

X3 - Low current

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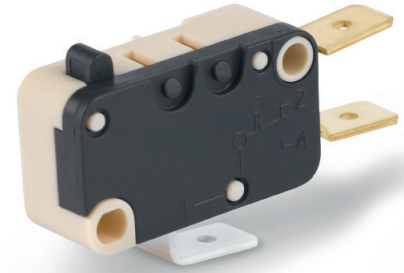
- Characteristics
- 8 mm creepage and clearance distance to the actuator
 - long mechanical and electrical life
 - solder, faston and PCB terminal
 - compliant to glow wire requirements IEC 60335-1, 4. ed.

Rating 250 VAC, 6 A max, 5mA 5VDC

Dimensions (mm) 27,8 × 15,9 × 10,3

- Actuator
- plunger
 - straight lever
 - simulated roller levers
 - roller levers

Approvals UL, cUL, CSA, ENEC, CQC



Preferred Range

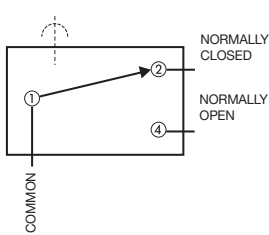
Ordering Reference	Actuating Force		Operating pos. (mm)	(in)	Terminal	Circuit	Actuator	Contacts	Electrical rating	
	(N)	(ozf)							ENEC 61058	UL 61058
X3C302N9SF	0,8	2,87	14,7 +0,2/-0,4	0,58	Faston	CO	Plunger	Au/Ag/CuNi44	0.1 (0.05) A	0.1 A
X3C306N9SF	0,8	2,87	14,7 +0,2/-0,4	0,58	Faston	CO	Plunger	Au/Ag/CuNi44	0.1 (0.05) A	0.1 A
X3C312N9SF	0,8	2,87	14,7 +0,2/-0,4	0,58	Solder	CO	Plunger	Au/Ag/CuNi44	0.1 (0.05) A	0.1 A
X3C313N9SF	0,8	2,87	14,7 +0,2/-0,4	0,58	PCB	CO	Plunger	Au/Ag/CuNi44	0.1 (0.05) A	0.1 A
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X3M302N9SF	1,6	5,76	14,7 +0,2/-0,4	0,58	Faston	CO	Plunger	Au/Ag/CuNi44	0.1 (0.05) A	0.1 A
X3M306N9SF	1,6	5,76	14,7 +0,2/-0,4	0,58	Faston	CO	Plunger	Au/Ag/CuNi44	0.1 (0.05) A	0.1 A
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X3M314N9SF	1,6	5,76	14,7 +0,2/-0,4	0,58	PCB	CO	Plunger	Au/Ag/CuNi44	0.1 (0.05) A	0.1 A
X3C302N3TG	0,8	2,87	14,7 +0,2/-0,4	0,58	Faston	CO	Plunger	AgNi0.15	6 (3) A	6 A
X3C306N3TG	0,8	2,87	14,7 +0,2/-0,4	0,58	Faston	CO	Plunger	AgNi0.15	6 (3) A	6 A
X3C312N3TG	0,8	2,87	14,7 +0,2/-0,4	0,58	Solder	CO	Plunger	AgNi0.15	6 (3) A	6 A
X3C313N3TG	0,8	2,87	14,7 +0,2/-0,4	0,58	PCB	CO	Plunger	AgNi0.15	6 (3) A	6 A
X3C314N3TG	0,8	2,87	14,7 +0,2/-0,4	0,58	PCB	CO	Plunger	AgNi0.15	6 (3) A	6 A
X3M302N3TG	1,6	5,76	14,7 +0,2/-0,4	0,58	Faston	CO	Plunger	AgNi0.15	6 (3) A	6 A
X3M306N3TG	1,6	5,76	14,7 +0,2/-0,4	0,58	Faston	CO	Plunger	AgNi0.15	6 (3) A	6 A
X3M312N3TG	1,6	5,76	14,7 +0,2/-0,4	0,58	Solder	CO	Plunger	AgNi0.15	6 (3) A	6 A
X3M313N3TG	1,6	5,76	14,7 +0,2/-0,4	0,58	PCB	CO	Plunger	AgNi0.15	6 (3) A	6 A
X3M314N3TG	1,6	5,76	14,7 +0,2/-0,4	0,58	PCB	CO	Plunger	AgNi0.15	6 (3) A	6 A

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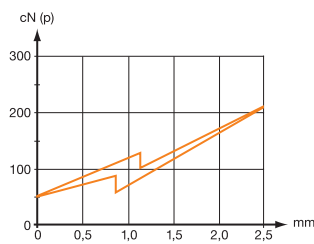
Specifications

Housing	Thermoplastic
Plunger	Thermoplastic
Mechanism	Snap-action, single pole beryllium bronze blade mechanism with wiping contacts
Contact carrier	Brass
Contacts	Silver nickel (AgNi0.15), gold plated
Terminals	Solder, Faston and PCB
Temperature range °C	Between -40°C and +125°C
Mechanical life	Minimum cycles X3M: 2×10^6 / X3C: 2×10^6 (Actuation: sinusoidal and maximum up to 80% of the overtravel)
Protection	Enclosure IP40
Mounting	Side mounting via mounting holes
Actuators	Stainless steel (lever)

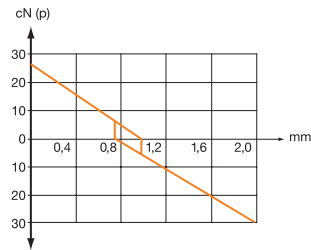
Circuit diagram



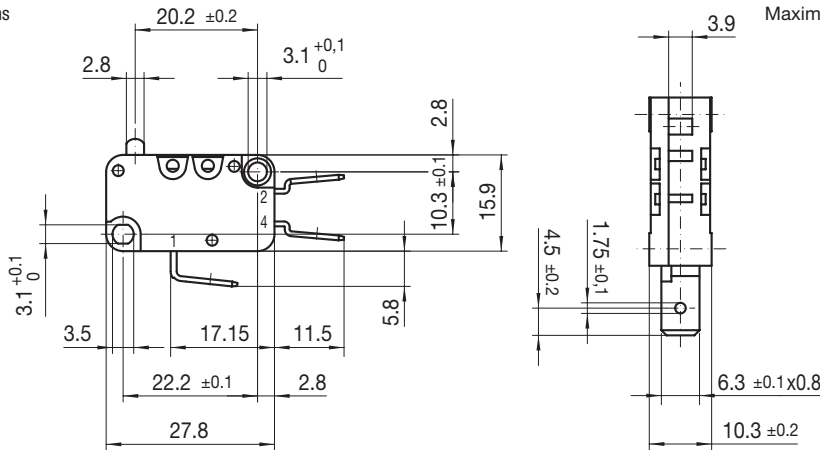
Actuating force/travel



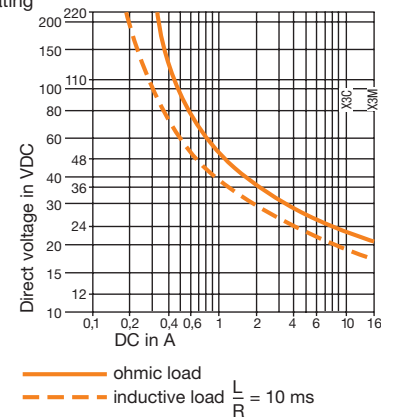
Contact force/travel



Dimensions



Maximum DC rating



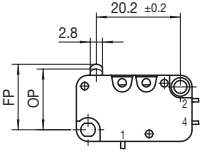
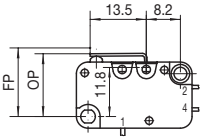
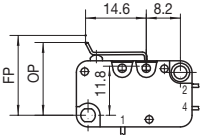
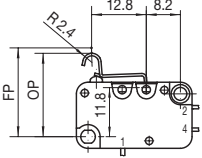
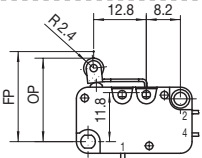
Recommended maximum electrical ratings

	Voltage (VAC)	Resistive load (A)	Motor load (A)	Approvals ENEC		Voltage (VAC)	Approvals UL	
				(A)	(A)		(A)	(VAC)
X3M	250	6	3	6 (3)	1E4	250	6	250
X3C	250	6	3	6 (3)	1E4	250	6	125
							6	250
							6	125

Current breaking capacities in the tables refer to AgNi0.15 contacts

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Operating Characteristics

Actuator	Reference	Actuating Force		Release Force		Free FP Position		Operating OP Position		Movement Differential Maximum		Full overtravel Position	
		(N)	(ozf)	(N)	(ozf)	(mm)	(in)	(mm)	(in)	(mm)	(in)	(mm)	(in)
 Plunger	X3C	0,80	2,88	0,050	0,179	15,75	0,620	14,7	$\left. \begin{matrix} +0,2 & 0,58 \\ -0,4 & 0,58 \end{matrix} \right\} \begin{matrix} +0,008 \\ -0,016 \end{matrix}$	0,25	0,009	13,2	0,519
	X3M	1,60	5,76	0,200	0,719	15,75	0,620	14,7		0,25	0,009	13,2	0,519
 J02 Lever	X3C ..	0,80	2,88	0,045	0,162	16,50	0,649	15,1 ± 0,5	0,59 ± 0,019	0,35	0,014	14,0	0,550
	X3M ..	2,00	7,19	0,180	0,647	16,50	0,649	15,1 ± 0,5	0,59 ± 0,019	0,35	0,014	14,0	0,550
Width of lever 7,0 mm/0,28 in – also available with width 4 mm/0,16 in													
 M02 Lever	X3C ..	0,65	2,34	0,045	0,162	19,20	0,755	17,5 ± 0,7	0,69 ± 0,028	0,35	0,014	16,4	0,646
	X3M ..	1,65	5,93	0,160	0,576	19,20	0,755	17,5 ± 0,7	0,69 ± 0,028	0,35	0,014	16,4	0,646
Width of lever 7,0 mm/0,28 in													
 L02 Lever	X3C ..	0,80	2,88	0,045	0,162	21,80	0,858	20,5 ± 0,6	0,81 ± 0,024	0,35	0,014	19,5	0,768
	X3M ..	2,00	7,19	0,190	0,683	21,80	0,858	20,5 ± 0,6	0,81 ± 0,024	0,35	0,014	19,5	0,768
Width of lever 7,0 mm/0,28 in													
 T02 Lever	X3C ..	0,80	2,88	0,045	0,162	21,80	0,858	20,2 ± 0,7	0,79 ± 0,028	0,35	0,014	19,3	0,760
	X3M ..	2,00	7,19	0,190	0,683	21,80	0,858	20,2 ± 0,7	0,79 ± 0,028	0,35	0,014	19,3	0,760
Width of roller 6,6 mm/0,26 in													

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Ordering Reference (new versions)

Basic type	X3	Microswitch according to DIN 41635, Design A	Example: X3	M	3	02	K	2	A	A	J0	2
Operating force	M	Standard force 1										
	C	Low force										
Circuit diagram	3	Change-over (CO)										
	4	Normally closed (NC)										
	5	Normally open (NO)										
Terminals	02	Plug terminal 6,3 × 0,8 mm	13	PCB-terminal, bent to lid								
	06	Plug terminal 4,8 × 0,5 mm	14	PCB-terminal, bent to base								
	12	Solder terminal, short										
Body	N	PA66GF25 (Latamid)										
Contacts materials	3	Silver/Ag Ni 0,15 (Middle current)										
	9	Gold plated (Low current)										
UL/C-UL ratings	UL 61058											
CSA ratings	S	0,1 A 125/250 V ~6E3 / 5E4 T125 μ	T	6A 250 V ~ 6E3 T125 μ (for contact material 3)								
		0,5 A 30 VDC 6E3 / 5E4 T125 μ		(for contact material 9)								
		(for contact material 9)										
EN/IEC ratings	ENEC 61058											
	F	0,1 (0,05) A, 250 V ~ 5E4 T125 μ										
		0,5 A, 30 VDC 5E4 T125 μ (for contact material 9)										
	G	6 (3) A, 250 V ~ 1E4 T125 μ (for contact material 3)										
Type of actuator	No digit	Without lever	P0 to P9	Straight lever (width 4 mm)								
	J0 to J9	Straight lever (width 7 mm)	T0 to T9	Roller lever								
	L0 to L9	Simulated roller lever	U0 to U9	Outside mounted lever								
	M0 to M9	Customer specified lever (KV)										
Actuator position	No digit	Without lever										
	2	Rear lever										
	4	Front lever										
Customer version	No digit	Standard type										
	AA to AZ	Specials for customers										