



## 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>UL</b> <b>US</b>
<b>Degree of protection (switch interior)</b>	IP40

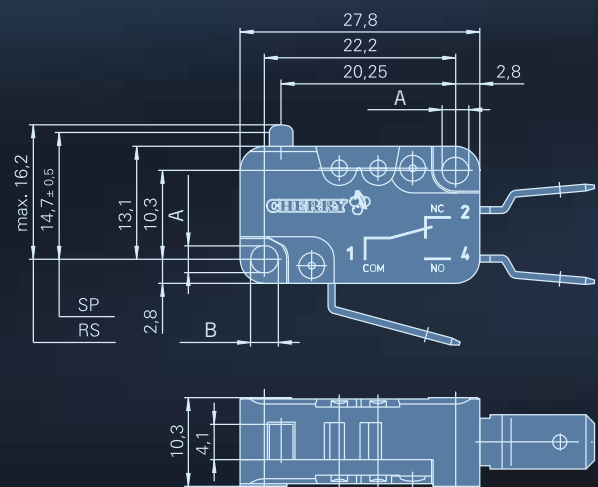
For detailed information and the layout of the details described above, please do not hesitate to ask for our technical specifications and drawing.

### Features

### Mounting holes

Hole dimensions	Measurement „A“	Measurement „B“
<b>International version</b>	3,1 +0,15mm	3,3 +0,15mm
<b>US version</b>	2,9 ±0,05mm	3,2 ±0,05mm

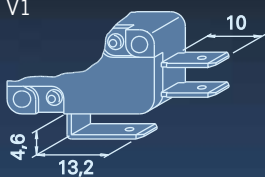
### Dimensions in mm



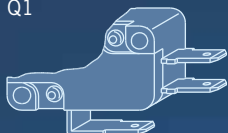


## Terminals

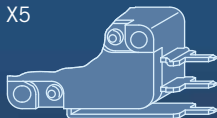
Q.C. terminal, 6,3x0,8mm,  
straight  
V1



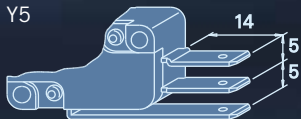
Q.C. terminal 4,8x0,8  
straight  
Q1



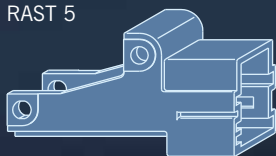
Q.C. terminal  
RAST 2,5  
X5



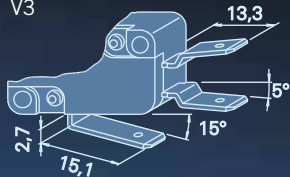
Q.C. terminal 6,3x0,8mm  
RAST 5  
Y5



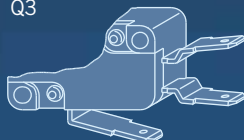
Connector housing for Q.C. terminals  
RAST 5



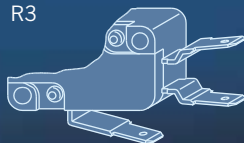
Q.C. terminal, 6,3x0,8mm,  
dog-leg  
V3



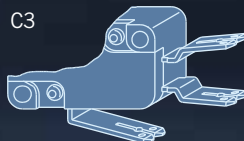
Q.C. terminal, 4,8x0,8mm  
dog-leg  
Q3



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

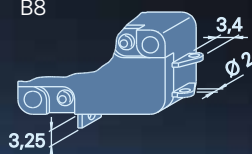


Q.C. terminal 2,8x0,8mm  
bifurcated dog-leg  
C3

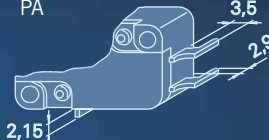


Other terminals available  
on request.

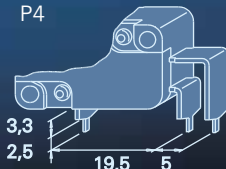
Solder terminal,  
short  
B8



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



PCB terminal  
1,3x0,5mm underside  
P4



Solder terminal  
with temperature-stop  
S1



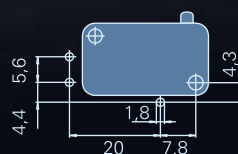
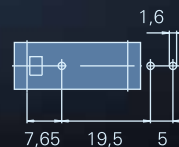
PCB terminal  
1,3x0,8mm cover side  
PB



PCB terminal  
1,3x0,8mm rear  
P5



## 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		
<b>Standard operating force</b>							
0,1 (0,05) A, 250VAC	0,1 A 125–250VAC	50.000	6.000	10x10 <sup>6</sup>	1x10 <sup>6</sup>	170	D4 1 Y
3 (1) A, 250VAC	3 A, 125–250VAC 1/10 HP 250VAC	50.000	6.000	10x10 <sup>6</sup>	1x10 <sup>6</sup>	170	D4 2 Y
6 (2) A, 250VAC	5 A, 125–250VAC, 1/4 HP 250VAC	50.000	6.000	5x10 <sup>6</sup>	25x10 <sup>4</sup>	170	D4 3 Y
10 (3) A, 250VAC	10 A, 1/2 HP, 125–250VAC	50.000	6.000	1x10 <sup>6</sup>	1x10 <sup>5</sup>	285	D4 4 Y
16 (4) A, 250VAC	15 A, 1/2 HP, 125–250VAC	50.000	6.000	2x10 <sup>5</sup>	1x10 <sup>5</sup>	400	D4 5 Y
10 (3) A, 400VAC							
<b>Light operating force</b>							
0,1 (0,05) A, 250VAC	0,1 A, 125–250VAC	50.000	6.000	10x10 <sup>6</sup>	1x10 <sup>6</sup>	45**	D4 1 X
3 (1) A, 250VAC	3 A, 125–250VAC, 1/10 HP 250VAC	50.000	6.000	10x10 <sup>6</sup>	1x10 <sup>6</sup>	45**	D4 2 X
6 (2) A, 250VAC	5 A, 125–250VAC, 1/4 HP 250VAC	50.000	6.000	10x10 <sup>6</sup>	5x10 <sup>5</sup>	45	D4 3 X
10 (3) A, 250VAC	10 A, 1/2 HP, 125–250VAC	50.000	6.000	10x10 <sup>6</sup>	25x10 <sup>4</sup>	75	D4 4 X
16 (4) A, 250VAC	15 A, 1/2 HP, 125–250VAC	50.000	6.000	10x10 <sup>6</sup>	25x10 <sup>4</sup>	100	D4 5 X
21 (8) A, 250VAC	21 A, 250VAC 1HP 125VAC 2HP 250VAC	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	–	45	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 35,6 mm	35	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 74,5 mm	6	15,2 ± 4,2	12,7	7,9	2,5
	D44L-R1AA	10(3)A, 250V~	10 A, 1/2HP, 125/250 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 35,6 mm	37	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 69,9 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 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
	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 35,6 mm	40	15,3 ± 1,2	3,2	2,2	0,8
	D489-V3AA	16(4)A, 250V~	15 A, 1/2HP, 125/250 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
Roller	RM rear	20,6
		34,1
	FM front	25,1
		38,6
		–
Simulated Roller	RM rear	20,6
	FM front	25,1

