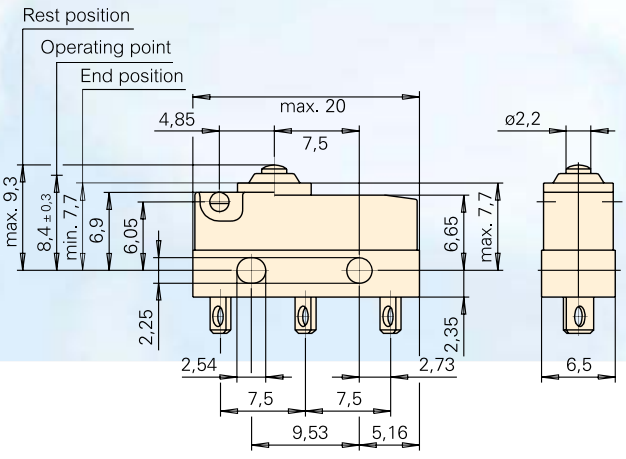
DC subminiature switch



Features

- Sealed switch IP6K7 protection
- Silicon-free variants available
- Models available for 120 °C operating temperature
- Nominal currents from 10 A at 250 VAC
- Various auxiliary actuators available (can also be retrofitted)
- Various application-specific contact materials
- Mechanical operating life min. 1,000,000 actuations
- Wide variety of terminal types

Dimensions in mm



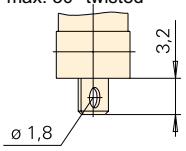
Technical specifications

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	0,1 to 10 A AC (see table) depending on model
Operating force	200 to 340 cN without auxiliary actuator depending on model
Total travel	ca. 1,6 mm
Mechanical life	min. 1 x 10^6 operations (see table)
Electrical life (max. load)	min 10.000 operations (see table)
Ambient temperature	-40 to +85 °C / 120 °C
Model with leads	-40 to +105 °C
Proof tracking index	PTI175, PTI250 on request
Materials	
Housing	PET/PBT (UL 94V-0)
Actuator	POM (T85), PBT (T120)
Contacts DC1, DC2, DC4	AuNi
DC3	AuAgPt (Crosspint)
Terminals	CuZn (silver-plated)
Auxiliary actuator	Stainless steel or plastic
Sealing gasket	SI, silicon-free alternative available
Leads	Cu, PVC-sheated
Approvals	depending on model
Degree of protection (switch interior)	IP6K7

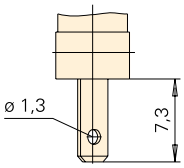
For detailed information and the layout of the details described above, please do not hesitate to ask for our technical specifications and drawing.

Terminals

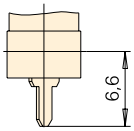
Solder terminal short
max. 30° twisted



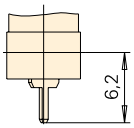
Q.C. terminal 2,8 x 0,5
max. 30° twisted



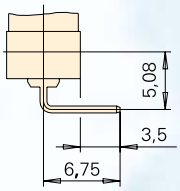
PCB terminal 1,3 x 0,5 mm
max. 30° twisted



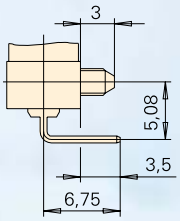
PCB terminal 0,6 x 0,5 mm
max. 30° twisted



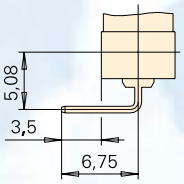
PCB terminal 0,6 x 0,5 mm
RH-side w/o location pins



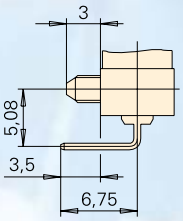
PCB terminal 0,6 x 0,5 mm
RH-side with location pins



PCB terminal 0,6 x 0,5 mm
LH-side w/o location pins

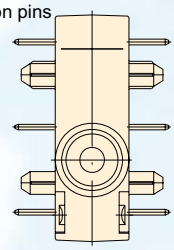


PCB terminal 0,6 x 0,5 mm
LH-side with location pins



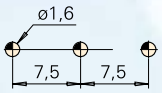
Side definition with terminals and location pins

left

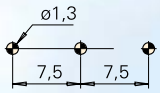


right

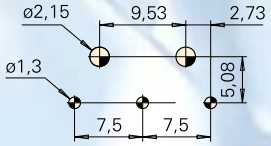
Drilling pattern for
PCB terminals 1.3 x 0.5 mm



Drilling pattern for lateral PCB
terminals 0.6 x 0.5 mm
straight / lateral

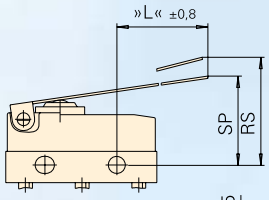


Drilling pattern for lateral PCB
terminals 0.6 x 0.5, with location pins

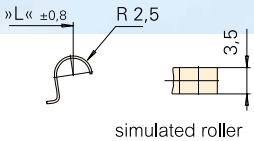


Auxiliary actuator options

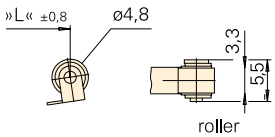
Steel auxiliary actuator



straight

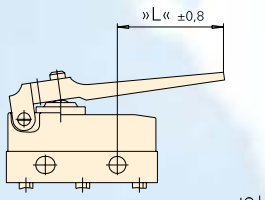


simulated roller

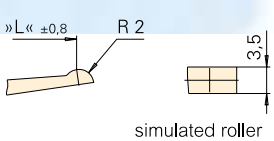


roller

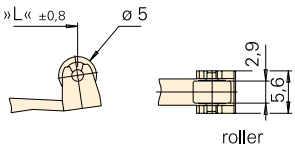
Plastic auxiliary actuator with/
without adjusting screw



straight

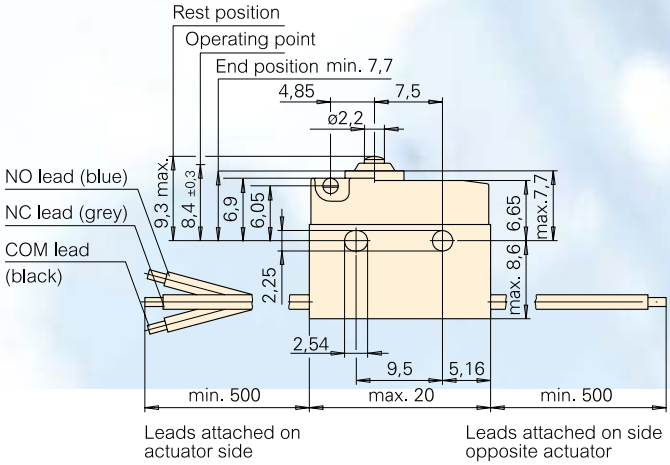


simulated roller

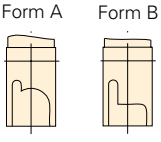


roller

Model with connecting leads (IP6K7)



Special model with tall pedestral available on request



Electrical rating and operating life (2)

Electrical rating according to EN 61058	UL 1054	Electrical life at rated load acc. to EN (operations)	acc. to UL	Mechanical life	Max. operating force (cN)	Code
6 A 250 V AC	5 A 125–250 V AC	10.000	6.000	2×10^6	200	1
10 (1,5) A, 250 V AC	10,1 A, 125–250 V AC 1/4 HP, 125 V AC	10.000	6.000	1×10^6	340	2
0,1 A, 250 V AC	0,1 A 125–250 V AC	50.000	100.000	2×10^6	200	3
3 A, 250 V AC	3 A, 125–250 V AC	50.000	6.000	2×10^6	200	4*

* DC4 only possible as line version with line diameter 0.5 mm^2

Switching parameters

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	Code
Without auxiliary actuator	DC1, 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

Contact configuration (3)

Contact configuration	Code
Ambient temperature 40T85	
S.P.S.T.-N.O.	E
S.P.S.T.-N.C.	F
S.P.D.T.	G
Ambient temperature 40T120 (with leads 40T105)	
S.P.S.T.-N.O.	A
S.P.S.T.-N.C.	B
S.P.D.T.	C





Contact rating at direct voltage

	Switched current resistive load		Induktive load (L/R = 3 ms)	
Switching voltage	DC1	DC2	DC1	DC2
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

Terminals (4)

Type of terminal with standard pedestral	Code
Solder terminal, short*	A1
PCB terminal 1,3 x 0,5 straight*	H1
PCB terminal 0,6 x 0,5 straight*	K1
PCB terminal 0,6 x 0,5 right-hand side**	K8
PCB terminal 0,6 x 0,5 left-hand side**	K9
PCB terminal 0,6 x 0,5 right-hand side***	K6
PCB terminal 0,6 x 0,5 left-hand side***	K7
Q.C. terminal 2,8 x 0,5 mm 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 (Form B) on actuator side/ opposite*	N3/N4
Without Leads (Form A) on actuator side/ opposite*	P3/P4
Without Leads (no cut-out) with solder terminal*	Q1

* max. 30° twisted **with location pins ***w/o location pins

Auxiliary actuator options (5)

Model	Length	Code
Without auxiliary actuator	–	AA
Straight	4,8 8 42	LB LC LD
Roller	2,5 4,7 39,7	RB RC RD
Simulated roller	2,5 4,7 39,7	SB SC SD
Plastic straight	7 14	WB WC
Plastic roller	5,2	ZB
Plastic simulated roller	5,6	VB