

SUB-SUBMINIATURE MICROSWITCHES - STANDARD

V5D - 83194

- › Coil spring snap-action mechanism with wiping contacts
- › Very small size
- › Ratings from 1 mA 4 V_{DC} to 5 A 250 V_{AC}
- › Low operating force
- › cURus an CCC approved
- › Very long mechanical life
- › Auxiliary actuators: stainless steel or plastic, pre-assembled or retrofittable



Main specifications

		Standard 831940	Dual-current 831948
Function	Connections		
I (changeover)	W2 (solder)		
Electrical characteristics		83194001	83194801
Rating nominal / 250 V AC (A)		5	5*
Rating thermal / 250 V AC (A)		8.5	8.5
Mechanical characteristics			
Max. operating force (N)		1.4	1.4
Min. Release force (N)		0.25	0.25
Max. Allowable overtravel force (N)		10	10
Max. rest position (mm)		8.8	8.8
Operating position (mm)		8.1+0.3/-0.2	8.1+0.3/-0.2
Max. differential travel (mm)		0.13	0.13
Min. overtravel (mm)		0.25	0.25
Ambient operating temperature (°C)		-40 → +85	-40 → +85
Mechanical life (operations)		10 ⁷	10 ⁷
Contact gap (mm)		0.3	0.3
Weight (g)		1	1

Additional specifications

- Case, Button: PA66 GF (UL 94-V0 / GWFI 960 °C / GWIT 775 °C)
- Moving blade: beryllium copper
- Contacts: gold-plated silver nickel
- Terminals: gold-plated brass
- Levers: stainless steel or PARA GF
- Degree of protection: IP40 (mechanism)
- Recommended actuating speed: 0.1 mm/s to 0.3 m/s
- Certification marks: cULus, CCC, ENEC

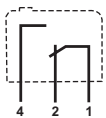
Product adaptations



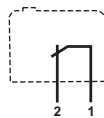
- › Special actuators: stainless steel or plastic, special shapes and lengths
- › Normally closed (R) or normally open (C) SPST versions
- › Connections: for PCB, quick-connect 2.8 x 0.5, special connections
- › High operating temperature: +110 °C
- › ENEC approval

Principles

Single break snap-action switch
Changeover - SPDT (form C)



Normally closed - SPST-NC (form B)**



Normally open - SPST-NO (form A)**



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Standard product

Product made to order



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Curves

Electrical life

Standard 831940 and Dual-current 831948

- 250 V~ 5 A resistive > 10 000 cycles
- 30 V= 3 A resistive 50 000 cycles

Dual-current 831948

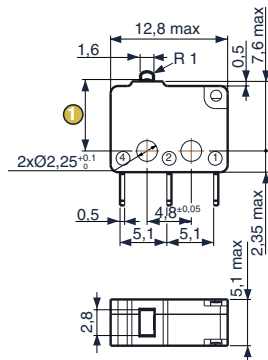
- 5 V= 1 mA resistive 1 000 000 cycles

* Models 831948 are designed to operate equally well on low-current (1 mA 4 V minimum recommended) or medium-current circuits (5 A maximum) circuits. However, a given product should only be used to switch one type of circuit during its working life.

Dimensions

Product

83194

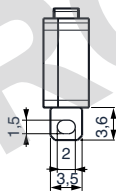


① Total travel position: max. 7.65

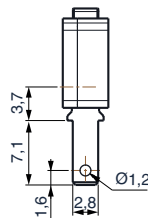
Fixing with M2 screws
Max. tightening torque: 0.15 N.m

Connections

W2 solder

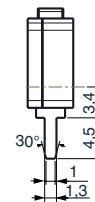


W7A5 quick-connect 2.8 x 0.5**



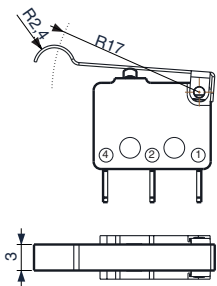
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X1 for PCB, straight output**

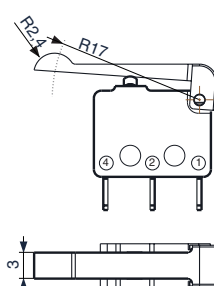


Actuators

194F dummy roller

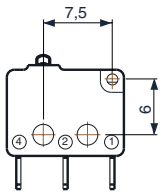


194FP plastic dummy roller





Other shapes and dimensions:
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Actuator mounting position



Actuators and mounting accessories

Actuators		Dummy roller stainless steel 194F R17	Dummy roller plastic 194FP R17
			
Operating force - max.	N	0.7	0.7
Release force - min.	N	0.09	0.09
Rest position - max.	mm	11.7	11.7
Operating position	mm	10.3 ^{+0.8/-0.55}	10.3 ^{+0.8/-0.55}
Total travel position - max.	mm	9.3	9.3
Differential travel - max.	mm	0.45	0.45
Mechanical life	operations	2.10 ⁶	10 ⁶

V5D-83194 microswitches with referenced actuators

	Actuators	194F R17	194FP R17
831940	I W2	83194015	83194014
831948	I W2	83194813	83194814

Installation recommendations

See "Basic technical concepts"

For use above 150 V: to ensure protection against electric shock after installation in the application, any parts inserted in the mounting holes shall be insulated.

How to order

Use the 8 digit part numbers when they are defined

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

* if needed

Example: 831940 C W2 194FP R17

Standard product

Product made to order



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Warning:

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