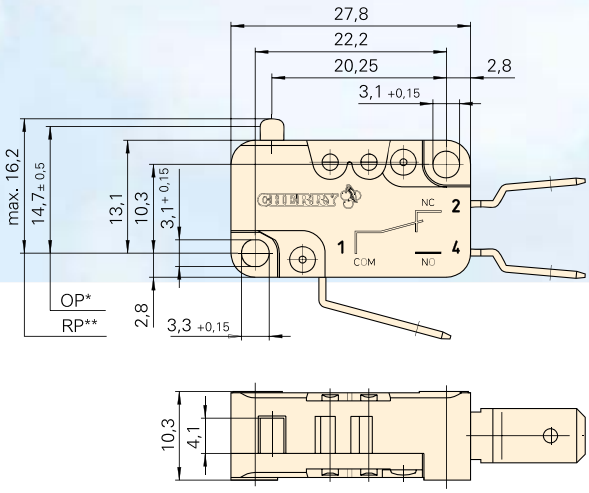
D4 miniature switch

Features

- Versatile snap switch with various auxiliary actuators and mounting points
- Fulfils requirements of IEC 60335-1: GWFI at 850 °C, GWIT at 775 °C and GWT 750°C
- Reliable in operation, with high level of repeat accuracy
- High contact stability thanks to application-specific contact materials for switching currents of 0.1 to 21 A at 250 VAC
- Ambient temperature -40 to max. +150 °C
- EN 61058 and UL 1054-approved
- Cadmium-free contact material

Dimensions in mm



Technical specifications

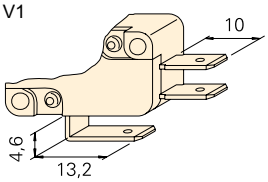
Contact configuration	S.P.D.T., S.P.S.T. - N.O., S.P.S.T. - N.C.
Contact gap	< 3 mm (μ)
Switching voltage	250 V AC (400 V on request)
Switched current max.	< 0,1 to 21 A, depending on model
Total travel	2,6 mm
Mechanical life	> 2 x 10^5 to 1 x 10^7 operations
Electrical life	see table
Ambient temperature	40T85; 40T125; 40T150
Proof tracking index	PTI 300
Materials	
Housing/Cover	PET (UL 94V-0)
Actuator	POM (max. 85 °C) PET alternative (UL 94 V-0)
Contact material D41	AuAgPt (Crosspoint)
D42	Ag
D43 - D48	AgNi
Terminals	CuZn alternative Cu
Auxiliary actuator	nickel-plated steel, alternative stainless steel
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.

Terminals

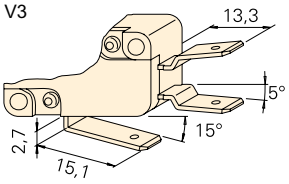
Q.C. terminal 6.3 x 0.8
straight

V1



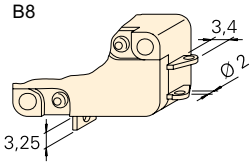
Q.C. terminal 6.3 x 0.8
dog-leg

V3



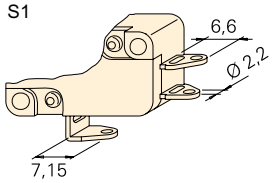
Solder terminal, short

B8



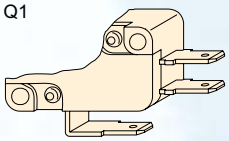
Solder terminal with
temperature-stop

S1



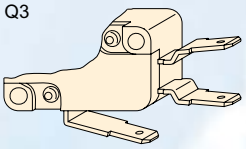
Q.C. terminal 4.8 x 0.8
straight

Q1



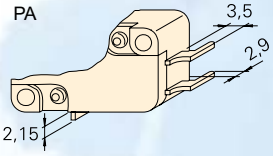
Q.C. terminal 4.8 x 0.8
dog-leg

Q3



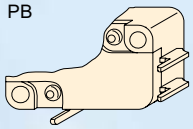
PCB terminal
1.3 x 0.8 housing side

PA



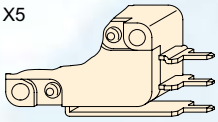
PCB terminal
1.3 x 0.8 cover side

PB



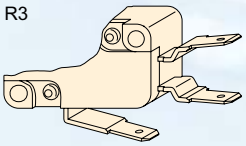
Q.C. terminal
RAST 2.5

X5



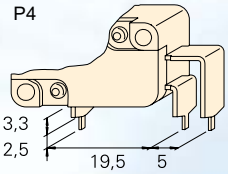
Q.C. terminal 4.8 x 0.5
dog-leg

R3



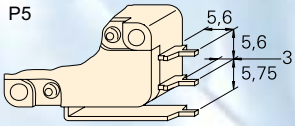
PCB terminal
1.3 x 0.5 underside

P4



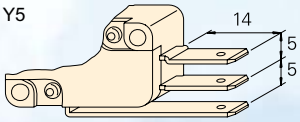
PCB terminal
1.3 x 0.8 rear

P5



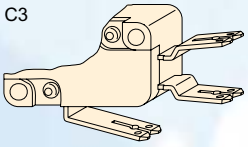
Q.C. terminal 6.3 x 0.8
RAST 5

Y5

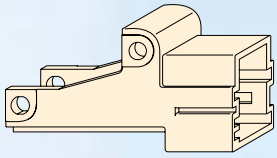


Q.C. terminal 2.8 x 0.8
bifurcated dog-leg

C3

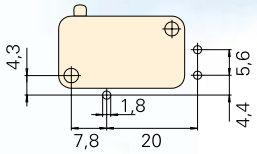


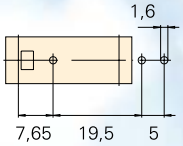
Connector housing for Q.C. terminals
6.3 x 0.8, RAST 5

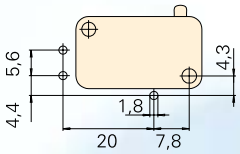


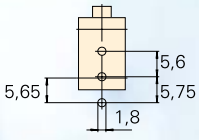
Other terminals available on request.

Drilling patterns for PCB terminals







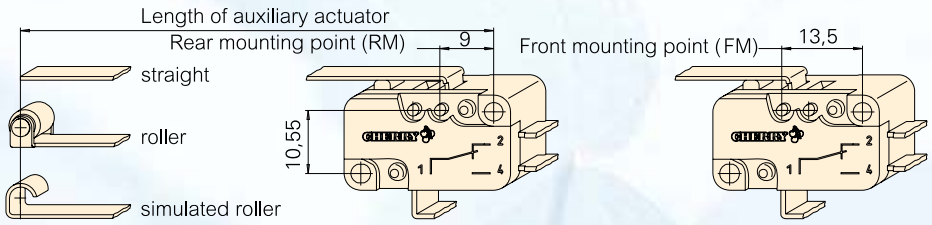


Electrical rating and operating life (2)

Electrical rating according to EN 61058	UL 1054	Electrical life for 40T85* acc. to EN (operations)	acc. to UL	Mechanical life actuator material POM	PET	Max. operating force (cN)	Code
Standard operating force							
0,1 (0,05) A, 250 V AC	0,1 A 125–250 V AC	50.000	6.000	10×10^6	1×10^6	170**	1
3 (1) A, 250 V AC	3 A, 125–250 V AC 1/10 HP 250 V AC	50.000	6.000	10×10^6	1×10^6	170**	2
6 (2) A, 250 V AC	5 A, 125–250 V AC, 1/4 HP 250 V AC	50.000	6.000	5×10^6	25×10^4	170	3
10 (3) A, 250 V AC	10 A, 1/2 HP, 125–250 V AC	50.000	6.000	1×10^6	1×10^5	285	4
16 (4) A, 250 V AC	15 A, 1/2 HP, 125–250 V AC	50.000	6.000	2×10^5	1×10^5	400	5
10 (3) A, 400 V AC							
Light operating force							
0,1 (0,05) A, 250 V AC	0,1 A, 125–250 V AC	50.000	6.000	10×10^6	1×10^6	45**	1
3 (1) A, 250 V AC	3 A, 125–250 V AC, 1/10 HP 250 V AC	50.000	6.000	10×10^6	1×10^6	45**	2
6 (2) A, 250 V AC	5 A, 125–250 V AC, 1/4 HP 250 V AC	50.000	6.000	10×10^6	5×10^5	45	3
10 (3) A, 250 V AC	10 A, 1/2 HP, 125–250 V AC	50.000	6.000	10×10^6	25×10^4	75	4
16 (4) A, 250 V AC	15 A, 1/2 HP, 125–250 V AC	50.000	6.000	10×10^6	25×10^4	100	5
21 (8) A, 250 V AC	21 A, 250 V AC 1HP 125 V AC 2HP 250 V AC	10.000	6.000	3×10^6	25×10^4	150	8

* Operating life for 40T125 and 40T150 on request

** Lower operating forces on request



Switching parameters

Model	Type	Max. operating force (cN) Standard	Light	Max. pretravel (mm)	Min. overtravel (mm)	Max. movement differential (mm)	Max. rest position (mm)	Operating point (mm)	Code
Without auxiliary actuator	D41	170	45	1,2	1,3	0,3	16,2	14,7 ± 0,5	AA
	D42	170	45	1,2	1,3	0,3	16,2	14,7 ± 0,5	
	D43	170	45	1,2	1,3	0,3	16,2	14,7 ± 0,5	
	D44	285	75	1,2	1,3	0,3	16,2	14,7 ± 0,5	
	D45	400	100	1,2	1,3	0,3	16,2	14,7 ± 0,5	
	D48	–	150	1,6	1,2	0,3	16,2	14,7 ± 0,5	

Contact configuration (3)

Contact configuration Ambient temperature 40T120	Code
Standard operating force	
S.P.S.T.-N.O.	1
S.P.S.T. - N.C.	2
S.P.D.T.	3
Light operating force	Code
S.P.S.T.-N.O.	7
S.P.S.T. - N.C.	8
S.P.D.T.	9
Contact configuration Ambient temperature 40T125	Code
Standard operating force	
S.P.S.T.-N.O.	G
S.P.S.T. - N.C.	H
S.P.D.T.	M
Light operating force	
S.P.S.T.-N.O.	N
S.P.S.T. - N.C.	P
S.P.D.T.	R
Contact configuration Ambient temperature 40T150*	
Light operating force	
S.P.S.T.-N.O.	S
S.P.S.T. - N.C.	T
S.P.D.T.	U

* not for D48

Terminals (4)

Type of terminal	Code
Q.C. terminal 6.3 x 0.8 mm, straight	V1
Q.C. terminal 6.3 x 0.8 mm, dog-leg	V3
Q.C. terminal 6.3 x 0.8 mm, RAST 5	Y5
Q.C. terminal, RAST 2,5	X5
Q.C. terminal 4.8 x 0.8 mm, straight*	Q1
Q.C. terminal 4.8 x 0.8 mm, dog-leg*	Q3
Q.C. terminal 4.8 x 0.5 mm, dog-leg**	R3
Q.C. terminal 2.8 x 0.8 mm, bifurcated, dog-leg	C3
Solder terminal, short*	B8
Solder terminal with temperature-stop	S1
Welding terminal	A1
PCB terminal 1.3 x 0.8 mm housing side*	PA
PCB terminal 1.3 x 0.8 mm cover side*	PB
PCB terminal 1.3 x 0.5 mm underside*	P4
PCB terminal 1.3 x 0.8 mm rear*	P5

* not for D48 ** not for D45 and D48

Auxiliary actuator options (5)

Model	Mounting point	Length	Code	Code
Without auxiliary actuator			AA	
Material			Nickel-plated steel	Optional stain-less steel
Straight	RM rear	21,2	LA	JA
		35,6	LD	JD
		69,9	LL	JL
	FM front	25,7	MA	KA
		40,1	MD	KD
		74,4	ML	KL
Roller	RM rear	20,6	RA	
		34,1	RD	
	FM front	25,1	TA	
		38,6	TD	
Simulated roller	RM rear	20,6	SA	
	FM front	25,1	UA	