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 | Connections | | | |
| I (changeover) | W3 | 83 106 022 | 83 106 411 | 83 106 701 |
| l (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.



- 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



W2 solder









→ Connections

W1 screw







W3 for 6.35 mm clips



→ Actuators



Lever cross-section 1 x 6.4 mm

Q



Lever cross-section 1 x 6.4 mm

→ Mounting accessories

O2 2-pole side mounting plate





Lever cross-section 1 x 6.4 mm

B9





Lever cross-section 1 x 6.4 mm

V3



Lever cross-section 1 x 6.4 mm



K2 2-pole vertical mounting plate



H Horizontal single-pole mounting plate



Unless indicated, the thickness of plates is 1.5 mm

| Actuators | | 70500888 | 70500828 | 70500813 | 70500840 | 70500870 | 70500170 |
|------------------------|----|--------------|--------------|----------|-----------|-----------------|----------|
| | | A P49 | B R49 | ER47 | Q | V3 R15.5 | B9 |
| | | | \sim | | | A A | |
| Operating force - max. | N | 1.2 | 1.2 | 1.2 | 2.8 | 4 | 4 |
| Release force - min. | Ν | 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 Sde plate | H Horizontal single-pole mounting plate | O2 2-pole side mounting plate | K2 2-pole vertical mounting plate |
| | | 0 | | | |
| Screws: Length | 14.5 70599100 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



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



Main specifications

| | | Outputs on front face |
|---------------------------------|-------------|-----------------------|
| | | 03 109 0 |
| Function | Connections | |
| l (changeover) | W2 | 83 109 004 |
| 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) | | 107 |
| 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.



- 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



83 109 0

→ Connections W2 solder

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2,8

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→ 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

В9

K2



Lever cross-section 1 x 6.4 mm

→ Mounting accessories

02

Q

2-pole side mounting plate





2-pole vertical mounting plate

20

άé

3:

25

Ø 4,2



Lever cross-section 1 x 6.4 mm





Unless indicated, the thickness of plates is 1.5 mm

Actuators and mounting accessories

| Actuators | | 70500888 | 70500828 | 70500813 | 70500840 | 70500870 | 70500170 |
|------------------------|----|--------------|--------------|--------------|-----------|-----------------|--------------------|
| | | A P49 | B R49 | E R47 | Q | V3 R15,5 | B9 |
| | | | å∕∽ | | -B | A CONTRACTOR | |
| Operating force - max. | N | 1.2 | 1.2 | 1.2 | 2.8 | 4 | 4 |
| Release force - min. | Ν | 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 ^{±02} |
| 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 | 6-0-0 | | |

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

| | | Rear-fixing by nuts 83 111 0 | Rear-fixing by clips 83 111 5 |
|---------------------------------|--------------|---------------------------------|----------------------------------|
| Function | Connections | | |
| l (changeover) | W3 | 83 111 001 | 83 111 525 |
| 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 | 107 |
| Max. permitted overtravel force | (N) | 20 | 20 |
| Rest position max. (mm) | | - | - |
| Maximum differential travel (mm | n) | 0.5 ^{±0.2} | 0.5 ^{±0.2} |
| Ambient operating temperature | (°°) | - 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.



- 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



Dimensions

→ Product

83 111 0







→ Connections

W1 screw



W2 solder









→ Actuators



Lever cross-section 1 x 6.4 mm

Q



Lever cross-section 1 x 6.4 mm

Actuators and mounting accessories



Lever cross-section 1 x 6.4 mm







Lever cross-section 1 x 6.4 mm

V3



Lever cross-section 1 x 6.4 mm

| Actuators | | 70500888 | 70500828 | 70500813 | 70500840 | 70500870 | 70500170 |
|------------------------|----|--------------|--------------|--------------|-----------|-----------------|------------|
| | | A R49 | B P49 | E R47 | Q | V3 R15.5 | B 9 |
| | | | | | - B | L. | |
| Operating force - max. | N | 1.2 | 1.2 | 1.2 | 2.8 | 4 | 4 |
| Release force - min. | Ν | 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).

Other information

Mounting - Operation See basic technical concepts

Protected



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



Main specifications

| FunctionConnectionsI (changeover)W183 112 001Electrical characteristics5Rating nominal / 250 V AC (A)5Rating thermal / 250 V AC (A)17.5Mechanical characteristics4Maximum operating force (N)4Min. Release force (N)1Tripping point (mm)0.7Mechanical life (operations)0.7Max. permitted overtravel force (N)107Max. permitted overtravel force (N)20Rest position max. (mm)12.75differential travel (mm)0.5 ^{±0.2} Ambient operating temperature (°C)-40 \rightarrow +85Contact gap (mm)0.4 x 2Weight (g)14.5 | | | Built-in screw connections 83 112 0 |
|---|---------------------------------|-------------|---|
| I (changeover)W183 112 001Electrical characteristics5Rating nominal / 250 V AC (A)5Rating thermal / 250 V AC (A)17.5Mechanical characteristics4Min. Release force (N)1Tripping point (mm)11.45 + $^{02 \cdot 0.25}$ Min. overtravel (mm)0.7Mechanical life (operations)10 ⁷ Max. permitted overtravel force (N)20Rest position max. (mm)12.75differential travel (mm)0.5 ^{±02} Ambient operating temperature (°C)-40 → +85Contact gap (mm)0.4 x 2Weight (g)14.5 | Function | Connections | |
| Electrical characteristicsRating nominal / 250 V AC (A)5Rating thermal / 250 V AC (A)17.5Mechanical characteristics4Maximum operating force (N)4Min. Release force (N)11.45 $+^{02-025}$ Min. overtravel (mm)0.7Mechanical life (operations)107Max. permitted overtravel force (N)20Rest position max. (mm)12.75differential travel (mm)0.5 $^{+02}$ Ambient operating temperature (°C) $-40 \rightarrow +855$ Contact gap (mm)0.4 x 2Weight (g)14.5 | I (changeover) | W1 | 83 112 001 |
| Rating nominal / 250 V AC (A)5Rating thermal / 250 V AC (A)17.5Mechanical characteristics4Maximum operating force (N)4Min. Release force (N)1Tripping point (mm)11.45 $^{+02-0.25}$ Min. overtravel (mm)0.7Mechanical life (operations)107Max. permitted overtravel force (N)20Rest position max. (mm)12.75differential travel (mm)0.5 $^{*0.2}$ Ambient operating temperature (°C)-40 \rightarrow +85Contact gap (mm)0.4 \times 2Weight (g)14.5 | Electrical characteristics | | |
| Rating thermal / 250 V AC (A)17.5Mechanical characteristics4Maximum operating force (N)4Min. Release force (N)1Tripping point (mm)11.45 $^{+02-0.26}$ Min. overtravel (mm)0.7Mechanical life (operations)107Max. permitted overtravel force (N)20Rest position max. (mm)12.75differential travel (mm)0.5 $^{+02}$ Ambient operating temperature (°C) $-40 \rightarrow +85$ Contact gap (mm)0.4 x 2Weight (g)14.5 | Rating nominal / 250 V AC (A) | | 5 |
| Mechanical characteristics4Maximum operating force (N)4Min. Release force (N)1Tripping point (mm)11.45 $^{+02 \cdot 0.25}$ Min. overtravel (mm)0.7Mechanical life (operations)107Max. permitted overtravel force (N)20Rest position max. (mm)12.75differential travel (mm)0.5 $^{+02}$ Ambient operating temperature (°C) $-40 \rightarrow +85$ Contact gap (mm)0.4 x 2Weight (g)14.5 | Rating thermal / 250 V AC (A) | | 17.5 |
| Maximum operating force (N)4Min. Release force (N)1Tripping point (mm)11.45 $^{+02-0.25}$ Min. overtravel (mm)0.7Mechanical life (operations)107Max. permitted overtravel force (N)20Rest position max. (mm)12.75differential travel (mm)0.5^{+02-0.25}Ambient operating temperature (°C) $-40 \rightarrow +85$ Contact gap (mm)0.4 x 2Weight (g)14.5 | Mechanical characteristics | | |
| Min. Release force (N)1Tripping point (mm) $11.45^{+02-0.25}$ 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) $0.5^{s0.2}$ Ambient operating temperature (°C) $-40 \rightarrow +85$ Contact gap (mm) 0.4×2 Weight (g) 14.5 | Maximum operating force (N) | | 4 |
| Tripping point (mm) $11.45^{+02-0.25}$ 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) $-40 \rightarrow +85$ Contact gap (mm) 0.4×2 Weight (g) 14.5 | Min. Release force (N) | | 1 |
| 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) $0.5^{\pm 0.2}$ Ambient operating temperature (°C) $-40 \rightarrow +85$ Contact gap (mm) 0.4×2 Weight (g) 14.5 | Tripping point (mm) | | 11.45 + 0.2 - 0.25 |
| Mechanical life (operations) 10^7 Max. permitted overtravel force (N)20Rest position max. (mm)12.75differential travel (mm) $0.5^{*0.2}$ Ambient operating temperature (°C) $-40 \rightarrow +85$ Contact gap (mm) 0.4×2 Weight (g) 14.5 | Min. overtravel (mm) | | 0.7 |
| Max. permitted overtravel force (N)20Rest position max. (mm)12.75differential travel (mm) $0.5^{\pm 0.2}$ Ambient operating temperature (°C) $-40 \rightarrow +85$ Contact gap (mm) 0.4×2 Weight (g)14.5 | Mechanical life (operations) | | 107 |
| Rest position max. (mm)12.75differential travel (mm) $0.5^{\pm 0.2}$ Ambient operating temperature (°C) $-40 \rightarrow +85$ Contact gap (mm) 0.4×2 Weight (g)14.5 | Max. permitted overtravel force | ∋ (N) | 20 |
| differential travel (mm) $0.5^{\pm0.2}$ Ambient operating temperature (°C) $-40 \rightarrow +85$ Contact gap (mm) 0.4×2 Weight (g) 14.5 | Rest position max. (mm) | | 12.75 |
| Ambient operating temperature (°C) $-40 \rightarrow +85$ Contact gap (mm) 0.4×2 Weight (g) 14.5 | differential travel (mm) | | 0.5 ^{±0.2} |
| Contact gap (mm) 0.4 x 2 Weight (g) 14.5 | Ambient operating temperature | ∋ (°C) | -40 → +85 |
| Weight (g) 14.5 | 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.



- 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



→ Actuators



Lever cross-section 1 x 6.4 mm

Q



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 V3



Lever cross-section 1 x 6.4 mm

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1 1 4.2

17,2

→ Mounting accessories

02



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62

K2 2-pole vertical mounting plate







Unless indicated, the thickness of plates is 1.5 mm

Actuators and mounting accessories

| Actuators | | 70500888 | 70500828 | 70500813 | 70500840 | 70500870 | 70500170 |
|------------------------|----|--------------|--------------|--------------|-----------|---------------------------------------|----------|
| | | A P49 | B R47 | E R47 | Q | V3 R15,5 | B9 |
| | | | | | - | A A A A A A A A A A A A A A A A A A A | |
| Operating force - max. | N | 1.2 | 1.2 | 1.2 | 2.8 | 4 | 4 |
| Release force - min. | Ν | 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 | 0-0-0 | | |

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.

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 1245.0120