

# D4 Series

## Miniature Snap-Action Switches



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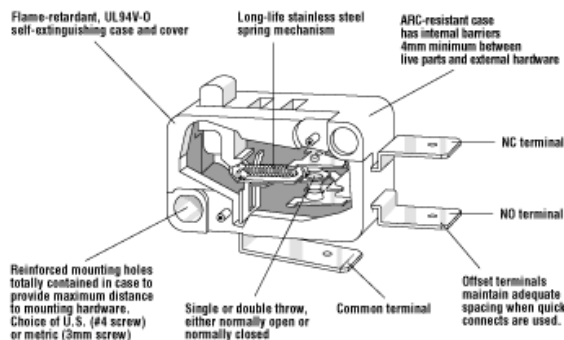


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### Features

- Features
- 8 current ratings
- Choice of actuators
- Various terminal types
- 3 contact arrangements
- Choice of standard or light operating force
- Long-life coil spring mechanism
- Agency approved extended life versions
- ENEC/VDE approval standard on European versions
- Stackable case and cover available upon request



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### D4 Series



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### Electrical Ratings

Switch Series	EN61058 Rating	UL1054 Rating	Electrical Life at Rated Load	
			According to EN (Min. Operations)	According to UL (Min. Operations)
D40	N/A	1.0A, 125VAC	N/A	6,000*
D41	0.1(0.05)A, 250V~	0.1A, 125/250VAC	50,000	6,000*
D42	3(1)A, 250V~	3A, 125/250VAC, 1/10HP, 250VAC	50,000	6,000*
D43	6(2)A, 250V~	5A, 1/4HP, 125/250VAC	50,000	6,000*
D44	10(3)A, 250V~	10A, 1/2HP, 125/250VAC	50,000	6,000*
D45	16(4)A, 250V~ 10(3)A, 400V~ (Std. force only)	15A, 1/2HP, 125/250VAC	50,000	6,000*
D48	21(8)A, 250V~	21A, 1HP, 125VAC, 2HP, 250VAC	10,000	6,000
D49	N/A	10A, 1/2HP, 125/250VAC; 6A, 30VDC	N/A	6,000*

Operating life for 125°C and 150°C available upon request.  
\*Indicates 100K life available. Consult factory.

## Specifications

### Electrical

Temperature Rating: -40° to +85°C, 125°C or 150°C

Flammability Rating: UL94V-O

### Materials

Case: Thermoplastic Polyester (PBT), European Versions (PET)

Actuating Button: Thermoplastic Acetal (POM) 85°C  
Thermoplastic Polyester (PET) 125°C, 150°C

Auxiliary Actuator: Aluminum, Stainless Steel or Cold-Rolled Steel (Nickel-Plated)

Common Terminal: Silver-Plated Brass

NO/NC Terminals: Brass (D40, D41, D42, D43, D44, D49 and D45–European versions)  
Copper (D45–US Versions and D48–European versions)  
Silver-Plated Copper (D48–US versions)

Moving Blade: Brass (D40, D41, D42, D43)  
Beryllium Copper (D44, D45, D48)

Contacts: Gold Crosspoint (D40, D41)  
Silver Alloy (D42, D43, D44, D45, D48, D49)

## Approvals

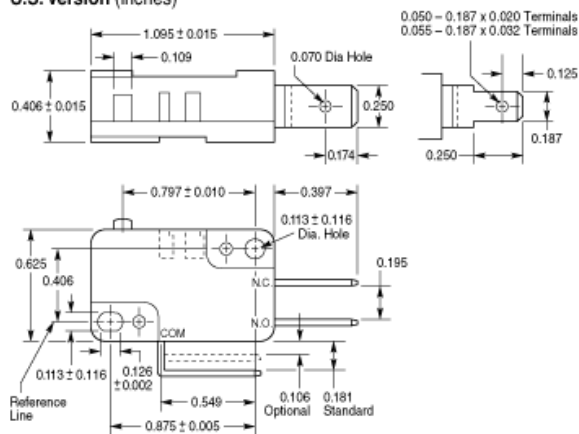
### European Approved Versions



- Standard D4 series switches with metric mounting holes automatically carry ENEC approval.
- D4 series switches with U.S. mounting holes have optional VDE approval. Contact factory for part number.
- Switches with straight terminals may require insulated connectors for international approval.

## Dimensions

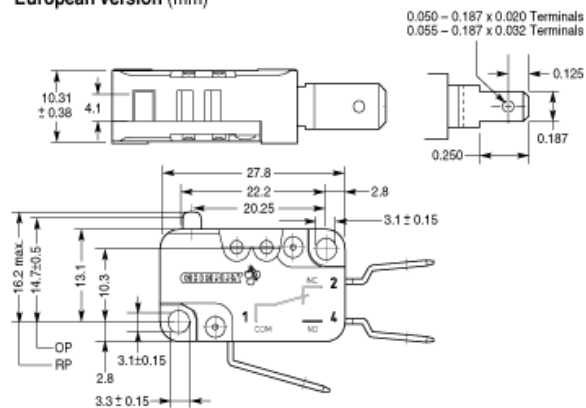
### U.S. Version (inches)



Inches (mm)

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### European Version (mm)



Inches (mm)

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## Mounting

### Mounting — U.S. Version

Recommended mounting screw size: #4-40 Round head.  
Recommended torque on screw: 3 inch- lbs. max.

### Mounting — European Version

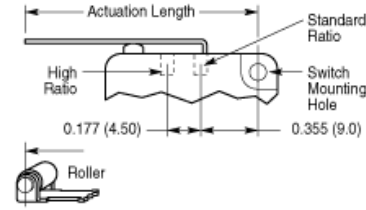
Recommended mounting screw size: M3.  
Recommended torque on screw: 70N cm max.

## Actuators

Many special forms and lengths of actuators are available. Standard type integral hinged lever and roller actuators are available in choice of 2 mounting positions. Actuation lengths are dimensioned from centerline of switch mounting hole as shown.


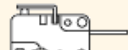






Note: Actuator tolerance  $\pm 0.003$  inch ( $\pm 0.08$ mm)

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Inches (mm)

## Actuator Specifications — U.S. Versions

Actuator Type	Switch Type	Maximum Operating Force (grams)						Max. Pre-Travel inches (mm)		Operating Point inches (mm)		Min. Over-Travel inches (mm)		Max. Movement Differential inches (mm)		Actuation Length inches (mm)
		D40, D41, D42 (Stand./Light)	D43 (Std./Lt.)	D44 (Std./Lt.)	D45 (Std./Lt.)	D48 (Light)	D49 (Std./Lt.)	D40 - 45, D49	D48	D40 - 45, D49	D48	D40 - 45, D49	D48	D40 - 45, D49	D48	
AA		75 / 15	170 / 45	285 / 75	400 / 100	120	285 / 75	0.047 (1.19)	0.070 (1.78)	0.558/0.598 (14.17/15.19)	0.537/0.557 (13.64/14.15)	0.050 (1.27)	0.040 (1.02)	0.010 (0.25)	0.010 (0.25)	N/A
LA		75 / 15	170 / 45	285 / 75	400 / 100	183	285 / 75	0.062 (1.57)	0.063 (1.60)	0.580/0.620 (14.73/15.75)	0.578/0.618 (14.70/15.70)	0.050 (1.27)	0.031 (0.80)	0.016 (0.41)	0.011 (0.30)	0.865 (21.97)
LD*1		35 / 8	86 / 23	144 / 37	200 / 51	77	144 / 37	0.125 (3.18)	0.150 (3.80)	0.555/0.645 (14.10/16.38)	0.563/0.657 (14.0/16.4)	0.085 (2.16)	0.071 (1.80)	0.030 (0.76)	0.031 (0.80)	1.40 (35.56)
JL*2		17 / 3.5	38 / 10	63 / 17	90 / 22	36	63 / 17	0.300 (7.62)	0.347 (8.80)	0.500/0.700 (12.70/17.78)	0.472/0.724 (12.0/18.4)	0.187 (4.75)	0.169 (4.30)	0.065 (1.65)	0.067 (1.70)	2.757 (70.03)
MD*3		20 / 5	51 / 14	86 / 23	120 / 30	46	86 / 30	0.222 (5.59)	0.252 (6.40)	0.525/0.675 (13.34/17.15)	0.535/0.661 (13.6/16.8)	0.130 (3.30)	0.126 (3.20)	0.050 (1.27)	0.051 (1.30)	1.580 (40.13)
RA		75 / 15	170 / 45	285 / 75	400 / 100	N/A	285 / 75	0.047 (1.19)	N/A	0.776/0.836 (19.71/21.33)	N/A	0.040 (1.02)	N/A	0.010 (0.25)	N/A	0.810 (20.57)
RD		35 / 8	86 / 22	144 / 37	200 / 50	N/A	144 / 37	0.125 (3.18)	N/A	0.761/0.851 (19.33/21.62)	N/A	0.085 (2.16)	N/A	0.030 (0.76)	N/A	1.240 (34.04)
TD		25 / 5	51 / 14	86 / 22	120 / 30	N/A	86 / 22	0.200 (5.08)	N/A	0.731/0.881 (18.57/22.38)	N/A	0.120 (3.05)	N/A	0.040 (1.02)	N/A	1.512 (38.51)

## Ordering Information — U.S. Versions

### VDE Identifiers

Switches with a "standard" operating force are identified by a 'Y' next to the standard model description, e.g. D43Y.

Switches with a "light" operating force are identified by a 'X' next to the standard model description, e.g. D43X.

D4	3		V3	L	D
Series/Prefix					
Code	EN61058	UL1054		Code	Actuator
0	N/A	1.0A, 125VAC		AA	Button
1	0.1(0.5)A, 250V	0.1A, 125/250VAC		L	Lever SR
2	3(1)A, 250V	3A, 125/250VAC 1/10HP, 250VAC		M	Lever HR
3	6(2)A, 250V	5A, 1/4HP, 125/250VAC		Y	Alum. Lever SR
4	10(3)A, 250V	10A, 1/2HP, 125/250VAC		X	Alum. Lever HR
5	16(4)A, 250V 10(3)A, 400V** (Std. force only)	15A, 1/2HP, 125/250VAC		J	SS Lever SR
8	21(8)A, 250V	21A, 1HP, 125VAC 2HP, 250VAC		K	SS Lever HR
9	N/A	10A, 1/2HP, 125/250VAC 6A, 30VDC		R	Roller SR
				T	Roller HR
				G	1-Way Roller SR
				N	1-Way Roller HR

Mounting Holes	NO	NC	DT	Oper. Force	Temp. Index
US Mounting Holes (VDE Optional)	A	B	C	Std.	85°C
	J	K	L	Light	
	D	E	F	Std.	150°C*
	W	X	V	Light	

\*D45 and D48 with VDE only available with metric holes. See European ordering information.

Code	Terminal Type	inches (mm)
Q1	0.187 x 0.032 (4.8 x 0.8) QC	Straight*
Q3	0.187 x 0.032 (4.8 x 0.8) QC	Dog Leg*
R1	0.187 x 0.020 (4.8 x 0.8) QC	Straight*
Y1	0.250 x 0.032 (6.3 x 0.8) QC	Straight
Y3	0.250 x 0.032 (6.3 x 0.8) QC	Dog Leg

\*Not available for D48.

Code	Actuator	Code A	Actuation Length inches (mm)		
			D	L	
AA	Button	—	—	—	—
L	Lever SR	0.865 (21.97)	1.400 (35.56)	2.757 (70.02)	—
M	Lever HR	1.042 (26.47)	1.580 (40.13)	2.934 (74.52)	—
Y	Alum. Lever SR	—	1.400 (35.56)	2.757 (70.03)	—
X	Alum. Lever HR	—	1.580 (40.13)	2.932 (74.47)	—
J	SS Lever SR	—	—	2.757 (70.03)	—
K	SS Lever HR	—	—	2.932 (74.47)	—
R	Roller SR	0.810 (20.57)	1.340 (34.04)	—	—
T	Roller HR	0.987 (25.07)	1.516 (38.51)	—	—
G	1-Way Roller SR	0.810 (20.57)	1.340 (34.04)	—	—
N	1-Way Roller HR	0.987 (25.07)	1.516 (38.51)	—	—

SR = Standard Ratio, Back Hole - HR = High Ratio, Front Hole  
Additional actuators available upon request.

VDE optional for D4 L-D44 with U.S. mounting holes.

\*D45 and D48 with VDE only available with metric holes. See European ordering information.

Code	Terminal Type	inches (mm)
Q1	0.187 × 0.032 (4.8 × 0.8) GC Straight*	
Q3	0.187 × 0.032 (4.8 × 0.8) GC Dog Leg*	
R1	0.187 × 0.020 (4.8 × 0.8) GC, Straight*	
Y1	0.250 × 0.032 (6.3 × 0.8) GC, Straight	
Y3	0.250 × 0.032 (6.3 × 0.8) GC, Dog Leg	

\*Not available for D4S.

SR = Standard Ratio, Back Hole - HR = High Ratio, Front Hole  
Additional actuators available upon request.

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## Ordering Information — European Versions

### VDE Identifiers

Switches with a "standard" operating force are identified by a 'Y' next to the standard model description, e.g. D43Y.

Switches with a "light" operating force are identified by a 'X' next to the standard model description, e.g. D43X.

<b>D4</b>		<b>3</b>
<div>Series/Prefix</div>		
Code	EN61058	UL1054
1	0.1(0.5)A, 250V	0.1A, 125/250VAC
2	3(1)A, 250V	3A, 125/250VAC 1/10HP, 250VAC
3	6(2)A, 250V	5A, 1/4HP, 125/250VAC
4	10(3)A, 250V	10A, 1/2HP, 125/250VAC
5	16(4)A, 250V 10(3)A, 400V** (Std. force only)	15A, 1/2HP, 125/250VAC
8	21(8)A, 250V	21A, 1HP, 125VAC 2HP, 250VAC
9	N/A	10A, 1/2HP, 125/250VAC 6A, 30VDC

EN standard on all D4 European designs.

3		V3		L	
Mounting Holes	NO	NC	DT	Oper. Force	Temp. Index
European Metric Mounting Holes (IEC Standard)	1	2	3	Std.	85°C
	7	8	9	Light	
	G	H	M	Std.	125°C
	N	P	R	Light	
	S	T	U	Light	150°C

Code	Terminal Type inches (mm)
A1	Welding
B8	Short Solder*
C1	0.110 × 0.032 (2.8 × 0.8) GC, Bifurcated Straight**
C3	0.110 × 0.032 (2.8 × 0.8) GC, Bifurcated Dog Leg**
P4	0.047 × 0.020 (1.2 × 0.5) PCB, Underside*
P5	0.047 × 0.020 (1.2 × 0.5) PCB, Rear*
PA	0.047 × 0.032 (1.2 × 0.8) PCB, Housing Side*
PB	0.047 × 0.032 (1.2 × 0.8) PCB, Cover Side*
Q1	0.187 × 0.032 (4.8 × 0.8) GC Straight*
Q3	0.187 × 0.032 (4.8 × 0.8) GC Dog Leg*
R1	0.187 × 0.020 (4.8 × 0.5) GC, Straight**
R3	0.187 × 0.020 (4.8 × 0.5) GC, Dog Leg**
S1	Solder with Temp. Stop
Y1	0.250 × 0.032 (6.3 × 0.8) GC, Straight
Y3	0.250 × 0.032 (6.3 × 0.8) GC, Dog Leg
W9	Screw*
Y5	0.250 × 0.032 (6.3 × 0.8) GC, 5mm Grid
Z5	0.250 × 0.032 (6.3 × 0.8) GC, 7mm Grid

\*Not available for D4S versions.

\*\*Not available for D4S nor D4S versions

L		D	
Code	Actuator	Code A	Actuation Length inches (mm)
			D L
AA	Button	—	—
J	SS Lever SR	0.835 (21.2)	1.4 (35.6) 2.75 (69.9)
K	SSLever HR	1.01 (25.7)	— 2.93 (74.4)
L	Lever SR	0.835 (21.2)	1.4 (35.6) 2.75 (69.9)
M	Lever HR	1.01 (25.7)	— 2.93 (74.4)
R	Roller SR	0.811 (20.6)	1.34 (34.1) —
S	Sim. Roller SR	0.811 (20.6)	— —
T	Roller HR	0.988 (25.1)	1.52 (38.6) —
U	Sim. Roller HR	0.988 (25.1)	— —

SR = Standard Ratio, Back Hole - HR = High Ratio, Front Hole  
Additional actuators available upon request.

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Specifications subject to change without notice.