

MINIATURE LIMIT SWITCHES 52

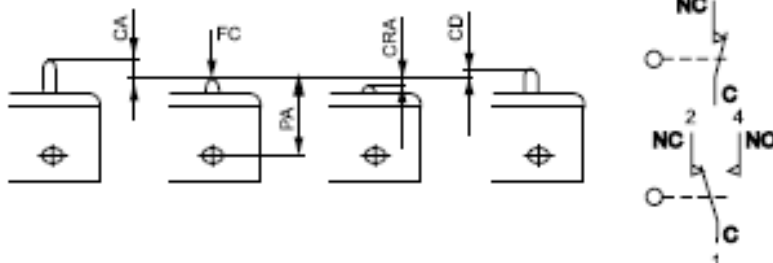
DATA SHEET

no: KK-ŁK_52



Miniature switches of the 52 series are intended to be used in various automated auxiliary circuits of control, signaling, monitoring, and measuring systems. The following factors are decisive when selecting the proper version of a 52 series switch:

- Type of circuit (NO, change-over)
- Type of connecting clamps
- Type of control elements that operate the switch (the shape and method of travel)
- Mechanical and electrical parameters of the switch.



TECHNICAL DATA:

Parameter	Value	
Rated insulation voltage U_i		400V
Rated switching voltage U_e	AC 15 DC 13	400V 50...60Hz 220V
Rated continuous current I_u		16A
Rated switched currents I_e	AC 15- U_e 400V, 50Hz DC 13- U_e 220V	2A 0,2A
Minimum switching voltage U_e		10V
Minimum switching current I_U		20mA
Mechanical life (cycles)		1×10^6
Electrical endurance (switching)	AC 15 DC 13	$0,2 \times 10^6$ $0,125 \times 10^6$
Minimum speed of drive element		17 $\mu\text{m/s}$
Maximum speed of drive element		1 m/s
Rated frequency of switching per hour		120 switches/h
Cross-sections of conductors		1 ... 2,5 mm ²
Ambient temperature		-25 ... +55 °C
Protection class	- Body of a switch - Terminals	IP 40 IP 00
Operation of contacts		snap action

The product conforms to the following standard PN-EN 60947-5-1.

The driving force's direction of action should correspond to the direction of movement of the drive element – deflections have been specified in the table below:

Type of drive element	The permissible angle of inclination the driving force operation		
	In any plane	To the plane in which the lever moves or the roll rotates	
		In parallel	Perpendicularly
Pin and telescopic pushers without a roll	5°	-	-
Telescopic pushers with a roll	-	±30°	±5°
Flat levers or levers with a roll	-	±45°	±5°

The forces and travels of switches in the standard design 5211-... (with a NC/NO circuit)

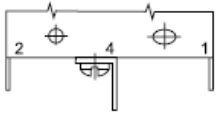
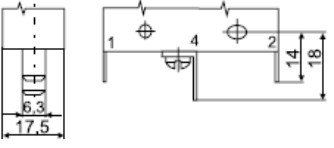

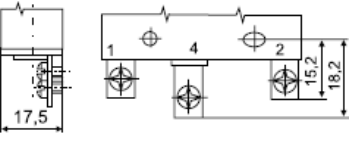

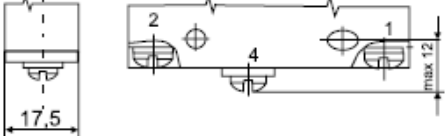
Type of drive element	Variation	Catalogue No.	Forces and travels				
			PA	CA	CRA	CD	FC
Pin pusher	steel	5211- _00	18,2 ^{±0,5}	0,1...0,6	Min.0,15	Max.0,1	2,5...4,5
	plastic	5211- _10					
Telescopic pusher	short	5211- _20	21 ^{±1}	Max.0,8	Min.1,4	0,04...0,1	Max.6,5
	short	5211- _20/02				Max.0,02	
	Długi	5211- _30	38 ^{±1}	0,1...0,6	Min.3,5	Max.0,1	2,5...4,5
	With a transverse roll	5211- _40	49,5 ^{±1,2}				
	With a longitudinal roll	5211- _50					
Flat lever with the radius of:	R=65,3mm	5211- _01	19 ^{±3}	Max.13	Min.1,7	Max.2	0,2...0,6
	R=53,3mm	5211- _02		Max.10	Min.1,3	Max.1,6	0,3...0,7
	R=39,3mm	5211- _05	19 ^{±2}	Max.8	Min.1	Max.1,2	0,4...1
Lever with a roll (along the lever) with the radius of:	R=28,4mm	5211- _03	30,5 ^{±2}	Max.6	Min.0,7	Max.0,8	0,5...1,3
	R=51,0mm	5211- _04		Max.10	Min.1,2	Max.1,5	0,3...0,7
	R=37,2mm	5211- _06	Max.8	Min.1	Max.1,2	0,4...1	
Lever with a roll (across the lever) with the radius of:	R=36,8mm	5211- _07	30,5 ^{±2}	Max.8	Min.2	Max.1,2	0,4...1

Note:

The catalogue no. of a switch must be provided together with the code number of terminals:

- 2 – Sleeve terminal
- 4 – Screw terminal
- 5 – Side terminal

Type of terminals

Description	Appearance	Dimensions	Symbol
6.3 sleeve terminal (sleeve joints)			2
M3 side screw terminal			5
M3 screw terminal			4

TYPES OF MINIATURE LIMIT SWITCHES 52

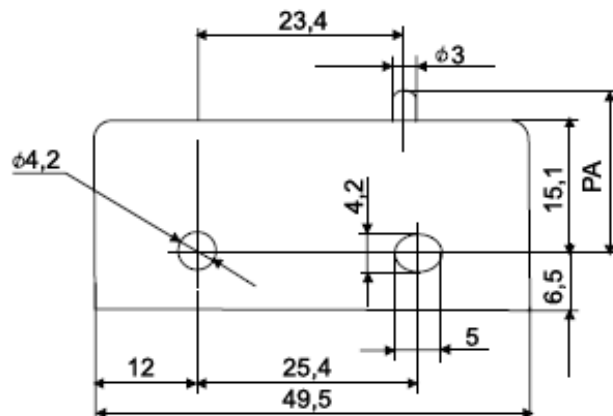
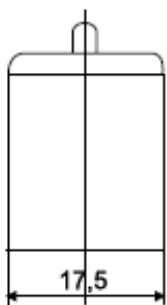
Type of switch	Description	Type of terminals	Catalogue no.	Weight (g)
	Switch with a steel pin pusher	Sleeve joints Screws Side screws	5211-200 5211-400 5211-500	26
	Switch with a plastic pin pusher	Sleeve joints Screws Side screws	5211-210 5211-410 5211-510	25
	Switch with a short telescopic pusher	Sleeve joints Screws Side screws	5211-220 5211-420 5211-520	27
	Switch with a short telescopic pusher, with reduced differential travel	Sleeve joints Screws Side screws	5211-220/02 5211-420/02 5211-520/02	27
	Switch with a long telescopic pusher	Sleeve joints Screws Side screws	5211-230 5211-430 5211-530	43
	Switch with a telescopic pusher and with a transverse roll	Sleeve joints Screws Side screws	5211-240 5211-440 5211-540	50
	Switch with a telescopic pusher and with a longitudinal roll	Sleeve joints Screws Side screws	5211-250 5211-450 5211-550	50

MINIATURE SWITCHES WITH A LEVER

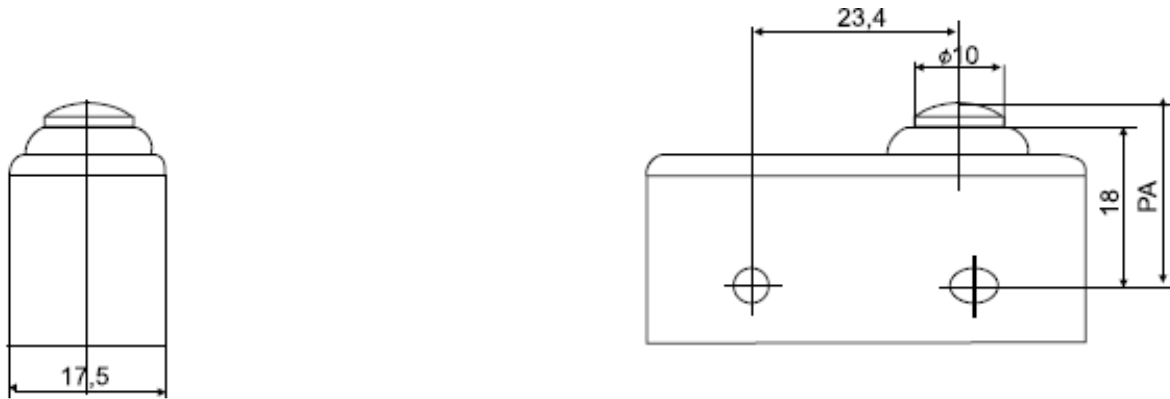
Type of switch	Description	Radius of lever	Type of terminals	Catalogue no.	Weight (g)
	Switch with a flat lever	65,3	Sleeve joints	5211-201	31
		53,3		5211-202	31
		39,3		5211-205	30
		65,3	Screws	5211-401	31
		53,3		5211-402	31
		39,3		5211-405	30
		65,3	Side screws	5211-501	31
		53,3		5211-502	31
39,3	5211-505	30			
	Switch with a roll running along the lever	28,4	Sleeve joints	5211-203	31
		51,0		5211-204	32
		37,2		5211-206	31
		28,4	Screws	5211-403	31
		51,0		5211-404	32
		37,2		5211-406	31
		28,4	Side screws	5211-503	31
		51,0		5211-504	32
37,2	5211-506	31			
	switch with a roll running across the lever	36,8	Sleeve joints	5211-207	31
			Screws	5211-407	
			Side screws	5211-507	

DIMENSIONS

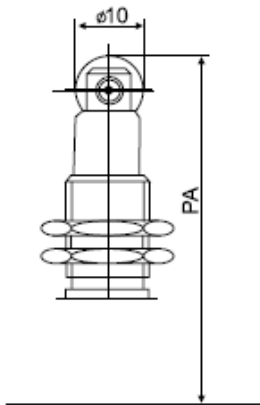
5211-00, 5211-10



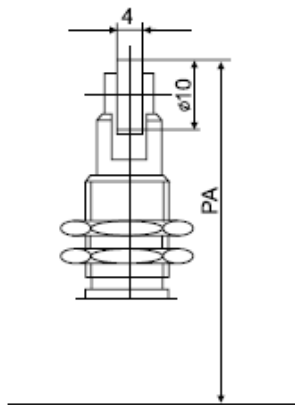
5211-_20



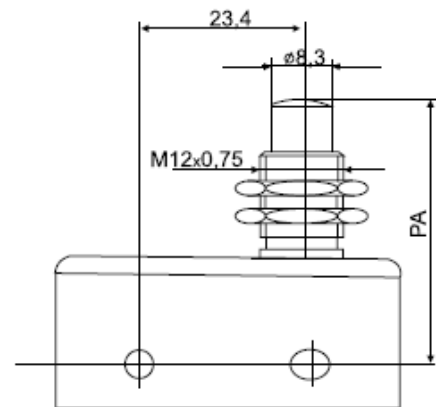
5211-_50



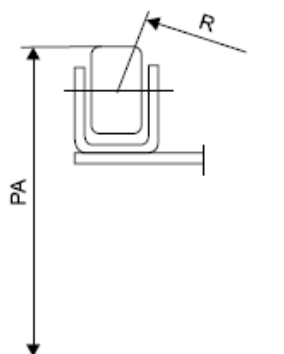
5211-_40



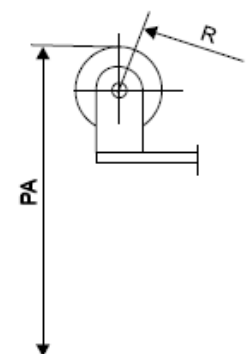
5211-_30



5211-_07



5211-_03, 5211-_04, 5211-_06



5211-_01, 5211-_02, 5211-_05

