

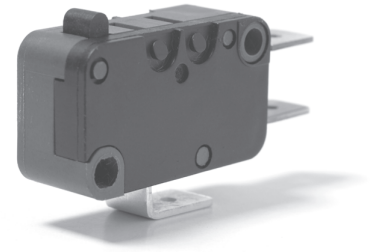
X3

Snap-action Microswitches

Miniature

X3

Characteristics	<ul style="list-style-type: none"> ■ 8 mm creepage and 8 mm clearance distance to the actuator ■ Long mechanical and electrical life
Rating	250 VAC, 21 A
Dimensions (mm)	27,8 × 15,9 × 10,3
Actuator	Plunger, plain levers, roller levers, simulated roller (cam follower) levers.
Approvals	UL, cUL, CSA, ENEC, CQC



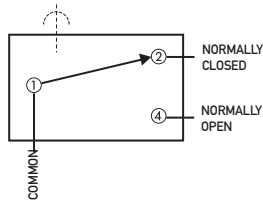
Preferred Range

Ordering Reference	Actuating Force (N)	(ozf)	Operating pos. (mm)	Terminal	Circuit	Actuator	Contacts	Electrical rating ENEC	UL/CSA
X3M302K2KA	1,60	5,72	14,7 +0.2/-0.4	Faston	CO	Plunger	Ag/AgNi10	16 (6) A	20.5 A
X3M302K2KAJ32	0,88	3,15	15 ± 1,0	Faston	CO	Plain lever	Ag/AgNi10	16 (6) A	20.5 A
X3M302K2KAJ62	0,57	2,04	14,8 ± 1,5	Faston	CO	Plain lever	Ag/AgNi10	16 (6) A	20.5 A
X3M302K2KAT02	2,00	7,15	20,2 ± 0,7	Solder	CO	Roller lever	Ag/AgNi10	16 (6) A	20.5 A
X3M303K2KA	1,60	5,72	14,7 +0.2/-0.4	Solder	CO	Plunger	Ag/AgNi10	16 (6) A	20.5 A
X3M306K2KA	1,60	5,72	14,7 +0.2/-0.4	Faston	CO	Plain lever	Ag/AgNi10	16 (6) A	20.5 A
X3C302K2LB	0,80	2,86	14,7 +0.2/-0.4	Faston	CO	Plunger	Ag/AgNi10	10 (3) A	12 A
X3C302K2LBJ32	0,35	1,25	15 ± 1,0	Faston	CO	Plain lever	Ag/AgNi10	10 (3) A	12 A
X3C303K2LB	0,80	2,86	14,7 +0.2/-0.4	Solder	CO	Plunger	Ag/AgNi10	10 (3) A	12 A
X3C306K2LB	0,80	2,86	14,7 +0.2/-0.4	Faston	CO	Plunger	Ag/AgNi10	10 (3) A	12 A
X3L302K6DD	1,50	5,36	14,7 +0.2/-0.4	Faston	CO	Plunger	Ag/AgCdO	21 (8) A	21 A
X3L303K6DD	1,50	5,36	14,7 +0.2/-0.4	Solder	CO	Plunger	Ag/AgCdO	21 (8) A	21 A

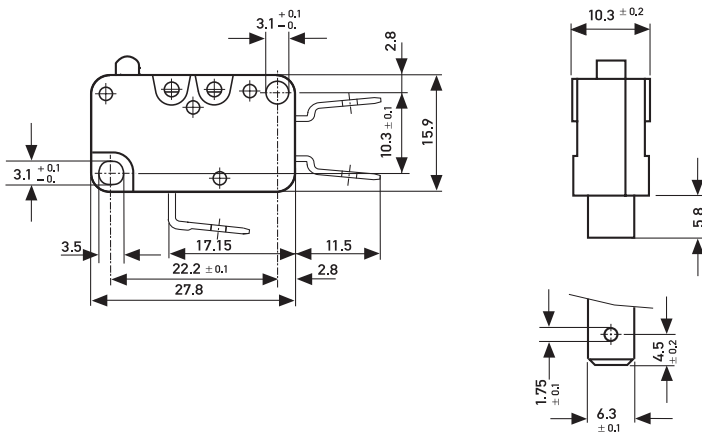
Specifications

Housing	Thermoplastic
Plunger	Thermoplastic
Mechanism	Snap-action, single pole beryllium bronze blade mechanism with wiping contacts
Contact carrier	Brass
Contacts	Fine silver (Ag), silver nickel (AgNi10), gold-plated 4 μm (Au), silver cadmium oxide (AgCd0)
Terminals	Solder, Faston and RAST 5 terminals
Temperature range °C	Between -40°C and +125°C
Mechanical life	10 ⁵ cycles minimum 2, 10 ⁶ cycles maximum (Actuation: sinusoidal and maximum up to 80% of the overtravel)
Protection	Enclosure IP40
Mounting	Side mounting via mounting holes
Actuators	Stainless steel

Circuit diagram



Dimensions

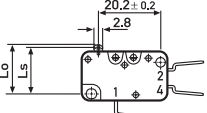
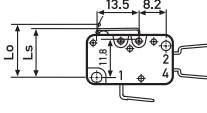
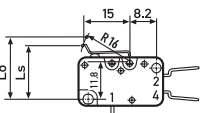
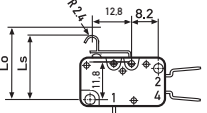
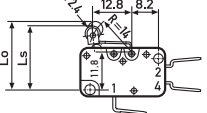


Recommended maximum electrical ratings

	Voltage (VAC)	Resistive load (A)	Motor load (A)	Approvals ENEC (A)	(VAC)	Approvals UL (A)	(VAC)	Motor load
X3M	250	16	6	16 (6)	5E4	20,5	250	1 ½ HP
X3C	250	10	3	10 (3)	5E4	20,5	125	½ HP
						12	250	½ HP
X3L	250	21	8	21 (8)	1E4	21	250	2 HP
						21	125	1 HP

Current breaking capacities in the tables refer to Ag/AgNi10 contacts with the exception of X3L Ag/AgCd0

Operating Characteristics

Actuator	Reference	Actuating Force Maximum		Release Force Minimum		Free Position Maximum		Operating Position		Movement Differential		Full overtravel position		
		(N)	(ozf)	(N)	(ozf)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)	
Plunger 	X3C3	0,8	2,877	0,05	0,179	15,75	0,62	14,7	$\left. \begin{matrix} +0,2 \\ -0,4 \end{matrix} \right\} 0,578$	$\left. \begin{matrix} +0,008 \\ -0,006 \end{matrix} \right\}$	0,25	0,009	13,2	0,52
	X3M3	1,6	5,755	0,2	0,719	15,75	0,62	14,7			0,25	0,009	13,2	0,52
J02 Lever 	X3C3 ..	0,8	2,877	0,045	0,161	16,5	0,649	15,1 ± 0,5	0,59 ± 0,02	0,35	0,014	14	0,55	
	X3M3..	2	7,193	0,18	0,647	16,5	0,649	15,1 ± 0,5	0,59 ± 0,02	0,35	0,014	14	0,55	
Width of lever 7.0 mm/0.28 in														
M02 Lever 	X3C3 ..	0,5	1,798	0,04	0,143	19,2	0,755	17,5 ± 0,7	0,69 ± 0,028	0,35	0,014	16,4	0,65	
	X3M3..	1,65	5,934	0,16	0,575	19,2	0,755	17,5 ± 0,7	0,69 ± 0,028	0,35	0,014	16,4	0,65	
Width of lever 7.0 mm/0.28 in														
L02 Lever 	X3C3 ..	0,8	2,877	0,045	0,161	21,8	0,858	20,5 ± 0,6	0,81 ± 0,024	0,35	0,014	19,5	0,76	
	X3M3..	2	7,193	0,19	0,683	21,8	0,858	20,5 ± 0,6	0,81 ± 0,024	0,3	0,011	19,5	0,76	
Width of lever 7.0 mm/0.28 in														
T02 Lever 	X3C3 ..	0,8	2,877	0,045	0,161	21,8	0,858	20,2 ± 0,7	0,79 ± 0,028	0,35	0,014	19,3	0,76	
	X3M3..	2	7,193	0,19	0,683	21,8	0,858	20,2 ± 0,7	0,79 ± 0,028	0,35	0,014	19,3	0,76	
Width of roller 7.0 mm/0.28 in														

Ordering Reference

Type	X3	
Actuating Force	M	Standard force Fs max.: 160 cN
	L	Standard force Fs max.: 150 cN
	C	Low force Fs max.: 80 cN
Circuit	3	Change-over
	4	Normally closed (NC)
	5	Normally open (NO)
Terminals	02	Faston terminal 6.3 × 0.8 mm
	03	Solder terminal
	06	Faston terminal 4.8 × 0.5 mm
	10	Faston terminal 4.8 × 0.8 mm
	12	Solder terminal, short
	13	PCB-terminal, bent to lid
	14	PCB-terminal, bent to base
	15	Faston terminal RAST 5 6.3 × 0.8 mm
	16	Faston terminal RAST 5 4.8 × 0.8 mm
Housing design	K	Thermoplastic
Contacts	2	Ag/AgNi10
	6	AgCd0
	8	Gold plated
Approval classes in accordance with UL/cUL/CSA	A	125/250 VAC, 20.5 A
		125/250 VAC, 15 A 100'000 cy.
		250 VAC, 1½ HP; 125 VAC, ½ HP
	D	250 VAC, 21 A
		250 VAC, 2 HP; 125 VAC, 1 HP
	E	125/250 VAC, 21 A
		125/250 VAC, 15 A 100'000 cy.
		250 VAC, 2 HP; 125 VAC, 1 HP
	K	125/250 VAC, 20.5 A
		250 VAC, 1½ HP; 125 VAC, ½ HP
	L	125/250 VAC, 12 A
		250 VAC, ½ HP; 125 VAC, ½ HP
	M	125/250 VAC, 6 A
		250 VAC, ½ HP; 125 VAC, ½ HP
	N	No approvals
	P	125/250 VAC, 20.5 A
		250 VAC, 1½ HP; 125 VAC, ½ HP
		250 VDC, ¼ A; 125 VDC, ¼ A
	Q	125/250 VAC, 12 A
		250 VAC, ½ HP; 125 VAC, ½ HP
		250 VDC, ¼ A; 125 VDC, ¼ A
	R	125/250 VAC, 6 A
		250 VAC, ½ HP; 125 VAC, ½ HP
		250 VDC, ¼ A; 125 VDC, ¼ A
Approval classes in accordance with ENEC	A	250 V, 16 (6) A ~ 5E4 T125 µ approved
	B	250 V, 10 (3) A ~ 5E4 T125 µ approved
	C	250 V, 6 (3) A ~ 5E4 T125 µ approved
	D	250 V, 21 (8) A ~ 1E4 T105 µ approved
Actuators	No digit	Without lever
	J0	Plain lever
	L0	Simulated roller lever
	M0	Customer specified lever (KV)
	T0	Roller level
	U0	Externally mounted lever
Actuator position	No digit	Without lever
	2	Rear lever
	4	Front lever