

Protected

→ 83 106

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



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
- Approvals : UL - cUL

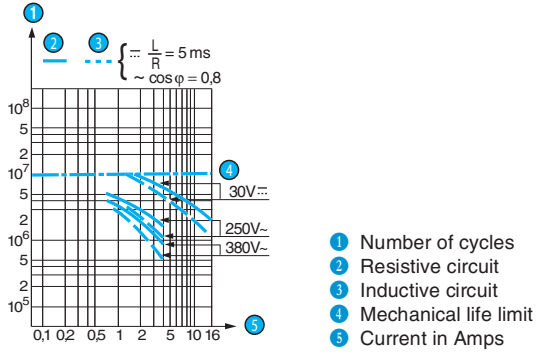
Principles

Double break changeover switch



Curves

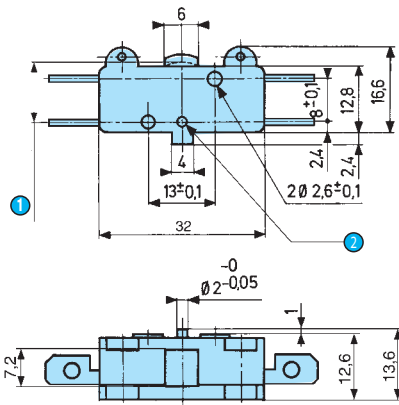
Operating curve for types 83 106 0 / 4 / 7



Dimensions

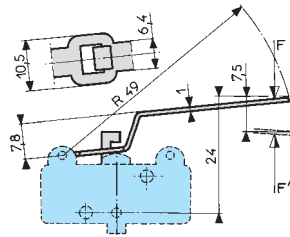
→ Product

83 106

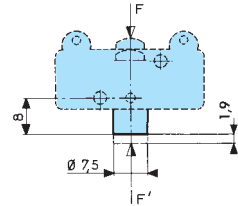


- 1 OL = 10.65
- 2 $\emptyset 2^{+0.01 +0.65}$ Depth 1.2

83 106 4

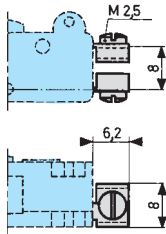


83 106 7

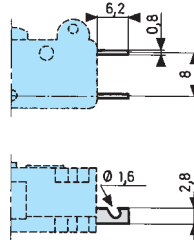


→ Connections

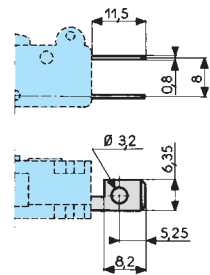
W1 screw



W2 solder

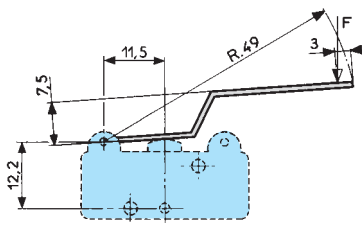


W3 for 6.35 mm clips



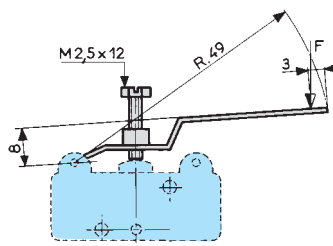
→ Actuators

A



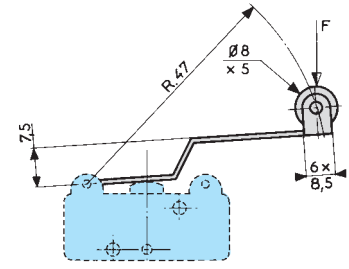
Lever cross-section 1 x 6.4 mm

B



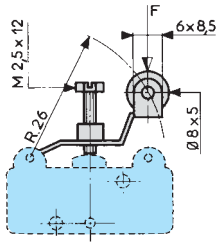
Lever cross-section 1 x 6.4 mm

E



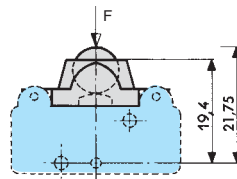
Lever cross-section 1 x 6.4 mm

Q

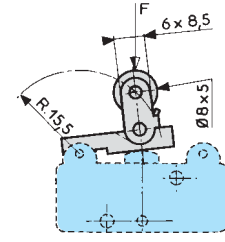


Lever cross-section 1 x 6.4 mm

B9



V3

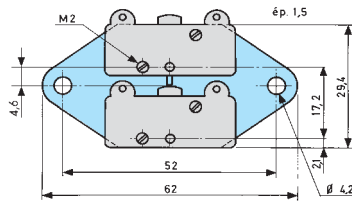


Lever cross-section 1 x 6.4 mm

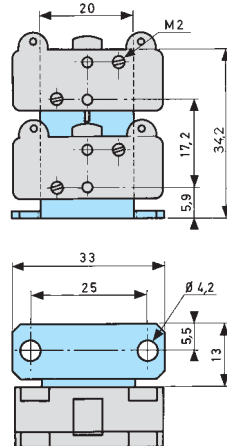
1

→ Mounting accessories

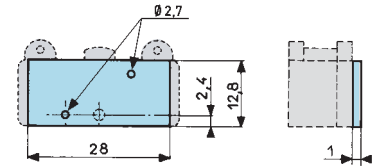
O2
2-pole side mounting plate



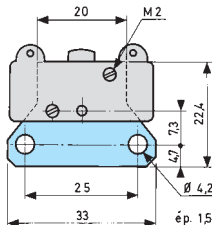
K2
2-pole vertical mounting plate



Y
Side plate









H
Horizontal single-pole mounting plate



Unless indicated, the thickness of plates is 1.5 mm

Actuators and fixing positions

Actuators and fixing positions

Actuators		AR49	BR47	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

Y Side plate



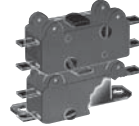
H Horizontal single-pole mounting plate



O2 2-pole side mounting plate



K2 2-pole vertical mounting plate



Other information

Mounting - Operation

See basic technical concepts

Protected

→ 83 109

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



Main specifications

		Outputs on front face 83 109 0
Function	Connections	
I (changeover)	W2	
R (normally closed)	W2	
C (normally open)	W2	
Electrical characteristics		83 109 004
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

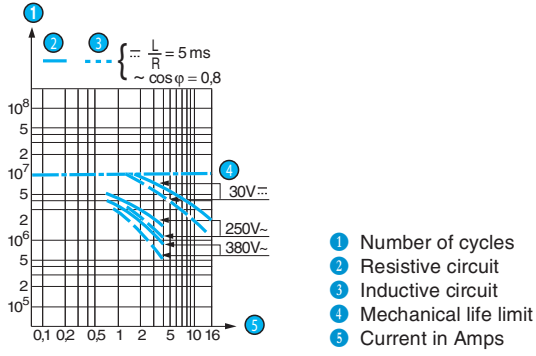
Principles

Double break changeover switch



Curves

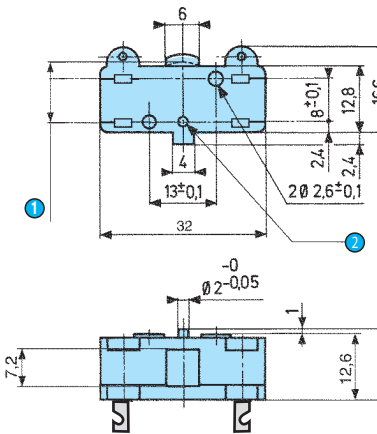
Operating curve for type 83 109 0



Dimensions

→ Product

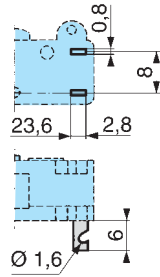
83 109 0



- 1 OL = 10.65
- 2 $\varnothing 2^{+0.01 +0.65}$ Depth 1.2

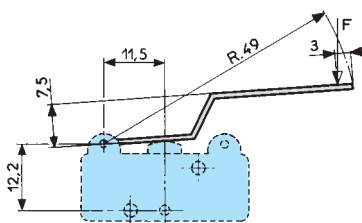
→ Connections

W2 solder



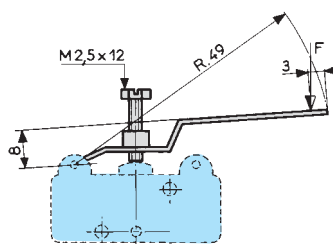
→ Actuators

A



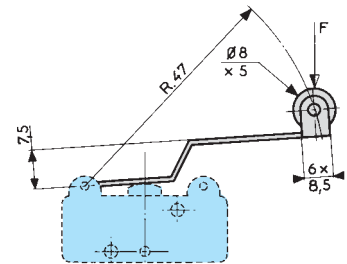
Lever cross-section 1 x 6.4 mm

B



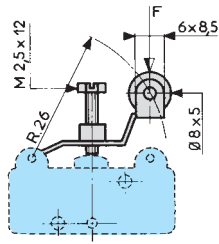
Lever cross-section 1 x 6.4 mm

E



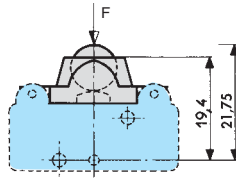
Lever cross-section 1 x 6.4 mm

Q

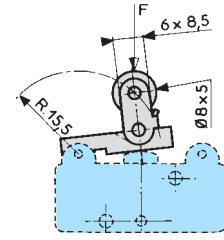


Lever cross-section 1 x 6.4 mm

B9



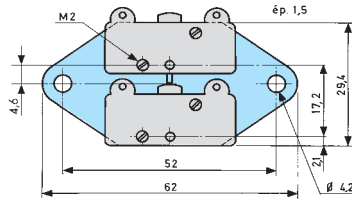
V3



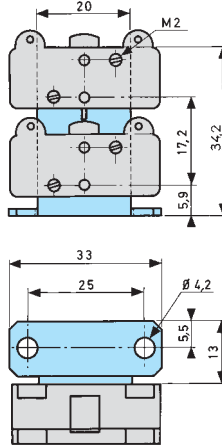
Lever cross-section 1 x 6.4 mm

→ Mounting accessories

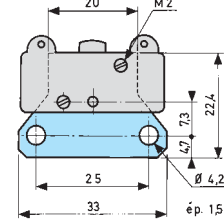
O2 2-pole side mounting plate



K2 2-pole vertical mounting plate



H Horizontal single-pole mounting plate



Unless indicated, the thickness of plates is 1.5 mm

Actuators and fixing positions

Actuators and fixing positions

Actuators	AR49	BR47	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

H Horizontal single-pole mounting plate



O2 2-pole side mounting plate



K2 2-pole vertical mounting plate



Other information

Mounting - Operation
See basic technical concepts

Protected

→ 83 111

- Double break switching
- Rear-fixing via nut or clips
- Options for operation in stable positions
- Choice of actuators and fixing positions



Main specifications

		Rear-fixing with a nut 83 111 0	Rear-fixing with clips 83 111 5
Function	Connections		
I (changeover)	W1 - W2 - W3	●	●
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

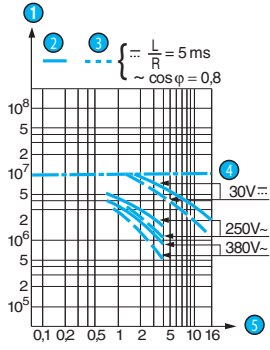
Principles

Double break changeover switch



Curves

Operating curve for types 83 111 0 - 83 111 5

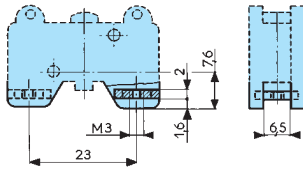


- ① Number of cycles
- ② Resistive circuit
- ③ Inductive circuit
- ④ Mechanical life limit
- ⑤ Current in Amps

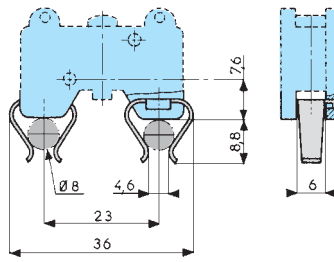
Dimensions

→ Product

83 111 0

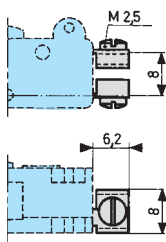


83 111 5

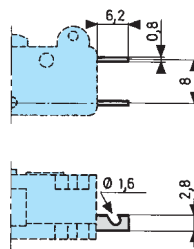


→ Connections

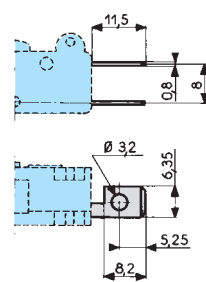
W1 screw



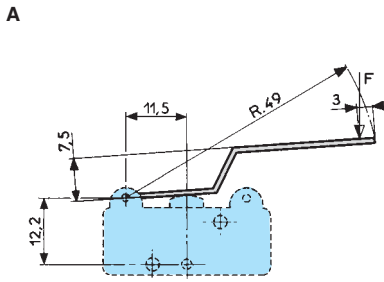
W2 solder



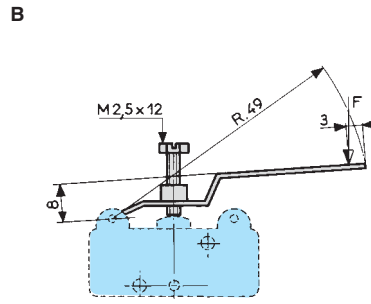
W3 for 6.35 mm clips



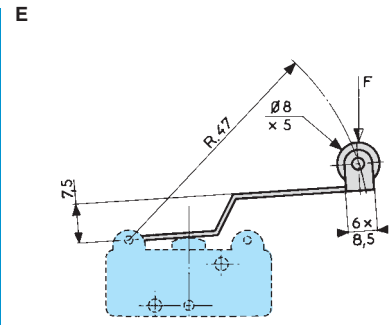
→ Actuators



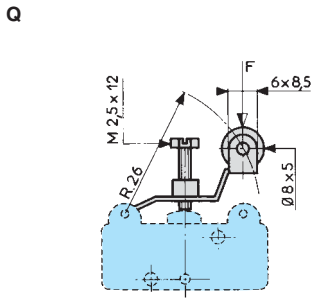
Lever cross-section 1 x 6.4 mm



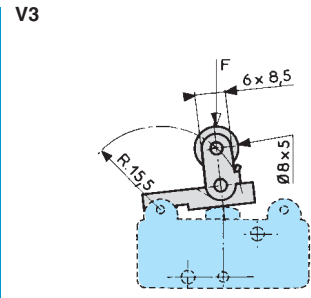
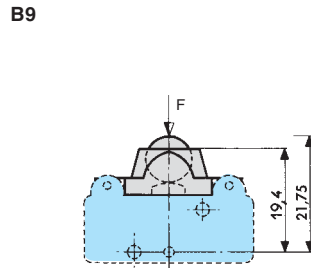
Lever cross-section 1 x 6.4 mm



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 fixing positions

Actuators and fixing positions

Actuators	AR49	BR47	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).

Other information

Mounting - Operation

See basic technical concepts

Protected

→ 83 112

- Double break switching
- Flush-mounted connections
- Options for operation in stable positions
- Choice of actuators and fixing positions



Main specifications

		Flush-mounted connections 83 112 0
Function	Connections	
I (changeover)	W1	
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

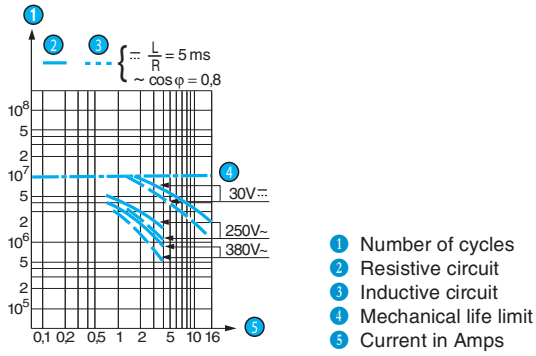
Principles

Double break changeover switch



Curves

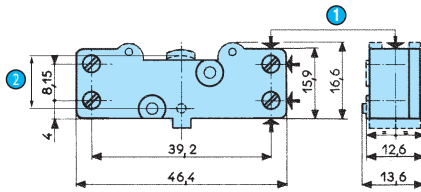
Operating curve for type 83 112 0



Dimensions

→ Product

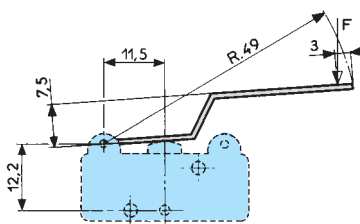
83 112 0



- 1 Connection
- 2 OL = 10.65

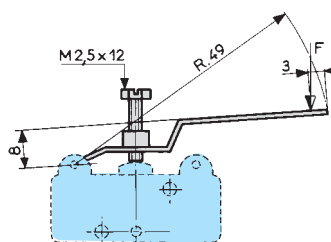
→ Actuators

A



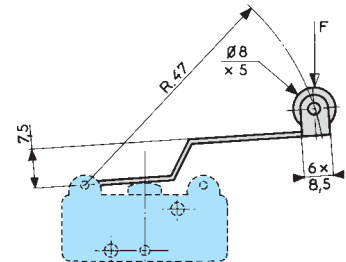
Lever cross-section 1 x 6.4 mm

B



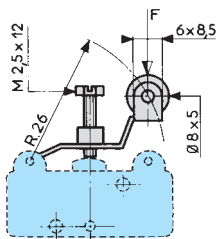
Lever cross-section 1 x 6.4 mm

E



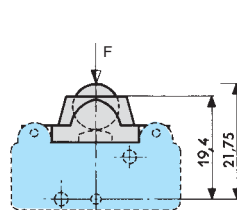
Lever cross-section 1 x 6.4 mm

Q

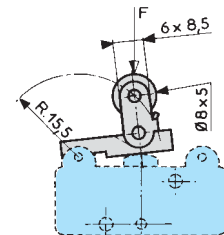


Lever cross-section 1 x 6.4 mm

B9



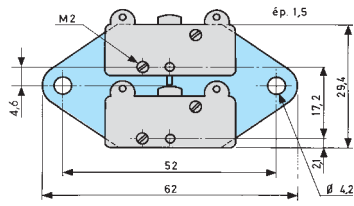
V3



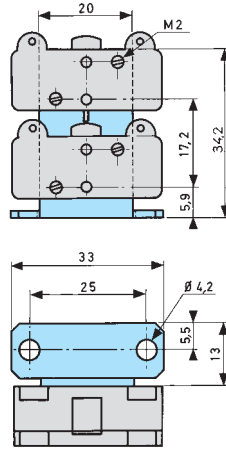
Lever cross-section 1 x 6.4 mm

→ Mounting accessories

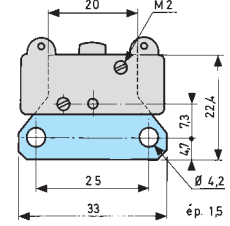
O2
2-pole side mounting plate



K2
2-pole vertical mounting plate









H
Horizontal single-pole mounting plate



Unless indicated, the thickness of plates is 1.5 mm

Actuators and fixing positions

Actuators and fixing positions

Actuators		AR49	BR47	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 ±0.09	2.1 ±0.09	2.1 ±0.09	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

H Horizontal single-pole mounting plate



O2 2-pole side mounting plate



K2 2-pole vertical mounting plate



Other information

Mounting - Operation

See basic technical concepts