

# SUB-SUBMINIATURE MICROSWITCHES - STANDARD

## V5D - 83194

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



### Main specifications

Function	Connections	Standard 831940	Dual-current 831948
		83194001	83194801
I (changeover)	W2 (solder)		
<b>Electrical characteristics</b>			
Rating nominal / 250 V AC (A)		5	5*
Rating thermal / 250 V AC (A)		8.5	8.5
<b>Mechanical characteristics</b>			
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 <sup>7</sup>	10 <sup>7</sup>
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: ENEC

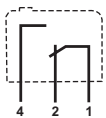
### Product adaptations



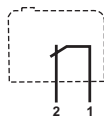
- › Special actuators: stainless steel or plastic, special shapes and lengths
- › Normally closed (R) or normally open (C) SPST versions
- › Connections: for PCB, quick-connect 2.8 x 0.5, special connections
- › High operating temperature: +110 °C
- › ENEC approval

### Principles

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



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



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



\*\* Consult us

Standard product

Product made to order

Contact us

**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**

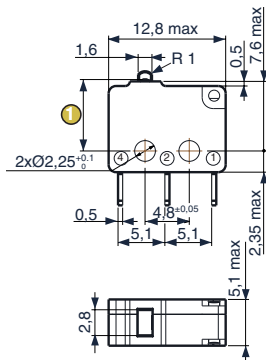
- 5 V= 1 mA resistive 1 000 000 cycles

\* 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**

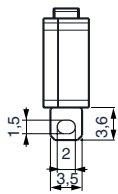


① Total travel position: max. 7.65

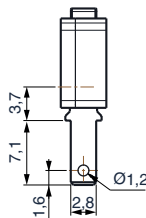
Fixing with M2 screws  
Max. tightening torque: 0.15 N.m

**Connections**

**W2 solder**

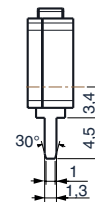


**W7A5 quick-connect 2.8 x 0.5\*\***



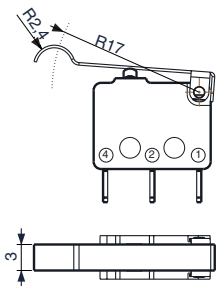
\*\* consult us

**X1 for PCB, straight output\*\***

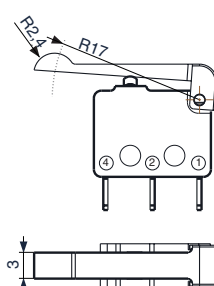


**Actuators**

**194F dummy roller**

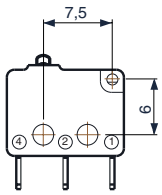


**194FP plastic dummy roller**





Other shapes and dimensions:  
consult us

## Actuator mounting position



## Actuators and mounting accessories

Actuators		Dummy roller stainless steel <b>194F R17</b>	Dummy roller plastic <b>194FP R17</b>
			
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 <sup>+0.8/-0.55</sup>	10.3 <sup>+0.8/-0.55</sup>
Total travel position - max.	mm	9.3	9.3
Differential travel - max.	mm	0.45	0.45
Mechanical life	operations	2.10 <sup>6</sup>	10 <sup>6</sup>

### V5D-83194 microswitches with referenced actuators

	Actuators	194F R17	194FP R17
<b>831940</b>	I W2	83194015	83194014
<b>831948</b>	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



Contact us

### Warning:

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