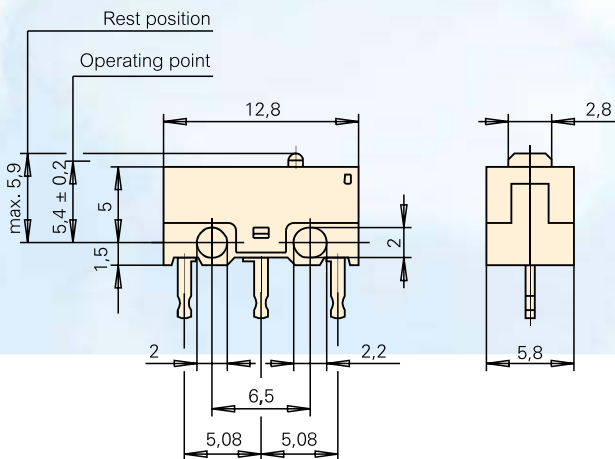


DG sub-subminiature switch


Features

- Very small size (only 12.8 x 5.8 x 6.5 mm)
- Depending on the model, the breaking capacity ranges from small switching currents and voltages to low-voltage applications up to 3 A 125 VAC
- Optionally available with or without auxiliary actuator
- Use on circuit boards with connections to the left or right and standing
- High mechanical operating life, depending on the model > 1,000,000 actuations

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
Switching voltage max.	125 V AC
Switched current max.	3 A AC
Operating force max.	75 cN or 140 cN without auxiliary actuator
Total travel	0,7 mm without auxiliary actuator
Mechanical life	> 1 x 10 ⁶ operations
Electrical life (max. load)	see table
Ambient temperature	-25 °C to +85 °C
Materials	
Base	PPHS (UL 94V-0)
Cover	PBT (UL 94V-0)
Actuator	PBT (UL 94V-0)
Auxiliary actuator	Stainless steel
Terminals	CuZn striped silver-plated
Contacts	DG 1/4 AgNi DG2 AgNi, gal. Au
Approvals	
Degree of protection (switch interior)	IP40

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

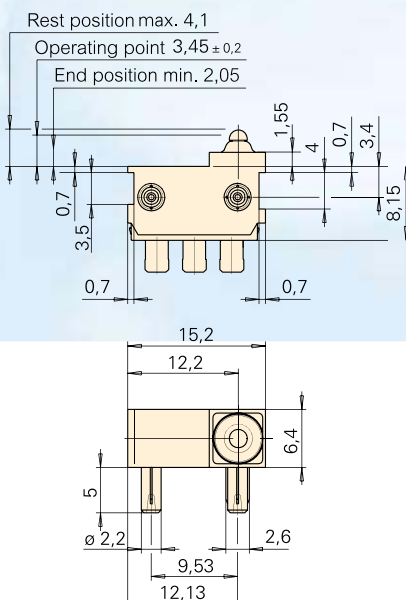
DJ sub-subminiature



Features

- Sealed switch up to protection IP6K7
- Suitable for actuation at angles of up to 40°C depending on slide partner material, etc.
- Easy installation thanks to connector pins and fastening nut
- Smallest dimensions
- Models available for up to 85°C operating temperature
- Nominal currents 5 mA to 2 A at 12 VDC
- High contact stability with AuAg crosspoint contacts
- Mechanical operating life min. 500.000 actuations
- Many connection possibilities

Dimensions in mm



Technical specifications

Contact configuration	S.P.D.T.
Contact gap	< 3 mm
Switching voltage max.	12 V DC up to 60 V on request
Switched current	0.005 to 2 A DC
Operating force	max. 120 cN
Total travel	ca. 2,0 mm
Mechanical life	min. 500.000 operations
Electrical life (max. load)	min 100.000 operations
Ambient temperature	-40 to + 85°C
Materials	
Base	PBT
Cover	PBT + ASA
Actuator	POM
Sealing gasket	SI (VMQ)
Terminals	CuZn (silver-plated)
Contact	AuAg (Crosspoint)
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.

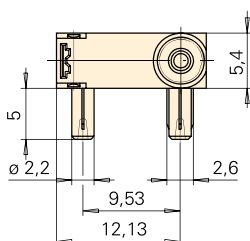
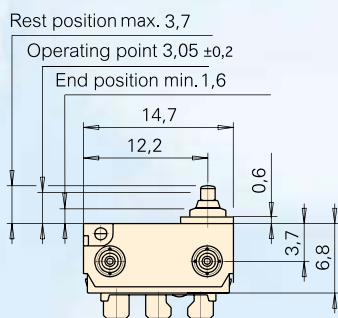
DK sub-subminiature switch



Features

- Sealed switch up to protection IP6K5. IP6K7 on request
- Smallest dimensions
- Models available up to 105 °C operating temperature
- Nominal currents 5 mA up to 2 A at 12 V DC
- Actuation vertically or with auxiliary actuator
- High contact stability thanks to AuAg crosspoint contacts
- Mechanical operating life min. 500,000 actuations
- Many connection possibilities, also available with leads

Dimensions in mm

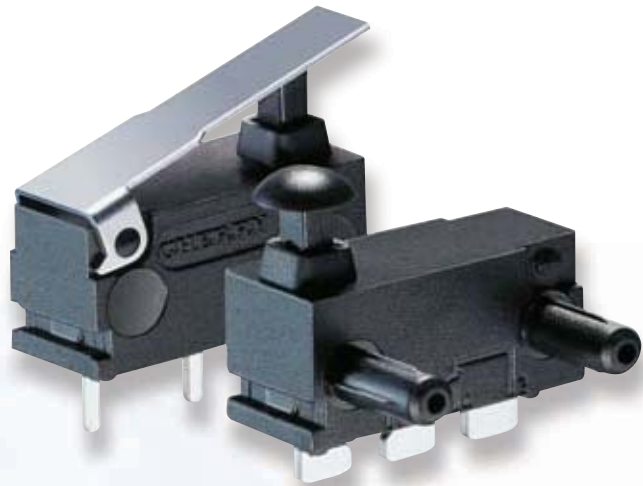


Technical specifications

Contact configuration	S.P.D.T.
Contact gap	< 3 mm
Switching voltage (max.)	12 V DC, up to 60 V on request
Switched current	0,005 to 2 A DC (see table)
Operating force	max. 75 cN without auxiliary actuator
Total travel	ca. 2,0 mm
Mechanical life	min. 500.000 operations
Electrical life (max. load)	min. 100.000 operations
Ambient temperature	-40 to +85 °C / 105 °C
Materials	
Base	PBT
Cover	PBT + ASA
Actuator	POM (+85 °)
Auxiliary actuator	Stainless steel
Sealing gasket	SI (VMQ)
Terminals	CuZn (silver-plated)
Leads	Cu, Isolation PVC
Contacts	AuAg (Crosspoint)
Degree of protection (switch interior)	IP6K5, IP6K7 on request

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

DR sub-subminiature switch

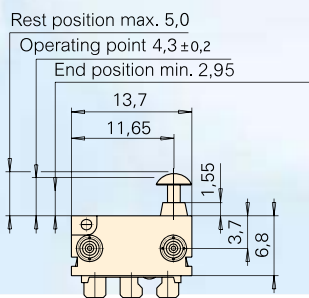


Features

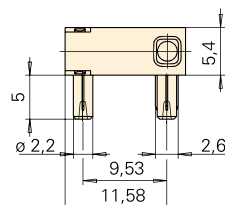
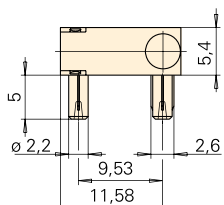
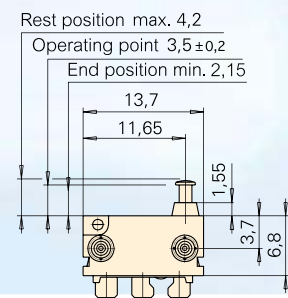
- Switch with mushroom or pan-head actuator for many actuation possibilities
- Dustproof according to IP40
- Models available up to 105 °C operating temperature
- Nominal currents 5 mA up to 2 A at 12 VDC
- Auxiliary actuator on request
- High contact stability thanks to AuAg crosspoint contacts
- Mechanical operating life min. 1×10^6 actuations
- Various connection possibilities

Dimensions in mm

with mushroom actuator



with pan-head actuator



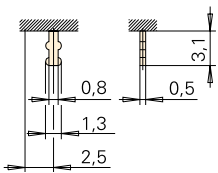
Technical specifications

Contact configuration	S.P.D.T.
Contact gap	< 3 mm
Switching voltage max.	12 V DC, up to 60 V on request
Switched current	0,005 to 2 A DC
Operating force	max. 75 cN without auxiliary actuator
Total travel	ca. 2,0 mm
Mechanical life	min. 1×10^6 operations
Electrical life (max. load)	min. 100.000 operations
Ambient temperature	-40 to +85 °C/105 °C
Materials	
Base	PBT
Cover	PBT
Actuator	POM (+85°)
Auxiliary actuator	Stainless steel
Terminals	CuZn (silver-plated)
Contacts	AuAg Crosspoint
Degree of protection (switch interior)	IP40

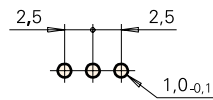
For detailed information and the layout of the details described above, please do not hesitate to ask for our technical specifications and drawing.

Terminals DH2

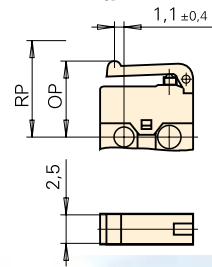
Solder terminal



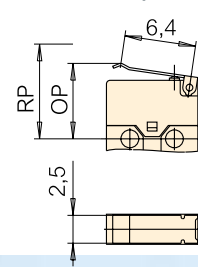
Drilling pattern



Aux. actuator DH2 (plastic)

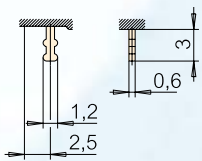


Aux. actuator DH3/4 (metal)

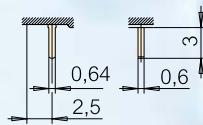


Terminals DH3/4

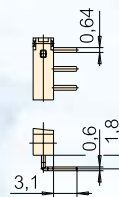
Solder terminal



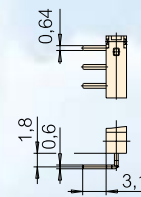
PCB terminal, RH-side



PCB terminal RH-side



LH-side



Drilling pattern



Electrical rating and operating life (2)

Electrical rating	Operating life		
	at nominal load	mechanical	Code
5-500 mA 30 V DC	30.000	50.000	2
50 mA-300 mA 5-30 V DC	30.000	50.000	3
5 mA-50 mA 5-30 V DC	30.000	50.000	4

Contact configuration (3)

Contact configuration	Code
S.P.D.T.	C

Terminals (4)

	Code
Solder terminal straight, 1.3 x 3.1	B1
PCB terminal, straight, 0.64 x 3.1	C4
PCB terminal, RH-side, 0.64 x 3.1	C5
PCB terminal, LH-side, 0.64 x 3.1	C6

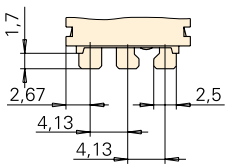
DH2 only available with straight terminals

Auxiliary actuator options (5)

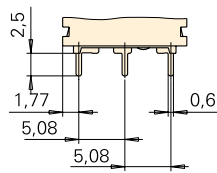
Model	Max. operating force (cN)	Max. pretravel (mm)	Min. overtravel (mm)	Max. movement differential (mm)	Max. rest position (mm)	Operating point (mm)	Code
Without aux. actuator	90	-	0,1	0,07	6,2	5,6 ± 0,15	AA
With aux. actuator	50	-	0,3	0,6	8,5	6,7 ± 0,5	PA (DH2) LA (DH3/4)

Terminals

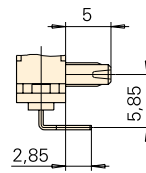
Solder terminal
2.5 x 0.5 mm



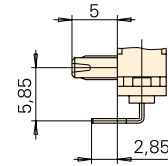
PCB terminal 0.6 x 0.5 mm



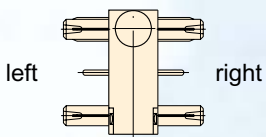
PCB terminal 0.6 x 0.5 mm
RH side with location pins



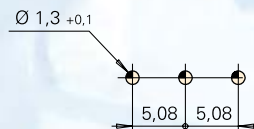
PCB terminal 0.6 x 0.5 mm
LH side with location pins



Side definition



Drilling pattern for PCB terminals
0.6 x 0.5, side and underside



Electrical rating (2)

Electrical rating	Code
0,005–2 A DC, 12 V	1

Actuator shape (3)

Actuator shape	Code
Mushroom	P
Pan-head	R

Terminals and location pins (4)

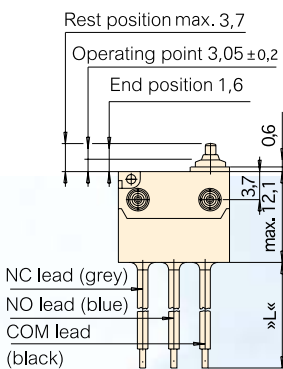
Type of terminal	Code
Solder terminal 2.5 x 0.5 without pins	AN
Solder terminal 2.5 x 0.5 with RH pins	AR
Solder terminal, straight 2.5 x 0.5 with LH pins	AL
PCB terminal, straight 0.6 x 0.5 without pins	BN
PCB terminal, straight 0.6 x 0.5 with RH pins	BR
PCB terminal, straight 0.6 x 0.5 with LH pins	BL
PCB terminal, RH-side 0.6 x 0.5 with RH pins	CR
PCB terminal, LH-side 0.6 x 0.5 with LH pins	DL

Auxiliary actuator options (5)

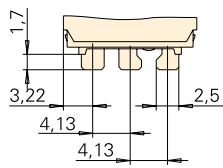
Model	Code
Without auxiliary actuator	A0

Dimensions in mm Terminals

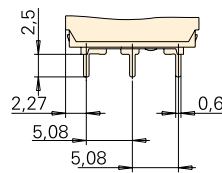
For DK sub-miniature switch with leads (IP6K7-compliant)



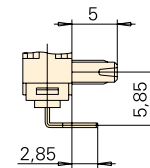
Solder terminal
2,5 x 0,5



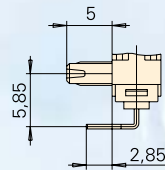
PCB terminal 0.6 x 0.5 mm



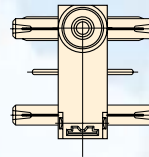
PCB terminal 0.6 x 0.5 mm
RH-side with location pins



PCB terminal 0.6 x 0.5 mm Side definition
LH-side with location pins



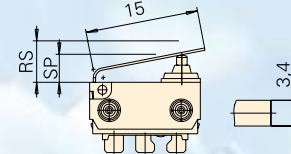
left



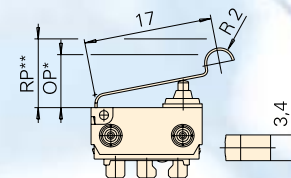
right

Auxiliary actuator

straight



simulated roller



Electrical rating (2)

Electrical rating	Code
0,005–2 A DC, 12 V	1

Contact configuration (3)

Contact configuration	Code
S.P.D.T.	G
Version with leads:	
S.P.S.T-N.O.	E
S.P.S.T-N.C.	F

Terminals and location pins (4)

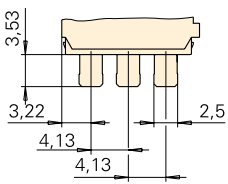
Type of terminal	Code
Solder terminals 2.5 x 0.5, straight w/o pins	RN
Solder terminals 2.5 x 0.5, str. with RH pins	RR
Solder terminals 2.5 x 0.5, str. with LH pins	RL
PCB terminals 0.6 x 0.5, straight w/o pins	SN
PCB terminals 0.6 x 0.5, str. with RH pins	SR
PCB terminals 0.6 x 0.5, str. with LH pins	SL
PCB terminals 0.6 x 0.5, RH-s. with RH pins	TR
PCB terminals 0.6 x 0.5, LH-s. with LH pins	UL
250 mm leads 0.35 mm ² to underside without pins	W3
250 mm leads 0.35 mm ² to underside with RH pins	W9
250 mm leads 0.35 mm ² to underside with LH pins	W6
500 mm leads 0.35 mm ² to underside without pins	Z3
500 mm leads 0.35 mm ² to underside with RH pins	Z9
500 mm leads 0.35 mm ² to underside with LH pins	Z6

Auxiliary actuator options (5)

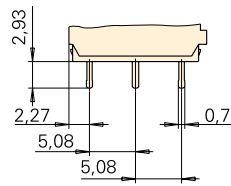
Model	Code
Without auxiliary actuator	A0
Straight spring-loaded auxiliary actuator	D1
Sim. roller, spring-loaded	E1

Terminals

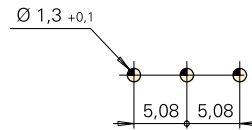
Solder terminal 2.5 x 0.5



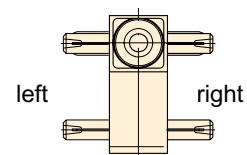
PCB terminal straight 0.7 x 0.5



Drilling pattern for PCB terminal 0.7 x 0.5



Side definition



Electrical rating (2)

Electrical rating	Code
0,005–2 A DC, 12 V	1

Contact configuration (3)

Contact configuration	Code
S.P.D.T.	G

Terminals and location pins (4)

Type of terminal	Code
Solder terminals 2.5 x 0.5, straight w/o pins	AN
Solder terminals 2.5 x 0.5, straight with RH pins	AR
Solder terminals 2.5 x 0.5, straight with LH pins	AL
PCB terminals 0.7 x 0.5, straight w/o pins	BN
PCB terminals 0.7 x 0.5, straight with RH pins	BR
PCB terminals 0.7 x 0.5, straight with LH pins	BL

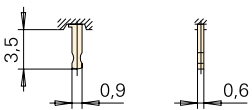
Auxiliary actuator options (5)

Model	Code
Without auxiliary actuator	A0

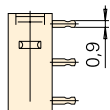


Terminals

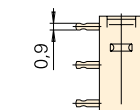
Solder terminal



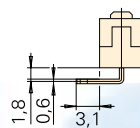
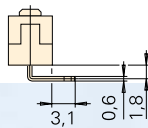
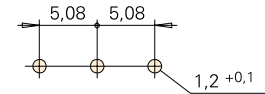
PCB terminal, RH-side



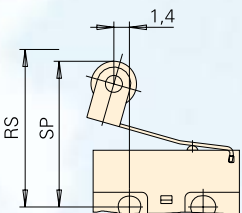
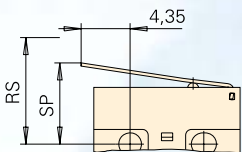
PCB terminal, LH-side



Drilling pattern



Auxiliary actuator



Electrical rating and operating life (2)

Electrical rating according to UL and CSA	Operating life		
	Nominal load UL and CSA	mechanical	Code
3 A, 125 V AC 2 A, 30 V DC	6.000	1 x 10 ⁶	1
0,05 A, 30 V DC	6.000	1 x 10 ⁶	2
1 A, 125 V AC 1 A, 30 V DC	6.000	1 x 10 ⁶	4

Contact configuration (3)

Contact configuration	Code
S.P.D.T.	3

Terminals (5)

PCB terminal	Code
straight	1
RH-side	2
LH-side	3

Operating force (4)

Operating force (OF)	Possible combinations with electrical rating (2)	Code
140 cN	1, 2	B
75 cN	2, 4	C

Auxiliary actuator options (6)

Model	Type	Max. operating force (cN)	Max. pretravel (mm)	Min. overtravel (mm)	Max. movement differential (mm)	Max. rest position (mm)	Operating point (mm)	Code
Without aux. actuator	DG 1,2 B DG 2,4 C	140 75	0,5 0,5	0,2 0,2	0,1 0,1	5,9 5,9	5,4 ± 0,2 5,4 ± 0,2	AA
aux. actuator straight	DG 1,2 B DG 2,4 C	45 30	1,8 1,8	0,55 0,55	0,5 0,5	9,4 9,4	6,8 ± 6,8 ±	LA
aux. actuator roller	DG 1,2 B DG 2,4 C	60 35	1,5 1,5	0,55 0,55	0,5 0,5	13,9 13,9	12,4 ± 0,5 12,4 ± 0,5	RA