SNAP SWITCHES

D4 miniature switch

Technical specifications

Contact configuration		S.P.D.T., S.P.S.T. - N.O., S.P.S.T. - N.C
Conact 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		see table
Electrical life		see table
Ambient temperature		40T85; 40T125; 40T150
Proof tracking index		PTI 300
Materials		
Housing/cover		PET (UL94 V-0)
Actuator		POM (max. 85 °C) alternative PET (UL94 V-0)
Contacts	**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

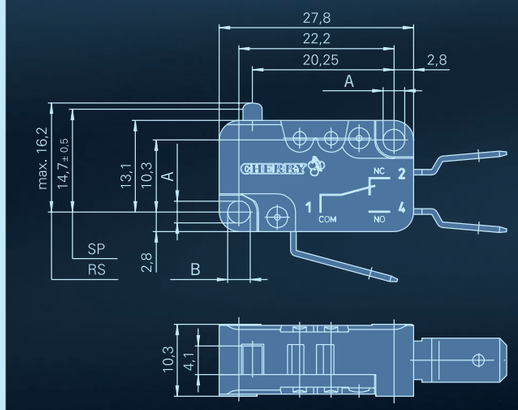
For detailed information and the layout of the details described above, please do not hesitate to ask for our technical specifications and drawing.

Features

Mounting holes

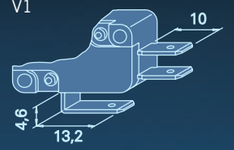
Hole dimensions	**Measurement „A“**	**Measurement “B”**
Global version	3,1 +0,15 mm	3,3 +0,15 mm

Dimensions in mm

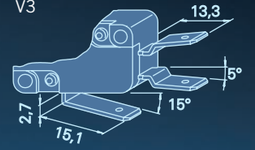


Terminals

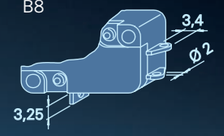
Q.C. terminal, 6,3x0,8 mm, straight
V1



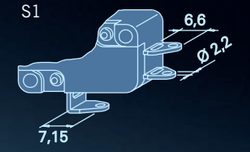
Q.C. terminal, 6,3x0,8 mm, dog-leg
V3



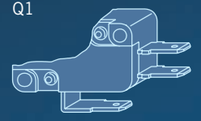
Solder terminal, short
B8



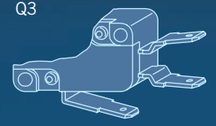
Solder terminal with temperature-stop
S1



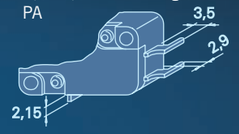
Q.C. terminal 4,8x0,8 straight
Q1



Q.C. terminal 4,8x0,8 mm dog-leg
Q3

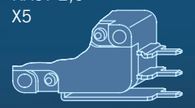


PCB terminal 1,3x0,8 mm housing side
PA

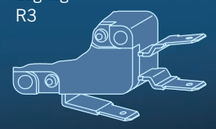


PCB terminal 1,3x0,8 mm cover side
PB

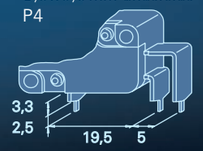
Q.C. terminal RAST 2,5
X5



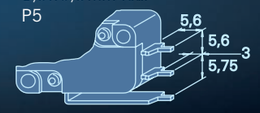
Q.C. terminal 4,8x0,5 mm dog-leg
R3



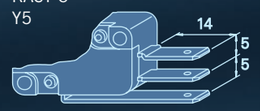
PCB terminal 1,3x0,5 mm underside
P4



PCB terminal 1,3x0,8 mm rear
P5



Q.C. terminal 6,3x0,8 mm RAST 5
Y5



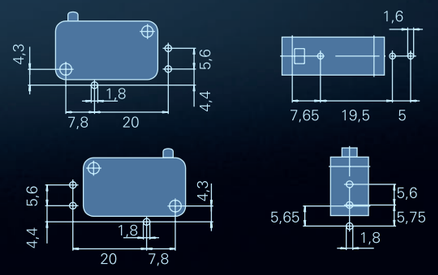
Q.C. terminal 2,8x0,8 mm bifurcated dog-leg
C3

Connector housing for Q.C. terminals RAST 5

Q.C. terminal, 4,8x0,5 mm, straight
R1

Other terminals available on request.

Drilling patterns for PCB terminals



D4 miniature switch

Electrical rating and operating life

Electrical rating according to		Electrical life for 40T85* (operations)		Mechanical lifetime actuator material		Max. operating force (cN)	Housing mark
EN 61058-1	UL 1054	acc. to EN	acc. to UL	POM	PET		
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	D4 1 Y
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	D4 2 Y
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	D4 3 Y
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	D4 4 Y
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	D4 5 Y
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**	D4 1 X
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**	D4 2 X
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	D4 3 X
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	D4 4 X
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	D4 5 X
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	D4 8 X

* Operating life for 40T125 and 40T150 on request
** Lower operating forces and additional electrical ratings on request

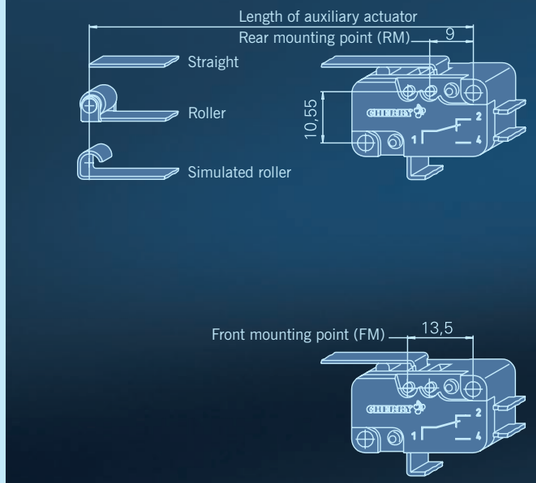
Switching parameters

Model	Type	Max. operating force (cN)		Max. pretravel (mm)	Min. overtravel (mm)	Differential travel max. (mm)	Max. rest position (mm)	Operating point (mm)
		Standard	Light					
Without auxiliary actuator	D41	170	45	1,2	1,3	0,3	16,2	14,7 ± 0,5
	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

Preferred parts

	Type	Order code	Electrical rating EN	Electrical rating UL	Terminals	Auxiliary actuator	Operating force (cN)	Operating point (mm)	Max. pretravel (mm)	Min. overtravel (mm)	Differential travel max. (mm)
US mounting holes		D41C-R1AA*	0.1(0.05)A, 250V~	0,1 A, 125/250 V AC	Q.C. terminals 4,8x0,5 mm, straight	–	170	14,7 ± 0,5	1,2	1,3	0,3
		D41C-R1LD*	0.1(0.05)A, 250V~	0,1 A, 125/250 V AC	Q.C. terminals 4,8x0,5 mm, straight	Straight RM rear, length 35,6 mm	86	15,3 ± 1,2	3,2	2,2	0,8
		D42L-R1ML	3(1)A, 250V~	3 A, 125/250 V AC 1/10HP, 250VAC	Q.C. terminals 4,8x0,5 mm, straight	Straight FM front, length 74,5 mm	6	15,2 ± 4,2	12,7	7,9	2,5
		D44L-R1AA	10(3)A, 250V~	10 A, 1/2HP, 125/250 V AC	Q.C. terminals 4,8x0,5 mm, straight	–	75	14,7 ± 0,5	1,2	1,3	0,3
		D44L-R1LD	10(3)A, 250V~	10 A, 1/2HP, 125/250 V AC	Q.C. terminals 4,8x0,5 mm, straight	Straight RM rear, length 35,6 mm	40	15,3 ± 1,2	3,2	2,2	0,8
		D44L-R1RA	10(3)A, 250V~	10 A, 1/2HP, 125/250 V AC	Q.C. terminals 4,8x0,5 mm, straight	Roller RM rear, length 20,6 mm	75	20,5 ± 0,8	1,2	1,0	0,3
		D45L-R1LL	16(4)A, 250V~	15 A, 1/2HP, 125/250 V AC	Q.C. terminals 4,8x0,5 mm, straight	Straight RM rear, length 69,9 mm	22	15,2 ± 3,2	7,6	4,7	1,7
International mounting holes		D419-V3AA	0.1(0.05)A, 250V~	0,1 A, 125/250 V AC	Q.C. terminals 6,3x0,8 mm, dog-leg	–	45	14,7 ± 0,5	1,2	1,3	0,3
		D429-V1AA	3(1)A, 250V~	3 A, 125/250 V AC 1/10HP, 250VAC	Q.C. terminals 6,3x0,8 mm, straight	–	45	14,7 ± 0,5	1,2	1,3	0,3
		D449-V1AA	10(3)A, 250V~	10 A, 1/2HP, 125/250 V AC	Q.C. terminals 6,3x0,8 mm, straight	–	75	14,7 ± 0,5	1,2	1,3	0,3
		D459-B8AA	16(4)A, 250V~	15 A, 1/2HP, 125/250 V AC	Solder terminals, short	–	100	14,7 ± 0,5	1,2	1,3	0,3
		D459-V3AA	16(4)A, 250V~	15 A, 1/2HP, 125/250 V AC	Q.C. terminals 6,3x0,8 mm, dog-leg	–	100	14,7 ± 0,5	1,2	1,3	0,3
		D459-V3LD	16(4)A, 250V~	15 A, 1/2HP, 125/250 V AC	Q.C. terminals 6,3x0,8 mm, dog-leg	Straight RM rear, length 35,6 mm	40	15,3 ± 1,2	3,2	2,2	0,8
		D489-V3AA	16(4)A, 250V~	15 A, 1/2HP, 125/250 V AC	Q.C. terminals 6,3x0,8 mm, dog-leg	–	150	14,2 ± 0,5	1,8	0,9	0,3

* Versions with standard operating force; other versions with operating force light

Auxiliary actuator options

Model	Mounting point	Length (mm)
Straight	RM rear	21,2
		35,6
		69,9
	FM front	25,7
		40,1
		74,4
Roller	RM rear	20,6
		34,1
	FM front	25,1
		38,6
Simulated Roller	RM rear	20,6
	FM front	25,1