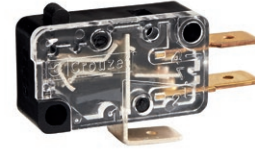


MINIATURE MICROSWITCHES - POSITIVE BREAK

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

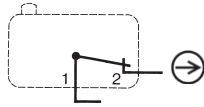
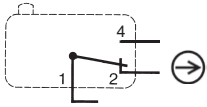
Product made to order



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

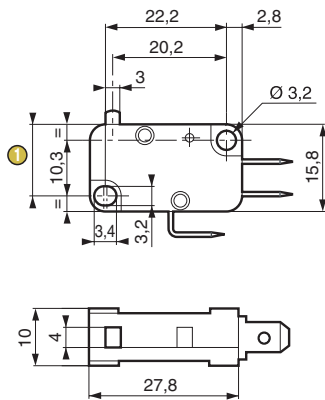
- Resistive load: 250 V \sim 6 A: 10⁵ cycles
- Inductive load (IEC 60947-5-1) : AC15: 250 V \sim 6 A: 0.3 x 10⁵ cycles
 DC13: 24 V --- 20 W L/R = 40 ms: 3 x 10⁵ cycles
 120 V --- 20 W L/R = 40 ms: 5 x 10⁵ cycles

* 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

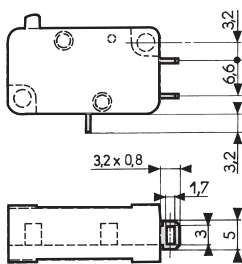
831607



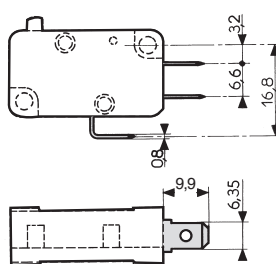
① Total travel position = 13.2 max.

Connections

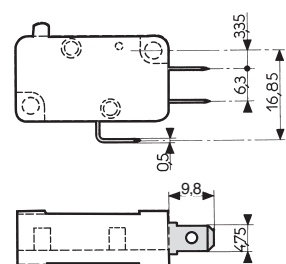
W2 solder



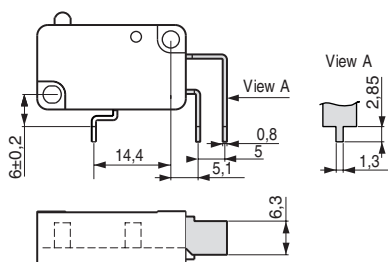
W3 quick-connect 6.3 x 0.8



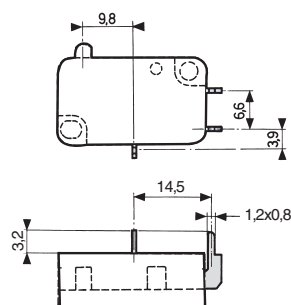
W6 quick-connect 4.8x0.5



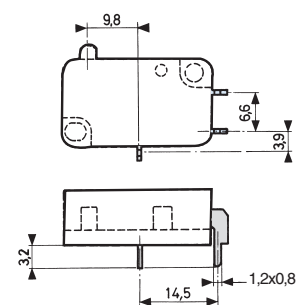
X1 for PCB, straight output



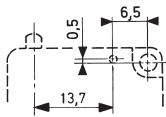
X2 for PCB, rear output



X3 for PCB, front output

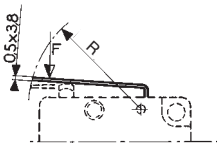


Actuator mounting position

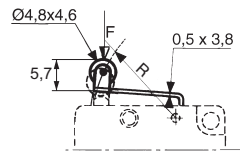


Actuators

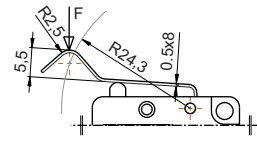
139AX flat




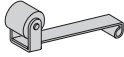

139EX roller

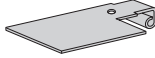
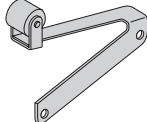
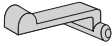


153FX dummy roller



Actuators and mounting accessories

Actuators	Flat 139AX R16.2	Roller 139EX R15.8	Dummy roller 153FX R24.3
			
Operating force - max.	N	4	2.4
Release force - min.	N	1	0.9
Min. positive opening force	N	18	11
Maximum rest position	mm	16.2	21.3
Operating position	mm	15.3 ±0.3	20.5 ±0.45
Positive opening position	mm	14	19.2
Maximum total travel position	mm	13.9	19.1
We recommend that levers are assembled in our factories			

Actuators	Two-pole 139A2X R 24**	Flexible with roller 153B **	Plastic 153V **
			
** Consult us			

831607 microswitches with referenced actuators

Actuators	139AX R16.2	139EX R15.8	153FX R24.3	
831607 Standard	I W2	●	83160789	
	I W3	●	83160710	
	I X3	●	●	
	R W2	●	83160787	
	R W3	●	83160711	83160713
	R X3	●	83160714	●

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 139AX R16.2

Standard product

Product made to order



Contact us

Examples of special adaptations



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

Warning:

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