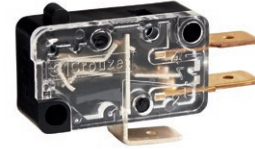


MINIATURE MICROSWITCHES - POSITIVE BREAK

831607

- › Coil spring snap-action mechanism with wiping contacts
- › Positive opening action according to IEC 60947-5-1 Annex K
- › Ratings from 10 mA 4 V_{DC} to 6 A 250 V_{AC}
- › Very long life
- › Extended range of terminals
- › cURus approved
- › Choice of actuators: stainless steel or plastic



Main specifications

		Positive break 831607	
		Standard	Dual-current (DORE)
Function	Connections		
I (changeover)	W2 (solder)	83160702	83160796
I (changeover)	W3 (QC 6.3x0.8)	83160704	83160786
I (changeover)	W6 (QC 4.8x0.5)	83160706	●
I (changeover)	X1 (PCB, straight)	●	●
I (changeover)	X2 (PCB, rear)	●	●
I (changeover)	X3 (PCB, front)	83160708	●
R (normally closed)	W2 (solder)	83160701	83160794
R (normally closed)	W3 (QC 6.3x0.8)	83160703	83160797
R (normally closed)	W6 (QC 4.8x0.5)	83160705	●
R (normally closed)	X2 (PCB, rear)	83160732	●
R (normally closed)	X3 (PCB, front)	83160707	●
Electrical characteristics			
Positive opening action		⊙	⊙
Rating nominal / 250 V _{AC} (A)		6	6*
Thermal current (I _{th}) (A)		10	10
Mechanical characteristics			
Maximum operating force (N)		4	4
Min. Release force (N)		1.5	1.5
Minimum positive opening force (N)		18	18
Max. Allowable overtravel force (N)		200	200
Rest position max. (mm)		15.7	15.7
Operating position (mm)		14.8±0.3	14.8±0.3
Positive opening position (mm)		13.5	13.5
Maximum differential travel (mm)		0.3	0.3
Min. overtravel (mm)		1.3	1.3
Ambient operating temperature (°C)		-40 → +85	-40 → +85
Mechanical life (operations)		10 ⁷	10 ⁷
Contact gap (mm)		1.2	1.2
Weight (g)		7	7

Additional specifications

- Case, Button: PBT GF (UL 94-V0 / GWFI 960 °C)
- Cover: PC (UL 94-V0 / GWFI 850 °C), transparent
- Contacts: silver alloy, gold-plated silver alloy (dual-current)
- Terminals: brass (except W2/X: copper nickel), silver plated common
- Levers: stainless steel or polyamide, polyamide roller

- Degree of protection: IP40 (mechanism)
- Recommended actuating speed: 0.1 mm/s to 0.5 m/s
- Rated insulation voltage U_i: 250 V
- Impulse withstand voltage U_{imp}: 4 kV
- Certification marks:

Product adaptations



- › Special levers : special shapes and lengths
- › Special connections : angled, screw with clamp (W5), full wiring with custom connector....
- › Adjustable fixing by metal threaded barrel (SP9627)
- › Variant for irradiated environment

Standard product

Product made to order

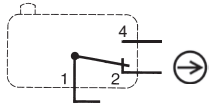


Contact us

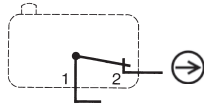
Principles

Single break snap-action switch with positive opening action on NC contacts (1-2) according to IEC 60947-5-1 Annex K

Changeover - SPDT (form C)



Normally closed - SPST-NC (form B)



Curves

Electrical life

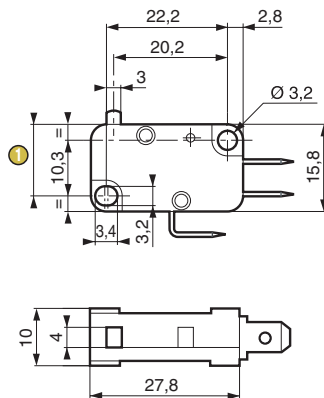
- Resistive load: 250 V~ 6 A: 10^5 cycles
- Inductive load (IEC 60947-5-1) : AC15: 250 V~ 6 A: 0.3×10^5 cycles
DC13: 24 V--- 20 W L/R = 40 ms: 3×10^5 cycles
120 V--- 20 W L/R = 40 ms: 5×10^5 cycles

* Dual-current models are designed to operate equally well on low current (10 mA 4 V minimum recommended) or medium-current (6 A maximum) circuits. However, a given product should only be used to switch one type of circuit during its working life

Dimensions

Product

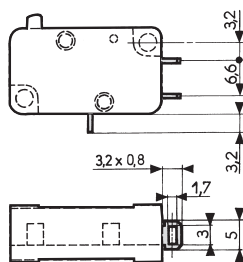
831607



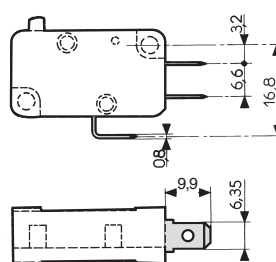
① Total travel position = 13.2 max.

Connections

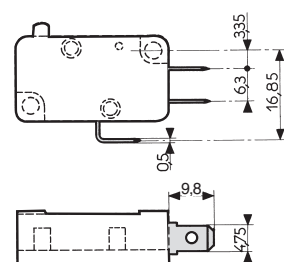
W2 solder



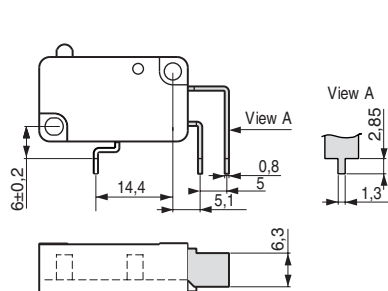
W3 quick-connect 6.3 x 0.8



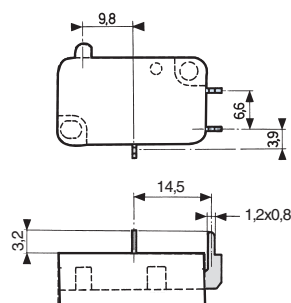
W6 quick-connect 4.8x0.5



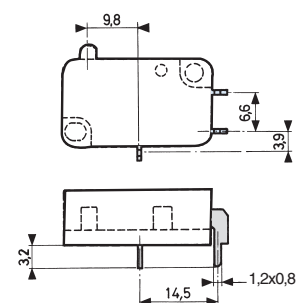
X1 for PCB, straight output



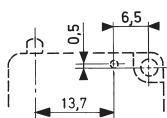
X2 for PCB, rear output



X3 for PCB, front output

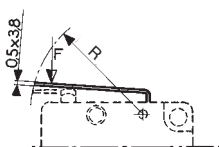


Actuator mounting position

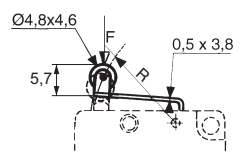


Actuators

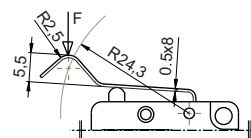
153AX flat



153EX roller



153FX dummy roller



Actuators and mounting accessories

Part numbers for standard actuators

79211670*

79211672*

79211668*

Actuators

Flat **153AX** R16.2Roller **153EX** R15.8Dummy roller **153FX** R24.3

Operating force - max.	N	4	4	2.4
Release force - min.	N	1	1	0.9
Min. positive opening force	N	18	18	11
Maximum rest position	mm	16.2	21.3	21.8
Operating position	mm	15.3 ±0.3	20.5 ±0.45	20.3 ±0.6
Positive opening position	mm	14	19.2	18
Maximum total travel position	mm	13.9	19.1	17.6

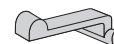
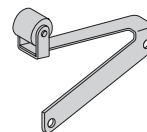
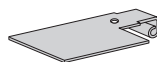
* We recommend that levers are mounted in our factories. See preferred part numbers in table below.

For unmounted supply, please also order associated pin **79210424**.

Part numbers for standard actuators

79211694*

Actuators

Two-pole **153A2XB** R 24**Flexible with roller **153B****Plastic **153V****

** Consult us

831607 microswitches with referenced actuators

Actuators		153AX R16.2 79211670	153EX R15.8 79211672	153FX R24.3 79211668
831607 Standard	I W2	•	83160789	•
	I W3	•	83160710	•
	I X3	•	•	•
	R W2	•	83160787	•
	R W3	•	83160711	83160713
	R X3	•	83160714	•

Standard product

Product made to order



Contact us

Installation recommendations

See “Basic technical concepts”

How to order

Use the 8 digit part numbers when they are defined

Other cases, precise: Type of microswitch - Function - Connection - Contact* - Actuator* - Adaptation*

* if needed

Example: 831607 R W3 DORE 153AX R16.2

Examples of special adaptations



Metal plunger and threaded barrel for heavy duty and precise setting (SP9627)

Warning:

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[831607B3.E](#)