General Specifications

Electrical Capacity (Resistive Load)

Logic Level: 0.4VA maximum @ 28V AC/DC maximum
(Applicable Range 0.1mA ~ 0.1A @ 20mV ~ 28V)
Note: Find additional explanation of operating range in Supplement section.

Other Ratings

Contact Resistance: 50 milliohms maximum
Insulation Resistance: 500 megohms minimum @ 500V DC
Dielectric Strength: 500V AC minimum for 1 minute minimum
Mechanical Life: 50,000 operations minimum (momentary)
25,000 operations minimum (alternate action)
Electrical Life: 50,000 operations minimum (momentary)
25,000 operations minimum (alternate action)
Nominal Operating Force: 2.55N (momentary); 2.94N (alternate action)
Contact Timing: Nonshorting
Travel: Momentary: Pretravel .028" (0.7mm); Overtravel .016" (0.4mm); Total Travel .043" (1.1mm)
Alternate: Pretravel .039" (1.0mm); Overtravel .039" (1.0mm); Total Travel .079" (2.0mm)

Materials & Finishes

Plunger: Polyacetal
Bushing: Carbon blended polyamide
Case Housing: Glass fiber reinforced polyamide
Support Bracket: Tin plated phosphor bronze
Movable Contact: Phosphor bronze with gold plating
Stationary Contacts: Copper alloy with gold plating
Terminals: Copper alloy with gold plating

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 (490m/s^2) acceleration (tested in 6 right angled directions, with 5 shocks in each direction)

Installation

Cap Installation Force: 49.03N (11.2 lbf) maximum downward force on actuator;
actuator must be in UP position to remove cap from alternate action models

PCB Processing

Soldering: Wave Soldering Recommended: See Profile A in Supplement section.
Manual Soldering: See Profile B in Supplement section.
Cleaning: Automated cleaning. See Cleaning specifications in Supplement section.

Standards & Certifications

Flammability Standards: UL94V-0 available
The BB Series pushbuttons have not been tested for UL recognition or CSA certification.
These switches are designed for use in a low-voltage, low-current, logic-level circuit.
When used as intended in a logic-level circuit, the results do not produce hazardous energy.

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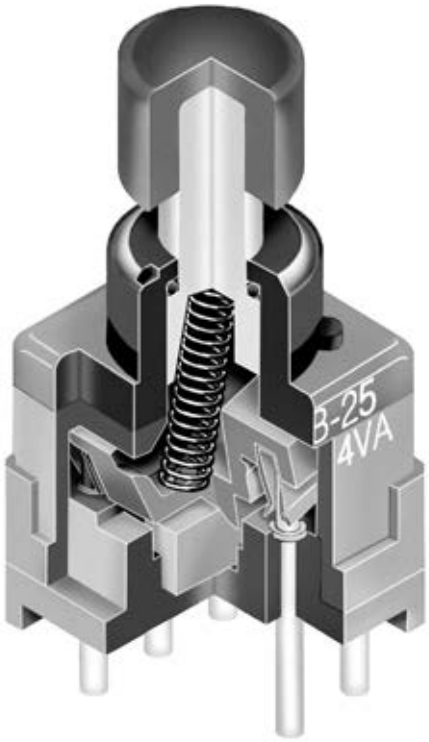
Distinctive Characteristics

Subminiature size (1/3 size of Series M switches) saves space on PC boards.

Specifically developed for logic-level applications.

Available in momentary and maintained circuits.

Industry's smallest alternate action (maintained) pushbutton with latchdown feature providing visible, audible, and tactile feedback.



Antistatic superstructure, consisting of the carbon impregnated bushing and the support bracket, prevents static discharge to the contacts. Static electricity from an operator's touch travels from the actuator through the bushing and bracket to the PC board.

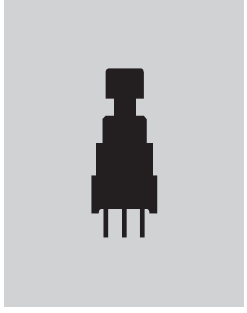
Award-winning STC contact mechanism with benefits unavailable in conventional mechanisms: smoother, positive detent actuation, increased contact stability and unparalleled logic-level reliability. (Additional STC details in Terms & Acronyms; see Supplement section.)

Smooth, 6mm diameter bushing simplifies panel layout.

Totally sealed body construction prevents contact contamination and allows time- and money-saving soldering and cleaning.

.100" x .100" (2.54mm x 2.54mm) terminal spacing conforms to standard PC board grids.

Actual Size



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TYPICAL SWITCH ORDERING EXAMPLE

BB 1 5 A H – F A

Poles

1	SPDT
2	DPDT

Circuits

5	ON		(ON)
( ) = Momentary			
6	ON		ON

Alternate Action has Latchdown.
BB16 has a Double Pole case.

PC Terminals

P	Straight
* B	Straight with Bracket
* H	Right Angle with Bracket
* V	Vertical with Bracket
W	Straight Long

* Bracketed models are ESD protected

Plunger

A	.213″ (5.4mm) Long

Caps

F	.201″ (5.1mm) Diameter
H	.295″ (7.5mm) Diameter

Cap Colors

A	Black
B	White
C	Red

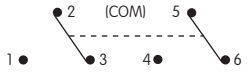
DESCRIPTION FOR TYPICAL ORDERING EXAMPLE

BB15AH-FA



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POLES & CIRCUITS

Pole	Model	Plunger Position ( ) = Momentary: Normal	Plunger Position ( ) = Momentary: Down	Connected Terminals: Normal	Connected Terminals: Down	Throw & Schematics
		Slot		Slot		Note: Terminal numbers are not actually on the switch.
SP	**BB15** **BB16**	ON ON	(ON) ON	2-3	2-1	SPDT 
DP	**BB25** **BB26**	ON ON	(ON) ON	2-3 5-6	2-1 5-4	DPDT 

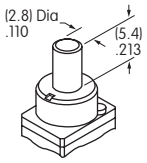
PLUNGERS

A **.213" (5.4mm) Long**

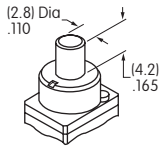
Standard Plunger Color: White

Contact factory for other colors and lengths.

Normal Position



Latchdown Position



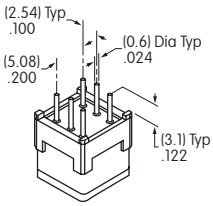
PC TERMINALS

Use of a support bracket is recommended to increase PCB mounting strength and stability.

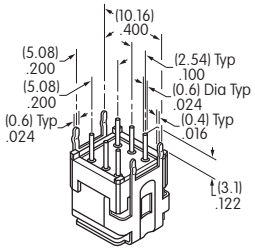
Both single pole and double pole alternate action models have double pole bases.

See Typical Switch Dimensions for details.

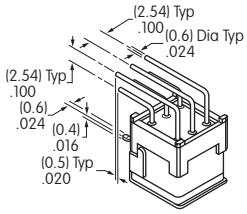
P **Straight**



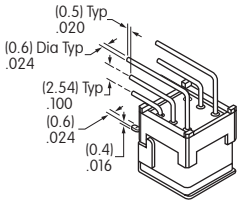
B **Straight with Bracket**



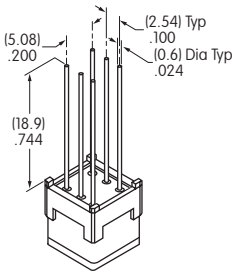
H **Right Angle with Bracket**



V **Vertical with Bracket**



W **Straight Long**

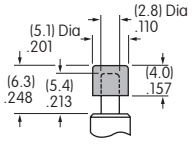


SLIP-ON CAPS

F **AT475**
.201" (5.1mm) Diameter Cap



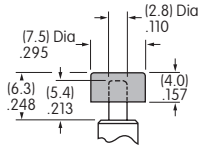
Material: Polyamide



H **AT496**
.295" (7.5mm) Diameter Cap



Material: Polyamide



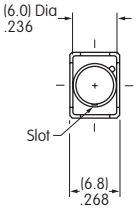
Colors Available: **A** Black **B** White **C** Red

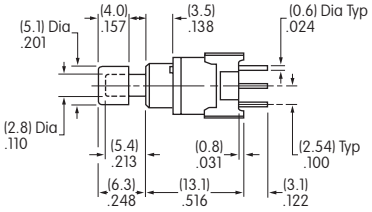
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TYPICAL SWITCH DIMENSIONS

Straight PC

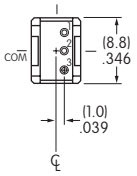


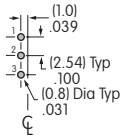




BB15AP-FA

Single Pole

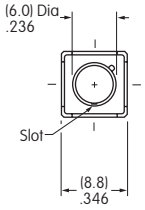


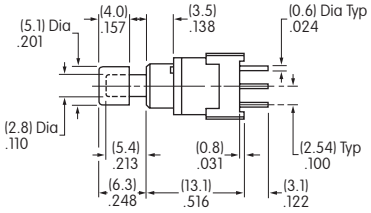


Momentary

Straight PC

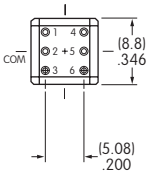


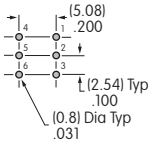




BB25AP-FA

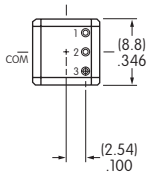
Double Pole

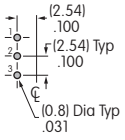




Momentary & Alternate

BB16AP

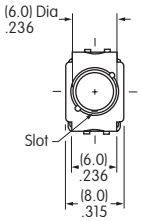


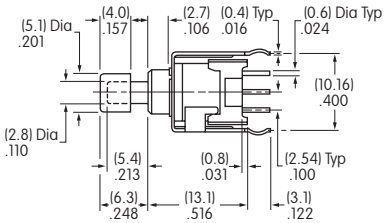


Alternate

Straight PC • Bracket

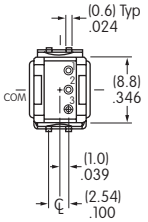


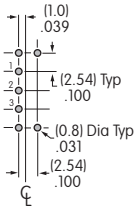




BB15AB-FA

Single Pole

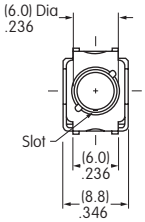


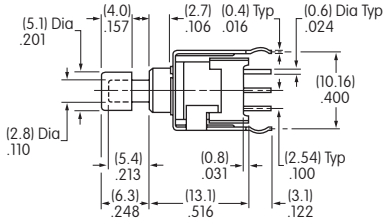


Momentary

Straight PC • Bracket

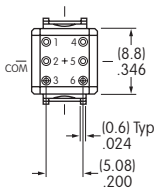


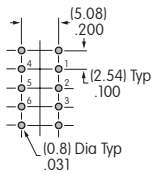




BB25AB-FA

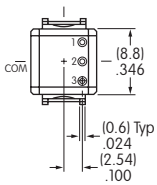
Double Pole

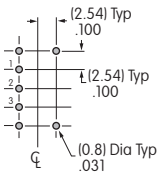




Momentary & Alternate

BB16AB



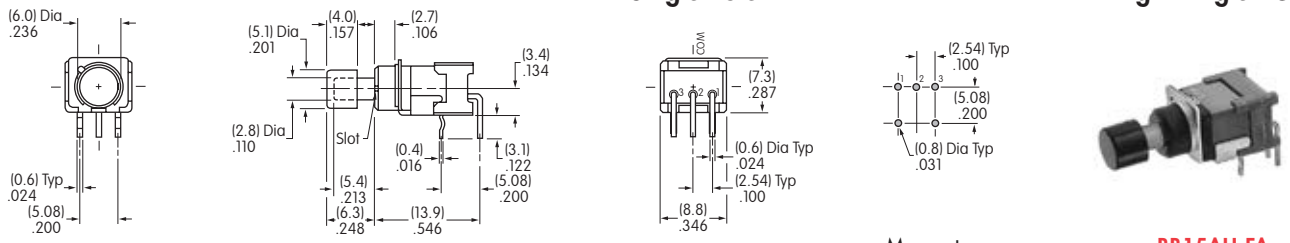


Alternate

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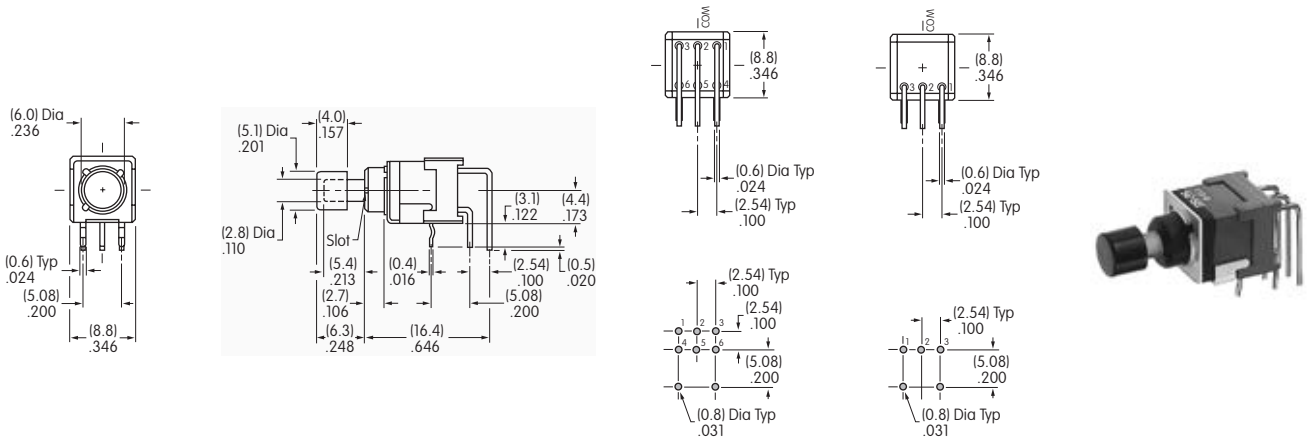
TYPICAL SWITCH DIMENSIONS

Single Pole — Momentary — Right Angle PC



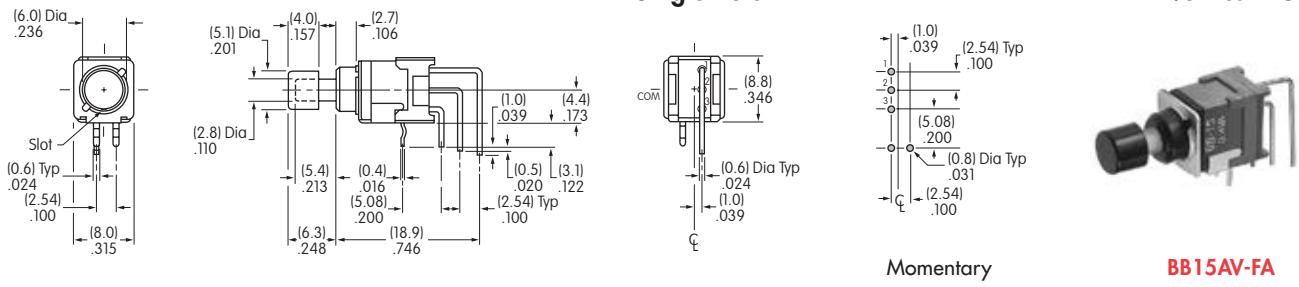
BB15AH-FA

Double Pole — BB16AH — Right Angle PC



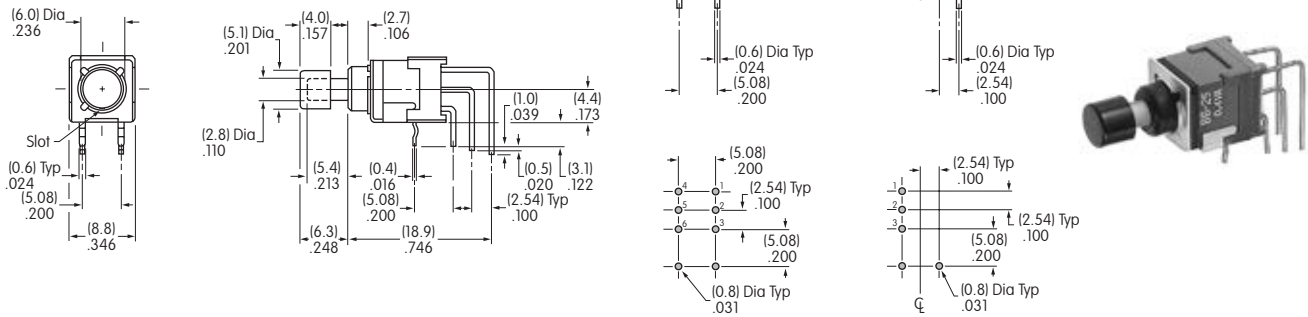
BB25AH-FA

Single Pole — Momentary — Vertical PC



BB15AV-FA

Double Pole — BB16AV — Vertical PC



BB25AV-FA

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