

## D4 miniature 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</b>	250 VAC (400 V on request)
<b>Switched current max.</b>	< 0,1 to 21 A, depending on model
<b>Total travel</b>	2,6 mm
<b>Mechanical life</b>	see table
<b>Electrical life</b>	see table
<b>Ambient temperature</b>	40T85; 40T125; 40T150
<b>Proof tracking index</b>	PTI 300
<b>Materials</b>	
<b>Housing/cover</b>	PET (UL94 V-0)
<b>Actuator</b>	POM (max. 85°C) alternative PET (UL94 V-0)
<b>Contacts</b>	<b>D41</b> AuAgPt (Crosspoint) <b>D42</b> Ag <b>D43 - D48</b> AgNi
<b>Terminals</b>	CuZn alternative Cu
<b>Auxiliary actuator</b>	nickel-plated steel, alternative stainless steel
<b>Approvals</b>	
<b>Degree of protection (switch interior)</b>	IP40

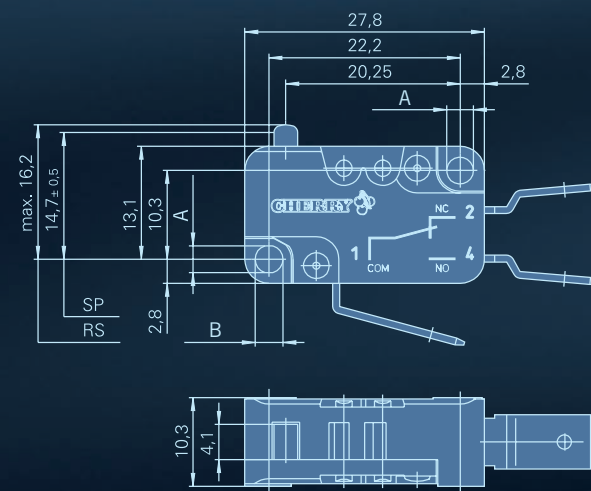
For detailed information and the layout of the details described above, please do not hesitate to ask for our technical specifications and drawing.

### Features

### Mounting holes

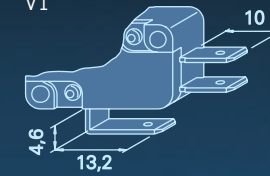
Hole dimensions	Measurement „A“	Measurement “B”
<b>Global version</b>	3,1 +0,15 mm	3,3 +0,15 mm

### Dimensions in mm

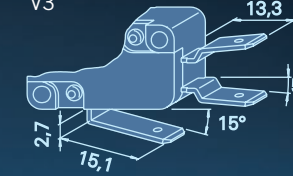


### Terminals

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



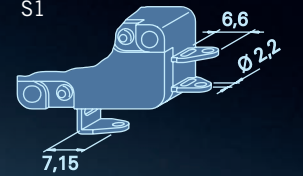
Q.C. terminal, 6,3x0,8 mm, dog-leg  
V3



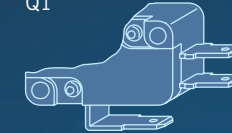
Solder terminal, short  
B8



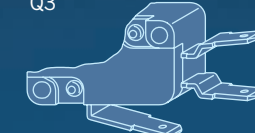
Solder terminal with temperature-stop  
S1



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



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



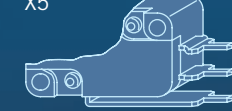
PCB terminal 1,3x0,8 mm housing side  
PA



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



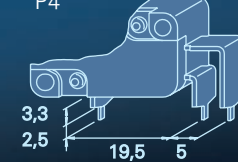
Q.C. terminal RAST 2,5  
X5



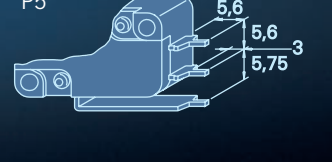
Q.C. terminal 4,8x0,5 mm dog-leg  
R3



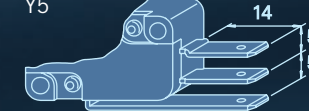
PCB terminal 1,3x0,5 mm underside  
P4



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

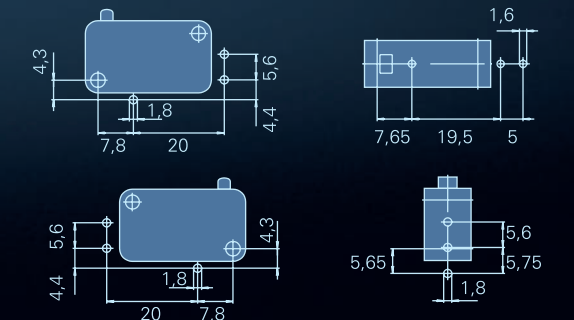


Q.C. terminal, 4,8x0,5 mm, straight  
R1



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*		Mechanical lifetime actuator material		Max. operating force (cN)	Housing mark
EN 61058-1	UL 1054	acc. to EN	acc. to UL	POM	PET		
<b>Standard operating force</b>							
0,1 (0,05) A, 250 VAC	0,1 A 125–250 VAC	50.000	6.000	10x10 <sup>6</sup>	1x10 <sup>6</sup>	170	D4 1 Y
3 (1) A, 250 VAC	3 A, 125–250 VAC 1/10 HP 250 VAC	50.000	6.000	10x10 <sup>6</sup>	1x10 <sup>6</sup>	170	D4 2 Y
6 (2) A, 250 VAC	5 A, 125–250 VAC, 1/4 HP 250 VAC	50.000	6.000	5x10 <sup>6</sup>	25x10 <sup>4</sup>	170	D4 3 Y
10 (3) A, 250 VAC	10 A, 1/2 HP, 125–250 VAC	50.000	6.000	1x10 <sup>6</sup>	1x10 <sup>5</sup>	285	D4 4 Y
16 (4) A, 250 VAC	15 A, 1/2 HP, 125–250 VAC	50.000	6.000	2x10 <sup>5</sup>	1x10 <sup>5</sup>	400	D4 5 Y
10 (3) A, 400 VAC							
<b>Light operating force</b>							
0,1 (0,05) A, 250 VAC	0,1 A, 125–250 VAC	50.000	6.000	10x10 <sup>6</sup>	1x10 <sup>6</sup>	45**	D4 1 X
3 (1) A, 250 VAC	3 A, 125–250 VAC, 1/10 HP 250 VAC	50.000	6.000	10x10 <sup>6</sup>	1x10 <sup>6</sup>	45**	D4 2 X
6 (2) A, 250 VAC	5 A, 125–250 VAC, 1/4 HP 250 VAC	50.000	6.000	10x10 <sup>6</sup>	5x10 <sup>5</sup>	45	D4 3 X
10 (3) A, 250 VAC	10 A, 1/2 HP, 125–250 VAC	50.000	6.000	10x10 <sup>6</sup>	25x10 <sup>4</sup>	75	D4 4 X
16 (4) A, 250 VAC	15 A, 1/2 HP, 125–250 VAC	50.000	6.000	10x10 <sup>6</sup>	25x10 <sup>4</sup>	100	D4 5 X
21 (8) A, 250 VAC	21 A, 250 VAC 1HP 125 VAC 2HP 250 VAC	10.000	6.000	3x10 <sup>6</sup>	25x10 <sup>4</sup>	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		Terminals	Auxiliary actuator	Operating force (cN)	Operating point (mm)	Max. pretravel (mm)	Min. overtravel (mm)	Differential travel max. (mm)
		EN	UL							
US mounting holes	D41C-R1AA*	0.1(0.05)A, 250V~	0,1 A, 125/250 VAC	Q.C. terminals 4,8x0,5mm, 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 VAC	Q.C. terminals 4,8x0,5mm, straight	Straight RM rear, length 35,6mm	86	15,3 ± 1,2	3,2	2,2	0,8
	D42L-R1ML	3(1)A, 250V~	3 A, 125/250 VAC 1/10HP, 250VAC	Q.C. terminals 4,8x0,5mm, straight	Straight FM front, length 74,5mm	6	15,2 ± 4,2	12,7	7,9	2,5
	D44L-R1AA	10(3)A, 250V~	10 A, 1/2HP, 125/250 VAC	Q.C. terminals 4,8x0,5mm, straight	–	75	14,7 ± 0,5	1,2	1,3	0,3
	D44L-R1LD	10(3)A, 250V~	10 A, 1/2HP, 125/250 VAC	Q.C. terminals 4,8x0,5mm, straight	Straight RM rear, length 35,6mm	40	15,3 ± 1,2	3,2	2,2	0,8
	D44L-R1RA	10(3)A, 250V~	10 A, 1/2HP, 125/250 VAC	Q.C. terminals 4,8x0,5mm, 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 VAC	Q.C. terminals 4,8x0,5mm, straight	Straight RM rear, length 69,9mm	22	15,2 ± 3,2	7,6	4,7	1,7
	D419-V3AA	0.1(0.05)A, 250V~	0,1 A, 125/250 VAC	Q.C. terminals 6,3x0,8mm, dog-leg	–	45	14,7 ± 0,5	1,2	1,3	0,3
	D429-V1AA	3(1)A, 250V~	3 A, 125/250 VAC 1/10HP, 250VAC	Q.C. terminals 6,3x0,8mm, straight	–	45	14,7 ± 0,5	1,2	1,3	0,3
	D449-V1AA	10(3)A, 250V~	10 A, 1/2HP, 125/250 VAC	Q.C. terminals 6,3x0,8mm, straight	–	75	14,7 ± 0,5	1,2	1,3	0,3
International mounting holes	D459-B8AA	16(4)A, 250V~	15 A, 1/2HP, 125/250 VAC	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 VAC	Q.C. terminals 6,3x0,8mm, 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 VAC	Q.C. terminals 6,3x0,8mm, dog-leg	Straight RM rear, length 35,6mm	40	15,3 ± 1,2	3,2	2,2	0,8
	D489-V3AA	16(4)A, 250V~	15 A, 1/2HP, 125/250 VAC	Q.C. terminals 6,3x0,8mm, 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	20,6 34,1 38,6
	Simulated Roller	20,6 25,1

