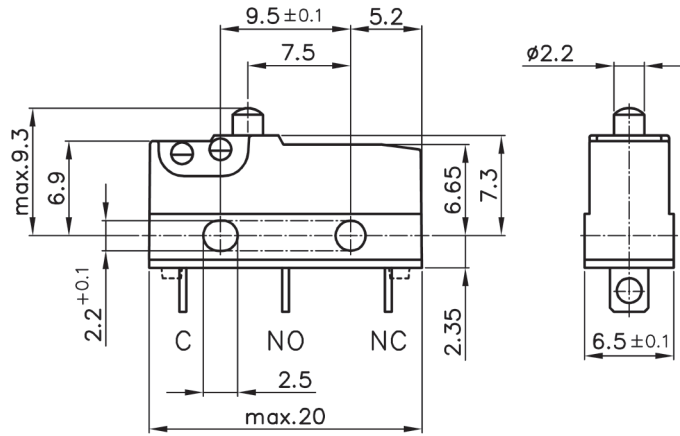


1 MBZ1



Tension spring mechanism

- Micro switches design B acc. to DIN 41635
- functional final inspection and testing
- solid design
- high-quality materials
- very exact switching position
- Version 100 mA 12VDC with Au plated contacts
- Fulfills glow wire testing GWT 750°C acc. DIN EN 60335-1 (household appliance standard)

Micro switches, also known as snap action switches, are primarily used as limit switches, but are also suitable for many other industry applications. The actual switching speed is completely independent from the speed of operation. ISO 9001:2000 approved production together with 100% functional final inspection and testing guarantee reliable operation. These products reflect our long standing experience in design and production of high quality switches.

MECHANICAL DATA

Mech. lifetime	10 000 000 actuations
Electrical lifetime	min. 10 000 actuations
depending on switching capacity	
Movement differential	$\leq 0,13$ mm
Pretravel	≤ 1 mm
Overtravel	0,3 - 0,6mm
Operating position	$8,4 \pm 0,3$ mm
Contact opening	<3mm (μ)

OTHER DATA

Approvals	ENEC-VDE, cULus, cCSAus
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MATERIAL

Base	PBT (UL94-V0)
Cap	PBT (UL94-V0)
Actuator for 85°C ambient temperature	POM (UL94-HB)
Actuator for 130°C ambient temperature	PBT (UL94-V0)
Terminals	CuZn Ag plated
Contacts	AgNi, AgNi Au plated
Contact spring	CuBe

MBZ1 Plunger

2 RATING

10(1,5)A 250VAC										Code: MBZ1 01	3	4	5	6	7	8
6A 250VAC										 Code: MBZ1 02	3	4	5	6	7	8
100mA 12VDC										 Code: MBZ1 06	3	4	5	6	7	8

3 OPERATING FORCE

2,8N																		Code: MBZ1 2 A	4	5	6	7	8	
1,5N										 Code: MBZ1 2 B	4	5	6	7	8									
0,6N										 Code: MBZ1 2 C	4	5	6	7	8									

RECOMMENDED COMBINATIONS

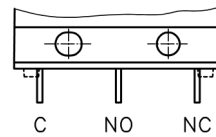
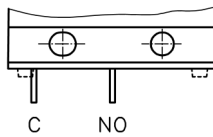
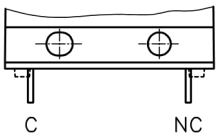
	2,8N	1,5N	0,6N
10(1,5)A 250VAC	■	■	
6A 250VAC	■	■	
100mA 12VDC	■	■	■

4 AMBIENT TEMPERATURE

-40...+85°C																			Code: MBZ1 2 3 01	5	6	7	8
-40...+130°C										 Code: MBZ1 2 3 02	5	6	7	8									

5 CONTACT ARRANGEMENT

Normally closed Code: MBZ1 2 3 4 A 6 7 8	Normally open Code: MBZ1 2 3 4 B 6 7 8	Change-over Code: MBZ1 2 3 4 C 6 7 8
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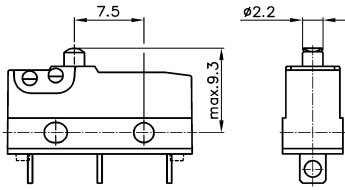


MBZ1

6 ACTUATOR

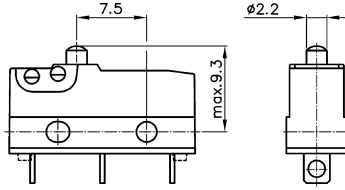
Plunger with radius

Code: MBZ1 2 3 4 5 **01** 7 8



Plunger sperical form

Code: MBZ1 2 3 4 5 **02** 7 8



7 FIXING POSITION

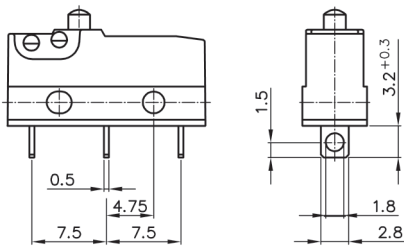
No additional actuator

Code: MBZ1 2 3 4 5 6 **X** 8

8 TERMINALS

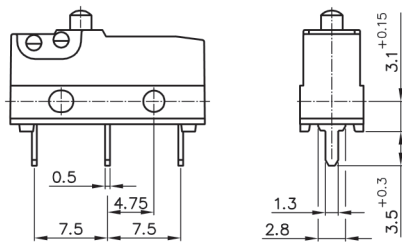
Solder terminal

Code: MBZ1 2 3 4 5 6 7 **01**

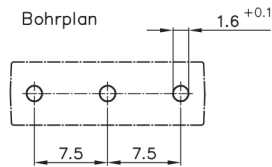


0,5x1,3mm / PCB terminal

Code: MBZ1 2 3 4 5 6 7 **02**

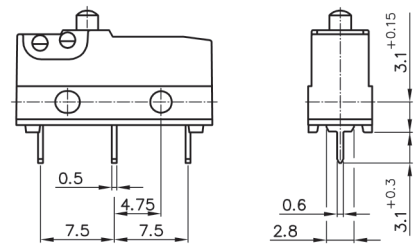


Bohrplan

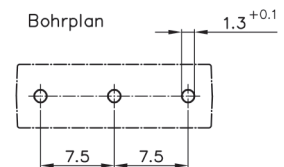


0,5x0,6mm / PCB terminal

Code: MBZ1 2 3 4 5 6 7 **03**



Bohrplan

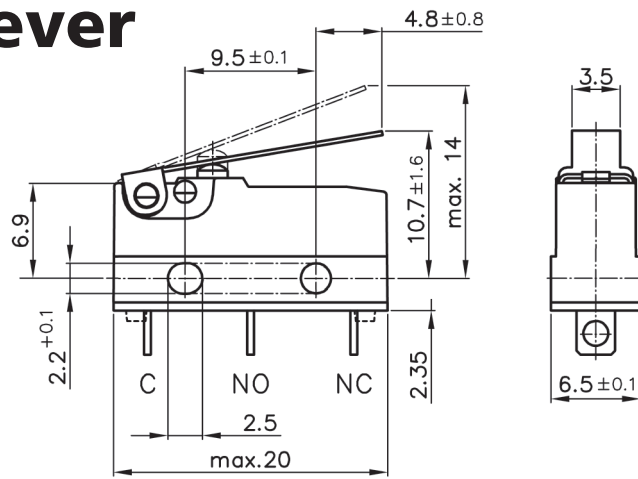


MBZ1 Plunger

OVERVIEW ACTUATORS / TRAVEL / FORCES

	Code	Actuator length		Operating force on plunger		Operating force on lever		Pretravel	Overtravel	Movement differential	Free position	Operating position
		mm	≤ N	Code	≤ N	≤ mm	min. mm					
Plunger with radius	01	-	2,8	A	-	1,2	0,3 - 0,6	0,13	9,3	8,4 ±0,3		
			1,5	B								
			0,6	C								
Plunger sperical form	02	-	2,8	A	-	1,2	0,3 - 0,6	0,13	9,3	8,4 ±0,3		
			1,5	B								
			0,6	C								

1 MBZ1 Hinge lever



Tension spring mechanism

- Micro switches design B acc. to DIN 41635
- functional final inspection and testing
- solid design
- high-quality materials
- very exact switching position
- Version 100mA 12VDC with Au plated contacts
- Fulfills glow wire testing GWT 750°C acc. DIN EN 60335-1 (household appliance standard)

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MECHANICAL DATA

Mech. lifetime	10 000 000 actuations
Electrical lifetime	min. 10 000 actuations
depending on switching capacity	
Movement differential	siehe Übersicht nächste Seite / please see overview next page
Pretravel	siehe Übersicht nächste Seite / please see overview next page
Overtravel	siehe Übersicht nächste Seite / please see overview next page
Operating position	siehe Übersicht nächste Seite / please see overview next page
Contact opening	<3mm (μ)

OTHER DATA

Approvals	ENEC-VDE, cULus, cCSAus
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MATERIAL


Base	PBT (UL94-V0)
Cap	PBT (UL94-V0)
Actuator for 85°C ambient temperature	POM (UL94-HB) / POM (UL94-HB)
Actuator for 130°C ambient temperature	PBT (UL94-V0)
Terminals	CuZn versilbert / CuZn Ag plated
Contacts	AgNi, AgNi vergoldet / AgNi, AgNi Au plated
Contact spring	CuBe

MBZ1 Hinge lever

2 RATING

10(1,5)A 250VAC								Code: MBZ1 01	3	4	5	6	7	8
6A 250VAC								 Code: MBZ1 02	3	4	5	6	7	8
100mA 12VDC								 Code: MBZ1 06	3	4	5	6	7	8


3 OPERATING FORCE

2,8N								Code: MBZ1 2 A	4	5	6	7	8
1,5N								 Code: MBZ1 2 B	4	5	6	7	8
0,6N								 Code: MBZ1 2 C	4	5	6	7	8

RECOMMENDED COMBINATIONS

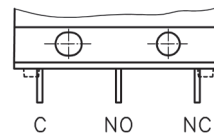
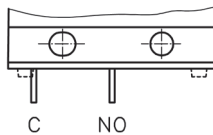
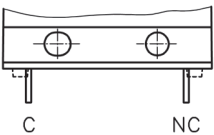
	2,8N	1,5N	0,6N
10(1,5)A 250VAC	■	■	
6A 250VAC	■	■	
100mA 12VDC	■	■	■

4 AMBIENT TEMPERATURE

-40...+85°C								Code: MBZ1 2 3 01	5	6	7	8
-40...+130°C								 Code: MBZ1 2 3 02	5	6	7	8

5 CONTACT ARRANGEMENT

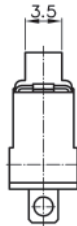
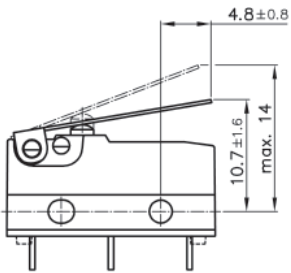
Normally closed Code: MBZ1 2 3 4 A 6 7 8	Normally open Code: MBZ1 2 3 4 B 6 7 8	Change-over Code: MBZ1 2 3 4 C 6 7 8
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MBZ1 Hinge lever

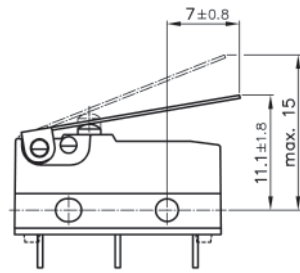
Hinge lever short

Code: MBZ1 2 3 4 5 **03** 7 8



Hinge lever long

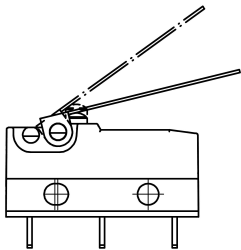
Code: MBZ1 2 3 4 5 **04** 7 8



7 FIXING POSITION

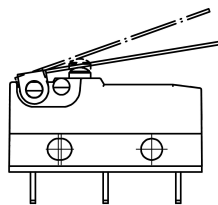
front

Code: MBZ1 2 3 4 5 6 **A** 8



rear

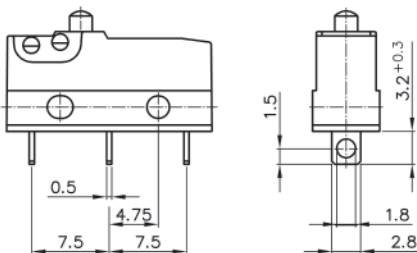
Code: MBZ1 2 3 4 5 6 **B** 8



8 TERMINALS

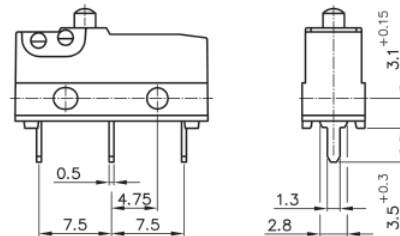
Solder terminal

Code: MBZ1 2 3 4 5 6 7 **01**



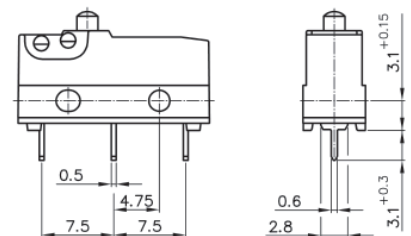
0,5x1,3mm / PCB terminal

Code: MBZ1 2 3 4 5 6 7 **02**

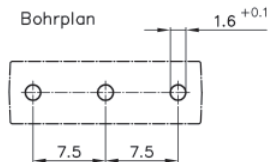


0,5x0,6mm / PCB terminal

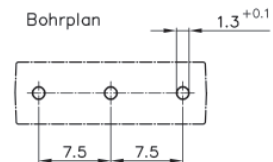
Code: MBZ1 2 3 4 5 6 7 **03**



Bohrplan



Bohrplan

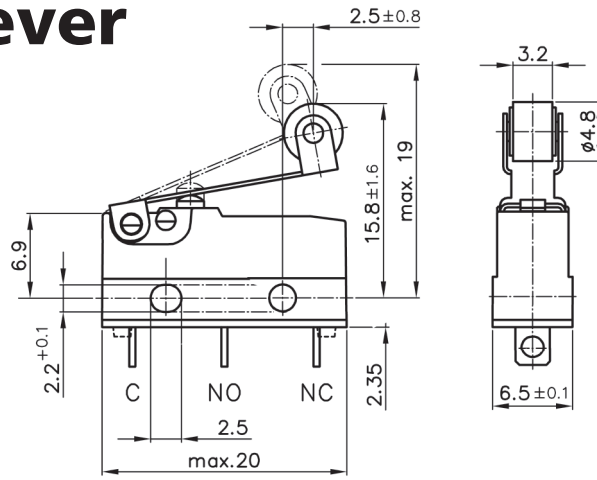


MBZ1 Hinge lever

OVERVIEW ACTUATORS / TRAVEL / FORCES

	Code	Actuator length		Operating force on plunger		Operating force on lever		Pretravel	Overtravel	Movement differential	Free position	Operating position
		mm	≤ N	Code	≤ N	≤ mm	min. mm					
Fixing position front	03	7,0	2,8	A	0,45	9	1,25 - 2,5	1,5	18	12 ±3		
Hinge lever short			1,5	B	0,24							
			0,6	C	0,10							
	04	9,4	2,8	A	0,40	10	1,5 - 3	1,8	20	12,5 ±3,5		
Hinge lever long			1,5	B	0,21							
			0,6	C	0,09							
Fixing position rear	03	4,8	2,8	A	1,00	4,5	0,75 - 1,5	0,9	14	10,7 ±1,6		
Hinge lever short			1,5	B	0,54							
			0,6	C	0,21							
	04	7,0	2,8	A	0,85	5	0,75 - 1,5	1,2	15	11,1 ±1,8		
Hinge lever long			1,5	B	0,46							
			0,6	C	0,18							

1 MBZ1 Roller lever



Tension spring mechanism

- Micro switches design B acc. to DIN 41635
- functional final inspection and testing
- solid design
- high-quality materials
- very exact switching position
- Version 100mA 12VDC with Au plated contacts on request
- Fulfills glow wire testing GWT 750°C acc. DIN EN 60335-1 (household appliance standard)

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MECHANICAL DATA

Mech. lifetime	10 000 000 actuations
Electrical lifetime	min. 10 000 actuations
depending on switching capacity	
Movement differential	please see overview next page
Pretravel	please see overview next page
Overtravel	please see overview next page
Operating position	please see overview next page
Contact opening	<3mm (μ)

OTHER DATA

Approvals	ENEC-VDE, cULus, cCSAus
-----------	-------------------------

MATERIAL

Base	PBT (UL94-V0)
Cap	PBT (UL94-V0)
Actuator for 85°C ambient temperature	POM (UL94-HB) / POM (UL94-HB)
Terminals	CuZn Ag plated
Contacts	AgNi, AgNi Au plated
Contact spring	CuBe

MBZ1 Roller lever

2 RATING

10(1,5)A 250VAC								Code: MBZ1 01	3	4	5	6	7	8
6A 250VAC								 Code: MBZ1 02	3	4	5	6	7	8
100mA 12VDC								 Code: MBZ1 06	3	4	5	6	7	8

3 OPERATING FORCE

2,8N								Code: MBZ1 2 A	4	5	6	7	8
1,5N								 Code: MBZ1 2 B	4	5	6	7	8
0,6N								 Code: MBZ1 2 C	4	5	6	7	8

RECOMMENDED COMBINATIONS

	2,8N	1,5N	0,6N
10(1,5)A 250VAC	■	■	
6A 250VAC	■	■	
100mA 12VDC	■	■	■

4 AMBIENT TEMPERATURE

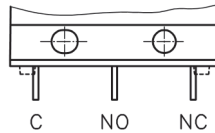
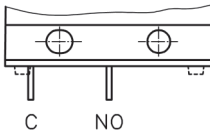
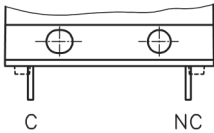
-40...+85°C								Code: MBZ1 2 3 01	5	6	7	8
-40...+130°C								 Code: MBZ1 2 3 02	5	6	7	8

5 CONTACT ARRANGEMENT

Normally closed
Code: MBZ1 2 3 4 **A** 6 7 8

Normally open
Code: MBZ1 2 3 4 **B** 6 7 8

Change-over
Code: MBZ1 2 3 4 **C** 6 7 8

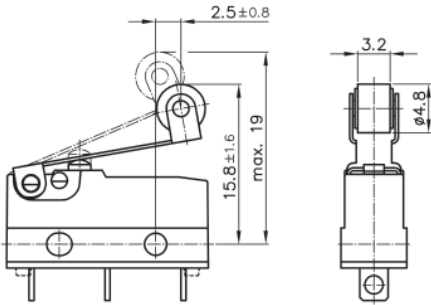


MBZ1 Roller lever

6 ACTUATOR

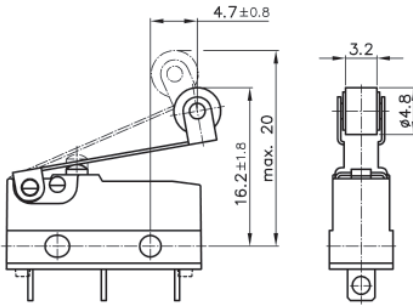
Roller lever short

Code: MBZ1 2 3 4 5 **05** 7 8



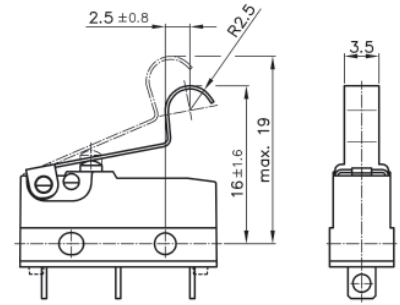
Roller lever long

Code: MBZ1 2 3 4 5 **06** 7 8



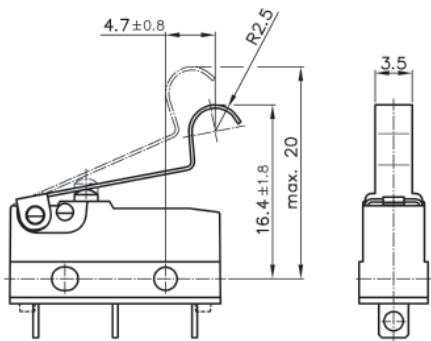
Simulated roller lever short

Code: MBZ1 2 3 4 5 **07** 7 8



Simulated roller lever long

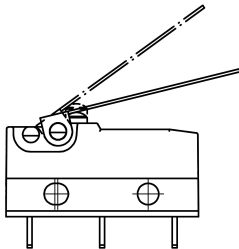
Code: MBZ1 2 3 4 5 **08** 7 8



7 FIXING POSITION

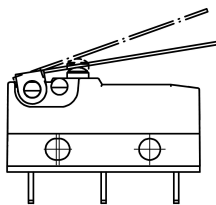
front

Code: MBZ1 2 3 4 5 6 **A** 8



rear

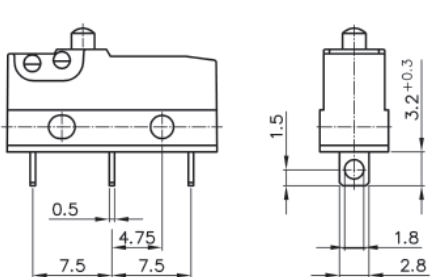
Code: MBZ1 2 3 4 5 6 **B** 8



8 TERMINALS

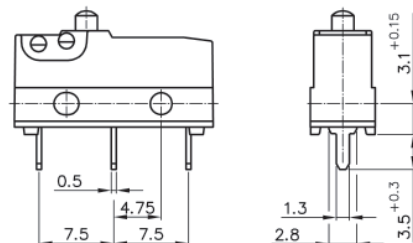
Solder terminal

Code: MBZ1 2 3 4 5 6 7 **01**



0,5x1,3mm / PCB terminal

Code: MBZ1 2 3 4 5 6 7 **02**

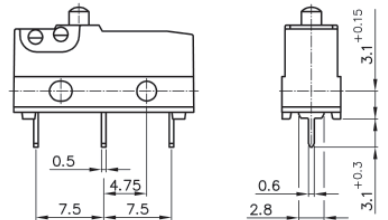


Bohrplan

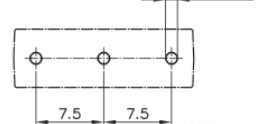


0,5x0,6mm / PCB terminal

Code: MBZ1 2 3 4 5 6 7 **03**



Bohrplan



MBZ1 Roller lever

OVERVIEW ACTUATORS / TRAVEL / FORCES

		Actuator length		Operating force on plunger		Operating force on lever		Pretravel		Overtravel		Movement differential		Free position		Operating position	
Fixing position front		Code	mm	≤ N	Code	≤ N	≤ mm	min. mm	≤ mm	≤ mm	≤ mm	mm					
Roller lever short	05	4,7	2,8	A	0,50	9	1,25 - 2,5	1,5	22	17 ±3							
			1,5	B	0,27												
			0,6	C	0,11												
		Code	mm	≤ N	Code	≤ N	≤ mm	min. mm	≤ mm	≤ mm	mm						
Roller lever long	06	7,1	2,8	A	0,40	10	1,5 - 3	1,8	24	17,5 ±3,5							
			1,5	B	0,21												
			0,6	C	0,09												
		Code	mm	≤ N	Code	≤ N	≤ mm	min. mm	≤ mm	≤ mm	mm						
Simulated roller lever short	07	4,7	2,8	A	0,60	9	1,25 - 2,5	1,5	22	17,2 ±3							
			1,5	B	0,32												
			0,6	C	0,13												
		Code	mm	≤ N	Code	≤ N	≤ mm	min. mm	≤ mm	≤ mm	mm						
Simulated roller lever long	08	7,1	2,8	A	0,50	10	1,5 - 3	1,8	24	17,7 ±3,5							
			1,5	B	0,27												
			0,6	C	0,11												
		Code	mm	≤ N	Code	≤ N	≤ mm	min. mm	≤ mm	≤ mm	mm						
Fixing position rear		Code	mm	≤ N	Code	≤ N	≤ mm	min. mm	≤ mm	≤ mm	mm						
Roller lever short	05	2,5	2,8	A	1,10	4,5	0,75 - 1,5	0,7	19	15,8 ±1,6							
			1,5	B	0,59												
			0,6	C	0,24												
		Code	mm	≤ N	Code	≤ N	≤ mm	min. mm	≤ mm	≤ mm	mm						
Roller lever long	06	4,7	2,8	A	0,95	5	0,75 - 1,5	1	20	16,2 ±1,8							
			1,5	B	0,51												
			0,6	C	0,20												
		Code	mm	≤ N	Code	≤ N	≤ mm	min. mm	≤ mm	≤ mm	mm						
Simulated roller lever short	07	2,5	2,8	A	1,15	4,5	0,75 - 1,5	0,7	19,0	16 ±1,6							
			1,5	B	0,62												
			0,6	C	0,25												
		Code	mm	≤ N	Code	≤ N	≤ mm	min. mm	≤ mm	≤ mm	mm						
Simulated roller lever long	08	4,7	2,8	A	0,95	5,0	0,75 - 1,5	1	20	16,4 ±1,8							
			1,5	B	0,51												
			0,6	C	0,20												
		Code	mm	≤ N	Code	≤ N	≤ mm	min. mm	≤ mm	≤ mm	mm						