



## DC subminiature switch

### Technical specifications

<b>Contact configuration</b>	S.P.D.T., S.P.S.T. - N.O., S.P.S.T. - N.C.
<b>Contact gap</b>	< 3 mm ( $\mu$ )
<b>Switching voltage max.</b>	250 VAC
<b>Switched current</b>	0,1 to 10 AAC (see table) depending on model
<b>Operating force</b>	200 to 340 cN without auxiliary actuator depending on model
<b>Total travel</b>	ca. 1,6 mm
<b>Mechanical life</b>	min. $1 \times 10^6$ operations (see table)
<b>Electrical life</b>	min $10^4$ operations (see table)
<b>Ambient temperature</b>	-40 to +85 °C/120 °C
<b>Model with leads</b>	-40 to +105 °C
<b>Proof tracking index</b>	PTI175, PTI250 auf Anfrage
<b>Materials</b>	
<b>Housing</b>	PBT (UL 94 V-0), PET (UL 94 V-0)
<b>Actuator</b>	POM UL 94 HB (T85), PBT UL 94 V-0 (T120)
<b>Base</b>	PET (UL 94 V-0)
<b>Contacts</b>	<b>DC1, DC2, DC4</b> AgNi
	<b>DC3</b> AuAgPt (Crosspoint)
<b>Terminals</b>	CuZn (silver-plated)
<b>Auxiliary actuator</b>	Stainless steel or plastic
<b>Sealing gasket</b>	SI, silicon-free alternative available
<b>Leads</b>	Cu, PVC-sheathed
<b>Approvals</b>	depending on model
<b>Degree of protection (switch interior)</b>	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

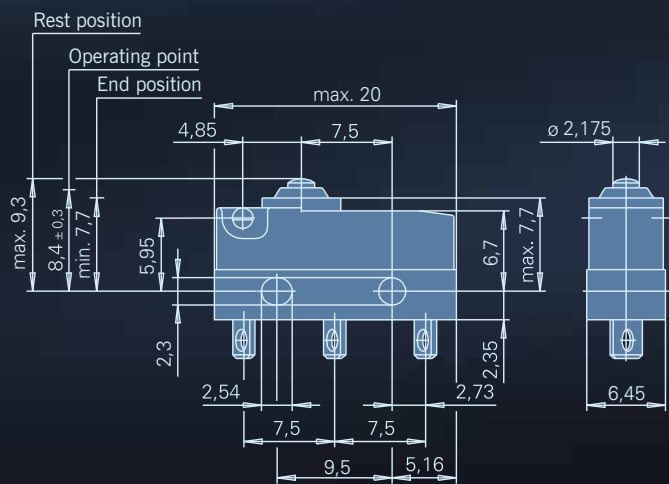
- Sealed switch IP6K7 protection
- Silicon-free variants available
- Models available for 120 °C operating temperature
- Nominal currents from 10A at 250 VAC
- Various auxiliary actuators available (can also be retrofitted)
- Various application-specific contact materials
- Mechanical operating life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

### Auxiliary actuator options\*

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



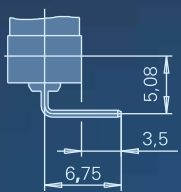
PCB terminal 1,3x0,5 mm  
max. 30° twisted



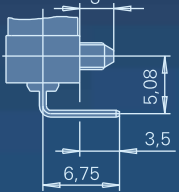
PCB terminal 0,6x0,5 mm  
max. 30° twisted



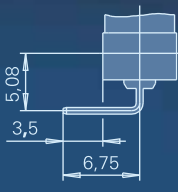
PCB terminal 0,6x0,5 mm  
RH-side w/o location pin



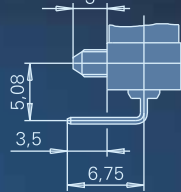
PCB terminal 0,6x0,5 mm  
RH-side with location pin



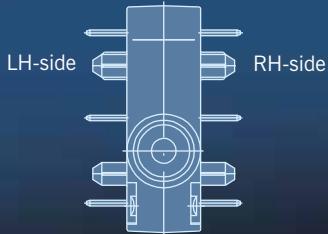
PCB terminal 0,6x0,5 mm  
LH-side w/o location pin



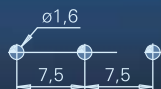
PCB terminal 0,6x0,5 mm  
LH-side with location pin



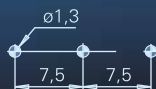
Side definition with terminals  
and location pins



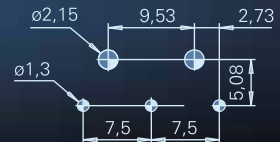
Drilling pattern for  
PCB terminals 1,3x0,5 mm



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

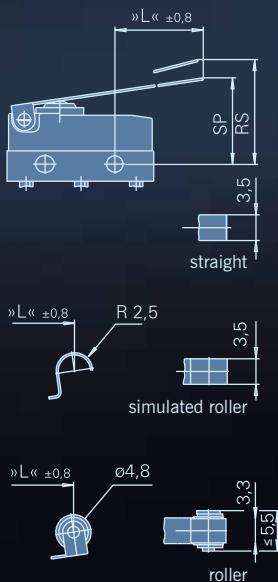


Drilling pattern for lateral PCB terminals  
0,6x0,5 mm with location pins

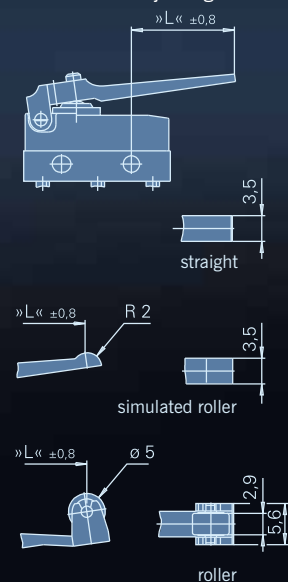


## Auxiliary actuator options

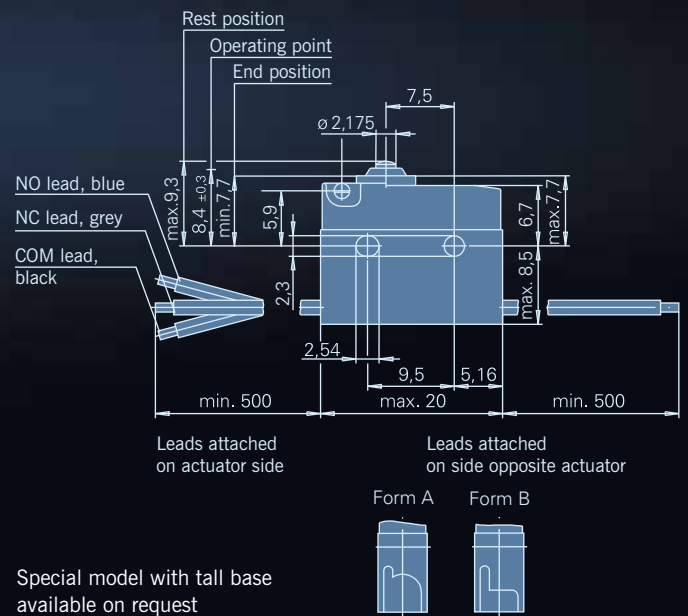
Steel auxiliary actuator



Plastic auxiliary actuator  
with/without adjusting screw



## Model with connecting leads (IP67)





## DC subminiature switch

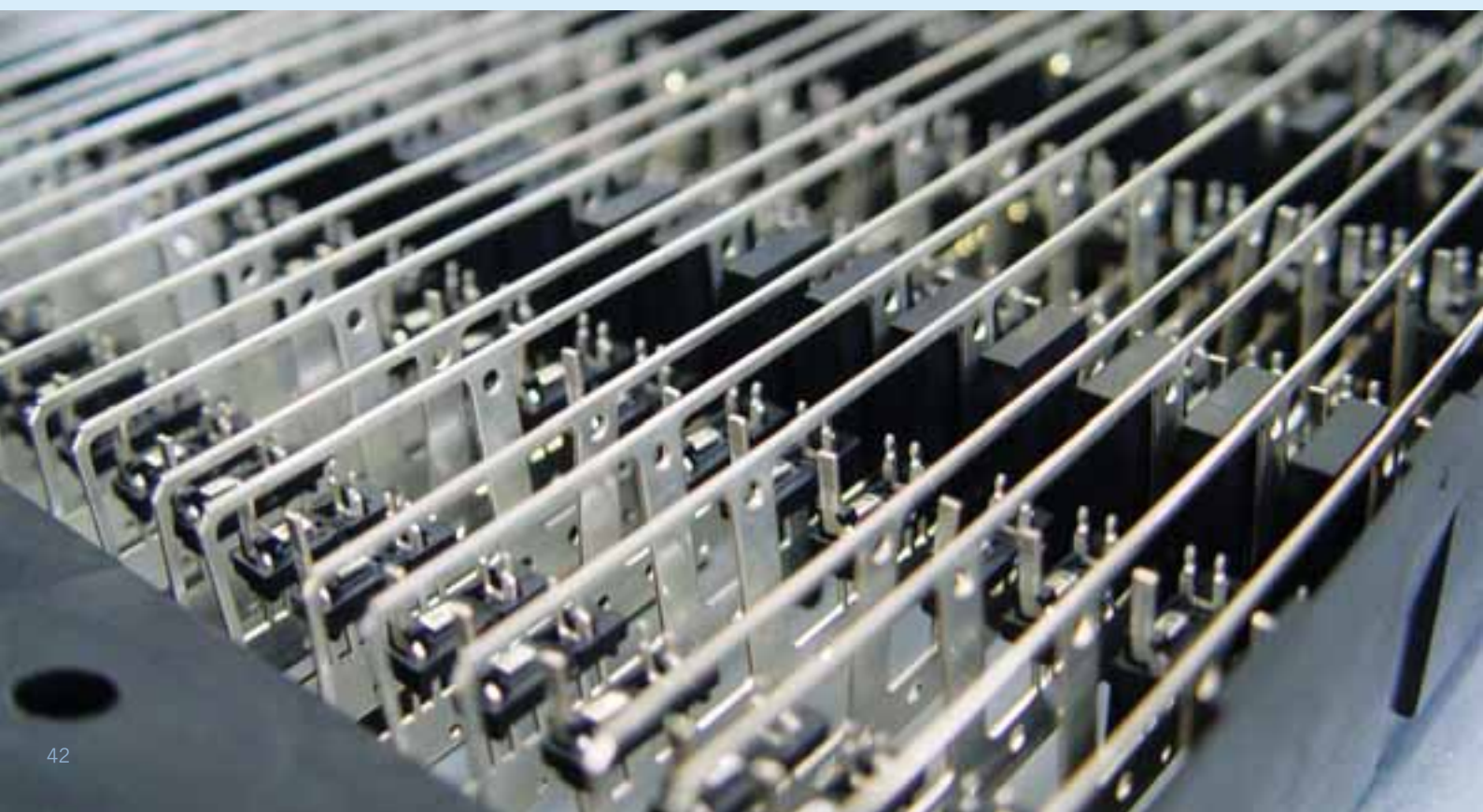
### Electrical rating and operating life

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	$1 \times 10^6$	200	DC 1
10 (1,5) A, 250 VAC	10,1 A 125–250 VAC 1/4 HP, 125 VAC	10.000	6.000	$1 \times 10^6$	340	DC 2
0,1 A, 250 VAC	0,1 A 125–250 VAC	50.000	100.000	$1 \times 10^6$	200	DC 3
3 A, 250 VAC	3 A 125–250 VAC	50.000	6.000	$1 \times 10^6$	200	DC 4*

\* DC4 only possible as line version with line diameter 0.5 mm<sup>2</sup> 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 <sup>2</sup> 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 <sup>2</sup> 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