

XC

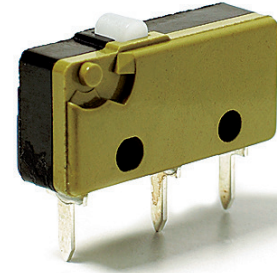
- Characteristics
- wide range of forces and variants
 - long mechanical and electrical life
 - solder, PCB and faston terminals
 - compliant to glow wire test IEC 60335-1, 4. ed.

Rating 250 VAC, 10 A max.

Dimensions (mm) 19,9 × 9,5 × 6,4

- Actuator
- Plunger
 - mushroom plunger
 - plain levers
 - simulated roller lever/cam follower
 - roller levers

Approvals ENEC, UL, cUL, CSA



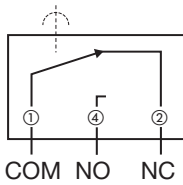
Preferred Range

Ordering Reference	Actuating Force		Operating pos.		Terminal	Circuit	Actuator	Contacts	Electrical rating	
	(N)	(ozf)	(mm)	(in)					ENEC	UL/CSA
XCG3Z1	1,7	6,07	8,4	0,33	Solder	CO	Plunger	Ag	6(2) A	5 A
XCG3-J1Z1	0,6	2,14	10,2	0,40	Solder	CO	Plain lever	Ag	6(2) A	5 A
XCG3-S1Z1	0,7	2,49	15,6	0,61	Solder	CO	Roller lever	Ag	6(2) A	5 A
XCG5Z1	1,7	6,07	8,4	0,33	Faston 2,8 × 0,5 mm	CO	Plunger	Ag	6(2) A	5 A
XCG5-J1Z1	0,6	2,14	10,2	0,40	Faston 2,8 × 0,5 mm	CO	Plain lever	Ag	6(2) A	5 A
XCG5-S1Z1	0,7	2,49	15,6	0,61	Faston 2,8 × 0,5 mm	CO	Roller lever	Ag	6(2) A	5 A
XCG8-81Z1	1,7	6,07	8,4	0,33	PCB	CO	Plunger	Au	none	0,1 A/125 VAC
XCG8-81-J1Z1	0,6	2,14	10,2	0,40	PCB	CO	Plain lever	Au	none	0,1 A/125 VAC
XCG8-81-S1Z1	0,7	2,49	15,6	0,61	PCB	CO	Roller lever	Au	none	0,1 A/125 VAC
XCF3Z1	3,0	10,70	8,4	0,33	Solder	CO	Plunger	Ag	10(3) A	10,1 A
XCF3-J1Z1	1,05	3,74	10,2	0,40	Solder	CO	Plain lever	Ag	10(3) A	10,1 A
XCF3-S1Z1	1,1	3,92	15,6	0,61	Solder	CO	Roller lever	Ag	10(3) A	10,1 A
XCG3-U1Z1	1,7	6,07	9,9	0,39	Solder	CO	Mushroom plunger	Ag	6(2) A	5 A
XCG4-U1Z1	1,7	6,07	9,9	0,39	Faston 2,8 × 0,5 mm	CO	Mushroom plunger	Ag	6(2) A	5 A
XCG8-U1Z1	1,7	6,07	9,9	0,39	PCB	CO	Mushroom plunger	Ag	6(2) A	5 A

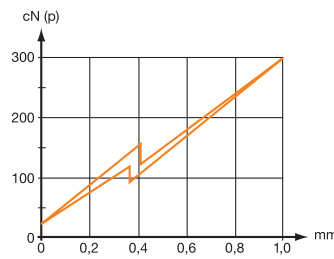
Specifications

Housing	Melamine-Formaldehyd, Thermosetting
Plunger	POM for T85, PPS for T125 and 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 5×10^7 cycles (Actuation: sinusoidal and up to 80% of overtravel)
Protection	Enclosure IP40
Mounting	Side mounting through mounting holes
Actuators	Stainless steel, PA66-GF35
Contact Carrier	CuZn or CuSn

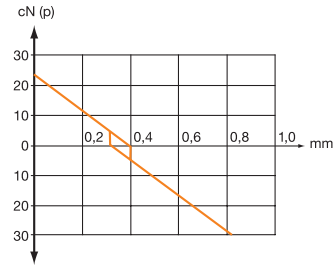
Circuit diagram



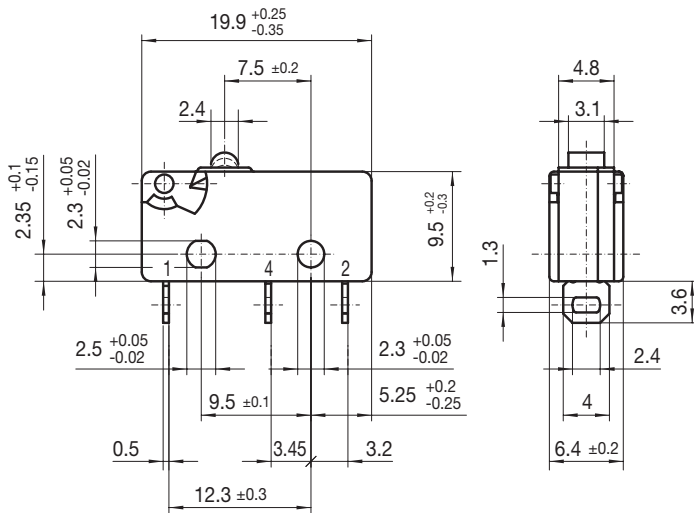
Actuating force/travel



Contact force/travel

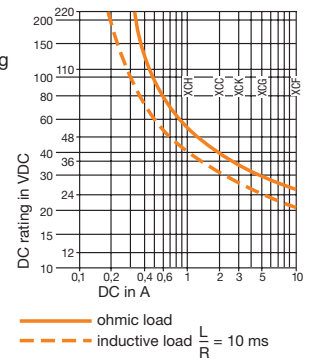


Dimensions



FP = Free Position
OP = Operating Position

Maximum DC rating

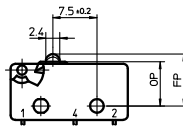
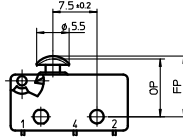
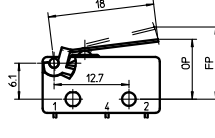
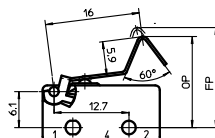
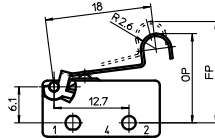
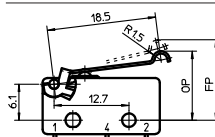
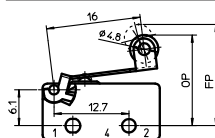
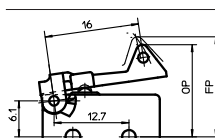
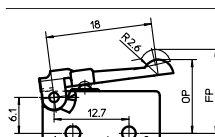


Recommended maximum electrical ratings

Voltage	Resistive load		Motor load (A)	Approvals ENEC		Approvals UL		Motor load	
	(VAC)	(A)		(A)	(VAC)	(A)	(VAC)		
XCF	250	10	3	10 (3)	1E4	250	10,1	125/250	¼ HP
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 Ag contacts.

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)	(mm)	(in)	Maximum (mm)	(in)	Maximum (mm)	(in)	
	XCF..	3	10,70	0,5	1,78	8,8	0,34	8,4	$\left. \begin{matrix} 0,33 \\ 0,33 \\ 0,33 \\ 0,33 \end{matrix} \right\} \begin{matrix} +0,1 \\ -0,3 \end{matrix}$	$\left. \begin{matrix} 0,33 \\ 0,33 \\ 0,33 \\ 0,33 \end{matrix} \right\} \begin{matrix} +0,003 \\ -0,011 \end{matrix}$	0,1	0,003	7,7	0,303
	XCG..	1,7	6,07	0,3	1,07	8,8	0,34	8,4			0,1	0,003	7,7	0,303
	XCK..	1,2	4,28	0,2	0,71	8,8	0,34	8,4			0,1	0,003	7,7	0,303
	XCC..	0,6	2,14	0,1	0,36	8,8	0,34	8,4			0,1	0,003	7,7	0,303
	XCH..	0,35	1,24	0,07	0,24	8,8	0,34	8,4			0,1	0,003	7,7	0,303
	XCF..-U1	3	10,70	0,5	1,78	10,3	0,41	9,9	$\left. \begin{matrix} 0,39 \\ 0,39 \\ 0,39 \\ 0,39 \end{matrix} \right\} \begin{matrix} +0,1 \\ -0,3 \end{matrix}$	$\left. \begin{matrix} 0,39 \\ 0,39 \\ 0,39 \\ 0,39 \end{matrix} \right\} \begin{matrix} +0,003 \\ -0,011 \end{matrix}$	0,1	0,003	9,2	0,36
	XCG..-U1	1,7	6,07	0,3	1,07	10,3	0,41	9,9			0,1	0,003	9,2	0,36
	XCK..-U1	1,2	4,28	0,2	0,71	10,3	0,41	9,9			0,1	0,003	9,2	0,36
	XCC..-U1	0,6	2,14	0,1	0,36	10,3	0,41	9,9			0,1	0,003	9,2	0,36
	XCH..-U1	0,35	1,24	0,07	0,24	10,3	0,41	9,9			0,1	0,003	9,2	0,36
	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..	1,05	3,74	0,16	0,57	17,1	0,48	15,1 ± 1,1	0,401 ± 0,039	0,6	0,023	8,4	0,33	
	XCG..	0,6	2,14	0,08	0,28	17,1	0,48	15,1 ± 1,0	0,401 ± 0,035	0,5	0,019	8,5	0,337	
	XCK..	0,42	1,49	0,056	0,19	17,1	0,48	15,2 ± 1,0	0,405 ± 0,035	0,5	0,019	8,7	0,342	
	XCC..	0,22	0,78	0,025	0,08	17,1	0,48	15,2 ± 1,0	0,404 ± 0,035	0,4	0,015	8,7	0,342	
	XCH..	0,13	0,46	0,02	0,07	17,1	0,48	15,3 ± 1,0	0,409 ± 0,035	0,4	0,015	8,8	0,346	
	XCF..	1,05	3,74	0,16	0,57	13,7	0,48	11,7 ± 1,1	0,401 ± 0,039	0,6	0,023	8,4	0,33	
	XCG..	0,6	2,14	0,08	0,28	13,7	0,48	11,7 ± 1,0	0,401 ± 0,035	0,5	0,019	8,5	0,337	
	XCK..	0,42	1,49	0,056	0,19	13,7	0,48	11,8 ± 1,0	0,405 ± 0,035	0,5	0,019	8,7	0,342	
	XCC..	0,22	0,78	0,025	0,08	13,7	0,48	11,8 ± 1,0	0,404 ± 0,035	0,4	0,015	8,7	0,342	
	XCH..	0,13	0,46	0,02	0,07	13,7	0,48	11,9 ± 1,0	0,409 ± 0,035	0,4	0,015	8,8	0,346	
	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	

Ordering Reference

Basic type	XCF	3	N	10,70 ozf	Example: XCF	4	3	V	-81	-J1	Z1
	XCG	1,7	N	6,07 ozf							
	XCK	1,2	N	4,28 ozf							
	XCC	0,6	N	2,14 ozf							
	XCH	0,35	N	1,24 ozf							
Circuits	No symbol, change-over (CO)										
	4	Normally closed (NC)									
	5	Normally open (NO)									
Terminals	3	Solder									
	4	Faston									
	5	Faston									
	8	PCB									
	9	PCB									
	10	PCB									
	11	PCB									
	12	PCB									
	13	PCB									
	14	PCB									
	15	PCB									
Version	No symbol, 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 symbol, Ag (Ag)										
	-81	μ profile Au 10 μm									
	-83	Ag + 0,2 μ Au (gold plated)									
Actuators	No symbol, plunger										
	-J1	Plain lever									
	-J2	Plain lever									
	-J5	Plain lever									
	-S1	Roller lever									
	-L1	Cam follower									
	-L6	Cam follower									
	-L9	Cam follower									
	-P5	Plastic lever									
	-P6	Plastic lever									
	-U1	Mushroom plunger									
	Other actuators on special request.										
Approvals	No symbol, ENEC										
	Z1	UL, CSA									

X4

Characteristics

- thermoplastic housing
- long mechanical and electrical life
- solder, PCB and faston terminals
- compliant to glow wire test IEC 60335-1, 4. ed.

Rating 250 VAC, 12 A max.

Dimensions (mm) 19,9 × 9,7 × 6,4

Actuator

- plunger
- plain levers
- cam follower lever
- roller levers

Approvals UL, cUL, CSA, ENEC, CQC



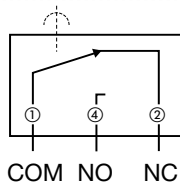
Preferred Range

Ordering Reference	Actuating Force		Operating pos.		Terminal	Circuit	Actuator	Contacts ENEC	Electrical rating	
	(N)	(ozf)	(mm)	(inch)					UL/CSA	
X4F303N1AA	3,30	11,87	8,4	0,3	Solder	CO	Plunger	Ag	12 (6) A	12 A
X4F305N1AA	3,30	11,87	8,4	0,3	Faston	CO	Plunger	Ag	12 (6) A	12 A
X4G303N1BB	2,00	7,19	8,4	0,3	Solder	CO	Plunger	Ag	6 (3) A	6 A
X4G305N1BB	2,00	7,19	8,4	0,3	Faston	CO	Plunger	Ag	6 (3) A	6 A
X4C303N1CC	0,75	2,70	8,4	0,3	Solder	CO	Plunger	Ag	3 (2) A	3 A
X4C305N1CC	0,75	2,70	8,4	0,3	Faston	CO	Plunger	Ag	3 (2) A	3 A

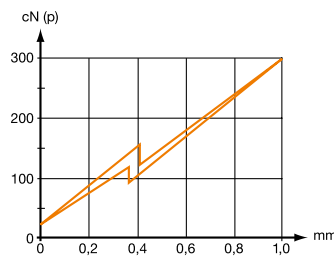
Specifications

Housing	Thermoplastic
Plunger	Thermoplastic
Mechanism	Snap-action system with stainless steel tension spring
Functions	CO (Change-over), NO (Normally Open), NC (Normally Closed)
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	106 cycles minimum
Protection	Enclosure IP 40
Mounting	Side mounting or PCB
Actuators	Stainless steel
Contact carrier	CuZn or CuSn

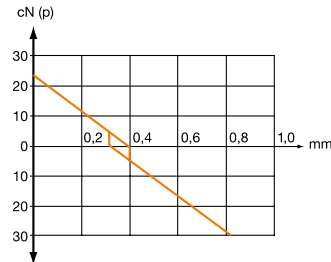
Circuit diagram



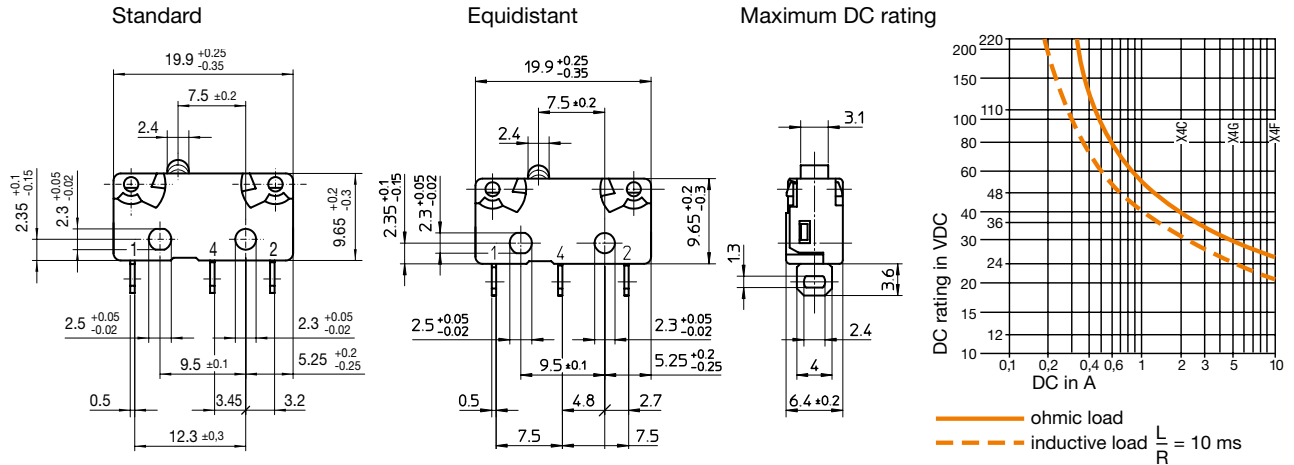
Actuating force/travel



Contact force/travel



Dimensions

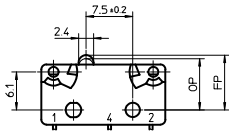
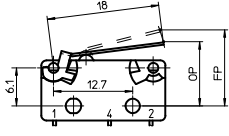
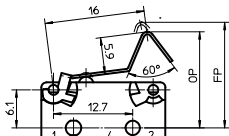
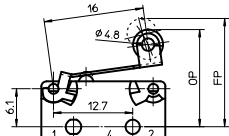


Recommended maximum electrical ratings

	Voltage (VAC)	Resistive load (A)		Motor load (A)		Approvals ENEC (A)		Approvals UL (VAC)	
		(A)	(A)	(A)	(A)	(VAC)	(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		Release Force		Free Position		Operating Position		Movement Differential		Full Overtravel	
		Maximum (N)	(ozf)	Minimum (N)	(ozf)	Maximum (mm)	(in)	Maximum (mm)	(in)	Maximum (mm)	(in)	Maximum (mm)	(in)
	X4F	3,30	11,87	0,550	1,978	8,8	0,35	8,4	$\left. \begin{array}{l} 0,33 \\ +0,1 \\ -0,3 \end{array} \right\} \begin{array}{l} 0,33 \\ +0,004 \\ -0,01 \end{array}$	$\left. \begin{array}{l} 0,2 \\ 0,2 \\ 0,2 \end{array} \right\} \begin{array}{l} 0,008 \\ 0,008 \\ 0,008 \end{array}$	$\left. \begin{array}{l} 7,7 \\ 7,7 \\ 7,7 \end{array} \right\} \begin{array}{l} 0,303 \\ 0,303 \\ 0,303 \end{array}$		
	X4G	2,00	7,19	0,350	1,259	8,8	0,35	8,4					
	X4C	0,75	2,70	0,130	0,468	8,8	0,35	8,4					
	X4F	1,16	4,17	0,180	0,647	12,2	0,48	10,2 ±1,0	0,40 ±0,035	0,6	0,024	8,4	0,331
	X4G	0,70	2,52	0,094	0,338	12,2	0,48	10,2 ±0,9	0,40 ±0,039	0,5	0,020	8,5	0,33
	X4C	0,28	1,00	0,031	0,112	12,2	0,48	10,3 ±0,9	0,40 ±0,039	0,4	0,016	8,7	0,343
Width of lever 4,0 mm/0,16 in													
	X4F	1,21	4,35	0,190	0,683	17,6	0,69	15,6 ±1,1	0,61 ±0,043	0,6	0,024	14,0	0,551
	X4G	0,82	2,95	0,110	0,396	17,6	0,69	15,6 ±1,0	0,61 ±0,039	0,5	0,020	14,1	0,555
	X4C	0,29	1,04	0,033	0,119	17,6	0,69	15,7 ±1,0	0,61 ±0,039	0,4	0,016	14,3	0,563
Width of lever 4,0 mm/0,16 in													
	X4F	1,21	4,35	0,190	0,683	17,6	0,69	15,6 ±1,2	0,61 ±0,047	0,6	0,024	14,1	0,555
	X4G	0,82	2,95	0,110	0,396	17,6	0,69	15,6 ±1,1	0,61 ±0,043	0,5	0,020	14,2	0,559
	X4C	0,29	1,04	0,036	0,129	17,6	0,69	15,7 ±1,1	0,62 ±0,043	0,4	0,016	14,4	0,567
Width of roller 4,0 mm/0,16 in													

Ordering Reference

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)																										
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 07,6)	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)	21	Equidistant PCB-terminals, length 8,15 mm (pitch 7,5)	22	Equidistant PCB-terminals formed to base (pitch 7,5)	23	Equidistant PCB-terminals formed to lid (pitch 7,5)	24	Equidistant faston terminals 2,8 × 0,5 mm DIN (pitch 7,5)	25	Equidistant solder terminals (pitch 7,5)
Body	N	PA66GF25 for terminal types 03 to 15 only	P	PA66GF25 (pitch 7,5) for equidistant terminal types 21 to 25 only	R	PA66GF25 (pitch 7,5 with moulded pegs) for equidistant terminal types 22 and 23 only																										
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	N	no approvals																		
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 and lengths available																														
Actuator position		No symbol, without lever	1	Lever above terminal 1	2	Lever above terminal 2																										

V4NCS

V4NCS

- Characteristics
- wide variety of levers
 - peg mounting option
 - pre-wired option
 - sealed (IP6K7)
 - solder and faston terminals
 - PCB terminals

Rating 250 VAC, 5 A

Dimensions (mm) 20 × 10,3 × 6,4

- Actuator
- plunger
 - plain levers
 - roller levers
 - simulated roller levers

Approvals Automotive standard



Subminiature

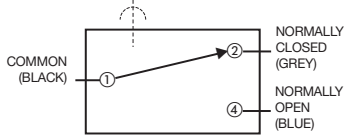
Preferred Range

Ordering Reference	Actuating Force (N)	Actuating Force (ozf)	Sealing	Operating pos. (mm)	Operating pos. (in)	Terminal	Circuit	Actuator	Contacts	Electrical rating
V4NCS	2,5	8,992	Sealed IP6K7	8,40	0,331	Cable 500 mm	CO	Plunger	Ag	250 VAC, 5 A
V4NCSA1	0,9	3,237	Sealed IP6K7	10,80	0,425	Cable 500 mm	CO	Plain lever	Ag	250 VAC, 5 A
V4NCSAR	0,9	3,237	Sealed IP6K7	15,90	0,626	Cable 500 mm	CO	Roller lever	Ag	250 VAC, 5 A

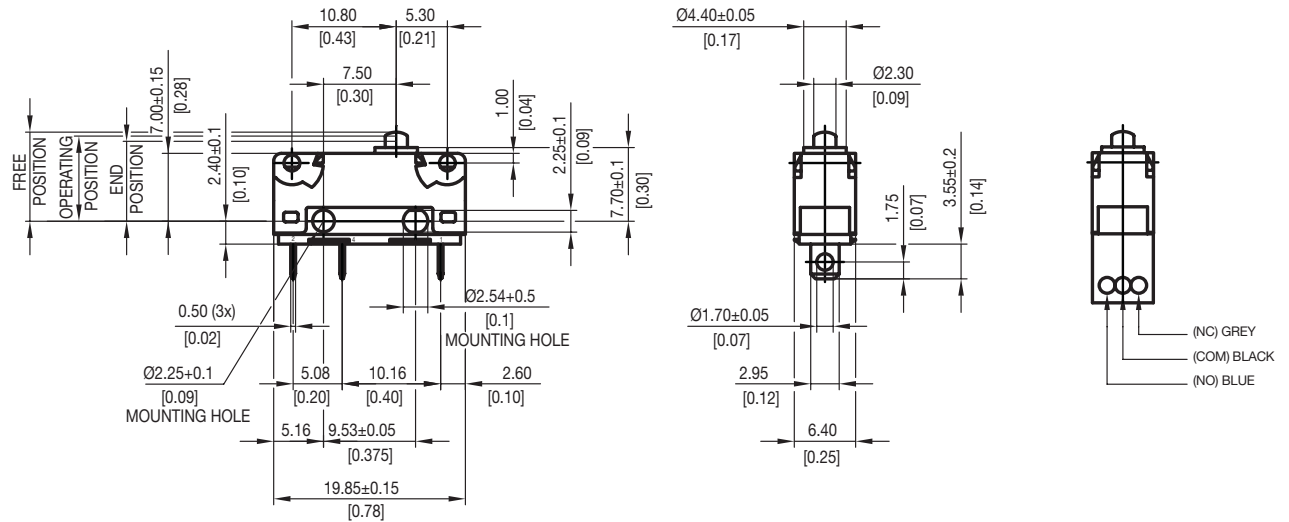
Specifications

Housing	Glass fibre reinforced Polyamide (PA 6.6)
Plunger	Polyacetal POM/(PA 4,6)
Mechanism	Snap-action coil spring mechanism with stainless steel spring
Functions	Change-over, normally closed or normally open
Contacts	Fine Silver, Gold plate on silver, Gold alloy on silver palladium (crosspoint)
Terminals	Gold flashed
Temperature range °C	-40°C to +85°C (120°C option)
Mechanical life	3 × 10 ⁶ cycles minimum (impact free actuation)
Protection	IP67 enclosure, IP40 Flux proof terminal entries
Mounting	Side mounting (moulded mounting pegs on request)
Actuators	Plain lever, cam follower, roller lever, simulated roller (cam follower) lever
Accessories	Lug mounting frame, clip-on terminals cover, insulating sheet

Circuit diagram

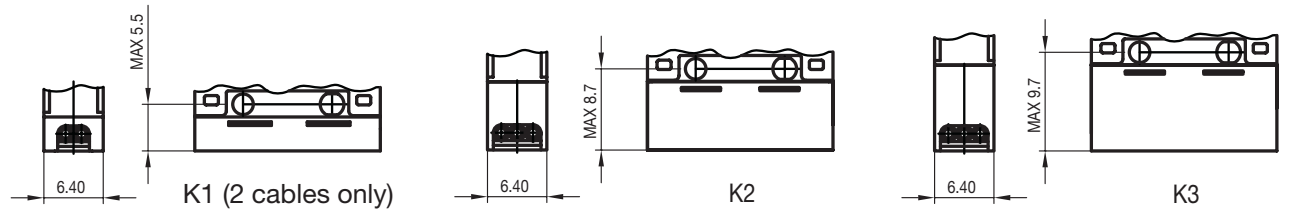


Dimensions



Prewired version with cable box
For type coding key please contact Saia

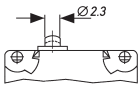
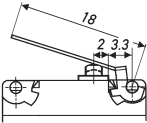
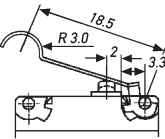
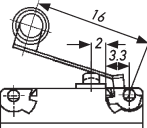
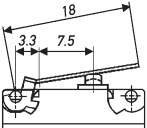
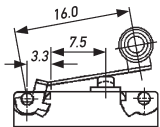
Standard cable FLY 0,5 mm² with max. outside diameter 1.8 mm
Standard cable box is K2



Recommended maximum electrical ratings

	Voltage (max)	Resistive load (A)	Motor load (A)	Approval
V4NCST	250 VAC	5	2	General rating (85° C)
	0 - 15 VDC	5	3	General rating (85° C)
	15 - 30 VDC	5	3	General rating (85° C)
V4NCS	250 VAC	5	2	General rating (85° C)
	0 - 15 VDC	3	3	General rating (85° C)
	15 - 30 VDC	3	3	General rating (85° C)

Operating Characteristics

Actuator	Reference	Actuating Force		Release Force		Free Position Maximum		Operating Position		Movement Differential Maximum			
		(N)	(ozf)	(N)	(ozf)	(mm)	(in)	(mm)	(in)	(mm)	(in)		
Plunger 	V4NCS..	2,5	8,992	0,5	1,798	9,2	0,362	8,4	} ± 1,3	} 0,331	} ± 0,012	} 0,1	} 0,004
	V4NCSB..	2,5	8,992	0,5	1,798	9,7	0,382	8,9					
A1 Lever 	V4NCS..	0,9	3,237	0,1	0,359	13,4	0,527	10,8	} ± 1,3	} 0,425	} ± 0,051	} 0,4	} 0,016
	V4NCSB..	0,9	3,237	0,1	0,359	14,8	0,582	12,4					
Width of lever 4,0 (mm)/0,16 (in)													
AC Lever 	V4NCS..	0,9	3,237	0,1	0,359	16,1	0,634	13,4	} ± 1,3	} 0,527	} ± 0,051	} 0,4	} 0,016
	V4NCSB..	0,9	3,237	0,1	0,359	17,6	0,693	15,1					
Width of lever 4,0 (mm)/0,16 (in)													
AR Lever 	V4NCS..	0,9	3,237	0,1	0,359	18,1	0,712	15,9	} ± 1,2	} 0,626	} ± 0,047	} 0,4	} 0,016
	V4NCSB..	0,9	3,237	0,1	0,359	19,2	0,756	17,3					
Width of lever 4,0 (mm)/0,16 (in)													
A10 Lever 	V4NCS..	1,8	6,474	0,2	0,719	10,7	0,421	9,3	} ± 0,7	} 0,366	} ± 0,027	} 0,2	} 0,008
	V4NCSB..	1,8	6,474	0,2	0,719	11,5	0,453	10,1					
Width of lever 4,0 (mm)/0,16 (in)													
ARO Lever 	V4NCS..	1,8	6,474	0,2	0,719	15,8	0,622	14,7	} ± 0,6	} 0,579	} ± 0,023	} 0,2	} 0,008
	V4NCSB..	1,8	6,474	0,2	0,719	16,5	0,649	15,4					
Width of lever 4,0 (mm)/0,16 (in)													

Operating characteristics shown above are specified from mounting hole centres.

Over travel: Flush with case. (7,8 mm min) The case should not be used as an end stop.

Ordering Reference

Basic type	V4NC	Example: V4NC	S	T7	C4	A1	0	G
Type of sealing	S	Sealed IP6K7	standard travel					
	B	Sealed IP6K7	with extended overtravel (0,5 mm)					
Terminals	No symbol, pre-wired 500 mm with cable box (V4NCS/B only)							
	T7	Solder	2,95 × 0,5 × 3,55 long					
	T8	PCB	0,8 × 0,5 × 4,0 long					
	T9	Faston	2,8 × 0,5 × 9,5 long					
	T81	Formed PCB	0,8 × 0,5 × 3,8 long					
	T82	Formed PCB	0,8 × 0,5 × 3,8 long					
Circuit	No symbol, change-over							
	C2	Normally closed						
	C4	Normally open						
Actuators	No symbol, without lever							
	A1	Plain lever	18,0 mm					
	A2	Plain lever	25,0 mm					
	A3	Plain lever	32,0 mm					
	A7	Plain lever	60,0 mm					
	AC	Cam follower lever	18,5 mm (AC1)					
	AR	Roller lever	16,0 mm (AR1)					
	AP	Roller lever	17,9 mm (AR2)					
	Other actuators on special request							
Actuator Position	No symbol, without lever, or lever fitted at the end nearest to the Plunger							
	0	With lever fitted at end opposite to plunger						
Contact Material	No symbol, Ag							
	X	Gold alloy on silver palladium crosspoint (AUX)						
Special Features	/□□□□ Saia specialise in customer specific solutions. Additional product variants are available or can be provided. If your requirements cannot be satisfied from the options listed, please contact www.saia-burgess.com or your local SB outlet.							

V4NS

- Characteristics
- sealed (IP67)
 - solder, 2,8 mm faston and PCB terminals
 - pre-wired option
 - compliant to glow wire test IEC 60335-1, 4. ed.

Rating 250 VAC, 5 A (3 A prewired UL)

Dimensions (mm) 20 × 10,3 × 6,4

- Actuator
- plunger
 - plain levers
 - roller levers
 - simulated roller lever/cam follower

Approvals UL, CSA, ENEC



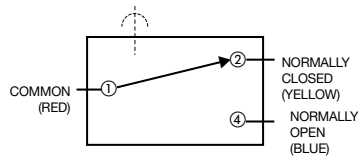
Preferred Range

Ordering Reference	Actuating Force (N)	Actuating Force (ozf)	Sealing	Operating pos. (mm)	Operating pos. (in)	Terminal	Circuit	Actuator	Contacts	Electrical rating
V4NST7UL	2,50	9,0	IP67	8,40	0,33	Solder	CO	Plain plunger	Ag	250 VAC, 5 A
V4NSUL	2,50	9,0	IP67	8,40	0,33	Pre-wired	CO	Plain plunger	Ag	250 VAC, 5 A
V4NST7Y1UL	0,90	3,2	IP67	10,6	0,42	Solder	CO	Straight lever	Ag	250 VAC, 5 A
V4NSY1UL	0,90	3,2	IP67	10,6	0,42	Pre-wired	CO	Straight lever	Ag	250 VAC, 5 A
V4NST7YRUL	0,90	3,2	IP67	15,6	0,62	Solder	CO	Roller lever	Ag	250 VAC, 5 A
V4NSYRUL	0,90	3,2	IP67	15,6	0,62	Pre-wired	CO	Roller lever	Ag	250 VAC, 5 A

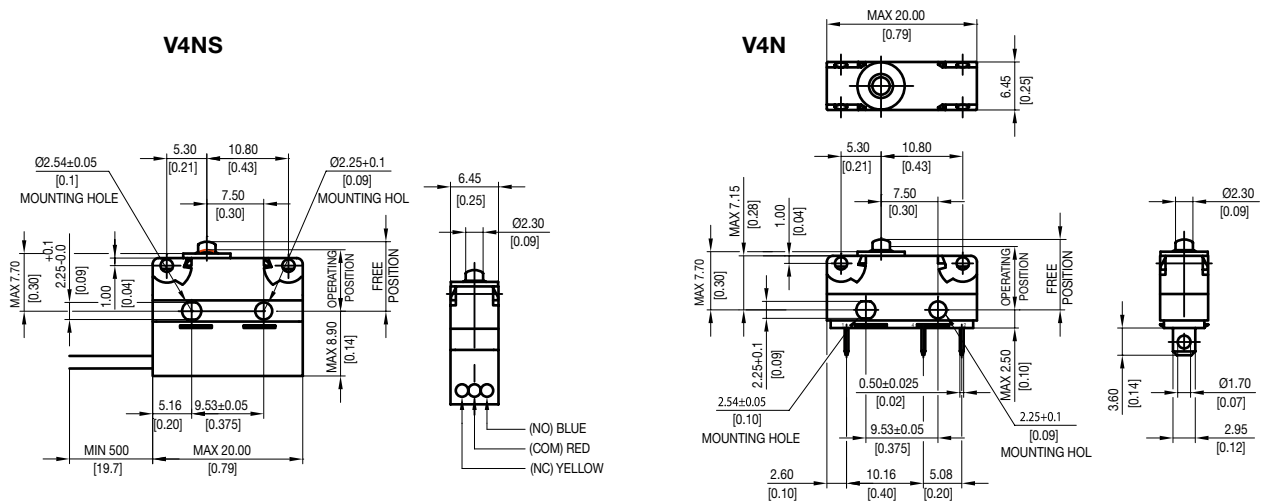
Specifications

Housing	Flame-retardant glass-fibre reinforced nylon
Plunger	Polyacetal (POM)
Mechanism	Snap-action coil spring mechanism with stainless steel spring
Functions	Change-over, normally closed or normally open
Contacts	Silver
Terminals	Gold flashed
Temperature range °C	-40°C to +85°C
Mechanical life	3 × 10 ⁶ cycles minimum (impact free actuation)
Protection	IP67 enclosure, IP40 Flux proof terminal entries
Actuators	Plain lever, cam follower, Roller lever
Accessories	Insulating sheet - N04619, Clip-on terminal cover - TC102, Long overtravel actuator - QA4

Circuit diagram



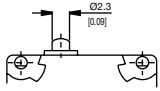
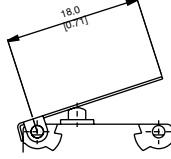
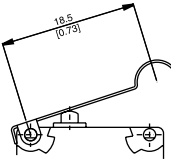
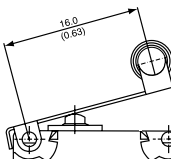
Dimension



Recommended maximum electrical ratings

	Voltage (max)	Resistive load (A)	Motor load (A)	Approval
V4NST7UL	250 VAC	5 (0,75 pf)		UL 1054/CSA 22,2 No. 55 - 6,000 operations - 65°C EN61058-1, T85, 10,000 operations
	250 VAC	5	2	
	0 - 15 VDC	5	3	General rating - 50,000 operations (85°C)
	15 - 30 VDC	5	3	General rating - 50,000 operations (85°C)
V4NSUL	250 VAC	3 (0,75 pf)		UL 1054/CSA 22,2 No. 55 - 6,000 operations - 65°C EN61058-1, T85, 10,000 operations
	250 VAC	5	2	
	0 - 15 VDC	3	3	General rating - 50,000 operations (85°C)
	15 - 30 VDC	3	3	General rating - 50,000 operations (85°C)

Operating Characteristics

Actuator	Reference	Actuating Force Maximum		Release Force Minimum		Free Position Maximum		Operating Position		Movement Differential Maximum	
		(N)	(ozf)	(N)	(ozf)	(mm)	(in)	(mm)	(in)	(mm)	(in)
Plunger 	V4NST7UL	2,5	9,00	0,30	1,00	9,2	0,36	8,4 ± 0,3	0,33 ± 0,012	0,1	0,004
	V4NSUL	2,5	9,00	0,30	1,00	9,2	0,36	8,4 ± 0,3	0,33 ± 0,012	0,1	0,004
Y1 lever 	V4NST7Y1UL	0,9	3,20	0,07	0,25	13,2	0,52	10,6 ± 1,2	0,42 ± 0,05	0,4	0,016
	V4NSY1UL	0,9	3,20	0,07	0,25	13,2	0,52	10,6 ± 1,2	0,42 ± 0,05	0,4	0,016
Width of lever 4,0 mm/0,16 in											
YC lever 	V4NST7YCUL	0,9	3,20	0,07	0,25	17,8	0,70	15,6 ± 1,2	0,61 ± 0,05	0,4	0,016
	V4NSYCUL	0,9	3,20	0,07	0,25	17,8	0,70	15,6 ± 1,2	0,61 ± 0,05	0,4	0,016
Width of lever 4,0 mm/0,16 in											
YR lever 	V4NST7YRUL	0,9	3,20	0,07	0,25	17,8	0,70	15,6 ± 1,2	0,61 ± 0,05	0,4	0,016
	V4NSYRUL	0,9	3,20	0,07	0,25	17,8	0,70	15,6 ± 1,2	0,61 ± 0,05	0,4	0,016
Width of lever 4,0 mm/0,16 in											

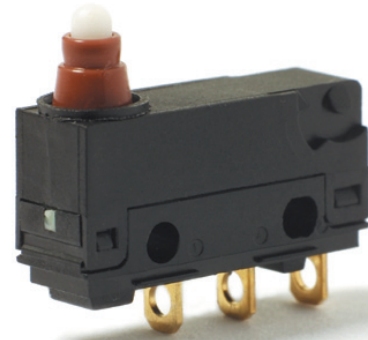
Over travel: Plunger can be depressed flush with housing. The housing should not be used as an end stop.

Ordering Reference

Basic type	V4NS	Example: V4NS						B	T7	C2	Y1	0	X	UL
Type of sealing/ Overtravel	B	No symbol, sealed IP67, standard travel												
		Sealed IP67 with extended overtravel (0,5 mm)												
Terminals	No symbol, pre-wired 500 mm with cable box (V4NS/B only)													
T7	Solder	2,95 × 0,5 × 3,6 long												
T8	PCB	0,8 × 0,5 × 4,0 long												
T9	Faston	2,8 × 0,5 × 8,1 long												
T81	Formed PCB	0,8 × 0,5 × 3,8 long												
T82	Formed PCB	0,8 × 0,5 × 3,8 long												
Circuit	No symbol, change-over													
C2	Normally closed													
C4	Normally open													
Actuators	No symbol, without lever													
Y1	Plain lever	18,0 mm												
Y2	Plain lever	25,0 mm												
Y3	Plain lever	32,0 mm												
YC	Cam follower lever	18,5 mm												
YR	Roller lever	16,0 mm												
QA	Long overtravel actuator available on request													
Other actuators on special request														
Actuator Position	No symbol, without lever, or lever fitted at the end nearest to the Plunger													
0	With lever fitted at end opposite to plunger													
Contact Material	No symbol, Fine silver													
X	Gold alloy on silver palladium crosspoint													
Approvals	UL	UL, CSA and ENEC approval												
Special Features	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Saia specialise in customer specific solutions. Additional product variants are available or can be provided. If your requirements cannot be satisfied from the options listed, please contact www.saia-burgess.com or your local SB outlet.													

V4L

Characteristics	<ul style="list-style-type: none"> ■ long overtravel of 2.2 mm minimum ■ sealed to (IP6K7) option ■ pre-wired option ■ solder terminals ■ compliant to glow wire test IEC 60335-1, 4. ed. as optional item
Rating	250 VAC, 5 A
Dimensions (mm)	20 × 11 × 6.4
Actuator	<ul style="list-style-type: none"> ■ plunger ■ plain lever ■ ice break lever
Approvals	ENEC, UL, CSA



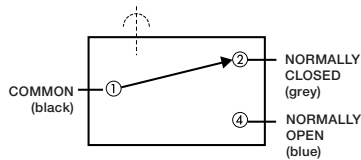
Preferred Range

Ordering Reference	Actuating Force (N)	Actuating Force (ozf)	Sealing	Operating pos. (mm)	Terminal	Circuit	Actuator	Contacts	Electrical rating
V4LS	2,5	9,0	IP6K7	11,7 ± 0,4	Cable 500 mm	CO	Plunger	Ag	250 VAC, 5 A
V4LSA2	2,0		IP6K7	16,5 ± 1,0	Cable 500 mm	CO	Plain lever	Ag	250 VAC, 5 A
V4LST7	2,5	9,0	IP6K7	11,7 ± 0,4	Solder	CO	Plunger	Ag	250 VAC, 5 A
V4LST7A2	2,0		IP6K7	14,6 ± 1,0	Solder	CO	Plain lever	Ag	250 VAC, 5 A

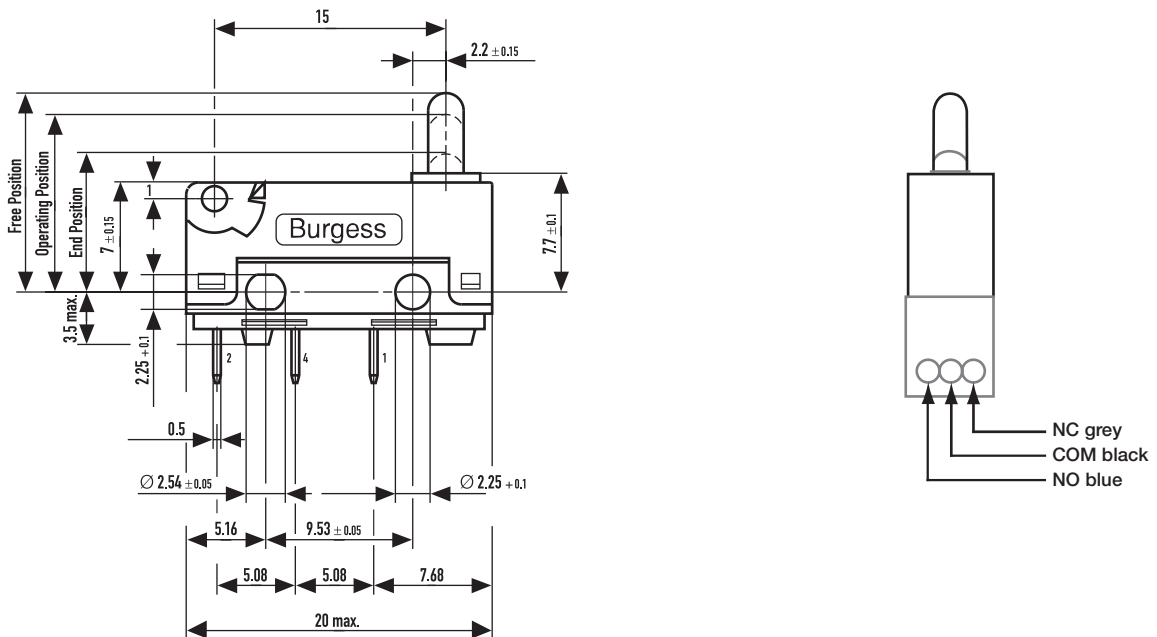
Specifications

Housing	Glass fibre reinforced polyamide (PA 6.6)
Plunger	Polyacetal (POM)
Mechanism	Snap-action coil spring mechanism with stainless steel spring. Change-over, normally closed or normally open
Contact carrier	Brass. Moving contact beryllium-copper
Contacts	Fine silver or gold crosspoint
Terminals	V4L – solder tags V4LS – PVC covered leads 0.5 m long
Temperature range °C	–40°C to +85°C
Mechanical life	V4L 2 T 10 ⁶ cycles/min., V4LS 2 T 10 ⁵ cycles/min. (impact free actuation)
Protection	V4L series IP40, V4LS series IP6K7, with encapsulated terminals
Mounting	Side mounting to a flat surface
Actuators	Plain lever, ice break lever, stainless steel
Cowl	Silicon elastomer

Circuit diagram



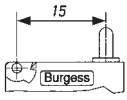
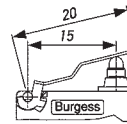
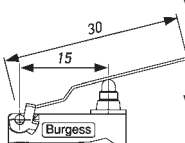
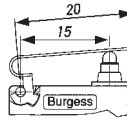
Dimensions



Recommended maximum electrical ratings

	Voltage (max)	Resistive load (A)	Motor load (A)	Approval
V4LST7	250 VAC	5 (0,75 pf)		UL 1054/CSA 22,2 No. 55–6,000 operations – 65°C EN61058-1, T55, 50,000 operations
	250 VAC	5	2	
	0–15 VDC	5	3	General rating – 50,000 operations (85°C)
	15–30 VAC	5	3	General rating – 50,000 operations (85°C)
V4LS	250 VAC	5 (0,75 pf)		UL 1054/CSA 22,2 No. 55–6,000 operations – 65°C EN61058-1, T55, 50,000 operations
	250 VAC	5	2	
	0–15 VDC	3	3	General rating – 50,000 operations (85°C)
	15–30 VAC	3	3	General rating – 50,000 operations (85°C)

Ordering Reference

Actuator	Reference	Actuating Force		Release Position		Free Position		Operating		Movement Differential		Total overtravel		Overtravel	
		Maximum (N)	Force (ozf)	Minimum (N)	Minimum (ozf)	Maximum (mm)	(in)	(mm)	(in)	Maximum (mm)	(in)	Minimum (mm)	(in)	Minimum (mm)	(in)
Plunger 	V4LT7	2,4	8,60	0,4	1,44	12,9	0,507	11,7 ± 0,4	0,46 ± 0,012	0,9	0,023	9,2	0,36	2,2	0,09
	V4LST7	2,5	9,00	0,5	1,78	12,9	0,507	11,7 ± 0,4	0,46 ± 0,012	0,9	0,023	9,2	0,36	2,2	0,09
A1 Lever 	V4L...	2,4	8,60	0,4	1,44	14,5	0,57	12,6 ± 0,8	0,59 ± 0,03	1,0	0,04	9,6	0,38	2,2	0,09
	V4LS...	2,5	9,00	0,5	1,78	14,5	0,57	12,6 ± 0,8	0,59 ± 0,03	1,0	0,04	9,6	0,38	2,2	0,09
Width of lever 4.0 mm/0.16 in															
A2 Lever 	V4L...	1,5	5,70	0,3	1,08	16,5	0,65	13,5 ± 1,0	0,53 ± 0,04	1,3	0,05	9,6	0,38	2,9	1,1
	V4LS...	2	7,20	0,3	1,08	16,5	0,65	13,5 ± 1,0	0,53 ± 0,04	1,3	0,05	9,6	0,38	2,9	1,1
Width of lever 4.0 mm/0.16 in															
F Lever 	V4L...	For positions and forces of this actuator please contact Burgess													
	V4LS...														
Width of lever 4.0 mm/0.16 in															

Ordering Reference

Basic type	V4L	Example: V4L	S	T7	A1	X	UL
Type of sealing	S	No symbol, unsealed Sealed IP6K7					
Terminals	T7	No symbol, pre-wired 500 mm with cable FLRY 0.5 mm ² and cable box (V4LS only) Solder 2.95 T 0.5 T 3.55 long					
Circuit		No symbol, change over					
Actuators	A1 A2 F	No symbol, without lever Plain lever 20.0 mm, fitted at the end opposite to plunger Plain lever 30.0 mm, fitted at the end opposite to plunger Special lever F type 20.0 mm, fitted at the end opposite to plunger					
Contact Material	X	No symbol, Ag Gold alloy on silver palladium crosspoint (AUX)					
		Other contact materials on special request					
Approvals	UL EN UN	No symbol, without approval UL and CSA approval ENEC approval only UL, CSA and ENEC approval					
Special Features	/□□□□	Burgess specialise in customer specific solutions. Additional product variants are available or can be provided. If your requirements cannot be satisfied from the options listed, please contact us.					

QA4

QA4

Panel cut-out (mm)	Ø 6.1
Characteristics	<ul style="list-style-type: none">■ for use with V4N/V4NC series■ long overtravel up to 5 mm■ simple clip-on attachment
Rating	250 VAC, 5 A
Dimensions (mm)	20 × 6.45 × 38.3
Actuator	<ul style="list-style-type: none">■ stainless steel plunger■ polyamide (PA 6.6) plunger
Approvals	UL, CSA



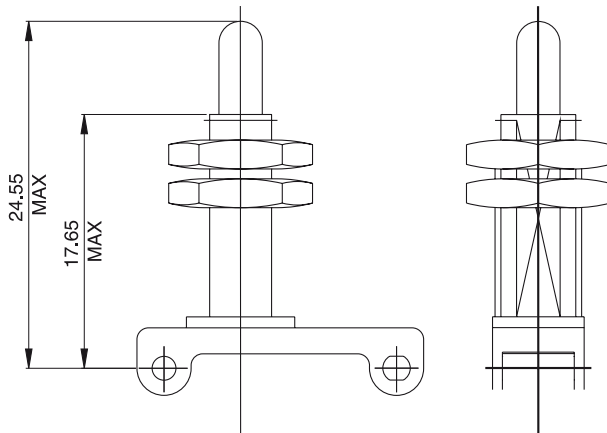
Preferred Range

Ordering Reference	Basic switch	Actuator kit
	V4NCT7UL	QA4

Specifications

Clip-on frame	Glass fibre reinforced polyamide (PA 6.6)
Locknut	Brass nickel plate
Plunger	Stainless steel (QA4)
Basic switches	V4N
Temperature range °C	-10°C to +85°C
Mechanical Life	5 × 10 ⁶ cycles minimum (Mechanism 2 × 10 ⁶ cycles minimum) (Impact free actuation)
Mounting mm (in)	Single hole ∅ 6.4 (0.25) suitable for panels up to 8.0 (0.3) thick
Torque max. Nm	0.4 to be applied to locknut

Dimensions QA4



Configuration

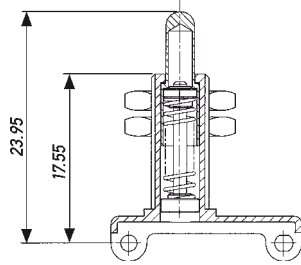
Basic switch V4NC...
V4N...

Ordering Reference

Actuator kit QA4

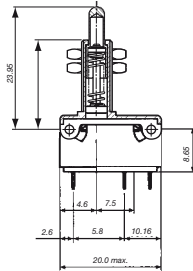
without insert switch

Example: QA4 QV4NCT7



With insert switch

Q followed by switch reference
 V4NC... See pages 52 to 55
 V4N... See pages 56 to 59
 Example reference: QV4NCT7



Special Features



TH-Contact specialise in customer specific solutions.
 Additional product variants are available or can be provided.
 If your requirements cannot be satisfied from the options listed,
 please contact www.saia-burgess.com or your local SB outlet.