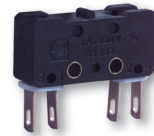


SUBMINIATURE MICROSWITCHES - DOUBLE BREAK

83132 / 83133 / 83134

- › Double-break flexible leaf snap-action mechanism
- › Side, rear or on front face terminals
- › Momentary or maintained action (option)
- › Very long life
- › Ratings from 1 mA 4 V $\sim$ to 6 A 250 V $\sim$
- › Operating temperature -40 °C up to +150 °C
- › Wide choice of actuators on 2 symmetric fixing positions



Main specifications

Function	Connections	Actuators	Side outputs 83132		Rear outputs 83133		Front face outputs 83134	
			Standard	Dual-current	Standard	Dual-current	Standard	Dual-current
I (changeover)	W2 (solder or QC 2.8x0.5)	No	83132030	83132053	83133035	83133073	-	-
I (changeover)	X1 (PCB)	No	-	-	83133045	83133052	83134001	83134003
R (normally closed)	W2 (solder or QC 2.8x0.5)	No	83132032	●	83133042	83133210	-	-
R (normally closed)	X1 (PCB)	No	-	-	●	●	-	-
C (normally open)	W2 (solder or QC 2.8x0.5)	No	83132040	●	83133050	●	-	-
C (normally open)	X1 (PCB)	No	-	-	●	●	-	-
Configurations with actuators		yes	See page 4	See page 4	See page 4	See page 4	See page 4	See page 4
Electrical characteristics								
Rating nominal / 250 V AC (A)			6	5*	6	5*	6	5*
Rating thermal / 250 V AC (A)			11		11		11	
Mechanical characteristics								
Maximum operating force (N)			1.6		1.6		1.6	
Min. Release force (N)			0.4		0.4		0.4	
Max. Allowable overtravel force (N)			10		10		10	
Rest position max. (mm)			8.45		8.45		8.10	
Operating position (mm)			7.7 $\pm$ 0.2		7.7 $\pm$ 0.2		7.35 $\pm$ 0.25	
Differential travel (mm)			0.35 $\pm$ 0.1		0.35 $\pm$ 0.1		0.35 $\pm$ 0.1	
Min. overtravel (mm)			0.27		0.27		0.27	
Ambient operating temperature (°C)			-40 $\rightarrow$ +125		-40 $\rightarrow$ +125		-40 $\rightarrow$ +125	
Mechanical life (operations)			10 ⁷		10 ⁷		10 ⁷	
Contact gap (mm)			0.3 x 2		0.3 x 2		0.3 x 2	
Weight (g)			1.8		2.0		1.5	

Additional specifications

- Case, Button: PA66 GF (UL 94-V0 / GWFI 960 °C / GWIT 775 °C)
- Moving blade: beryllium copper
- Contacts: silver, gold-plated silver (dual-current)
- Fixing hole inserts: brass
- Terminals: copper nickel
- Levers: stainless steel, polyamide roller

- Degree of protection: IP40 (mechanism)
- Proof tracking index: PTI 400
- Recommended min actuating speed: 0.01 mm/s
- Conformity / Certifications: us on request /

Product adaptations



- › Maintained action variants (bistable reset switch), with or without lever
- › 2 or 3-pole assembly with single actuator. Optional mounting on metal plate (8331)
- › Special levers: special shapes and lengths
- › Plunger with ball (Ø 5 mm) for lateral approach from any direction
- › High operating temperature: max +150 °C
- › Applications in irradiated environment
- › Higher operating force: max 2.6 N
- › Larger overtravel: min 0.5 mm (SP4225)
- › Added overtravel and/or adjustable fixing by threaded barrel (see 83528 and 8354 Series)
- › cURus approved versions up to 480 V $\sim$

Principles

Double break snap-action switch

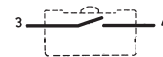
Changeover - SPDT (form Za)



Normally closed - SPST-NC (form Y)



Normally open - SPST-NO (form X)



Standard product

Product made to order

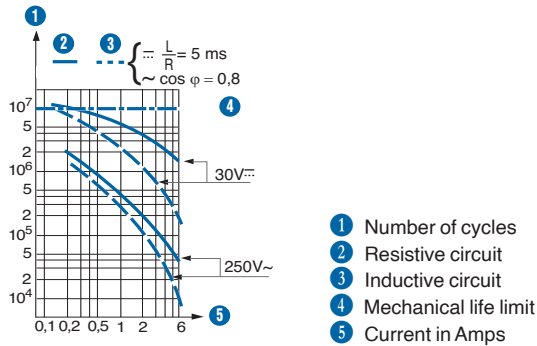


Contact us

Both circuits must be used at same polarity

Curves

Operating curve for types 83132 - 83133 - 83134

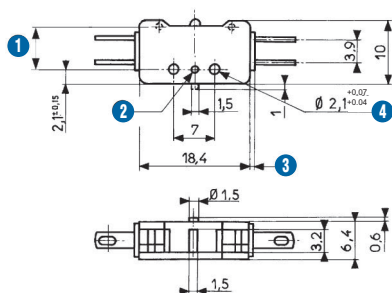


* Dual-current models are designed to operate equally well on low-current (1 mA 4 V minimum recommended) or medium-current (5 A maximum) circuits. However, a given product should only be used to switch one type of circuit during its working life.

Dimensions

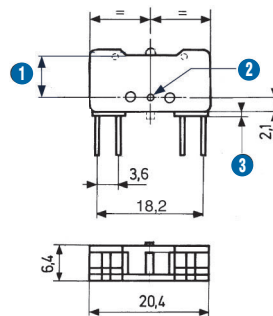
Products

83132

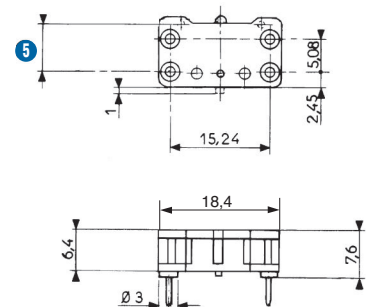


- ① Total travel position = 7.35 max.
- ② Ø1.5, depth 0.7
- ③ 2 PTFE plates, thickness 0.8
- ④ Metal inserts

83133



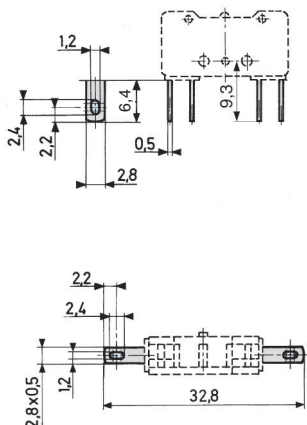
83134



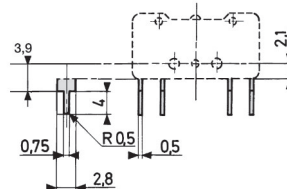
- ⑤ Total travel position = 7 max.

Connections

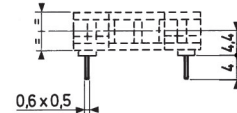
W2 solder or quick-connect 2.8 x 0.5 (83132 - 83133)



X1 for printed circuit board (83133)

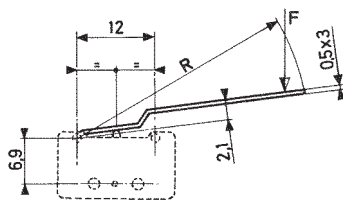


X1 for printed circuit board (83134)

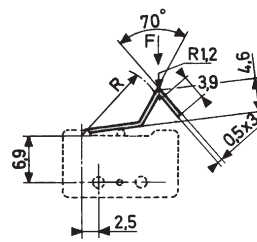


Actuators

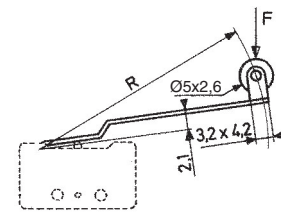
54A flat



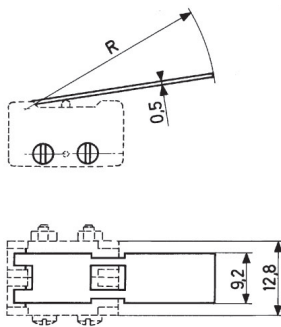
54B folded



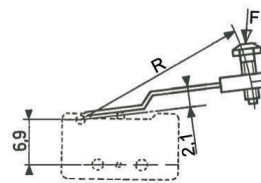
54E roller



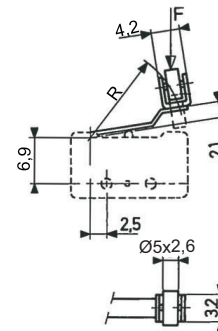
54A2 2-pole



54D adjustable

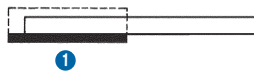


54EL transverse roller



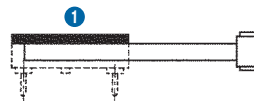
Standard mounting position

For 831320 and 831330



1 Cover

For 831340



1 Cover

Actuators and mounting accessories

Part numbers for standard actuators		70514175	70514194	70514181	70514182	70514183
Actuators		Flat 54A R14.75	Flat 54A R35.75	Roller 54E R7.5	Roller 54E R14.1	Roller 54E R34.4
						
		83132	83132	83132	83132	83132
		83133	83133	83133	83133	83133
		83134	83134	83134	83134	83134
Operating position	mm	9.5 ±0.8	10 ±1.5	14.2 ±0.3	15.5 ±0.8	16.1 ±1.4
Operating force max.	N	0.8	0.34	1.6	0.8	0.34
Release force min.	N	0.16	0.06	0.32	0.17	0.07
Pretravel max.	mm	2.15	5.15	1.1	2.05	4.9
Differential travel	mm	1 ±0.3	2.1 ±0.65	0.5 ±0.15	0.95 ±0.3	2 ±0.6
Total travel max.	mm	2.8	6.8	1.45	2.7	6.6

Part numbers for standard actuators		70514559	70514125	70514188	70514178	70514179	70514280
Actuators		Folded 54B R13.17	2-pole 54A2 R30	Adjustable 54D R27.1	Transverse Roller 54EL R7.5	Transverse Roller 54EL R14.1	Side fixing plate 54Y stainless steel (16 x 8 x 0.4 mm)
							
		83132	83132	83132	83132	83132	Always supplied separately
		83133	83133	83133	83133	83133	
		83134	83134	83134	83134	83134	
Operating position	mm	12.7 ±0.8	8.8 ±0.8	12.6-17.6 ±1.2	14.2 ±0.3	15.6 ±0.8	
Operating force max.	N	0.85	0.8	0.43	1.6	0.75	
Release force min.	N	0.18	0.16	0.08	0.32	0.15	
Pretravel max.	mm	2.05	4.3	3.9	1.1	2.25	
Differential travel	mm	0.95 ±0.3	2 ±0.55	1.8 ±0.5	0.5 ±0.15	1 ±0.35	
Total travel max.	mm	2.7	5.75	5.2	1.45	3	

Unless otherwise requested, the levers are mounted in the position illustrated on the dimension diagrams (standard mounting).
We recommend that these levers are assembled in our workshops.

83132/133/134 microswitches with referenced actuators

			Actuators		54A		54A2	54B	54D	54E			54EL	
			(standard mounting = on left)	R14.75	R35.75	R30	R13.17	R27.1	R7.5	R14.1	R34.4	R7.5	R14.1	
			Mounting	70514175	70514194	70514125	70514559	70514188	70514181	70514182	70514183	70514178	70514179	
Standard	83132	IW2	Standard	83132039	83132045	●	83132087	83132076	83132033	83132003	83132005	83132097	83132054	
	83133	IW2	Standard	83133015	83133038	83133301	83133171	83133118	83133004	83133002	83133003	83133058	83133059	
		IX1	Standard	83133174	83133062	83133306	83133212	83133120	●	83133119	●	●	●	
	83134	IX1	Standard	83134004	83134016	-	83134002	●	83134015	83134011	83134009	●	83134056	
			On right (D)	83134005	83134012	-	83134007	●	●	83134006	●	83134053	●	
Dual-current (DORE)	83132	IW2	Standard	83132090	●	●	●	●	●	●	●	●	●	
	83133	IW2	Standard	83133252	●	●	●	●	83133247	83133122	●	●	●	
		IX1	Standard	●	83133173	●	●	●	●	83133246	●	●	●	
	83134	IX1	Standard	83134046	●	-	83134028	●	●	83134014	●	●	●	
			On right (D)	●	●	-	●	●	●	●	●	●	●	

Installation recommendations

See "Basic technical concepts"

For use above 125 V, with 54A, 54A2 or 54B actuator: to ensure protection against electric shock, actuation shall be made by an insulated part.

For 83133 and 83134, and when used above 50V: to ensure protection against electric shock after installation in the application, please consult us when conductive parts are located less than 1mm from case/cover mating surfaces, on the side walls.

How to order

Use the 8 digit part numbers when they are defined

Other cases, precise: Type of microswitch** - Function - Connection - UL approval* - Actuator* - Fixing position* - Adaptation*

* if needed **if Dual-current, add DORE

Example: 83134 DORE I X1 UL 54E R14.1 D

Standard product

Product made to order

Contact us

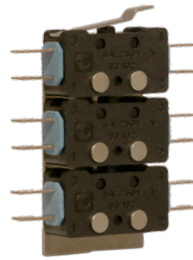
Examples of special adaptations



Maintained action variant (bistable reset switch) for level regulation. Has lever with hole for push-pull actuation by a rod with 2 stops



Plunger with ball (Ø 5 mm) for lateral approach from any direction



3 pole assembly (3PDT) on metal plate: 833162



«US format»: housing with 1/2" (12.7 mm) mounting hole pitch (831337)



Flexible pre-armed lever: provides both precise operating position and extra-long overtravel (5 mm)

Warning:

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