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

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@ 2-4 V DC, 100 mA, for both silver and gold plated contacts.
INSULATION RESISTANCE: 109 Ωmin.
DIELECTRIC STRENGTH: 1000 Vrms min. @ sea level.
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.
Packing: 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.

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.

Typical Applications

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

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.

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

NOTE: Specifications and materials listed above are for switches with standard options. For information on specific and custom switches, consult Customer Service Center.

CAUTION: PC mounting layouts and pads as shown are designed to be compatible with the latest equipment and reflow techniques. Care should be taken in the design and location of PC lands to suit individual needs. Orientation relative to reflow direction may significantly impact solder joint integrity.
# EP Series
## Sealed Tiny Pushbutton Switches

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

## 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>1-3</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>EP12</td>
<td>ON</td>
<td>2-1</td>
<td>2</td>
</tr>
<tr>
<td>D1</td>
<td>EP12</td>
<td>OFF</td>
<td>2-3</td>
<td>3</td>
</tr>
</tbody>
</table>

### SPDT
- Part number shown: EP21SD1CBE
- Omit terminal 2 for EP11 models.

### DP
- EP21
- Terminal Nos. For Reference Only

### DPST
- Part number shown: EP21SD1CBE

- **Terminal Nos. For Reference Only**
- **C&K marking on opposite side**

## Plunger
- **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.

### D1
- **UNTHREADED**

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

## Bushing

**NOTE:** Internal actuator o-ring standard.

---

C&K marking on opposite side

Dimensions are shown: Inches (mm)

Specifications and dimensions subject to change

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26 Mar 19
Sealed Tiny Pushbutton Switches

EP Series

TERMINATIONS

C  PC THRU-HOLE

SP

DP

EP12SD1ABE

SPDT

W  WIRE WRAP

EP11 - Omit center hole.


EP21SD1ABE

DPST

EP12SD1AVBE

SPDT

AV  VERTICAL RIGHT ANGLE, PC THRU-HOLE


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

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

26 Mar 19

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EP Series
Sealed Tiny Pushbutton Switches

TERMINATIONS

AV VERTICAL RIGHT ANGLE, THRU-HOLE

EP21SD1AVBE DPST

PC MOUNTING


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.

EP12SD1AV3BE SPST

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


TERMINAL NOS. FOR REF. ONLY

2 (COMM)
3 NONC
1

Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change
EP Series
Sealed Tiny Pushbutton Switches

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>GOLD 1</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>SILVER 5</td>
<td>MATTE-TIN 6</td>
<td></td>
</tr>
<tr>
<td>G</td>
<td>GOLD OVER SILVER 2,3</td>
<td>GOLD 3 MATTE-TIN 5</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>
</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

Cap

PART NO.
508101000
508102000
508103000

Material: Nylon
Finish: Gloss
Not for use on S1 plunger

PART NO.
465801000
465802000
465803000

Material: Nylon
Finish: Gloss
Not for use on S1 plunger

PART NO.
585A01000
585A02000
585A03000

Material: Nylon
Finish: Gloss


PART NO.
785A01000
785A02000
785A03000

Material: Nylon
Finish: Gloss

NOTE: Other colors available, consult Customer Service Center.

TAPE & REEL

For part number EPXX-SA/SA1

FEED DIRECTION

Elongated sprocket holes

REEL INFORMATION

<table>
<thead>
<tr>
<th>OUTSIDE DIAMETER</th>
<th>PILOT HOLES</th>
<th>QUANTITY PER REEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>13.00 (330.0)</td>
<td>.512 (13.0)</td>
<td>600</td>
</tr>
</tbody>
</table>

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