

Subminiature Snap Switch

Single Pole

DB Series



Features

- Precision switch with high repeat accuracy
- Models available for operating temperature up to 120 °C
- Various contact materials available
- RoHS compliant
- Various aux actuators (can be retrofitted)
- Two mounting positions
- Mechanical life up to 15,000,000 operations

Standard Parts¹

DB1C-A1AA	DB1C-A1RC	DB1C-B1RC	DB2C-A1MC	DB2C-C1AA	DB3C-B1AA
DB1C-A1LB	DB1C-B1AA	DB1C-C1AA	DB2C-A1RC	DB3C-A1AA	DB3C-B1LB
DB1C-A1LC	DB1C-B1LB	DB2C-A1AA	DB2C-B1AA	DB3C-A1LB	DB3C-B1LC
DB1C-A1MC	DB1C-B1LC	DB2C-A1LB	DB2C-B1LC	DB3C-A1LC	DB3C-B1MC
DB1C-A1RB	DB1C-B1MC	DB2C-A1LC	DB2C-B1RC	DB3C-A1RC	DB3C-B1RC
					DB3C-C1AA

¹The part number configuration matrix below provides details to the part numbers above.

For configurable part numbers that are not listed above, not listed in your region, or for custom part numbers, contact the factory or your distributor.

Part Number Breakdown

DB1B-B1AA						
Series	Contact Rating ²		Configuration	Terminal Type millimeters (inches)		Actuator Type
DB	120 °C or 85 °C		120 °C	A1	Solder, short	AA Spherical-head, no auxiliary actuator
	1	5 Amp	A SPST NO	B1	2.8 x 0.5 (0.110 x 0.020) QC, straight	BA Radius, no auxiliary actuator
	2	10.1 Amp	B SPST NC	C1	1.3 x 0.5 (0.051 x 0.020) PCB, straight	For others, see actuator table at www.cherryswitches.com
	3	0.1 Amp	C SPDT	D1	0.6 x 0.5 (0.024 x 0.020) PCB, straight	
	85 °C only		85 °C	D2	0.6 x 0.5 (0.024 x 0.020) PCB, RH side w/location pins	
	5	1 Amp	E SPST NO	D3	0.6 x 0.5 (0.024 x 0.020) PCB, LH side w/location pins	
	6	5 Amp	F SPDT NC	D4	0.6 x 0.5 (0.024 x 0.020) PCB, RH side	
	7	10.1 Amp	G SPDT	D5	0.6 x 0.5 (0.024 x 0.020) PCB, LH side	

²UL current rating; see table below for complete details

Electrical Specifications – Contact Ratings

Contact	EN61058	UL1054
1	6 A, 250 VAC; 0.1 A, 80 VDC	5 A, 125/250 VAC; 1 A, 48 VDC
2	10 (1.5) A, 250 VAC; 0.1 A, 80 VDC	10.1 A, 125/250 VAC; ¼ HP, 125 VAC
3	0.1 A, 250 VAC; 0.1 A, 80 VDC	0.1 A, 125/250 VAC
4	4 A, 250 VAC	4 A, 125/250 VAC; 1 A, 48 VDC
5	1 A, 250 VAC	1 A, 125/250 VAC; 1 A, 48 VDC
6	6 A, 250 VAC	5 A, 125/250 VAC
7	10 (1.5) A, 250 VAC	10.1 A, 125/250 VAC; ¼ HP, 125 VAC

UL file number E314201

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Contact Gap	< 3 mm (μ)		
Operating Force	70 – 280 cN (model dependent, without actuator)		
Total Travel	1.6 mm		
Operating life			
	<u>Operation Cycles</u>		
<u>Contact</u>	<u>EN61058</u>	<u>UL1054</u>	<u>Mechanical Life</u>
1	10,000	6,000	15,000,000
2	10,000	6,000	10,000,000
3	50,000	100,000	15,000,000
4	50,000	6,000	15,000,000
5	50,000	6,000	15,000,000
6	50,000	6,000	15,000,000
7	50,000	6,000	10,000,000

Base	PET (UL 94 V-0)
Cover	PBT (UL 94 V-0); PET (UL 94 V-0)
Actuator	PBT (UL 94 V-0) 120 °C, POM (UL 94 HB) 85 °C
Contacts	AgSnO ₂ , AgNi, AuAgPt (Crosspoint)
Terminals	CuZn (silver-plated)
Auxiliary Actuator	Stainless Steel or plastic
Switching parameters	Complete chart available at www.cherryswitches.com

Ambient Temperature	-40 °C to 85 °C/120 °C (-40 °F to 185 °F/248 °F)
Operating Force	70 – 280 cN (model dependent, without actuator)
Total Travel	1.6 mm
Ingress Protection	IP50

Rest Position
9.3 (0.374) max.

Operating Point
8.4±0.3 (0.331)

Approved end position: even position actuator/upper edge of housing. No supporting force allowed.

7.5±0.1 (0.295)

6.65 (0.262)

7.3 (0.287)

6.9 (0.272)

2.2±0.1 (0.087)

0.5 (0.020)

7.5±0.2 (0.295)

2.5±0.1 (0.098)

2.5±0.1 (0.098)

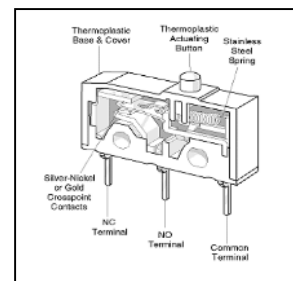
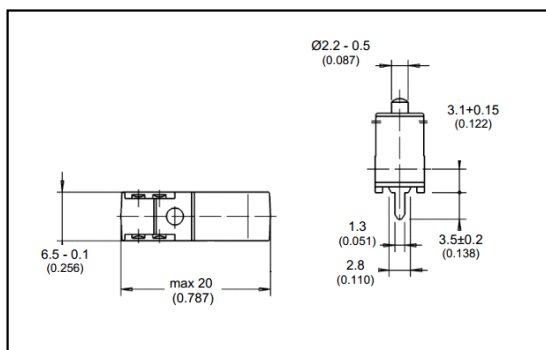
2.35 (0.093)

7.5±0.2 (0.295)

2.73 (0.107)

9.5±0.1 (0.374)

5.2 (0.205)



The technical drawings illustrate the PCB assembly for the 1000 Series, showing various views and dimensions for different solder types and hole patterns.

Top Views:

- Short Solder Code A1:** Dimensions include $\phi 1.875$, 1.95 , 2.0 , and 3.35 ± 0.3 .
- PCB .051" Code B1:** Dimensions include $\phi 1.35$, 2.25 , 7.3 ± 0.3 , and 2.8 .
- PCB .051" Code C1:** Dimensions include 3.175 ± 0.075 , 1.3 , and 3.5 ± 0.35 .
- PCB .024" Code D1:** Dimensions include $\phi 1.65 \pm 0.05$, 3.175 ± 0.075 , 0.6 , and 3.1 ± 0.35 .

Side Views:

- Short Solder Code A1:** Dimensions include 2.8 ± 0.1 , 5.08 ± 0.2 , 0.6 , 3.5 ± 0.2 , and 6.75 ± 0.2 .
- PCB .051" Code B1:** Dimensions include 2.8 ± 0.1 , 5.08 ± 0.2 , 0.6 , 3.5 ± 0.2 , and 6.75 ± 0.2 .
- PCB .024" Code D1:** Dimensions include 5.08 ± 0.2 , 0.6 , 3.5 ± 0.2 , 6.75 ± 0.2 , and 5.08 ± 0.2 .

Top Down View of Lateral Terminals: Shows the arrangement of terminals on the PCB, with "Left" and "Right" labels.

Hole Patterns:

- Hole pattern for .051" pcb:** Shows a pattern of holes with dimensions $\phi 1.65 \pm 0.05$ and $\phi 1.35 \pm 0.05$.
- Hole pattern for .024" pcb:** Shows a pattern of holes with dimensions $\phi 1.65 \pm 0.05$ and $\phi 1.35 \pm 0.05$.
- Hole pattern for pcb terminals with location pins:** Shows a pattern of holes with dimensions $\phi 1.65 \pm 0.05$ and $\phi 1.35 \pm 0.05$.
- Hole pattern for pcb terminals without location pins:** Shows a pattern of holes with dimensions $\phi 1.65 \pm 0.05$ and $\phi 1.35 \pm 0.05$.