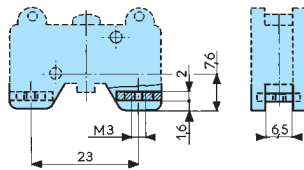


- 1 Number of cycles
- 2 Resistive circuit
- 3 Inductive circuit
- 4 Mechanical life limit
- 5 Current in Amps

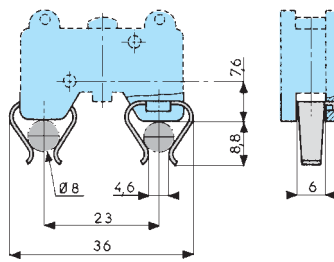
Dimensions

→ Product

83 111 0

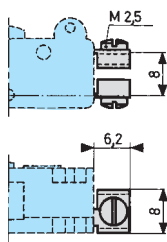


83 111 5

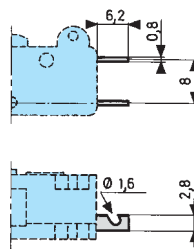


→ Connections

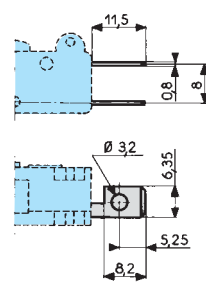
W1 screw



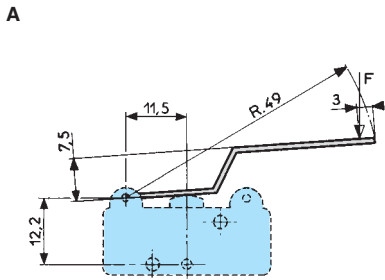
W2 solder



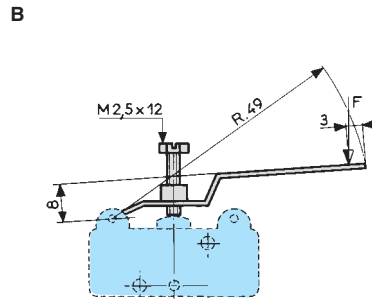
W3 for 6.35 mm clips



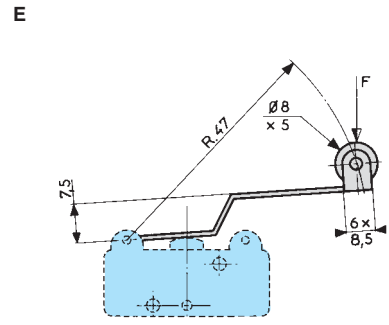
→ Actuators



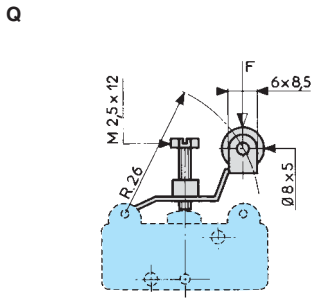
Lever cross-section 1 x 6.4 mm



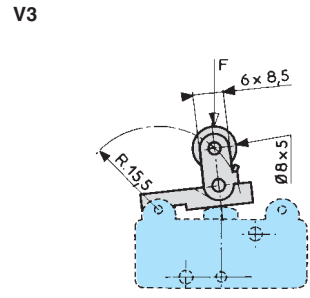
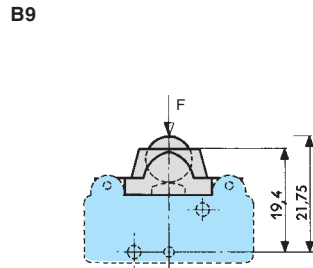
Lever cross-section 1 x 6.4 mm



Lever cross-section 1 x 6.4 mm









Lever cross-section 1 x 6.4 mm



Lever cross-section 1 x 6.4 mm

Actuators and mounting accessories

| Actuators | 70500888 | 70500828 | 70500813 | 70500840 | 70500870 | 70500170 |
|------------------------|---|---|---|---|---|---|
| | AR49 | BR49 | ER47 | Q | V3 R15.5 | B9 |
| |  |  |  |  |  |  |
| Operating force - max. | N | 1.2 | 1.2 | 2.8 | 4 | 4 |
| Release force - min. | N | 0.25 | 0.25 | 0.45 | 0.8 | 1 |
| Pre-travel - max | mm | 6.2 | 6.2 | 3.2 | 1.45 | 1.5 |
| Differential travel | mm | 2.1 ±0.9 | 2.1 ±0.9 | 2.1 ±0.9 | 1.05 ±0.4 | 0.5 ±0.2 |
| Total travel max. | mm | 7.5 | 8.4 | 7.5 | 4.5 | 1.9 |

Except where otherwise indicated, the flat and roller levers are mounted as shown in the dimensional drawings (mounted on the left)..

Other information

Mounting - Operation

See basic technical concepts

Protected

→ 83 112

- Double break switching
- Built-in screw connections
- Options for operation in stable positions
- Choice of actuators and mounting accessories



Main specifications

| | | Built-in screw connections 83 112 0 |
|-------------------------------------|--------------------|--|
| Function | Connections | |
| I (changeover) | W1 | |
| | | 83 112 001 |
| Electrical characteristics | | |
| Rating nominal / 250 V AC (A) | | 5 |
| Rating thermal / 250 V AC (A) | | 17.5 |
| Mechanical characteristics | | |
| Maximum operating force (N) | | 4 |
| Min. Release force (N) | | 1 |
| Tripping point (mm) | | 11.45 ^{+0.2 -0.25} |
| Min. overtravel (mm) | | 0.7 |
| Mechanical life (operations) | | 10 ⁷ |
| Max. permitted overtravel force (N) | | 20 |
| Rest position max. (mm) | | 12.75 |
| differential travel (mm) | | 0.5 ^{+0.2} |
| Ambient operating temperature (°C) | | -40 → +85 |
| Contact gap (mm) | | 0.4 x 2 |
| Weight (g) | | 14.5 |

Additional specifications

Components

Material

- Case : polyamide UL94V2
- Contacts : nickel silver

Levers

- Mild steel (zinc)
- Roller : polyamide
- Adjusting screws : self-retaining
- Plates : iridescent passivated mild steel (zinc)

NB : Fixing holes for these microswitches have metal ferrules.

Product adaptations



- Special levers
- Reinforced spring
- Special contacts
- Approvals : UL - cUL

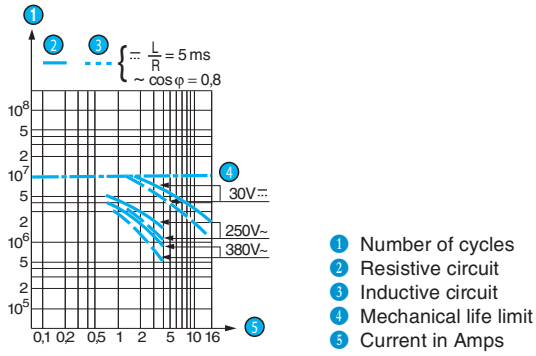
Principles

Double break changeover snap-action switch



Curves

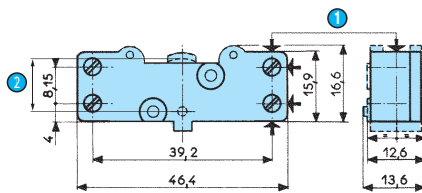
Operating curve for type 83 112 0



Dimensions

→ Product

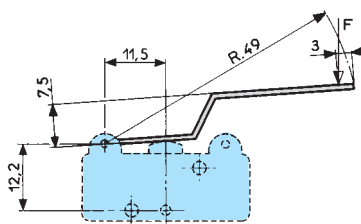
83 112 0



- 1 Connection
- 2 OL = 10.65

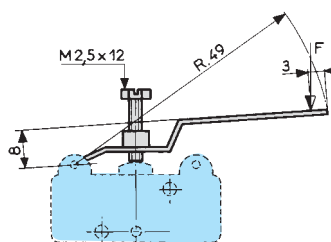
→ Actuators

A



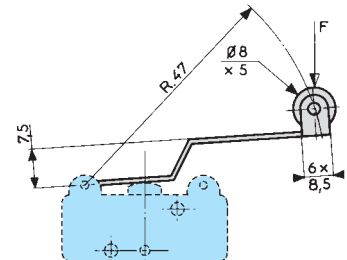
Lever cross-section 1 x 6.4 mm

B



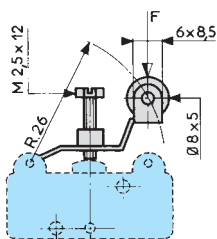
Lever cross-section 1 x 6.4 mm

E



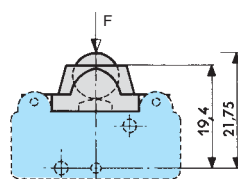
Lever cross-section 1 x 6.4 mm

Q

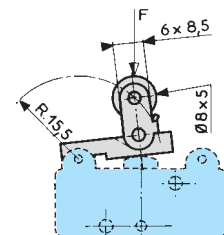


Lever cross-section 1 x 6.4 mm

B9



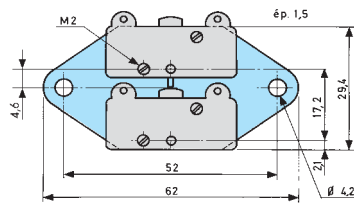
V3



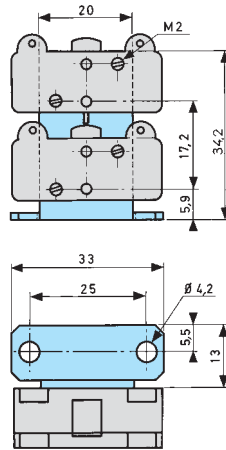
Lever cross-section 1 x 6.4 mm

→ Mounting accessories

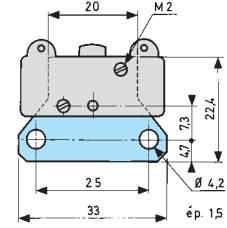
O2
2-pole side mounting plate



K2
2-pole vertical mounting plate









H
Horizontal single-pole mounting plate






Unless indicated, the thickness of plates is 1.5 mm

Actuators and mounting accessories

| Actuators | 70500888 | 70500828 | 70500813 | 70500840 | 70500870 | 70500170 |
|------------------------|---|---|---|---|---|---|
| | AR49 | BR47 | ER47 | Q | V3 R15,5 | E9 |
| |  |  |  |  |  |  |
| Operating force - max. | N | 1.2 | 1.2 | 1.2 | 2.8 | 4 |
| Release force - min. | N | 0.25 | 0.25 | 0.2 | 0.45 | 0.8 |
| Pre-travel - max. | mm | 6.2 | 6.2 | 6.2 | 3.2 | 1.45 |
| Differential travel | mm | 2.1 ±0.09 | 2.1 ±0.09 | 2.1 ±0.09 | 1.05 ±0.4 | 0.5 ±0.2 |
| Total travel max. | mm | 7.5 | 8.4 | 7.5 | 4.5 | 1.9 |

Except where otherwise indicated, the flat and roller levers are mounted as shown in the dimensional drawings (mounted on the left)..

| Mounting accessories | 70500208 | 70500218 | 70500216 |
|----------------------|---|--|---|
| | H Horizontal single-pole mounting plate | O2 2-pole side mounting plate | K2 2-pole vertical mounting plate |
| |  |  |  |
| Screws: Length | 14.5 | 70599106 | |

Other information

Mounting - Operation

See basic technical concepts

To ensure protection against electric shock after installation in the application, please consult us when conductive parts are located less than 3mm from case/cover rear mating surfaces, opposite to button side.

Warning:

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