

# XC

## Snap-action Microswitches

Subminiature

### XC

- Characteristics
- Wide range of actuating forces
  - Long mechanical and electrical life
  - Solder, PCB, faston (quick connect) terminals

Rating 250 V, 10 A

Dimensions (mm) 19,9 × 9,5 × 6,4

Actuator Plunger, plain, roller, plastic, simulated roller lever

Approvals UL, cUL, CSA, ENEC



### Preferred Range

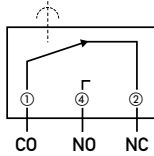
Ordering Reference	Actuating Force (N) (ozf)		Operating pos. (mm) (in)		Terminal	Circuit	Actuator	Contacts	Electrical rating ENEC	UL/CSA
XCG3Z1	1.7	6.07	8.4	0.33	Solder	C0	Plunger	Ag	6(2) A	5 A
XCG3-J1Z1	0.6	2.14	10.2	0.40	Solder	C0	Plain lever	Ag	6(2) A	5 A
XCG3-S1Z1	0.7	2.49	15.6	0.61	Solder	C0	Roller lever	Ag	6(2) A	5 A
XCG5Z1	1.7	6.07	8.4	0.33	Faston 2.8 × 0.5 mm	C0	Plunger	Ag	6(2) A	5 A
XCG5-J1Z1	0.6	2.14	10.2	0.40	Faston 2.8 × 0.5 mm	C0	Plain lever	Ag	6(2) A	5 A
XCG5-S1Z1	0.7	2.49	15.6	0.61	Faston 2.8 × 0.5 mm	C0	Roller lever	Ag	6(2) A	5 A
XCG8Z1	1.7	6.07	8.4	0.33	PCB	C0	Plunger	Ag	6(2) A	5 A
XCG8-J1Z1	0.6	2.14	10.2	0.40	PCB	C0	Plain lever	Ag	6(2) A	5 A
XCG8-S1Z1	0.7	2.49	15.6	0.61	PCB	C0	Roller lever	Ag	6(2) A	5 A
XCF3Z1	3	10.70	8.4	0.33	Solder	C0	Plunger	Ag	10(3) A	10.1 A
XCF3-J1Z1	1.05	3.74	10.2	0.40	Solder	C0	Plain lever	Ag	10(3) A	10.1 A
XCF3-S1Z1	1.1	3.92	15.6	0.61	Solder	C0	Roller lever	Ag	10(3) A	10.1 A

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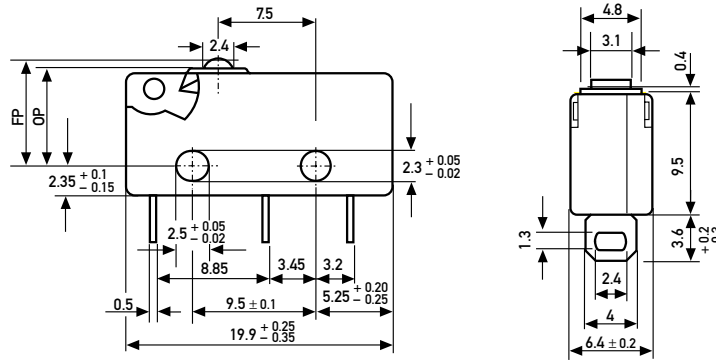
### Specifications

Housing	Melamine-Formaldehyd, Thermosetting
Plunger	POM for T85, PBT for T125, PPS for T150
Mechanism	Snap-action system with stainless steel tension spring
Functions	Change-over, NO, NC
Contacts	Fine silver (Ag) or 10 µm Gold (Au), microprofile
Terminals	Solder, faston and various PCB terminals (side of housing or side of lid, as well as 1/10" o lin pitch)
Temperature range °C	Between -40°C and +85°C (special version up to 140°C)
Mechanical life	up to 5-10 <sup>7</sup> cycles (sinusoidal actuation)
Protection	Enclosure IP40
Mounting	Side mounting through mounting holes
Actuators	Stainless steel, PA66-GF35
Contact Carrier	CuZn or CuSn

Circuit diagram



Dimensions



FP = Free Position  
OP = Operating Position

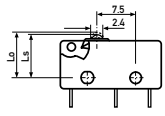
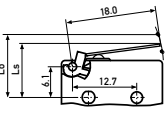
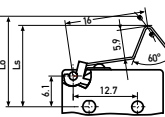
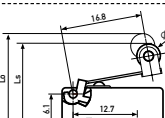
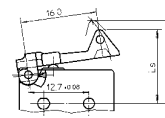
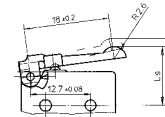
### Recommended maximum electrical ratings

	Voltage (VAC)	Resistive load (A)	Motor load (A)	Approvals ENEC (A)		(VAC)	Approvals UL (A)	(VAC)	Motor load
XCF	250	10	3	10 (3)	1E4	250	10,1	125/250	¼HP
XCG	250	6	2	6 (2)	5E4	250	5	250	-
XCK	250	5	3	5 (3)	1E4	250	5	250	-
XCC	250	3	1	3 (1)	5E4	250	2	250	-
XCH	250	1,5	0,3	1,5 (0,3)	5E4	250	1	250	-

Breaking capacities in the tables refer to silver contacts.

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## Operating Characteristics

Actuator	Reference	Actuating Force		Release Force		Free Position		Operating Position		Movement Differential		Total travelled position		
		Maximum (N)	(ozf)	Minimum (N)	(ozf)	Maximum (mm)	(in)	Maximum (mm)	(in)	Maximum (mm)	(in)	Maximum (mm)	(in)	
	XCF..	3	10.70	0.5	1.78	8.8	0.34	8.4	0.33	$\left. \begin{array}{l} +0.1 \\ -0.3 \end{array} \right\} +0.003$ $\left. \begin{array}{l} 0.33 \\ 0.33 \end{array} \right\} -0.011$	0.1	0.003	7.7	0.303
	XCG..	1.7	6.07	0.3	1.07	8.8	0.34	8.4	0.33		0.1	0.003	7.7	0.303
	XCK..	1.2	4.28	0.2	0.71	8.8	0.34	8.4	0.33		0.1	0.003	7.7	0.303
	XCC..	0.6	2.14	0.1	3.57	8.8	0.34	8.4	0.33		0.1	0.003	7.7	0.303
	XCH..	0.35	1.24	0.07	0.24	8.8	0.34	8.4	0.33		0.1	0.003	7.7	0.303
	XCF..	1.05	3.74	0.16	0.57	12.2	0.48	10.2 ± 1.0	0.401 ± 0.039	0.6	0.023	8.4	0.33	
	XCG..	0.6	2.14	0.08	0.28	12.2	0.48	10.2 ± 0.9	0.401 ± 0.035	0.5	0.019	8.5	0.337	
	XCK..	0.42	1.49	0.056	0.19	12.2	0.48	10.3 ± 0.9	0.405 ± 0.035	0.5	0.019	8.7	0.342	
	XCC..	0.22	0.78	0.025	0.08	12.2	0.48	10.3 ± 0.9	0.404 ± 0.035	0.4	0.015	8.7	0.342	
	XCH..	0.13	0.46	0.02	0.07	12.2	0.48	10.4 ± 0.9	0.409 ± 0.035	0.4	0.015	8.8	0.346	
Width of lever 4.0 mm/0.16 in														
	XCF..	1.1	3.92	0.17	0.6	17.6	0.69	15.6 ± 1.1	0.614 ± 0.043	0.6	0.023	14	0.551	
	XCG..	0.7	2.49	0.09	0.32	17.6	0.69	15.6 ± 1.0	0.614 ± 0.039	0.5	0.019	14.1	0.555	
	XCK..	0.43	1.53	0.058	0.2	17.6	0.69	15.7 ± 1.0	0.618 ± 0.039	0.4	0.015	14.3	0.562	
	XCC..	0.23	0.82	0.026	0.09	17.6	0.69	15.7 ± 1.0	0.618 ± 0.039	0.4	0.015	14.3	0.562	
	XCH..	0.14	0.49	0.021	0.07	17.6	0.69	15.8 ± 1.0	0.622 ± 0.039	0.4	0.015	14.4	0.566	
Width of lever 4.0 mm/0.16 in														
	XCF..	1.1	3.92	0.17	0.6	17.6	0.69	15.6 ± 1.2	0.614 ± 0.047	0.6	0.023	14.1	0.555	
	XCG..	0.7	2.49	0.09	0.32	17.6	0.69	15.6 ± 1.1	0.614 ± 0.043	0.5	0.019	14.2	0.559	
	XCK..	0.43	1.53	0.058	0.2	17.6	0.69	15.7 ± 1.1	0.618 ± 0.043	0.4	0.015	14.4	0.566	
	XCC..	0.23	0.82	0.026	0.09	17.6	0.69	15.7 ± 1.1	0.618 ± 0.043	0.4	0.015	14.4	0.566	
	XCH..	0.14	0.49	0.021	0.07	17.6	0.69	15.8 ± 1.1	0.622 ± 0.043	0.4	0.015	14.5	0.57	
Width of roller 4.0 mm/0.16 in. for high temperature use -T1 lever														
	XCF..	1.3	4.62	0.17	0.6	17.6	0.69	15.6 ± 1.1	0.614 ± 0.043	0.6	0.023	14	0.551	
	XCG..	0.75	2.67	0.09	0.32	17.6	0.69	15.6 ± 1.0	0.614 ± 0.039	0.5	0.019	14.1	0.555	
	XCK..	0.6	2.13	0.058	0.2	17.6	0.69	15.7 ± 1.0	0.618 ± 0.039	0.4	0.015	14.3	0.562	
	XCC..	0.31	1.10	0.026	0.09	17.6	0.69	15.7 ± 1.1	0.618 ± 0.043	0.4	0.015	14.3	0.562	
	XCH..	0.22	0.78	0.021	0.07	17.6	0.69	15.8 ± 1.0	0.622 ± 0.039	0.4	0.015	14.4	0.566	
	XCF..	1.05	3.74	0.16	0.57	14.3	0.56	12.5 ± 1.1	0.49 ± 0.043	0.6	0.023	10.6	0.417	
	XCG..	0.6	2.13	0.08	0.28	14.3	0.56	12.5 ± 1.0	0.49 ± 0.039	0.5	0.019	10.7	0.421	
	XCK..	0.42	1.49	0.056	0.21	14.3	0.56	12.6 ± 1.0	0.5 ± 0.039	0.5	0.015	10.8	0.425	
	XCC..	0.22	0.78	0.025	0.11	14.3	0.56	12.6 ± 1.0	0.5 ± 0.039	0.4	0.015	10.8	0.425	
	XCH..	0.13	0.46	0.02	0.07	14.3	0.56	12.7 ± 1.0	0.5 ± 0.039	0.4	0.015	10.9	0.429	

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## Ordering Reference

Actuating	XCF	3 N	6,07 ozf
Characteristic	XCG	1,7 N	10,70 ozf
	XCK	1,2 N	4,28 ozf
	XCC	0,6 N	2,14 ozf
	XCH	0,35 N	1,24 ozf

Circuits	No digit	Change-over
	4	Normally closed (NC)
	5	Normally open (NO)

Terminals	3	Solder
	4	Faston 2.8 × 0.5 mm DIN
	5	Faston 2.8 × 0.5 mm IEC/AMP
	8	PCB (straight)
	9	PCB (1/10" pitch)
	10	Side mounting PCB, Base side
	11	Side mounting PCB, cover side

Other terminals on special request.

Version	No digit	Housing material MF, Europe up to 85°C, UL up to 90°C
	V	(High temperature 125°C), Housing material MF / Plunger PBT, Europe up to 125°C, UL up to 130°C
	W	(High temperature 140°C), Housing material MF / Plunger PPS, Europe up to 140°C, UL up to 150°C

Contacts	No digit	Ag (silver)
	-81	μ profile Au 10 μm

Actuators	No digit	Plunger
	-J1	Plain lever 18,0 mm (0.71 in)
	-J2	Plain lever 25,0 mm (0.98 in)
	-J5	Plain lever 40,0 mm (1.57 in)
	-S1	Roller lever 16,8 mm (0.66 in)
	-L1	Cam follower 16,0 mm (0.63 in)
	-P5	Plastic lever 16,0 mm (0.63 in)
	-P6	Plastic lever 18,0 mm (0.71 in)

Other actuators on special request.