

## Product Range



### Rocker & Paddle Switches

- **Rocker & Paddle Switches for Panel Mounting:**  
F, TRD and Gemini Series
- **Rocker & Paddle Switches for PCB Mounting:**  
Gemini Series

#### Main features:

- Sealed or unsealed versions
- Various switch functions
- Gold or silver contacts
- LED illumination available (also bi-color)
- Multiple rocker/paddle colors available
- Beveled frames available



**F Series, Power Rocker, Panel Mounting, 6A .....page F2**



**TRD Series, Rocker/Paddle .....page F4**



**Gemini A Series Rocker/Paddle .....page F7**



**Gemini AE Series Rocker/Paddle .....page F17**

## F Series, Rocker/Paddle, Panel Mounting, 6A

### Features

- Wide range switch functions available
- Terminals are gold-flashed to prevent oxidation and for ease of soldering



### Typical performance characteristics

Number of poles . . . . . 1 to 4 pole  
Switch functions . . . . . ON-ON, ON-(ON), ON-OFF-ON, ON-ON-ON,  
ON-OFF-(ON), (ON)-OFF-(ON)  
Contact rating . . . . . 6 A @250 VAC, 6 A @125 VAC;  
gold contact: 0,4 VA max 20 V AC/DC  
Electrical life . . . . . 25,000 to 50,000 cycles  
Mechanical life . . . . . 50,000 to 100,000 cycles  
Contact resistance . . . . . max 10 mOhm  
Insulation resistance . . . . . min 1,000 MOhm  
Dielectric strength . . . . . 1,000 VAC for 1 min  
Actuation force . . . . . max 19,6 N  
Panel cut-out . . . . . Ø 6,2 mm  
Standards and specs . . . . . UL, CSA

### Environmental specification

Operating temperature . . . . . -20 to +70°C  
Storage temperature . . . . . -20 to +70°C  
Vibration resistance . . . . . 1,5 mm 10-55 Hz  
Shock resistance . . . . . 50 g for 11±1 msec  
Terminal strength . . . . . 24,5 N

### Material specifications

Contacts . . . . . brass silver alloy finished  
Toggle . . . . . brass chromium plated  
Terminals . . . . . brass plate  
Case . . . . . phenol resin  
Cover . . . . . steel zinc plated  
Seal . . . . . rubber seal, insert molded rubber  
RoHS compliance . . . . . compliant

### Product key

Typical product key

**F L N 1 9 red 04**

**Type**  
**F** F Series power rocker switch

**Model**  
**L** snap-in lever & rocker

**Switch function & poles**  
**1 pole**  
**D** ON-ON  
**2 pole**  
**N** ON-ON

**Actuator**  
**1** long rocker  
**2** small rocker

**Terminal type**  
**9** leadwire hooking type

**Contact material**  
**blank** silver  
**G** gold

**Rocker color**  
**red** red  
**black** black  
**white** white

**Material**  
**04** RoHS compliant

## F Series, Rocker/Paddle, Panel Mounting, 6A (Continued)

### Function



#### Function Poles

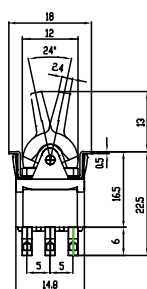
|   |   |  |  |  |  |
|---|---|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| D | 1 | On                                                                                | On                                                                                | 1-2                                                                               | 2-3                                                                                 |
| N | 2 | On                                                                                | On                                                                                | 1-2, 4-5                                                                          | 2-3, 5-6                                                                            |

Off indicates a mechanical position with no electrical connection  
(On) indicates momentary connection  
None indicates no mechanical position

### Actuator



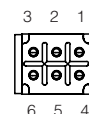
#### Code 1 long rocker



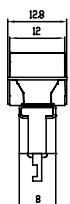
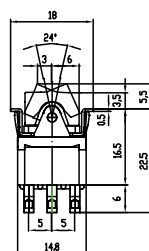
1 pole



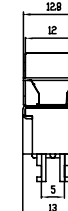
2 pole



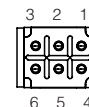
#### Code 2 small rocker



1 pole



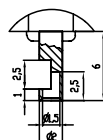
2 pole



### Terminal

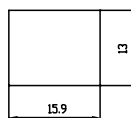


#### Leadwire hooking type



### Mounting

Panel Cutout  
thickness 1 to 2.5mm



| Product key  | Poles   | Switch func. | Actuator     | Act. Color | Terminal | Contacts | Material  | Part Number |
|--------------|---------|--------------|--------------|------------|----------|----------|-----------|-------------|
| FLD19black04 | 1 pole  | On - On      | long rocker  | black      | leadwire | silver   | RoHS      | 3-6437630-2 |
| FLD29black04 |         |              | small rocker |            | hooking  |          | compliant | 2-6437630-9 |
| FLN19black04 | 2 poles |              | long rocker  | black      | type     |          |           | 3-6437630-7 |
| FLN19red04   |         |              |              | red        |          |          |           | 2-6437630-7 |
| FLN19white04 |         |              |              | white      |          |          |           | 2-6437630-6 |
| FLN29black04 |         |              | small rocker | black      |          |          |           | 2-6437630-5 |
| FLN29red04   |         |              |              | red        |          |          |           | 4-6437630-7 |
| FLN29white04 |         |              |              | white      |          |          |           | 2-6437630-3 |

## TRD Series, Rocker/Paddle

### Features

- Wire lug, quick connect, or PC terminals
- LED both single and bi-colored available
- Entire series epoxy sealed terminals



### Typical performance characteristics

Contact configuration . . . . . SPST, DPDT  
Contact timing . . . . . break-before-make  
Contact rating max . . . . . 3 A @ 125 VAC with silver Option 3, 0.4 VA @ 20 VDC gold option 1  
Electrical life . . . . . 2 Pos.: 20,000 cycles @ full rated 3 A load  
80,000 cycles @ 0.4 VA  
3 Pos.: 10,000 cycles @ full rated 3 A load  
60,000 cycles @ 0.4 VA  
Initial contact resistance . . . . . max. 20 mOhms  
Insulation resistance . . . . . 1,000 MOhms min. @ 500 VDC  
Dielectric strength . . . . . 500 Volts rms @ sea level

### Environmental specification

Operating temperature . . . . . -20°C to +80°C  
Storage temperature . . . . . -45°C to +93°C  
Solder heat resistance . . . . .  
wave solder . . . . . capable to 265°C  
hand solder . . . . . max. 316°C for less than 5 seconds  
with switch in the closed position  
Seal . . . . . epoxy sealed terminals

### Material specifications

Contacts movable . . . . . copper alloy w/silver inlay or gold plated  
Actuator . . . . . brass nickel plated  
Terminals/fixed contacts . . . . . copper alloy w/silver inlay or gold plated  
Housing/beveled frame . . . . . polyamide, black matte finish  
Terminal seal . . . . . epoxy  
RoHS Directive 2002/95/EC . . . . . compliant

| Product key      |       | Typical product key  |  | TRD | 1                                 | 3 | D  | 1                  | 0 |  | WL |  | 04 |
|------------------|-------|----------------------|--|-----|-----------------------------------|---|----|--------------------|---|--|----|--|----|
| Type             | TRD   | Rocker/Paddle Switch |  |     |                                   |   |    |                    |   |  |    |  |    |
| Number of poles  | 1     | single pole          |  | 2   | double pole                       |   |    |                    |   |  |    |  |    |
| Rating           | 1     | 0.4 VA @20VDC (Gold) |  | 3   | 3A @ 125VAC or 28VDC (Silver)     |   |    |                    |   |  |    |  |    |
| Function         |       | single pole          |  |     | double pole                       |   |    |                    |   |  |    |  |    |
|                  | D     | on-on                |  | N   | on-on                             |   |    |                    |   |  |    |  |    |
|                  | E     | on-off-on            |  | P   | on-off-on                         |   |    |                    |   |  |    |  |    |
|                  | F     | on-(on)              |  | S   | (on)-off-(on)                     |   |    |                    |   |  |    |  |    |
|                  | G     | (on)-off-(on)        |  |     |                                   |   |    |                    |   |  |    |  |    |
| Actuator         | 1     | rocker               |  | 2   | paddle                            |   |    |                    |   |  |    |  |    |
| Actuator color   | 0     | black                |  | 2   | red                               |   |    |                    |   |  |    |  |    |
| Terminals        | WL    | wire lug             |  | QC  | quick connect                     |   |    |                    |   |  |    |  |    |
| Mount            | blank | 11.91 mm (15/32")    |  |     |                                   |   |    |                    |   |  |    |  |    |
| LED illumination | blank | none                 |  | LR  | LED integral w/rocker (TRD1 only) |   |    |                    |   |  |    |  |    |
| LED color        | 2     | red                  |  | 5   | green                             |   | 25 | bi-color red/green |   |  |    |  |    |
| Material         | blank | RoHS compliant       |  | 04  | RoHS compliant                    |   |    |                    |   |  |    |  |    |

## TRD Series, Rocker/Paddle (Continued)

### Function



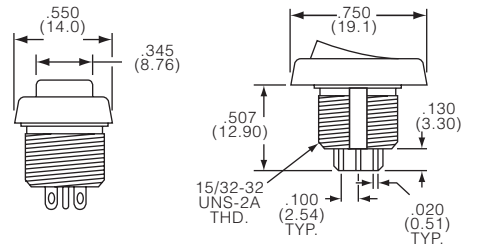
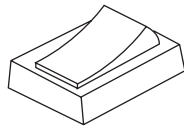
Codes 1, 2 1 and 2 pole

|                     |       |       |       |                     |                                                                                                                                    |                |                |
|---------------------|-------|-------|-------|---------------------|------------------------------------------------------------------------------------------------------------------------------------|----------------|----------------|
| 1 Single pole       |       |       |       | 2 Double pole       |                                                                                                                                    |                |                |
|                     |       |       |       |                     |                                                                                                                                    |                |                |
|                     | 1-2-3 | 1-2-3 | 1-2-3 |                     | 1-2-3                                                                                                                              | 1-2-3          | 1-2-3          |
| <b>Function</b>     |       |       |       | <b>Function</b>     |                                                                                                                                    |                |                |
| D                   | On    | None  | On    | N                   | On                                                                                                                                 | None           | On             |
| E                   | On    | Off   | On    | P                   | On                                                                                                                                 | Off            | On             |
| F                   | On    | None  | (On)  | S                   | (On)                                                                                                                               | Off            | (On)           |
| G                   | (On)  | Off   | (On)  |                     |                                                                                                                                    |                |                |
| Terminals connected | 2 - 3 | - - - | 1 - 2 | Terminals connected | 2 - 3<br>5 - 6                                                                                                                     | - - -<br>- - - | 1 - 2<br>4 - 5 |
|                     |       |       |       | Off                 | mechanical position, no electrical connection<br>momentary mechanical position and electrical connection<br>no mechanical position |                |                |
|                     |       |       |       | (On)                |                                                                                                                                    |                |                |
|                     |       |       |       | None                |                                                                                                                                    |                |                |

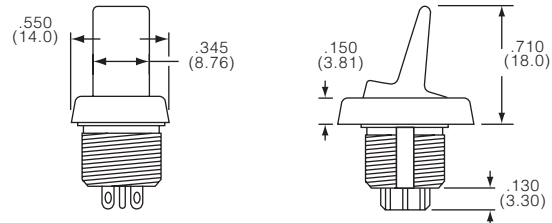
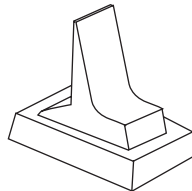
### Actuator



1 rocker



2 paddle

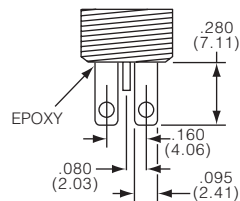


### Terminal

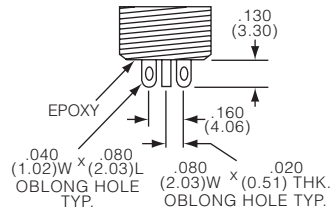


QC, WL

QC, quick connect



WL, wire lug

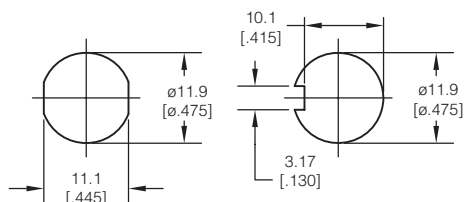


## TRD Series, Rocker/Paddle (Continued)

Mount



**blank** 15/32" round hole



Standard TRD bushing will mount in any hole shown.  
Recommended panel thickness: .030" to .250".  
One hex nut, one internal tooth lock washer supplied

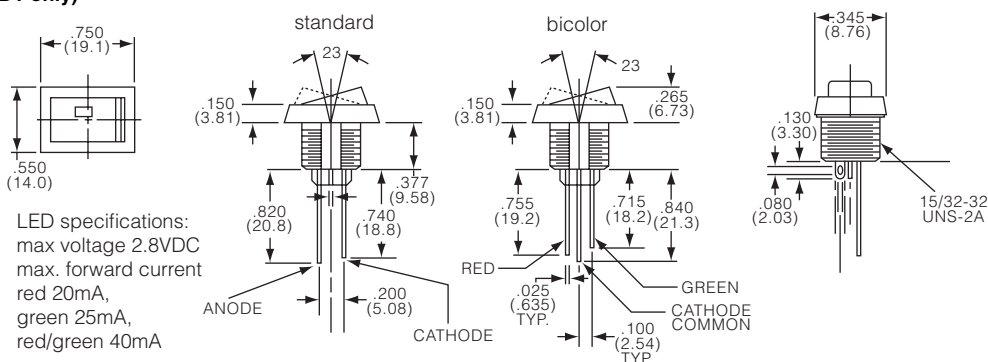
LED



**LR integral w/rocker (TRD1 only)**



TRD11D10WLLR



LED specifications:  
max voltage 2.8VDC  
max. forward current  
red 20mA,  
green 25mA,  
red/green 40mA

| Product key      | Poles       | Rating                      | Function      | Actuator | Act. color | Terminals     | LED      | LED color | Material       | Part Number |
|------------------|-------------|-----------------------------|---------------|----------|------------|---------------|----------|-----------|----------------|-------------|
| TRD11D10WL       | single pole | 0.4 VA<br>@ 20VDC           | on-on         | rocker   | black      | wire lug      | none     | none      | RoHS compliant | 4-1437595-1 |
| TRD11D10WLLR504  |             |                             | on-(on)       |          |            | quick c.      | integral | green     |                | 1825424-1   |
| TRD11F10QCLR204  |             |                             | (on)-off-(on) |          |            | wire lug      | none     | none      |                | 5-1437595-2 |
| TRD11F10WL       |             |                             | on-on         |          |            | quick c.      | none     | none      |                | 5-1437595-6 |
| TRD11G10WL       |             | 3 A<br>@ 125VAC<br>or 28VDC | on-on         |          |            | wire lug      | integral | red       |                | 1825422-1   |
| TRD13D10QC04     |             |                             | on-on         |          |            | quick c.      | none     | none      |                | 1825420-1   |
| TRD13D10WL04     |             |                             | on-off-on     |          |            | wire lug      | integral | bi-color  |                | 1825426-1   |
| TRD13D10WLLR204  |             |                             | on-(on)       |          |            | quick c.      | none     | green     |                | 1825426-2   |
| TRD13D10WLLR2504 |             |                             | on-off-on     |          |            | wire lug      | integral | red       |                | 1825426-3   |
| TRD13D10WLLR504  |             |                             | on-(on)       |          |            | quick c.      | none     | none      |                | 1825426-4   |
| TRD13E10WLLR204  |             |                             | on-off-on     |          |            | wire lug      | integral | red       |                | 1825422-2   |
| TRD13F10QC04     |             |                             | on-on         |          |            | quick connect | integral | red       |                | 1825427-1   |
| TRD13F10QCLR204  |             |                             | (on)-off-(on) |          |            | wire lug      | none     | none      |                | 1825420-2   |
| TRD13G10WL04     |             |                             | on-off-on     |          |            | wire lug      | integral | red       |                | 1825420-3   |
| TRD13G10WLLR204  |             |                             | on-off-on     |          |            | wire lug      | integral | red       |                | 1825426-5   |
| TRD21N10WL       | double      | 0.4 VA<br>gold              | on-on         |          |            | wire lug      | none     | none      |                | 1437596-3   |
| TRD21S10WL       |             |                             | (on)-off-(on) |          |            | wire lug      | none     | none      |                | 1-1437596-4 |
| TRD23N10QC04     |             | 3 A<br>@ 125VAC<br>or 28VDC | on-on         |          |            | quick c.      | none     | none      |                | 1825423-1   |
| TRD23N10WL04     |             |                             | on-off-on     |          |            | wire lug      | none     | none      |                | 1825421-1   |
| TRD23P10WL04     |             |                             | on-off-on     |          |            | wire lug      | none     | none      |                | 1825421-2   |
| TRD23S10WL04     |             |                             | (on)-off-(on) |          |            | wire lug      | none     | none      |                | 1825421-3   |

## Gemini A Series Rocker/Paddle

### Features

- Multiple actuator colors available
- G and Q contacts UL® recognition



### Typical performance characteristics

Contact configuration . . . . . SPST, DPST  
Contact timing . . . . . break before make  
Contact rating max. . . . . B contacts: 0.4 VA @ 20 V max. AC or DC  
 . . . . . G contacts: 0.4 VA @ 20 V max. AC or DC or  
 . . . . . 5 A @ 120 VAC or 28 VDC (resistive) or  
 . . . . . 2 A @ 250 VAC (resistive)  
 . . . . . Q contacts: 5 A @ 120 VAC or 28 VDC (resistive) or  
 . . . . . 2 A @ 250 VAC (resistive)  
Electrical life. . . . . 6,000 cycles at rated load  
Mechanical life. . . . . 40,000 cycles  
Contact resistance. . . . . max. 10 mOhms initial @ 2-4 VDC, 100 mA  
Insulation resistance . . . . . min. 1,000 MOhms  
Dielectric strength. . . . . 1,000 Vrms at sea level  
Standards and specs. . . . . UL® recognition on G & Q contacts

### Environmental specification

Operating temperature . . . . . -30°C to 85°C  
Storage temperature . . . . . -40°C to 85°C  
Solder heat resistance . . . . . wave solder capable to 265°C

### Material specifications

Contacts & terminals. . . . . B contacts: copper alloy w/ gold over nickel  
 . . . . . G contacts: copper alloy w/ silver  
 . . . . . Q contacts: copper alloy w/ gold over silver  
Actuator . . . . . phenolic  
Base . . . . . DAP® UL94 V-O  
Frame. . . . . stainless steel  
Seal. . . . . epoxy UL94 V-1  
RoHS Directive 2002/95/EC . . . . . compliant

### Product key

Typical product key

**A 1 01 J1 A Q 0 04**

|                            |  |                                            |  |                                                     |                                            |
|----------------------------|--|--------------------------------------------|--|-----------------------------------------------------|--------------------------------------------|
| <b>Type</b>                |  | <b>A</b>                                   |  | Rocker/Paddle Switch                                |                                            |
| <b>Number of poles</b>     |  | <b>1</b>                                   |  | single pole                                         | <b>2</b> double pole                       |
| <b>Function</b>            |  | <b>01</b>                                  |  | On-On                                               | <b>07</b> On-Off-(On) <b>13</b> On-On-(On) |
|                            |  | <b>03</b>                                  |  | On-Off-On                                           | <b>08</b> On-(On)                          |
|                            |  | <b>05</b>                                  |  | (On)-Off-(On)                                       | <b>11</b> On-On-On                         |
| <b>Actuator</b>            |  | <b>Rocker</b>                              |  | <b>Paddle</b>                                       |                                            |
|                            |  | <b>J1</b> small                            |  | <b>J2</b> small                                     |                                            |
|                            |  | <b>J3</b> large                            |  | <b>J4</b> large                                     |                                            |
|                            |  | <b>J50</b> snap-in                         |  | <b>J60</b> snap-in                                  |                                            |
|                            |  | <b>J51</b> snap-in w/beveled frame         |  | <b>J61</b> snap-in w/beveled frame                  |                                            |
|                            |  | <b>J52</b> snap-in w/beveled frame and LED |  | <b>J62</b> snap-in w/beveled frame and LED          |                                            |
| <b>Terminals</b>           |  | <b>A</b> right angle                       |  | <b>V3</b> vertical with support bracket .620(15.75) |                                            |
|                            |  | <b>AV2</b> vertical R/A                    |  | <b>Z</b> wire lug                                   |                                            |
|                            |  | <b>C</b> P.C.                              |  | <b>Z3</b> quick connect                             |                                            |
| <b>Contacts</b>            |  | <b>B</b> gold                              |  | <b>G</b> gold over silver                           | <b>Q</b> silver                            |
| <b>Actuator color</b>      |  | <b>0</b> black (std.)                      |  | <b>3</b> orange                                     | <b>6</b> blue                              |
|                            |  | <b>1</b> brown                             |  | <b>4</b> yellow                                     | <b>8</b> gray                              |
|                            |  | <b>2</b> red                               |  | <b>5</b> green                                      | <b>9</b> white                             |
| <b>Beveled frame color</b> |  | <b>0</b> black (std.)                      |  | <b>3</b> orange                                     | <b>6</b> blue                              |
|                            |  | <b>1</b> brown                             |  | <b>4</b> yellow                                     | <b>8</b> gray                              |
|                            |  | <b>2</b> red                               |  | <b>5</b> green                                      | <b>9</b> white                             |
| <b>Material</b>            |  | <b>04</b> RoHS compliant                   |  |                                                     |                                            |

## Gemini A Series Rocker/Paddle (Continued)

### Function



Codes 01, 03, 05, 07, 08, 11 and 13

| Code | Positions           |                |                |                |
|------|---------------------|----------------|----------------|----------------|
| 01   | 2 positions         | On             | None           | On             |
| 08   |                     | On             | None           | (On)           |
|      | Term. conn.         | 2 - 3          | - - -          | 1 - 2          |
| 03   | 3 positions         | On             | Off            | On             |
| 05   |                     | (On)           | Off            | (On)           |
| 07   |                     | On             | Off            | (On)           |
|      | Terminals connected | 2 - 3<br>5 - 6 | - - -          | 1 - 2<br>4 - 5 |
| 11   | 3 positions         | On             | On             | On             |
| 13   |                     | On             | On             | (On)           |
|      | Terminals connected | 2 - 3<br>5 - 6 | 1 - 2<br>5 - 6 | 1 - 2<br>4 - 5 |

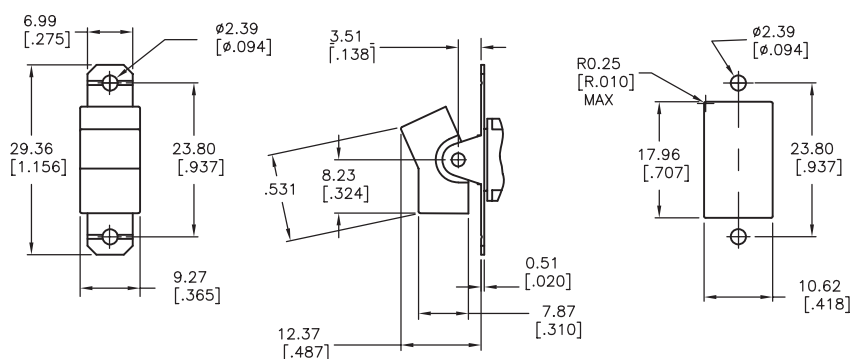
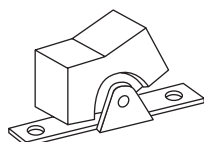
Off  
(On)  
None

mechanical position, no electrical connection  
momentary mechanical position and electrical connection  
no mechanical position

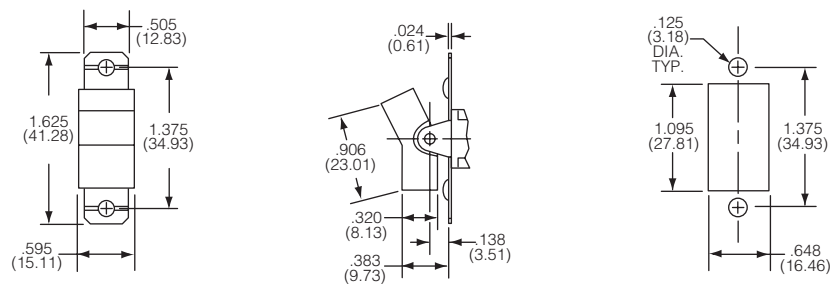
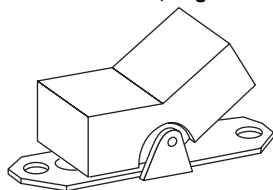
### Actuator



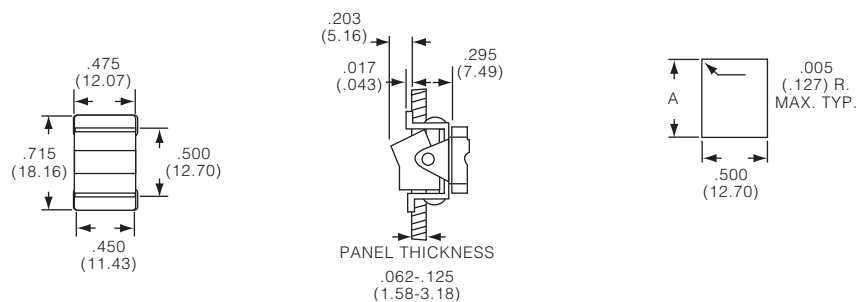
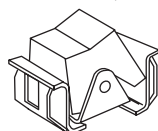
#### J1 rocker, small



#### J3 rocker, large

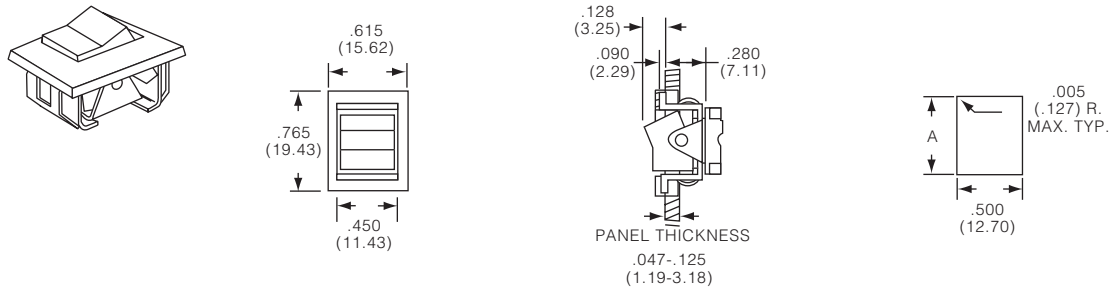


#### J50 rocker, snap-in

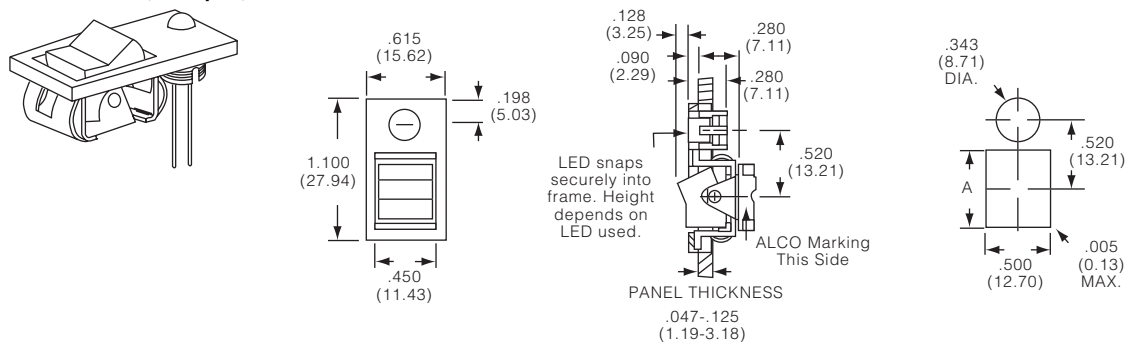


## Gemini A Series Rocker/Paddle (Continued)

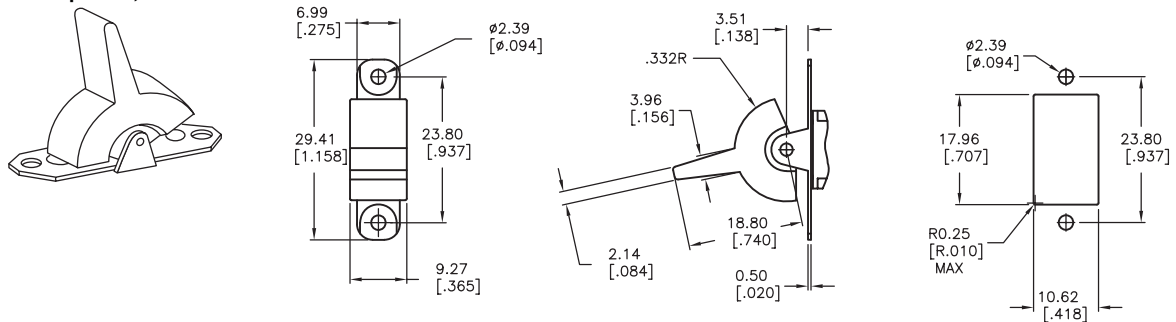
**J51 rocker, snap-in w/beveled frame**



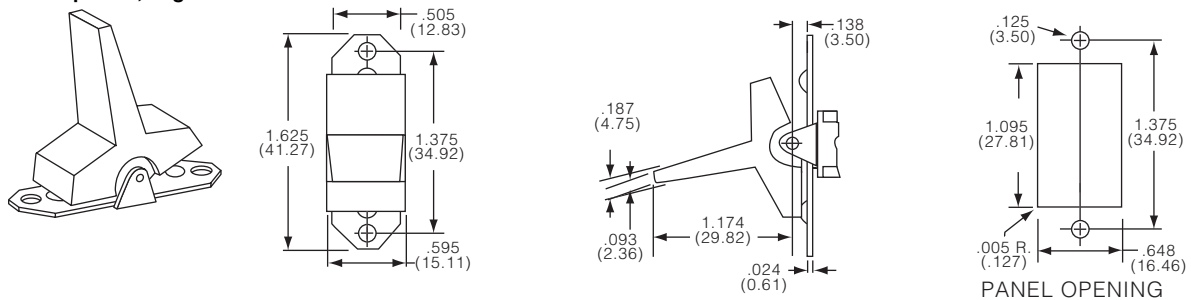
**J52 rocker, ssnap-in, w/beveled frame and LED**



**J2 paddle, small**

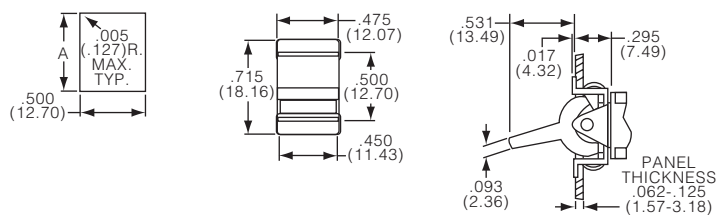
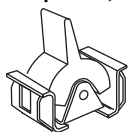


**J4 paddle, large**

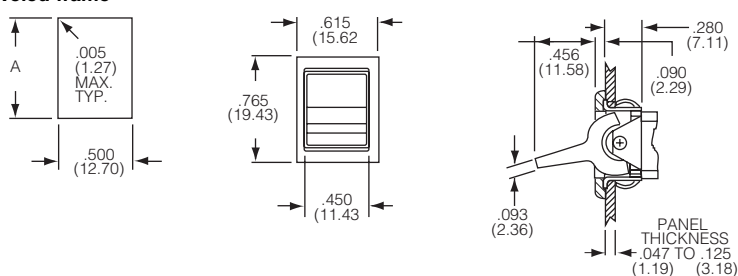
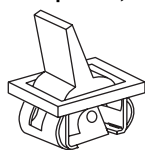


## Gemini A Series Rocker/Paddle (Continued)

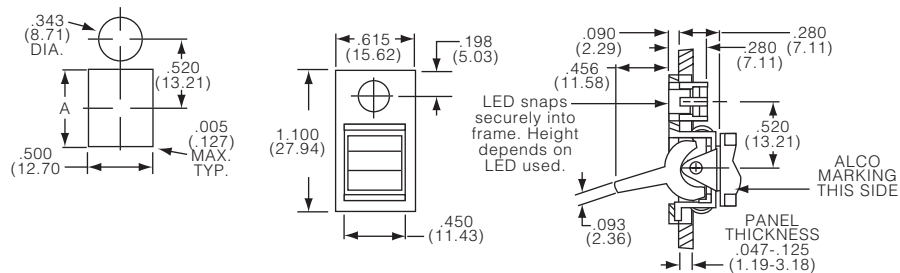
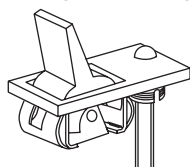
### J60 paddle, snap-in



### J61 paddle, snap-in w/beveled frame



### J62 paddle, snap-in, w/beveled frame and LED



## Terminals

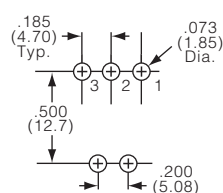
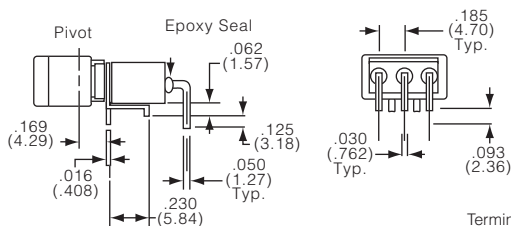
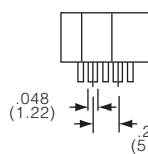


### A right angle, rocker



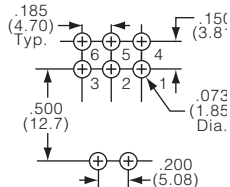
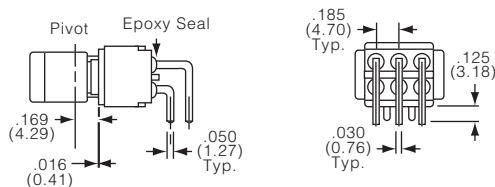
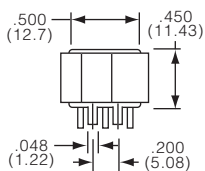
A101J1AQ0

#### Single pole



A201J1AQ0

#### Double pole

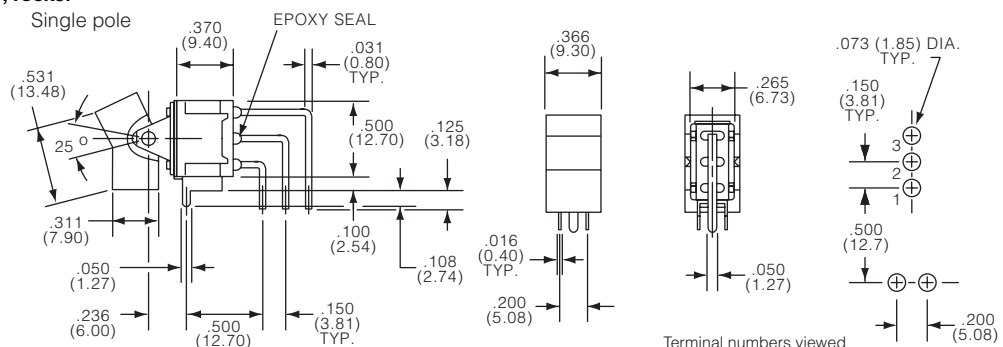


## Gemini A Series Rocker/Paddle (Continued)

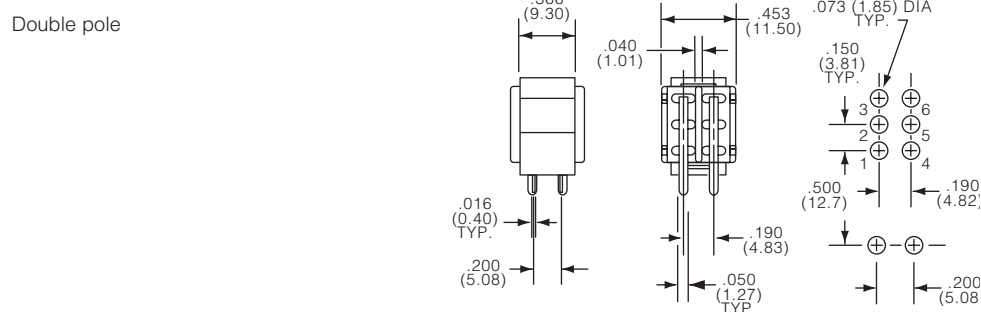
### AV2 vertical, right angle, rocker



A101J1AV2Q0



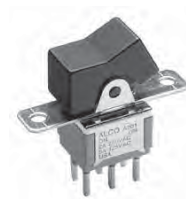
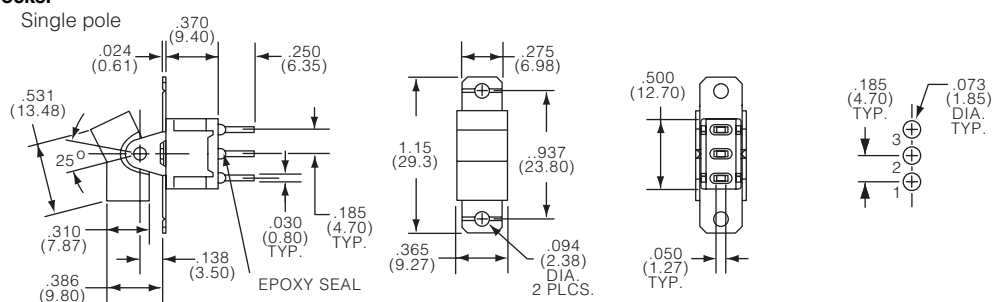
A205J1AV2Q0



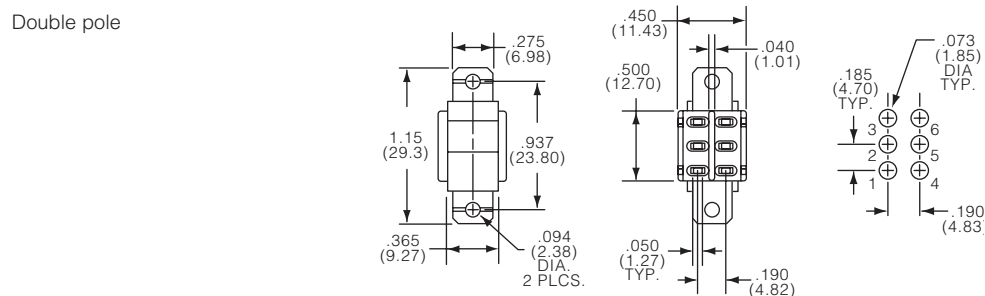
### C printed circuit board, rocker



A101J1CQ0



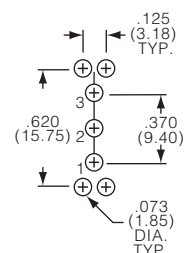
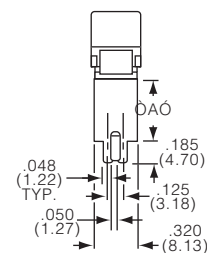
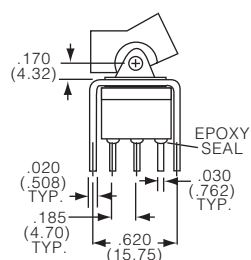
A201J1CQ0



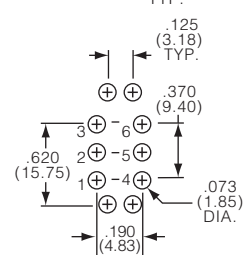
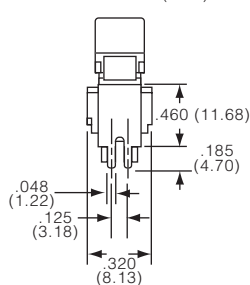
## Gemini A Series Rocker/Paddle (Continued)

### V3 vertical with support bracket, rocker

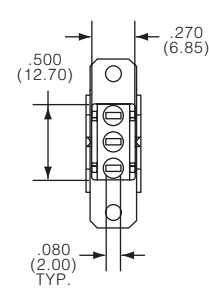
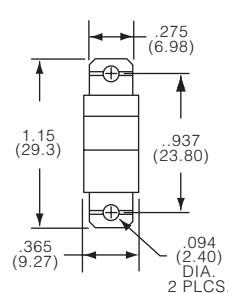
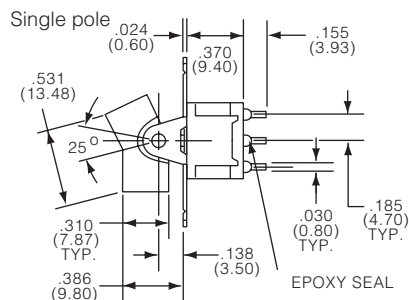
Single pole



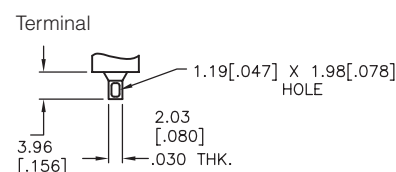
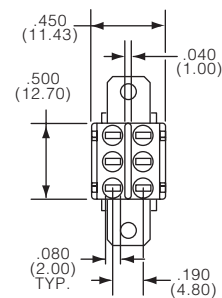
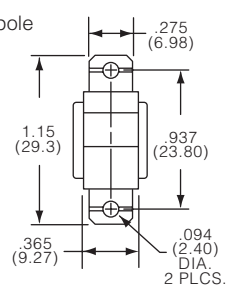
Double pole



### Z wire lug, rocker



Double pole



## Gemini A Series Rocker/Paddle (Continued)

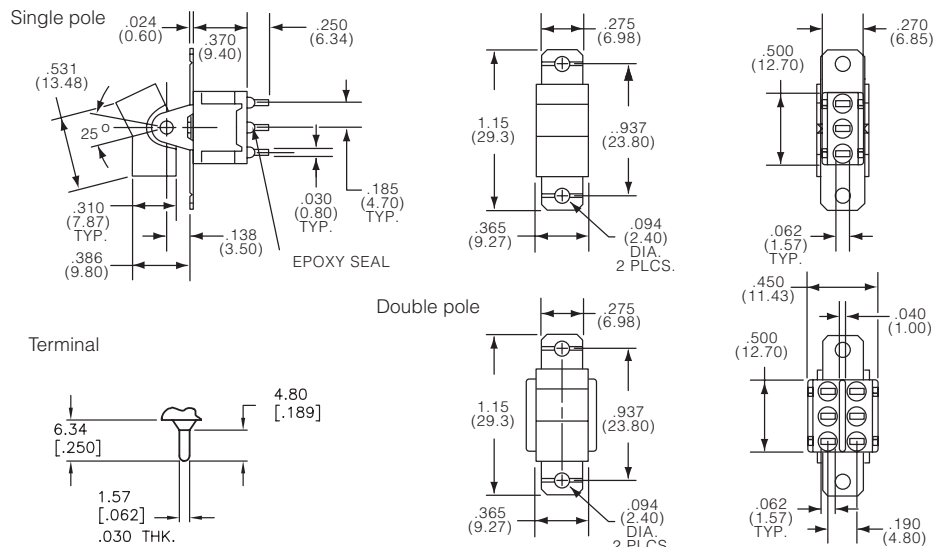
### Z3 quick connect, rocker



A101J1ZQ0



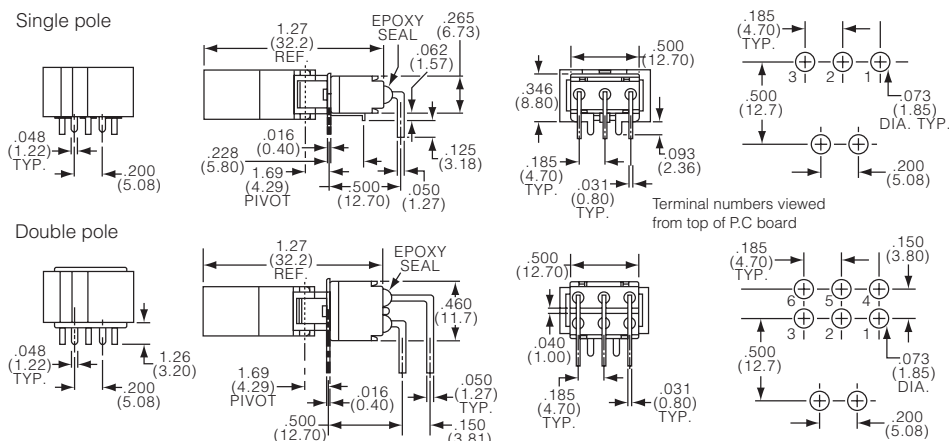
A201J1ZQ0



### A right angle, paddle



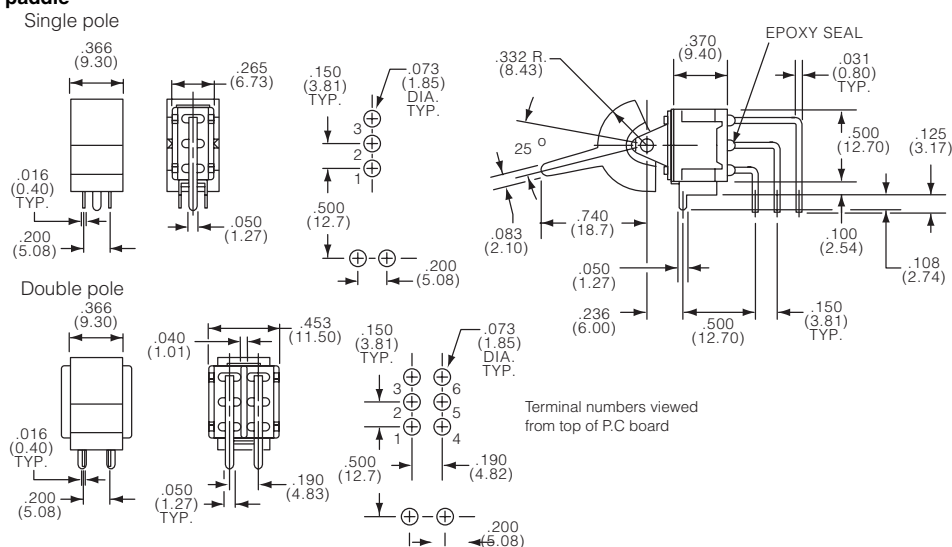
A201J2AQ0



### AV2 vertical, right angle, paddle



A105J2AV2Q0



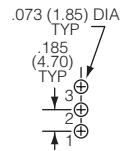
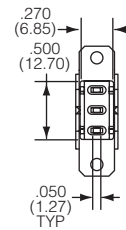
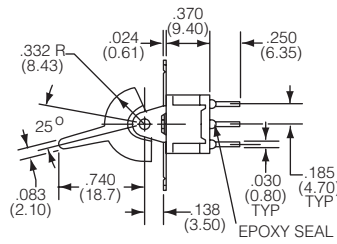
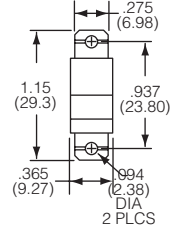
**Gemini A Series Rocker/Paddle (Continued)**

**C printed circuit board, paddle**



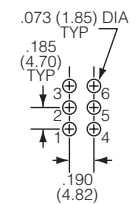
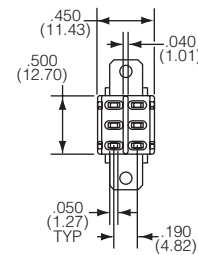
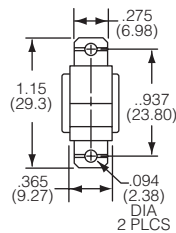
A105J2CQ0

Single pole



A205J2CQ0

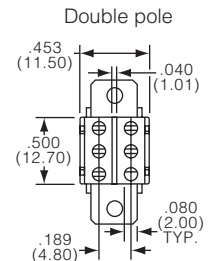
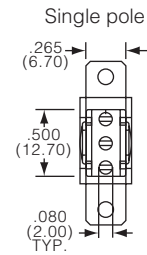
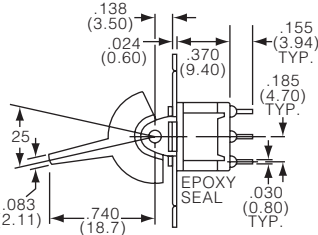
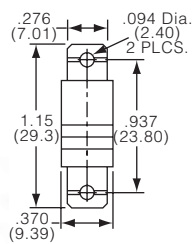
Double pole



**Z wire lug, paddle**



A101J2ZQ0



A201J2ZQ0

**Gemini A Series Rocker/Paddle** (Continued)

| Product key    | Poles       | Function      | Actuator         | Terminals       | Contacts | Act. color | Fr. color | Material       | Part Number |
|----------------|-------------|---------------|------------------|-----------------|----------|------------|-----------|----------------|-------------|
| A101J1AB004    | single pole | On-On         | small            | right angle     | gold     | black      | n/a       | RoHS compliant | 1571986-7   |
| A101J1AQ004    |             |               |                  |                 | silver   |            |           |                | 1571986-8   |
| A101J1AQ204    |             |               |                  |                 |          | red        |           |                | 1571986-9   |
| A101J1AV2B004  |             |               |                  | vertical R/A    | gold     | black      |           |                | 1-1571986-0 |
| A101J1AV2Q004  |             |               |                  |                 | silver   |            |           |                | 1-1571986-1 |
| A101J1CG004    |             |               |                  | P.C.            | Au on Ag |            |           |                | 1-1571986-2 |
| A101J1CQ004    |             |               |                  |                 | silver   |            |           |                | 1-1571986-3 |
| A101J1V3B004   |             |               |                  | br. .620(15.75) | gold     |            |           |                | 1-1571986-4 |
| A101J1V3Q004   |             |               |                  |                 | silver   |            |           |                | 1-1571986-5 |
| A101J1ZB004    |             |               |                  | wire lug        | gold     |            |           |                | 1-1571986-6 |
| A101J1ZQ004    |             |               |                  |                 | silver   |            |           |                | 1-1571986-7 |
| A101J2AV2Q004  |             |               |                  | vertical R/A    |          |            |           |                | 1-1571986-8 |
| A101J2ZB904    |             |               |                  | wire lug        | gold     | white      |           |                | 1-1571986-9 |
| A101J2ZQ004    |             |               |                  |                 | silver   | black      |           |                | 2-1571986-0 |
| A101J3V3Q204   |             |               | large            | br. .620(15.75) |          | red        |           |                | 2-1571986-1 |
| A101J3ZQ004    |             |               |                  | wire lug        |          | black      |           |                | 2-1571986-2 |
| A101J4ZQ004    |             |               |                  |                 |          |            |           |                | 2-1571986-3 |
| A101J4ZQ804    |             |               |                  |                 |          | gray       |           |                | 2-1571986-4 |
| A101J50AV2Q004 |             |               | snap-in          | vertical R/A    |          | black      |           |                | 2-1571986-5 |
| A101J50V3Q004  |             |               |                  | br. .620(15.75) |          |            |           |                | 2-1571986-6 |
| A101J50V3Q204  |             |               |                  |                 |          | red        |           |                | 2-1571986-7 |
| A101J50ZQ004   |             |               |                  | wire lug        |          | black      |           |                | 2-1571986-8 |
| A101J51CB0004  |             |               | snap-in, frame   | P.C.            | gold     |            | black     |                | 2-1571986-9 |
| A101J51Z3G0004 |             |               |                  | quick c.        | Au on Ag |            |           |                | 3-1571986-0 |
| A101J51Z3Q0004 |             |               |                  |                 | silver   |            |           |                | 3-1571986-1 |
| A101J51ZB0004  |             |               |                  | wire lug        | gold     |            |           |                | 3-1571986-3 |
| A101J51ZQ0004  |             |               |                  |                 | silver   |            |           |                | 3-1571986-4 |
| A101J51ZQ2004  |             |               |                  |                 |          | red        |           |                | 3-1571986-5 |
| A101J61ZQ0004  |             |               |                  |                 |          | black      |           |                | 3-1571986-6 |
| A103J1AV2B004  |             | On-Off-On     | small            | vertical R/A    | gold     |            | n/a       |                | 3-1571986-8 |
| A103J1AV2Q004  |             |               |                  |                 | silver   |            |           |                | 3-1571986-9 |
| A103J1V3Q004   |             |               |                  | br. .620(15.75) |          |            |           |                | 4-1571986-0 |
| A103J1ZQ004    |             |               |                  | wire lug        |          |            |           |                | 4-1571986-1 |
| A103J2CB004    |             |               |                  | P.C.            | gold     |            |           |                | 4-1571986-2 |
| A103J2ZQ004    |             |               |                  | wire lug        | silver   |            |           |                | 4-1571986-3 |
| A103J3ZQ004    |             |               | large            |                 |          |            |           |                | 4-1571986-4 |
| A103J51ZQ0004  |             |               |                  | snap-in, frame  |          |            | black     |                | 4-1571986-5 |
| A103J61ZQ0004  |             |               |                  |                 |          |            |           |                | 4-1571986-6 |
| A105J1AQ004    |             | (On)-Off-(On) | small            | right angle     |          |            | n/a       |                | 4-1571986-9 |
| A105J1AV2Q004  |             |               |                  | vertical R/A    |          |            |           |                | 5-1571986-0 |
| A105J1CQ004    |             |               |                  | P.C.            |          |            |           |                | 5-1571986-1 |
| A105J1V3B004   |             |               |                  | br. .620(15.75) | gold     |            |           |                | 5-1571986-2 |
| A105J1ZQ004    |             |               |                  | wire lug        | silver   |            |           |                | 5-1571986-3 |
| A105J2AQ004    |             |               |                  | right angle     |          |            |           |                | 5-1571986-4 |
| A105J2AV2Q004  |             |               |                  | vertical R/A    |          |            |           |                | 5-1571986-5 |
| A105J2ZQ004    |             |               |                  | wire lug        |          |            |           |                | 5-1571986-6 |
| A105J3CQ004    |             |               | large            | P.C.            |          |            |           |                | 5-1571986-7 |
| A105J3CQ2004   |             |               |                  |                 |          | red        | black     |                | 5-1571986-8 |
| A105J3ZQ004    |             |               |                  | wire lug        |          | black      | n/a       |                | 5-1571986-9 |
| A105J4ZQ004    |             |               |                  |                 |          |            |           |                | 6-1571986-0 |
| A105J51ZQ0004  |             |               | snap-in, frame   |                 |          |            | black     |                | 6-1571986-1 |
| A105J52ZQ2004  |             |               | snap-in, f., LED |                 |          | red        |           |                | 6-1571986-2 |
| A105J61ZG0004  |             |               | snap-in, frame   |                 | Au on Ag | black      |           |                | 6-1571986-3 |
| A105J61ZQ0004  |             |               |                  |                 | silver   |            |           |                | 6-1571986-4 |
| A107J51ZQ0004  |             | On-Off-(On)   |                  |                 |          |            |           |                | 6-1571986-5 |
| A107J61ZQ0004  |             |               |                  |                 |          |            |           |                | 6-1571986-6 |
| A108J1V3Q004   |             | On-(On)       | small            | br. .620(15.75) |          |            | n/a       |                | 6-1571986-7 |
| A108J1ZQ004    |             |               |                  | wire lug        |          |            |           |                | 6-1571986-8 |
| A108J51ZQ0004  |             |               | snap-in, frame   |                 |          |            | black     |                | 6-1571986-9 |
| A108J61ZQ0004  |             |               |                  |                 |          |            |           |                | 7-1571986-0 |

## Gemini A Series Rocker/Paddle (Continued)

| Product key    | Poles       | Function      | Actuator       | Terminals       | Contacts | Act. color | Fr. color | Material       | Part Number |
|----------------|-------------|---------------|----------------|-----------------|----------|------------|-----------|----------------|-------------|
| A201J1AQ004    | double pole | On-On         | small          | right angle     |          | black      | n/a       | RoHS compliant | 1571987-2   |
| A201J1AQ204    |             |               |                |                 |          | red        |           |                | 1571987-3   |
| A201J1AV2Q004  |             |               |                | vertical R/A    |          | black      |           |                | 1571987-4   |
| A201J1CQ004    |             |               |                | P.C.            |          |            |           |                | 1571987-5   |
| A201J1V3Q004   |             |               |                | br. .620(15.75) |          |            |           |                | 1571987-6   |
| A201J1ZQ004    |             |               |                | wire lug        |          |            |           |                | 1571987-7   |
| A201J2CQ004    |             |               |                | P.C.            |          |            |           |                | 1571987-8   |
| A201J2ZQ004    |             |               |                | wire lug        |          |            |           |                | 1571987-9   |
| A201J3ZB004    |             |               | large          |                 | gold     |            |           |                | 1-1571987-0 |
| A201J3ZQ004    |             |               |                |                 | silver   |            |           |                | 1-1571987-1 |
| A201J50AV2Q004 |             |               | snap-in        | vertical R/A    |          |            |           |                | 1-1571987-2 |
| A201J50AV2Q804 |             |               |                |                 |          | gray       |           |                | 1-1571987-3 |
| A201J50ZQ004   |             |               |                | wire lug        |          | black      |           |                | 1-1571987-4 |
| A201J51ZQ0004  |             |               | snap-in, frame |                 |          |            | black     |                | 1-1571987-5 |
| A201J51ZQ9904  |             |               |                |                 |          | white      | white     |                | 1-1571987-7 |
| A201J61Z3Q0004 |             |               |                | quick c.        |          | black      | black     |                | 1-1571987-8 |
| A201J61ZQ0004  |             |               |                | wire lug        |          |            |           |                | 1-1571987-9 |
| A203J1AQ004    |             | On-Off-On     | small          | right angle     |          |            | n/a       |                | 2-1571987-0 |
| A203J1AV2Q004  |             |               |                | vertical R/A    |          |            |           |                | 2-1571987-1 |
| A203J1CQ204    |             |               |                | P.C.            |          | red        |           |                | 2-1571987-2 |
| A203J1ZQ004    |             |               |                | wire lug        |          | black      |           |                | 2-1571987-4 |
| A203J51ZQ0004  |             |               | snap-in, frame |                 |          |            | black     |                | 2-1571987-6 |
| A203J61ZQ0004  |             |               |                |                 |          |            |           |                | 2-1571987-7 |
| A205J1AV2Q004  |             | (On)-Off-(On) | small          | vertical R/A    |          |            | n/a       |                | 2-1571987-9 |
| A205J1ZQ004    |             |               |                | wire lug        |          |            |           |                | 3-1571987-0 |
| A205J2CQ004    |             |               |                | P.C.            |          |            |           |                | 3-1571987-1 |
| A205J2ZQ004    |             |               |                | wire lug        |          |            |           |                | 3-1571987-2 |
| A205J51ZQ0004  |             |               | snap-in, frame |                 |          |            | black     |                | 3-1571987-3 |
| A205J61ZQ0004  |             |               |                |                 |          |            |           |                | 3-1571987-4 |
| A207J1ZQ004    |             | On-Off-(On)   | small          |                 |          |            | n/a       |                | 3-1571987-5 |
| A207J3ZQ004    |             |               | large          |                 |          |            |           |                | 3-1571987-6 |
| A207J51ZQ0004  |             |               | snap-in, frame |                 |          |            | black     |                | 3-1571987-7 |
| A207J61ZQ0004  |             |               |                |                 |          |            |           |                | 3-1571987-8 |
| A208J1V3Q004   |             | On-(On)       | small          | br. .620(15.75) |          |            | n/a       |                | 4-1571987-0 |
| A208J51ZQ0004  |             |               | snap-in, frame | wire lug        |          |            |           |                | 4-1571987-1 |
| A208J61ZQ0004  |             |               |                |                 |          |            | black     |                | 4-1571987-2 |
| A211J51ZQ0004  |             | On-On-On      |                |                 |          |            |           |                | 4-1571987-3 |
| A213J61ZQ0004  |             | On-On-(On)    |                |                 |          |            |           |                | 4-1571987-4 |

## Gemini AE Series Rocker/Paddle

## Features

- Multiple actuator colors available
- G and Q contacts UL® recognition
- Sealed to IP67 select series



### Typical performance characteristics

|                       |                                                                                                                                                                                                                                                 |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Contact configuration | SPST, DPST                                                                                                                                                                                                                                      |
| Contact timing        | break-before-make                                                                                                                                                                                                                               |
| Contact rating max.   | B contacts: 0.4 VA @ 20 V max. AC or DC<br>G contacts: 0.4 VA @ 20 V max. AC or DC or<br>5 A @ 120 VAC or 28 VDC (resistive) or<br>2 A @ 250 VAC (resistive)<br>Q contacts: 5 A @ 120 VAC or 28 VDC (resistive) or<br>2 A @ 250 VAC (resistive) |
| Electrical life       | 6,000 cycles at rated load                                                                                                                                                                                                                      |
| Mechanical life       | 40,000 cycles                                                                                                                                                                                                                                   |
| Contact resistance    | max. 10 mOhms initial @ 2-4 VDC, 100 mA                                                                                                                                                                                                         |
| Insulation resistance | min. 1,000 MOhms                                                                                                                                                                                                                                |
| Dielectric strength   | 1,000 Vrms at sea level                                                                                                                                                                                                                         |
| Standards and specs.  | UL® recognition on G & Q contacts                                                                                                                                                                                                               |

## Environmental specification

**Environmental specification**

|                        |                              |
|------------------------|------------------------------|
| Operating temperature  | -30°C to 85°C                |
| Storage temperature    | -40°C to 85°C                |
| Solder heat resistance | wave solder capable to 265°C |

## Material specifications

**Material Specifications**

|                               |                                              |
|-------------------------------|----------------------------------------------|
| Contacts & terminals          | B contacts: copper alloy w/ gold over nickel |
|                               | G contacts: copper alloy w/ silver           |
|                               | Q contacts: copper alloy w/ gold over silver |
| Actuator                      | phenolic                                     |
| Case                          | nylon red, UL94 V-0                          |
| Support bracket               | brass/ tin plated                            |
| Seal                          | epoxy UL94 V-1                               |
| O ring                        | pvc, black                                   |
| Spring                        | music wire                                   |
| Mounting bracket & rocker cap | nylon UL94 V-1                               |
| Retainer                      | stainless steel                              |
| RoHS Directive 2002/95/EC     | compliant                                    |

### Product key

Typical product key

|    |   |    |    |   |   |   |    |
|----|---|----|----|---|---|---|----|
| AE | 1 | 01 | J1 | A | Q | 0 | 04 |
|----|---|----|----|---|---|---|----|

|      |                        |
|------|------------------------|
| Type |                        |
| AE   | Rocker/Paddle Switches |

| Number of poles |             |
|-----------------|-------------|
| 1               | single pole |
| 2               | double pole |

| Function  |               |
|-----------|---------------|
| <b>01</b> | On-On         |
| <b>05</b> | (On)-Off-(On) |
| <b>07</b> | On-Off-(On)   |
| <b>08</b> | On-(On)       |

| Actuator      |          |  | Paddle     |          |
|---------------|----------|--|------------|----------|
| <b>Rocker</b> |          |  | <b>J2</b>  | standard |
| <b>J1</b>     | standard |  | <b>J60</b> | small    |
| <b>J50</b>    | small    |  |            |          |

| Terminals     |                               |
|---------------|-------------------------------|
| <b>A</b>      | right angle                   |
| <b>AV2</b>    | vertical R/A                  |
| <b>C</b>      | P.C.                          |
| <b>V3, V4</b> | vertical with support bracket |
| <b>W</b>      | wire wrap .736 (18.7)         |
| <b>W4</b>     | wire wrap 1.062 (27.00)       |
| <b>Z</b>      | wire lug                      |
| <b>Z3</b>     | quick connect                 |

| Contacts |      |                  |
|----------|------|------------------|
| B        | gold | G                |
|          |      | gold over silver |
|          |      | Q                |
|          |      | silver           |

| Actuator color |              |
|----------------|--------------|
| 0              | black (std.) |
| 2              | red          |

|                 |                |
|-----------------|----------------|
| <b>Material</b> |                |
| <b>04</b>       | RoHS compliant |

## Gemini AE Series Rocker/Paddle (Continued)

### Function



Codes 01, 05, 07 and 08

| Code | Positions           |       |      |       |
|------|---------------------|-------|------|-------|
| 01   | 2 positions         | On    | None | On    |
| 08   |                     | On    | None | (On)  |
|      | Term. conn.         | 1 - 2 | ---  | 2 - 3 |
| 05   | 3 positions         | (On)  | Off  | (On)  |
| 07   |                     | On    | Off  | (On)  |
|      | Terminals connected | 1 - 2 | ---  | 2 - 3 |
|      |                     | 4 - 5 | ---  | 5 - 6 |

Off  
(On)  
None

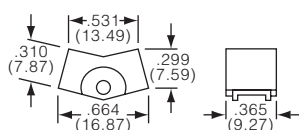
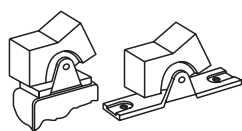
mechanical position, no electrical connection  
momentary mechanical position and electrical connection  
no mechanical position

### Actuator



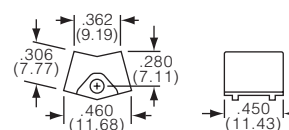
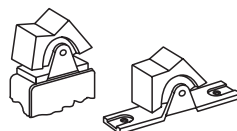
#### J1, J50 rockers standard and small rocker

J1 standard rocker



mounting provided with C or Z terminal types

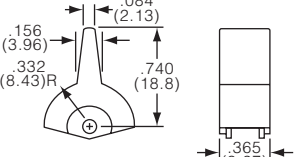
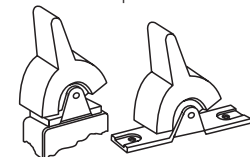
J50 small rocker



mounting provided with C or Z terminal types

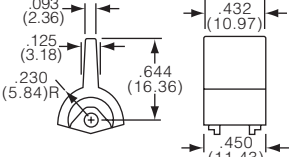
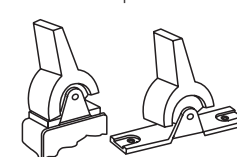
#### J2, J60 paddles standard and small paddle

J2 standard paddle



mounting provided with C or Z terminal types

J60 small paddle



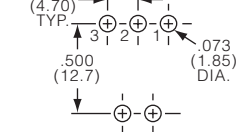
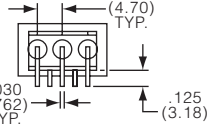
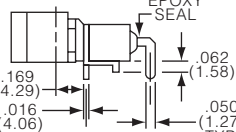
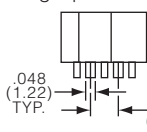
mounting provided with C or Z terminal types

### Terminals

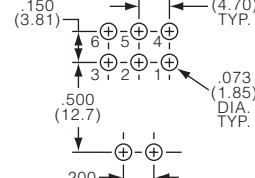
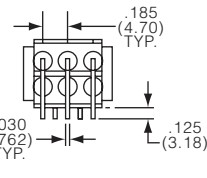
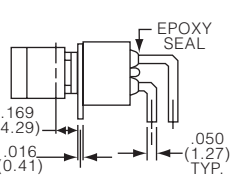
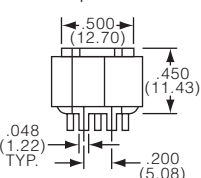


#### A right angle

Single pole

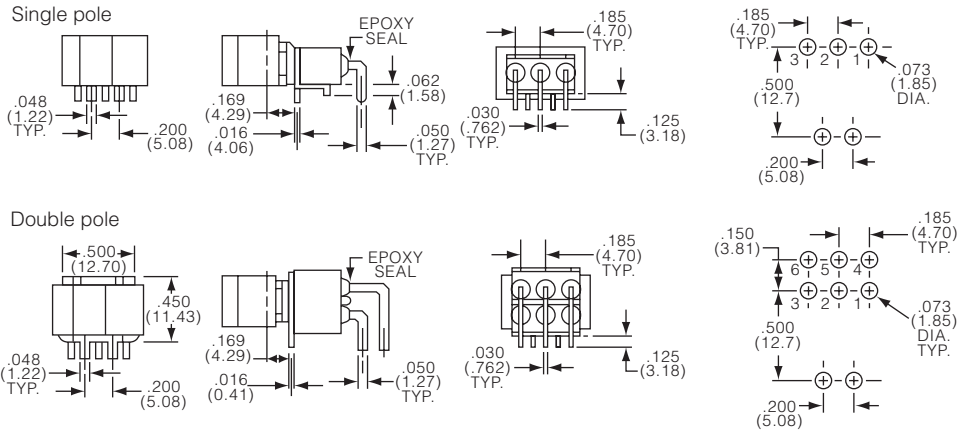


Double pole

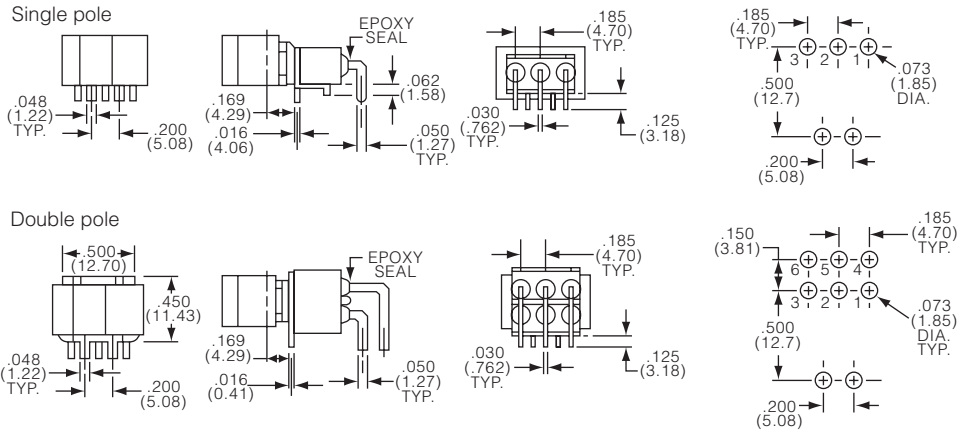


**Gemini AE Series Rocker/Paddle (Continued)**

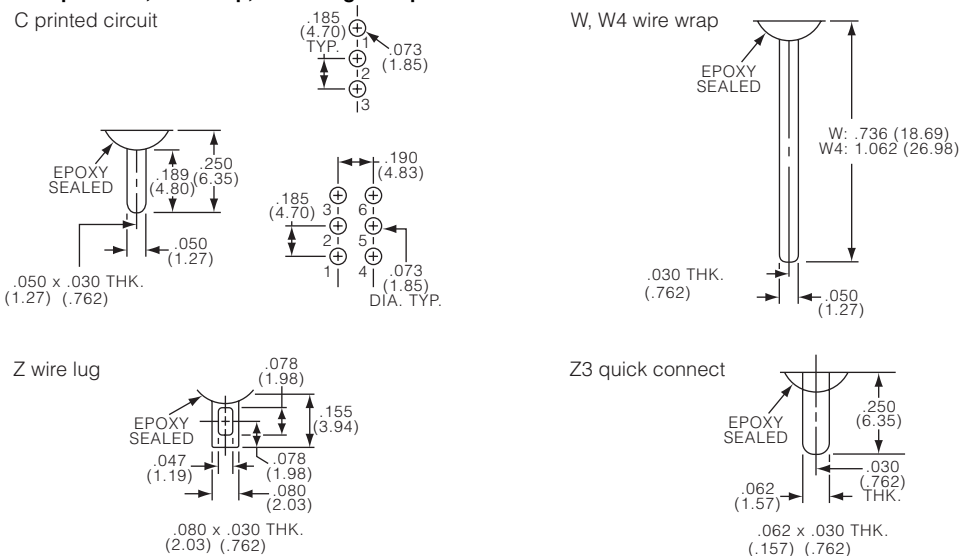
**AV2 vertical right angle**



**V3, V4 vertical with support bracket**



**Codes C, W, W4, Z and Z3 rpc board, wire wrap, solder lug and quick connect**



## Gemini AE Series Rocker/Paddle (Continued)

| Product key    | Poles       | Function      | Actuator | Terminals       | Contacts | Act. color | Material       | Part Number |
|----------------|-------------|---------------|----------|-----------------|----------|------------|----------------|-------------|
| AE101J1AB004   | single pole | On-On         | standard | right angle     | gold     | black      | RoHS compliant | 1571988-1   |
| AE101J1AQ004   |             |               |          |                 | silver   |            |                | 1571988-2   |
| AE101J1AQ404   |             |               |          |                 |          | yellow     |                | 1571988-3   |
| AE101J1AV2Q004 |             |               |          | vertical R/A    |          | black      |                | 1571988-4   |
| AE101J1V3B004  |             |               |          | br. .620(15.75) | gold     |            |                | 1571988-5   |
| AE101J1V3Q004  |             |               |          |                 | silver   |            |                | 1571988-6   |
| AE103J50V3B004 |             | On-Off-On     | small    |                 | gold     |            |                | 1571988-7   |
| AE103J60V3Q204 |             |               |          |                 | silver   | red        |                | 1571988-8   |
| AE105J1AQ004   |             | (On)-Off-(On) | standard | right angle     |          | black      |                | 1571988-9   |
| AE105J1V3B004  |             |               |          | br. .620(15.75) | gold     |            |                | 1-1571988-0 |
| AE105J1ZB004   |             |               |          | wire lug        |          |            |                | 1-1571988-1 |
| AE105J60V3B004 |             |               | small    | br. .620(15.75) |          |            |                | 1-1571988-2 |
| AE107J1AQ004   |             | On-Off-(On)   | standard | right angle     | silver   |            |                | 1-1571988-3 |
| AE107J1ZQ004   |             |               |          | wire lug        |          |            |                | 1-1571988-4 |
| AE108J1ZQ004   |             | On-(On)       |          |                 |          |            |                | 1-1571988-5 |
| AE108J60V3B004 |             |               | small    | br. .620(15.75) | gold     |            |                | 1-1571988-6 |
| AE201J1AQ004   | double pole | On-On         | standard | right angle     | silver   |            |                | 1571989-1   |
| AE201J1AV2Q004 |             |               |          | vertical R/A    |          |            |                | 1571989-2   |
| AE201J1V3B004  |             |               |          | br. .620(15.75) | gold     |            |                | 1571989-3   |
| AE201J2AQ204   |             |               |          | right angle     | silver   | red        |                | 1571989-4   |
| AE203J1AQ004   |             | On-Off-On     |          |                 |          | black      |                | 1571989-5   |
| AE205J50V3B004 |             | (On)-Off-(On) | small    | br. .620(15.75) | gold     |            |                | 1571989-6   |
| AE205J60V3B004 |             |               |          |                 |          |            |                | 1571989-7   |
| AE208J50V3B004 |             | On-(On)       |          |                 |          |            |                | 1571989-8   |

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[TRD11D10WL](#) [TRD11D10QCL2](#) [TRD13D10QC](#) [TRD13D10WLLR25](#) [TRD13H10WLLR2](#) [A203J61ZQ00](#)  
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