Features/Benefits
- Sealed against solder & cleaning processes
- Thru-hole and surface mount models
- Snap-fitting actuator accepts standard caps
- Tape & reel packaging available
- RoHS compliant models available

Typical Applications
- Telecommunications and networking equipment
- Computers and peripherals
- Instrumentation and controls

Specifications
CONTACT RATING: B contact material: 0.4 VA max. @ 20 V AC or DC max. See page A-13 for additional ratings.
CONTACT RESISTANCE: Below 20 mΩ typ. @ 2-4 V DC, 100 mA, for both silver and gold plated contacts.
INSULATION RESISTANCE: 10^9 Ω min.
DIELECTRIC STRENGTH: 1000 Vrms min. @ sea level.
OPERATING TEMPERATURE: -30ºC to 85ºC.
SOLDERABILITY: Per MIL-STD-202F method 208D, or EIA RS-186E method 9 (1 hour steam aging).
DEGREE OF PROTECTION: IP57; Protection against harmful dust deposit, full-scale voltage protection, temporary immersion.
PACKAGING: Surface mount switches standard in anti-static tape and reel packaging per EIA 481-3, see page A-14 for drawings and reel information. Tape and cover strip are conductive for use near statically sensitive components, consult Customer Service Center.

Materials
PLUNGER: Thermoplastic polyester or glass filled nylon (UL 94V-0), with internal o-ring seal. SA surface mount: High temperature material, glass filled LCP (UL 94V-0).
SWITCH SUPPORT: Brass, matte-tin plated.
CONTACTS & TERMINALS: B contact material: Copper alloy, with gold plate over nickel plate. See page A-13 for additional contact materials.
TERMINAL SEAL: Epoxy.

Build-A-Switch
To order, simply select desired option from each category and place in the appropriate box. Available options are shown and described on pages A-10 thru A-14. For additional options not shown in catalog, consult Customer Service Center. All models are process sealed to withstand machine soldering temperatures and pressure wash cleaning methods.
### EP Series
Sealed Tiny Pushbutton Switches

#### SWITCH FUNCTION

<table>
<thead>
<tr>
<th>NO. POLES</th>
<th>MODEL NO.</th>
<th>SWITCH FUNCTION</th>
<th>CONNECTED TERMINALS</th>
<th>SCHEMATIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>SP</td>
<td>EP1</td>
<td>OFF</td>
<td>MOM.</td>
<td>SPST</td>
</tr>
<tr>
<td></td>
<td>EP12</td>
<td>ON</td>
<td>MOM.</td>
<td>SPDT</td>
</tr>
</tbody>
</table>

#### Third Angle Projection

- S: .215" HIGH
- S1: .110" HIGH
- S2: .465" HIGH
- FP: FLUSH PLUNGER
- R: SNAP-FITTING

S1 & S2 actuators are not available with EP12 & EP21 models.
FP & R actuators are not available with EP21 model.

**NOTE:** Caps available for plunger options, see page A-14.

#### Terminal Nos.

- For Reference Only
- Omit terminal 2 for EP11 models.

#### BUSHING

- D1: UNTHREADED

**NOTE:** Internal actuator o-ring standard.
EP Series
Sealed Tiny Pushbutton Switches

TERMINATIONS

C PC THRU-HOLE

SP

EPOXY SEAL

.030 (0.76)

.020 THK. (0.51)

1.30 (3.30)

.043 DIA. (1.098)

.260 (6.60)

DP

EPOXY SEAL

.030 (0.76)

.020 THK. (0.51)

1.30 (3.30)

.260 (6.60)

Third Angle Projection

Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change

www.ckswitches.com

A RIGHT ANGLE, PC THRU-HOLE

EP12SD1AVBE SPDT

AV VERTICAL RIGHT ANGLE, PC THRU-HOLE

NOTE: Terminal bend radii and lead-in manufacturing option.

BPC MOUNTING

EP11 - Omit center hole.


EP12SD1AVBE SPDT

EP21SD1ABE DPST

SP and DP

SP and DP

WIRE WRAP


EP Series
Sealed Tiny Pushbutton Switches

TERMINATIONS

AV  VERTICAL RIGHT ANGLE, THRU-HOLE

EP21SD1AVBE

DPST

EP12SD1AV3BE

SPST

NOTE: Terminal bend radii and lead-in manufacturing option.

AV3  VERTICAL RIGHT ANGLE, SNAP-IN, PC THRU-HOLE

EP11 Models:
omit hole 2.

EP21SD1AV3BE

SPST

EP12SD1AV3BE

SPST

SA  RIGHT ANGLE, SURFACE MOUNT

EP12SD1SAPE

SPDT

Available with P contact material only.
Not Available on DPST models.

SA1  RIGHT ANGLE, SURFACE MOUNT

EP12SD1SA1BE

SPDT

SA1 is only available with B and P contact materials.
Not Available on DPST models.

Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change

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Sealed Tiny Pushbutton Switches

EP Series

TERMINATIONS

V3 VERTICAL MOUNT, V-BRACKET
V31 VERTICAL MOUNT, V-BRACKET, SNAP-IN

CONTACT MATERIAL

<table>
<thead>
<tr>
<th>OPTION CODE</th>
<th>CONTACT MATERIAL</th>
<th>TERMINAL PLATING</th>
<th>RATINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>B</td>
<td>GOLD 1</td>
<td>GOLD 1</td>
<td>LOW LEVEL/DRY CIRCUIT 0.4 VA MAX @ 20 V AC OR DC MAX.</td>
</tr>
<tr>
<td>P</td>
<td></td>
<td>MATTE-TIN 6</td>
<td></td>
</tr>
<tr>
<td>Q</td>
<td>SILVER 4,5</td>
<td>SILVER 5</td>
<td>POWER 1 AMP @ 120 V AC OR 28 V DC.</td>
</tr>
<tr>
<td>S</td>
<td></td>
<td>MATTE-TIN 6</td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>GOLD OVER SILVER 2,3</td>
<td>GOLD 3</td>
<td>LOW LEVEL/DRY CIRCUIT OR POWER 0.4 VA MAX @ 20 V AC OR DC MAX. OR 1 AMP @ 120 V AC OR 28 V DC.</td>
</tr>
<tr>
<td>R</td>
<td></td>
<td>MATTE-TIN 6</td>
<td></td>
</tr>
</tbody>
</table>

* Note: See Technical Data section of this catalog for RoHS compliant and compatible definitions and specifications.

1 CONTACTS & TERMINALS: Copper alloy, with gold plate over nickel plate.
2 END CONTACTS: Coin silver, with gold plate over nickel plate.
3 CENTER CONTACTS & ALL TERMINALS: Copper alloy, with gold plate over nickel plate.
4 END CONTACTS: Coin silver, silver plated.
5 CENTER CONTACT & ALL TERMINALS: Copper alloy, silver plated.
6 TERMINALS: Copper alloy, with matte tin over nickel plate.

NOTE: Any models supplied with Q, B, P, S, R or G contact material are RoHS compliant.

All models with all options when ordered with G, S, R or Q contact material.

SEAL

E EPOXY SEAL

Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change

www.ckswitches.com
EP Series
Sealed Tiny Pushbutton Switches

AVAILABLE HARDWARE

<table>
<thead>
<tr>
<th>Cap</th>
<th>Cap</th>
<th>Cap</th>
<th>Cap</th>
</tr>
</thead>
</table>

NOTE: Other colors available, consult Customer Service Center.

TAPE & REEL

For part number EPXX-SA/SA1

FEED DIRECTION

REEL INFORMATION

| OUTSIDE DIAMETER | .13.00 (330.0) |
| PILOT HOLE | .0512 (13.0) |
| QUANTITY PER REEL | 600 |

Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change

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