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^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

PCB Processing
- Soldering: Wave Soldering Recommended: See Profile A in Supplement section.

Standards & Certifications
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.
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.
TYPICAL SWITCH ORDERING EXAMPLE

**Poles**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>SPST</td>
</tr>
<tr>
<td>2</td>
<td>SPDT</td>
</tr>
</tbody>
</table>

**Circuits**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>OFF</td>
</tr>
<tr>
<td>5</td>
<td>ON</td>
</tr>
</tbody>
</table>

( ) = Momentary

**PC Terminals**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>Straight</td>
</tr>
<tr>
<td>B</td>
<td>Straight with Bracket</td>
</tr>
<tr>
<td>B1</td>
<td>Straight with Inline Bracket (SP only)</td>
</tr>
<tr>
<td>H</td>
<td>Right Angle with Bracket</td>
</tr>
<tr>
<td>V</td>
<td>Vertical with Bracket</td>
</tr>
<tr>
<td>V1</td>
<td>Vertical with Inline Bracket (SP only)</td>
</tr>
</tbody>
</table>

**Plungers**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>.213” (5.4mm) Long</td>
</tr>
<tr>
<td>*B</td>
<td>.183” (4.65mm) Long</td>
</tr>
<tr>
<td>*C</td>
<td>.080” (2.03mm) Long (cannot be used with cap)</td>
</tr>
</tbody>
</table>

* Available in single pole only

**Caps**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>.201” (5.1mm) Diameter</td>
</tr>
<tr>
<td>H</td>
<td>.295” (7.5mm) Diameter</td>
</tr>
</tbody>
</table>

**Cap Colors**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Black</td>
</tr>
<tr>
<td>B</td>
<td>White</td>
</tr>
<tr>
<td>C</td>
<td>Red</td>
</tr>
</tbody>
</table>

DESCRIPTION FOR TYPICAL ORDERING EXAMPLE

**AB25AP-HA**

- .213” (5.4mm) Long White Plunger
- Black .295” (7.5mm) Diameter Cap
- DPDT
- ON-(ON) Circuit
- Straight PC Terminals
Process Sealed Subminiature Pushbuttons

POLES & CIRCUITS

<table>
<thead>
<tr>
<th>Pole</th>
<th>Model</th>
<th>Normal</th>
<th>Down</th>
<th>Connected Terminals</th>
<th>Throw &amp; Schematics</th>
</tr>
</thead>
<tbody>
<tr>
<td>SP</td>
<td>AB11</td>
<td>OFF</td>
<td>(ON)</td>
<td>Normal</td>
<td>SPST</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3-1</td>
<td></td>
</tr>
<tr>
<td>SP</td>
<td>AB15</td>
<td>ON</td>
<td>(ON)</td>
<td>Normal</td>
<td>SPDT</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2-3</td>
<td></td>
</tr>
<tr>
<td>DP</td>
<td>AB25</td>
<td>ON</td>
<td>(ON)</td>
<td>2-3 5-6</td>
<td>DPDT</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2-1 5-4</td>
<td></td>
</tr>
</tbody>
</table>

Note: Terminal numbers are not actually on the switch.

PLUNGERS

A .213” (5.4mm) Long

B .183” (4.6mm) Long (on SP only)

C .080” (2.03mm) Long (on SP only)

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.

PC TERMINALS

P Straight

B Straight with Bracket

H Right Angle with Bracket

V Vertical with Bracket

SLIP-ON CAPS

F AT475 .201” (5.1mm) Diameter Cap

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

**Single Pole (Double Throw)**

**Right Angle PC**

**Double Pole**

**Right Angle PC**

**Single Pole**

**Vertical PC • Inline Bracket**

**AB15AH-FA**

**AB25AV-FA**

**AB15AV-FA**

**AB11 model does not have terminal 2.**

**AB11AV1-FA**

**AB11 model does not have terminal 2.**

**AB25AV-FA**

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