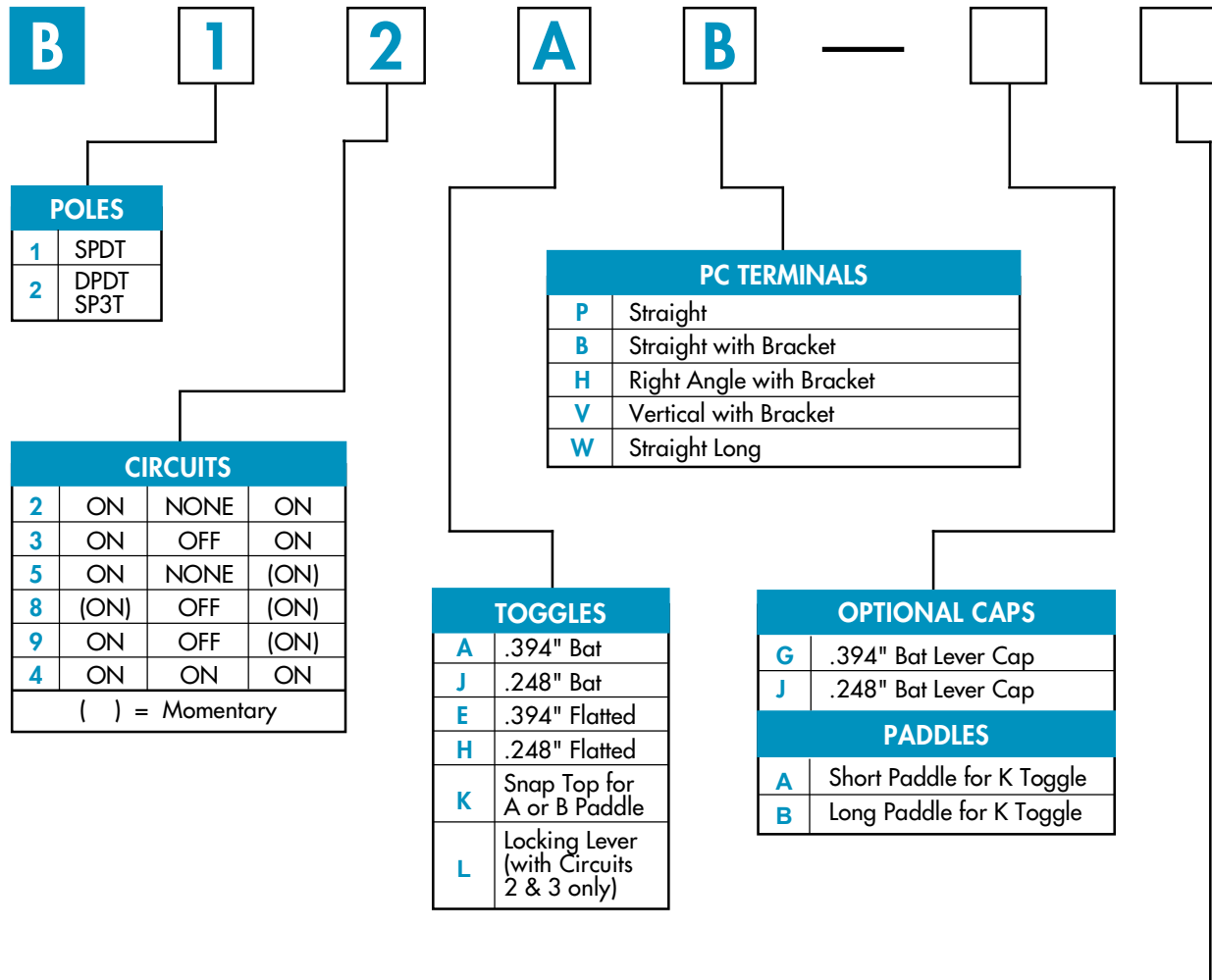
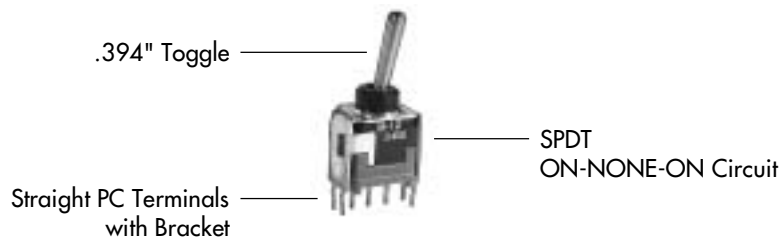


## TYPICAL SWITCH ORDERING EXAMPLE



### DESCRIPTION FOR TYPICAL ORDERING EXAMPLE

**B12AB**



CAP COLORS		PADDLE COLORS	
A	Black	A	
B	White	B	
C	Red	C	
---	Yellow	E	
---	Green	F	
---	Blue	G	
---	Gray	H	

### GENERAL SPECIFICATIONS

#### Electrical Capacity (Resistive Load)

**Logic Level:** 0.4VA maximum @ 28V AC/DC maximum  
(Applicable Range 0.1mA ~ 0.1A @ 20mV ~ 28V)

Note: See Supplement Index (page Z1) to find explanation of operating range.

#### Other Ratings

**Contact Resistance:** 50 milliohms maximum  
**Insulation Resistance:** 500 megohms minimum @ 500V DC  
**Dielectric Strength:** 500V AC minimum  
**Mechanical Life:** 100,000 operations minimum for On-None-On & On-Off-On  
 50,000 operations minimum for other circuits  
 50,000 operations minimum for locking lever models  
**Electrical Life:** 50,000 operations minimum  
**Static Capability:** Withstands 3 kilovolts ESD  
**Nominal Operating Force:** Toggles A & E & K w/Long Paddle: 150 grams (momentary); 120 grams (maintained)  
 Toggles J & H & K w/Short Paddle: 278 grams (momentary); 188 grams (maintained)  
 Toggle L: 60 grams  
**Contact Timing:** Nonshorting  
**Angle of Throw:** 26°

#### Materials & Finishes

**Toggle:** Nickel plated brass  
**Bushing:** Carbon blended polyamide; nickel plated zinc alloy for locking levers  
**Case Housing:** Glass fiber reinforced polyamide  
**Support Bracket:** Tin plated phosphor bronze  
**Movable Contact:** Phosphor bronze with gold plating over silver plating  
**Stationary Contacts:** Brass with gold plating over nickel undercoating  
**Terminals:** Brass with gold plating over nickel undercoating

#### Environmental Data

**Operating Temp Range:** -30°C through +85°C (-22°F through +185°F)  
**Humidity:** 90 ~ 95% humidity for 96 hours @ 40°C (104°F)  
**Vibration:** 10 ~ 55Hz with peak-to-peak amplitude of 1.5mm traversing the frequency range & returning in 1 minute; 3 right angled directions for 2 hours  
**Shock:** 50g acceleration (tested in 6 right angled directions, with 5 shocks in each direction)









#### Installation

**Soldering Time & Temperature:** 3 seconds @ 350°C or 5 seconds @ 270°C  
**Process Seal:** See Supplement Index (page Z1) for specific processing data.

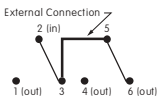
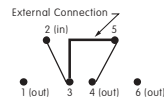
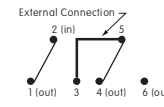
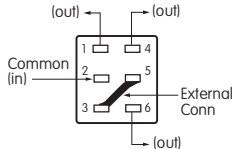
#### Standards & Certifications

**Flammability Standards:** UL94V-0 available  
**IECQ Approved:** All toggle models recognized at 0.4VA maximum @ 28V AC/DC maximum  
 Qualification Approval Number: JP792-4A

### POLES & CIRCUITS

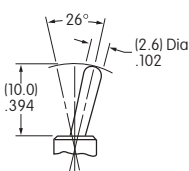
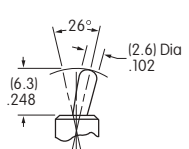
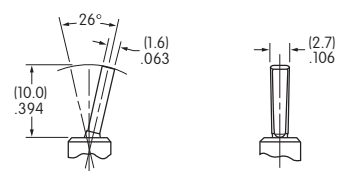
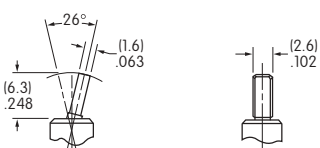
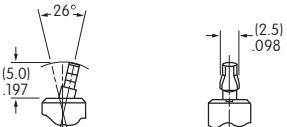
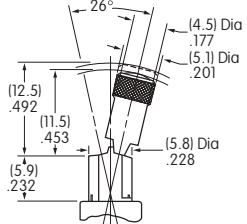
		Toggle Position ( ) = Momentary			Connected Terminals			Throw & Schematics
Pole	Model	Up 	Center 	Down 	Up 	Center 	Down 	Note: Terminal numbers are not actually on the switch.
SP	<b>B12</b> <b>B13</b> <b>B15</b> <b>B18</b> <b>B19</b>	ON	NONE	ON	2-3	OPEN	2-1	SPDT 
DP	<b>B22</b> <b>B23</b> <b>B25</b> <b>B28</b> <b>B29</b>	ON	NONE	ON	2-3 5-6	OPEN	2-1 5-4	DPDT 

### For 3 Throw (3-On)

		Connected Terminals			External Connection
Pole	Model	Down	Center	Up	
SP	<b>B24</b>	ON  2-3 5-6	ON  2-3 5-4	ON  2-1 5-4	The SP3T model utilizes a double pole base.  External connections must be made during field installation. 

### TOGGLES

Standard Material & Finish: Brass with Bright Nickel

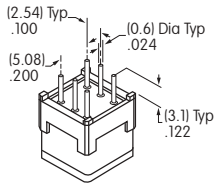
<p><b>A</b> .394" Bat</p> 	<p><b>J</b> .248" Bat</p> 	<p><b>E</b> .394" Flatted</p> 
<p><b>H</b> .248" Flatted</p> 	<p><b>K</b> Snap Top for Paddles</p> 	<p><b>L</b> Locking Lever</p> 

### PC TERMINALS

Use of a support bracket or placement of the round bushing in a panel cutout is recommended to increase PCB mounting stability.

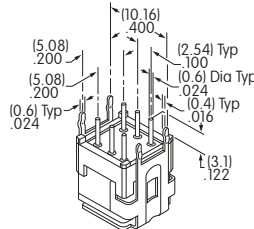
**P**

**Straight**



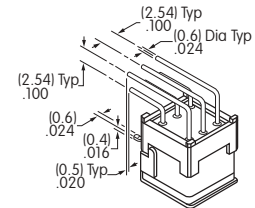
**B**

**Straight with Bracket**



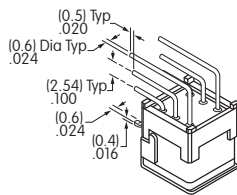
**H**

**Right Angle with Bracket**



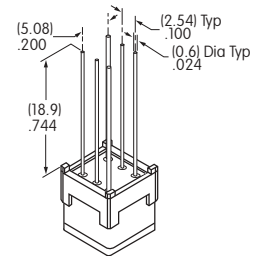
**V**

**Vertical with Bracket**



**W**

**Straight Long**



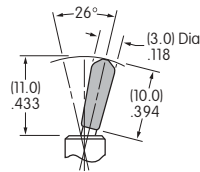
### OPTIONAL CAPS

**G**

**AT4003**  
**.394" Bat Lever Cap**

Material: PVC

Colors Available:  
A, B, C

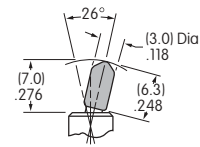


**J**

**AT4064**  
**.248" Bat Lever Cap**

Material: PVC

Colors Available:  
A, B, C



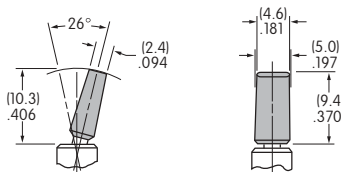
### PADDLES

**A**

**AT467**  
**Short Paddle**

Material: PBT

Colors Available:  
A, B, C, E, F, G, H

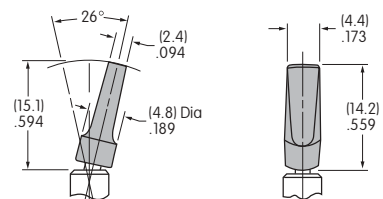


**B**

**AT468**  
**Long Paddle**

Material: PBT

Colors Available:  
A, B, C, E, F, G, H



Color Codes:

**A**

Black

**B**

White

**C**

Red

**E**

Yellow

**F**

Green

**G**

Blue

**H**

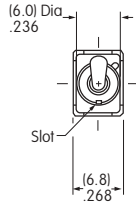
Gray

## TYPICAL SWITCH DIMENSIONS

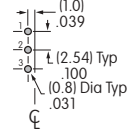
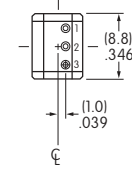
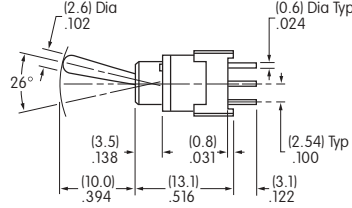
### Straight PC



B12AP



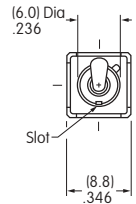
### Single Pole



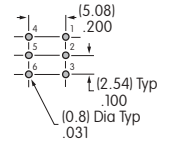
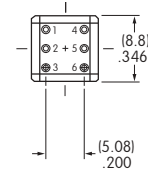
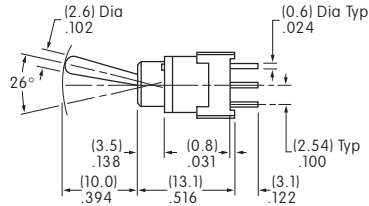
### Straight PC



B22AP



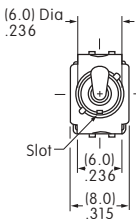
### Double Pole



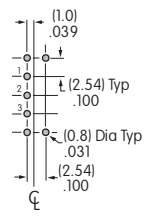
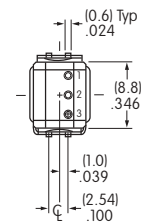
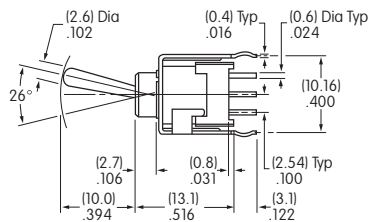
### Straight PC • Bracket



B12AB



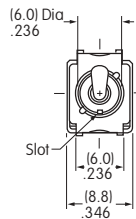
### Single Pole



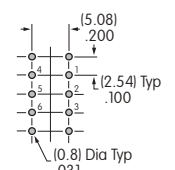
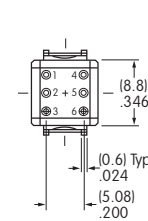
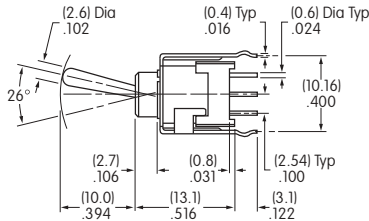
### Straight PC • Bracket



B22AB



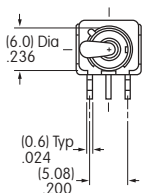
### Double Pole



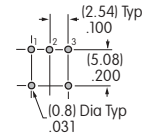
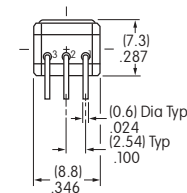
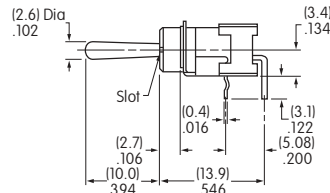
### Right Angle PC



B12AH



### Single Pole

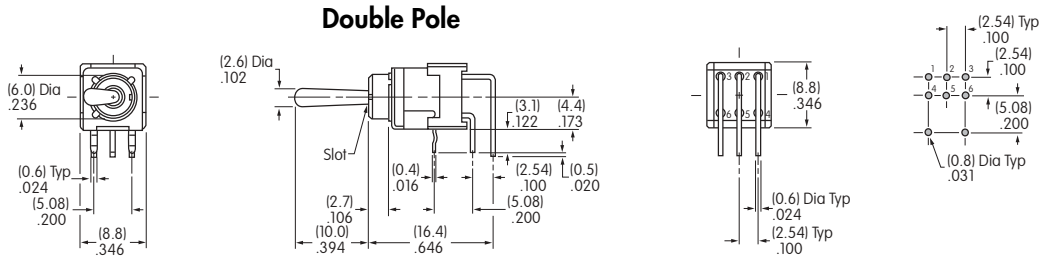


### TYPICAL SWITCH DIMENSIONS

#### Right Angle PC



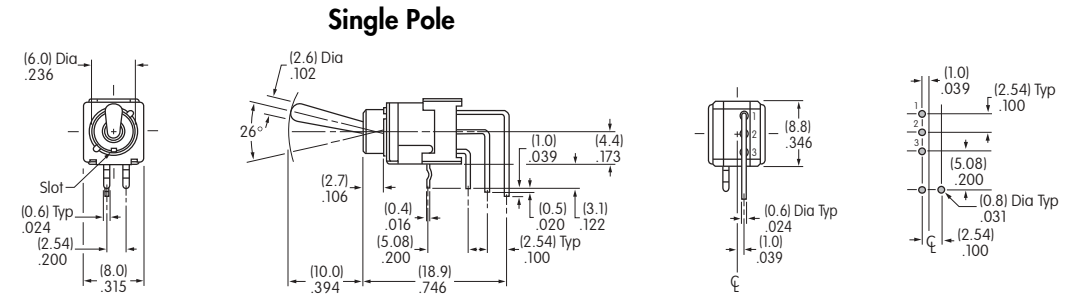
**B22AH**



#### Vertical PC



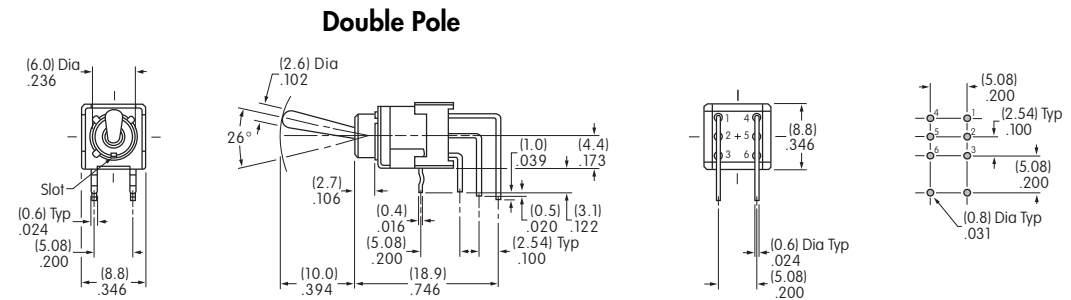
**B12AV**



#### Vertical PC



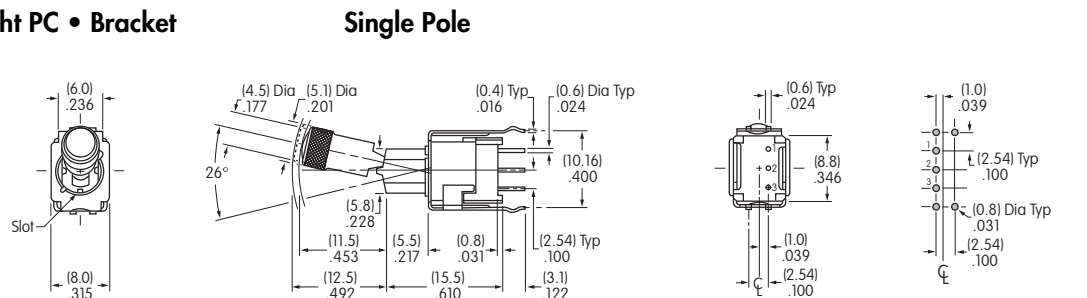
**B22AV**



#### Locking Lever • Straight PC • Bracket



**B12LB**



#### Locking Lever • Straight PC • Bracket



**B22LB**

