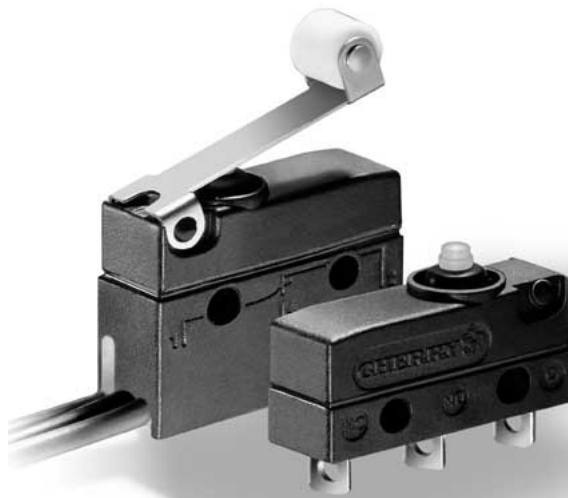


DC subminiature switch

Features

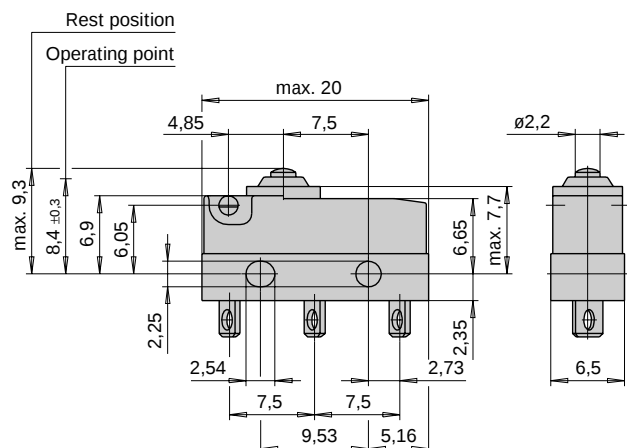
- Enclosed switch complying with IP 6K7
- Silicon-free version available
- Models available for operating temperatures up to 120° C
- Rated for currents up to 10 A at 250 V AC
- Range of auxiliary actuators available (can also be retrofitted)
- Various contact materials available, depending on application
- Mechanical life: min. 1 x 10⁶ operations
- Wide variety of connection options
- Numerous approvals



Technical specifications

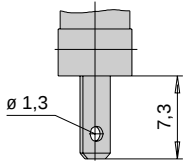
Contact configuration	S.P.D.T., S.P.S.T. - N.O., S.P.S.T. - N.C.
Contact gap	< 3 mm (μ)
Switching voltage (max.)	250 V AC
Switched current (max.)	0.1 to 10 A AC (see table)
Operating force	200 to 340 cN without aux. actuator, depend. on model
Total actuator travel	ca. 1.6 mm
Mechanical life	min. 1 x 10 ⁶ operations
Electrical life	min. 10 000 operations in compliance with VDE 0630
Ambient temperature	- 40° C to + 85° C / +120° C
Model with leads	- 40° C to + 105° C
Proof tracking index	PTI 175, PTI 250 on request
Materials	PET / PBT (UL 94 V-0)
Housing	POM (T85), PBT (T120)
Actuator	AgNi
Contacts DC1, DC2, DC4	AuAgPt (crosspoint)
DC3	CuZn (silver-plated)
Terminals	Stainless steel or plastic
Auxiliary actuator	SI (VMQ)
Sealing gasket	silicon-free alternative avail.
Leads	Cu (PVC-sheathed)
Approvals	   depending on model
Degree of protection (switch interior)	IP6K7

Dimensions in mm

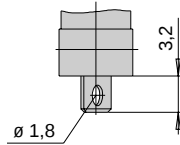


Terminal options

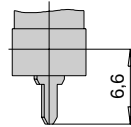
Q.C. terminals 2.8 x 0.5,
max. 30° twisted



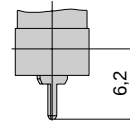
Solder terminals, short
max. 30° twisted



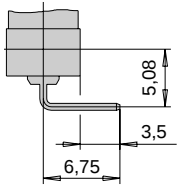
PCB terminals 1.3 x 0.5,
max. 30° twisted



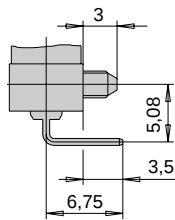
PCB terminals 0.6 x 0.5,
max. 30° twisted



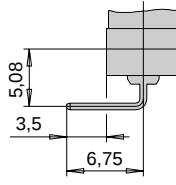
PCB terminals 0.6 x 0.5,
RH-side w/o location pins



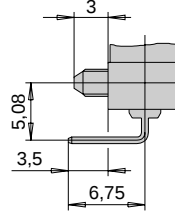
PCB terminals 0.6 x 0.5,
RH-side with location pins



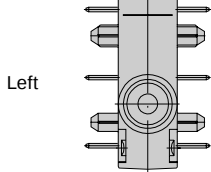
PCB terminals 0.6 x 0.5,
LH-side w/o location pins



PCB terminals 0.6 x 0.5,
LH-side with location pins

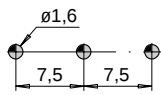


Top-down view of lateral
terminals

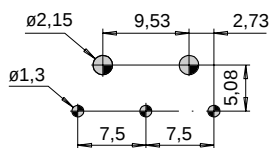


Right

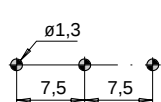
Drilling pattern for
PCB terminals 1.3 x 0.5



Drilling pattern for lateral
PCB terminals 0.6 x 0.5,
with location pins

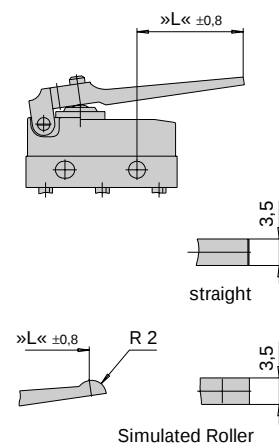


Drilling pattern for lateral/
underside PCB terminals
0.6 x 0.5, w/o location pins



Auxiliary actuator options

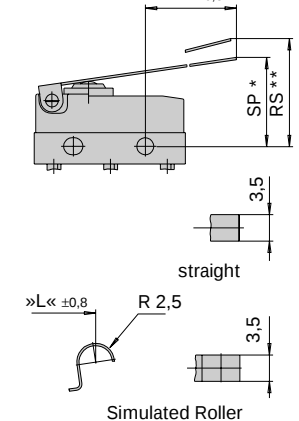
Plastic auxiliary actuator
with/without adjusting screw



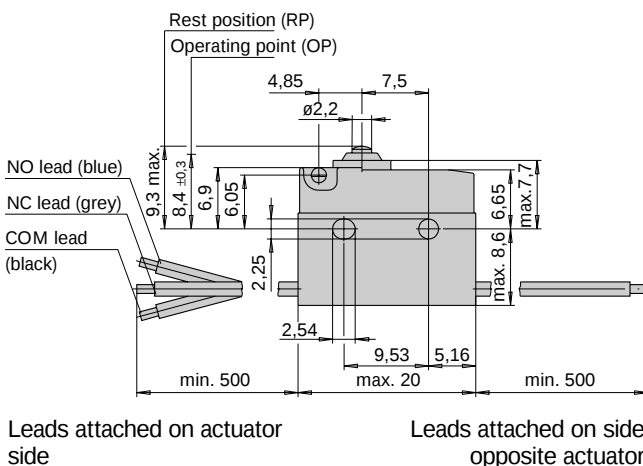
Steel auxiliary actuator

*SP = Operating point (OP)

**RS = Rest position (RP)



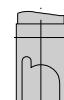
Model with connecting leads (IP 6K7)



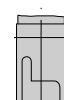
Special model available
with tall pedestal on request

Cut-out

Type A



Type B



DC subminiature switch

Electrical rating and operating life b

Electrical rating according to		Electrical life (T85) at rated load		Mechanical life min.(Operations)	Max. operating force (cN)	Code
VDE 0630	UL	acc. to VDE min. (Operations)	acc. to UL			
6 A 250 V~	5 A 125-250 V AC	10 000	6 000	2 x 10 ⁶	200	1
10 (1.5) A, 250 V~	10.1A, 125-250VAC 1/4HP, 125V	10 000	6 000	1 x 10 ⁶	340	2
0.1 A, 250 V~ +++	0.1 A 125 V AC	50 000	6 000	2 x 10 ⁶	200	3
3 A, 250 V~ +++	3 A, 125-250 V AC	50 000	6 000	2 x 10 ⁶	200	4

Contact rating at direct voltage

Switching voltage	Switched current resistive load		Inductive load (L/R = 3 ms)	
	DC 1	DC 2	DC 1	DC 2
12 V	6 A	10 A	6 A	10 A
24 V	3 A	5 A	2 A	4 A
60 V	1 A	1 A	0.5 A	0.5 A
110 V	0.5 A	0.5 A	0.2 A	0.2 A
220 V	0.25 A	0.25 A	0.1 A	0.1 A

Contact configuration c

Contact configuration operating temperature + 85°C	Code
S.P.S.T.-N.O.	E
S.P.S.T.-N.C.	F
S.P.D.T.	G
operating temperature +120° C (with leads +105° C)	Code
S.P.S.T.-N.O.	A
S.P.S.T.-N.C.	B
S.P.D.T.	C

Terminals d

Type of terminals with standard pedestral	Code
Short solder terminals*	A1
PCB terminals 1.3 x 0.5, straight*	H1
PCB terminals 0.6 x 0.5, straight*	K1
PCB terminals 0.6 x 0.5, right-hand side**	K8
PCB terminals 0.6 x 0.5, left-hand side**	K9
PCB terminals 0.6 x 0.5, right-hand side***	K6
PCB terminals 0.6 x 0.5, left-hand side***	K7
Q.C. terminals 2.8 x 0.5, straight*	L1
Leads 0.5 mm ² attached to underside	B5
Leads 0.5 mm ² on actuator side	B3
Leads 0.5 mm ² on opposite side from actuator	B4
Leads 0.75 mm ² attached to underside	C5
Leads 0.75 mm ² on actuator side	C3
Leads 0.75 mm ² on opposite side from actuator	C4
Without leads (type B) on actuator side/opposite*	N3/N4
Without leads (type A) on actuator side/opposite*	P3/P4
Without leads (no cut-out)*	Q5

Auxiliary actuator options e

Auxiliary actuator option	Type	Max. operating force (cN)	Max. pretravel (mm)	Min. overtravel (mm)	Max. Movement differential (mm)	Max. rest position (mm)	Operating point (mm)	Length of aux. actuator (mm) ±0.8	Code
W/o aux. actuator	DC 1, 3, 4 DC2	200 340	1.0 1.0	0.6 0.6	0.1 0.1	9.3 9.3	8.4±0.3 8.4±0.3	—	AA
Straight aux. actuator	DC 1, 3, 4 DC2	80 150	4.5 5.0	1.5 1.5	0.5 0.7	14.0 14.0	10.7±1.3 10.7±1.6	4.8	LB
Straight aux. actuator	DC 1, 3, 4 DC2	70 120	5.0 5.5	1.5 1.5	0.6 1.0	15.0 15.0	11.1±1.5 11.1±1.8	7.0	LC
Straight aux. actuator	DC 1, 3, 4 DC2	on request						42.0	LD
Sim. roller aux. actuator	DC 1, 3, 4 DC2	90 160	4.5 5.0	1.5 1.5	0.5 0.7	19.0 19.0	16.0±1.3 16.0±1.6	2.5	SB
Sim. roller aux. actuator	DC 1, 3, 4 DC2	80 130	5.0 5.5	1.5 1.5	0.6 1.0	20.0 20.0	16.4±1.5 16.4±1.8	4.7	SC
Sim. roller aux. actuator	DC 1, 3, 4 DC2	on request						39.7	SD
Roller aux. actuator	DC 1, 3, 4 DC2	90 160	4.5 5.0	1.5 1.5	0.5 0.7	19.0 19.0	15.8±1.3 15.8±1.6	2.5	RB
Roller aux. actuator	DC 1, 3, 4 DC2	80 130	5.0 5.5	1.5 1.5	0.6 1.0	20.0 20.0	16.2±1.5 16.2±1.8	4.7	RC
Roller aux. actuator	DC 1, 3, 4 DC2	on request						39.7	RD
Straight aux. actuator (plastic)	DC 1, 3, 4 DC2	68 115	4.5 4.5	2.0 2.0	0.6 0.6	15.0 15.0	11.1±1.5 11.1±1.5	7.0	WB
Straight aux. actuator (plastic)	DC 1, 2, 3 DC2	50 85	6.0 6.0	3.0 3.0	0.8 0.8	17.0 17.0	12.2±1.8 12.2±1.8	14.0	WC
Sim. roller aux. actuator (plastic)	DC 1, 3, 4 DC2	73 125	4.5 4.5	2.0 2.0	0.6 0.6	15.0 15.0	11.9±1.4 11.9±1.4	5.6	VB
Roller auxiliary actuator (plastic)	DC 1, 3, 4 DC2	73 125	4.5 4.5	1.5 1.5	0.6 0.6	19.0 19.0	16.0±1.4 16.0±1.4	5.2	ZB

Example

DC subminiature switch

3: 0.1 A 250 V AC

G: T 85, S.P.D.T.

B3: Leads, 0.5 mm²
attached on actuator
side

LC: Auxiliary actuator:
7.0 mm long from
center of mounting hole

Ordering code

a b c d e
DC 3 G B3 LC