### Features/Benefits
- Positive tactile feel
- Multi-positions available
- Wide variety of termination options
- Epoxy terminal seal compatible with bottom wash cleaning
- RoHS compliant models available

### Typical Applications
- Instrumentation
- Computer peripherals
- Telecommunications equipment

### Specifications
**CONTACT RATING:** B contact material (8X25 Models): 0.4 VA max. @ 20 V AC or DC maximum. G contact material (8X21, U8X1 Models): 1 AMP @ 120 V AC or 28 V DC or 0.4 VA max. @ 20 V AC or DC max. Note: Break-before-make contacts. Multi-pole contacts do not make and break simultaneously. See page A-43 for additional ratings.

**ELECTRICAL LIFE:** 60,000 make-and-break cycles at full load.

**CONTACT RESISTANCE:** Below 50 mΩ typ. initial @ 2-4 V DC, 100 mA, for both silver and gold plated contacts.

**CAP INSTALLATION FORCE:** 10 lbs. max. permissible.

**OPERATING TEMPERATURE:**
- 8X2X MODELS: –30ºC to 75ºC.
- U8X1 MODELS: –30ºC to 65ºC.

**DIELECTRIC STRENGTH:** 1,000 Vrms min. @ sea level.

**INSULATION RESISTANCE:** 10³ MΩ min. @ 20 V AC or DC maximum.

**CONTACT RATING:**
- B contact material (8X25 Models): 1 AMP @ 120 V AC or 28 V DC or 0.4 VA max. @ 20 V AC or DC maximum. G contact material (8X21, U8X1 Models): 1 AMP @ 120 V AC or 28 V DC or 0.4 VA max. @ 20 V AC or DC maximum.

**SOLDERABILITY:** Per MIL-STD-202F method 208D, or EIA RS-186E method 9 (1 hour steam aging).

**CAP & FRAME:** Nylon, black, standard.

**HARDWARE:** Nut & Locking Ring: Brass, nickel plated; Lockwasher: Steel, nickel plated.

**TERMINAL SEAL:** Epoxy. Refer to soldering and cleaning Technical Data Chapter.

**Hardware:**
- Nut & Locking Ring: Brass, nickel plated; Lockwasher: Steel, nickel plated.

**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-30 thru A-45. For additional options not shown in catalog, consult Customer Service Center. All models have epoxy terminal seal and are compatible with all “bottom-wash” PCB cleaning methods.

### Materials
**CASE:** Glass filled nylon 6/6 or dialyl phthalate (DAP), flame retardant (UL 94V-0).

**PLUNGER:** Glass filled nylon or glass filled polyester (PBT) (UL 94V-0).

**CONTACT RATING:** B contact material: Copper alloy, with gold plate over nickel plate.

**CAP & FRAME:** Nylon, black, standard.

**HOUSING:** Stainless steel.

**SWITCH SUPPORT:** Brass or steel, matte-tin plated.

**N.O. & N.C. CONTACTS:** 8X21, U8X1 MODELS: G contact material: Coin silver, with gold plate over nickel plate. See page A-43 for additional contact materials.

**COMMON CONTACT & ALL TERMINALS:** Copper alloy, with gold plate over nickel plate. See page A-43 for additional contact materials.

### Build-A-Switch

<table>
<thead>
<tr>
<th>Actuator or Plunger</th>
<th>Bushing</th>
<th>Contact Material</th>
<th>Cap Color</th>
<th>Frame Color</th>
<th>LED Color</th>
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</thead>
<tbody>
<tr>
<td>S Plunger</td>
<td>D9</td>
<td>B Gold</td>
<td>2 Black</td>
<td>2 Black</td>
<td>3 Red</td>
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<tr>
<td>NONE Snap-in</td>
<td>H</td>
<td>P Gold, matte-tin</td>
<td>5 Orange</td>
<td>5 Orange</td>
<td>6 Yellow</td>
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<tr>
<td>J80 Snap-in</td>
<td>NONE</td>
<td>G Gold over silver</td>
<td>5 Blue</td>
<td>5 Yellow</td>
<td>6 Green</td>
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<tr>
<td>J81 Snap-in w/frame</td>
<td>D</td>
<td>R Gold over silver</td>
<td>5 Blue</td>
<td>5 Yellow</td>
<td>6 Green</td>
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<tr>
<td>J82 Snap-in w/frame for LED</td>
<td>D2</td>
<td>L Plunger</td>
<td>6 Orange</td>
<td>6 Yellow</td>
<td>6 Green</td>
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<tr>
<td>J83 Snap-in w/frame &amp; flush cap</td>
<td>D3</td>
<td>M Snap-fitting plunger</td>
<td>6 Orange</td>
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<td>6 Green</td>
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<tr>
<td>J84 Snap-in w/frame for LED, flush cap</td>
<td>D6</td>
<td>N Snap-fitting plunger</td>
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<td>2 Black</td>
<td>3 Red</td>
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<tr>
<td>J85 Snap-in w/frame &amp; LED PC w/V-bracket &amp; LED</td>
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<td>4 Orange</td>
<td>5 Orange</td>
<td>5 Orange</td>
<td>6 Yellow</td>
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<tr>
<td>J95 Snap-in w/frame &amp; LED PC w/V-bracket &amp; LED</td>
<td>Y</td>
<td>4 Orange</td>
<td>5 Orange</td>
<td>5 Orange</td>
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<tr>
<td>L Plunger</td>
<td>Y3</td>
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<td>6 Yellow</td>
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<tr>
<td>M Snap-fitting plunger</td>
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<td>V2 .555” high, V-bracket</td>
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<td>5 Orange</td>
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<tr>
<td>V3 .460” high, V-bracket</td>
<td>Y6</td>
<td>4 Orange</td>
<td>5 Orange</td>
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<td>6 Yellow</td>
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<tr>
<td>V4 .630” high, V-bracket</td>
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<td>5 Orange</td>
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<tr>
<td>V6 .630” high, V-bracket</td>
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<td>4 Orange</td>
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<tr>
<td>V7 .953” high, V-bracket</td>
<td>V3</td>
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<td>V8 1.150” high, V-bracket</td>
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<tr>
<td>V9 .460” high, snap-in V-bracket</td>
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<td>4 Orange</td>
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<tr>
<td>W .750” long, wire wrap</td>
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<td>V1 .964” long, wire wrap</td>
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<td>W3 .425” long, wire wrap</td>
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<tr>
<td>W4 1.062” long, wire wrap</td>
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<td>Z3 Quick connect</td>
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</tbody>
</table>

**Specifications and materials listed above are for switches with standard options.**

**Any models supplied with B, P, 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.
# 8020 Series
Snap-acting Momentary Pushbutton Switches

## SWITCH FUNCTION

<table>
<thead>
<tr>
<th>POLES</th>
<th>MODEL NO.</th>
<th>UL/CSA MODEL NO.</th>
<th>SWATCH FUNCTION</th>
<th>CONNECTED TERMINALS</th>
<th>TERMINALS</th>
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<tbody>
<tr>
<td>SP</td>
<td>8121</td>
<td>U811</td>
<td>ON MOM.</td>
<td>1-3</td>
<td>1-2</td>
</tr>
<tr>
<td></td>
<td>8125</td>
<td></td>
<td>ON MOM.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### SPDT

- **Part number shown:** 8121SHZGE

### DPDT

- **Part number shown:** 8221SHZGE

### 3P

- **Part number shown:** 8321SHZGE

### 3PDT

- **Part number shown:** 8325SHZGE

---

MOM. = Momentary

*U811 thru U841 model numbers with all options (except R, R2 terminations) when ordered with G or R contact material.

8X25 models must be ordered with B or P contact material.

8X21 and U8X1 models must be ordered with G or R contact material.
### 8020 Series

Snap-acting Momentary Pushbutton Switches

#### SWITCH FUNCTION

<table>
<thead>
<tr>
<th>NO. POLES</th>
<th>MODEL NO.</th>
<th>UL/CSA* MODEL NO.</th>
<th>SWITCH FUNCTION</th>
<th>CONNECTED TERMINALS</th>
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<td>4P</td>
<td>8421</td>
<td>U841</td>
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<tr>
<td></td>
<td>8425</td>
<td></td>
<td>ON MOM.</td>
<td>1-2,4,5,7,8,10,11</td>
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</table>

* U811 thru U841 model numbers with all options (except R, R2 terminations) when ordered with G or R contact material.

** Increase this dim. to .620/.625 (15.75/15.88) for .091/.125 (2.31/3.18) thk. panels.

### ACTUATOR—SNAP-IN FRONT MOUNT

#### CAP COLOR

<table>
<thead>
<tr>
<th>OPTION CODE</th>
<th>CAP AND FRAME COLOR</th>
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<tbody>
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<td>7</td>
<td>BLUE</td>
</tr>
<tr>
<td>9</td>
<td>GRAY</td>
</tr>
</tbody>
</table>


NOTE: Caps and frames available separately, see pages A-44 and A-45.

#### PANEL MOUNTING

- ** .005 R. MAX. (1,13) TYP.  
- ** .650 (16.5)

** Increase this dim. to .620/.625 (15.75/15.88) for .091/.125 (2.31/3.18) thk. panels.

#### J80 SNAP-IN

- ** .475 (12.07)  
- ** .060 (1,52)  

NOTE: No frame color choice required.

### J81 SNAP-IN WITH FRAME

- ** .450 (11.43)  
- ** .615 (15.62)

NOTE: Available with C, W-W4, Z or Z3 terminations and SPDT and DPDT models only.

** Increase this dim. to .620/.625 (15.75/15.88) for .091/.125 (2.31/3.18) thk. panels.
8020 Series
Snap-acting Momentary Pushbutton Switches

### ACTUATOR—SNAP-IN FRONT MOUNT

<table>
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<tr>
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<tbody>
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</table>

**CAP AND FRAME COLOR**

- **CAP COLOR**
- **FRAME COLOR**

**ACTUATOR OR PLUNGER**

**NOTE:** Caps and frames available separately, see pages A-44 and A-45.

**LED not included.**
For LED information, see page A-45.
8020 Series
Snap-acting Momentary Pushbutton Switches

ACTUATOR—SNAP-IN FRONT MOUNT

J85 SNAPP IN WITH FRAME AND LED

Available with C, W-W4, Z or Z3 terminations and SPDT models only. For LED information see page A-45.

NOTE: Caps & frames available separately, see pages A-44 and A-45.

<table>
<thead>
<tr>
<th>OPTION CODE</th>
<th>CAP AND FRAME COLOR</th>
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<tr>
<td>7</td>
<td>BLUE</td>
</tr>
<tr>
<td>9</td>
<td>GRAY</td>
</tr>
</tbody>
</table>

PANEL MOUNTING

* Increase this dim. to .620/.625 (15,75/15,88) for .091/.125 (2,31/3,18) tk. panels.

J95 PC WITH V-BRACKET AND LED

Available with V3 terminations and SPDT models only.

NOTE: Caps available separately, see page A-44.

<table>
<thead>
<tr>
<th>OPTION CODE</th>
<th>CAP AND FRAME COLOR</th>
</tr>
</thead>
<tbody>
<tr>
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</table>

8121J85ZGE223
SPST

ACTUATOR—PC MOUNT

J95 PC WITH V-BRACKET AND LED

For LED information see page A-45.
8020 Series
Snap-acting Momentary Pushbutton Switches

PLUNGER

S PLUNGER

NONE

NO PLUGER CHOICE REQUIRED
(JXX ACTUATORS)

L PLUNGER

M SNAP-FITTING PLUNGER

BUSHING

NOTE: When selecting plunger option, bushing selection must also be made, see next page. No plunger option is required when any JXX actuator option is selected. Additional plunger lengths are available on SPDT and DPDT models, consult Customer Service Center.
Not all plunger lengths sufficient for use with caps, see page A-44.

D 2.80" HIGH THREADED, KEYWAY

D9 .2034" HIGH UNTHREADED, KEYWAY

H .250" HIGH THREADED, FLAT

H9 .250" HIGH UNTHREADED, KEYWAY

Y .350" HIGH THREADED, KEYWAY

Y9 .350" HIGH UNTHREADED, KEYWAY

D9 bushing standard with A-A6, R, R2 AV-A3 terminations.
H bushing standard with C, W-W4, Z or Z3 terminations.
H, H9 bushings not available on single pole models with A3-A6, R, R2 terminations.
Will withstand 12 in./lbs. of torque with no distortion.

Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change
www.ckswitches.com
8020 Series
Snap-acting Momentary Pushbutton Switches

BUSHING

Y3 6.35mm THREADED, KEYWAY

Y4 .378" HIGH THREADED, FLAT

D2 .288" HIGH THREADED, FLAT

D8 .288" HIGH UNTREATED, FLAT

D3 .180" HIGH UNTREATED

Y3 & Y4 bushings not available on single pole models with A3-A6, R, R2 terminations. Will withstand 12 in./lbs. of torque with no distortion.

D2, D8 bushings not available with C, W-W4, Z, Z3 terminations.

D3 bushing available with A, A2, A3, AV, AV2, AV3 and V2-V61 terminations only.

NOTE: No bushing option choice required when JXX actuator option is selected. When selecting bushing option, plunger selection must also be made, see previous page. Plunger lengths vary with bushing and termination options selected.

TERMINATIONS

Z SOLDER LUG

SPDT thru 4PDT
Not available with J95 actuator, P or R contact material.

Z3 QUICK CONNECT

SPDT thru 4PDT
Not available with J95 actuator, P or R contact material. Mating quick connector available, order part number 530100000, page A-44.

C PC THRU-HOLE

SPDT thru 4PDT
Not available with J95 actuator option.

W W1, W3, W4 WIRE WRAP

SPDT thru 4PDT
Not available with J95 actuator option.

NOTE:
Two mounting nuts, locking ring and lockwasher supplied standard with threaded bushings.
Optional mounting nut and locking ring styles available, see section "Technical Data and Additional Hardware".

Dimensions are shown; Inches (mm)
Specifications and dimensions subject to change
8020 Series
Snap-acting Momentary Pushbutton Switches

TERMINATIONS

A  RIGHT ANGLE, PC THRU-HOLE

8121SD9AGE
SPDT

A3  RIGHT ANGLE, SNAP-IN, PC THRU-HOLE

8221SD9AGE
DPDT

A  RIGHT ANGLE, PC THRU-HOLE

PC MOUNTING

A3  RIGHT ANGLE, SNAP-IN, PC THRU-HOLE

PC MOUNTING

Not available with JXX actuators and I seal.
Terminal bend radii and lead-in manufacturing option.

Not available with JXX actuators and I seal.
Terminal bend radii and lead-in manufacturing option.

Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change
www.ckswitches.com
8020 Series
Snap-acting Momentary Pushbutton Switches

TERMINATIONS

A  RIGHT ANGLE, PC THRU-HOLE

Not available with JXX actuators and I seal option.
Terminal bend radii and lead-in manufacturing option.

A2  RIGHT ANGLE, PC THRU-HOLE

Not available with JXX actuators, I seal option.
Terminal bend radii and lead-in manufacturing option.

A4  RIGHT ANGLE, PC THRU-HOLE, REVERSED TERMINALS

Not available with JXX actuators, D3, H, H9, Y3, Y4 bushings and I seal.
Terminal bend radii and lead-in manufacturing option.

The A4 and R2 termination options are functionally identical and fit the same PC mounting pattern. The switches, however, are shifted relative to the mounting holes. The PC pattern must clear the switch support legs. Unlike the R2, the A4 option is available with UL/CSA.
8020 Series
Snap-acting Momentary Pushbutton Switches

TERMINATIONS

**A6**  RIGHT ANGLE, PC THRU-HOLE

8121SD9A6GE
SPDT

Not available with JXX actuators, D3, H9, Y3, Y4 bushings and I seal option. Terminal bend radii and lead-in manufacturing option.

**R**  RIGHT ANGLE WITH PCB

8121SD9RGE
SPDT

Not available with JXX actuators, D3, H9, Y3, Y4 bushings, I seal option. R termination not UL/CSA approved.

**R2**  RIGHT ANGLE WITH PCB, REVERSED TERMINALS

8121SD9R2GE
SPDT

Not available with JXX actuators, D3, H9, Y3, Y4 bushings, I seal option. R2 termination not UL/CSA approved.

The A6 and R termination options are functionally identical and fit the same PC mounting pattern. The switches, however, are shifted relative to the mounting holes. The PC pattern must clear the switch support legs. Unlike the R, the A6 option is available with UL/CSA.
8020 Series
Snap-acting Momentary Pushbutton Switches

TERMINATIONS

AV2  VERTICAL RIGHT ANGLE, PC THRU-HOLE, .150" PITCH

AV3  VERTICAL RIGHT ANGLE, SNAP-IN, PC THRU-HOLE, .150" PITCH

AV1  VERTICAL RIGHT ANGLE, EXTENDED, PC THRU-HOLE, .150" PITCH

Not available with JXX actuators and I seal.
Terminal bend radii and lead-in manufacturing option.

AV2  VERTICAL RIGHT ANGLE, PC THRU-HOLE, .150" PITCH

AV3  VERTICAL RIGHT ANGLE, SNAP-IN, PC THRU-HOLE, .150" PITCH

AV1  VERTICAL RIGHT ANGLE, EXTENDED, PC THRU-HOLE, .150" PITCH

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

29 Aug 18

A-39
## 8020 Series
Snap-acting Momentary Pushbutton Switches

### Specifications and dimensions subject to change

Dimensions are shown: Inches (mm)

Specifications and dimensions subject to change

www.ckswitches.com

<table>
<thead>
<tr>
<th>Option Code</th>
<th>Dim 'A'</th>
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<tbody>
<tr>
<td>V2</td>
<td>.555 (14.10)</td>
</tr>
<tr>
<td>V6, V61</td>
<td>.460 (11.68)</td>
</tr>
<tr>
<td>V7</td>
<td>.630 (16.00)</td>
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<tr>
<td>V8</td>
<td>.853 (21.67)</td>
</tr>
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</table>

Dimensions are shown: Inches (mm)

Specifications and dimensions subject to change

---

### Terminations

**AV2**

**VERTICAL RIGHT ANGLE, PC THRU-HOLE, 150° PITCH**

- **Dimensions:**
  - .050 TYP. (1.27)
  - .180 TYP. (4.57)
  - .250 (6.35)
  - .298 (7.55)
  - .565 (14.35)
  - .650 (16.51)

**AV3**

**VERTICAL RIGHT ANGLE, SNAP-IN, PC THRU-HOLE, 150° PITCH**

- **Dimensions:**
  - .048 TYP. (1.22)
  - .070 TYP. (1.78)

**AV1**

**VERTICAL RIGHT ANGLE, EXTENDED, PC THRU-HOLE, 150° PITCH**

- **Dimensions:**
  - .122 (3.10)
  - .250 (6.35)
  - .298 (7.55)
  - .565 (14.35)
  - .650 (16.51)

**V2, V6, V7, V8**

**VERTICAL MOUNT, V-BRACKET**

- **Dimensions:**
  - .122 (3.10)

**V61**

**VERTICAL MOUNT, V-BRACKET, SNAP-IN**

- **Dimensions:**
  - .050 TYP. (1.27)

---

**8321SD9AV2GE 3PDT**

**8421SD9AV2GE 4PDT**

**8121SD3__GE SPDT**

---

Not available with JXX actuators and I seal.
Terminal bend radii and lead-in manufacturing option.
### 8020 Series

#### Snap-acting Momentary Pushbutton Switches

**TERMINATIONS**

<table>
<thead>
<tr>
<th>TERMINATIONS</th>
<th>DIMENSION</th>
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<tbody>
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<td>VERTICAL MOUNT, V-BRACKET, SNAP-IN</td>
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**PC MOUNTING**

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<tr>
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<th>DIM ‘A’</th>
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<tbody>
<tr>
<td>V2</td>
<td>.555 (14,10)</td>
</tr>
<tr>
<td>V6, V61</td>
<td>.460 (11,68)</td>
</tr>
<tr>
<td>V7</td>
<td>.630 (16,00)</td>
</tr>
<tr>
<td>V8</td>
<td>.953 (24,21)</td>
</tr>
</tbody>
</table>

**8221SD3__GE**

**DPDT**

Not available with JXX actuators and 1 seal.

**8321SD3__GE**

**3PDT**

Not available with JXX actuators and 1 seal.

**8421SD3__GE**

**4PDT**

Not available with JXX actuators and 1 seal.

---

29 Aug 18
### 8020 Series
Snap-acting Momentary Pushbutton Switches

#### TERMINATIONS

<table>
<thead>
<tr>
<th>OPTIONS</th>
<th>DIM 'A'</th>
</tr>
</thead>
<tbody>
<tr>
<td>V3, V31</td>
<td>0.460 (11.68)</td>
</tr>
<tr>
<td>V4</td>
<td>0.630 (16.00)</td>
</tr>
<tr>
<td>V9</td>
<td>1.150 (29.21)</td>
</tr>
</tbody>
</table>

---

#### V3, V4, V9
**VERTICAL MOUNT, V-BRACKET**

8121SD3__GE

- SPDT

V31

- VERTICAL MOUNT, V-BRACKET, SNAP-IN

Dimensions: Inches (mm)

- .190 (4.81)
- .185 (4.70)
- .150 (3.81)
- .050 (1.27)
- .048 TYP. (1.22)
- .040 TYP. (1.02)

PC MOUNTING

Dimensions: Inches (mm)

- 0.125 TYP. (3.18)
- 0.073 O/A (1.88)

---

#### V3, V4, V9
**VERTICAL MOUNT, V-BRACKET**

8221SD3__GE

- DPDT

V31

- VERTICAL MOUNT, V-BRACKET, SNAP-IN

Dimensions: Inches (mm)

- .190 (4.81)
- .185 (4.70)
- .150 (3.81)
- .050 (1.27)
- .048 TYP. (1.22)
- .040 TYP. (1.02)

PC MOUNTING

Dimensions: Inches (mm)

- 0.125 TYP. (3.18)
- 0.073 O/A (1.88)

---

#### V4, V9
**VERTICAL MOUNT, V-BRACKET**

8321SD3V4GE

- 3PDT

Not available with JXX actuators and I seal.

---

Not available with JXX actuators and I seal.

---

Dimensions are shown: Inches (mm)

Specifications and dimensions subject to change

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C&K 29 Aug 18
**TERMINATIONS**

**V4, V9**  
VERTICAL MOUNT, V-BRACKET

**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</td>
</tr>
<tr>
<td>P</td>
<td></td>
<td>MATTE-TIN(^4)</td>
<td>8x25 MODELS ONLY: 0.4 MAX. @ 20 V AC OR DC MAX.</td>
</tr>
<tr>
<td>G</td>
<td>GOLD OVER SILVER(^2,3)</td>
<td>GOLD^3</td>
<td>8X21, UBX1 MODELS ONLY: 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^4</td>
<td></td>
</tr>
</tbody>
</table>

\(^1\) ALL CONTACTS & TERMINALS: Copper alloy, with gold plate over nickel plate.  
\(^2\) N.O. AND N.C. CONTACTS: Coin silver, with gold plate over nickel plate.  
\(^3\) COMMON CONTACTS & ALL TERMINALS: Copper alloy, with gold plate over nickel plate.  
\(^4\) TERMINALS: Copper alloy, with matte-tin over nickel plate.  

**SEAL**

**E**  
EPOXY SEAL

**I**  
EPOXY POTTED BASE

**NOTES:**
- Any models supplied with B, P, R or G contact material are RoHS compliant.  
- U811-U841 models **UL** with all options (except R, R2 terminations) when ordered with mandatory G or R contact material.  
- B or P contact material must be ordered with 8X25 models.  
- G or R contact material must be ordered with 8X21, U8X1 models.  
- P or R contact material not available with Z, Z3 terminations.  
- AVAILABLE with C, W-W4, Z, Z3 terminations only.  

Dimensions are shown: Inches (mm)  
Specifications and dimensions subject to change  
www.ckswitches.com
# 8020 Series
Snap-acting Momentary Pushbutton Switches

## AVAILABLE HARDWARE

### Cap
- **PART NO.**
  - 708901000 WHITE
  - 708902000 BLACK
  - 708903000 RED
  - 708904000 ORANGE
  - 708905000 YELLOW
  - 708906000 GREEN
  - 708907000 BLUE
  - 708909000 GRAY
- **Material:** Nylon
- **Finish:** Gloss

- **PART NO.**
  - 752701000 WHITE
  - 752702000 BLACK
  - 752703000 RED
  - 752704000 ORANGE
  - 752705000 YELLOW
  - 752706000 GREEN
  - 752707000 BLUE
  - 752709000 GRAY
- **Material:** Nylon
- **Finish:** Gloss

- **PART NO.**
  - 452D01000 WHITE
  - 452D02000 BLACK
  - 452D03000 RED
  - 452D04000 ORANGE
  - 452D05000 YELLOW
  - 452D06000 GREEN
  - 452D07000 BLUE
  - 452D09000 GRAY
- **Material:** Nylon
- **Finish:** Gloss

### Cap, Snap-fitting plunger
- **PART NO.**
  - 801801000 WHITE
  - 801802000 BLACK
  - 801803000 RED
  - 801804000 ORANGE
  - 801805000 YELLOW
  - 801806000 GREEN
  - 801807000 BLUE
  - 801809000 GRAY
- **Material:** Nylon
- **Finish:** Gloss

- **PART NO.**
  - 894101000 WHITE
  - 894102000 BLACK
  - 894103000 RED
  - 894104000 ORANGE
  - 894105000 YELLOW
  - 894106000 GREEN
  - 894107000 BLUE
  - 894109000 GRAY
- **Material:** Nylon
- **Finish:** Gloss

### Frame
- **PART NO.**
  - 615602263 BLACK
- **Material:** Nylon
- **Finish:** Matte

- **PART NO.**
  - 613302263 BLACK
- **Material:** Nylon
- **Finish:** Matte

### Cap, J80, J81, J82, J83 & J84 options only
- **PART NO.**
  - 484601000 WHITE
  - 484602000 BLACK
  - 484603000 RED
  - 484604000 ORANGE
  - 484605000 YELLOW
  - 484606000 GREEN
  - 484607000 BLUE
  - 484609000 GRAY
- **Material:** Nylon
- **Finish:** Matte

### Cap, J85 & J95 options only
- **PART NO.**
  - 459701000 WHITE
  - 459702000 BLACK
  - 459703000 RED
  - 459704000 ORANGE
  - 459705000 YELLOW
  - 459706000 GREEN
  - 459707000 BLUE
  - 459709000 GRAY
- **Material:** Nylon
- **Finish:** Matte

### Fits Z3 Termination female connector
- **PART NO.**
  - 530100000
- **Available in loose pieces.**

---

NOTE: Additional nuts, locking rings and lockwashers available separately, see section “Technical Data and Additional Hardware”. Other cap & frame colors available, consult Customer Service Center.

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

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A-44
8020 Series
Snap-acting Momentary Pushbutton Switches

AVAILABLE HARDWARE

Frames snap into panel opening and are independent from switch mounting. Accurate positioning of the PC mounted switch relative to the panel opening is necessary to provide proper clearance between actuator and frame. Available in two basic styles and four panel thicknesses .047-.125 in. Material: Nylon. Finish: Matte.

<table>
<thead>
<tr>
<th>.090” (2.29) PANEL THK.</th>
<th>.125” (3.18) PANEL THK.</th>
</tr>
</thead>
<tbody>
<tr>
<td>PART NO.</td>
<td>PART NO.</td>
</tr>
<tr>
<td>432702263</td>
<td>432802263 BLACK</td>
</tr>
</tbody>
</table>

Panel Inserts

Above frames (part nos. 432XXXXXX) are also available with insert which accepts LED for indicator light assembly. Order insert separately from frame. Blank insert panel (without hole for LED) also available. LED not included.

PANEL INSERT
PART NO. 894902000
BLANK PANEL INSERT
PART NO. 476602000

Special colors, custom markings available, consult Customer Service Center.

LED INFORMATION

SWITCHES WITH LED SUPPLIED: J85, J95 OPTIONS:

Rectangular LEDs are supplied on 8020 Series pushbutton switches with J85 and J95 options. These LEDs are factory installed and are not replaceable. The following specifications apply:

<table>
<thead>
<tr>
<th>OPTION CODE</th>
<th>COLOR</th>
<th>TYP. INTENSITY</th>
<th>TYP. FORWARD VOLTAGE</th>
<th>TYP. FORWARD CURRENT</th>
<th>CONTINUOUS FORWARD CURRENT</th>
<th>CONTINUOUS POWER</th>
<th>CONTINUOUS DISSIPATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Green</td>
<td>1.0 mcd</td>
<td>2.1 V</td>
<td>20 mA</td>
<td>50 mA</td>
<td>125 mW</td>
<td>75 mW</td>
</tr>
<tr>
<td>3</td>
<td>Red*</td>
<td>0.5 mcd</td>
<td></td>
<td>10 mA</td>
<td>30 mA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Yellow</td>
<td>4.0 mcd</td>
<td></td>
<td>20 mA</td>
<td>50 mA</td>
<td>125 mW</td>
<td></td>
</tr>
</tbody>
</table>

| PROCESS INFORMATION: Soldering to LED leads must be completed within 5 seconds at 500°F (260°C) maximum. |

<table>
<thead>
<tr>
<th>MAX RATINGS AT 25°C AMBIENT TEMPERATURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>POWER DISSIPATION</td>
</tr>
<tr>
<td>-------------------</td>
</tr>
<tr>
<td>20 mA</td>
</tr>
<tr>
<td>30 mA</td>
</tr>
<tr>
<td>50 mA</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LED INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flat denotes cathode.</td>
</tr>
</tbody>
</table>

Dimensions are shown: Inches (mm)
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29 Aug 18

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