

### GENERAL SPECIFICATIONS FOR SB25, SB60s, SB221s, SB265

#### Electrical Capacity (Resistive Load)

**Power Level:** Shown in the following tables

#### Other Ratings

|                               |  |
|-------------------------------|--|
| <b>Contact Resistance:</b>    | 10 milliohms maximum   |
| <b>Insulation Resistance:</b> | 200 megohms minimum @ 500V DC for SB221s, SB25, & SB265;<br>1,000 megohms minimum @ 500V DC for SB60s.   |
| <b>Dielectric Strength:</b>   | 1,500V AC minimum for SB265 & SB25 for 1 minute minimum;<br>2,000V AC minimum between contacts for SB221s & SB60s for 1 minute minimum;<br>1,500V AC minimum between contacts & case for SB221s & SB60s for 1 minute minimum |
| <b>Mechanical Life:</b>       | 50,000 operations minimum for SB221s;<br>30,000 operations minimum for SB25, SB60s, SB265  |
| <b>Electrical Life:</b>       | 10,000 operations minimum  |
| <b>Total Travel:</b>          | SB221s .116" (2.95mm); SB60s .094" (2.4mm); SB265 .213" (5.4mm);<br>SB25 .195" (4.95mm)  |
| <b>Operating Temp Range:</b>  | -10°C through +70°C (+14°F through +158°F)   |

#### Materials & Finishes

|   |  |
|---|--|
| <b>Cap:</b>                               | Polybutylene terephthalate (PBT) (AT414)   |
| <b>Plunger:</b>                           | Polyacetal or brass with nickel plating  |
| <b>Bushing:</b>                           | Brass with nickel plating  |
| <b>Case:</b>                              | Phenolic resin or melamine phenolic resin  |
| <b>Case Cover:</b>                        | Steel with zinc plating  |
| <b>Movable &amp; Stationary Contacts:</b> | Copper with silver plating for SB221s; silver alloy with silver plating for SB25, SB60s, & SB265 |
| <b>Terminals:</b>                         | Copper with tin plating for SB25 & SB60s; copper with silver plating for SB265                   |



#### Installation



**Soldering Time & Temp:** Manual Soldering (Solder Lug): See Profile A in Supplement section.

#### Standards & Certifications

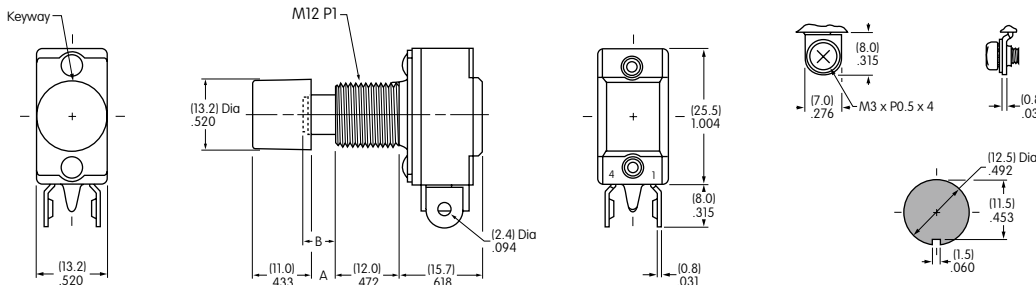
- UL: File No. E44145 - Recognized only when ordered with marking on switch.**  
Add "/U" or "/CUL" to end of part number to order UL recognized switch.  
UL or cULus recognition designated beside part numbers on following pages.  
See Supplement section to find UL or cULus rating details.
- CSA: File No. 023535\_0\_000 - Certified only when ordered with marking on switch.**  
Add "/C" to end of part number to order CSA certified switch.  
CSA certification designated beside part numbers on following pages.  
See Supplement section to find CSA rating details.

## SINGLE POLE WITH SOLDER LUG \* OR SCREW LUG

| * UL, cULus & CSA recognized only when ordered with marking on switch (see General Specs) |                            |              | Pushbutton Position/Connected Terminals ( ) = Momentary                                  |  | Electrical Capacity (Resistive) |         |
|---|----------------------------|--------------|--|--|---------------------------------|---------|
| Model   | * Approvals<br>UL cULus SP | Pole & Throw | Normal  | Down  | AC 125V                         | AC 250V |
| SB221NO   | — — ✓                      | SPST         | OFF —  | (ON) 1-4   | 3A                              | 1.5A    |
| SB221NC   | ✓ — ✓                      | SPST         | ON 1-4   | (OFF) —  | 3A                              | 1.5A    |
| SB221TNO  | — — ✓                      | SPST         | OFF —  | (ON) 1-4   | 3A                              | 1.5A    |
| SB221TNC  | ✓ — ✓                      | SPST         | ON 1-4   | (OFF) —  | 3A                              | 1.5A    |

Suffix T = Screw Lug      **Throw & Schematic:**      SPST SB221NO       SPST SB221NC       Note: Terminal numbers are actually on the switch.

**Notes:** Standard Hardware: AT504M Knurled Nut, AT508 Lockwasher, AT527M Hex Backup Nut. See Accessories & Hardware section.  
\* Wire harness & cable assemblies offered only in Americas.





Dimension A: .185" (4.7mm) for NO model & .150" (3.8mm) for NC model.  
Dimension B Plunger Extension: .197" (5.0mm) for NO model & .161" (4.1mm) for NC model.

Panel Thickness .193" (4.9mm)



**SB221NO**  
Supplied with AT414 Black Cap

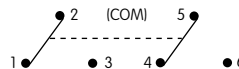
## DOUBLE POLE WITH SOLDER LUG \*

| * UL & cULus recognized only when ordered with marking on switch (see General Specs) |                            |              | Pushbutton Position/Connected Terminals ( ) = Momentary                                    |  | Electrical Capacity (Resistive) |         |
|--|----------------------------|--------------|--|--|---------------------------------|---------|
| Model  | * Approvals<br>UL cULus SP | Pole & Throw | Normal  | Down  | AC 125V                         | AC 250V |
| SB61A  | ✓ — ✓                      | DPDT         | ON 2-3 5-6   | (ON) 2-1 5-4   | 10A                             | 5A      |
| SB61B  | — — —                      | DPDT         | ON 2-3 5-6   | (ON) 2-1 5-4   | 3A                              | 1.5A    |
| SB63A  | — — —                      | DPDT         | ON 2-3 5-6   | (ON) or Lockdown ON 2-1 5-4  | 10A                             | 5A      |

Lockdown for SB63A is achieved by actuating and then turning the button clockwise.

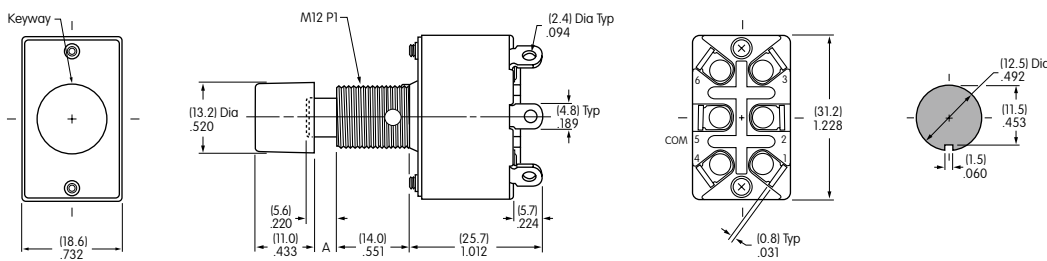
**Throw & Schematic:**

DPDT



Note: Terminal numbers are actually on the switch.

**Notes:** Standard Hardware: AT504M Knurled Nut, AT508 Lockwasher, AT527M Hex Backup Nut. See Accessories & Hardware section.  
\* Wire harness & cable assemblies offered only in Americas.



Dimension A: .169" (4.3mm) for SB61 model and .130" (3.3mm) for SB63 model.

Panel Thickness .193" (4.9mm)



**SB61A**  
Supplied with AT414 Black Cap

Toggles

Rockers

Pushbuttons

Illuminated PB

Programmable

Keylocks

Rotaries

Slides

Tactiles

Tilt

Touch

Indicators

Accessories

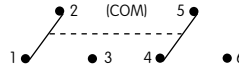
Supplement

### DOUBLE POLE WITH SOLDER LUG \*

| * UL, cULus & CSA recognized only when ordered with marking on switch (see General Specs) |             |              | Pushbutton Position/Connected Terminals ( ) = Momentary |      | Electrical Capacity (Resistive) |         |
|---|-------------|--------------|---|------|---------------------------------|---------|
| Model   | * Approvals | Pole & Throw | Normal  | Down | AC 125V                         | AC 250V |
| SB25  |             | DPDT         | ON  | ON   | 15A                             | 9A      |

Throw & Schematic:

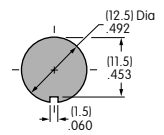
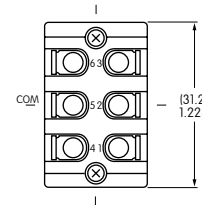
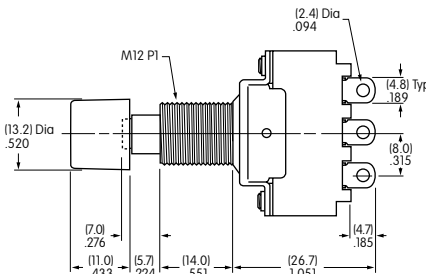
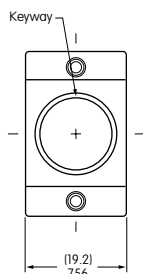
DPDT



Note: Terminal numbers are actually on the switch.

**Notes:** Standard Hardware: AT504M Knurled Nut, AT508 Lockwasher, AT527M Hex Backup Nut. See Accessories & Hardware section.

\* Wire harness & cable assemblies offered only in Americas.



**SB25**

Supplied with AT414 Black Cap

Panel Thickness .193" (4.9mm)

### SINGLE POLE WITH SOLDER LUG \*

| * UL, cULus & CSA recognized only when ordered with marking on switch (see General Specs) |             |              | Pushbutton Position/Connected Terminals ( ) = Momentary |      | Electrical Capacity (Resistive) |         |
|---|-------------|--------------|---|------|---------------------------------|---------|
| Model   | * Approvals | Pole & Throw | Normal  | Down | AC 125V                         | AC 250V |
| SB265   |             | SPST         | ON  | OFF  | 6A                              | 3A      |

Throw & Schematic:

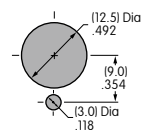
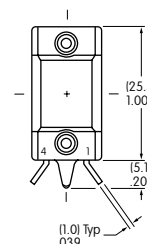
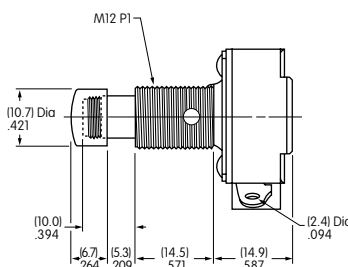
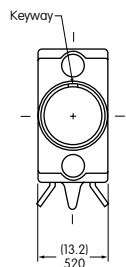
SPST



Note: Terminal numbers are actually on the switch.

**Notes:** Standard Hardware: AT504M Knurled Nut, AT508 Lockwasher, AT527M Hex Backup Nut. See Accessories & Hardware section.

\* Wire harness & cable assemblies offered only in Americas.



**SB265**

Supplied with Chrome Plated Brass Cap

Panel Thickness .291" (7.4mm)

# Mouser Electronics

Authorized Distributor

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## NKK Switches:

[SB61A-RO](#) [SB221NO-RO](#) [SB25-DB](#) [SB265/U](#) [SB25-RO](#) [SB221TNO-RO](#) [SB221NC-RO](#) [SB221NO-DC-RO](#) [SB25-BA-RO](#) [SB61B-RO](#) [SB221TNC-RO](#) [SB265/C](#) [SB61B/AT414C](#) [SB25/U](#) [SB63A/AT414C](#) [SB61A/AT414C](#) [SB61A/U](#) [SB221NC/U](#) [SB221NC/C](#) [SB265](#) [SB25](#) [SB63A](#) [SB221TNO](#) [SB221NO](#) [SB221NC](#) [SB221NO-DC](#) [SB61B](#) [SB61A](#) [SB285-RO](#)