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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⎓ to 6 A 250 V~**
- **Operating temperature -40 °C up to +150 °C**
- **Wide choice of actuators on 2 symmetric fixing positions**







Main specifications

		Side outputs 83132		Rear outputs 83133		Front face outputs 83134	
		Standard	Dual-current (DORE)	Standard	Dual-current (DORE)	Standard	Dual-current (DORE)
Function	**Connections**						
I (changeover)	W2 (solder or QC 2.8x0.5)	**83132030**	**83132053**	**83133035**	**83133073**	-	-
I (changeover)	X1 (PCB)	-	-	**83133045**	**83133052**	**83134001**	**83134003**
R (normally closed)	W2 (solder or QC 2.8x0.5)	**83132032**	●	**83133042**	**83133210**	-	-
R (normally closed)	X1 (PCB)	-	-	●	●	-	-
C (normally open)	W2 (solder or QC 2.8x0.5)	**83132040**	●	**83133050**	●	-	-
C (normally open)	X1 (PCB)	-	-	●	●	-	-
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 → +125		-40 → +125		-40 → +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)
- 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
- Certification marks: c UL us on request / EAC

Note: fixing holes are fitted with metal inserts

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 and NF approved versions up to 480 V~**

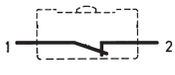
Principles

Double break snap-action switch

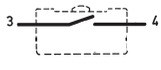
Changeover - SPDT (form Za)



Normally closed - SPST-NC (form Y)



Normally open - SPST-NO (form X)



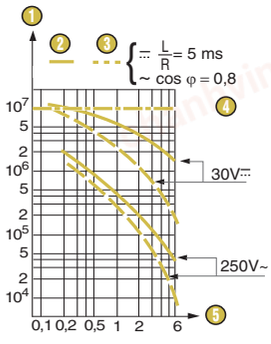
Both circuits must be used at same polarity

Standard product | Product made to order | ● Contact us

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Curves

Operating curve for types 83132 - 83133 - 83134



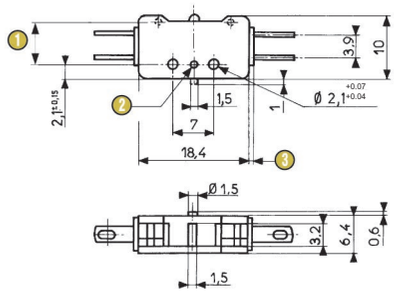
1. Number of cycles
2. Resistive circuit
3. Inductive circuit
4. Mechanical life limit
5. Current in Amps

* 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.

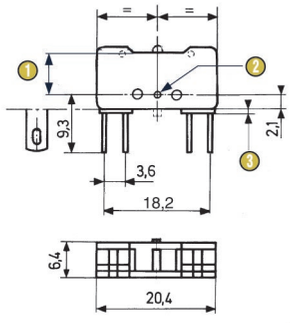
Dimensions

Products

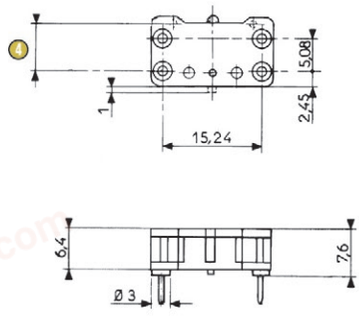
83132



83133



83134

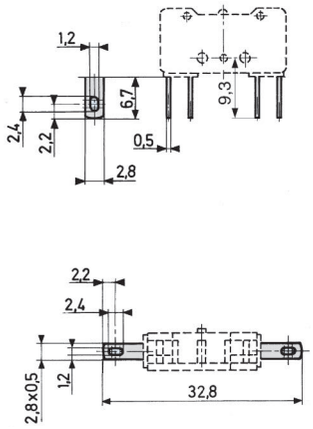


1. Total travel position = 7.35 max.
2. Ø1.5, depth 0.7
3. 2 PTFE plates, thickness 0.8

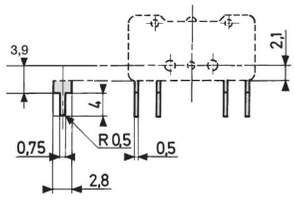
4. Total travel position = 7 max.

Connections

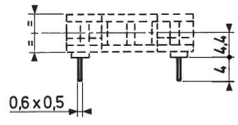
W2 solder or quick-connect 2.8 x 0.5 (83132 - 83133)



X1 for printed circuit board (83133)



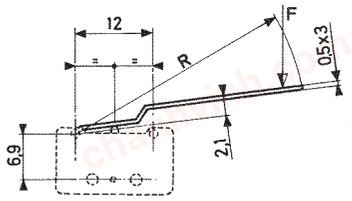
X1 for printed circuit board (83134)



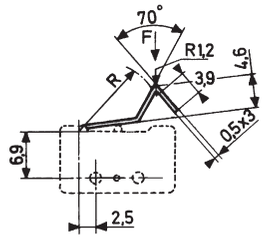
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Actuators

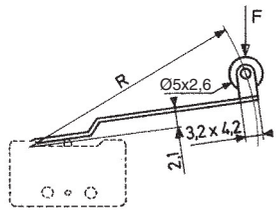
54A flat



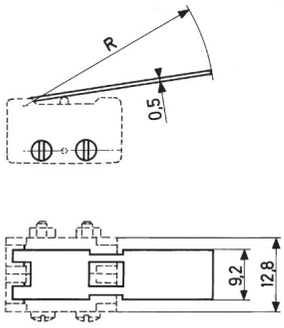
54B folded



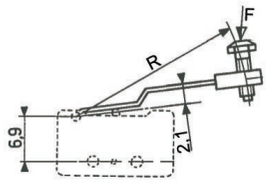
54E roller



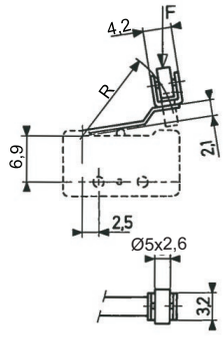
54A2 2-pole



54D adjustable

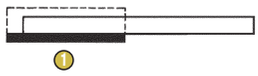


54EL transverse roller



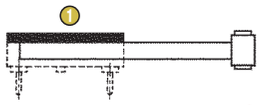
Standard mounting position

For 831320 and 831330



1 Cover

For 831340



1 Cover

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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 83134	83133 83134	83133 83134	83133 83134	83133 83134
Operating position	mm	9.5 ±0.8 9.2 ±0.8	10 ±1.5 9.7 ±0.15	14.2 ±0.3 13.9 ±0.3	15.5 ±0.8 15.2 ±0.8	16.1 ±1.4 15.8 ±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 83134	83133	83133 83134	83133 83134	83133 83134	
Operating position	mm	12.7 ±0.8 12.4 ±0.8	8.8 ±0.8	12.6-17.6 ±1.2 12.3-17.3 ±1.2	14.2 ±0.3 13.9 ±0.3	15.6 ±0.8 15.3 ±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	•	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	•	•
		On right (D)	83134005	83134012	-	83134007	•	•	83134006	•	•	•
Dual-current (DORE)	**83132** IW2	Standard	83132090	•	•	•	•	•	•	•	•	•
	83133 IW2	Standard	•	•	•	•	•	•	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 -Contact* - UL approval* - Actuator* - Fixing position* - Adaptation*
* if needed
Example: 83134 I X1 DORE UL 54E R14.1 D

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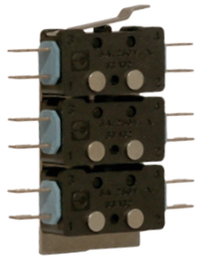
Examples of special adaptations



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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