

X4

Snap-action Microswitches

Subminiature

X4

Characteristics	<ul style="list-style-type: none">■ thermoplastic housing■ long mechanical and electrical life■ solder, PCB and faston terminals
Rating	250 VAC, 12 A max.
Dimensions (mm)	19.9 × 9.7 × 6.4
Actuator	<ul style="list-style-type: none">■ plunger■ plain levers■ cam follower lever■ roller levers
Approvals	UL, cUL, CSA, ENEC, CQC



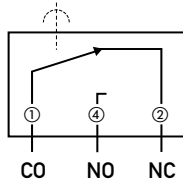
Preferred Range

Ordering Reference	Actuating Force (N)	Actuating Force (ozf)	Operating pos. (mm)	Terminal	Circuit	Actuator	Contacts	Electrical rating ENEC	UL/CSA
X4F303K1AA	3.3	11,869	8,4	Solder	CO	Plunger	Ag	12 (6) A	12 A
X4F305K1AA	3.3	11,869	8,4	Faston	CO	Plunger	Ag	12 (6) A	12 A
X4G303K1BB	2	7,193	8,4	Solder	CO	Plunger	Ag	6 (3) A	6 A
X4G305K1BB	2	7,193	8,4	Faston	CO	Plunger	Ag	6 (3) A	6 A
X4C303K1CC	0.75	2,697	8,4	Solder	CO	Plunger	Ag	3 (2) A	3 A
X4C305K1CC	0.75	2,697	8,4	Faston	CO	Plunger	Ag	3 (2) A	3 A

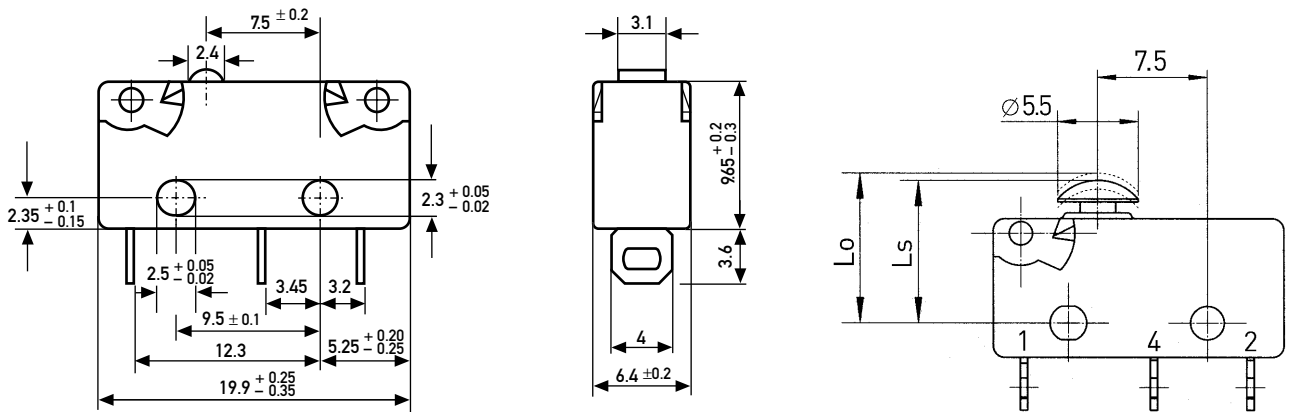
Specifications

Housing	Thermoplastic
Plunger	Thermoplastic
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, PCB, side-facing PCB and 'PCB terminals with 0.1" pitch
Temperature range °C	Between -40°C and +85°C
Mechanical life	10 ⁶ cycles minimum
Protection	Enclosure – IP 40
Mounting	Side mounting or PCB
Actuators	Stainless steel, PA66–GF35
Contact carrier	CuZn or CuSn

Circuit diagram



Dimensions

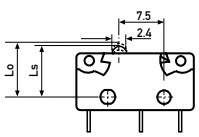
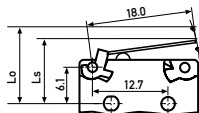
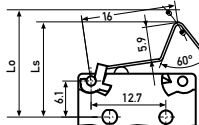
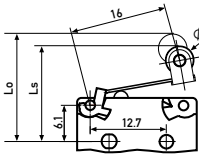


Recommended maximum electrical ratings

	Voltage (VAC)	Resistive load (A)	Motor load (A)	Approvals ENEC (A)		(VAC)	Approvals UL (A)	(VAC)
X4F	250	12	6	12 (6)	1E4	250	12	125/250
X4G	250	6	3	6 (3)	5E4	250	6	125/250
X4C	250	3	2	3 (2)	5E4	250	3	125/250

Breaking capacities in the tables refer to silver contacts

Operating Characteristics

Actuator	Reference	Actuating Force Maximum		Release Force Minimum		Free Position Maximum		Operating Position Maximum		Movement Differential Maximum		Full Overtravel Position		
		(N)	(ozf)	(N)	(ozf)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	
	X4F	3.3	11.869	0.55	1.978	8.8	0.35	8.4	$\left. \begin{matrix} 0,33 \\ +0,1 \\ -0,3 \end{matrix} \right\} 0,33$	$\left. \begin{matrix} 0,2 \\ +0,004 \\ -0,01 \end{matrix} \right\} 0,2$	0.2	0.008	7.7	0.3
	X4G	2.0	7.193	0.35	1.258	8.8	0.35	8.4						
	X4C	0.75	2.697	0.13	0.467	8.8	0.35	8.4						
	X4F	1.16	4.172	0.18	0.647	12.2	0.48	10.2 ±1.0	0.4 ±0.035	0.6	0.024	8.4	0.33	
	X4G	0.7	2.517	0.094	0.338	12.2	0.48	10.2 ±0.9	0.4 ±0.039	0.5	0.02	8.5	0.33	
	X4C	0.28	1.007	0.031	0.107	12.2	0.48	10.3 ±0.9	0.4 ±0.039	0.4	0.016	8.7	0.34	
Width of lever 4.0 mm/0.16 in														
	X4F	1.21	4.352	0.19	0.683	17.6	0.69	15.6 ±1.1	0.61 ±0.043	0.6	0.024	14	0.55	
	X4G	0.82	2.949	0.11	0.395	17.6	0.69	15.6 ±1.0	0.61 ±0.039	0.5	0.02	14.1	0.56	
	X4C	0.29	1.043	0.033	0.118	17.6	0.69	15.7 ±1.0	0.61 ±0.039	0.4	0.016	14.3	0.56	
Width of lever 4.0 mm/0.16 in														
	X4F	1.21	4.352	0.19	0.683	17.6	0.69	15.6 ±1.2	0.61 ±0.047	0.6	0.024	14.1	0.56	
	X4G	0.82	2.949	0.11	0.395	17.6	0.69	15.6 ±1.1	0.61 ±0.043	0.5	0.02	14.2	0.56	
	X4C	0.29	1.043	0.036	0.129	17.6	0.69	15.7 ±1.1	0.62 ±0.043	0.4	0.016	14.4	0.57	
Width of roller 4.0 mm/0.16 in														

Type coding key for standard products

Basic type	X4	Example: X4	F	3	03	K	1	A	A	J1	1											
Operating force	F	extra high force	G	high force	C	low force																
Circuits diagram	3	Change-over (CO)	4	Normally closed (NC)	5	Normally open (NO)	} with X4F and X4G not possible (except gold contacts)															
Terminals	03	Solder terminal	04	Faston terminal 2.8 × 0.5 mm DIN	05	Faston terminal 2.8 × 0.5 mm	08	PCB-terminal, length 4.5 mm	09	PCB-terminal, length 4.5 mm, (pitch 7.6)	10	PCB-terminal, formed to base	11	PCB-terminal, formed to lid	12	PCB-terminal, formed to base, (pitch 7.6)	13	PCB-terminal, formed to lid, (pitch 7.6)	14	PCB-terminal, length 3.5 mm	15	PCB-terminal, length 3.5 mm, (pitch 7.6)
Body	K	with unequally-spaced terminals																				
Contacts material	1	Silver/Silver	8	Gold microprofile (Crosspoint) contacts	9	Gold-plated																
UL/C-UL ratings	A	12 A, 125/250 VAC	B	6 A, 125/250 VAC	C	3 A, 125/250 VAC	D	0.1 A, 125 VAC	N	no approvals												
EN/IEC ratings	A	12 (6) A, 250 V~ 1E4 T85 μ approved	B	6 (3) A, 250 V~ 5E4 T85 μ approved	C	3 (2) A, 250 V~ 5E4 T85 μ approved	F	10 (4) A, 250 V~ 1E4 T125 μ approved	L	1 A, 30 V = not approved	M	0.3 A, 30 V~ 1E4 not approved	S	special approval according to EN 60947-5-1								
Type of actuators	No symbol	without lever		J1	Plain lever	18.0 mm (0.71 in)	L1	Cam follower	16.0 mm (0.63 in)	S1	Roller lever	16.0 mm (0.63 in)										
Other actuators on special request																						
Actuator position	No symbol	without lever		1	Lever above terminal 1	2	Lever above terminal 2															