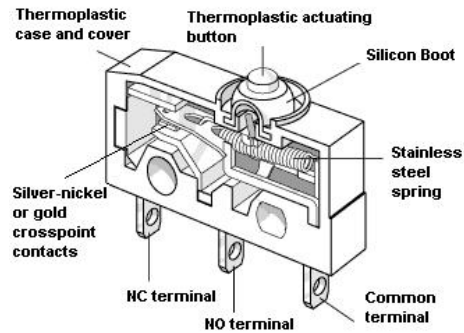


# Subminiature Sealed Snap Action Switch DC Series



## Features

- Enclosed switch complying with IP 6K7
- Silicon-free version available
- Models available for operating temperatures up to 120°C
- Rated for currents up to 10.1 amps at 250VAC
- Range of auxiliary actuators available (can also be retrofitted)
- Various contact materials available, depending on application
- Mechanical life: min.  $1 \times 10^6$  operations
- Wide variety of terminal options

## Electrical Ratings and Operating Life

| Switch Series | According to EN61058-1 |                  | According to UL1054               |                  |
|---------------|------------------------|------------------|-----------------------------------|------------------|
|               | Nominal Load           | Operation cycles | Nominal Load                      | Operation cycles |
| DC1           | 6A, 250V~              | 10,000           | 5A 125/250 VAC, 1A 48VDC          | 6,000            |
| DC2           | 10(1.5)A, 250 V~       | 10,000           | 10.1A 125/250 VAC<br>1/4HP 125VAC | 6,000            |
| DC3           | 0.1A 250 V~            | 50,000           | 0.1A 125/250 VAC                  | 100,000          |

| Technical Specifications     |   | Material Specifications    |  |
|------------------------------|---|----------------------------|--|
| <b>Temperature Rating:</b>   | -40° to +85°C / +120°C ( <i>without wire leads</i> )<br>-40° to +85°C / +105°C ( <i>with wire leads</i> ) | <b>Case:</b>               | PET / PBT                                    |
| <b>Degree of Protection:</b> | IP67  | <b>Actuator button:</b>    | PBT (UL 94 V-0) 120°C<br>POM (UL 94 HB) 85°C |
| <b>RoHS Compliant:</b>       | Yes   | <b>Contacts:</b>           | AuAgPt (Crosspoint),<br>AgNi,                |
| <b>UL File Number:</b>       | E314201   | <b>Terminals:</b>          | CuZn (silver plated)                         |
|                              |   | <b>Auxiliary actuator:</b> | Stainless steel or plastic                   |

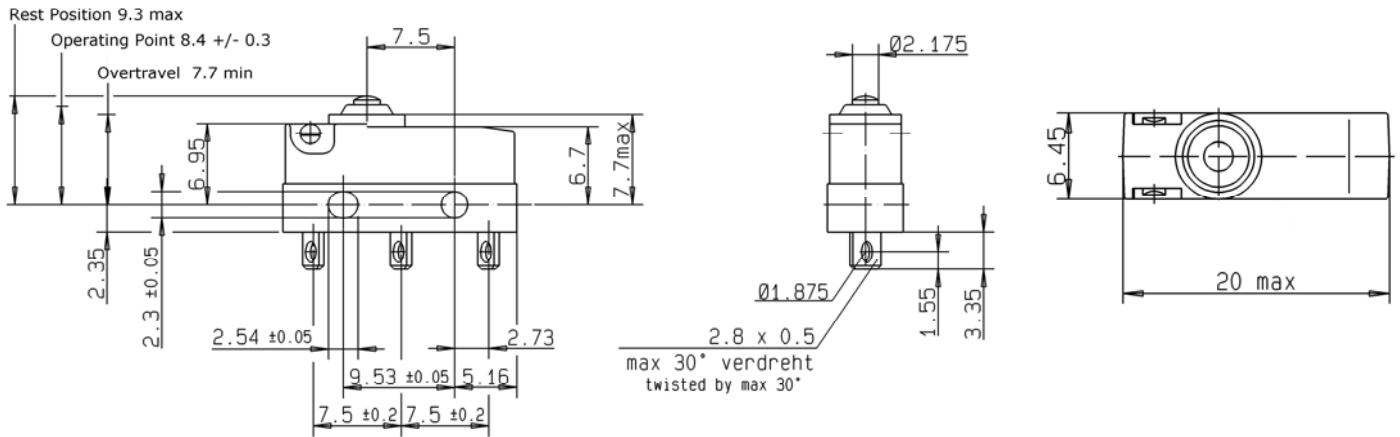


Specifications subject to change

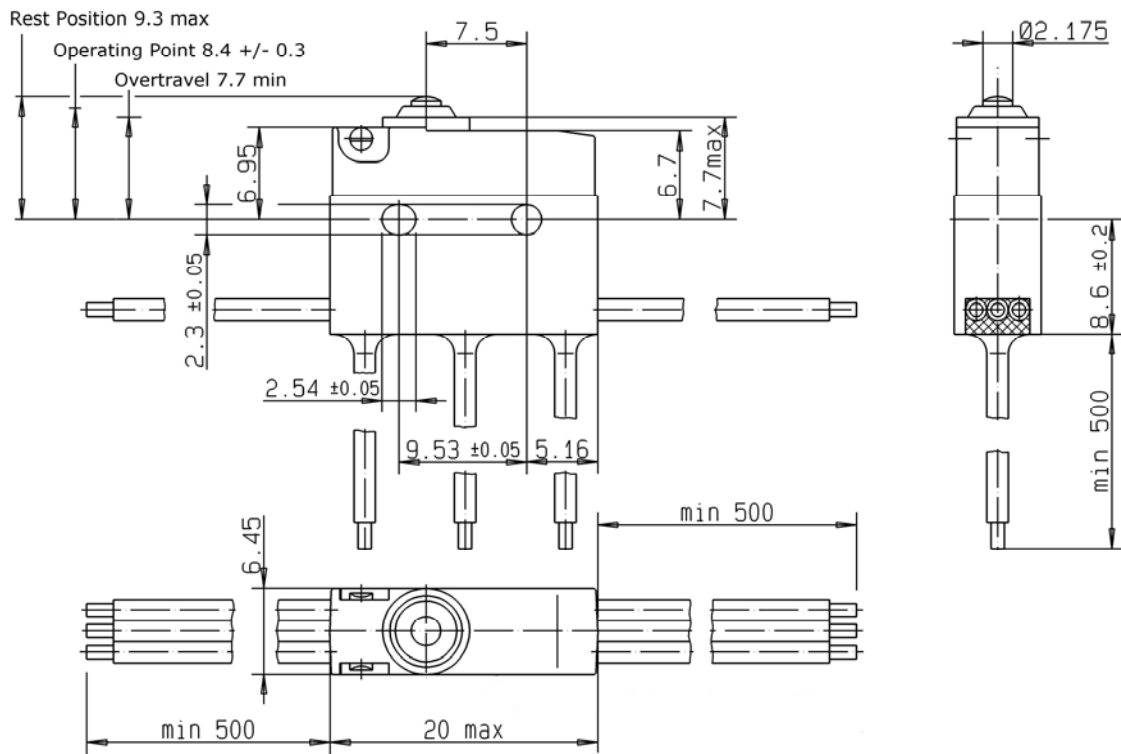
# Subminiature Sealed Snap Action Switch

## DC Series

### Dimensions - millimeter



### Models with Wire Leads



Wire Colors: Common: Black

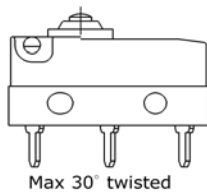
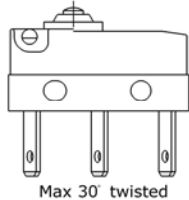
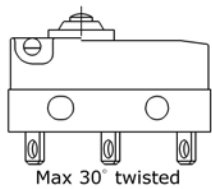
Normally Open: Blue

Normally Closed: Grey

# Subminiature Sealed Snap Action Switch

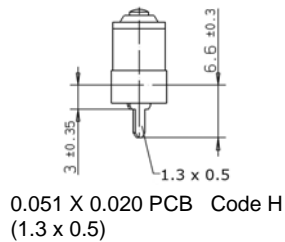
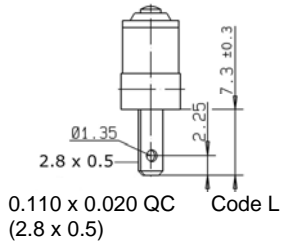
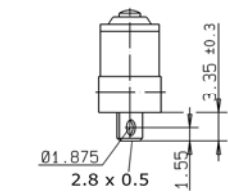
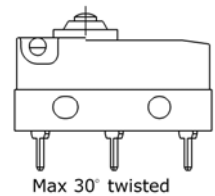
## DC Series

Terminal Options inches (mm)



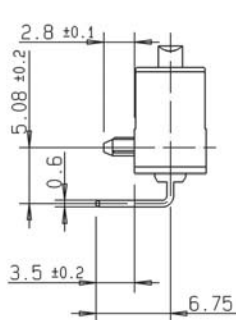
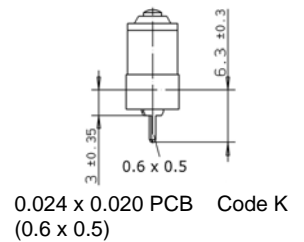
$\varnothing 0.065 \pm 0.002$   
(0.165 ± 0.05)

Hole pattern for .051" (1.3)  
pcb

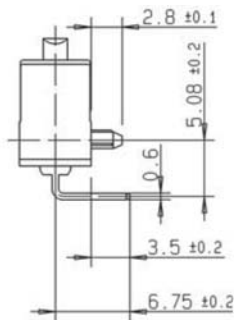


$\varnothing 0.053 \pm 0.002$   
(1.35 ± 0.05)

Hole pattern for .024" (0.6)  
pcb

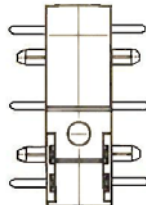


Left side pcb with location pins



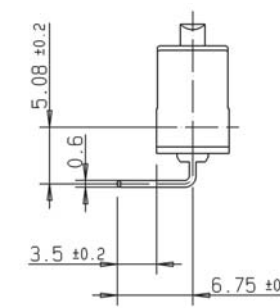
Right side pcb with location pins

L  
E  
F  
T

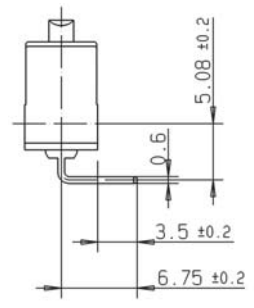


Top Down View of Lateral  
Terminals

R  
I  
G  
H  
T



Left side pcb terminals



Right side pcb terminals

$\varnothing 0.087 \pm 0.002$   
(2.2 ± 0.05)

$\varnothing 0.053 \pm 0.002$   
(1.35 ± 0.05)

Hole pattern for pcb terminals with location pins

$\varnothing 0.094 \pm 0.003$   
(2.385 ± 0.065)

$\varnothing 0.080 \pm 0.002$   
(2.05 ± 0.05)

60°

(Post Dimensions)

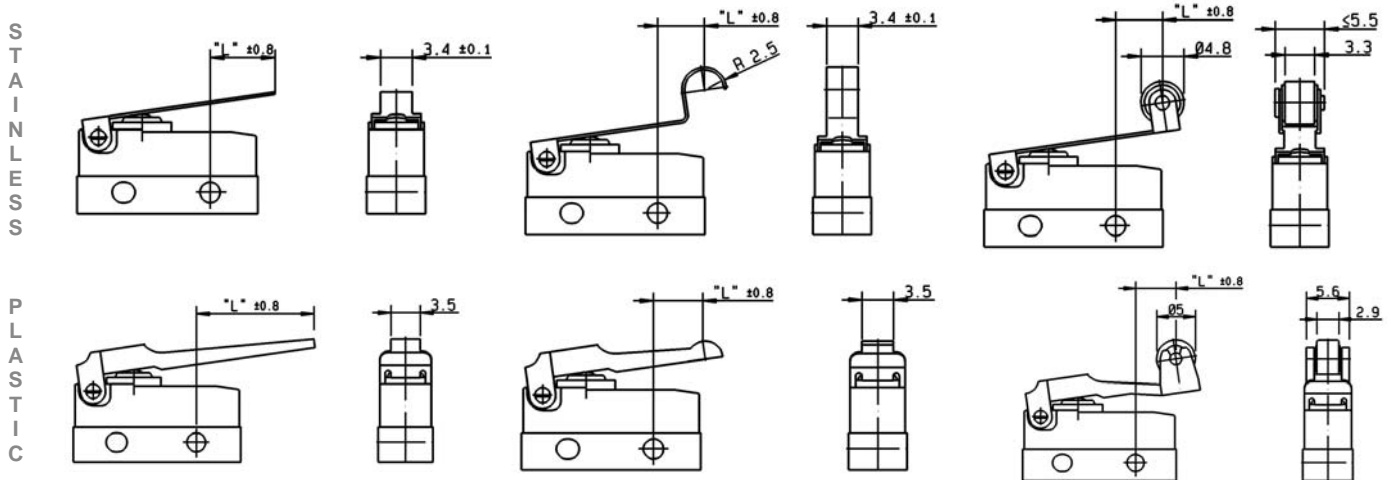
$\varnothing 0.053 \pm 0.002$   
(1.35 ± 0.05)

Hole pattern for pcb terminals without location pins

# Subminiature Sealed Snap Action Switch

## DC Series

Auxiliary Actuators Inches (mm)



### Auxiliary Actuator Options

| Actuator Code | Material  | Shape            | Actuation Length (mm) | Actuator Part number |
|---------------|-----------|------------------|-----------------------|----------------------|
| -LB           | Stainless | Straight         | 4.8                   | 06141232             |
| -LC           | Stainless | Straight         | 7.0                   | 06141233             |
| -LD           | Stainless | Straight         | 42.0                  | 06141234             |
| -SB           | Stainless | Simulated Roller | 2.5                   | 06141237             |
| -SC           | Stainless | Simulated Roller | 4.7                   | 06141238             |
| -SD           | Stainless | Simulated Roller | 39.7                  | 06141239             |

| Actuator Code | Material  | Shape            | Actuation Length (mm) | Actuator Part number |
|---------------|-----------|------------------|-----------------------|----------------------|
| -RB           | Stainless | Roller           | 2.5                   | 07140260             |
| -RC           | Stainless | Roller           | 4.7                   | 07140261             |
| -RD           | Stainless | Roller           | 39.7                  | 07140262             |
| -WB           | Plastic   | Straight         | 7.0                   | 06141247             |
| -WC           | Plastic   | Straight         | 14.0                  | 06141253             |
| -ZB           | Plastic   | Roller           | 5.2                   | 07140299             |
| -VB           | Plastic   | Simulated Roller | 5.6                   | 06141249             |

### Commonly Stocked Distributor Items / Preferred Part Numbers

| Item Number | EN Rating       | UL Rating                      | Terminals    | Maximum Operating Force (cN) | Maximum Pretravel inches (mm) | Operating Point inches (mm)      | Minimum Overtravel inches (mm) | Max. Movement Differential inches (mm) | Actuation Length inches (mm) |
|-------------|-----------------|--------------------------------|--------------|------------------------------|-------------------------------|----------------------------------|--------------------------------|--|------------------------------|
| DC1CA1AA    | 6A 260V ~       | 5A 125/250 VAC; 1A 48 VDC      | Short Solder | 200                          | 0.039 / 1.0                   | 0.330 +/- 0.012<br>8.4 +/- 0.3   | 0.024 / 0.6                    | .004 / 0.1                             | ---                          |
| DC1CA1LB    | 6A 260V ~       | 5A 125/250 VAC; 1A 48 VDC      | Short Solder | 80                           | 0.177 / 4.5                   | 0.421 +/- 0.5<br>10.7 +/- 1.3    | 0.06 / 1.5                     | .02 / 0.5                              | 0.189 (4.8)                  |
| DC1CA1RB    | 6A 260V ~       | 5A 125/250 VAC; 1A 48 VDC      | Short Solder | 90                           | 0.177 / 4.5                   | 0.622 +/- 0.050<br>15.8 +/- 1.3  | 0.06 / 1.5                     | .02 / 0.5                              | 0.088 (2.5)                  |
| DC2CA1AA    | 10(1.5A) 250V ~ | 10.1A 125/250VAC; 1/4HP 125VAC | Short Solder | 340                          | 0.039 / 1.0                   | 0.330 +/- 0.012<br>8.4 +/- 0.3   | 0.024 / 0.6                    | .004 / 0.1                             | ---                          |
| DC2CA1LB    | 10(1.5A) 250V ~ | 10.1A 125/250VAC; 1/4HP 125VAC | Short Solder | 150                          | 0.197 / 5.0                   | 0.421 +/- 0.50<br>10.7 +/- 1.3   | 0.06 / 1.5                     | 0.03 / 0.7                             | 0.189 (4.8)                  |
| DC2CA1RB    | 10(1.5A) 250V ~ | 10.1A 125/250VAC; 1/4HP 125VAC | Short Solder | 160                          | 0.197 / 5.0                   | 0.622 +/- 0.050<br>15.8 +/- 1.3  | 0.06 / 1.5                     | 0.03 / 0.7                             | 0.088 (2.5)                  |
| DC3CA1AA    | 0.1A 250V ~     | 0.1A 125/250VAC, 0.1A 30VDC    | Short Solder | 200                          | 0.039 / 1.0                   | 0.330 +/- 0.012<br>8.4 +/- 0.3   | 0.024 / 0.6                    | .004 / 0.1                             | ---                          |
| DC3CA1LB    | 0.1A 250V ~     | 0.1A 125/250VAC, 0.1A 30VDC    | Short Solder | 80                           | 0.177 / 4.5                   | 0.421 +/- 0.50<br>10.7 +/- 1.3   | 0.06 / 1.5                     | 0.03 / 0.7                             | 0.189 (4.8)                  |
| DC3CM5RB    | 0.1A 250V ~     | 0.1A 125/250VAC, 0.1A 30VDC    | 20 awg wire  | 90                           | 0.180 / 4.6                   | 0.600 +/- 0.030<br>15.24 +/- 0.8 | 0.06 / 1.5                     | .02 / 0.5                              | 0.088 (2.5)                  |

\*\* Additional part numbers available. Contact factory for minimums and availability



# Subminiature Sealed Snap Action Switch

# DC Series

## Ordering Information

| DC Series                   |                       | 3 |  |
|-----------------------------|-----------------------|---|--|
| Code                        | Contact Configuration |   |  |
| +85C Operating Temperature  |                       |   |  |
| E                           | SPST NO               |   |  |
| F                           | SPST NC               |   |  |
| G                           | SPDT                  |   |  |
| +120C Operating Temperature |                       |   |  |
| A                           | SPST NO               |   |  |
| B                           | SPST NC               |   |  |
| C                           | SPDT                  |   |  |

| Code | EN 61058 Rating | UL1054 Rating                  |
|------|-----------------|--------------------------------|
| 1    | 6A 250VAC       | 5A 125/250VAC, 1A 48VDC        |
| 2    | 10(1.5)A 250VAC | 10.1A 125/250VAC, 1/4HP 125VAC |
| 3    | 0.1A 250VAC     | 0.1A 125/250VAC 0.1A 30VDC     |

| A                            |   | Terminal Type |  | Notes   |
|------------------------------|---|---------------|--|---------|
| A                            | Short Solder                            |               |  | 1       |
| B                            | 0.02" (0.5) <sup>2</sup> Leads (No UL)  |               |  | 4,8     |
| C                            | 0.03" (0.75) <sup>2</sup> Leads (No UL) |               |  | 4       |
| H                            | 0.05 x 0.02 (1.2 x 0.5) PCB             |               |  | 1       |
| K                            | 0.02 x 0.02 (0.5 x 0.5) PCB             |               |  | 1,6     |
| L                            | 0.11 x 0.02 (2.8 x 0.5) QC              |               |  | 1       |
| N                            | Without Leads (Type B)                  |               |  | 5       |
| P                            | Without Leads (Type A)                  |               |  | 5       |
| Q                            | Without Leads (No Cut Out)              |               |  | 8       |
| <b>Non-European Versions</b> |   |               |  |         |
| D                            | Leads 18 awg (UL approved)              |               |  | 4, 7, 9 |
| E                            | Leads 16 awg (UL approved)              |               |  | 4       |
| M                            | Leads 20 awg (UL approved)              |               |  | 3, 4    |

| 1    |                                  | AA |  |
|------|----------------------------------|----|--|
| Code | Actuator Type                    |    |  |
| AA   | Spherical Head button            |    |  |
| LB   | Short straight lever 0.189 (4.8) |    |  |
| RB   | Short roller lever 0.098 (2.5)   |    |  |
| RC   | Roller lever 0.185 (4.7)         |    |  |

\* For additional actuator options contact factory

\*\* Do not use plastic levers with 120°C rated switches

|   |  |
|---|--|
| 1 | 30° Twisted                                      |
| 3 | Leads on Actuator Side                           |
| 4 | Leads on Opposite Side from Actuator             |
| 5 | Leads Attached to Underside                      |
| 6 | PCB Terminals Right Hand Side                    |
| 7 | PCB Terminals Left Hand Side                     |
| 8 | PCB Terminals Right Hand Side with Location Pins |
| 9 | PCB Terminals Left Hand Side with Location Pins  |

### Notes:

Wire leads 500 mm min. (approximately 20" long)

1. Only available with terminal configuration 1
2. +85C rated only
3. Only available with DC1 and DC3
4. Wire versions only rated to +105C
5. Only available with terminal configuration 3 or 4
6. Only available with terminal configuration 1, 6, 7, 8, 9
7. Only available with terminal configuration 5
8. Only available with DC3
9. Not available with DC2

## Contact

Call, fax or visit our Website for more information.

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The manufacturer accepts no liability for errors or non-availability, and reserves the right to change specifications without prior notice.

Technical data relates to product specifications only. Features may differ from those described. Only drawings combined with product specifications shall be deemed binding.

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