



DC subminiature switch

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 VAC
Switched current	0,1 to 10 AAC (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. 1×10^6 operations (see table)
Electrical life	min 10^4 operations (see table)
Ambient temperature	-40 to +85 °C/120 °C
Model with leads	-40 to +105 °C
Proof tracking index	PTI175, PTI250 auf Anfrage
Materials	
Housing	PBT (UL 94 V-0), PET (UL 94 V-0)
Actuator	POM UL 94 HB (T85), PBT UL 94 V-0 (T120)
Base	PET (UL 94 V-0)
Contacts	DC1, DC2, DC4 AgNi
	DC3 AuAgPt (Crosspoint)
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)	IP67

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

Features

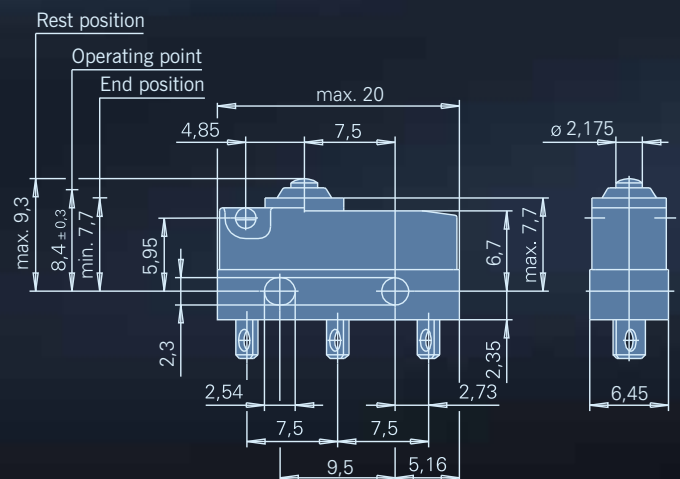
- Sealed switch IP6K7 protection
- Silicon-free variants available
- Models available for 120 °C operating temperature
- Nominal currents from 10A at 250 VAC
- Various auxiliary actuators available (can also be retrofitted)
- Various application-specific contact materials
- Mechanical operating life min. 1.000.000 actuations
- Wide variety of terminal types

Auxiliary actuator options*

Model	Length (mm)
Without auxiliary actuator	-
Straight	4,8; 8; 42
Roller	2,5; 4,7; 39,7
Simulated roller	2,5; 4,7; 39,7
Plastic straight	7; 14
Plastic roller	5,2
Plastic simulated roller	5,6

* Order codes identical to DB series, please see page 37

Dimensions in mm





Terminals

Solder terminal short
max. 30° twisted



Q.C. terminal 2,8x0,5
max. 30° twisted



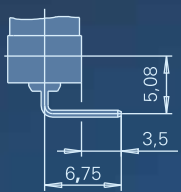
PCB terminal 1,3x0,5 mm
max. 30° twisted



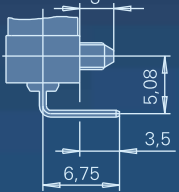
PCB terminal 0,6x0,5 mm
max. 30° twisted



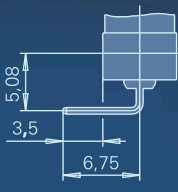
PCB terminal 0,6x0,5 mm
RH-side w/o location pin



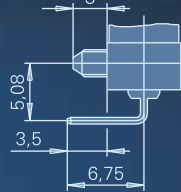
PCB terminal 0,6x0,5 mm
RH-side with location pin



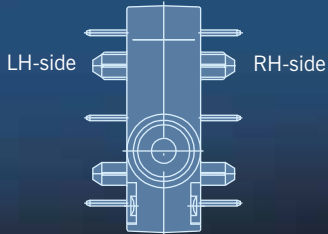
PCB terminal 0,6x0,5 mm
LH-side w/o location pin



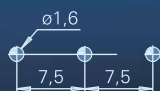
PCB terminal 0,6x0,5 mm
LH-side with location pin



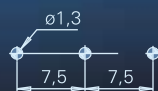
Side definition with terminals
and location pins



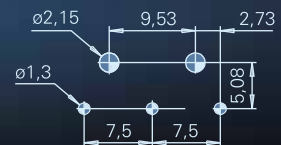
Drilling pattern for
PCB terminals 1,3x0,5 mm



Drilling pattern for lateral
PCB terminals 0,6x0,5 mm
straight/lateral

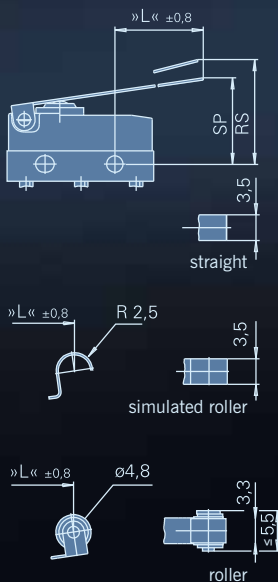


Drilling pattern for lateral PCB terminals
0,6x0,5 mm with location pins

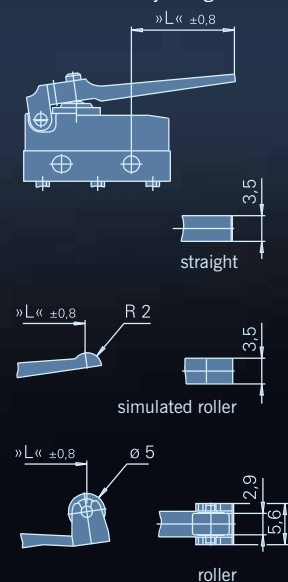


Auxiliary actuator options

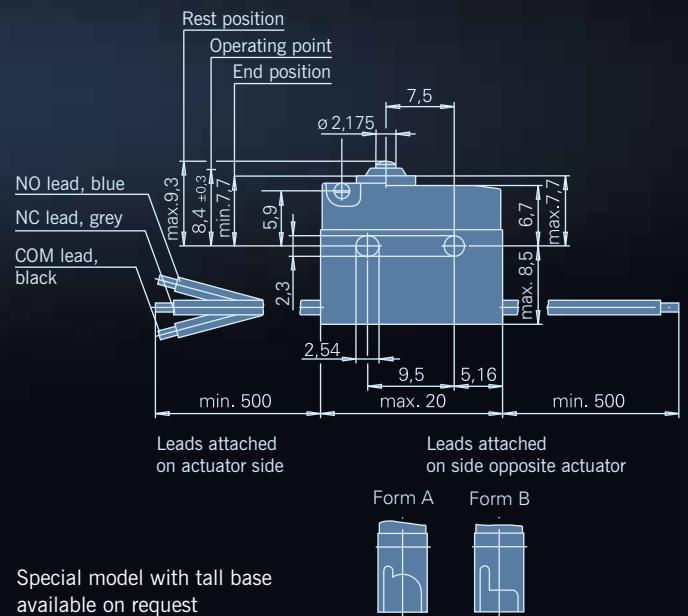
Steel auxiliary actuator



Plastic auxiliary actuator
with/without adjusting screw



Model with connecting leads (IP67)





DC subminiature switch

Electrical rating and operating life

Electrical rating according to		Electrical life at rated load for 40T85* (operations)		Mechanical life	Operating force max. (cN)	Housing mark
EN 61058-1	UL 1054	acc. to EN	acc. to UL			
6 A 250 VAC	5 A 125–250 VAC	10.000	6.000	1×10^6	200	DC 1
10 (1,5) A, 250 VAC	10,1 A 125–250 VAC 1/4 HP, 125 VAC	10.000	6.000	1×10^6	340	DC 2
0,1 A, 250 VAC	0,1 A 125–250 VAC	50.000	100.000	1×10^6	200	DC 3
3 A, 250 VAC	3 A 125–250 VAC	50.000	6.000	1×10^6	200	DC 4*

* DC4 only possible as line version with line diameter 0.5 mm² and AWG 22

Switching parameters

Model	Type	Operating force max. (cN)	Max. pretravel (mm)	Min. overtravel (mm)	Differential travel max. (mm)	Max. rest position (mm)	Operating point (mm)	Length actuator (mm) ± 0,8
Without auxiliary actuator	DC1, 3, 4	200	1,0	0,6	0,1	9,3	8,4 ± 0,3	
	DC2	340	1,0	0,6	0,1	9,3	8,4 ± 0,3	–





Preferred parts

Order code	Electrical rating		Terminals	Auxiliary actuator	Operating force (cN)	Operating point (mm)	Max. pretravel (mm)	Min. overtravel (mm)	Differential travel max. (mm)
	EN	UL							
DC1C-A1AA	6A, 250VAC	5A, 125–250VAC	Solder terminal short	-	200	8,4 ± 0,3	1,0	0,6	0,1
DC1C-A1RB	6A, 250VAC	5A, 125–250VAC	Solder terminal short	Roller, length 2,5mm	90	15,8 ± 1,3	4,5	1,5	0,5
DC1C-C3AA	6A, 250VAC	5A, 125–250VAC	Leads 0,75 mm ² on actuator side	-	200	8,4 ± 0,3	1,0	0,6	0,1
DC1C-L1AA	6A, 250VAC	5A, 125–250VAC	Q.C. terminal 2,8x0,5mm, straight	-	200	8,4 ± 0,3	1,0	0,6	0,1
DC2C-A1AA	10(1,5)A, 250VAC	10,1A, 125–250VAC 1/4 HP, 125VAC	Solder terminal short	-	340	8,4 ± 0,3	1,0	0,6	0,1
DC2C-A1LB	10(1,5)A, 250VAC	10,1A, 125–250VAC 1/4 HP, 125VAC	Solder terminal short	Straight, length 4,8mm	150	10,7 ± 1,6	5,0	1,5	0,7
DC2C-A1RB	10(1,5)A, 250VAC	10,1A, 125–250VAC 1/4 HP, 125VAC	Solder terminal short	Roller, length 2,5mm	160	15,8 ± 1,6	5	1,5	0,7
DC3C-A1AA	0,1A, 250VAC	0,1A, 125–250VAC	Solder terminal short	-	200	8,4 ± 0,3	1,0	0,6	0,1
DC3C-A1LB	0,1A, 250VAC	0,1A, 125–250VAC	Solder terminal short	Straight, length 4,8mm	80	10,7 ± 1,3	4,5	1,5	0,7
DC3C-B3AA	0,1A, 250VAC	0,1A, 125–250VAC	Leads 0,5mm ² on actuator side	-	200	8,4 ± 0,3	1,0	0,6	0,1
DC3C-L1AA	0,1A, 250VAC	0,1A, 125–250VAC	Q.C. terminal 2,8x0,5mm, straight	-	200	8,4 ± 0,3	1,0	0,6	0,1
DC3C-L1LB	0,1A, 250VAC	0,1A, 125–250VAC	Q.C. terminal 2,8x0,5mm, straight	Straight, length 4,8mm	80	10,7 ± 1,3	4,5	1,5	0,5
DC3C-M5RB*	0,1A, 250VAC	0,1A, 125–250VAC	Leads 20 AWG	Roller, length 2,5mm	90	15,8 ± 1,3	4,5	1,5	0,5

* UL leads