





# **Rockers Product Selection Guide**

| Rocker              |                           |                     |                     |                     |                                |                    |                          |
|---------------------|---------------------------|---------------------|---------------------|---------------------|--------------------------------|--------------------|--------------------------|
| Series              | 7000                      | E                   | ET                  | т                   | 9000                           | DA                 | D                        |
| Switch Type         | Miniature                 | Miniature           | Subminiature        | Subminiature        | Power Rocker<br>& Lever Handle | Miniature<br>Power | Miniature<br>Power       |
| Poles/Throws        | SPDT, DPDT,<br>3PDT, 4PDT | SPDT, DPDT,<br>3PDT | SPST, SPDT,<br>DPDT | SPST, SPDT,<br>DPDT | DPDT                           | SPST, SPDT         | SPST, SPDT<br>DPST, DPDT |
| Max. Current        | 5 Amps                    | 7.5 Amps            | 3 Amps              | 3 Amps              | 10 Amps                        | 16 Amps<br>10 Amps | 4 Amps<br>10 Amps        |
| Washable            |                           | •                   | •                   |                     |                                |                    |                          |
| Illuminated         |                           |                     |                     |                     |                                | ٠                  |                          |
| Panel Mount Options |                           |                     |                     |                     |                                |                    |                          |
| Front Mount         | •                         | •                   |                     | •                   | •                              | Snap-in            | Snap-in                  |
| Rear Mount          | •                         | ٠                   |                     | ٠                   | ٠                              |                    |                          |
| PCB Mount Options   |                           |                     |                     |                     |                                |                    |                          |
| Vertical            | •                         | •                   | •                   | •                   | •                              | •                  | •                        |
| Right Angle         | •                         | •                   | •                   | •                   | •                              | •                  | •                        |
| Surface Mount       |                           |                     | •                   |                     |                                |                    |                          |
| Page No.            | G–4                       | G–26                | G–40                | G–46                | G–52                           | G–57               | G–61                     |

| Rocker              |                           |                                   |                     |                    |                    |                    |
|---------------------|---------------------------|-----------------------------------|---------------------|--------------------|--------------------|--------------------|
| Series              | DM                        | DM                                | DF                  | CR                 | CG                 | CL                 |
| Switch Type         | Miniature<br>2 Pole Power | Miniature<br>Illuminated<br>Power | Power               | Round              | Power              | Power              |
| Poles/Throws        | DPST,<br>DPDT             | SPST,<br>DPST                     | SPST, SPDT,<br>DPST | SPST,<br>SPDT      | SPST, SPDT         | SPST, SPDT         |
| Max. Current        | 3 Amps,<br>10 Amps        | 3 Amps,<br>10 Amps                | 16 Amps             | 10 Amps,<br>6 Amps | 10 Amps<br>16 Amps | 10 Amps<br>16 Amps |
| Washable            |                           |                                   |                     |                    |                    |                    |
| Illuminated         |                           | ٠                                 |                     | ٠                  | •                  | •                  |
| Panel Mount Options |                           |                                   |                     |                    |                    |                    |
| Front Mount         | Snap-in                   | Snap-in                           | Snap-in             | Snap-in            | Snap-in            | Snap-in            |
| Rear Mount          |                           |                                   | •                   |                    |                    |                    |
| PCB Mount Options   |                           |                                   |                     |                    |                    |                    |
| Vertical            |                           |                                   |                     |                    |                    |                    |
| Right Angle         |                           |                                   | •                   |                    |                    |                    |
| Surface Mount       |                           |                                   |                     |                    |                    |                    |
| Page No.            | G–66                      | G–70                              | G–74                | G–78               | G-83               | G-87               |

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## **Rockers Product Selection Guide**

| Rocker              |                    |                    |
|---------------------|--------------------|--------------------|
| Series              | СМ                 | CN                 |
| Switch Type         | Power              | Power              |
| Poles/Throws        | SPDT, DPDT         | DPST, DPDT         |
| Max. Current        | 10 Amps<br>16 Amps | 10 Amps<br>16 Amps |
| Washable            |                    |                    |
| Illuminated         | •                  | •                  |
| Panel Mount Options |                    |                    |
| Front Mount         | Snap-in            | Snap-in            |
| Rear Mount          |                    |                    |
| PCB Mount Options   |                    |                    |
| Vertical            |                    |                    |
| Right Angle         |                    |                    |
| Surface Mount       |                    |                    |
| Page No.            | G–91               | G–95               |

Rocker

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

### Features/Benefits

- Multi-pole and multi-position
- Wide variety of actuator and termination options
- Epoxy terminal-seal compatible with bottom wash cleaning
- RoHS compliant



### Specifications

CONTACT RATING: B contact material: 0.4 VA max. @ 20 V AC or DC max. Q contact material: 5 AMPS @ 120 V AC or 28 V DC; 2 AMPS @ 250 V AC. See page G-20 for additional ratings.

ELECTRICAL LIFE: 7X01 and UX1 models: 100,000 make-and-break cycles at full load. All other models: 40,000 cycles.

CONTACT RESISTANCE: Below 10 m  $\Omega$  typ. initial @ 2-4 V DC, 100 mA, for both silver and gold plated contacts.

INSULATION RESISTANCE:  $10^9 \Omega$  min.

DIELECTRIC STRENGTH: 1000 Vrms min. @ sea level.

OPERATING TEMPERATURE: -30°C to 85°C.

SOLDERABILITY: Per MIL-STD-202F method 208D, or

EIA RS-186E method 9 (1 hour steam aging).

NOTE: Any models supplied with S, P, R, Q, B 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.

Typical Applications

- Telecommunications
- Instrumentation
- Medical equipment



### Materials

CASE: Glass filled nylon 6/6, flame retardant, heat stabilized, or diallyl phthalate (DAP) (UL 94V-0).

ACTUATOR: Nylon, black.

FRAME (FRONT MOUNT): Nylon, black.

FRAME (REAR MOUNT): Spring steel, black.

BUSHING: Brass or zinc, nickel plated.

HOUSING: Stainless steel.

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

- END CONTACTS: B contact material: Copper alloy, with gold plate over nickel plate. Q contact material: Coin silver, silver plated. See page G-20 for additional contact materials.
- CENTER CONTACTS & ALL TERMINALS: B contact material: Copper alloy, with gold plate over nickel plate. Q contact material: Copper alloy, silver plated. See page G-20 for additional contact materials.
- TERMINAL SEAL: Epoxy. Refer to Soldering and Cleaning in Technical Data Section
- HARDWARE: Mounting nuts & screws: Brass. Lockwasher: Stainless steel. Standoff: Nylon standard.

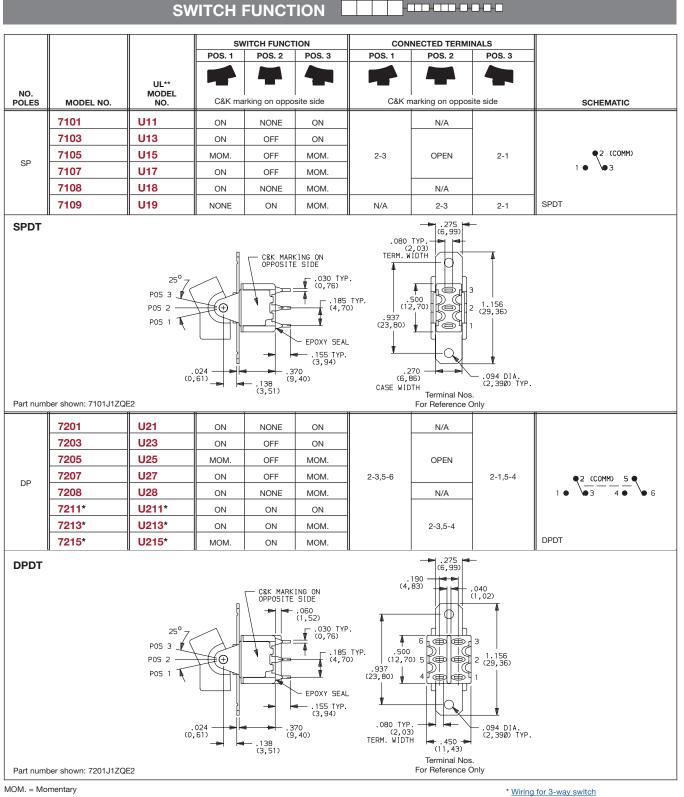
### **Build-A-Switch**

To order, simply select desired option from each category and place in the appropriate box. Available options are shown and described on pages G-4 through G-24. 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.

| 7107 SP 0n-Off-Mom.       J2 Lever         7107 SP 0n-Off-Mom.       J3 .906"         7108 SP 0n-None-Mom.       J10 1.318         7201 DP 0n-None-On       J11 Rocke         7203 DP 0n-Off-On       J15 Rocke         7205 DP MomOff-Mom.       J25 Lever,         7206 DP 0n-Off-Mom.       J16 Rocke         7207 DP 0n-Off-Mom.       J18 Rocke         7208 DP 0n-None-Mom.       J26 Lever,         7211 DP 0n-On-On       J26 Lever,         7213 DP 0n-On-Mom.       J37 Rocke         7303 3P 0n-Off-On       J50 Rocke         7401 4P 0n-None-On       J52 Rocke         7401 4P 0n-None-On       J60 Lever         7411 4P 0n-On-On       J60 Lever         Note: UL models       J60 Lever         available, see pages G-5       J90 Lever | with frame     Z     Solder lug       r, snap-in     X3     Right angle, snap-in, PC thru-hole       with frame     AV3     Vertical right angle,<br>snap-in, PC thru-hole       with frame     AV3     Right angle, extended, PC thru-hole       snap-in     V2     .555" high, V-bracket       with frame     .460" high, V-bracket       with frame     V4     .630" high, V-bracket | I<br>Contact Material<br>B Gold<br>P Gold, matte tin<br>Q Silver<br>S Silver, matte-tin<br>G Gold over silver, matte-tin<br>Seal<br>E Epoxy<br>I Epoxy potted base<br>Actuator Color<br>2 Black<br>T White<br>2 Black<br>3 Red<br>NONE No frame color required<br>1 White<br>Metal Frame Color<br>(J11, J19, J21 &<br>J37 Actuators)<br>2 Black<br>1 White<br>Metal Frame Color<br>(J11, J19, J21 &<br>J37 Actuators)<br>2 Black<br>1 White |
|---|---|---|
|---|---|---|

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





\*\* U11 through U413 model nos. CNUs with all options when ordered with G, Q, R or S contact material.

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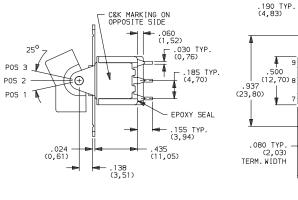
Dimensions are shown: Inches (mm)

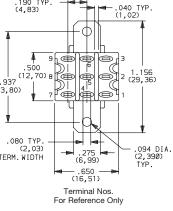


Specifications and dimensions subject to change

|              |           |                      | SWITCH FUNCTION |             | CONNECTED TERMINALS |             |                   |             |   |
|--------------|-----------|----------------------|-----------------|-------------|---------------------|-------------|-------------------|-------------|---|
|              |           |                      | POS. 1          | POS. 2      | POS. 3              | POS. 1      | POS. 2            | POS. 3      |   |
| NO.<br>POLES | MODEL NO. | UL**<br>MODEL<br>NO. | C&K mar         | king on opp | osite side          | C&K         | marking on opposi | te side     | SCHEMATIC                                   |
| 3P           | 7301      | U31                  | ON              | NONE        | ON                  | 2-3,5-6,8-9 | N/A               | 2-1,5-4,8-7 | 1 • 2 <u>5 • (COMM)</u> <u>8</u> • <u>9</u> |
|              | 7303      | U33                  | ON              | OFF         | ON                  | ,,          | OPEN              | 2 1,0 1,0 1 | 3PDT  |

**3PDT** 

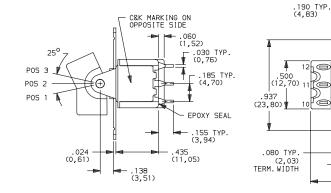




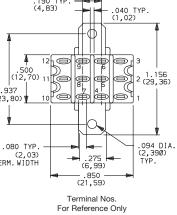
Part number shown: 7301J1ZQE2

|    | 7401  | U41   | ON   | NONE | ON   |                   | N/A               |                   |  |
|----|-------|-------|------|------|------|-------------------|-------------------|-------------------|--|
| 4P | 7405  | U45   | MOM. | OFF  | MOM. | 2-3,5-6,8-9,11-12 | OPEN              | 2-1,5-4,8-7,11-10 | $1 \xrightarrow{2}{6} 3 \xrightarrow{4}{6} \xrightarrow{6}{6} 7 \xrightarrow{6}{6} 9 \xrightarrow{11}{10} \xrightarrow{6}{12}$ |
|    | 7411* | U411* | ON   | ON   | ON   |                   | 2-3,5-4,8-9,11-10 |                   | 4PDT   |

4PDT



\*\* U11 through U411 model nos. with all options when ordered with G, Q, R or S contact material.



Part number shown: 7401J1ZQE2

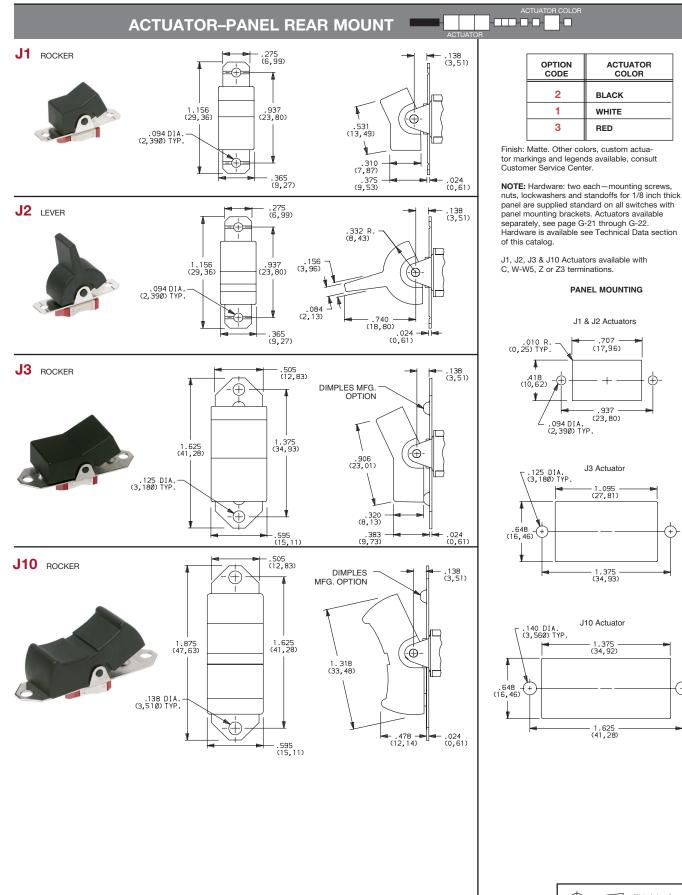
MOM. = Momentary



\* <u>Wiring for 3-way switch</u>: See Technical Data section of this catalog for RoHS compliant and compatible definitions and specifications.



Specifications and dimensions subject to change



CeK 15 Jan 21

Third Angle

Projection

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ACTUATOR COLOR

BLACK

WHITE

RED

- .707 -(17,96)

-.937 -(23,80)

J3 Actuator

1.095

1.375 (34,93)

J10 Actuator

- 1.375 (34,92)

1.625

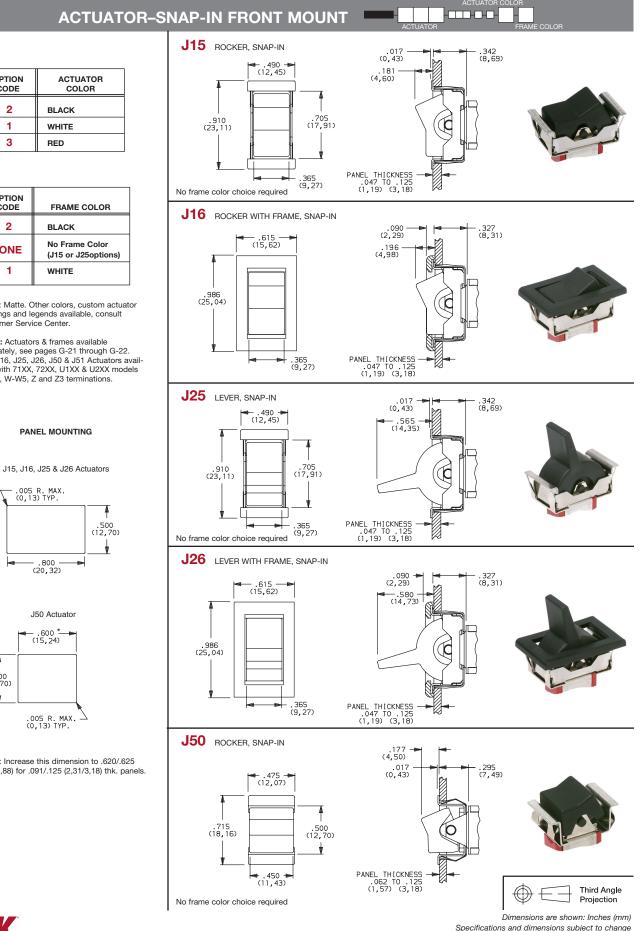
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G-7



OPTION CODE 2 1 3

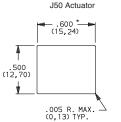
| OPTION<br>CODE | FRAME COLOR                           |
|----------------|---------------------------------------|
| 2              | BLACK                                 |
| NONE           | No Frame Color<br>(J15 or J25options) |
| 1              | WHITE                                 |

Finish: Matte. Other colors, custom actuator markings and legends available, consult Customer Service Center.

NOTE: Actuators & frames available separately, see pages G-21 through G-22. J15, J16, J25, J26, J50 & J51 Actuators avail-able with 71XX, 72XX, U1XX & U2XX models and C, W-W5, Z and Z3 terminations



.005 R. MAX. (0,13) TYP.

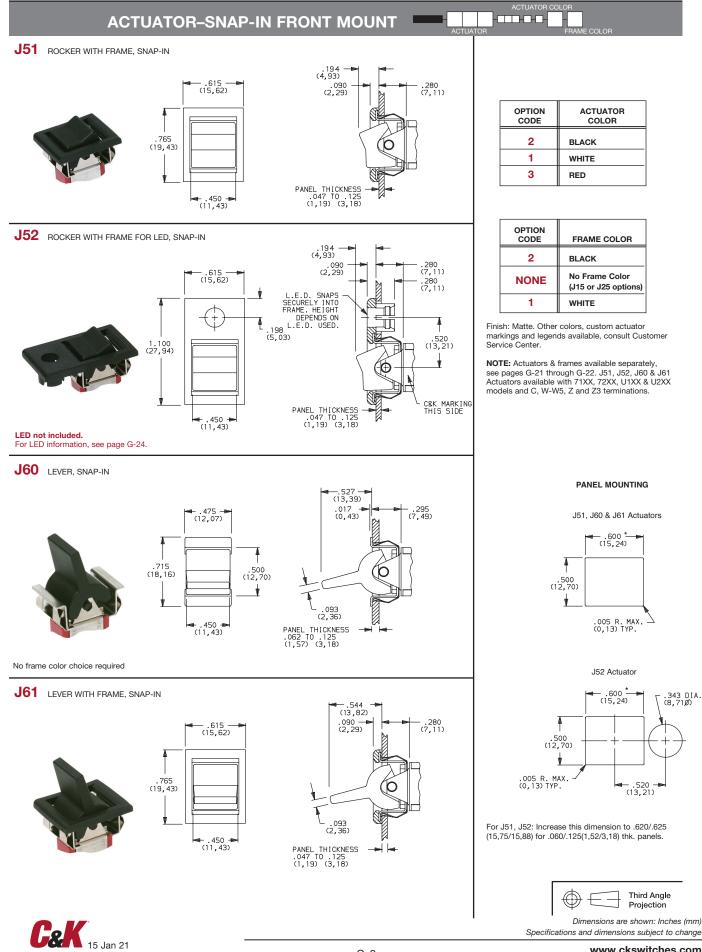


\* For J50: Increase this dimension to .620/.625 (15,75/15,88) for .091/.125 (2,31/3,18) thk. panels.

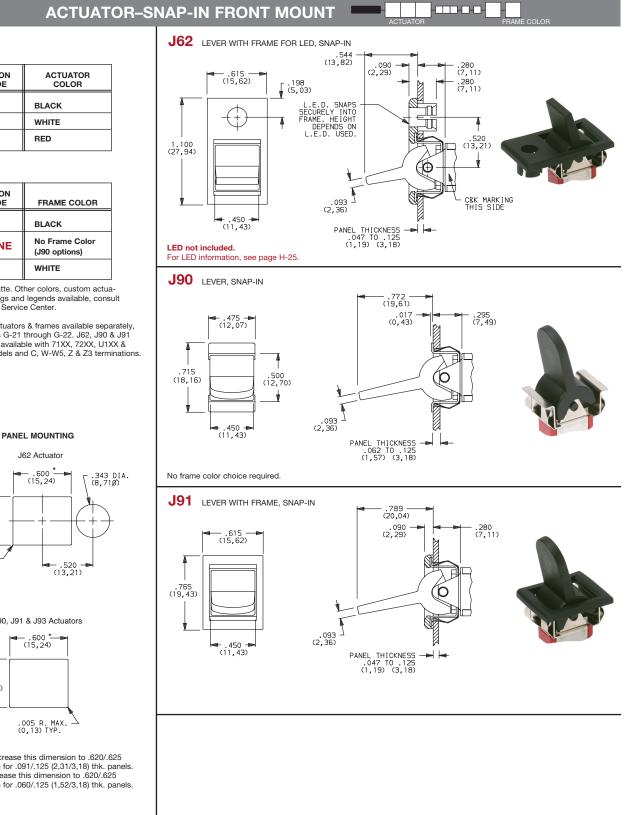
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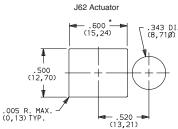
Specifications and dimensions subject to change

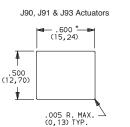


| OPTION<br>CODE | FRAME COLOR                     |  |
|----------------|---------------------------------|--|
| 2              | BLACK                           |  |
| NONE           | No Frame Color<br>(J90 options) |  |
| 1              | WHITE                           |  |

Finish: Matte. Other colors, custom actuator markings and legends available, consult Customer Service Center.

NOTE: Actuators & frames available separately, see pages G-21 through G-22. J62, J90 & J91 Actuators available with 71XX, 72XX, U1XX & U2XX models and C, W-W5, Z & Z3 terminations.



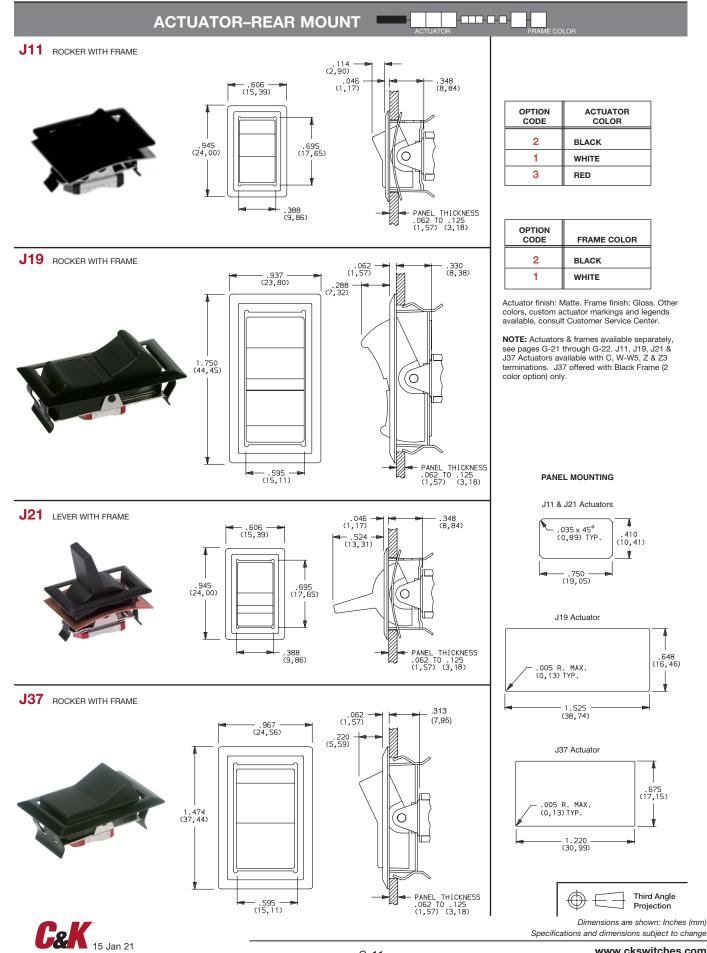


For J90: Increase this dimension to .620/.625 (15,75/15,88) for .091/.125 (2,31/3,18) thk. panels. For J91: Increase this dimension to .620/.625 (15,75/15,88) for .060/.125 (1,52/3,18) thk. panels.

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| ACTUA   |  |                   | R   |
|---|--|-------------------|---|
|   | J1 ROCKER  | ATON              |   |
| DR<br>8   | (13,49)<br>(13,49)<br>(13,49)<br>(13,49)<br>(13,49)<br>(13,49)<br>(13,49)<br>(13,49)<br>(13,49)<br>(13,49)<br>(13,49)<br>(13,49)<br>(13,49)<br>(13,49)<br>(13,49)<br>(13,49)<br>(13,49)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13,59)<br>(13 |                   |   |
|   | <b>J2</b> LEVER  |                   |   |
| om actuator<br>consult<br>cor/termination<br>e between<br>e must be<br>condition.<br>ee page G-21<br>available with<br>initations. J3<br>(3 & V2-V61<br>lable with A<br>P models only), | .156<br>(3,96)<br>.332 R.<br>(8,43)<br>.332 R.   | · 365<br>(9,27)   |   |
| only) & V2-V61  | J3 ROCKER  |                   |   |
|   |  |                   |   |
|   | J50 ROCKER   |                   |   |
|   | .306<br>(7,77)<br>.460<br>(11,68)  | .450 -<br>(11,43) |   |
|   |  |                   |   |
|   |  |                   |   |
|   |  |                   |   |
|   |  | Coc - 10          | Dimensions are shown: Inches (mm)<br>cations and dimensions subject to change |
|   |  | Specific          |   |

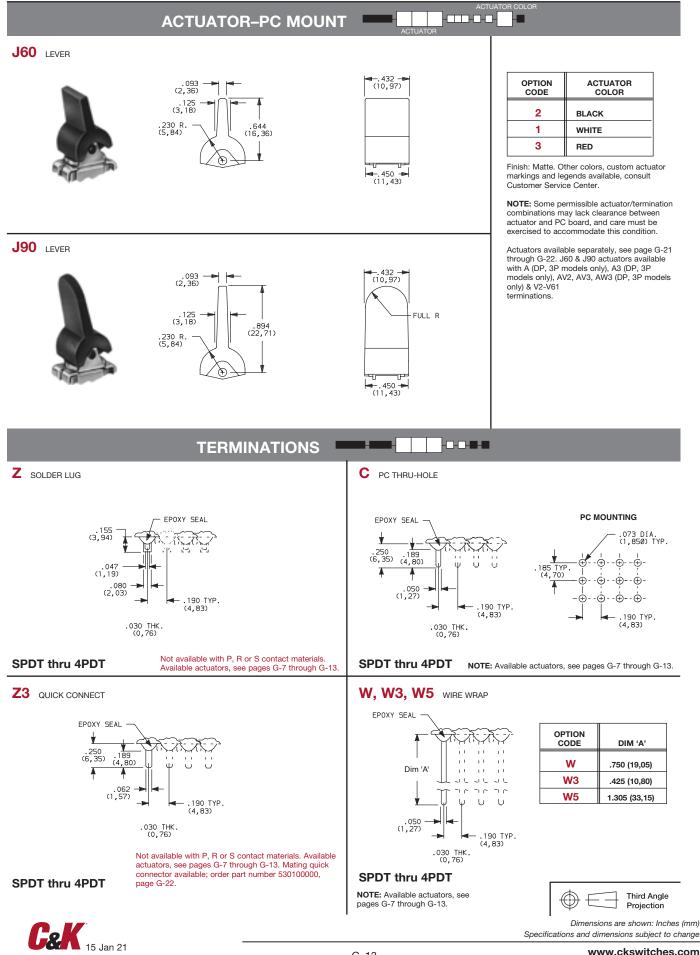
| OPTION<br>CODE | ACTUATOR<br>COLOR |
|----------------|-------------------|
| 2              | BLACK             |
| 1              | WHITE             |
| 3              | RED               |

Finish: Matte. Other colors, custom actuator markings and legends available, consult Customer Service Center.

NOTE: Some permissible actuator/termination combinations may lack clearance between actuator and PC board, and care must be exercised to accommodate this condition.

Actuators available separately, see page G-21 through G-22. J1, J2 actuators available with A, A3, AV2, AV3, AW3 & V2 terminations. J3 actuators available with AV2, AV3 & V2-V61 terminations. J50 actuators available with A (DP, 3P models only), A3 (DP, 3P models only), AV2, AV3, AW3 (DP, 3P models only) & V2-V61 terminations.

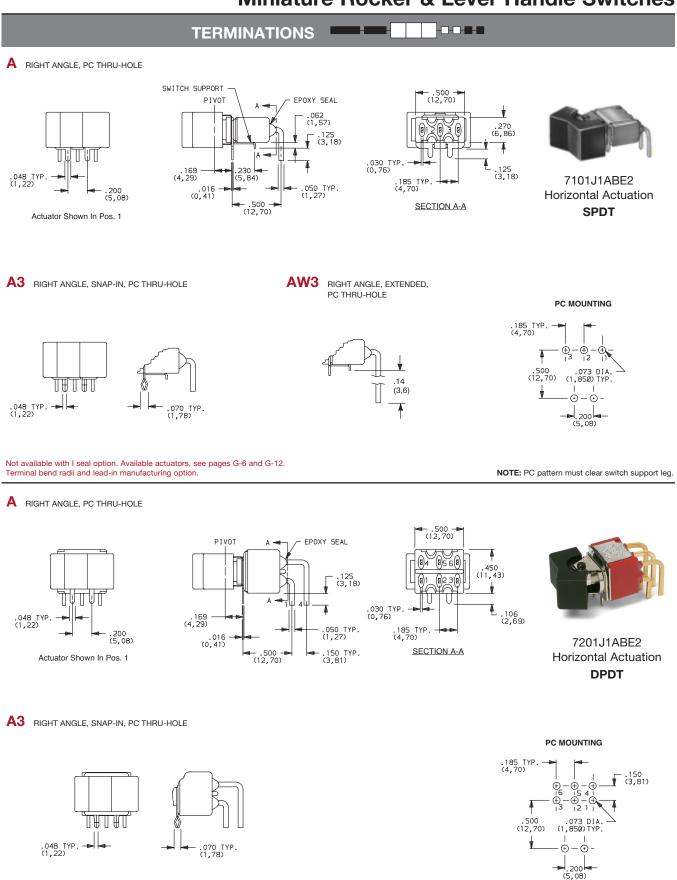




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Rocker

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Not available with I seal option. Available actuators, see pages G-6 and G-12. Terminal bend radii and lead-in manufacturing option.



Rocker

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

Third Angle

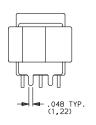
Projection

### TERMINATIONS

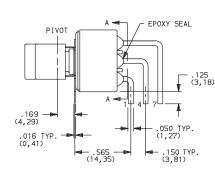
A RIGHT ANGLE, PC THRU-HOLE

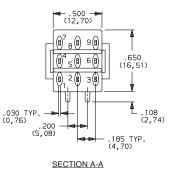


**3PDT** 



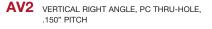
7301J1ABE2 Horizontal Actuation Actuator Shown In Pos. 1

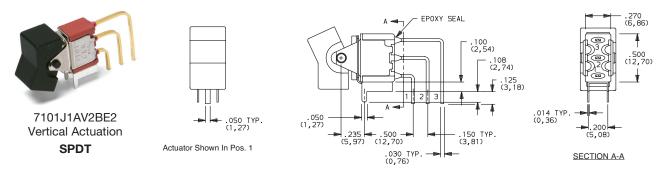




PC MOUNTING .185 TYP.-(4,70) .150 TYP. (3,81) ¥ 9€ € € 5\_4 .` ⊕<sub>6</sub> ÷ ֮ Έ. 12 .073 DIA (1,850) TYP .565 Ŵ  $\odot$ 200 (5,08)

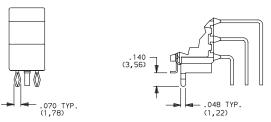
Not available with I seal option. Available actuators, see pages G-6 and G-12. Terminal bend radii and lead-in manufacturing option.





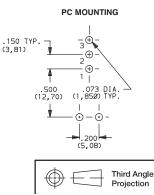
G–15

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



Not available with I seal option. Available actuators, see pages G-6 and G-12. Terminal bend radii and lead-in manufacturing option.

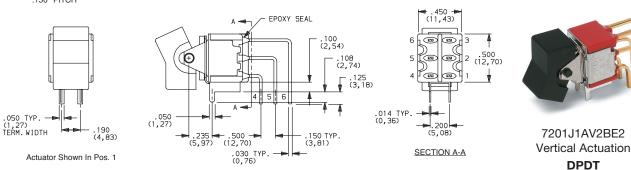




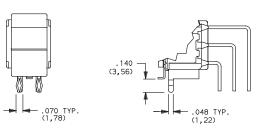
Dimensions are shown: Inches (mm) Specifications and dimensions subject to change 





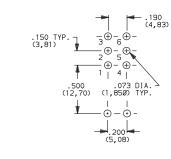




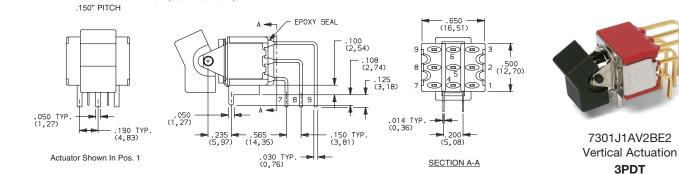


Not available with I seal option. Available actuators, see pages G-6 and G-12. Terminal bend radii and lead-in manufacturing option.

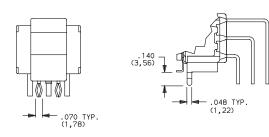
AV2 VERTICAL RIGHT ANGLE, PC THRU-HOLE,



PC MOUNTING



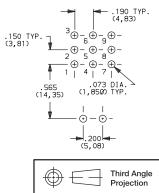
**AV3** VERTICAL RIGHT ANGLE, SNAP-IN, PC THRU-HOLE, .150" PITCH



Not available with I seal option. Available actuators, see pages G-6 and G-12. Terminal bend radii and lead-in manufacturing option.

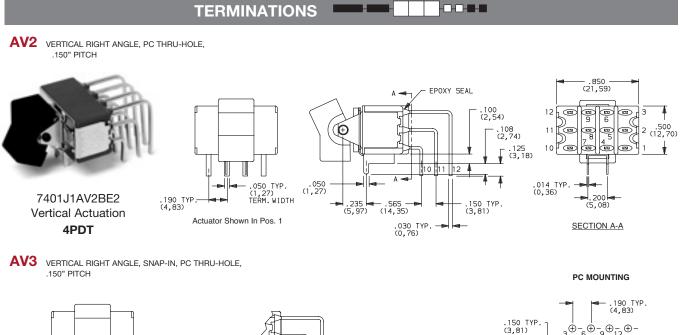


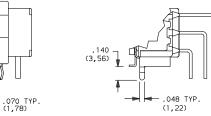
PC MOUNTING



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





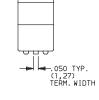


Not available with I seal option. Available actuators, see pages G-6 and G-12. Terminal bend radii and lead-in manufacturing option.

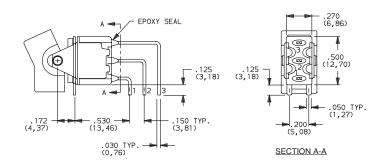








Actuator Shown In Pos. 1



.150 TYP. (3,81)

₃Ė

æ . ⊕-'⊕ Ð

.565 (14,35)

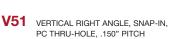
-\_6⊕\_-\_9⊕\_-\_ 9⊕\_12⊕-\_⊕\_5⊕\_8⊕\_1 2⊕\_5⊕\_8⊕\_1

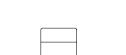
7 | 10

.073 DIA (1,85Ø) TYP

 $( \cdot ) - ( \cdot ) -$ . 200 -(5,08)

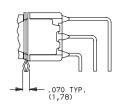
T





ТIН

.048 TYP. (1,22)



Not available with I seal option. Available actuators, see pages G-6 and G-12. Terminal bend radii and lead-in manufacturing option.



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

PC MOUNTING

-\_⊕-\_\_2⊕-. ⊕-

1 .530 .073 DIA. (13,46) (1,850) TYP.

 $\odot - \odot -$ 

200 (5, 08)

Third Angle

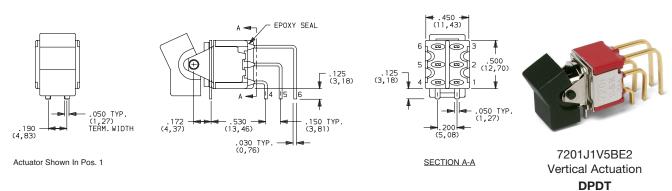
Projection

Rocker

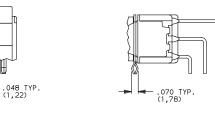
TYY

┝╍╍╼╼ **TERMINATIONS** Т

V5 VERTICAL RIGHT ANGLE, PC THRU-HOLE, .150" PITCH



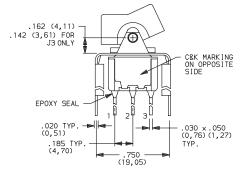
V51 VERTICAL RIGHT ANGLE, SNAP-IN, PC THRU-HOLE, .150" PITCH



Not available with I seal option. Available actuators, see pages G-6 and G-12. Terminal bend radii and lead-in manufacturing option.

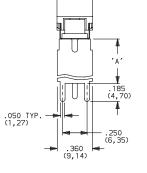


V61 VERTICAL MOUNT, V-BRACKET, SNAP-IN

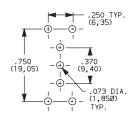




Not available with I seal option. Available actuators, see pages G-6 and G-12.

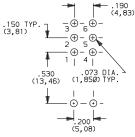


PC MOUNTING





PC MOUNTING





7101J1\_\_BE2 SPDT

| DIM 'A'      |
|--------------|
| .555 (14,10) |
| .460 (11,68) |
| .630 (16,00) |
| .953 (24,21) |
|              |

Third Angle  $\bigcirc$ Projection Dimensions are shown: Inches (mm)

Specifications and dimensions subject to change

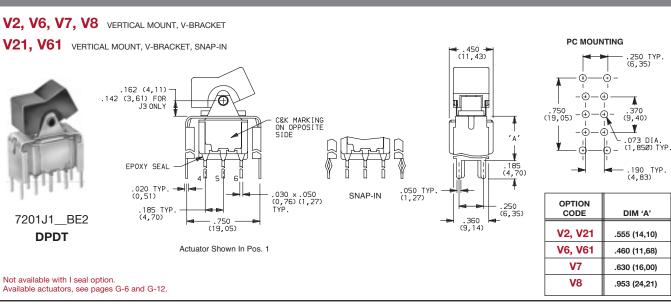


-2

15 Jan 21

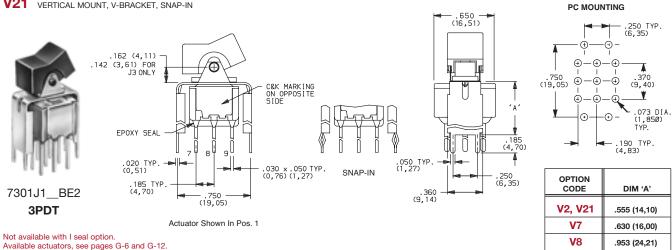


#### **TERMINATIONS**

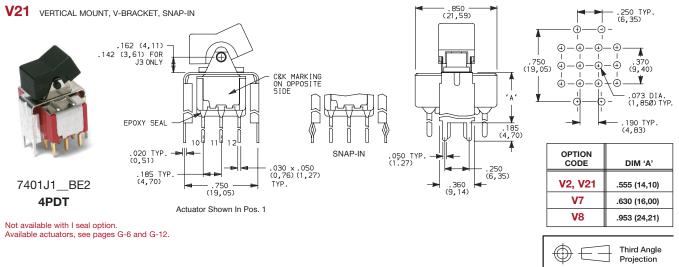


V2, V7, V8 VERTICAL MOUNT, V-BRACKET

V21 VERTICAL MOUNT, V-BRACKET, SNAP-IN



### V2, V7, V8 VERTICAL MOUNT, V-BRACKET

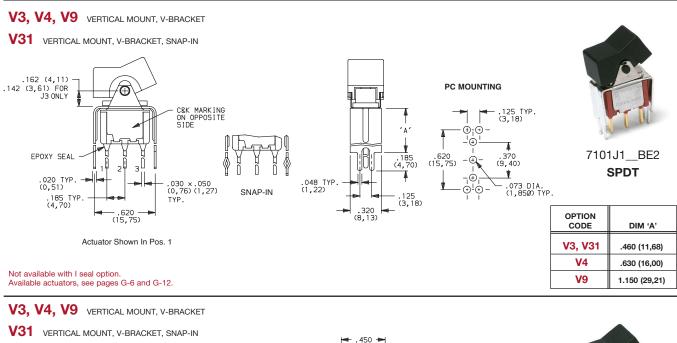


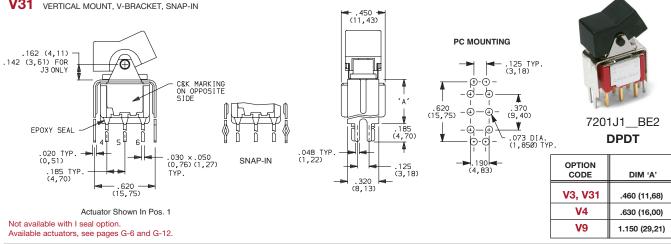


Dimensions are shown: Inches (mm) Specifications and dimensions subject to change

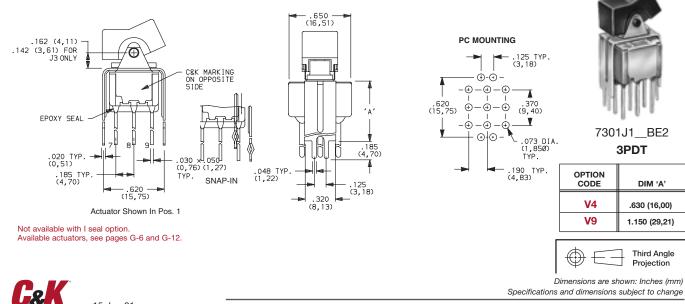
PC MOUNTING







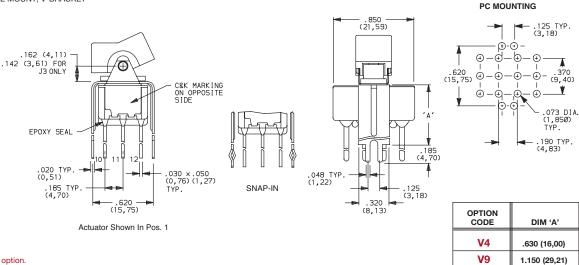
V4, V9 VERTICAL MOUNT, V-BRACKET



#### **TERMINATIONS**

V4, V9 VERTICAL MOUNT, V-BRACKET





Not available with I seal option. Available actuators, see pages G-6 and G-12.

#### CONTACT MATERIAL

| OPTION<br>CODE | CONTACT<br>MATERIAL   | TERMINAL<br>PLATING    | RATINGS          |  |  |  |
|----------------|-----------------------|------------------------|------------------|--|--|--|
| В              | GOLD <sup>1</sup>     | GOLD <sup>1</sup>      | LOW LEVEL/       |  |  |  |
| Р              | GOLD                  | MATTE-TIN <sup>6</sup> | DRY CIRCUIT      | 0.4 VA MAX. @ 20 V AC OR DC MAX.                 |  |  |
| Q              | SILVER <sup>4,5</sup> | SILVER 5               | DOWED            |  |  |  |
| S              | SILVER 5,5            | MATTE-TIN 6            | POWER            | 5 AMPS @ 120 V AC OR 28 V DC; 2 AMPS @ 250 V AC. |  |  |
| G              | GOLD OVER SILVER 2,3  | GOLD <sup>3</sup>      | LOW LEVEL/DRY    | 0 4 VA MAX @ 20 V AC OR DC MAX OR 5 AMPS @       |  |  |
| R              |                       | MATTE-TIN <sup>6</sup> | CIRCUIT OR POWER | 120 V AC OR 28 V DC; 2 AMPS @ 250 V AC.          |  |  |

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

<sup>1</sup> CONTACTS & TERMINALS: Copper alloy, with gold plate over nickel plate.

<sup>2</sup> END CONTACTS: Coin silver, with gold plate over nickel plate.

<sup>3</sup> CENTER CONTACTS & ALL TERMINALS: Copper alloy, with gold plate

over nickel plate.

<sup>4</sup> END CONTACTS: Coin silver, silver plated.

<sup>5</sup> CENTER CONTACT & ALL TERMINALS: Copper alloy, silver plated.

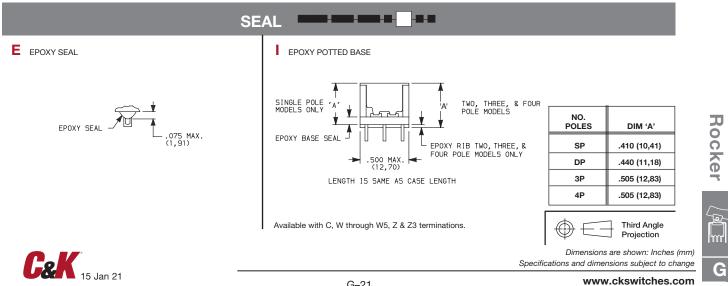
<sup>6</sup> TERMINALS: Copper alloy, with matte-tin over nickel plate.

B contact material standard with all terminations except C, Z & Z3.

Q contact material standard with C, Z & Z3 terminations.

P, S & R, contact materials not available with Z & Z3 terminations.

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

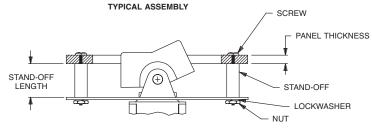


U11-U415 model numbers cNus with all options when ordered with G. Q. S & R contact material.

## **AVAILABLE HARDWARE**

Panel mounting hardware for rocker and lever handle switches is available separately. Mounting hardware consists of two screws, two nuts, two standoffs and two lockwashers per switch, and is available for panel thicknesses of 1/16, 3/32 and 1/8 inch. See part numbers below.

| Qty | Part Number | Description     |
|-----|-------------|-----------------|
| 2   | 761103000   | Standoffs       |
| 2   | 764100000   | Mounting screws |
| 2   | 764200000   | Lock washers    |
| 2   | 764300000   | Hex nuts        |



#### J1 & J2 actuators

J3 actuators

| PART NO.         PANEL THK.         STANDOFF LENGTH           761103000         1/8 IN. (3,18)         .233 (5,92) |           |                |                 |           |                |                 |
|--|-----------|----------------|-----------------|-----------|----------------|-----------------|
| 761103000 1/8 IN. (3,18) .233 (5,92) 770603000 1/8 IN. (3,18) .233 (5,92)  | PART NO.  | PANEL THK.     | STANDOFF LENGTH | PART NO.  | PANEL THK.     | STANDOFF LENGTH |
|  | 761103000 | 1/8 IN. (3,18) | .233 (5,92)     | 770603000 | 1/8 IN. (3,18) | .233 (5,92)     |

#### J10 actuators

| PART NO.  | PANEL THK.     | STANDOFF LENGTH |
|-----------|----------------|-----------------|
| 770703000 | 1/8 IN. (3,18) | .233 (5,92)     |

#### MATERIAL Screws, nuts, lockwashers: Stainless steel. Standoffs: Nylon, standard.

| J1, J11, J15 & J16 Actuators                        | J2, J21, J25 & J26 Actuators                        | J3 & J37 Actuators                                  |
|---|---|---|
|   |   | 1 al  |
| PART NO.  | PART NO.  | PART NO.  |
| 776A01000 WHITE<br>776A02263 BLACK<br>776A03000 RED | 426D01000 WHITE<br>426D02263 BLACK<br>426D03000 RED | 431D01000 WHITE<br>431D02263 BLACK<br>431D03000 RED |
| Material: Nylon<br>Finish: Matte                    | Material: Nylon<br>Finish: Matte                    | Material: Nylon<br>Finish: Matte                    |
| J50, J51 & J52 Actuators                            | J60, J61 & J62 Actuators                            |   |
|   |   |   |
| PART NO.  | PART NO.  |   |
| 775A01000 WHITE<br>775A02263 BLACK<br>775A03000 RED | 598101000 WHITE<br>613802263 BLACK<br>598103000 RED |   |
| Material: Nylon<br>Finish: Matte                    | Material: Nylon<br>Finish: Matte                    |   |

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

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| ART NO.<br>ART   |  |                        | E   |
|--|--|------------------------|---|
| ATTIO.<br>SECOND REC<br>MATRIO.<br>SECOND REC<br>MATRIO.<br>STREME OF J13 & J21 Actuators<br>Terme for J13 Actuator<br>Terme for J13 & J21 Actuators<br>Terme for J13 & J21 Actuator<br>Terme for J13 Actuat   | 190 & J91 Actuators  | J10 & J19 Actuators    | female connector  |
| BBBOODOUR WHITE<br>BBBOODOUR WHITE<br>BROOK MARK<br>BROOK RED<br>Marine Kydin<br>Iterie: Kindin<br>Iterie: Kindin<br>Iterie: Kate<br>Brook Baboo<br>Red<br>Autorie: Kydin<br>Brook Kate<br>Brook Baboo<br>Red<br>Brook Baboo<br>Brook Baboo<br>Red<br>Brook Babo |  | Co-                    |   |
| B8902283     BLACK<br>S000000     PART NO.<br>S010000     PART NO.<br>S010000       AFT NO.<br>S000000     Frame for J18 & J28 Actuators     Frame for J18 & J28 Actuators       AFT NO.<br>S000000     Frame for J18 & J28 Actuators     Frame for J18 & J28 Actuators       AFT NO.<br>S000000     Frame for J18 & J28 Actuators     Frame for J18 & J28 Actuators       AFT NO.<br>S000000     Frame for J18 & J28 Actuators     Frame for J18 & J28 Actuators       AFT NO.<br>S000000     Frame for J18 & J28 Actuators     Frame for J18 & J28 Actuators       AFT NO.<br>S000000     FRAMELIC<br>S000000     PART NO.<br>S000000     PART NO.<br>S000000       S000000     FET ANNIG SPRING<br>Material: Kydon<br>Finish: Matta     PART NO.<br>S000000       S000000     FET ANNIG SPRING     PART NO.<br>S000000       S0000000     FET ANNIG SPRING     PART NO.<br>S000000       S0000000     FET ANNIG SPRING     Frame for J37 Actuator       Aft NO.<br>S0000000     FET ANNIG SPRING     Frame for J37 Actuator       Aft NO.<br>S00000000     FET ANNIG SPRING     PART NO.<br>S000000000000000000000000000000000000   | PART NO.   |                        |   |
| Abservice hydron     Meeteria: hydron     Sourcewood       Finatis: Matia     Finatis     Ausiable in loces pieces.       America: hydron     Finatis     Ausiable in loces pieces.       America: hydron     Finatis     Parme for J18 & J28 Actuators       America: hydron     Finatis     Parme for J18 & J28 Actuators       America: hydron     Finatis     Parme for J18 & J28 Actuators       America: hydron     Finatis     Parme for J18 & J28 Actuators       America: hydron     Finatis     Parme for J18 & J28 Actuators       America: hydron     Finatis     Parme for J18 & J28 Actuators       America: hydron     Finatis     Parme for J18 Actuators       America: hydron     Finatis     Parme for J18 Actuators       America: hydron     Finatis     Parme for J37 Actuator       America: hydron     Finatis     Finatis       America: hydron     Finatis     Finatis       Finatis     Parme for J37 Actuator     Finatis       America: hydron     Finatis     Finatis       Finatis     Biologica Biol     Finatis       Finatis     Finatis     Finatis       Finatis     Finatis     Finatis       Finatis     Finatis     Finatis       Finatis     Finatis     Finatis       Finatis     F   | 598002263 BLACK  | 769502263 BLACK        | PART NO.  |
| rame for J1 & J21 Actuators           Frame for J1 & J21 Actuators         Frame for J1 & J21 Actuators           ART NO.         PART NO.           G45500746         PLACK ENAMEL           G45500747         WHTE ENAMEL           G45500746         PLACK ENAMEL           G45500747         WHTE ENAMEL           G45500746         PLACK ENAMEL           G45500746         PLACK ENAMEL           G45500747         WHTE ENAMEL           G4500747         WHTE ENAMEL           G4500747         PLACK ENAMEL           G100747         PLACK ENAMEL           Material: Spring Steel         PLACK ENAMEL           Material: Spr   | Aaterial: Nylon  | Material: Nylon        |   |
| AT NO.<br>REFORMER<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECOND<br>SECO   |  |                        |   |
| ANT NO.<br>G4500746 BLACK ENAMEL<br>G4500747 WHITE ENAMEL<br>G4500747 WHITE ENAMEL<br>G450100 RED<br>Material: Nylon<br>Finish: Matte<br>Frame for J19 Actuator<br>Frame for J22 & J62 Actuators<br>PART NO.<br>G13301000 WHITE<br>G13302026 BLACK<br>G13301000 WHITE<br>G1330226 BLACK<br>G1330100 WHITE<br>G1330226 BLACK<br>G133000   |  |                        |   |
| OBSOLTA BLACK ENAMEL<br>G4601105 RETAINING SPRING<br>Material: Spring Steel       459102000 BLACK<br>459103000 RED<br>Material: Nylon<br>Finish: Matte       615602263 BLACK<br>015602000 RED<br>Material: Nylon<br>Finish: Matte         Yrame for J19 Actuator       Frame for J37 Actuator       Frame for J37 Actuator         VART NO.<br>81000747 WHTE ENAMEL<br>81000747 WHTE ENAMEL<br>Material: Spring Steel       Frame for J37 Actuator       Frame for J52 & J62 Actuators         PART NO.<br>81000747 WHTE ENAMEL<br>Material: Spring Steel       PART NO.<br>455400746 BLACK ENAMEL<br>Material: Spring Steel       PART NO.<br>455400746 BLACK ENAMEL<br>Material: Spring Steel       PART NO.<br>613301000 WHTE<br>613302028 BLACK<br>61330000 RED<br>Material: Material: Spring Steel  | PART NO.   |                        |   |
| Material: Spring Steel     Material: Nylon     Material: Nylon       Finish: Matte     Finish: Matte     Finish: Matte       rame for J19 Actuator     Frame for J37 Actuator     Frame for J52 & J62 Actuators  | 64500747 WHITE ENAMEL  | 459102000 BLACK        | 615602263 BLACK   |
| ART NO.       Frame for J37 Actuator       Frame for J52 & J62 Actuators         ART NO.       Frame for J52 & J62 Actuators       Frame for J52 & J62 Actuators         ART NO.       Frame for J52 & J62 Actuators       Frame for J52 & J62 Actuators         ART NO.       Frame for J52 & J62 Actuators       Frame for J52 & J62 Actuators         ART NO.       Frame for J52 & J62 Actuators       Frame for J52 & J62 Actuators         ART NO.       Frame for J52 & J62 Actuators       Frame for J52 & J62 Actuators         ART NO.       Frame for J52 & J62 Actuators       Frame for J52 & J62 Actuators         PART NO.       Frame for J52 & J62 Actuators       Frame for J52 & J62 Actuators         PART NO.       Frame for J52 & J62 Actuators       Frame for J52 & J62 Actuators         PART NO.       Frame for J52 & J62 Actuators       Frame for J52 & J62 Actuators         B1000746       BLACK ENAMEL       Frame for J52 & J62 Actuators         B100747       WHITE ENAMEL       Frame for J52 & J62 Actuators         B100747       WHITE ENAMEL       Haterial: Spring Steel       Material: Mylon Finish: Matter         Framesions are shown: Inches       Specifications and dimensions subject to ch       Specifications and dimensions subject to ch   |  |                        |   |
| PART NO.<br>81000746 BLACK ENAMEL<br>81000747 WHITE ENAMEL<br>Material: Spring Steel<br>Material: Spring Steel<br>Material: Spring Steel<br>Material: Nylon<br>Finish: Matte<br>Dimensions are shown: Inches<br>Specifications and dimensions subject to ch  | rame for J19 Actuator  | Frame for J37 Actuator | Frame for J52 & J62 Actuators   |
| Dimensions are shown: Inches<br>Specifications and dimensions subject to ch  | PART NO.<br>781000746 BLACK ENAMEL<br>781000747 WHITE ENAMEL<br>Material: Spring Steel | 445400746 BLACK ENAMEL | 613301000 WHITE<br>613302263 BLACK<br>613303000 RED<br>Material: Nylon<br>Finish: Matte |
| Specifications and dimensions subject to ch  |  |                        | Projection  |
|  |  |                        | Specifications and dimensions subject to ch   |

Rocker

<u>P</u> 

## **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.





J1 & J2 Actuators



PART NO. 452902263

.047" (1,19) PANEL THK.

PART NO. 452702263

.062" (1,57) PANEL THK.

PART NO. 452802263

.090" (2,29) PANEL THK.

.125" (3,18) PANEL THK.

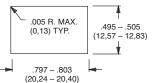
PART NO. 452602263 BLACK

J50, J60 & J90 Actuators

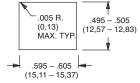


#### PANEL MOUNTING

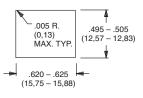
For part numbers 4529xxxx, 4527xxxx, 4528xxxx, 4526xxxx



For part numbers 4325xxxxx, 4326xxxxx



For part numbers 4327xxxxx, 4328xxxxx





Specifications and dimensions subject to change

Dimensions are shown: Inches (mm)

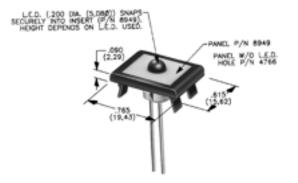
Third Angle Projection

### **AVAILABLE HARDWARE**

Panel Inserts

Will fit Separate Snap-in frames for J50, J60 & J90 actuators

Above frames (part nos. 432XXXXX) 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 WITH HOLE FOR LED PART NO.

894902000

BLANK PANEL INSERT WITHOUT HOLE FOR LED PART NO.

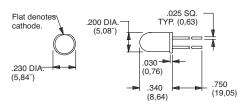
476602000 BLACK

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

#### LED INFORMATION

**Process Information:** Soldering to LED leads must be completed within 5 seconds at 500° F (260°C) maximum.

LEDs are not supplied with J52, J62 options. LED snaps into switch frame surrounding actuator and is wired externally.



Suggested LED for J52 & J62 options. Dimensions for reference only.

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

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### Features/Benefits

- Sealed against solder and cleaning process contaminants
- ESD Resistance—all actuator options
- Rocker, case & bushing UL 94V-0
- RoHS compliant



### Specifications

- CONTACT RATING: B contact material: 0.4 VA max. @ 20 V AC or DC max. Q contact material (E1XX & E2XX Models): 7.5 AMPS @125 V AC or 28 V DC; 3 AMPS @ 250 V AC. (E3XX Models): 5 AMPS @ 125 V AC or 28 V DC; 2 AMPS @ 250 V AC. See page G-36 for additional ratings.
- ELECTRICAL LIFE: E1XX and E2XX models: 40,000 make-and-break cycles at full load. E3XX models: 30,000 cycles.

CONTACT RESISTANCE: Below 10 m  $\Omega$  typ. initial @ 2-4 V DC, 100 mA, for both silver and gold plated contacts.

INSULATION RESISTANCE:  $10^9 \Omega$  min.

ELECTROSTATIC DISCHARGE (ESD) OPTION: All actuator options: 15,000 V DC max. @ sea level, actuator to terminals.

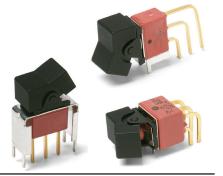
DIELECTRIC STRENGTH: 1000 Vrms min. @ sea level.

OPERATING TEMPERATURE: -30°C to 85°C.

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

## **Typical Applications**

- Telecommunications
- Instrumentation
- Computers & peripherals



#### Materials

- CASE & BUSHING: Glass filled nylon 6/6, flame retardant, heat stabilized (UL 94V-0).
- ACTUATOR: Nylon, black standard, internal o-ring seal standard with all actuators.

FRAME: Spring steel, black standard.

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

ACTUATOR PIVOT & MOUNTING BRACKET: Nylon.

ACTUATOR PIVOT RETAINER: Stainless steel.

CONTACTS & TERMINALS: B contact material: Copper alloy, with gold plate over nickel plate. Q contact material: Copper alloy, silver plated. See page G-36 for additional contact materials.

TERMINAL SEAL: Epoxy.

HARDWARE: Nut, Screw & Lockwasher: Stainless steel. Standoff: Nylon standard, aluminum available, consult Customer Service Center.

NOTE: Any models supplied with Q, B, G, S, P & R 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.

### **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 G-26 through G-38. 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.

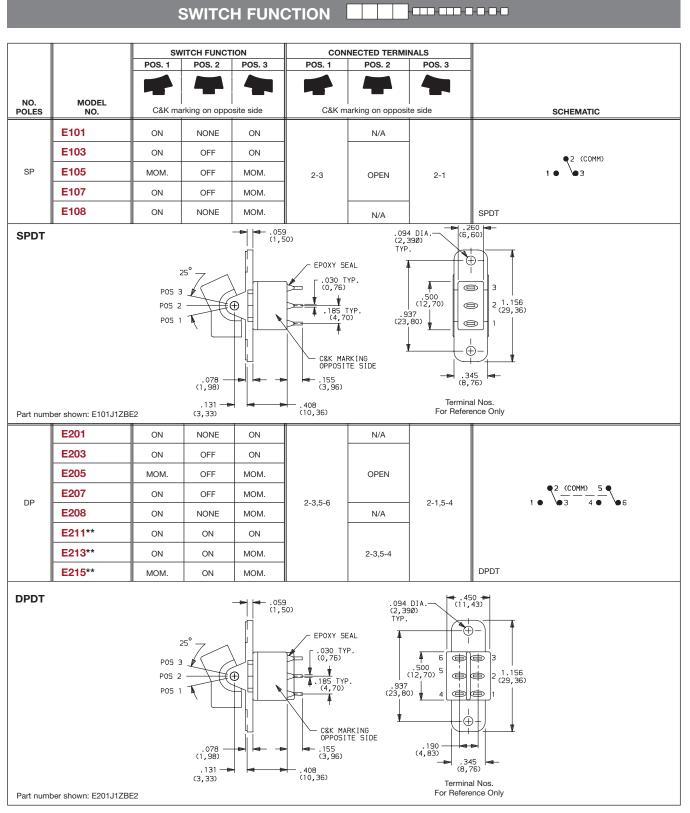
| Switch Function<br>E101 SP On-None-On<br>E103 SP On-Off-On<br>E105 SP MomOff-Mom.<br>E107 SP On-Off-Mom.<br>E201 DP On-None-Mon.<br>E203 DP On-Off-On<br>E203 DP On-Off-On<br>E203 DP On-Off-Mom.<br>E207 DP On-Off-Mom.<br>E207 DP On-Off-Mom.<br>E208 DP On-None-Mom.<br>E211 DP On-On-On<br>E213 DP On-On-Mom.<br>E215 DP MomOn-Mom.<br>E301 3P On-None-On | Terminations         A       Right angle, PC thru-hole         AV2       Vertical right angle, PC thru-hole         C       PC Thru-hole         Z       Solder lug         A3       Right angle, snap-in, PC thru-hole         AV3       Vertical right angle, snap-in, PC thru-hole         V3       .460" high, V-bracket         V4       .630" high, V-bracket         V5       Vertical right angle, PC thru-hole         V6       .460" high, V-bracket         V7       .630" high, V-bracket         V8       .953" high, V-bracket         V2       .555" high, V-bracket, snap-in         V31       .460" high, V-bracket, snap-in | Contact Material<br>B Gold<br>P Gold, matte tin<br>Q Silver<br>S Silver, matte-tin<br>G Gold over silver<br>R Gold over silver, m<br>Seal<br>E Epoxy<br>Actuator Color<br>2 Black<br>3 Red |                      |  |
|---|---|--|----------------------|--|
|   |   |  | (J11, J21 Actuators) |  |



15 Jan 21



www.ckswitches.com



#### MOM. = Momentary All models CNUS

\*\* Wiring for 3-way switch, Hardware available seperately, see Technical Data section of this catalog.

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**GeK** 15 Jan 21

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

G–27

Dimensions are shown: Inches (mm)

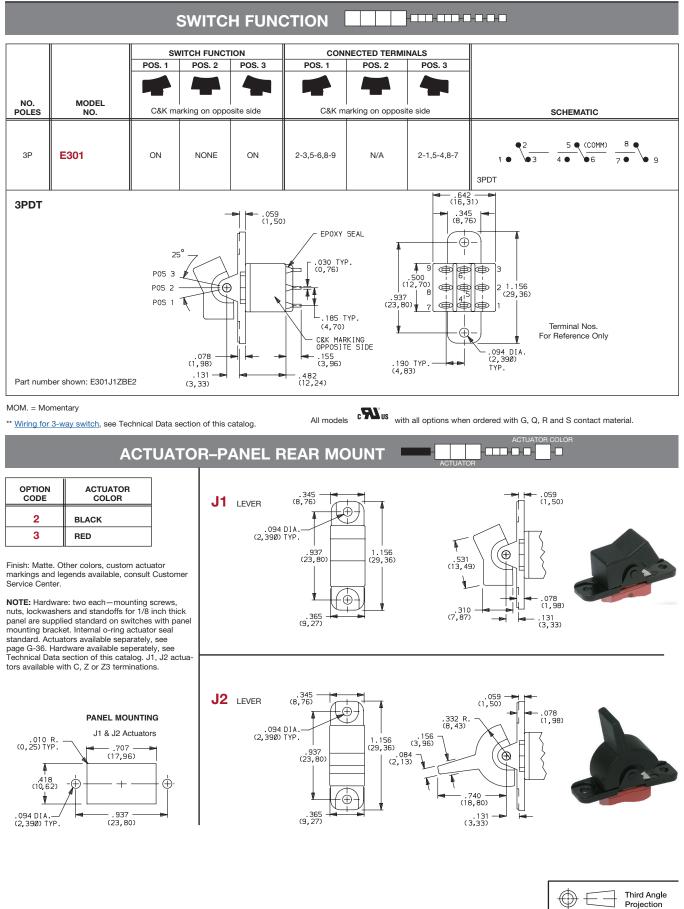
Specifications and dimensions subject to change

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Third Angle

Projection

www.ckswitches.com



G

15 Jan 21

-2 /

G–28

www.ckswitches.com

Dimensions are shown: Inches (mm)

Specifications and dimensions subject to change

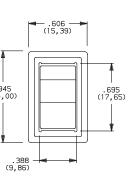
ACTUATOR-REAR MOUNT

#### J11 ROCKER WITH FRAME

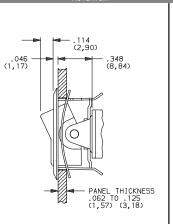


NOTE: This option has reduced anti-static capability

J21 LEVER WITH FRAME



-.606 -(15,39)



.348 (8,84)

PANEL THICKNESS .062 T0 .125 (1,57) (3,18)

.046

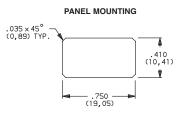
-.524 -(13,31) 

| OPTION<br>CODE | ACTUATOR<br>COLOR |
|----------------|-------------------|
| 2              | BLACK             |
| 3              | RED               |

| OPTION<br>CODE | FRAME COLOR |
|----------------|-------------|
| 2              | BLACK       |

Actuator finish: Matte, frame finish: gloss. Other colors, custom actuator markings and legends available, consult Customer Service Center.

NOTE: Internal o-ring actuator seal standard. Actuators & frames available separately, see page G-36. Hardware available seperately, see Technical Data section of this catalog. J11 & J21 actuators available with C, Z & Z3 terminations.



NOTE: This option has reduced anti-static capability.

.945 (24,00)

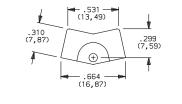
.388

**ACTUATOR-PC MOUNT** 

.695

J1 ROCKER



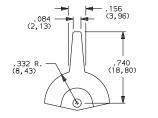


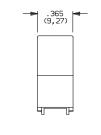


C

J2 LEVER







**C&K** 15 Jan 21

| OPTION | ACTUATOR |
|--------|----------|
| CODE   | COLOR    |
| 2      | BLACK    |
| 3      | RED      |

Finish: Matte. Other colors, custom actuator markings and legends available, consult Customer Service Center.

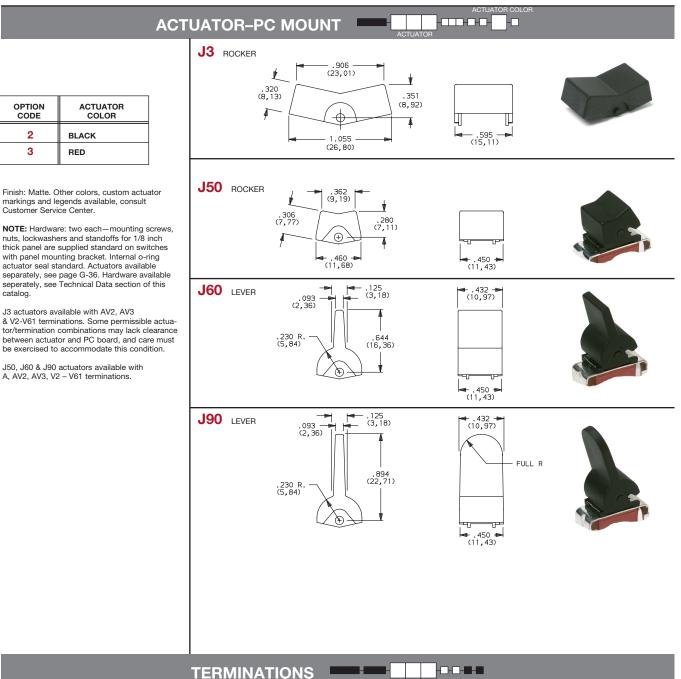
NOTE: Hardware: two each—mounting screws, nuts, lockwashers and standoffs for 1/8 inch thick panel are supplied standard on switches with panel mounting bracket. Internal o-ring actuator seal standard. Actuators available separately, see page G-36. Hardware available separately, see Technical Data section of this catalog. J1, J2 actuators available with A, A3, AV2, AV3, V2-V61 terminations.



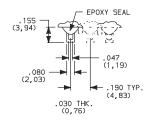
Dimensions are shown: Inches (mm) Specifications and dimensions subject to change

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Rocker

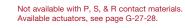


#### Z SOLDER LUG



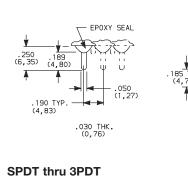
SPDT thru 3PDT

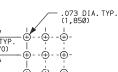
-2 (





C PC THRU-HOLE





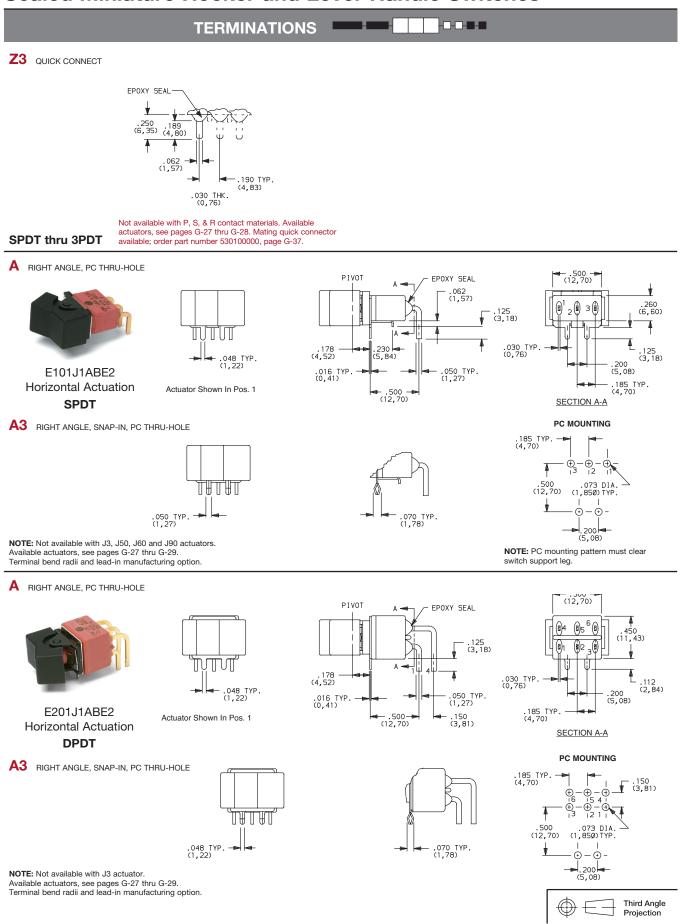
PC MOUNTING



Third Angle -Projection

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

-TTT



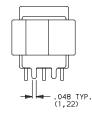
**CeK** 15 Jan 21

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

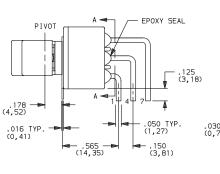
TYT

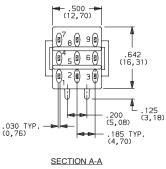
TERMINATIONS

A RIGHT ANGLE, PC THRU-HOLE



Actuator Shown In Pos. 1

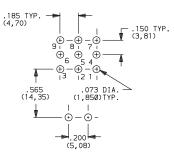






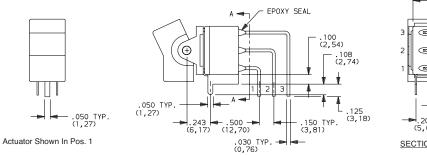
E301J1ABE2 Horizontal Actuation **3PDT** 

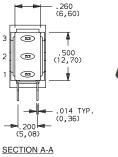
PC MOUNTING



NOTE: Terminal bend radii and lead-in manufacturing option. Available actuators, see pages G-27 thru G-29.







PC MOUNTING

 $-3 \oplus -2 \oplus -1 \oplus -$ 

.500 .073 DIA (12,70) (1,85Ø) TYP

> | | -⊕ — ⊕ -

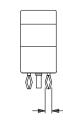
1.200 (5,08)

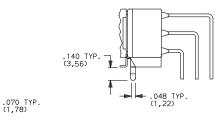
.150 TYP (3,81)



E101J1AV2BE2 Vertical Actuation SPDT

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





NOTE: Terminal bend radii and lead-in manufacturing option. Available actuators, see pages G-27 thru G-29.



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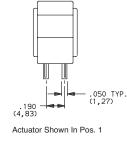


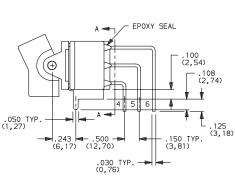
www.ckswitches.com

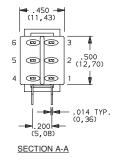
TERMINATIONS

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

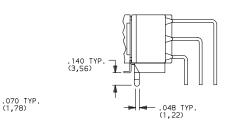




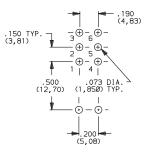




AV3 VERTICAL RIGHT ANGLE, SNAP-IN, PC THRU-HOLE, .150" PITCH

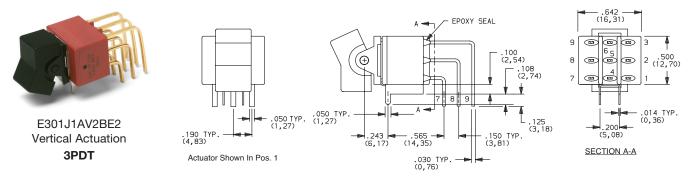






**NOTE:** Terminal bend radii and lead-in manufacturing option. Available actuators, see pages G-27 thru G-29.

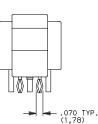


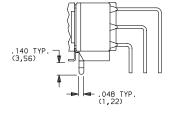


AV3 VERTICAL RIGHT ANGLE, SNAP-IN, PC THRU-HOLE, .150" PITCH

NOTE: Terminal bend radii and lead-in manufacturing option. Available actuators, see pages G-27 thru G-29.

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. 200 (5,08)

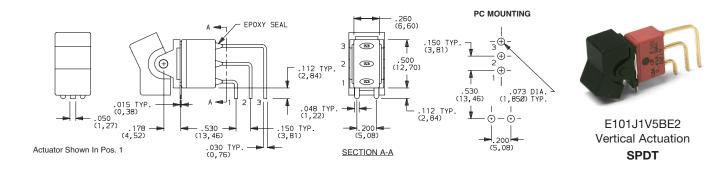


Projection Dimensions are shown: Inches (mm)

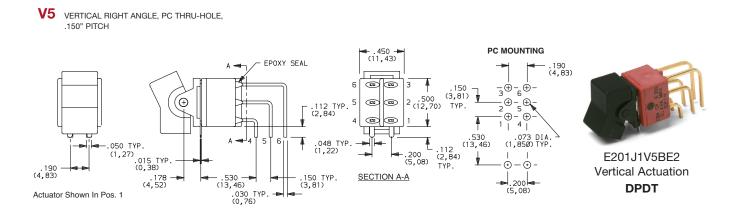
Dimensions are shown: Inches (mm) Specifications and dimensions subject to change TTT

TERMINATIONS

V5 VERTICAL RIGHT ANGLE, PC THRU-HOLE, .150" PITCH



NOTE: Terminal bend radii and lead-in manufacturing option. Available actuators, see pages G-27 thru G-29.



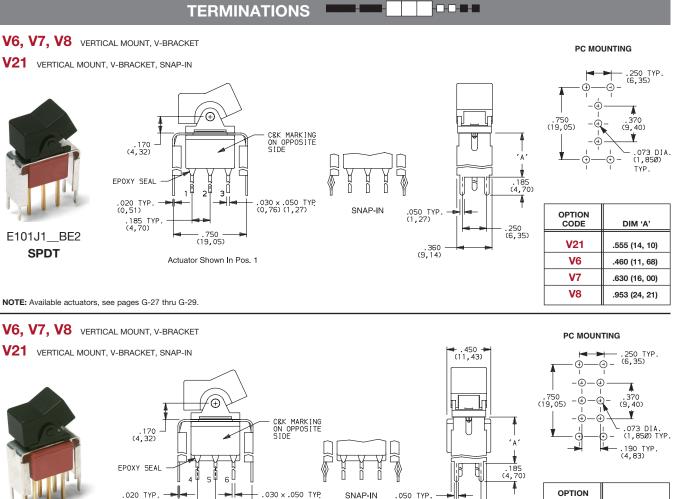
NOTE: Terminal bend radii and lead-in manufacturing option. Available actuators, see pages G-27 thru G-29.



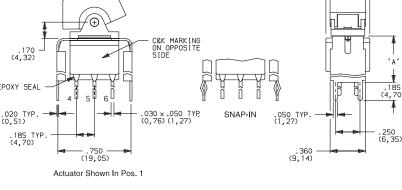
2



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







CODE DIM 'A' V21 .555 (14, 10) **V**6 .460 (11, 68) **V**7 .630 (16, 00) **V**8 .953 (24, 21)

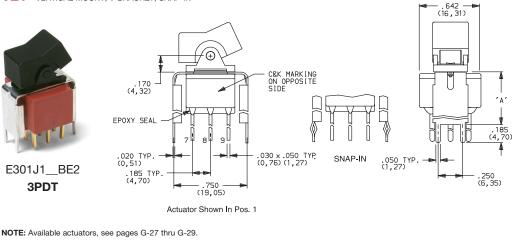
NOTE: Available actuators, see pages G-27 thru G-29.

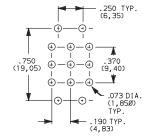


V21 VERTICAL MOUNT, V-BRACKET, SNAP-IN

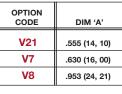
E301J1\_\_BE2 **3PDT** 

**CeK** 15 Jan 21



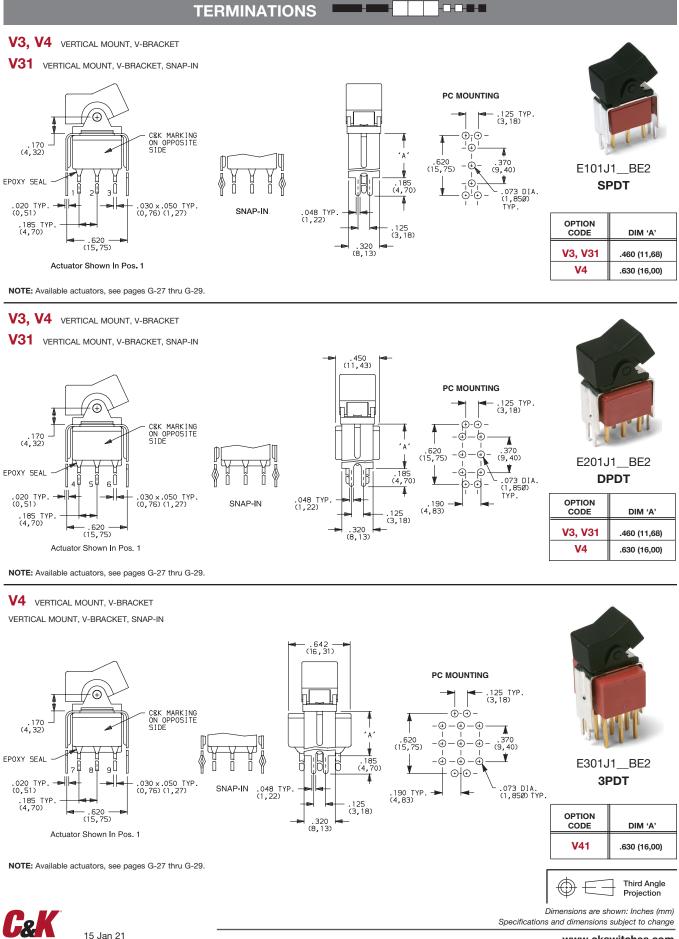


PC MOUNTING





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



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# E Series Sealed Miniature Rocker and Lever Handle Switches

| OPTION<br>CODE | CONTACT<br>MATERIAL   | TERMINAL<br>PLATING    | RATINGS  |   |  |
|----------------|-----------------------|------------------------|--|---|--|
| В              | GOLD <sup>1</sup>     | GOLD 1                 | LOW LEVEL/   | 0.4 VA MAX. @ 20 V AC OR DC MAX.  |  |
| Р              | 0.015                 | MATTE-TIN <sup>7</sup> | DRY CIRCUIT  |   |  |
| Q              | SILVER 4,5            | SILVER 5               | POWER  | E1XX & E2XX MODELS: 7.5 AMPS @125 V AC OR 28 V DC: 3 AMPS @250 V AC.                                    |  |
| S              |                       | MATTE-TIN 6            | E3XX MODELS: 5 AMPS @ 125 V AC OR 28 V DC; 2 AMPS @ 250 V AC.  |   |  |
| G              | GOLD OVER             | GOLD <sup>3</sup>      | LOW LEVEL/DRY E1XX AND E2XX MODELS: 0.4 VA MAX @20 V AC OR DC MAX. OR<br>7.5 AMPS @125 V AC OR 28 V DC; 3 AMPS @ 250 V AC. |   |  |
| R              | SILVER <sup>2,3</sup> | MATTE-TIN 6            | CIRCUIT OR POWER   | DC E3XX MODELS: 0.4 VA MAX. @ 20 V AC OR DC MAX. OR 5 AMPS @<br>125 V AC OR 28 V DC; 2 AMPS @ 250 V AC. |  |

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

<sup>1</sup> CONTACTS & TERMINALS: Copper alloy, with gold plate over nickel plate.

<sup>2</sup> END CONTACTS: Coin silver, with gold plate over nickel plate.

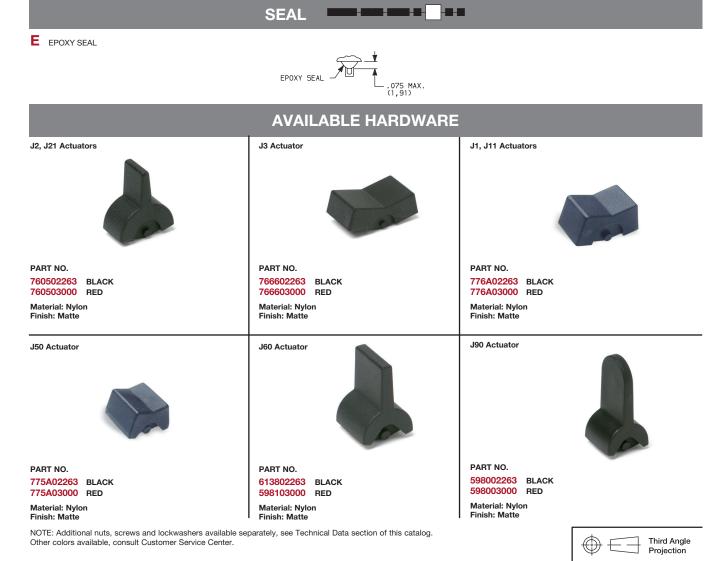
 $^{3}$  CENTER CONTACTS & ALL TERMINALS: Copper alloy, with gold plate over nickel plate.

- <sup>4</sup> END CONTACTS: Coin silver, silver plated.
- <sup>5</sup> CENTER CONTACT & ALL TERMINALS: Copper alloy, with gold flash over silver plate. Or copper alloy, silver plated.
- <sup>6</sup> TERMINALS: Copper alloy, with matte-tin over nickel plate.

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

All models with all options when ordered with G, Q, S & R contact material. B contact material standard with all terminations.

P R & S contact materials not available with Z terminations.





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

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NOTE: Additional nuts, screws and lockwashers available separately, see Technical Data section of this catalog. Other colors available, consult Customer Service Center.

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.

.047" (1,19) PANEL THK.

PART NO.

432502263

432503000





J1 & J2 Actuators





.090" (2.29) PANEL THK.

PART NO.

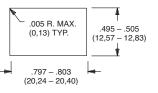
432702263

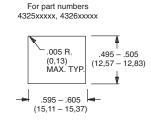
432703000

J50, J60 & J90 Actuators



For part numbers 4529xxxxx, 4527xxxxx, 4528xxxxx, 4526xxxxx





.062" (1,57) PANEL THK.

PART NO.

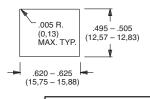
432602263

432603000

PANEL MOUNTING

For part numbers 4327xxxxx, 4328xxxxx

PART NO.



.125" (3,18) PANEL THK.

432802263 BLACK

432803000 RED

Third Angle Projection

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

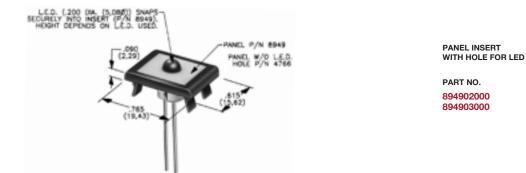
# **E** Series **Sealed Miniature Rocker and Lever Handle Switches**

### **AVAILABLE HARDWARE**

Panel Inserts

Above frames (part nos. 432XXXXX) 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.

Will fit separate snap-in frames for J50, J60, J90 actuators.



BLANK PANEL INSERT WITHOUT HOLE FOR LED

PART NO.

476602000 BLACK 476603000 RED

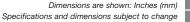
NOTE: Special colors, custom markings available, consult Customer Service Center.

W)

G



Dimensions are shown: Inches (mm)



CeK 15 Jan 21

### Features/Benefits

- Sealed against solder and cleaning process contaminants
- Rocker, bushing & case—UL 94V-0
- Small footprint—saves space
- RoHS compliant

# c**W**us

### Specifications

- CONTACT RATING: B contact material: 0.4 VA max. @ 20 V AC or DC max. Q contact material: Copper alloy, silver plated. See page G-43 for additional ratings.
- ELECTRICAL LIFE: ETX1 models: 60,000 make-and-break cycles at full load. All other models: 30,000 cycles.
- CONTACT RESISTANCE: Below 20 m  $\Omega$  typ. initial @ 2-4 V DC, 100 mA, for both silver and gold plated contacts.
- INSULATION RESISTANCE:  $10^9 \Omega$  min.
- DIELECTRIC STRENGTH: 1000 Vrms min. @ sea level.
- OPERATING TEMPERATURE: -30°C to 85°C.
- SOLDERABILITY: Per MIL-STD-202F method 208D, or EIA RS-186E method 9 (1 hour steam aging).
- PACKAGING: Surface mount switches standard in tape and reel packaging, see page G-45 for drawings and reel information.

### Typical Applications

- Telecommunications
- Instrumentation
- Computers & peripherals



#### Materials

CASE & BUSHING: Glass filled nylon 6/6, flame retardant,

- heat stabilized (UL 94V-0) or glass filled 4/6 nylon, flame retardant, heat stabilized (UL 94V-0).
- ACTUATOR: Nylon, black standard. Internal o-ring seal standard with all actuators. SA surface mount: High temperature material, glass filled 46 nylon, flame retardant, heat stabilized (UL 94V-0).

SWITCH SUPPORT: Brass, matte-tin plated.

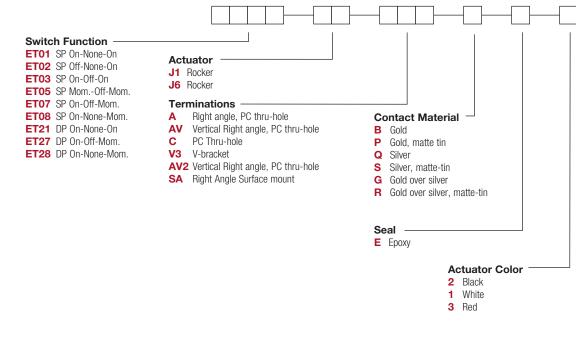
CONTACTS & TERMINALS: B contact material: Copper alloy, with gold plate over nickel plate. Q contact material: Copper alloy, silver plated. See page G-43 for additional contact materials. TERMINAL SEAL: Epoxy.

NOTE: Any models supplied with Q, B, G, S, P & R 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.

### **Build-A-Switch**

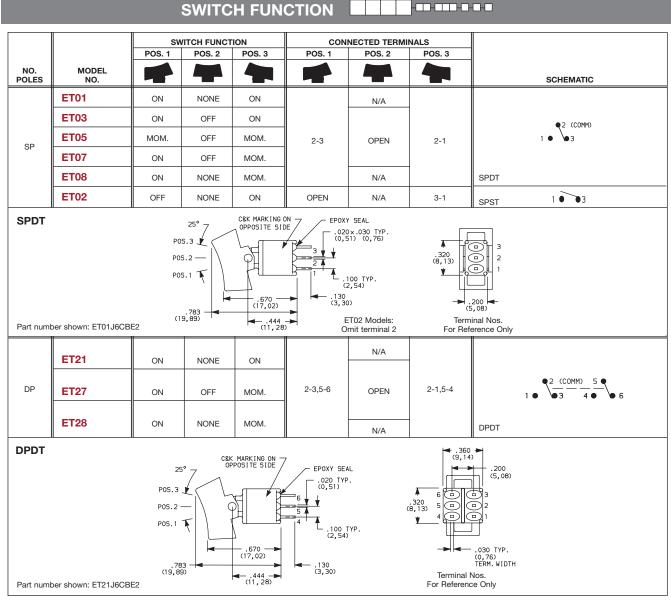
To order, simply select desired option from each category and place in the appropriate box. Available options are shown and described on pages G-40 thru G-44. For additional options not shown in catalog, consult Customer Service Center. All models are process sealed to withstand machine soldering temperatures and pressure wash cleaning methods.





**Rocker** 

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



MOM. = Momentary

**F**&K

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



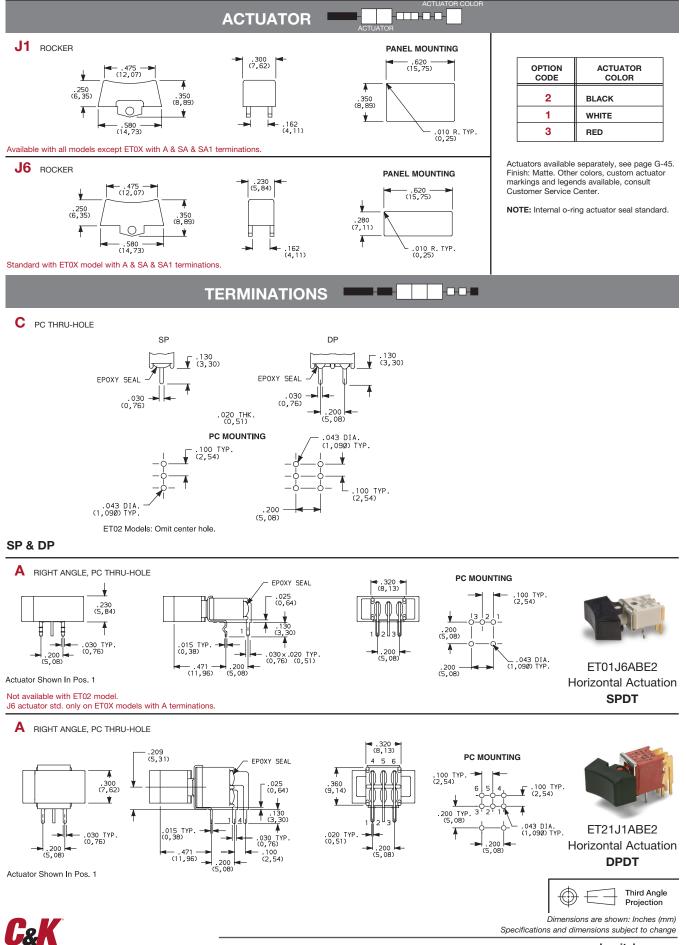


Dimensions are shown: Inches (mm) Specifications and dimensions subject to change

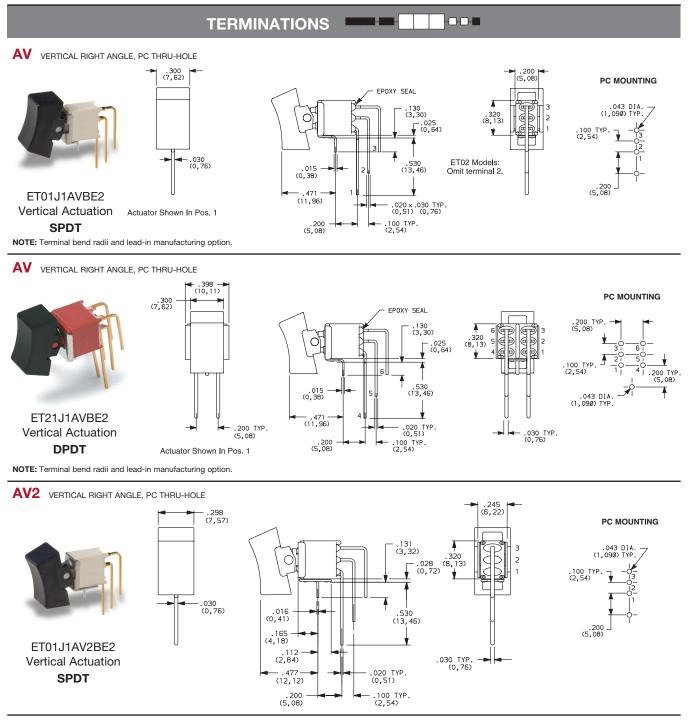
G



G–41



Rocker



0

TIT

G

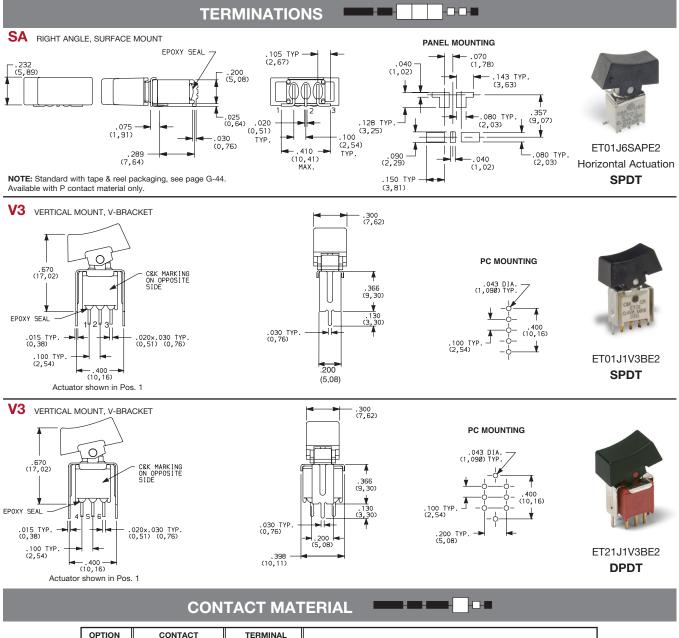


Dimensions are shown: Inches (mm)

Specifications and dimensions subject to change



G&K



| CODE | MATERI                                |                                  | PLATING                | RATINGS                           |   |  |
|------|---------------------------------------|----------------------------------|------------------------|-----------------------------------|---|--|
| В    | B GOLD <sup>1</sup> GOLD <sup>1</sup> |                                  | LOW LEVEL/             |                                   |   |  |
| Р    | MATTE-TIN 6 DRY CIRCUIT               | 0.4 VA MAX. @ 20 V AC OR DC MAX. |                        |                                   |   |  |
| Q    | SILVER                                | 4,5                              | SILVER 5               | POWER                             | ETX1 MODELS: 3 AMPS @ 120 V AC<br>OR 28 V DC.   |  |
| S    | S                                     |                                  | MATTE-TIN <sup>6</sup> |                                   | ALL OTHER MODELS: 2 AMPS @ 120 V AC<br>OR 28 V DC.                                    |  |
| G    | GOLD OV                               | 'ER                              | GOLD <sup>3</sup>      | LOW LEVEL/DRY<br>CIRCUIT OR POWER | ETX1 MODELS: 0.4 VA MAX @ 20 V AC OR DC<br>MAX. OR 3 AMPS @120 V AC OR 28 V DC.       |  |
| R    | SILVER                                | 2,3                              | MATTE-TIN 6            |                                   | ALL OTHER MODELS: 0.4 VA MAX @ 20 V AC OR<br>DC MAX. OR 2 AMPS @ 120 V AC OR 28 V DC. |  |

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

<sup>1</sup> CONTACTS & TERMINALS: Copper alloy, with gold plate over nickel plate.

<sup>2</sup> END CONTACTS: Coin silver, with gold plate over nickel plate.

<sup>3</sup> CENTER CONTACTS & ALL TERMINALS: Copper alloy, with gold plate over nickel plate.

<sup>4</sup> END CONTACTS: Coin silver, silver plated.

<sup>5</sup> CENTER CONTACT & ALL TERMINALS: Copper alloy, silver plated.

<sup>6</sup> TERMINALS: Copper alloy, with matte-tin over nickel plate.

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

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

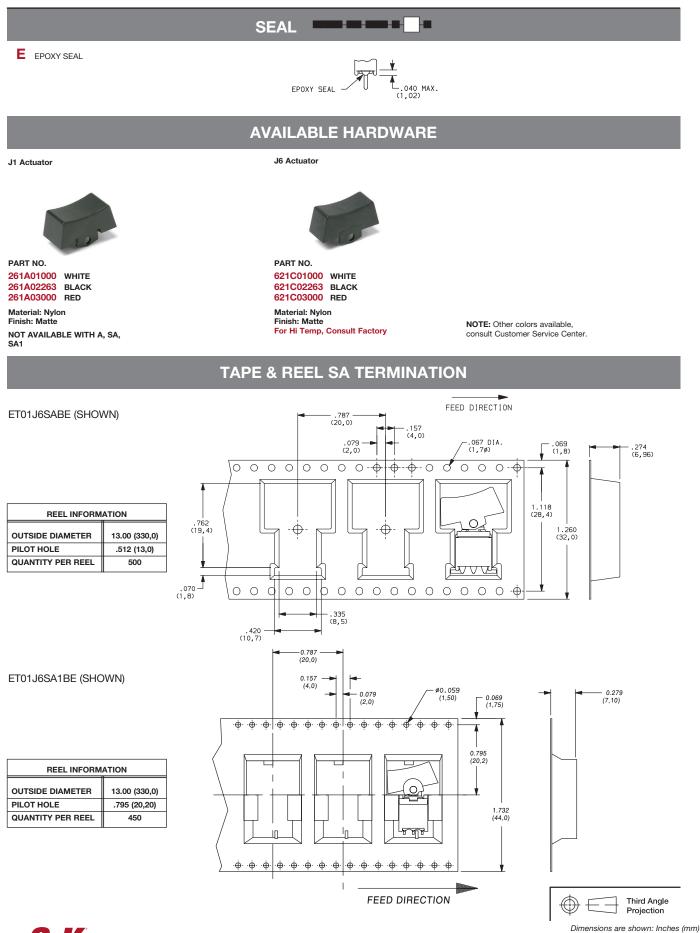


Dimensions are shown: Inches (mm) Specifications and dimensions subject to change



Rocker

æ m





Rocker

0

### Features/Benefits

- Compact size—small footprint
- Single and double pole models
- PC and panel mounting options available Medical Equipment
- RoHS compliant



Models Available

#### Specifications

- CONTACT RATING: Q contact material (TX01 models): 3 AMPS @ 120 V AC or 28 V DC. All other models: 2 AMPS @ 120 V AC or 28 V DC. See page G-49 for additional ratings.
- ELECTRICAL LIFE: TX01 models: 60.000 make-and-break cycles at full load. All other models: 30,000 cycles.
- CONTACT RESISTANCE: Below 20 m Ω typ. initial @ 2-4 V DC, 100 mA, for both silver and gold plated contacts.
- INSULATION RESISTANCE:  $10^9 \Omega$  min.

DIELECTRIC STRENGTH: 1000 Vrms min. @ sea level.

OPERATING TEMPERATURE: -30°C to 85°C.

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

NOTE: Any models supplied with B, G, P, Q or R 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.

Typical Applications

- Telecommunications
- Instrumentation





### **Materials**

CASE: Glass filled nylon 6/6, flame retardant, heat stabilized or diallyl phthalate (DAP), (UL 94V-0) or glass filled nylon 4/6, flame retardant, heat stabilized.

ACTUATOR: Nylon, black standard.

BUSHING: Brass, nickel plated.

HOUSING: Stainless steel.

SWITCH SUPPORT: Brass, matte-tin plated.

MOUNTING BRACKET: Stainless steel.

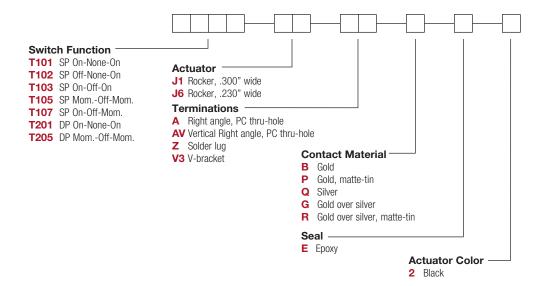
- END CONTACTS: B contact material: Copper alloy, with gold plate over nickel plate. Q contact material: Coin silver, silver plated. See page G-49 for additional contact materials.
- CENTER CONTACTS & TERMINALS: B contact material: Copper alloy, with gold plate over nickel plate. Q contact material: Copper alloy, silver plated. See page G-49 for additional contact materials.

TERMINAL SEAL: Epoxy.

HARDWARE: Nut, Screws & Lockwasher: Stainless steel. Standoff: Nylon standard.

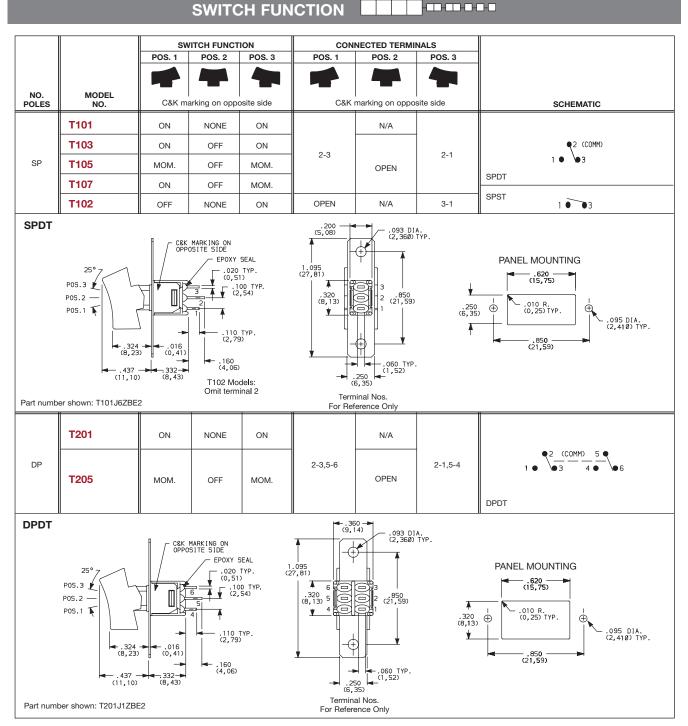
### **Build-A-Switch**

To order, simply select desired option from each category and place in the appropriate box. Available options are shown and described on pages G-46 through G-50. 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.









MOM. = Momentary

All models Number and a potions when ordered with G, Q or R contact material.

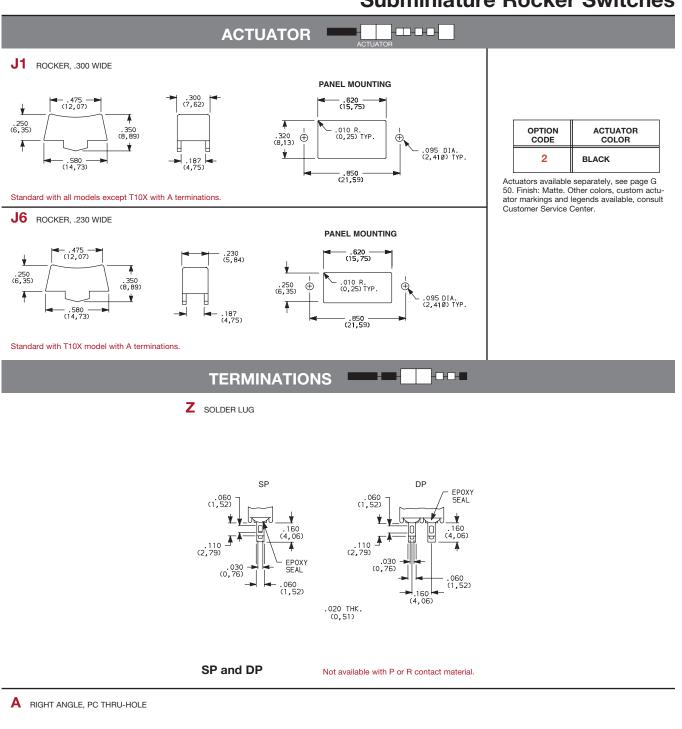
0

G



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









2



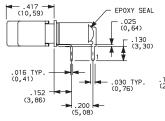
.200

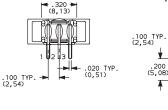
¥

.230 (5,84)

A

.030 TYP. (0,76)





on T10X models with A terminations.

PC MOUNTING .043 DIA (1,090) TYP

.200 (5,08)

¥

Ā



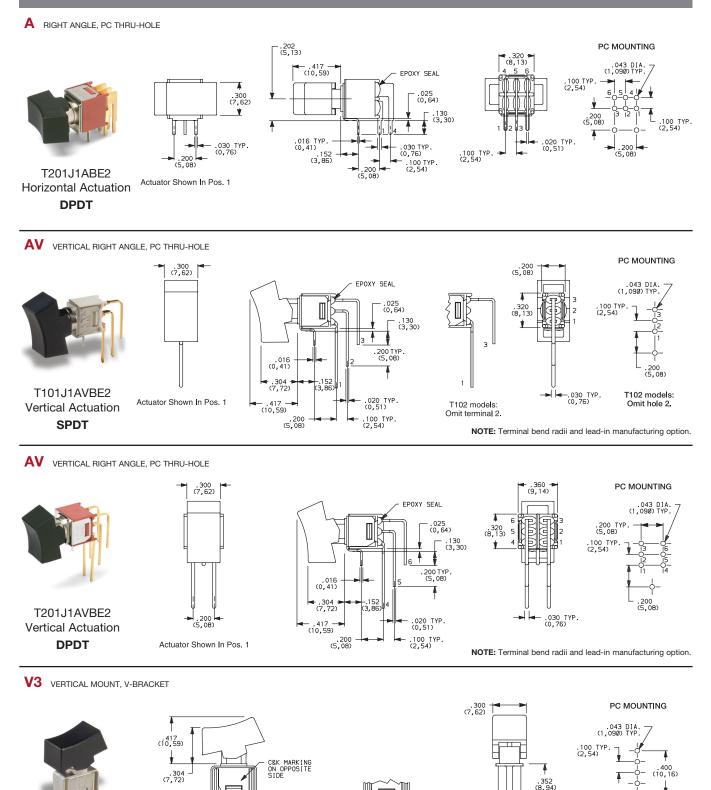
T101J6ABE2 Horizontal Actuation SPDT

Not available with T102 model. J6 actuator standard only Third Angle \$ Projection

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

> > www.ckswitches.com

TERMINATIONS





G

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

T102 models: Omit center hole.

.130 (3,30

.200 (5,08)

.030 TYP.

Third Angle

Projection



T102 models:

Omit terminal 2.

.020 x .030 TYP. (0,51) (0,76)

T101J1V3BE2

SPDT

EPOXY SEAL

.016 TYP. (0,41)

> .100 TYP (2,54)

⊢.400 -(10,16)

Actuator Shown In Pos. 1

### TERMINATIONS

V3 VERTICAL MOUNT, V-BRACKET

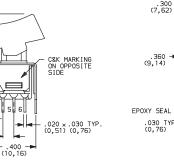
,417 (10,59)

1

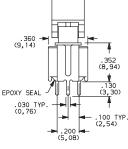
.304

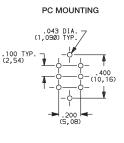
.016 TYP. (0,41)

> .100 TYP (2,54)



Actuator Shown In Pos. 1





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Т



T201J1V3BE2 DPDT

### CONTACT MATERIAL

| OPTION<br>CODE | CONTACT<br>MATERIAL   | TERMINAL<br>PLATING    | RATINGS          |   |  |
|----------------|-----------------------|------------------------|------------------|---|--|
| В              |                       | GOLD <sup>1</sup>      | LOW LEVEL/       | 0.4 VA MAX. @ 20 V AC OR DC MAX.  |  |
| Р              | GOLD <sup>3</sup>     | MATTE-TIN 6            | DRY CIRCUIT      |   |  |
| Q              | SILVER <sup>4,5</sup> | SILVER 5               | POWER            | TX01 MODELS: 3 AMPS @ 120 V AC OR 28 V DC.<br>ALL OTHER MODELS: 2 AMPS @ 120 V AC OR 28 V DC. |  |
| G              | GOLD OVER             | GOLD <sup>3</sup>      | LOW LEVEL/DRY    | TX01 MODELS: 0.4 VA MAX @ 20 V AC OR DC MAX. OR<br>3 AMPS @ 120 V AC OR 28 V DC.              |  |
| R              | SILVER <sup>2,3</sup> | MATTE-TIN <sup>6</sup> | CIRCUIT OR POWER | ALL OTHER MODELS: 0.4 VA MAX @ 20 V AC OR DC MAX. OR<br>2 AMPS @ 120 V AC OR 28 V DC.         |  |

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

<sup>1</sup> CONTACTS & TERMINALS: Copper alloy, with gold plate over nickel plate.

<sup>2</sup> END CONTACTS: Coin silver, with gold plate over nickel plate.

 $^{3}$  CENTER CONTACTS & ALL TERMINALS: Copper alloy, with gold plate over nickel plate.

<sup>4</sup> END CONTACTS: Coin silver, silver plated.

 $^5$  CENTER CONTACT & ALL TERMINALS: Copper alloy, silver plated.

<sup>6</sup> TERMINALS: Copper alloy, with matte-tin over nickel plate.

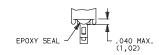
NOTE: Any models supplied with B, G, P, Q & R contact material are RoHS compliant.

All models **N** with all options when ordered with G, Q, or R contact material. B contact material standard with A, AV, V3 terminations. Q contact material standard with C & Z terminations.

P & R contact materials not available with Z terminations.



E EPOXY SEAL



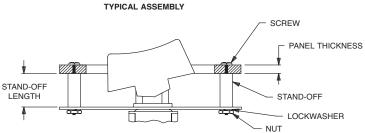


Dimensions are shown: Inches (mm) Specifications and dimensions subject to change



## AVAILABLE HARDWARE

Panel mounting hardware for rocker and lever handle switches is available separately. Mounting hardware consists of two screws, two nuts, two standoffs and two lockwashers per switch, and is available for panel thicknesses of 1/16, 3/32 and 1/8 inch. See part numbers below.



| PART NO.  | PANEL THK.      | STANDOFF LENGTH |
|-----------|-----------------|-----------------|
| 761101000 | 1/16 IN. (1,59) | .295 (7,49)     |
| 761102000 | 3/32 IN. (2,38) | .264 (6,71)     |
| 761103000 | 1/8 IN. (3,18)  | .233 (5,92)     |

**NOTE:** Additional nuts, screws and lockwashers available separately, see Technical Data section of this catalog.



Material: Nylon Finish: Matte

**NOTE:** Other colors, custom actuator markings and legends available, consult Customer Service Center.

Material: Nylon Finish: Matte



TTT

G



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





### Features/Benefits

- Thermoset UL 94V-0 housing
- Rugged construction
- Variety of actuator and termination options
- **RoHS** compliant

### **Typical Applications**

- Small equipment
- Shut-off switch



UL 61058-1 c 🕄 us



#### CONTACT RATING: CASE: Diallyl phthalate (DAP) (UL 94V-0). 9201 Model: ACTUATOR: Nylon, black standard. GP (general purpose) FRAME-REAR MOUNT OPTIONS: Spring steel, black. 6 AMPS 125 VAC 50/60 Hz T85 10,000 cycles (10E3) BUSHING: Brass, nickel plated. 3 AMPS 250 VAC 50/60 Hz T85 10,000 cycles HOUSING: Stainless steel. R (resistive) 6 AMPS 30 VDC T85 10,000 cycles 9221 Model: GP (general purpose) 10 AMPS 125 VAC 50/60 Hz T85 10,000 cycles 5 AMPS 250 VAC 50/60 Hz T85 10,000 cycles R (resistive) 10 AMPS 30 VDC T85 10,000 cycles ELECTRICAL LIFE: 25,000 make-and-break cycles at full load. 2-4 V DC, 100 mA. Service Center. INSULATION RESISTANCE: $10^9 \Omega$ min. DIELECTRIC STRENGTH: 2,500 Vrms min. @ sea level. OPERATING TEMPERATURE: -30°C to 85°C. SOLDERABILITY: Per MIL-STD-202F method 208D, or EIA RS-186E method 9 (1 hour steam aging).

# **Materials**

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

MOUNTING BRACKET: Stainless steel.

END CONTACTS: 9201 Model: Coin silver, silver plated. 9221 Model: Silver cadmium oxide.

CENTER CONTACTS: Copper alloy, silver plated

ALL TERMINALS: 9201 Model: Copper alloy, silver plated. 9221 Model: Copper alloy, matte-tin plated.

TERMINAL SEAL: Epoxy.

HARDWARE: Nut, Screw & Lockwasher: Stainless steel. Standoff: Nylon standard, aluminum available, consult Customer

\*Cadmium used in electrical contacts is acceptable for RoHS. NOTE: Any models supplied with Q 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.

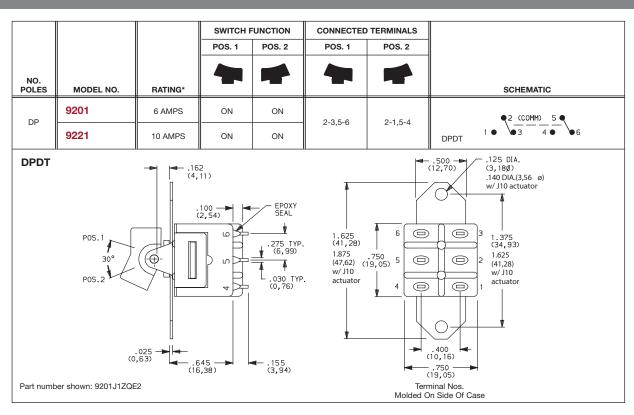
### **Build-A-Switch**

**Specifications** 

To order, simply select desired option from each category and place in the appropriate box. Available options are shown and described on pages G-52 through G-55. For additional options not shown in catalog, consult Customer Service Center.

| Switch Function<br>9201 DP On-On, 6 Amps<br>9221 DP On-On, 10 Amps<br>Actuator<br>J1 Rocker<br>J2 Lever<br>J3 Rocker<br>J37 Rocker with metal frame | Terminations<br>Z Solder lug (9201 only)<br>AV2 Vertical right angle, PC thru-ho<br>C PC Thru-hole (9201 only)<br>Z4 Quick connect<br>Contact Material<br>Q Silver | Seal  |  |
|---|--|---|--|
|   |  | <ul><li>E Epoxy</li><li>D No Seal</li></ul>   |  |
|   |  | Actuator Color<br>2 Black<br>1 White<br>3 Red | Frame Color<br>2 Black<br>NONE No frame color required                         |
|   |  |   | Dimensions are shown: Inches (<br>Specifications and dimensions subject to cha |





All 9000 Series models meet international dimensional and electrical requirements.

J1 ROCKER

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.310

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J2 LEVER

\* See CONTACT MATERIAL, page G-54, for complete ratings.

9221 model must be ordered with Z4 terminations and D seal option.

#### 

-.531 -(13,49)

 $\oplus$ 

- .664 -(16,87)

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¥

.299

4

.084 (2,13)

> .740 (18,80)

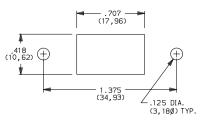
G–53

| OPTION<br>CODE | ACTUATOR<br>COLOR |
|----------------|-------------------|
| 2              | BLACK             |
| 1              | WHITE             |
| 3              | RED               |

Finish: Matte. Other colors, custom actuator markings and legends available, consult Customer Service Center.

**NOTE:** Hardware: two each—mounting screws, nuts, lockwashers and standoffs for 1/8 inch thick panel are supplied standard on all switches with panel mounting brackets. Actuators available separately, see page G-55. Hardware available separately, see Technical Data section of this catalog.

#### PANEL MOUNTING





.365

.365 (9,27)



TYY

G

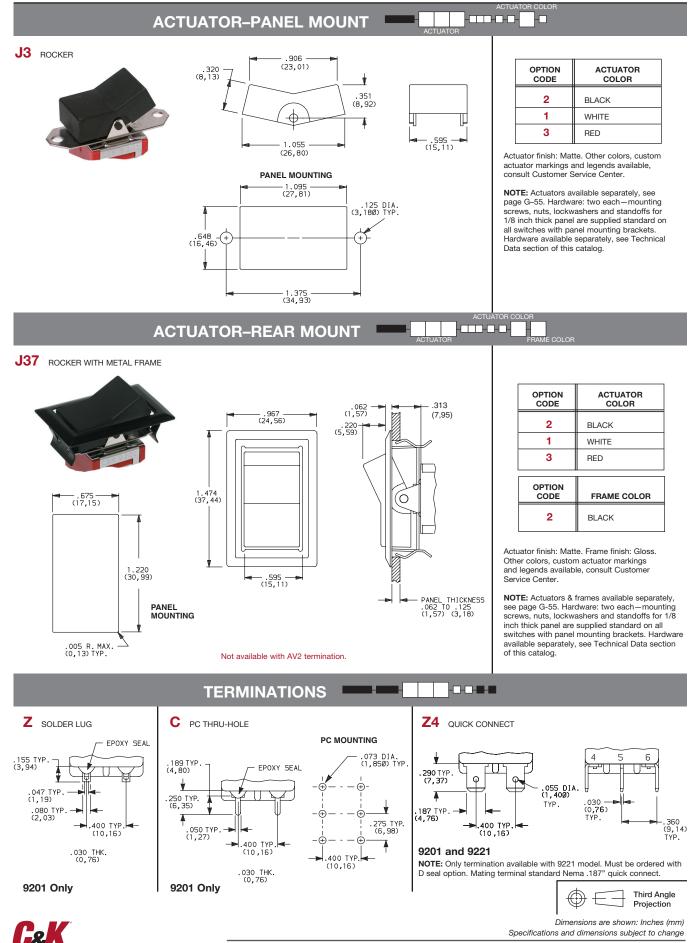


Dimensions are shown: Inches (mm) Specifications and dimensions subject to change

### 

.332 R. (8,43)

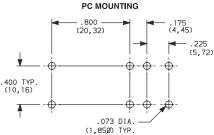
.156



Rocker

#### **TERMINATIONS** AV2 VERTICAL RIGHT ANGLE, PC THRU-HOLE EPOXY SEAL A٦ 6 ۵ .750 (19,05) 5 ഗ $\subset$ .125 (3,18) L 4------Ł .100 MIN. .750 (2,54) .050 TYP. (1,27) TERMINALS AND SUPPORT .170 (4,32) 800 (19,05) (20,32) .030 TYP. (0,76) .400 SECTION A-A 9201J1AV2QE2 .225 (5,72) .175 Terminal Nos. Molded Vertical Actuation On Side of Case DPDT PC MOUNTING

Actuator Shown In Pos. 1



#### 9201 Only

NOTE: Terminal bend radii and lead-in manufacturing option. Terminal spacing greater than 3mm at all points.

#### **CONTACT MATERIAL**

| OPTION<br>CODE | MODEL | CONTACT MATERIAL           | TERMINAL<br>PLATING          | RATINGS   |
|----------------|-------|----------------------------|------------------------------|---|
|                | 9201  | SILVER <sup>1,2</sup>      | SILVER OR TIN <sup>2,5</sup> | GP (general purpose) 6 AMPS 125 VAC 50/60 Hz T85 10,000 cycles (10E3)<br>3 AMPS 250 VAC 50/60 Hz T85 10,000 cycles<br>R (resistive) 6 AMPS 30 VDC T85 10,000 cycles |
| Q              | 9221  | SILVER CADMIUM OXIDE 3,4,6 | TIN <sup>5</sup>             | GP (general purpose) 10 AMPS 125 VAC 50/60 Hz T85 10,000 cycles<br>5 AMPS 250 VAC 50/60 Hz T85 10,000 cycles<br>R (resistive) 10 AMPS 30 VDC T85 10,000 cycles      |

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

- <sup>1</sup> END CONTACTS: Coin silver, silver plated. <sup>3</sup> END CONTACTS: Silver cadmium oxide.
- <sup>2</sup> CENTER CONTACTS & ALL TERMINALS: Copper alloy, silver plated.

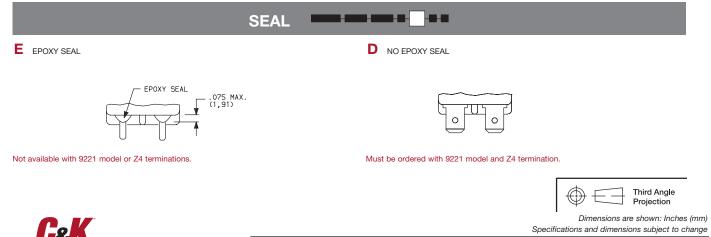
NOTE: Any models supplied with Q contact material is RoHS compliant. 9221 model must be ordered with Z4 terminations and D seal option.

All 9000 Series models meet international dimensional and electrical requirements.



<sup>4</sup> CENTER CONTACTS: Copper alloy, silver plated. <sup>5</sup> Z4 TERMINALS ONLY: Copper alloy, tin plated.

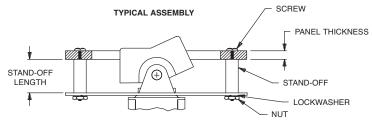
<sup>6</sup> Cadmium used for electrical contacts is acceptable for RoHS.





### **AVAILABLE HARDWARE**

Panel mounting hardware for rocker and lever handle switches is available separately. Mounting hardware consists of two screws, two nuts, two standoffs and two lockwashers per switch, and is available for panel thicknesses of 1/16, 3/32 and 1/8 inch. See part numbers below.



#### J1 & J2 actuators

| PART NO.  | PANEL THK.      | STANDOFF LENGTH |
|-----------|-----------------|-----------------|
| 761101000 | 1/16 IN. (1,59) | .295 (7,49)     |
| 761102000 | 3/32 IN. (2,38) | .264 (6,71)     |
| 761103000 | 1/8 IN. (3,18)  | .233 (5,92)     |



G





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

### Features/Benefits

- Nice actuator styling with multiple options
- Guards to prevent accidental actuation
- Momentary and maintained functions
- IP54 splash proof rubber boot option
- RoHS compliant

## c **FL**us UL 61058-1

### **Specifications**

**Materials** 

Typical Applications

Small appliances

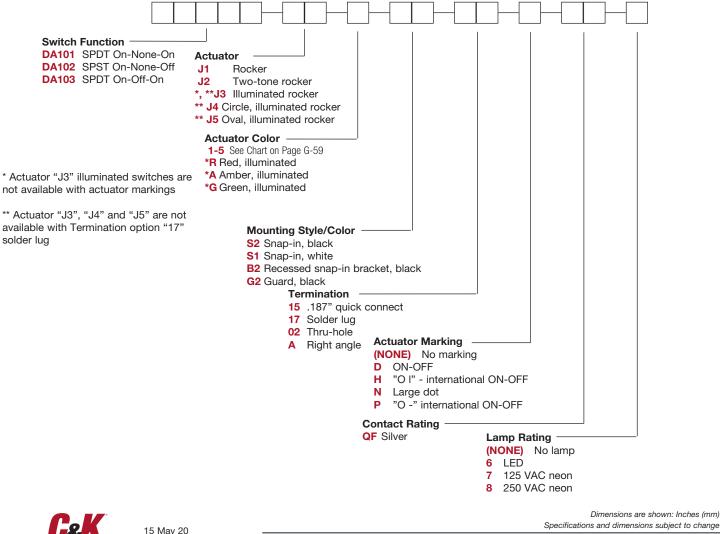
CONTACT RATING: 16 AMPS @ 125 VAC, 1/3 HP; 10 AMPS @ 250 VAC, 1/2 HP. 10 AMPS @ 125 VAC, 6 AMPS @ 250 VAC. ELECTRICAL LIFE: 10,000 make and break cycles at full load. INSULATION RESISTANCE:  $10^8 \Omega$  min. DIELECTRIC STRENGTH: 1,500 VRMS @ sea level. OPERATING TEMPERATURE: -20°C to +85°C

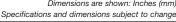
HOUSING AND ACTUATOR: 6/6 nylon (UL94V-2), black, matte finish. ILLUMINATED ACTUATOR: Polycarbonate, matte finish. CENTER CONTACTS: Silver plated, copper alloy. END CONTACTS: Silver plated. ALL TERMINALS: Silver plated, copper alloy.

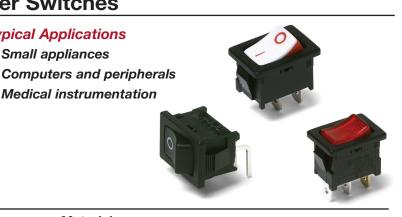
NOTE: Specifications and materials listed above are for switches with standard options. For information on specific and custom switches, consult Customer Service Center.

### **Build-A-Switch**

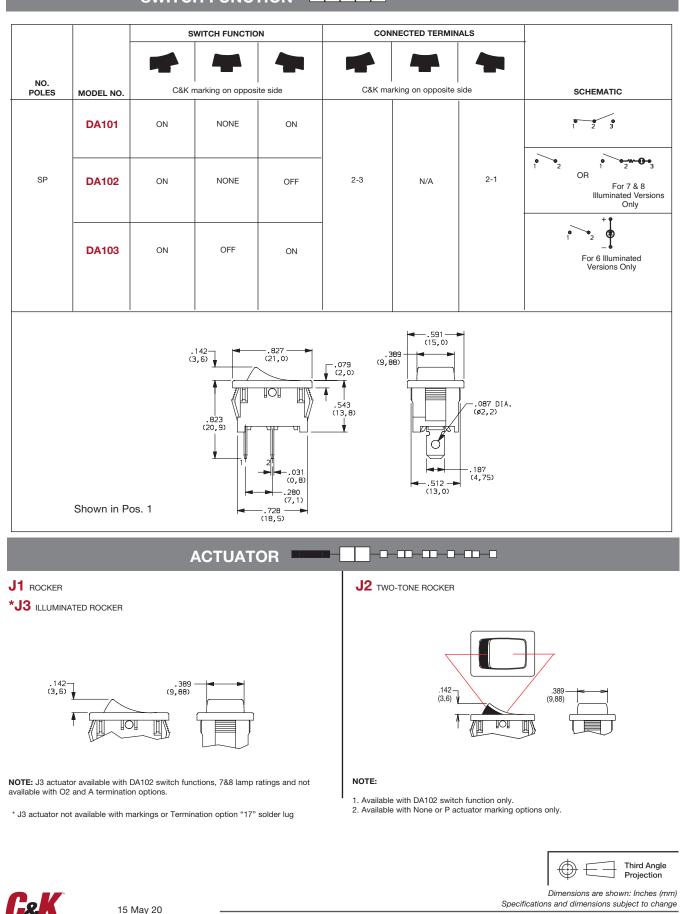
To order, simply select desired option from each category and place in the appropriate box. Available options are shown and described on pages G-57 through G-60. For additional options not shown in catalog, consult Customer Service Center.



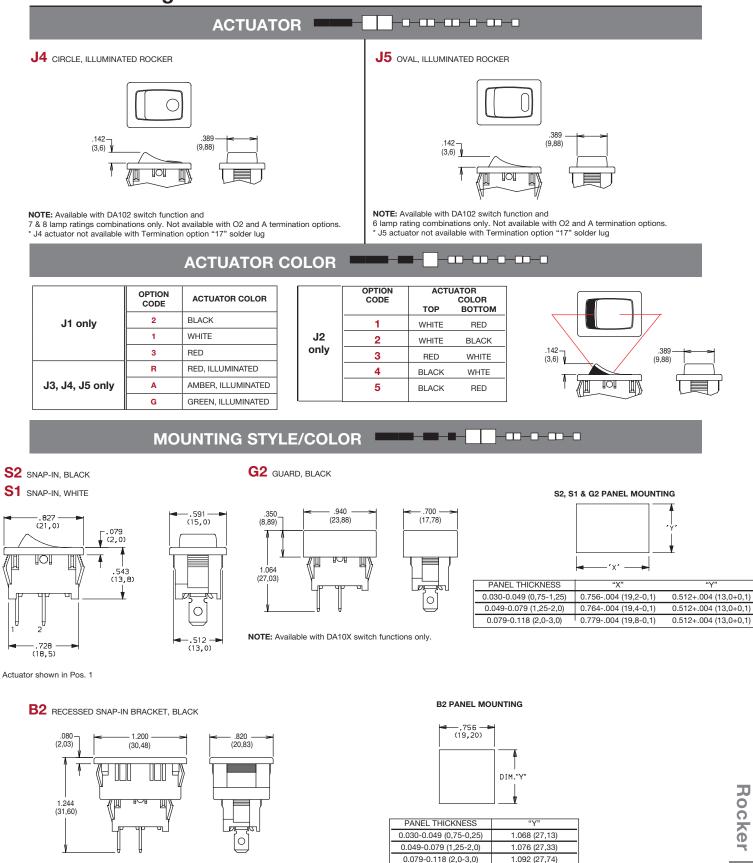










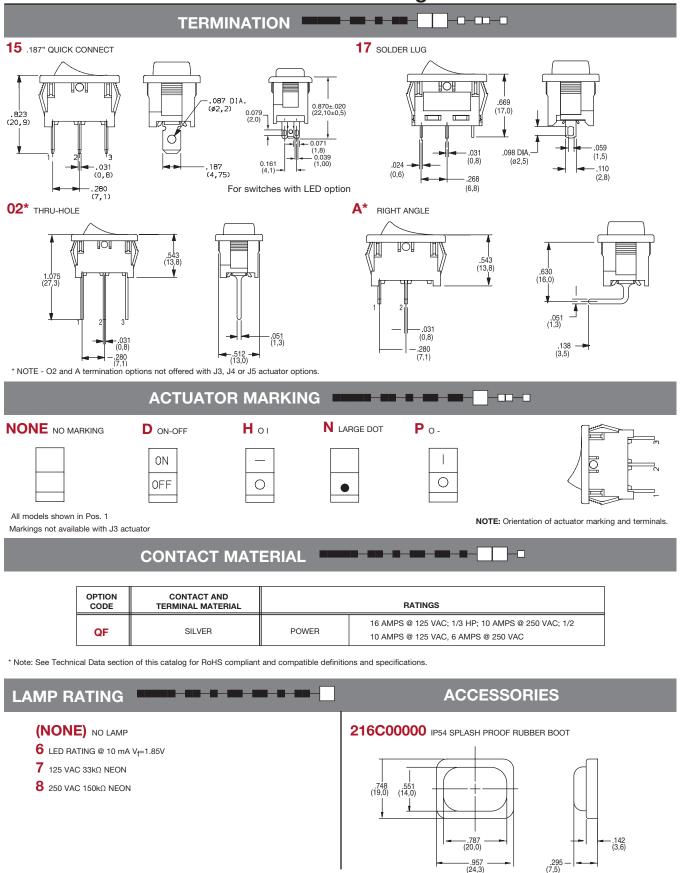


NOTE: Available with DA10X switch functions only.

**C**&K

Third Angle

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



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

15 May 20

G–60

### Features/Benefits

- Momentary and maintained models
- PC and quick connect terminals
- Recessed bracket available prevents accidental actuation
- RoHS compliant
- Gold plated options available

### Specifications

### CONTACT RATING: D101, D102, D103, D105, D108, D201, D202, D203 GP (general purpose) 4 AMPS 125 VAC 50/60 Hz T85 10,000 cycles 2 AMPS 250 VAC 50/60 Hz T85 10,000 cycles R (resistive) 4 AMPS 30 VDC T85 10,000 cycles D501, D502, D503, D508, D601, D602, D608 GP (general purpose) 10 AMPS 125 VAC 50/60 Hz T85 10,000 cycles 5 AMPS 250 VAC 50/60 Hz T85 10,000 cycles R (resistive) 10 AMPS 30 VDC T85 10,000 cycles 0.4VA @ 20V AC/DC (gold plating) available upon request ELECTRICAL LIFE: 10,000 make-and-break cycles at full load. INSULATION RESISTANCE: $10^9 \Omega$ min. DIELECTRIC STRENGTH: 1.000 Vrms min. @ sea level.

### Typical Applications

- Small appliances
- Computers and peripherals
- Medical instrumentation



UL 61058-1 CNUS

#### Materials

- ACTUATOR & HOUSING: 6/6 nylon (UL 94V-2), color black, finish: matte.
- MOVABLE CONTACTS: D10X and D20X Models: Copper, silver plated. D50X and D60X Models: Coin silver, silver plated.
- STATIONARY CONTACTS AND TERMINALS: Copper or brass, silver plated. Gold plating available.

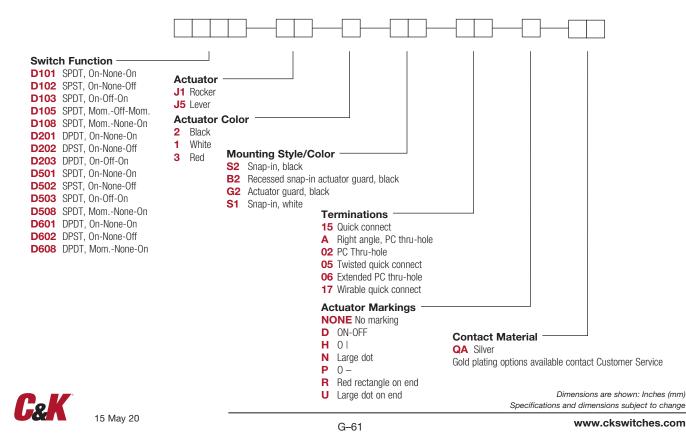
CONTACT SPRING: Music wire or stainless steel.

OPERATING TEMPERATURE: -30°C to +65°C

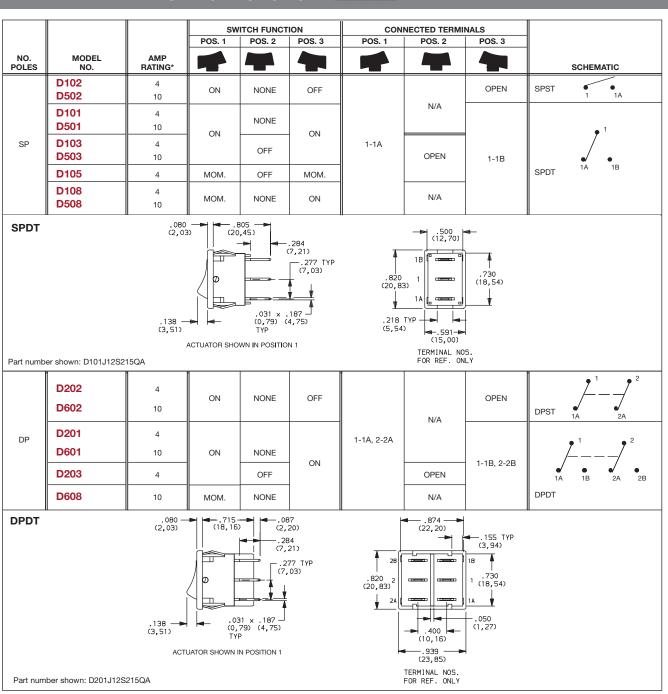
NOTE: Specifications and materials listed above are for standard switches. For information on specific and custom switches, consult Customer Service Center.

### 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 G–61 through G–65. For additional options not shown in catalog, consult Customer Service Center.



YYY



SWITCH FUNCTION

MOM. = Momentary \*AMP RATING: see G-60 See CONTACT MATERIALS, page G-64.



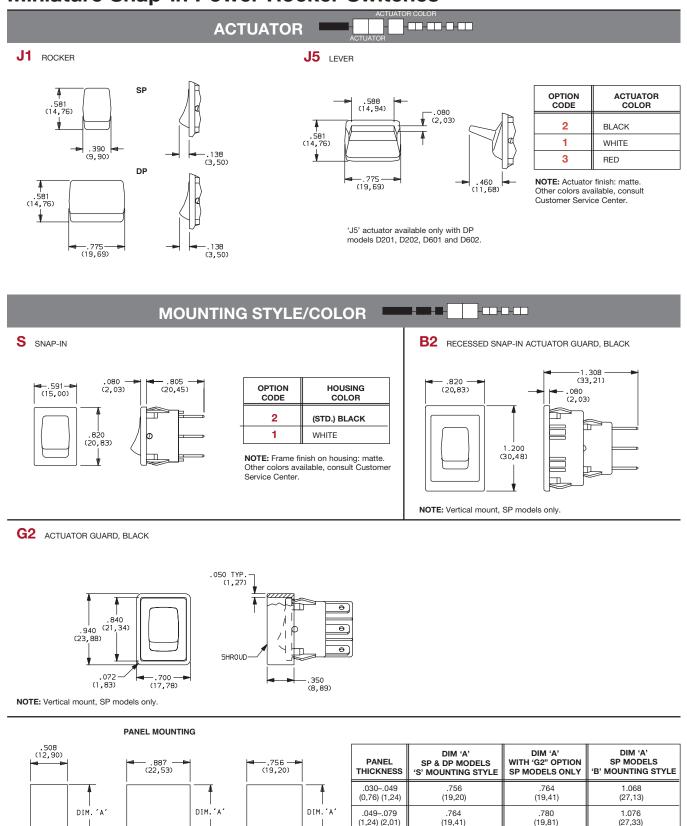


2

G–62



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



Third Angle

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

(27,33)

1.092

(27,74)

n/a

 $\bigcirc$ 

Rocker

G

SP MODELS

'B2' mounting style

SP MODELS

'S' & 'G2' mounting styles

DP MODELS

'S' mounting style

NOTE: Blank insert available for SP models only, see page G-64.

15 May 20

(1,24) (2,01)

.079–.118

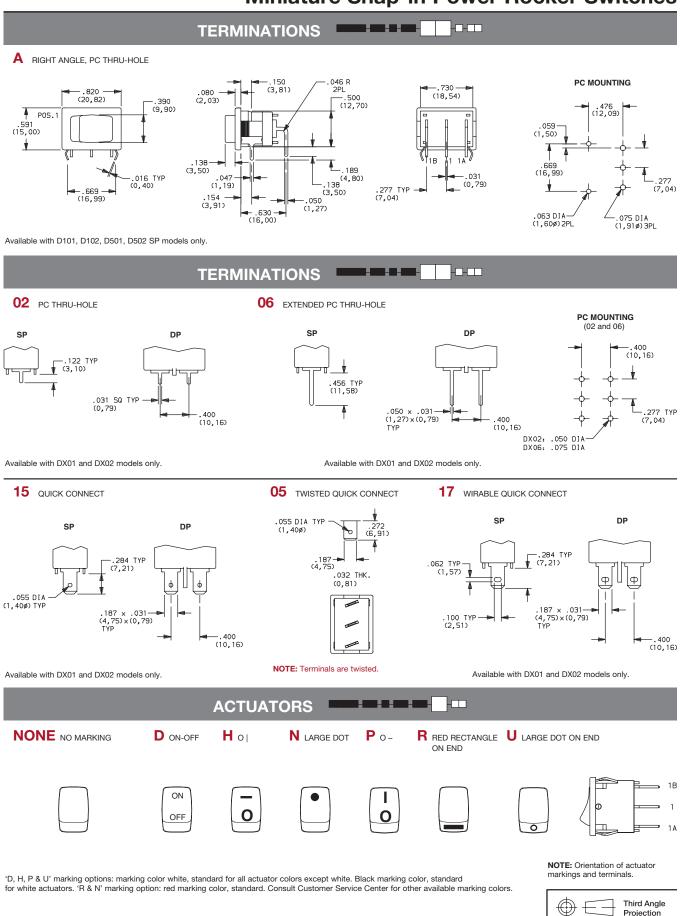
(2,01) (3,00)

G-63

(19,41)

.780

(19.81)



G

2

G–64

Dimensions are shown: Inches (mm)

Specifications and dimensions subject to change

|  |                                 | CONTA  | CT MAT   | ERIAL         |  |  |
|--|---------------------------------|--|--|---------------|--|--|
|  | OPTION<br>CODE                  | CONTACT AND<br>TERMINAL MATERIAL   |  |               | RATINGS  |  |
|  | QA                              | SILVER <sup>1</sup>  | D101, D102, D103, D105, D108, D201, D202, D203         GP (general purpose)       4 AMPS 125 VAC 50/60 Hz T85 10,000 cycles         2 AMPS 250 VAC 50/60 Hz T85 10,000 cycles         R (resistive)       4 AMPS 30 VDC T85 10,000 cycles         D501, D502, D503, D508, D601, D602, D608         GP (general purpose)       10 AMPS 125 VAC 50/60 Hz T85 10,000 cycles         5 AMPS 250 VAC 50/60 Hz T85 10,000 cycles         F (resistive)       10 AMPS 30 VDC T85 10,000 cycles         R (resistive)       10 AMPS 30 VDC T85 10,000 cycles |               |  |  |
| D50X and D6  | 0X MODELS: Coir                 | 200X MODELS: Copper, silve<br>silver, silver plated.<br>NALS: Copper or brass, silve |  | 28 Jus 215    | 0.4VA @ 20V AC/DC Gold plated options avilable contact Customer Service.                               |  |
|  |                                 |  | AVAIL  | ABLE HARD     | WARE   |  |
| ert<br>Only  |                                 |  |  |               | Recessed Actuator Guard,<br>SP Only  |  |
| ART NO.<br>57190200 Bi<br>aterial: Nylon 6/            |                                 | .730<br>(18,54)<br>.822<br>(20,68)   | .358<br>(3,09)<br>   | .500          | 599D02000 BLACK<br>Material: 6/6 Nylon   |  |
| nish: Matte  | -                               |  |  |               | Finish: Matte  |  |
| tuator Guard   |                                 |  |  |               | PART NO.<br>216C00000 IP54 SPLASH PROOF RUBBER BOOT  |  |
| ART NO.<br>D4C22000<br>aterial: PBT the<br>nish: Matte | .940<br>(23,88)<br><br><br>(1,1 | 72 700   | .780<br>19,81)   | . 350 (8, 89) | $\begin{array}{c ccccccccccccccccccccccccccccccccccc$  |  |
| Cel  | 15 May                          |  |  |               | Third Angle<br>Projection<br>Dimensions are shown: Inche<br>Specifications and dimensions subject to a |  |

G–65



### Features/Benefits

- 3 AMPS to 10 AMPS
- Quick connect terminals
- Double pole in miniature size
- Recessed bracket available—prevents accidental actuation
- RoHS compliant

### **Typical Applications**

- Computers
- Appliances
- Electric tools



### Specifications

CONTACT RATING: DM21, DM22: GP (general purpose)

- 3 AMPS 125 VAC 50/60 Hz T85 10,000 cycles 2 AMPS 250 VAC 50/60 Hz T85 10,000 cycles B (resistive)
- 3 AMPS 30 VDC T85 10,000 cycles

DM61, DM62:

- GP (general purpose)
  - 10 AMPS 125 VÁC 50/60 Hz T85 10,000 cycles 5 AMPS 250 VAC 50/60 Hz T85 10,000 cycles
- R (resistive)

10 AMPS 30 VDC T85 10,000 cycles

ELECTRICAL LIFE: 10,000 make-and-break cycles at full load.

INSULATION RESISTANCE: 10<sup>9</sup>  $\Omega$  min.

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

OPERATING TEMPERATURE: -20°C to +65°C

### Materials

HOUSING & ACTUATOR: 6/6 nylon (UL94V-2), black.

MOVABLE CONTACTS: DM2X Models: Copper, silver plated. DM6X Models: Coin silver, silver plated.

STATIONARY CONTACTS & TERMINALS: Copper or brass, silver plated.

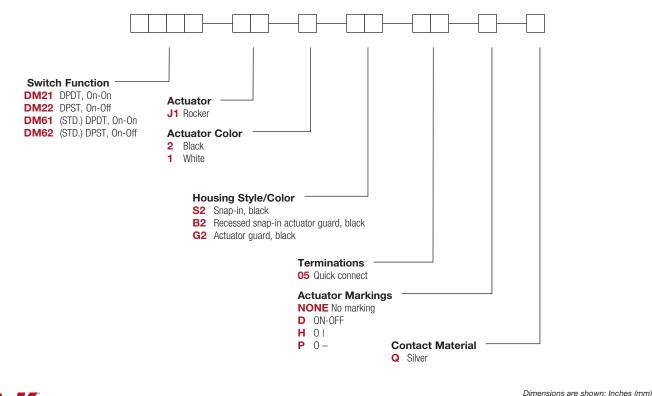
CONTACT SPRING: Music wire or stainless steel.

NOTE: Any models supplied with Q contact material are RoHS compliant.

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

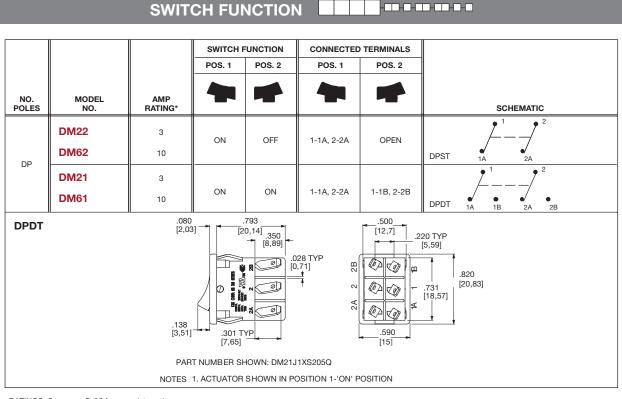
### **Build-A-Switch**

To order, simply select desired option from each category and place in the appropriate box. Available options are shown and described on pages G–66 and G–69. For additional options not shown in catalog, consult Customer Service Center.





Specifications and dimensions subject to change



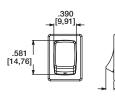
RATINGS: See page G-65 for complete ratings.



UL 61058-1 tested to 30C temperature rise @ 6,000 cycles.



J1 ROCKER



| OPTION<br>CODE | ACTUATOR<br>COLOR |  |
|----------------|-------------------|--|
| 2              | BLACK             |  |
| 1              | WHITE             |  |

NOTE: Actuator finish: matte. Other colors available, consult Customer Service Center.

#### **HOUSING STYLE/COLOR** -----S2 SNAP-IN, BLACK B2 RECESSED SNAP-IN ACTUATOR GUARD, BLACK .820 1.308 [33,22] [20,83] .793 .590 .080 [2,03] [20,14] [15] .080 [2.03] .820 1.200 [30,48] [20,83] NOTE: Housing finish: matte. Other colors available, consult Customer Service Center. Third Angle Projection Dimensions are shown: Inches (mm) Specifications and dimensions subject to change

www.ckswitches.com

TTT

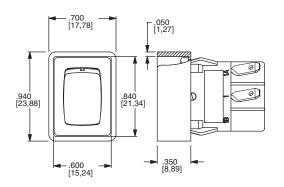
G

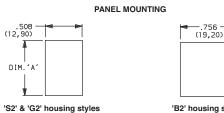
15 May 20

G-67

#### HOUSING STYLE/COLOR ----

G2 ACTUATOR GUARD, BLACK





DIM.'A' 'B2' housing style

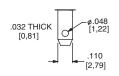
NOTE: Blank insert available for SP models only, see page H-76.

| PANEL<br>THICKNESS | DIM 'A'<br>'S2' & 'G2'<br>HOUSING STYLES | DIM 'A'<br>'G2' OPTION<br>SP MODELS ONLY | DIM 'A'<br>'B2'<br>HOUSING STYLES |
|--------------------|--|--|-----------------------------------|
| .030–.049          | .756                                     | 0.764                                    | 1.068                             |
| (0,76) (1,24)      | (19,20)                                  | (19,41)                                  | (27,13)                           |
| .049–.079          | .764                                     | 0.780                                    | 1.076                             |
| (1,24) (2,01)      | (19,41)                                  | (19,81)                                  | (27,33)                           |
| .079–.118          | .780                                     | n/a                                      | 1.092                             |
| (2,01) (3,00)      | (19,81)                                  |  | (27,74)                           |

-0-0

### **TERMINATIONS**

05 QUICK CONNECT



|                 | ACTUATOR  |                      | •••••       |  |
|-----------------|-----------|----------------------|-------------|--|
| NONE NO MARKING | D ON-OFF  | Нот                  | <b>P</b> o- |  |
|                 | ON<br>OFF | <b>–</b><br><b>0</b> |             |  |

NOTE: Orientation of actuator markings and terminals.

<sup>1</sup>D & P' marking options: marking color white, standard for all actuator colors except white actuators. Black marking color standard for white actuators. Consult Customer Service Center for other available marking colors.

### **CONTACT MATERIAL**

| OPTION<br>CODE | CONTACT AND<br>TERMINAL MATERIAL | RATINGS     |   |   |  |  |
|----------------|----------------------------------|-------------|---|---|--|--|
| •              | SILVER <sup>1,2</sup>            | DM21, DM22: | GP (general purpose)  | 3 AMPS 125 VAC 50/60 Hz T85 10,000 cycles |  |  |
| Q              |                                  |             |   | 2 AMPS 250 VAC 50/60 Hz T85 10,000 cycles |  |  |
|                |                                  |             | R (resistive)   | 3 AMPS 30 VDC T85 10,000 cycles           |  |  |
|                |                                  | DM61, DM62: | DM61, DM62: GP (general purpose) 10 AMPS 125 VAC 50/60 Hz T85 1 |   |  |  |
|                |                                  |             |   | 5 AMPS 250 VAC 50/60 Hz T85 10,000 cycles |  |  |
|                |                                  |             | R (resistive)   | 10 AMPS 30 VDC T85 10,000 cycles          |  |  |

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

<sup>1</sup> MOVABLE CONTACT: DM2X Models: Copper, silver plated. DM6X Models: Coin silver, silver plated.

<sup>2</sup> STATIONARY CONTACTS & TERMINALS: Copper or brass, silver plated.

NOTE: Any models supplied with Q contact material are RoHS compliant.



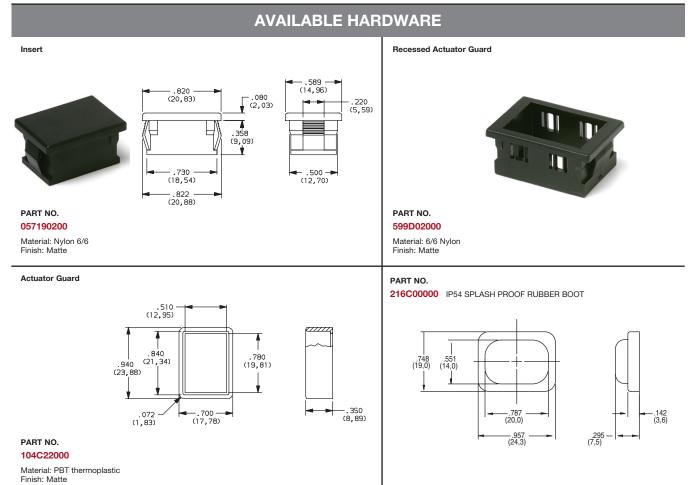
Projection

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





c 91 US (15



G



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



G-69

# **DM** Series **Miniature Illuminated Power Rocker Switches**



### Features/Benefits

- 3 AMPS to 10 AMPS
- Illuminated LED
- Positive detent
- **RoHS** compliant

### **Typical Applications**

- Instrumentation
- Industrial
- Office machines

| c <b>AJ</b> <sup>15</sup> ( | JL 61058-1 |
|-----------------------------|------------|
|-----------------------------|------------|

**Specifications** 

CONTACT RATING:

GP (general purpose)

R (resistive)

R (resistive)

DM14 and DM24 Models:

DM54 and DM64 Models:

DIELECTRIC STRENGTH: 1.000 Vrms min. @ sea level.

GP (general purpose)

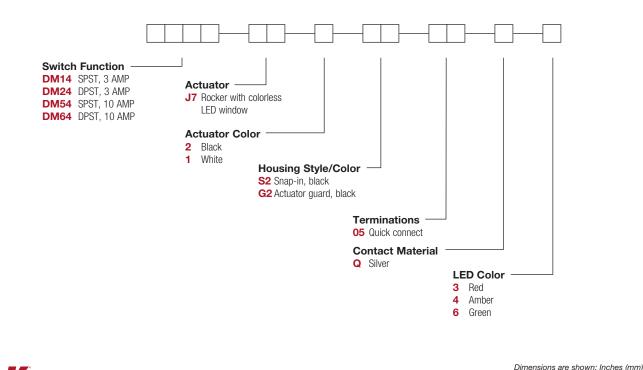
### **Materials**

HOUSING: 6/6 nylon (UL94V-2), black. ACTUATOR: 6/6 nylon (UL94V-2), black. MOVABLE CONTACTS: DM14 and DM24 Models: Copper, silver plated. DM54 and DM64 Models: Coin silver, silver plated. 3 AMPS @ 125 V AC; 2 AMPS @ 250 V AC. STATIONARY CONTACTS & TERMINALS: Copper or brass, silver plated. 3 AMPS 30 VDC 10,000 cycles LED TERMINALS: Brass, unplated. CONTACT SPRING: Music wire or stainless steel. OPERATING TEMPERATURE: -20°C to +65°C 10 AMPS @ 125 V AC; 5 AMPS @ 250 V AC (UL). 10 AMPS 30 VDC 10,000 cycles NOTE: Any models supplied with Q contact material are RoHS compliant. ELECTRICAL LIFE: 10,000 make-and-break cycles at full load. INSULATION RESISTANCE: 10<sup>9</sup> Ω min.

NOTE: Specification and materials listed above are for standard switches. For information on specific and custom switches, 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 G-70 and G-73. For additional options not shown in catalog, consult Customer Service Center.

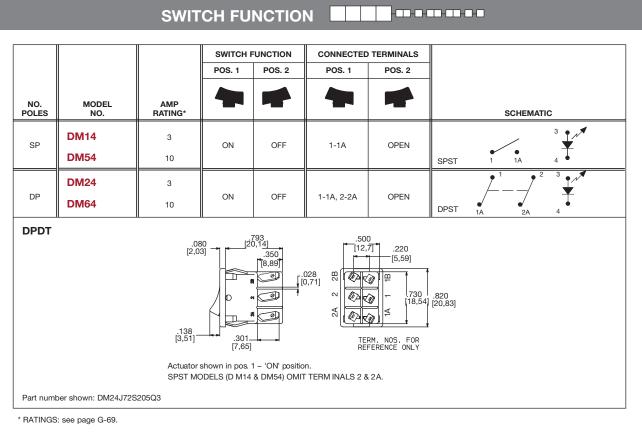




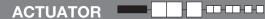


Specifications and dimensions subject to change

# DM Series Miniature Illuminated Power Rocker Switches



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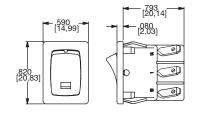


J7 ROCKER WITH COLORLESS LED WINDOW



### HOUSING STYLE/COLOR

SNAP-IN, BLACK



-----

NOTE: Housing finish: matte. Other colors available, consult Customer Service Center.





Third Angle

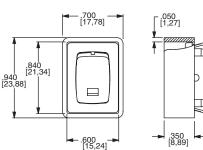
Projection

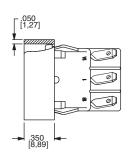
0

# DM Series Miniature Illuminated Power Rocker Switches

### HOUSING STYLE/COLOR

G2 ACTUATOR GUARD, BLACK







NOTE: Blank insert available for SP models only, see page H-80.

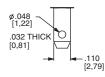
| PANEL<br>THICKNESS         | DIM 'A'<br>'S2' & 'G2'<br>HOUSING STYLES | DIM 'A' with<br>'G2' option<br>SP MODELS ONLY |  |  |
|----------------------------|--|---|--|--|
| .030–.049                  | 0.756                                    | 0.764   |  |  |
| (0,76) (1,24)              | (19,20)                                  | (19,41)                                       |  |  |
| .049–.079                  | 0.764                                    | 0.780   |  |  |
| (1,24) (2,01)              | (19,41)                                  | (19,81)                                       |  |  |
| .079–.118<br>(2,01) (3,00) | .780<br>(19,81)                          |   |  |  |

-0-0

NOTE: Any models supplied with Q contact material are RoHS compliant.

### TERMINATIONS

05 QUICK CONNECT



### CONTACT MATERIAL

| OPTION<br>CODE | CONTACT AND<br>TERMINAL MATERIAL | RATINGS |             |                      |  |  |
|----------------|----------------------------------|---------|-------------|----------------------|--|--|
| •              | SILVER <sup>1,2</sup>            | DOWED   | DM14, DM24: | GP (general purpose) | 3 AMPS @ 125 V AC; 2 AMPS @ 250 V AC.  |  |
| Q              |                                  | POWER   |             | R (resistive)        | 3 AMPS 30 VDC 10,000 cycles            |  |
|                |                                  |         | DM54, DM64: | GP (general purpose) | 10 AMPS @ 125 V AC; 5 AMPS @ 250 V AC. |  |
|                |                                  |         |             | R (resistive)        | 10 AMPS 30 VDC 10,000 cycles           |  |

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

<sup>1</sup> MOVABLE CONTACTS: DM14 and DM24 models: Copper, silver plated. DM54 and DM64 models: Coin silver, silver plated.

<sup>2</sup> STATIONARY CONTACTS & TERMINALS: Copper or brass, silver plated.



### LED COLOR

|             |              |                            |    |                              |          | RECOMMENDED RESISTOR @ VOLTAGE |     |      |  |
|-------------|--------------|----------------------------|----|------------------------------|----------|--------------------------------|-----|------|--|
| OPTION CODE | LED<br>COLOR | FORWARD<br>V <sub>FD</sub> |    | INTENSITY<br>M <sub>CD</sub> | 5V       | 12V                            | 24V |      |  |
| 3           | Red          | 2.1                        | 10 | 4V                           | 1.6 typ. | 270                            | 1K  | 2.2K |  |
| 4           | Amber        | 2.2                        | 20 | 4V                           | 2.5 typ. | 150                            | 510 | 1.2K |  |
| 6           | Green        | 2.1                        | 20 | 4V                           | 2.0 typ. | 150                            | 510 | 1.2K |  |

Rocker



15 May 20

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

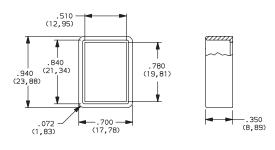
www.ckswitches.com

Third Angle Projection

# DM Series Miniature Illuminated Power Rocker Switches

#### **AVAILABLE HARDWARE** Blank Insert Recessed Bracket — .589 — (14,96) -.820 -(20,83) (2,03) -.220 (5,59) Π .358 (9,09) 730 - .500 -(18,54) -.822 -(20,88) PART NO. PART NO. 057190200 599D02000 Material: Zinc nylon 6/6 Material: 6/6 Nylon Finish: Matte Finish: Matte

Actuator Guard



PART NO. 104C22000

Material: PBT thermoplastic Finish: Matte

Rocker



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



G

15 May 20

**C**&K

G–73



#### Features/Benefits

- Power switching up to 16 AMPS
- Sub-panel and Front-panel mounting
- PC and quick connect terminals
- Multi-position and multi-pole function
- RoHS compliant

#### **Typical Applications**

- Computers
- Power supplies
- Appliances
- Fitness equipment
- Off-road vehicles



#### **Specifications**

CONTACT RATING: 16 AMPS @ 125, 250 V AC; 1/4 HP @ 125 V AC; 1/2 HP @ 250 V AC; 6 AMPS @ 48 V DC, 2 AMPS @ 60 V DC, 11 AMPS @ 30 V DC

ELECTRICAL LIFE: 10,000 make-and-break cycles at full load. INSULATION RESISTANCE:  $10^9 \Omega$  min.

DIELECTRIC STRENGTH: 1,000 Vrms min. @ sea level. OPERATING TEMPERATURE: -20°C to +85°C Materials

HOUSING & ACTUATOR: 6/6 nylon (UL 94V-2), black, finish: matte. CONTACTS: Fine silver, silver plated.

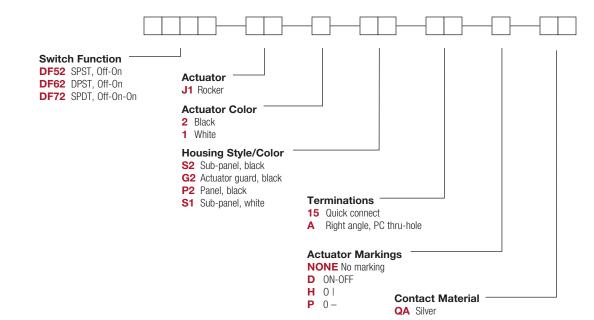
TERMINALS: Copper, silver plated.

CONTACT SPRING: Music wire or stainless steel.

**NOTE:** Specifications and materials listed above are for standard switches. For information on specific and custom switches, 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 G–74 thru G–76. For additional options not shown in catalog, consult Customer Service Center.



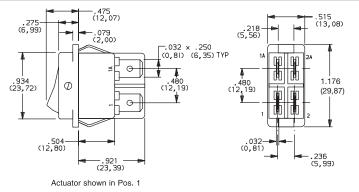


# DF Series Power Rocker Switches

### SWITCH FUNCTION

|              |              | SWITCH F |        | CONNECTED | TERMINALS  |            |
|--------------|--------------|----------|--------|-----------|------------|------------|
|              |              | POS. 1   | POS. 2 | POS. 1    | POS. 2     |            |
| NO.<br>POLES | MODEL<br>NO. |          |        |           |            | SCHEMATIC  |
| SP           | DF52         | OFF      | ON     | OPEN      | 1-1A       | SPST 1A    |
| DP           | DF62         | OFF      | ON     | OPEN      | 1-1A, 2-2A | DPST 1A 2A |

Part Number shown DF62J12S215QA



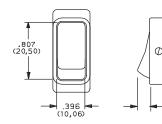
| NO.<br>POLES | MODEL<br>NO. | POS. 1 | POS. 2 | POS. 3 | POS. 1 | POS. 2   | POS. 3               | SCHEMATIC  |
|--------------|--------------|--------|--------|--------|--------|----------|----------------------|--|
| SP           | DF72         | OFF    | ON     | ON     | OPEN   | 1 / 2-2A | 1 / 2-1A<br>1 / 2-2A | POS. 1 POS. 2 POS. 3<br>1a 2a 1a 2a 1a 2a<br>1 2 1 2 1 2 |

All models

#### 

-.275 (6,99)

J1 ROCKER

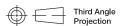


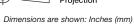
| OPTION<br>CODE | ACTUATOR<br>COLOR |
|----------------|-------------------|
| 2              | BLACK             |
| 1              | WHITE             |

**NOTE:** Actuator finish: matte. Other colors available, consult Customer Service Center.



G



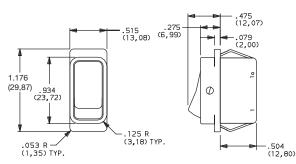




# DF Series Power Rocker Switches

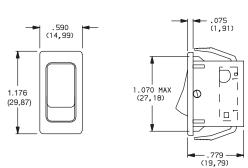
### HOUSING STYLE/COLOR

#### S SUB-PANEL

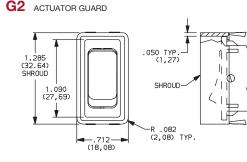


NOTE: DF52 & DF62 models only.





**NOTE:** Not available with 'A' termination. Available in black only.

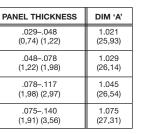


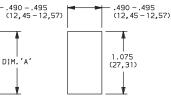
**NOTE:** Not available with 'A' termination. Available in black only.

| OPTION<br>CODE | HOUSING<br>COLOR |
|----------------|------------------|
| 2              | (STD.) BLACK     |
| 1              | WHITE            |

NOTE: Housing finish: matte. Other colors available, consult Customer Service Center.

#### PANEL MOUNTING



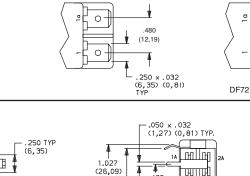


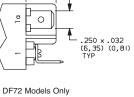
DF52 & DF62 Models with 'S' housing style

DF52, DF62 & DF72 Models with 'P2' & 'G2' housing style

#### TERMINATIONS

15 QUICK CONNECT

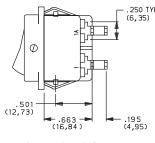




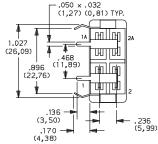
------

.417 (10,59)

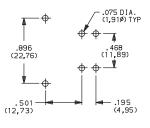
A RIGHT ANGLE, PC THRU-HOLE



Actuator shown in Pos. 1 NOTE: DF52 and DF62 Models Only



PC MOUNTING



Dimensions are shown: Inches (mm)



Rocker



# DF Series Power Rocker Switches

| NONE NO MARKING D ON-OFF | H oj                 | 2           |  |
|--------------------------|----------------------|-------------|--|
|                          |                      | <b>P</b> o- |  |
| OFF                      | <b>O</b><br><b>_</b> | O<br>I      |  |

**NOTE:** Orientation of actuator markings and terminals.

<sup>1</sup>D, H, & P' marking options: marking color white, standard for all actuator colors except white. Marking color black, standard for white actuators. Consult Customer Service Center for other available marking colors.

| CONTACT MATERIAL |  |  |
|------------------|--|--|
|------------------|--|--|

| OPTION<br>CODE | CONTACT AND<br>TERMINAL MATERIAL |  | RATINGS   |
|----------------|----------------------------------|--|---|
| QA             | A SILVER <sup>1,2</sup> POWER    |  | 16 AMPS @ 125, 250 V AC; 1/4 HP @ 125 V AC; 1/2 HP @ 250 V AC; 6 AMPS @ 48 V DC (UL), 2 AMPS @ 60 V DC, 11 AMPS @ 30 V DC |
|                |                                  |  | 16 AMPS @ 125, 250 V AC; 1/4 HP @ 125 V AC; 1/2 HP @ 250 V AC (UL)  |

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

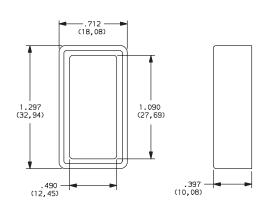
<sup>1</sup> CONTACTS: Fine silver, silver plated.

<sup>2</sup> TERMINALS: Copper, silver plated.

AVAILABLE HARDWARE

All models

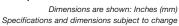
#### Actuator Guard



# PART NO. 285B02000

Material: Nylon 6/6 Finish: Matte





G

Rocker



#### Features/Benefits

- Round actuator and body
- Nice styling
- Multiple illuminated versions available
- *IP65* splash proof rubber boot option

# c Sus UL 61058-1

#### Specifications

CONTACT RATING:

16 AMPS @ 125 VAC, 10 AMPS @ 250 VAC. 16 AMPS @ 125 VAC, 10 AMPS @ 250 VAC. ELECTRICAL LIFE: 10,000 make and break cycles at full load. INSULATION RESISTANCE:  $10^8 \Omega$  min. DIELECTRIC STRENGTH: 1,500 VRMS @ sea level. OPERATING TEMPERATURE: -20°C to + 85°C

## **Typical Applications**

- Appliances, small and large
- Office equipment
- Computers and peripherals
- Audio/Video equipment
- RoHS compliant



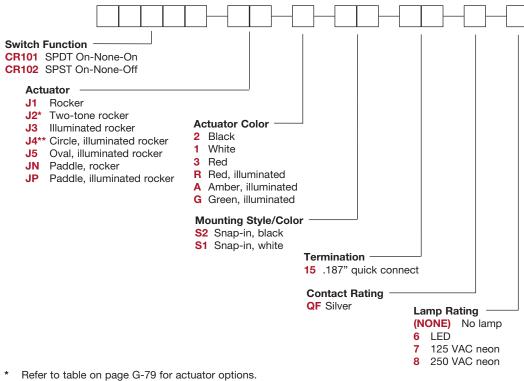
#### Materials

HOUSING AND ACTUATOR: 6/6 nylon (UL94V-2), matte finish. ILLUMINATED ACTUATOR: Polycarbonate, matte finish. CENTER CONTACTS: Silver plated, copper alloy. END CONTACTS: Silver plated AgSn0<sub>2</sub>ln0<sub>3</sub>. ALL TERMINALS: Silver plated, copper alloy.

**NOTE:** Specifications and materials listed above are for switches with standard options. For information on specific and custom switches, 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 G–78 through G–80. For additional options not shown in catalog, consult Customer Service Center.

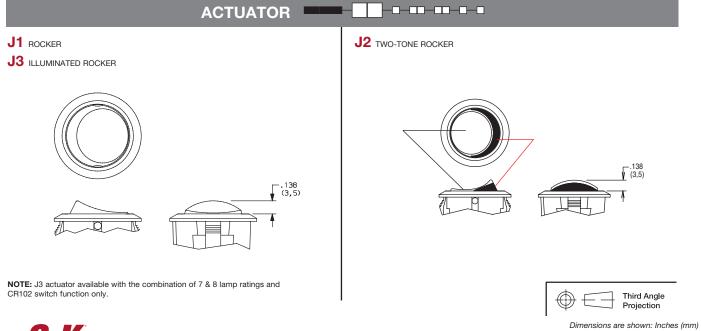






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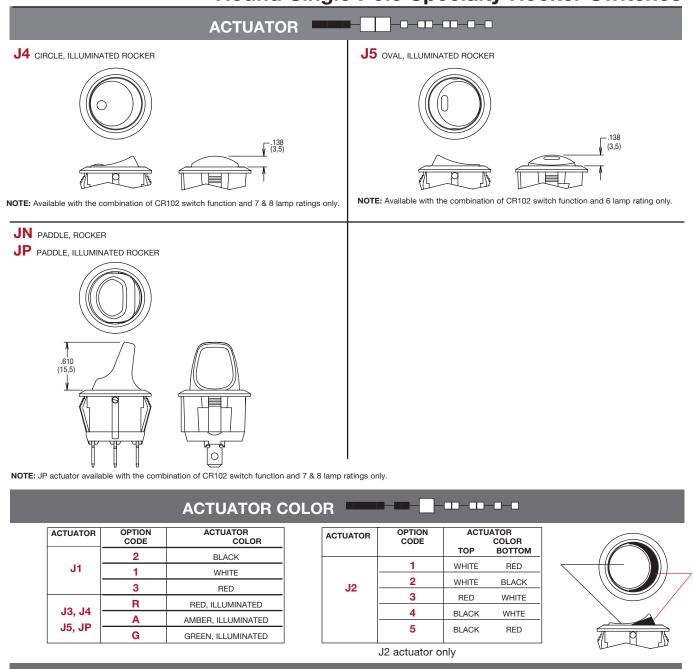
|              |           | SWITCI | H FUNCT   | ION                      |        |                      |          | 1                                 |
|--------------|-----------|--------|---|--------------------------|--------|----------------------|----------|-----------------------------------|
|              |           | S      | WITCH FUNCTIO   | N                        | COI    | NNECTED TERMIN       | ALS      |                                   |
|              |           | Pos. 1 | Pos. 2  | Pos. 3                   | Pos. 1 | Pos. 2               | Pos. 3   |                                   |
|              |           |        |   |                          |        |                      |          |                                   |
| NO.<br>POLES | MODEL NO. | C&K r  | narking on opposi   | te side                  | C&K m  | arking on opposite   | side     | SCHEMATIC                         |
|              | CR101     | ON     | NONE  | ON                       | 2-3    |                      | 2-1      | 1 2 3                             |
|              |           |        |   |                          | -      | N/A                  |          | 0R                                |
| SP           | CR102     | ON     | NONE  | OFF                      |        |                      |          | For 7 & 8<br>Illuminated Versions |
|              |           |        |   |                          |        |                      |          |                                   |
|              |           |        | .906 DIA.<br>(#23,0)<br>.079-<br>(2,0)<br>1 2 <sup>1</sup><br>1 2 <sup>1</sup><br>1 2 <sup>1</sup><br>1559 (14,2) | , 0303<br>(0,8)<br>(7,1) | 1)     | 780 DIA.<br>(\$19,8) | 086 DIA. |                                   |



**C&K** 

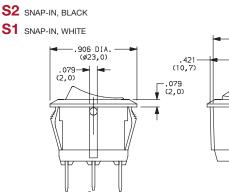
Specifications and dimensions subject to change

Rocker



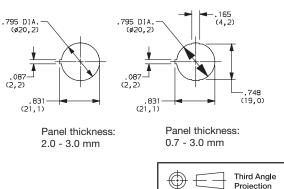
## **MOUNTING STYLE/COLOR**





.780 DIA. (ø19,8) Ο

PANEL MOUNTING





Rocker

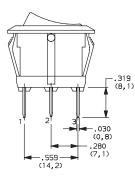
G

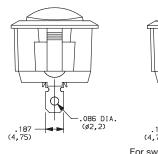
Specifications and dimensions subject to change

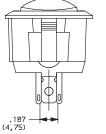
Dimensions are shown: Inches (mm)

# TERMINATION

#### 15 .187" QUICK CONNECT







For switches with LED option

-0

#### CONTACT MATERIAL

| OPTION<br>CODE | CONTACT AND<br>TERMINAL MATERIAL | RATINGS |                                      |                |  |
|----------------|----------------------------------|---------|--------------------------------------|----------------|--|
| QF             | SILVER                           | POWER   | 16 AMPS @ 125 VAC; 10 AMPS @ 250 VAC | c <b>RU</b> us |  |

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

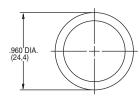
## LAMP RATING

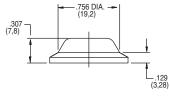
#### (NONE) NO LAMP

- $6 \hspace{0.1 cm} \text{LED RATING @ 10 mA V}_{f} = 1.85 \text{V}$
- 7 125 VAC 33kΩ NEON
- 8 250 VAC 150kΩ NEON

## ACCESSORIES

#### 377C00000 IP65 SPLASH PROOF RUBBER BOOT





Rocker



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

G–81





#### Features/Benefits

- Bevelled frame
- Illuminated versions available
- Easy panel mount installation

## **Typical Applications**

- Computers and peripherals
- Small appliances
- Instrument panels
- Industrial controls
- RoHS compliant



# c Wus UL 61058-1

#### Specifications

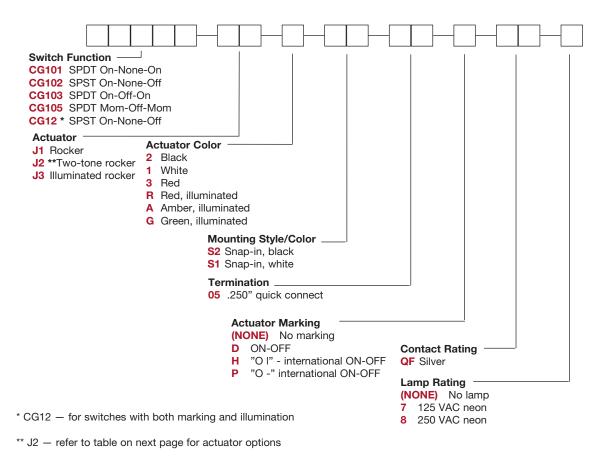
#### Materials

CONTACT RATING: 16 AMPS @ 125 VAC, 10 AMPS @ 250 VAC. 10 AMPS @ 250 VAC, 6 AMPS @ 250 VAC. ELECTRICAL LIFE: 10,000 make and break cycles at full load. INSULATION RESISTANCE:  $10^8 \Omega$  min. DIELECTRIC STRENGTH: 1,500 VRMS @ sea level. OPERATING TEMPERATURE:  $-20^{\circ}$ C to  $+85^{\circ}$ C HOUSING AND ACTUATOR: 6/6 nylon (UL94V-2), black, matte finish. ILLUMINATED ACTUATOR: Polycarbonate, matte finish. CENTER CONTACTS: Silver plated, copper alloy. END CONTACTS: Silver plated. ALL TERMINALS: Silver plated, copper alloy.

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

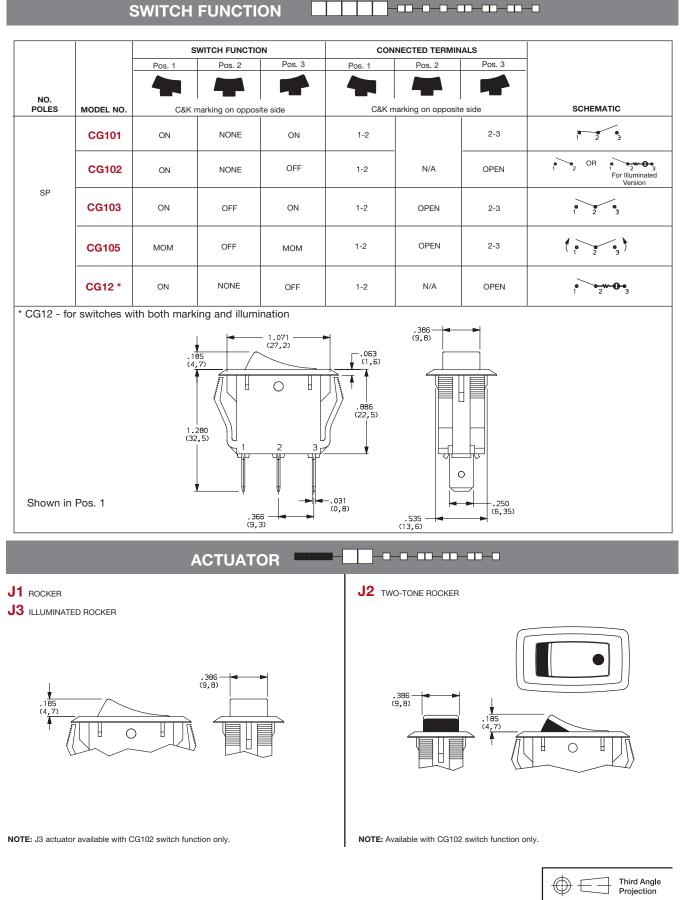
#### **Build-A-Switch**

To order, simply select desired option from each category and place in the appropriate box. Available options are shown and described on pages G–87 through G–89. For additional options not shown in catalog, consult Customer Service Center.





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





Rocker

G

#### 

| ACTUATOR | OPTION<br>CODE | ACTUATOR<br>COLOR  |
|----------|----------------|--------------------|
|          | 2              | BLACK              |
| J1       | 1              | WHITE              |
|          | 3              | RED                |
| J3       | R              | RED, ILLUMINATED   |
| 33       | Α              | AMBER, ILLUMINATED |
|          | G              | GREEN, ILLUMINATED |

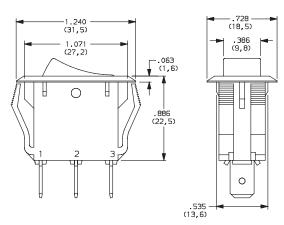
| OPTION<br>CODE | ACTUATOR<br>COLOR |        |  |  |
|----------------|-------------------|--------|--|--|
|                | TOP               | BOTTOM |  |  |
| 1              | WHITE             | RED    |  |  |
| 2              | WHITE             | BLACK  |  |  |
| 3              | RED               | WHITE  |  |  |
| 4              | BLACK             | WHTE   |  |  |
| 5              | BLACK             | RED    |  |  |
| 12 actuator o  | nlv               |        |  |  |

J2 actuator only

### MOUNTING STYLE/COLOR

S2 SNAP-IN, BLACK

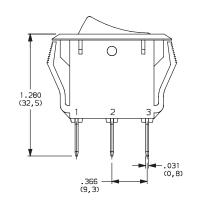
S1 SNAP-IN, WHITE



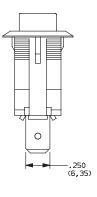
Shown in Pos. 1

### TERMINATION



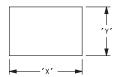






PANEL MOUNTING

-----



| PANEL THICKNESS         | "X"                 | "Y"                   |
|-------------------------|---------------------|-----------------------|
| 0.030-0.049 (0,75-1,25) | 1.087004 (27,6-0,1) | 0.543+.004 (13,8+0,1) |
| 0.049-0.079 (1,25-2,0)  | 1.094004 (27,8-0,1) | 0.543+.004 (13,8+0,1) |
| 0.079-0.118 (2,0-3,0)   | 1.102004 (28,0-0,1) | 0.543+.004 (13,8+0,1) |



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|                 | ACTUATOR MARKING |  |
|-----------------|------------------|--|
| NONE NO MARKING | D ON-OFF         |  |
|                 | ON<br>OFF        |  |
| Н от            | <b>P</b> o-      |  |
| -<br>0          |                  | NOTE: Orientation of actuator marking and terminals<br>Shown in Pos. 1 |
|                 |                  | Shown in Pos. 1  |

# CONTACT MATERIAL

| OPTION<br>CODE | CONTACT AND<br>TERMINAL MATERIAL | RATINGS |   |
|----------------|----------------------------------|---------|---|
| QF             | SILVER                           | POWER   | 16 AMPS @ 125 VAC; 10 AMPS @ 250 VAC<br>10 AMPS @ 250 VAC |

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

# LAMP RATING

(NONE) NO LAMP

7 125 VAC 33kΩ NEON

8 250 VAC 150kΩ NEON

NOTE: Lamp rating for J3 actuator option.







#### Features/Benefits

- Illuminated versions available
- Positive detent
- Snap-in mounting

## Typical Applications

- Floor care products
- Power outlet strips
- HVAC units
- RoHS compliant





#### Specifications

CONTACT RATING: 16 AMPS @ 125 VAC, 1/3 HP; 10 AMPS @ 250 VAC, 1/2 HP. ELECTRICAL LIFE: 10,000 make and break cycles at full load. INSULATION RESISTANCE:  $10^8 \Omega$  min. DIELECTRIC STRENGTH: 1,500 VRMS @ sea level. OPERATING TEMPERATURE: -20°C to +80°C

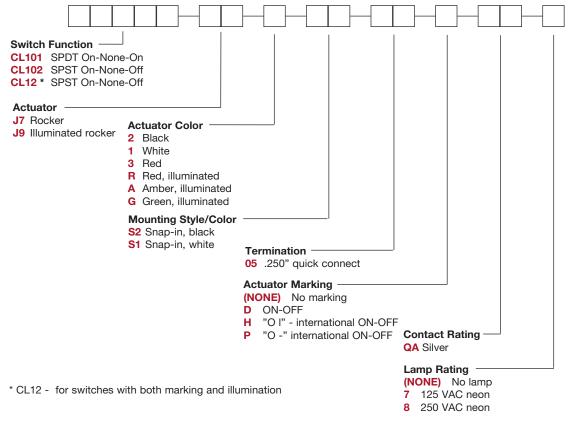
#### Materials

HOUSING AND ACTUATOR: 6/6 nylon (UL94V-2), black, matte finish. ILLUMINATED ACTUATOR: Polycarbonate, matte finish. CENTER CONTACTS: Silver plated, copper alloy. END CONTACTS: Silver plated. ALL TERMINALS: Silver plated, copper alloy.

NOTE: Specifications and materials listed above are for switches with standard options. For information on specific and custom switches, 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 G–91 through G–93. For additional options not shown in catalog, consult Customer Service Center.



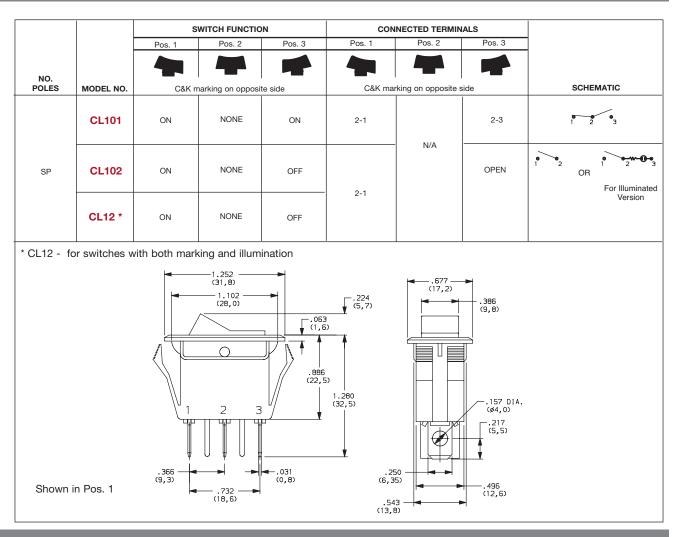


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G

Rocker

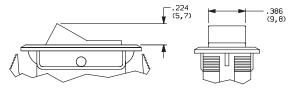
## SWITCH FUNCTION



#### 

J7 ROCKER

J9 ILLUMINATED ROCKER



NOTE: J9 actuator available with CL102 & CL12 switch function only.

#### ACTUATOR COLOR

#### <u>------</u>

| OPTION | ACTUATOR           |
|--------|--------------------|
| CODE   | COLOR              |
| 2      | BLACK              |
| 1      | WHITE              |
| 3      | RED                |
| R      | RED, ILLUMINATED   |
| Α      | AMBER, ILLUMINATED |
| G      | GREEN, ILLUMINATED |



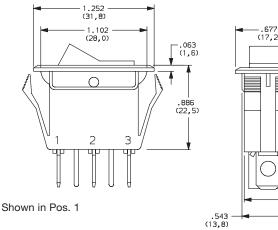
Dimensions are shown: Inches (mm) Specifications and dimensions subject to change



### MOUNTING STYLE/COLOR

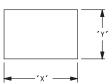
#### S2 SNAP-IN, BLACK

S1 SNAP-IN, WHITE



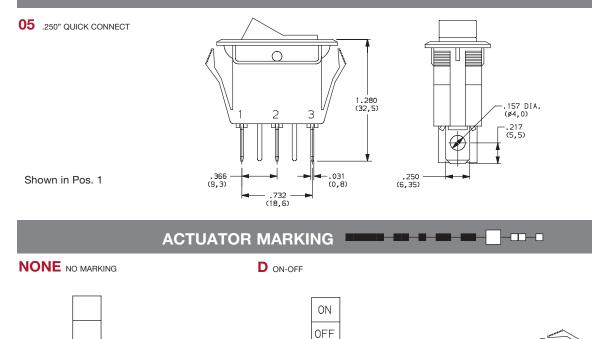
 PANEL MOUNTING

-----



| PANEL THICKNESS         | "X"                 | "Y"                   |
|-------------------------|---------------------|-----------------------|
| 0.030-0.049 (0,75-1,25) | 1.126004 (28,6-0,1) | 0.551+.004 (14,0+0,1) |
| 0.049-0.079 (1,25-2,0)  | 1.134004 (28,8-0,1) | 0.551+.004 (14,0+0,1) |
| 0.079-0.118 (2,0-3,0)   | 1.150004 (29,2-0,1) | 0.551+.004 (14,0+0,1) |

#### 



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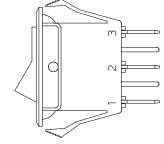
-0

F.e.K



**P** o -





NOTE: Orientation of actuator marking and terminals.

Shown in Pos. 1



G

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

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Third Angle

Projection

| OPTION<br>CODE | CONTACT AND<br>TERMINAL MATERIAL |       | RATINGS   |
|----------------|----------------------------------|-------|---|
| QA             | SILVER                           | POWER | 16 AMPS @ 125 VAC; 1/3 HP;<br>10 AMPS @ 250 VAC, 1/2 HP |

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



(NONE) NO LAMP

7 125 VAC 33kΩ NEON

8 250 VAC 150kΩ NEON

NOTE: Lamp rating for J9 actuator option.



C&K

#### Features/Benefits

- Illuminated versions available
- Easy to install snap-in design
- Multiple actuator and termination styles to choose from

#### Typical Applications

- Computers and peripherals
- Power supplies
- Industrial equipment
- Small appliances
- RoHS compliant



# c**FL**us

#### Specifications

CONTACT RATING: 16 AMPS @ 125 VAC, 1/8 HP; 10 AMPS @ 250 VAC, 1/3 HP. ELECTRICAL LIFE: 10,000 make and break cycles at full load. INSULATION RESISTANCE:  $10^8 \Omega$  min. DIELECTRIC STRENGTH: 1,500 VRMS @ sea level. OPERATING TEMPERATURE: -20°C to +80°C

#### Materials

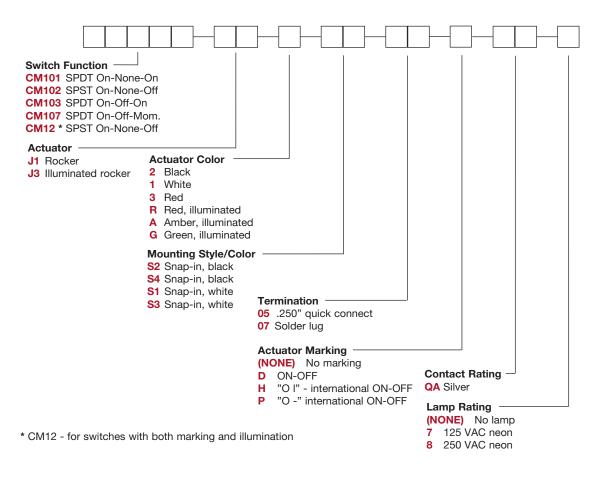
HOUSING AND ACTUATOR: 6/6 nylon (UL94V-2), black, gloss or matte finish.

ILLUMINATED ACTUATOR: Polycarbonate, gloss or matte finish. CENTER CONTACTS: Silver plated, copper alloy. END CONTACTS: Silver plated. ALL TERMINALS: Silver plated, copper alloy.

NOTE: Specifications and materials listed above are for switches with standard options. For information on specific and custom switches, 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 G–95 through G–97. For additional options not shown in catalog, consult Customer Service Center.





Rocker

YYY

|  |           | s      | WITCH FUNCTIO     | N        | CON    | NECTED TERMIN     | ALS    |                                       |
|--|-----------|--------|-------------------|----------|--------|-------------------|--------|---------------------------------------|
|  |           | Pos. 1 | Pos. 2            | Pos. 3   | Pos. 1 | Pos. 2            | Pos. 3 | -                                     |
|  |           |        |                   |          |        |                   |        |                                       |
| NO.<br>POLES   | MODEL NO. | C&K r  | narking on opposi | ite side | C&K ma | rking on opposite | side   | SCHEMATIC                             |
|  | CM101     | ON     | NONE              | ON       |        | N/A               | 2-3    | <b>9</b><br>1 2 <b>9</b><br>3         |
|  | CM102     | ON     | NONE              | OFF      |        | N/A               | OPEN   | OR<br>For Illuminated<br>Version      |
| SP   | CM103     | ON     | OFF               | ON       | 2-1    |                   |        |                                       |
|  | CM107     | ON     | OFF               | MOM.     |        | OPEN              | 2-3    | • • • • • • • • • • • • • • • • • • • |
|  | CM12 *    | ON     | NONE              | OFF      |        | N/A               | OPEN   |                                       |
| * CM12 - for switches with both<br>marking and illumination<br>(3,5)<br>(5,5)<br>(5,5)<br>(5,5)<br>(5,5)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(14,0)<br>(15,0)<br>(16,3)<br>(10,7) |           |        |                   |          |        | (3,0)             |        |                                       |

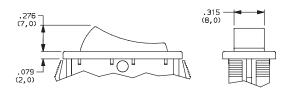
# SWITCH FUNCTION

ACTUATOR ------

J1 ROCKER

G&K

J3 ILLUMINATED ROCKER



NOTE: J3 actuator available with CM102 & CM12 switch function only.

16 May 18



Rocker

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#### ACTUATOR COLOR ------

| OPTION<br>CODE | ACTUATOR<br>COLOR  |  |
|----------------|--------------------|--|
| 2              | BLACK              |  |
| 1              | WHITE              |  |
| 3              | RED                |  |
| R              | RED, ILLUMINATED   |  |
| Α              | AMBER, ILLUMINATED |  |
| G              | GREEN, ILLUMINATED |  |

#### **MOUNTING STYLE/COLOR**

-.551-(14,0)

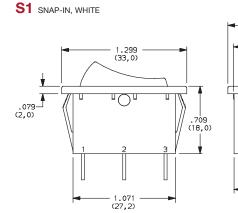
►.433 -(11,0)

Ο

-.421 (10,7)

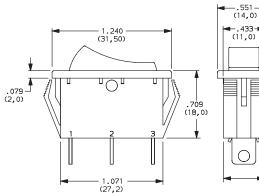
#### ------

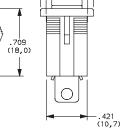
#### S2 SNAP-IN, BLACK



S4 SNAP-IN, BLACK (SHORT FRAME)

S3 SNAP-IN, WHITE





Shown in Pos. 1

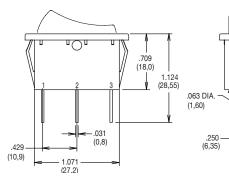
|                         | ······································ | <u> </u>      |
|-------------------------|--|---------------|
| PANEL THICKNESS         | "X"                                    | "Y"           |
| 0.030-0.049 (0,75-1,25) | 1.189004 (30,2-0,1)                    | 0.441+.004 (1 |
| 0 040 0 070 (1 25 2 0)  | 1 107 004 (20 4 0 1)                   | 0.441 004 (1  |

PANEL MOUNTING

| L |                         |                     |                       |
|---|-------------------------|---------------------|-----------------------|
|   | 0.030-0.049 (0,75-1,25) | 1.189004 (30,2-0,1) | 0.441+.004 (11,2+0,1) |
|   | 0.049-0.079 (1,25-2,0)  | 1.197004 (30,4-0,1) | 0.441+.004 (11,2+0,1) |
|   | 0.079-0.118 (2,0-3,0)   | 1.212004 (30,8-0,1) | 0.441+.004 (11,2+0,1) |

#### TERMINATION -----\_\_\_\_

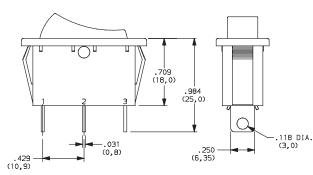
#### 05 .250 QUICK CONNECT



Shown in Pos. 1



07 SOLDER LUG



NOTE: Available with CM101 & CM102 switch functions only.

Third Angle  $\oplus$ Projection

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

Rocker

| NONE NO MARKING | D ON-OFF     |   |
|-----------------|--------------|---|
|                 | ON<br>OFF    |   |
| Н от            | <b>P</b> o - |   |
| -<br>0          |              | NOTE: Orientation of actuator marking and terminals.<br>Shown in Pos. 1 |

## CONTACT MATERIAL

| OPTION<br>CODE | CONTACT AND<br>TERMINAL MATERIAL | RATINGS |  |
|----------------|----------------------------------|---------|--|
| QA             | SILVER                           | POWER   | 16 AMPS @ 125 VAC; 1/8 HP<br>10 AMPS @ 250 VAC, 1/3 HP |

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

## LAMP RATING

#### (NONE) NO LAMP

- 7 125 VAC 33kΩ NEON
- 8 250 VAC 150kΩ NEON

NOTE: Lamp rating for J3 & J8 actuator option.



<u>CeK</u>





#### Features/Benefits

- Illuminated versions available
- Multiple actuator and termination styles
- Robust design
- Custom version upon request
- RoHS compliant

## Typical Applications

- Appliances
- Office equipment
- Computers and peripherals
- Off-road vehicles
- Industrial machines
- HVAC units
- Transportation



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#### Specifications

CONTACT RATING:

See table for Q and QA ratings on the last page of this series. ELECTRICAL LIFE: 10,000 make and break cycles at full load. INSULATION RESISTANCE:  $10^8 \Omega$  min. DIELECTRIC STRENGTH: 1,500 VRMS @ sea level. OPERATING TEMPERATURE: -20°C to +85°C

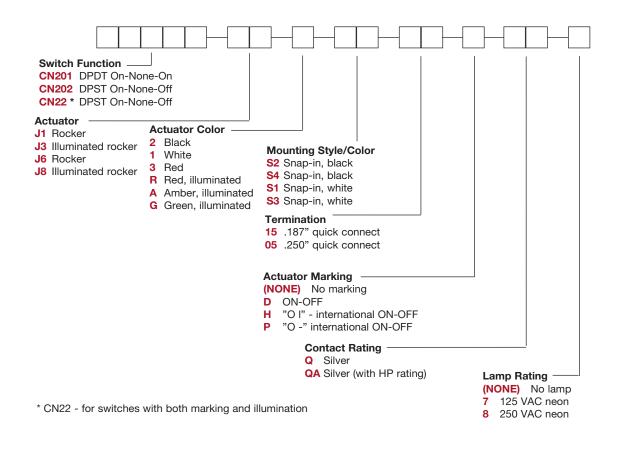
HOUSING AND ACTUATOR: 6/6 nylon (UL94V-2), black, matte finish. ILLUMINATED ACTUATOR: Polycarbonate, matte finish. CENTER CONTACTS: Silver plated, copper alloy. END CONTACTS: Silver plated AgSu0<sub>2</sub>In0<sub>3</sub>. ALL TERMINALS: Silver plated, copper alloy.

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

#### Materials

#### **Build-A-Switch**

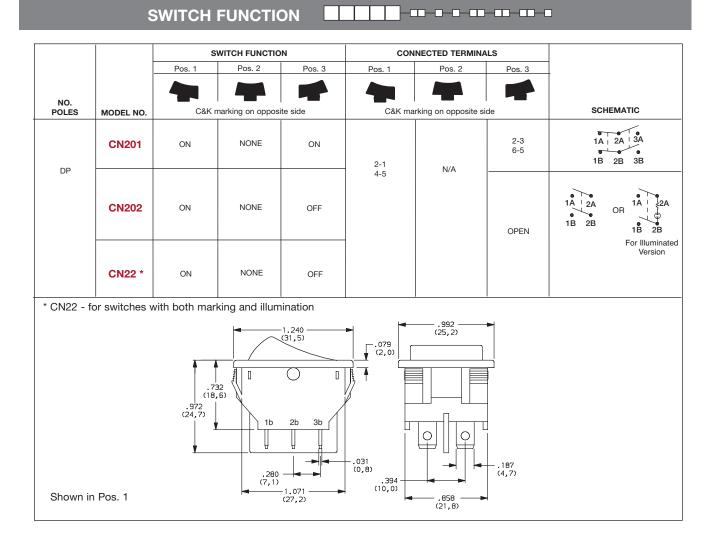
To order, simply select desired option from each category and place in the appropriate box. Available options are shown and described on pages G–99 through G–101. For additional options not shown in catalog, consult Customer Service Center.

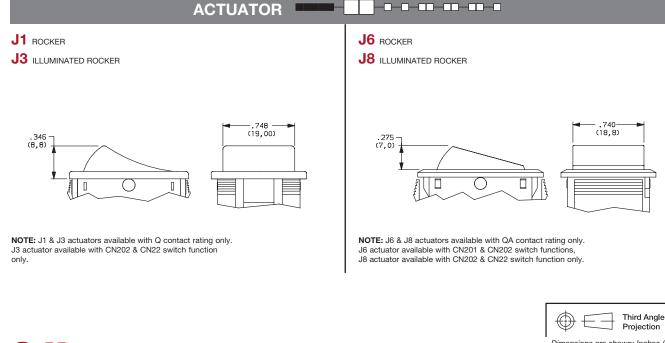




Rocker

YYY





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

**Rocker** 

G

G–96

| ACTUATOR COLOR |  |
|----------------|--|
|----------------|--|

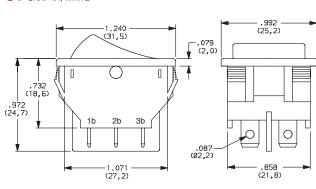
| OPTION<br>CODE | ACTUATOR<br>COLOR  |  |
|----------------|--------------------|--|
| 2              | BLACK              |  |
| 1              | WHITE              |  |
| 3              | RED                |  |
| R              | RED, ILLUMINATED   |  |
| Α              | AMBER, ILLUMINATED |  |
| G              | GREEN, ILLUMINATED |  |

# **MOUNTING STYLE/COLOR**

#### S4 SNAP-IN, BLACK

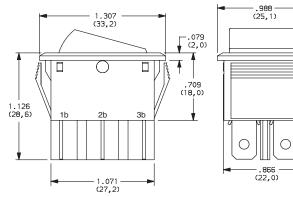
S3 SNAP-IN, WHITE





NOTE: Available with 15 termination and Q contact rating only.

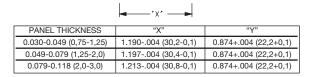
Shown in Pos. 1



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NOTE: Available with 05 termination and QA contact rating only.

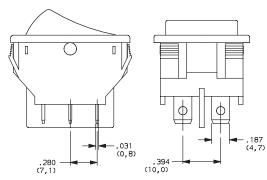
Shown in Pos. 1



PANEL MOUNTING

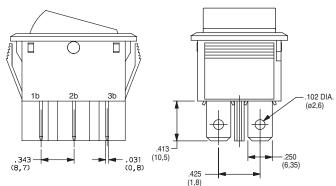
#### **TERMINATION**

#### 15 .187" QUICK CONNECT



NOTE: Available with S1 & S2 mounting style and Q contact rating only. Shown in Pos. 1

#### 05 .250" QUICK CONNECT



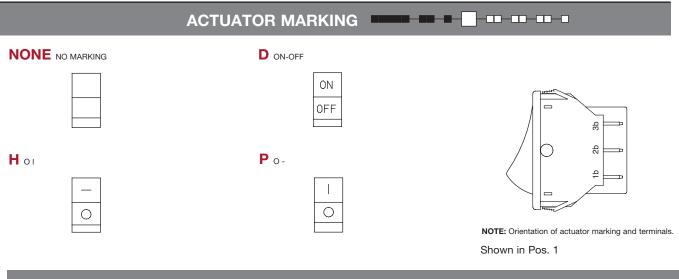
NOTE: Available with S3 & S4 mounting styles and QA contact rating, CN201 & CN202 switch functions only.

Shown in Pos. 1



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





## CONTACT MATERIAL

| OPTION<br>CODE | CONTACT AND<br>TERMINAL MATERIAL | RATINGS |  |
|----------------|----------------------------------|---------|--|
| Q              | SILVER                           | POWER   | 16A @ 125C 1/3 HP @ 125 V AC<br>10A @ 250 V AC 1/2HP @ 250 V AC        |
| QA             |                                  |         | 16A @ 125 VAC, 1/8 HP @ 125 V AC;<br>10 A @ 250 VAC, 1/3 HP @ 250 V AC |

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

LAMP RATING

(NONE) NO LAMP

7 125 VAC 33kΩ NEON

8 250 VAC 150kΩ NEON

G

NOTE: Lamp rating for J3 & J8 actuator options.





#### Features/Benefits

- 15 AMPS @ 125 V AC
- Cosmetic slimline detail
- Positive detent

#### **Typical Applications**

- Hair dryers and other small appliances
- HVAC and other large appliances
- RoHS compliant





#### Specifications

CONTACT RATING: 15 AMPS @ 125 V AC; 10 AMPS @ 250 V AC; 1/4 HP @ 125 V AC or 250 V AC

ELECTRICAL LIFE: 10,000 make-and-break cycles at full load.

INSULATION RESISTANCE:  $10^9 \Omega$  min.

DIELECTRIC STRENGTH: 1,000 Vrms min. @ sea level. OPERATING TEMPERATURE: -30°C to +65°C

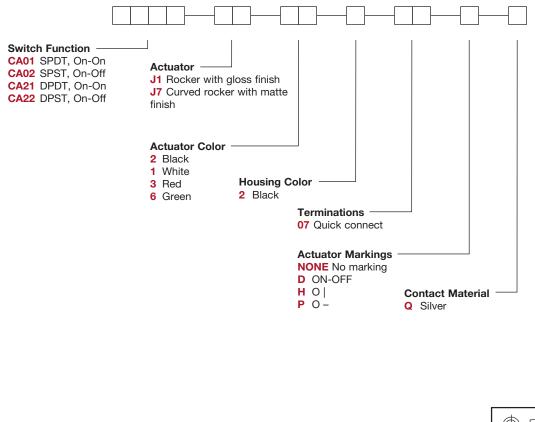
#### Materials

HOUSING: 6/6 nylon (UL 94V-2), black. ACTUATOR: Polycarbonate (UL 94V-2), black. CONTACTS: Coin silver, silver plated. TERMINALS: Copper, silver plated. CONTACT SPRING: Music wire.

NOTE: Specifications and material listed above are for switches with standard options. For information on specific and custom switches, 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 G–106 through G–108. For additional options not shown in catalog, consult Customer Service Center.



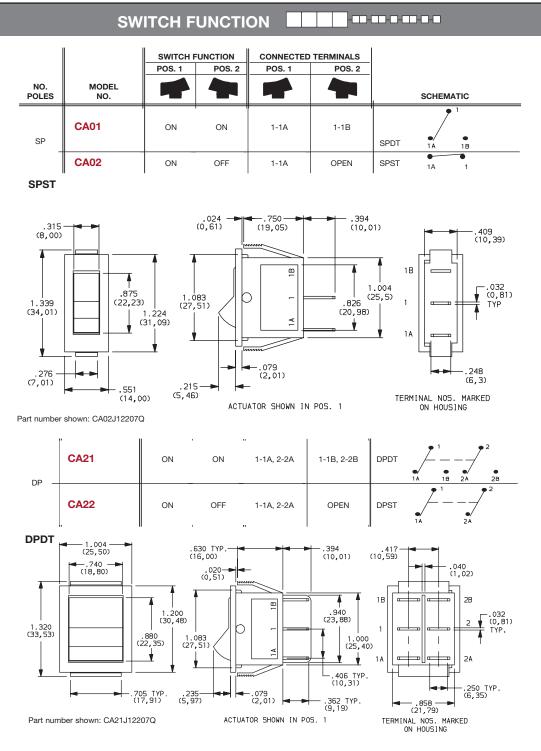


YYY

G



# CA Series Power Rocker Switches



For complete contact ratings and agency approvals, see CONTACT MATERIAL section, page G–108. Contacts make on side opposite actuator thrown.

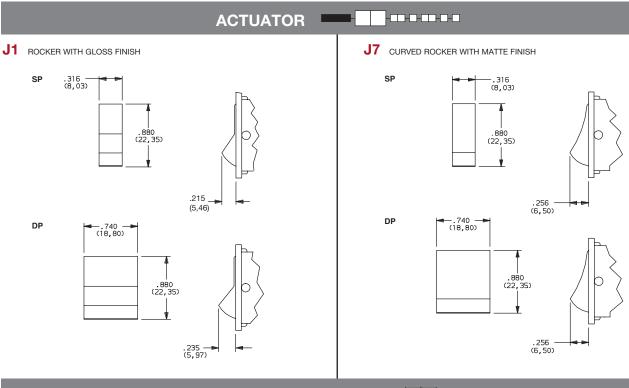
All models c with all options.







# CA Series Power Rocker Switches



# ACTUATOR COLOR

| OPTION<br>CODE |       |  |
|----------------|-------|--|
| 1              | WHITE |  |
| 2              | BLACK |  |
| 3              | RED   |  |
| 6              | GREEN |  |

**NOTE:** Actuator finish: matte. Special colors available, consult Customer Service Center.

#### 

| OPTION | HOUSING |  |
|--------|---------|--|
| CODE   | COLOR   |  |
| 2      | BLACK   |  |

NOTE: Housing frame finish: matte.



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

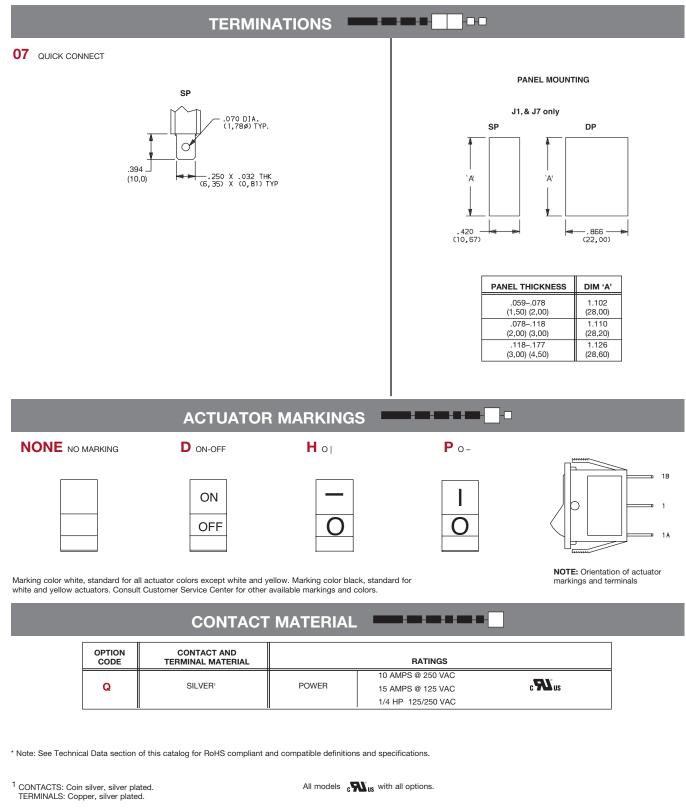
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G

Third Angle

Projection

# CA Series Power Rocker Switches







Dimensions are shown: Inches (mm)

Specifications and dimensions subject to change

 $\bigcirc$ 

Third Angle

Projection

#### Features/Benefits

- 15 AMPS @ 125 V AC
- Illuminated actuator
- Various actuator styles

#### Typical Applications

- Power outlet strips
- Appliances
- Handling and packaging machines
- RoHS compliant



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#### Specifications

Materials

CONTACT RATING: 15 AMPS @ 125 V AC; 10 AMPS @ 250 V AC; 1/4 HP @ 125 V AC or 250 V AC.

ELECTRICAL LIFE: 10,000 make-and-break cycles at full load.

LAMP LIFE: 20,000 hours typ.

INSULATION RESISTANCE:  $10^9 \Omega$  min.

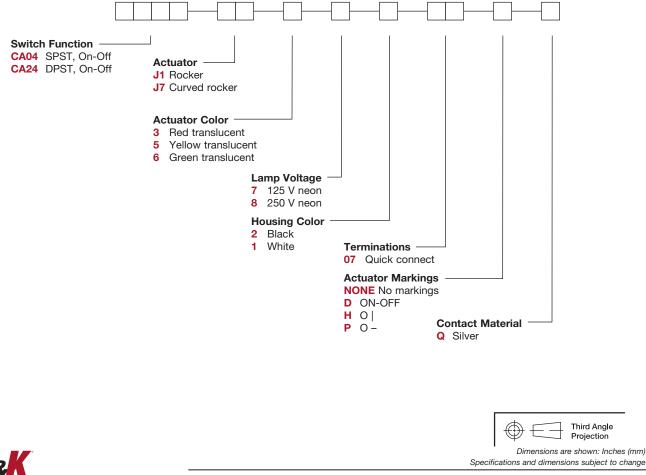
DIELECTRIC STRENGTH: 1,000 Vrms min. @ sea level.

HOUSING: 6/6 nylon (UL 94V-2), black. ACTUATOR: Polycarbonate (UL 94V-2), red. CONTACTS: Coin silver, silver plated. OPERATING TEMPERATURE: -30°C to +65°C

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

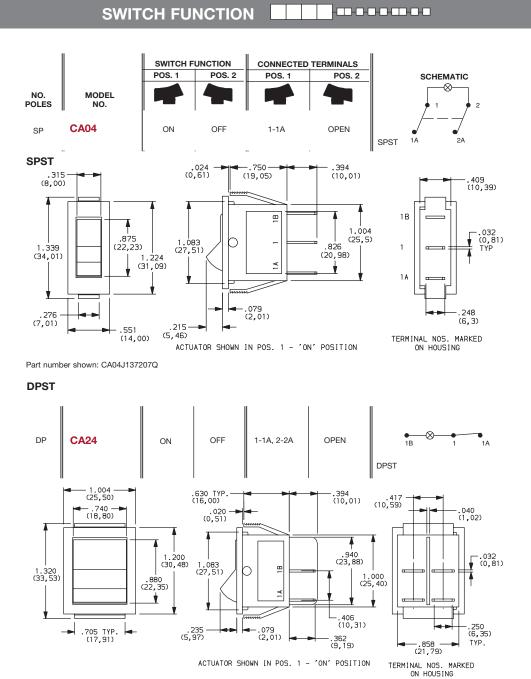
#### **Build-A-Switch**

To order, simply select desired option from each category and place in the appropriate box. Available options are shown and described on pages G–103 through G–105. For additional options not shown in catalog, consult Customer Service Center.



YYY

# CA Series Illuminated Power Rocker Switches



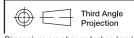
Part number shown: CA24J137207Q

See CONTACT MATERIAL section, page G–105, for complete contact ratings and agency approvals. Contacts make on side opposite actuator thrown.

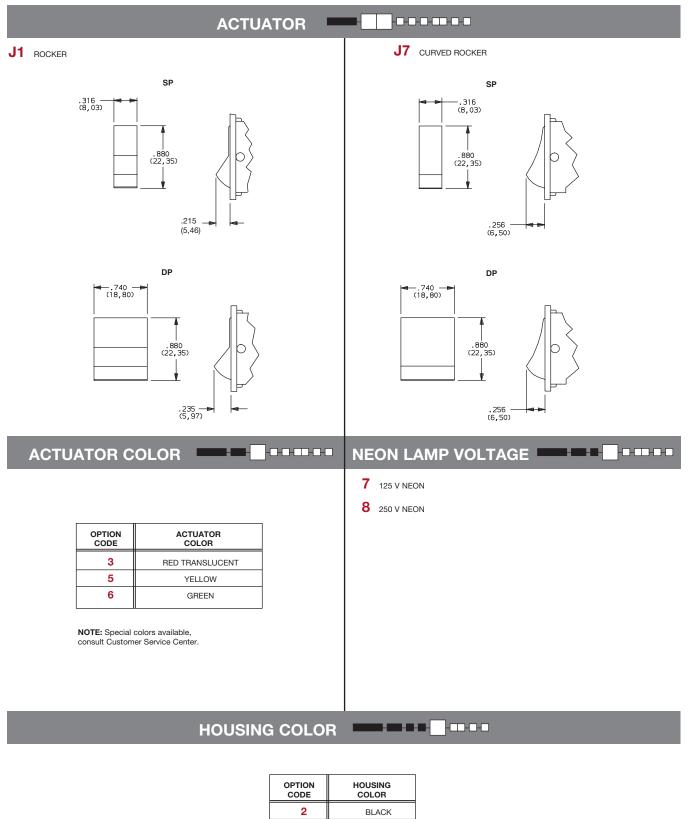
All models with all options.

G

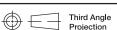


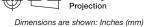


# CA Series Illuminated Power Rocker Switches



1





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

WHITE

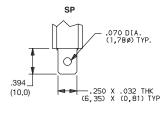
Rocker

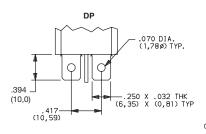
# CA Series Illuminated Power Rocker Switches

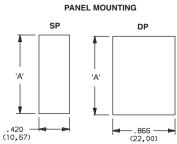
-0-0

#### TERMINATIONS









|   | PANEL THICKNESS            | DIM 'A'          |
|---|----------------------------|------------------|
| ĺ | .059–.078<br>(1,50) (2,00) | 1.102<br>(28,00) |
| ĺ | .078–.118<br>(2,00) (3,00) | 1.110<br>(28,20) |
|   | .118–.177<br>(3,00) (4,50) | 1.126<br>(28,60) |

# NONE NO MARKING D ON-OFF H OI P O Image: Constraint of the state of the stat

**NOTE:** Orientation of actuator markings and terminals

Marking color white, standard for all actuator colors except yellow. Marking color black, standard for yellow actuators. Consult Customer Service Center for other available markings and colors.

## CONTACT MATERIAL

| OPTION<br>CODE | CONTACT AND<br>TERMINAL MATERIAL |       | RATINGS  |         |
|----------------|----------------------------------|-------|--|---------|
| Q              | SILVER <sup>1</sup>              | POWER | 10 AMPS @ 250 VAC<br>15 AMPS @ 125 VAC<br>1/4 HP 125/250 VAC | c Ru us |

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

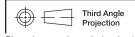
<sup>1</sup> CONTACTS: Coin silver, silver plated. TERMINALS: Copper, silver plated.











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 704 

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 704.960.9
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