

# Distinctive Characteristics

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

Specifically developed for logic-level applications.

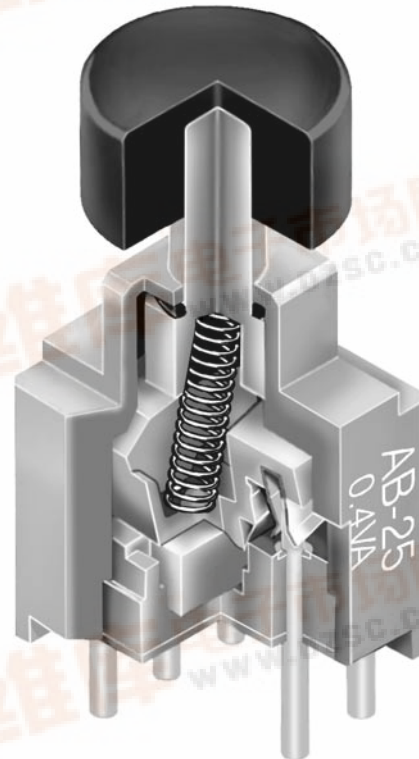
Totally sealed body construction prevents contact contamination and allows time- and money-saving automated soldering and cleaning.

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.)

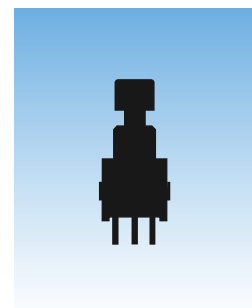
Molded-in, epoxy sealed or ultrasonically welded terminals lock out flux, solvents, and other contaminants.

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

Matching indicators available and shown at the end of Section M.



Actual Size



# 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  
**Electrical Life:** 50,000 operations minimum  
**Nominal Operating Force:** 2.55N  
**Contact Timing:** Nonshorting (break-before-make)  
**Travel:** Pretravel .028" (0.7mm); Overtravel .016" (0.4mm); Total Travel .043" (1.1mm)

### Materials & Finishes

**Plunger:** Polyacetal  
**Case Housing:** Glass fiber reinforced polyamide  
**Support Bracket:** Tin plated phosphor bronze  
**Movable Contact:** Phosphor bronze with gold plating  
**Stationary Contacts:** Brass with gold plating  
**Terminals:** Brass 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<sup>2</sup>) 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

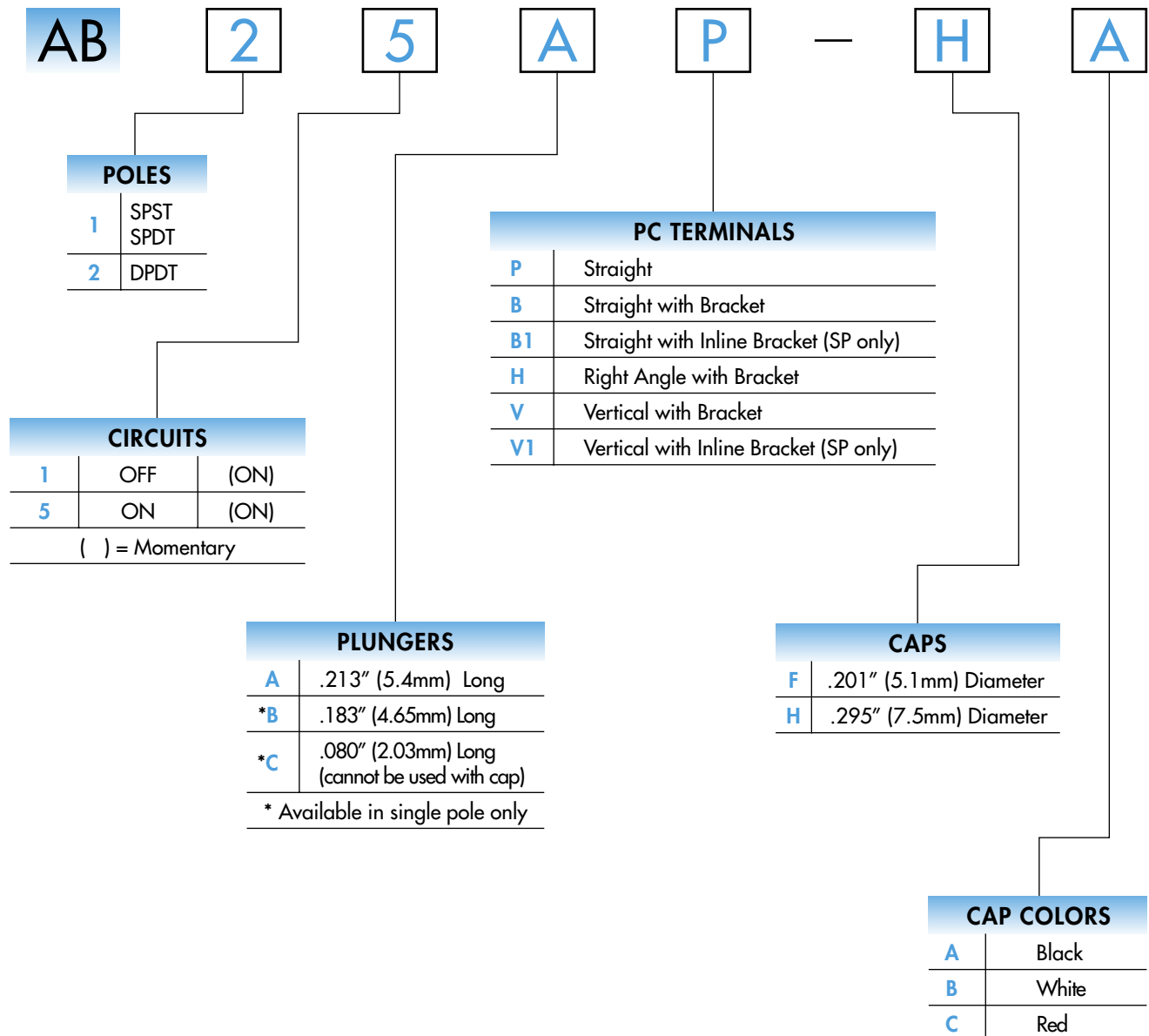
### PCB Processing

**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

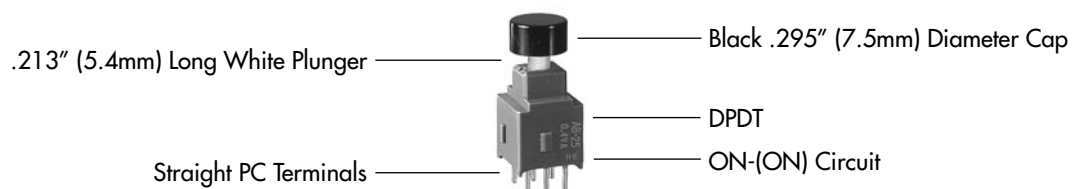
**UL Recognition or CSA Certification:** The AB Series pushbuttons have not been tested for UL recognition or CSA certification. These switches are designed for use in a low-voltage, low-current, logic-level circuit. When used as intended in a logic-level circuit, the results do not produce hazardous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

### TYPICAL SWITCH ORDERING EXAMPLE

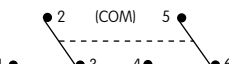


### DESCRIPTION FOR TYPICAL ORDERING EXAMPLE

#### AB25AP-HA



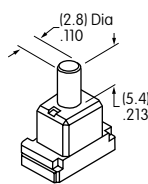
### POLES & CIRCUITS

| Pole | Model | Plunger Position<br>( ) = Momentary                                                         |                                                                                           | Connected Terminals                                                                         |                                                                                            | Throw & Schematics                                                                       |
|------|-------|---------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
|      |       | Normal<br> | Down<br> | Normal<br> | Down<br> |                                                                                          |
| SP   | AB11  | OFF                                                                                         | (ON)                                                                                      | OPEN                                                                                        | 3-1                                                                                        | SPST  |
| SP   | AB15  | ON                                                                                          | (ON)                                                                                      | 2-3                                                                                         | 2-1                                                                                        | SPDT  |
| DP   | AB25  | ON                                                                                          | (ON)                                                                                      | 2-3 5-6                                                                                     | 2-1 5-4                                                                                    | DPDT  |

### PLUNGERS

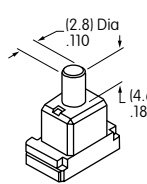
**A**

.213" (5.4mm)  
Long



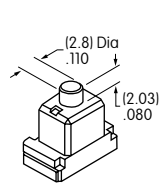
**B**

.183" (4.6mm)  
Long  
(on SP only)



**C**

.080" (2.03mm)  
Long  
(on SP only)



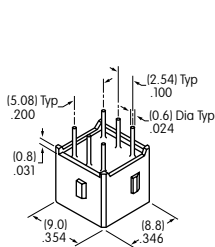
Standard Plunger Color: White

Contact factory for red or black options.

### PC TERMINALS

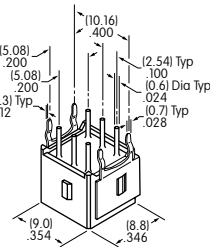
**P**

Straight



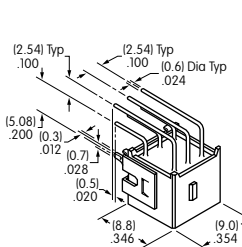
**B**

Straight  
with Bracket



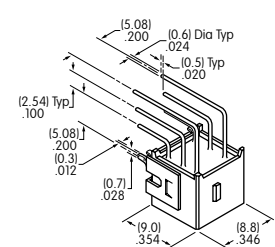
**H**

Right Angle  
with Bracket



**V**

Vertical  
with Bracket



Use of a support bracket is recommended to increase PCB mounting strength and stability.  
B1 & V1 terminal dimensions appear on the pushbutton drawings which follow.

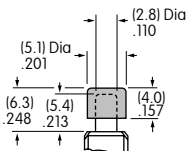
### SLIP-ON CAPS

**F**

AT475  
.201" (5.1mm) Diameter Cap

Material: Polyamide

For use with  
plungers A & B only.

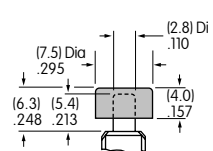


**H**

AT496  
.295" (7.5mm) Diameter Cap

Material: Polyamide

For use with  
plungers A & B only.



Colors Available:

**A**

Black

**B**

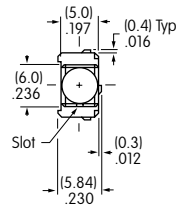
White

**C**

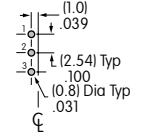
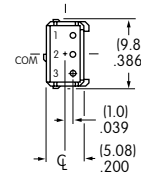
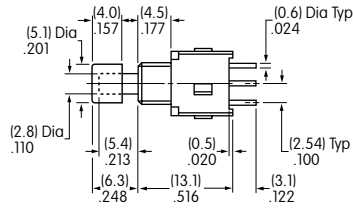
Red

### TYPICAL SWITCH DIMENSIONS

#### Straight PC



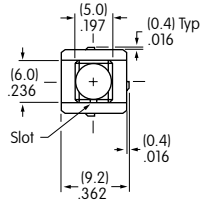
#### Single Pole



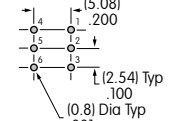
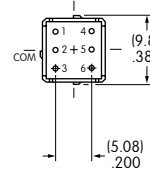
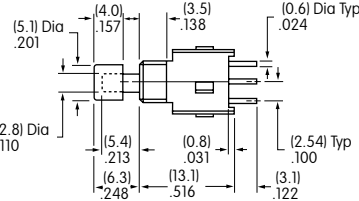
AB15AP-FA

AB11 model does not have terminal 2.

#### Straight PC

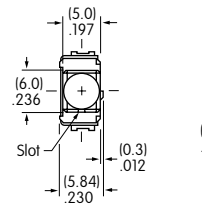


#### Double Pole

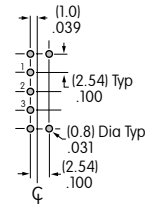
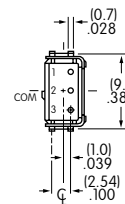
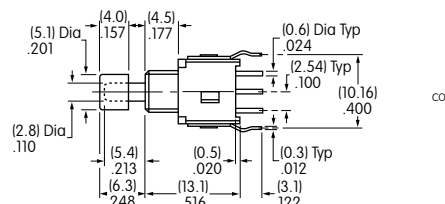


AB25AP-FA

#### Straight PC • Bracket



#### Single Pole

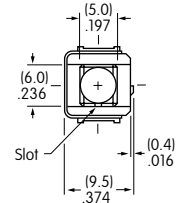


B Terminals

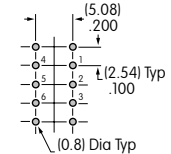
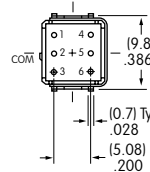
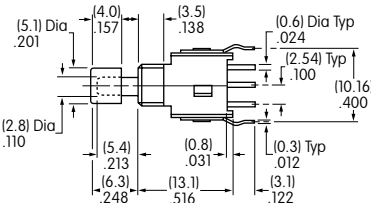
B1 Terminals

AB15AB-FA

#### Straight PC • Bracket

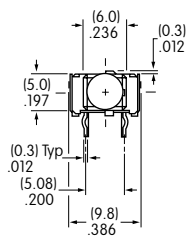


#### Double Pole

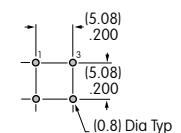
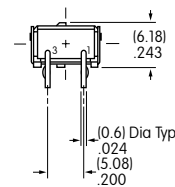
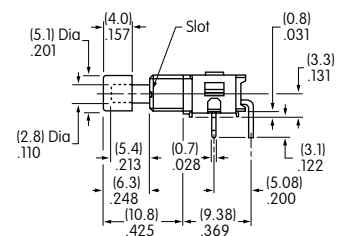


AB25AB-FA

#### Right Angle PC



#### Single Pole (Single Throw)

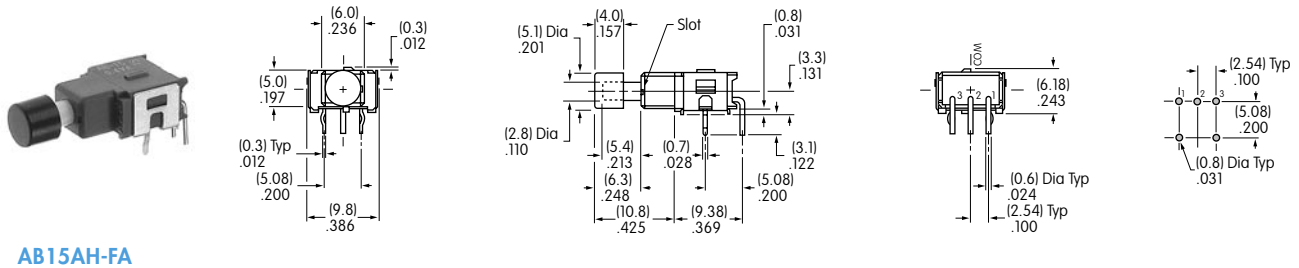


AB11AH-FA

### TYPICAL SWITCH DIMENSIONS

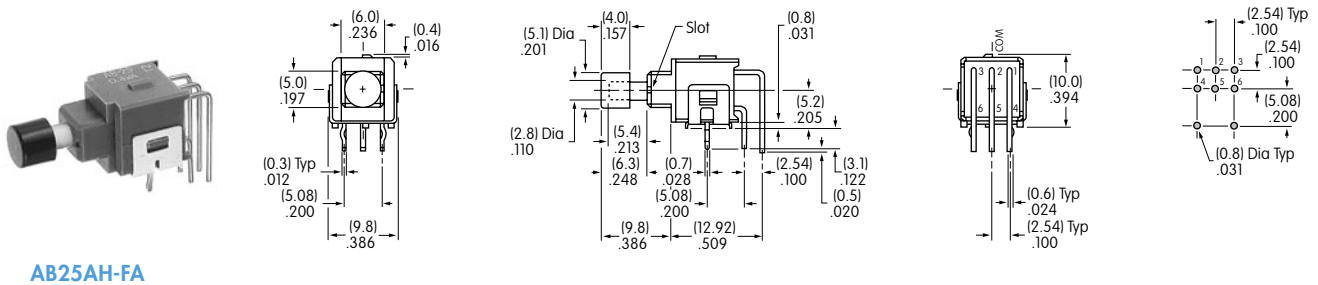
#### Right Angle PC

#### Single Pole (Double Throw)



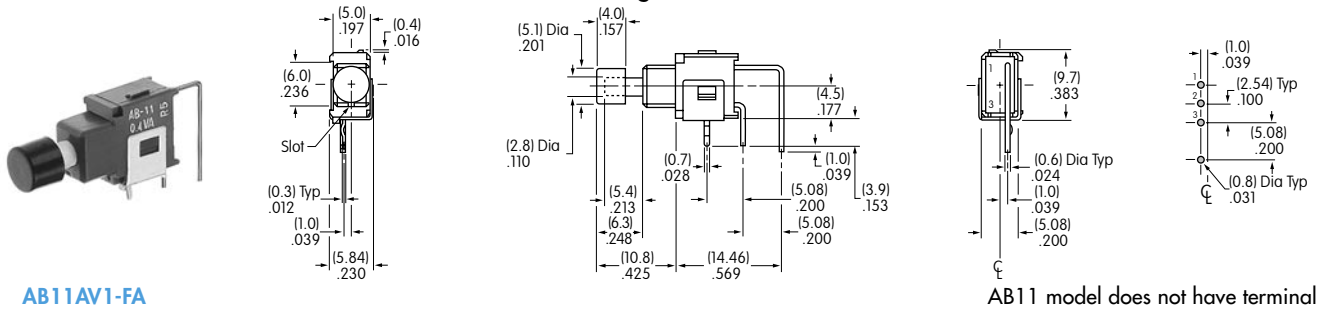
#### Right Angle PC

#### Double Pole



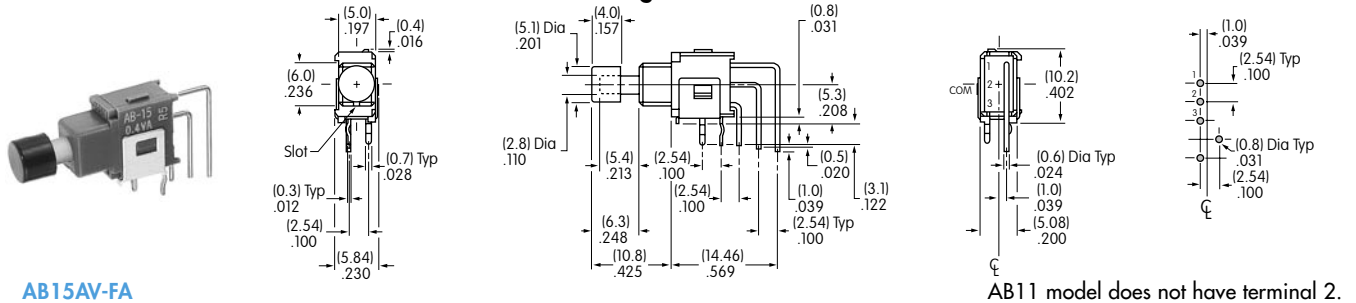
#### Vertical PC • Inline Bracket

#### Single Pole



#### Vertical PC

#### Single Pole



#### Vertical PC

#### Double Pole

