

cRU[®] US RoHS Compliant

E222871

Miniature Rocker

Specifications

| | |
|--------------------|--|
| Electrical Ratings | 5A @ 120VAC, 28VDC 2A @ 250VAC See Contact Options |
| Electrical Life | 50,000 cycles typical |
| Contact Resistance | <20mΩ initial @ 2-4VDC, 100mA |

| | |
|-----------------------|---------------|
| Dielectric Strength | 1500Vrms min |
| Insulation Resistance | >100MΩ min |
| Operating Temperature | -40°C to 85°C |
| Storage Temperature | -40°C to 85°C |

Materials

| | |
|-----------|------------------------------|
| Actuator | ABS |
| Housing | Diallyl Phthalate (DAP) |
| Frame | 6/6 Nylon |
| Bushing | Brass or Zinc, Nickel Plated |
| Contacts | Copper Alloy, Silver Plated |
| Terminals | Brass, Silver Plated |

Features

- Wide variety of applications from consumer electronics to commercial
- Standard epoxy sealed terminations
- Gold contacts available for low power applications
- Available support brackets for greater stability
- Up to four poles with five functions available
- Many rocker and paddle styles to choose from
- Wide variety of terminal options

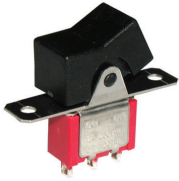
ANR

Miniature Pushbutton

Ordering Information

| | | | | | | | | | | |
|---|------------|-----------|------------------|-----|---|--|--|---|---|---|
| 1. Series | ANR | 1 | 1 | R11 | 2 | | | B | Q | E |
| ANR | | | | | | | | | | |
| 2. Number of Poles | | | | | | | | | | |
| 1 = SPDT | | | | | | | | | | |
| 2 = DPDT | | | | | | | | | | |
| 3 = 3PDT | | | | | | | | | | |
| 4 = 4PDT | | | | | | | | | | |
| 3. Switch Function | | | | | | | | | | |
| 1 = ON-NONE-ON | | | | | | | | | | |
| 2 = ON-NONE-(ON) | | | | | | | | | | |
| 3 = ON-OFF-ON | | | | | | | | | | |
| 4 = (ON)-OFF-(ON) | | | | | | | | | | |
| 5 = ON-OFF-(ON) | | | | | | | | | | |
| 6 = ON-ON-ON **See 3-way wiring section for details | | | | | | | | | | |
| 4. Actuator | | | | | | | | | | |
| R11P / R11 = Rocker, PC mount / Panel mount | | | | | | | | | | |
| R15P / R15 = Rocker, PC mount / Panel mount | | | | | | | | | | |
| R19P / R19 = Rocker, PC mount / Panel mount | | | | | | | | | | |
| R21P / R21 = Rocker, PC mount / Panel mount | | | | | | | | | | |
| P13P / P13 = Paddle, PC mount / Panel mount | | | | | | | | | | |
| P23P / P23 = Paddle, PC mount / Panel mount | | | | | | | | | | |
| P43P / P43 = Paddle, PC mount / Panel mount | | | | | | | | | | |
| P47P / P47 = Paddle, PC mount / Panel mount | | | | | | | | | | |
| P48P / P48 = Paddle, PC mount / Panel mount | | | | | | | | | | |
| R12 / R22 = Rocker, snap-in panel mount w/frame / snap-in panel mount w/o frame | | | | | | | | | | |
| P14 / P24 = Paddle, snap-in panel mount w/frame / snap-in panel mount w/o frame | | | | | | | | | | |
| P17 / P27 = Paddle, snap-in panel mount w/frame / snap-in panel mount w/o frame | | | | | | | | | | |
| P18 / P28 = Paddle, snap-in panel mount w/frame / snap-in panel mount w/o frame | | | | | | | | | | |
| R51R = Rocker, snap-in panel mount w/frame and LED (Red LED standard) | | | | | | | | | | |
| R53R = Rocker, snap-in panel mount w/frame and LED (Red LED standard) | | | | | | | | | | |
| 5. Actuator Color | | | | | | | | | | |
| 1 = White | 4 = Yellow | 7 = Blue | | | | | | | | |
| 2 = Black | 5 = Green | 8 = Brown | | | | | | | | |
| 3 = Red | 6 = Orange | 9 = Gray | | | | | | | | |
| 6. Frame Color | | | | | | | | | | |
| 1 = White | 4 = Yellow | 7 = Blue | Blank = No Frame | | | | | | | |
| 2 = Black | 5 = Green | 8 = Brown | | | | | | | | |
| 3 = Red | 6 = Orange | 9 = Gray | | | | | | | | |
| 7. Actuator Marking Style | | | | | | | | | | |
| Blank = No marking | | | | | | | | | | |
| A, B, C, D, E, F, G | | | | | | | | | | |
| 8. Actuator Marking Color | | | | | | | | | | |
| Blank = No marking | | | | | | | | | | |
| W = White, standard | | | | | | | | | | |
| B = Black | | | | | | | | | | |
| 9. Terminals | | | | | | | | | | |
| B = Solder lug | | | | | | | | | | |
| C = PC pin | | | | | | | | | | |
| D = Quick Connect | | | | | | | | | | |
| H = Horizontal mount, right angle PC Pin; HS = Snap-in | | | | | | | | | | |
| V = Vertical mount, right angle PC pin | | | | | | | | | | |
| S20 / S25 = PC pin with support bracket; V20 / V25 = Snap-in support bracket | | | | | | | | | | |
| S35 / S40 = PC pin with support bracket | | | | | | | | | | |
| 10. Contacts | | | | | | | | | | |
| Q = Silver plated | | | | | | | | | | |
| R = Gold plated | | | | | | | | | | |
| G = Gold over Silver plated | | | | | | | | | | |
| 11. Epoxy Seal | | | | | | | | | | |
| E = Epoxy Seal | | | | | | | | | | |

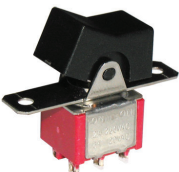
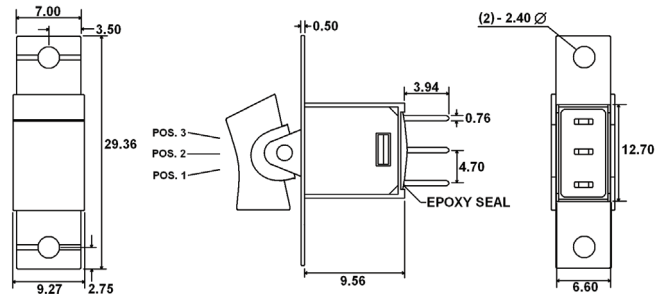
Switch Function



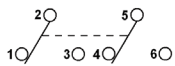
SPDT



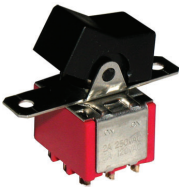
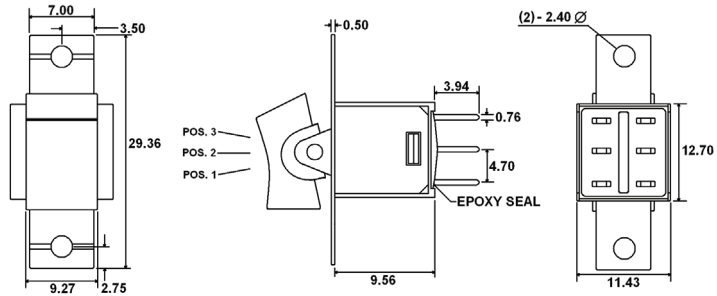
| Function | Rocker Position | | |
|-----------|-----------------|-----------|------|
| | | | |
| 1 | ON | NONE | ON |
| 2 | ON | NONE (ON) | |
| 3 | ON | OFF | ON |
| 4 | (ON) | OFF | (ON) |
| 5 | ON | OFF | (ON) |
| Terminals | 2-3 | - | 2-1 |



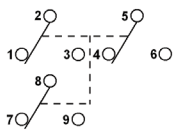
DPDT



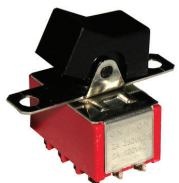
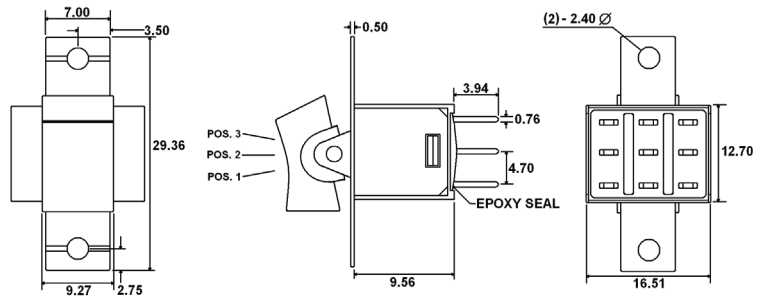
| Function | Rocker Position | | |
|-----------|-----------------|------------|------------|
| | | | |
| 1 | ON | NONE | ON |
| 2 | ON | NONE (ON) | |
| 3 | ON | OFF | ON |
| 4 | (ON) | OFF | (ON) |
| 5 | ON | OFF | (ON) |
| Terminals | 2-3 5-6 | - | 2-1 5-4 |
| Terminals | 2-3 5-6 | 2-3 5-4 | 2-1 5-4 |



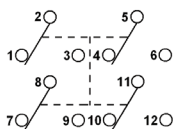
3PDT



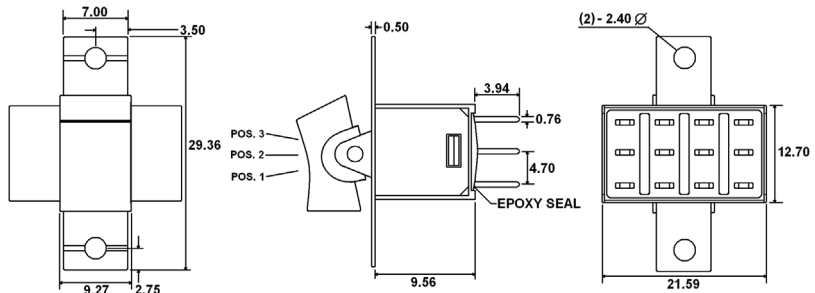
| Function | Rocker Position | | |
|-----------|-------------------|-----------|-------------------|
| | | | |
| 1 | ON | NONE | ON |
| 2 | ON | NONE (ON) | |
| 3 | ON | OFF | ON |
| 4 | (ON) | OFF | (ON) |
| 5 | ON | OFF | (ON) |
| Terminals | 2-3 5-6 8-9 | - | 2-1 5-4 8-7 |



4PDT



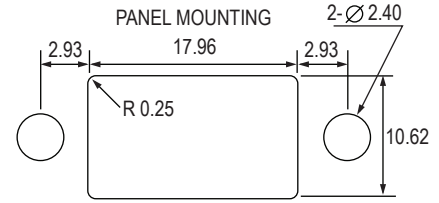
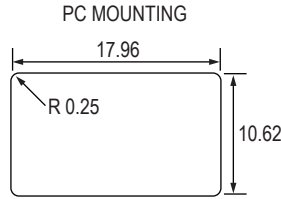
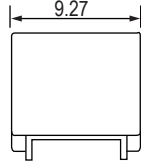
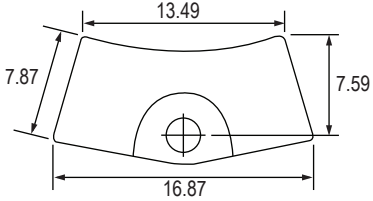
| Function | Rocker Position | | |
|-----------|----------------------------|----------------------------|----------------------------|
| | | | |
| 1 | ON | NONE | ON |
| 2 | ON | NONE (ON) | |
| 3 | ON | OFF | ON |
| 4 | (ON) | OFF | (ON) |
| 5 | ON | OFF | (ON) |
| Terminals | 2-3 5-6 8-9 11-12 | - | 2-1 5-4 8-7 11-10 |
| Terminals | 2-3 5-6 8-9 11-12 | 2-3 5-4 8-9 11-10 | 2-1 5-4 8-7 11-10 |



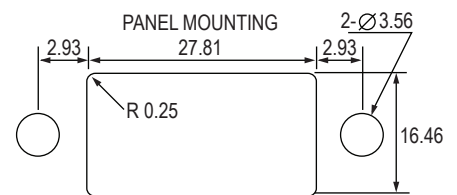
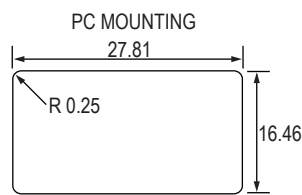
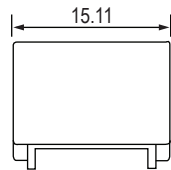
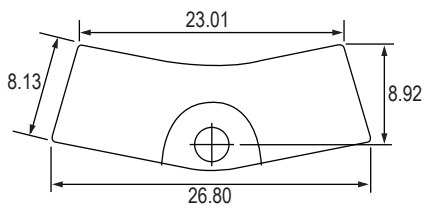
ANR

Miniature Rocker

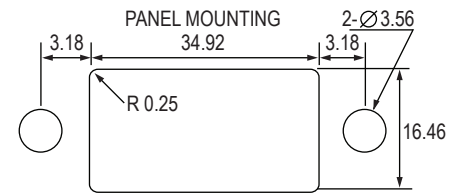
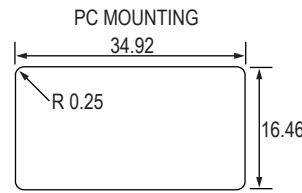
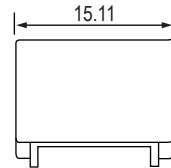
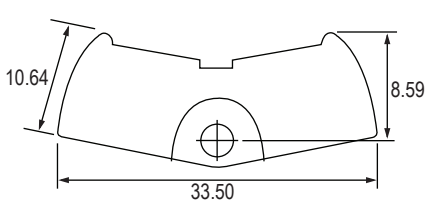
Actuator Options - PC mount & Panel mount



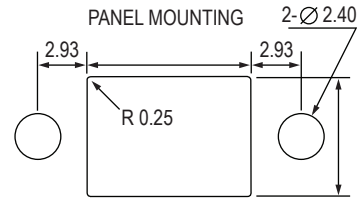
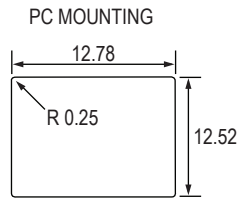
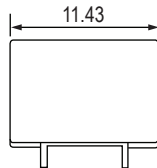
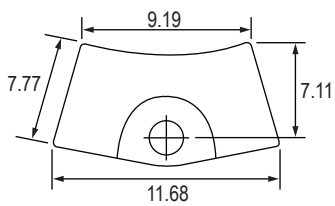
R11P / R11



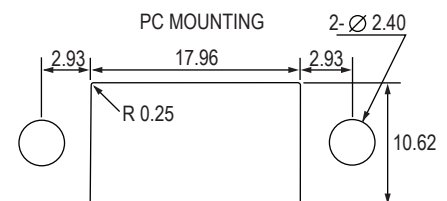
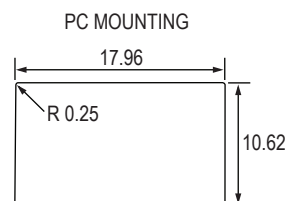
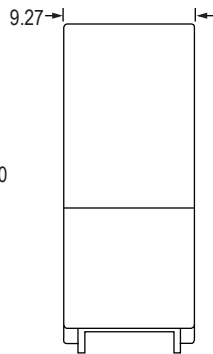
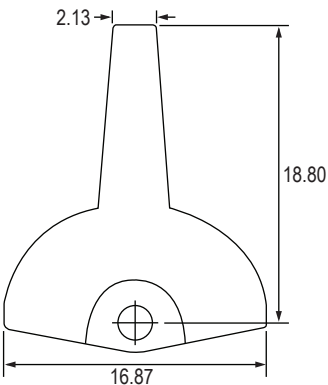
R15P / R15



R19P / R19

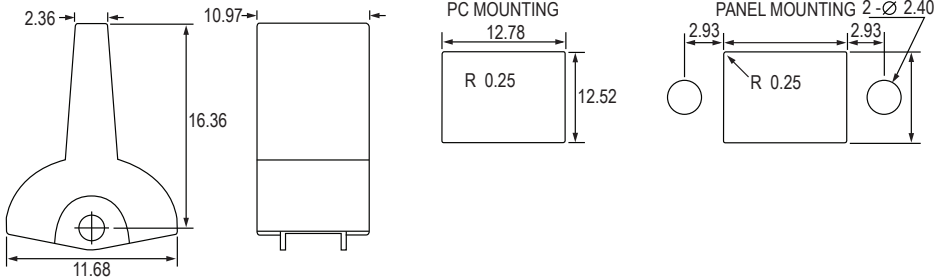


R21P / R21

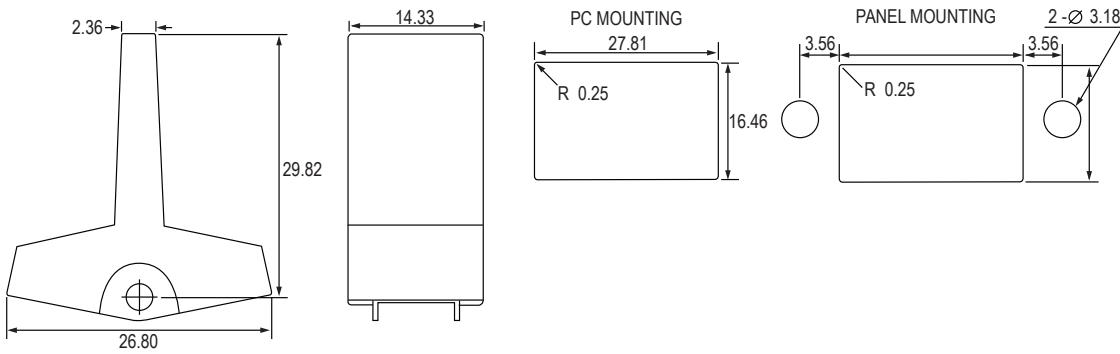


P13P / P13

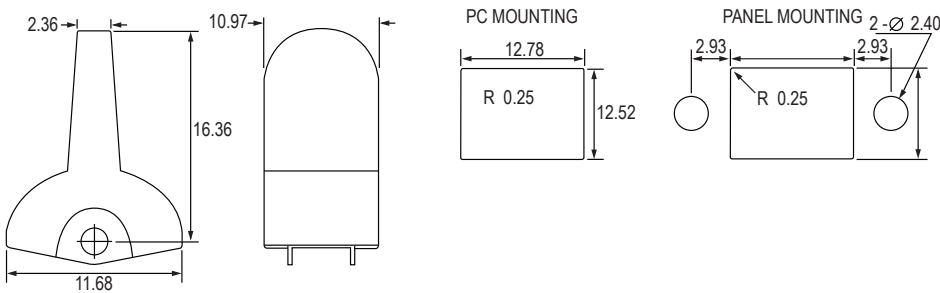
Actuator Options - PC mount & Panel mount



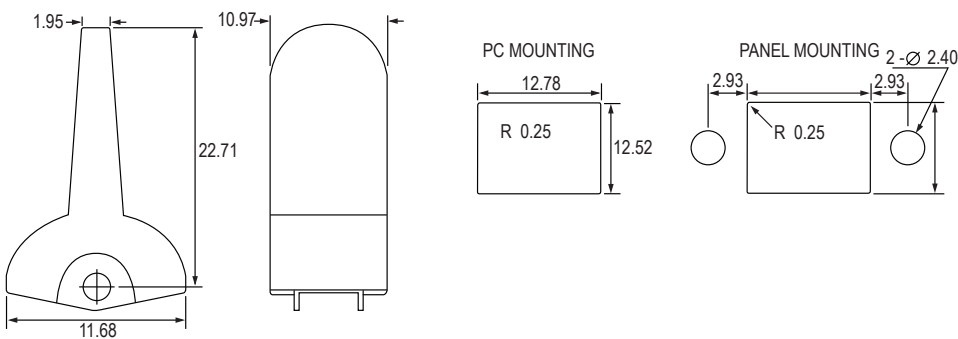
P23P / P23



P43P / P43



P47P / P47

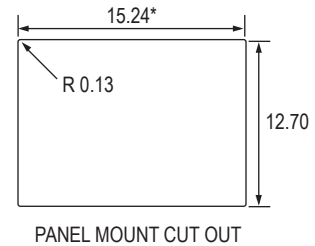
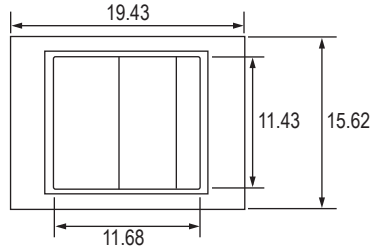
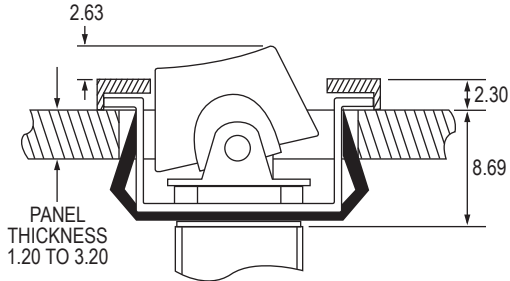


P48P / P48

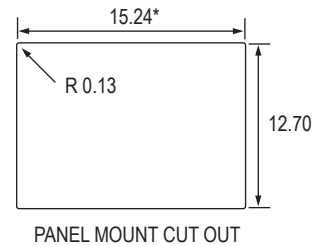
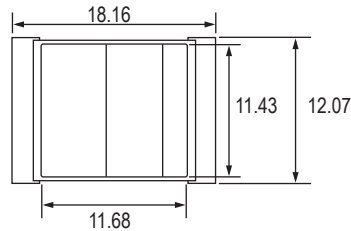
ANR

Miniature Rocker

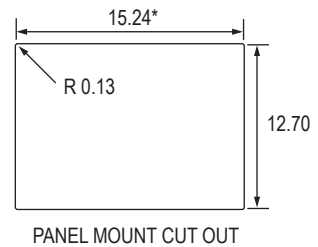
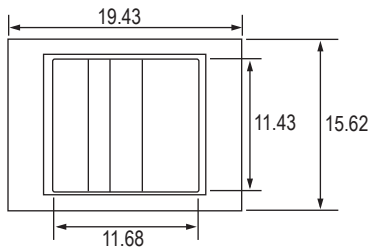
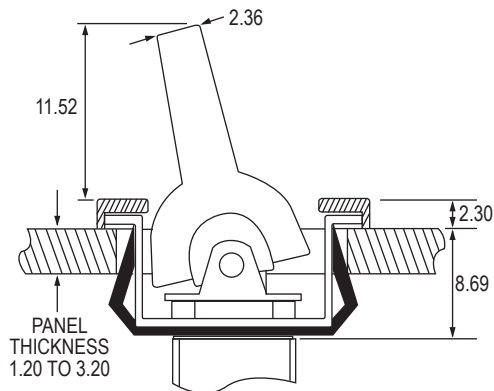
Actuator Options - Snap-In Panel mount



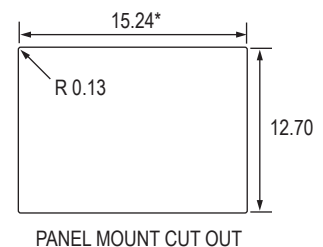
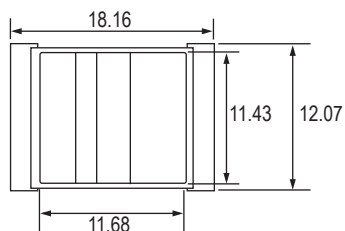
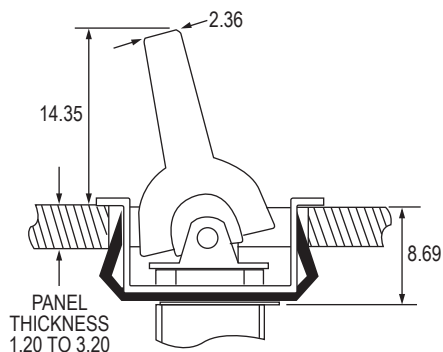
R12 - Increase the length dimension to 15.75/15.88 for 1.5/3.20 thick panels



R22 - Increase the length dimension to 15.75/15.88 for 1.5/3.20 thick panels

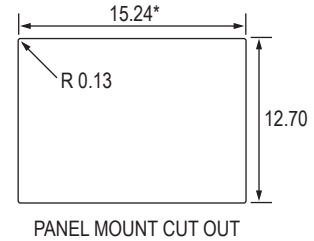
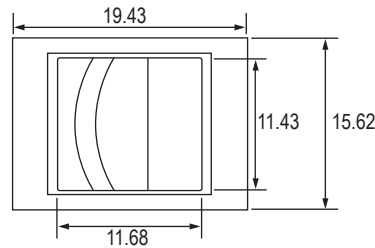
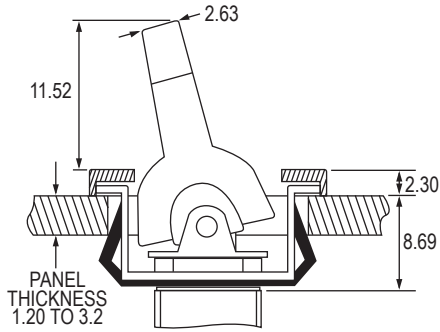


P14 - Increase the length dimension to 15.75/15.88 for 1.5/3.20 thick panels

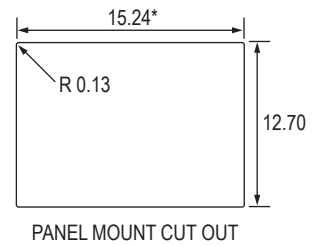
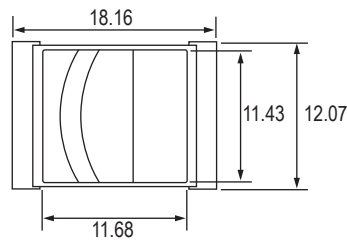
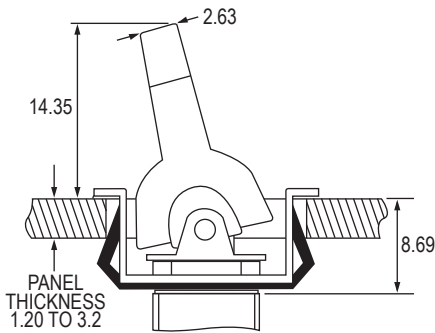


P24 - Increase the length dimension to 15.75/15.88 for 1.5/3.20 thick panels

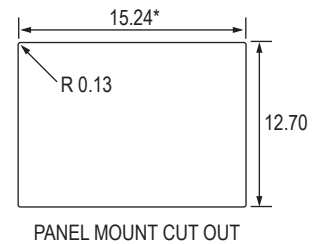
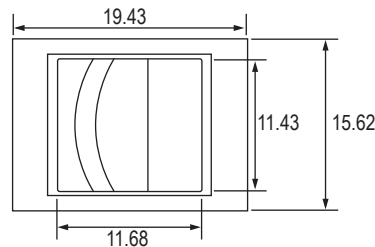
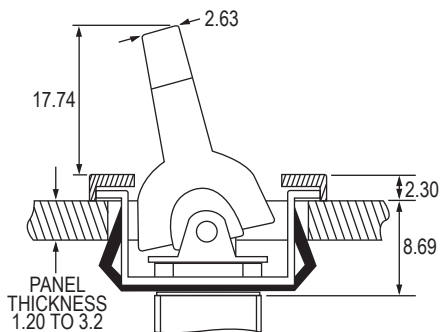
Actuator Options - Snap-In Panel mount



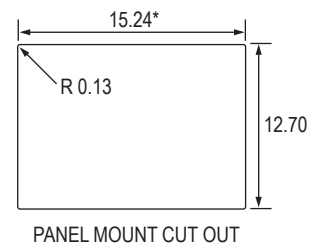
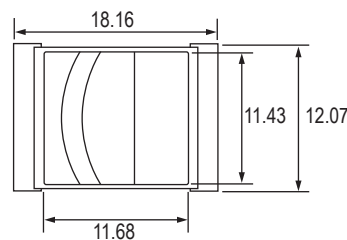
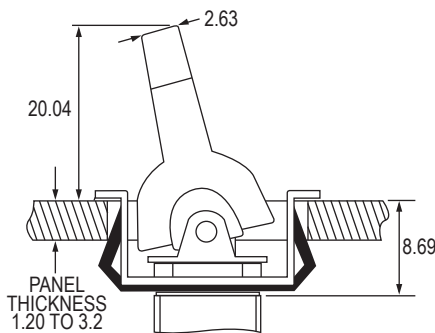
P17 - Increase the length dimension to 15.75/15.88 for 1.5/3.20 thick panels



P27 - Increase the length dimension to 15.75/15.88 for 1.5/3.20 thick panels

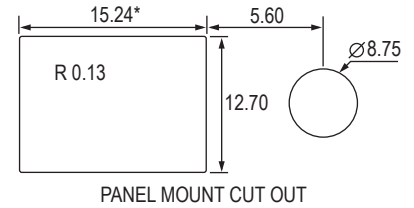
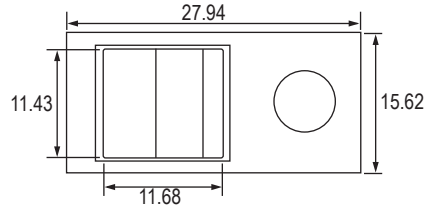
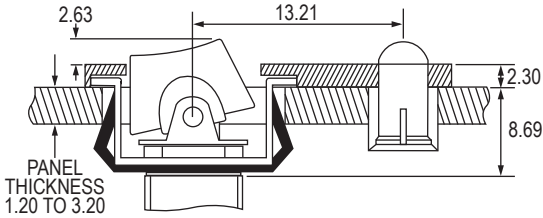


P18 - Increase the length dimension to 15.75/15.88 for 1.5/3.20 thick panels

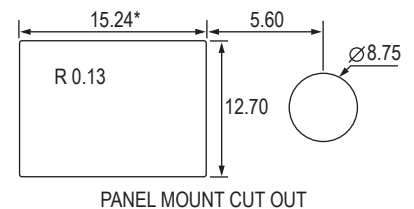
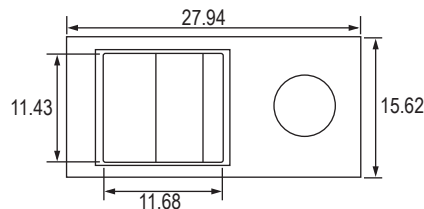
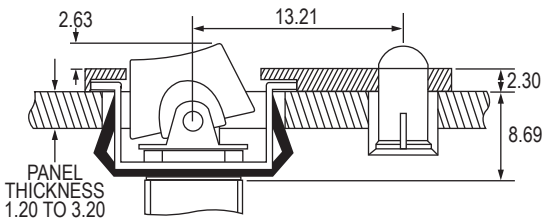


P28 - Increase the length dimension to 15.75/15.88 for 1.5/3.20 thick panels

Actuator Options - Snap-In Panel mount

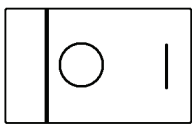


R51R - Increase the length dimension to 15.75/15.88 for 1.5/3.20 thick panels

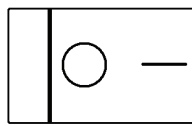


P53R - Increase the length dimension to 15.75/15.88 for 1.5/3.20 thick panels

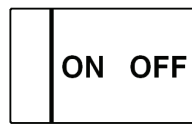
Actuator Markings



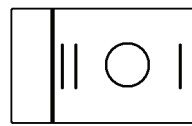
A



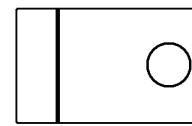
B



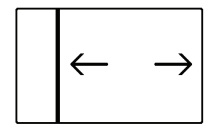
C



D

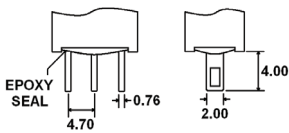


E

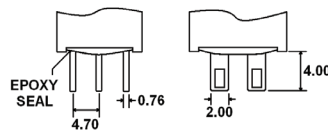


F

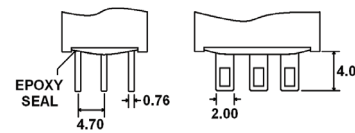
Terminal Options



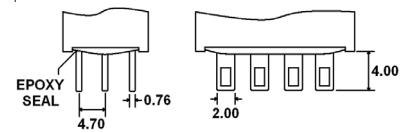
B Single Pole



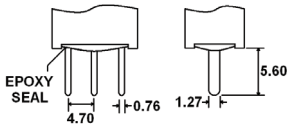
B Double Pole



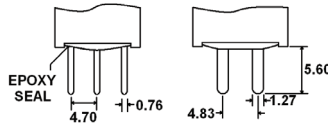
B 3Pole



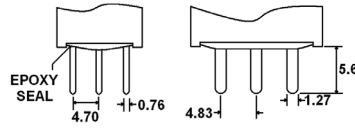
B 4Pole



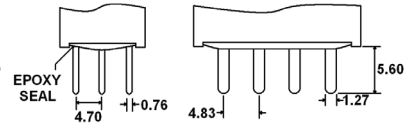
C Single Pole



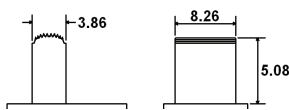
C Double Pole



C 3Pole



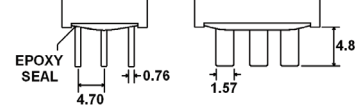
C 4Pole



D Single Pole



D Double Pole

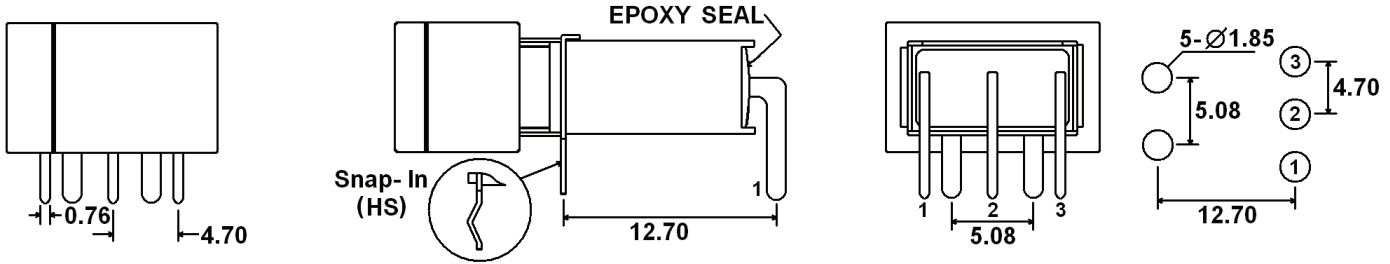


D 3Pole

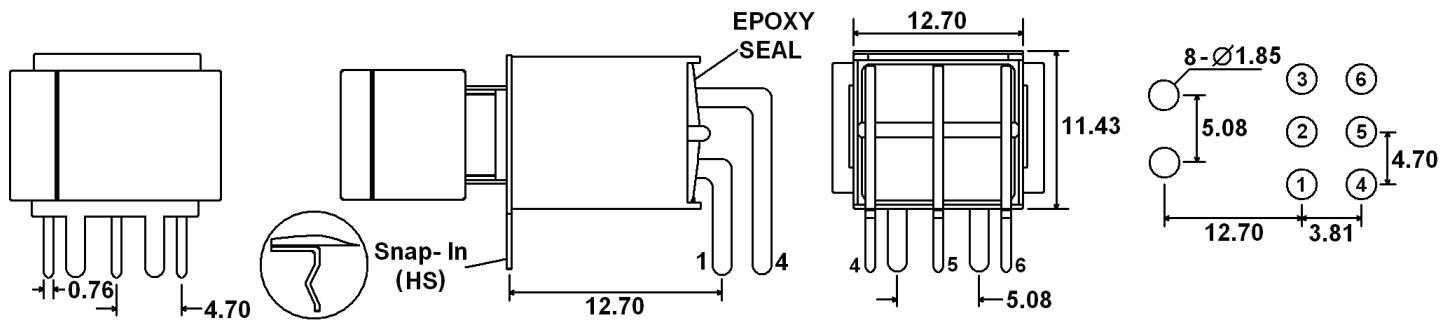


D 4Pole

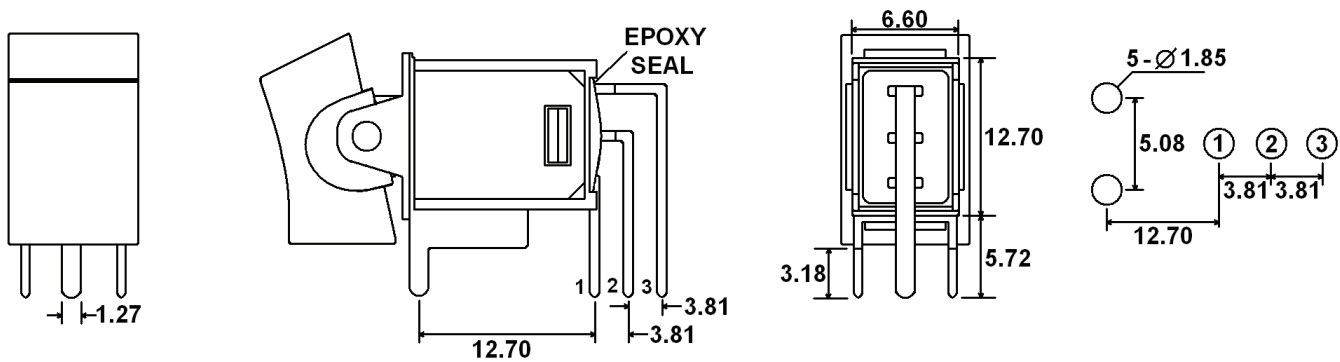
Terminal Options



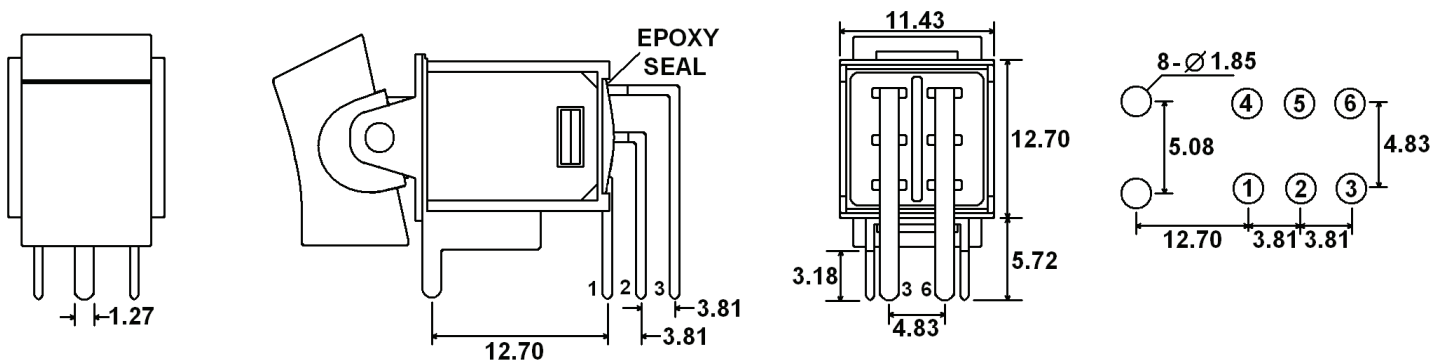
H (HS - Snap In) = Horizontal mount, right angle PC pins, single pole



H (HS - Snap In) = Horizontal mount, right angle PC pins, double pole



V = Vertical mount, right angle PC pins, single pole

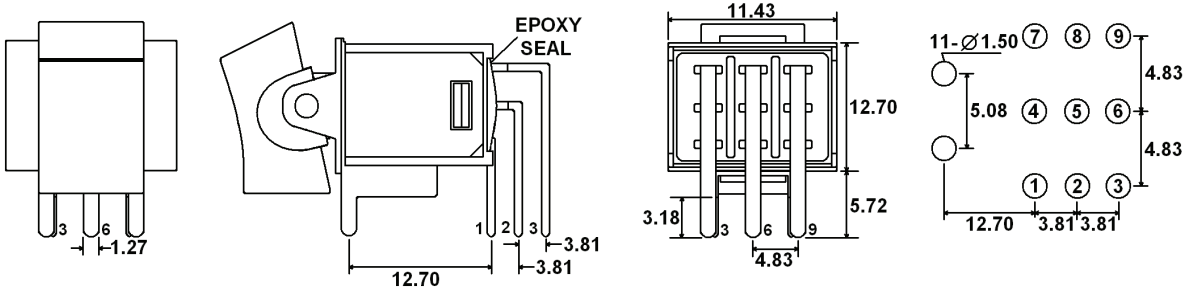


V = Vertical mount, right angle PC pins, double pole

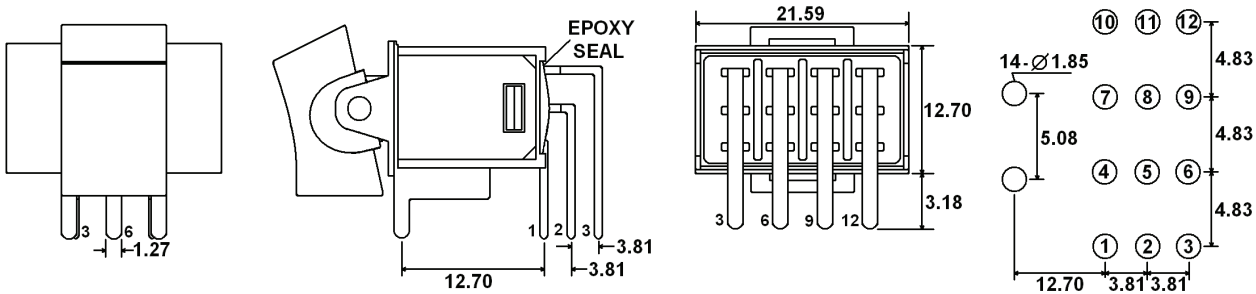
ANR

Miniature Rocker

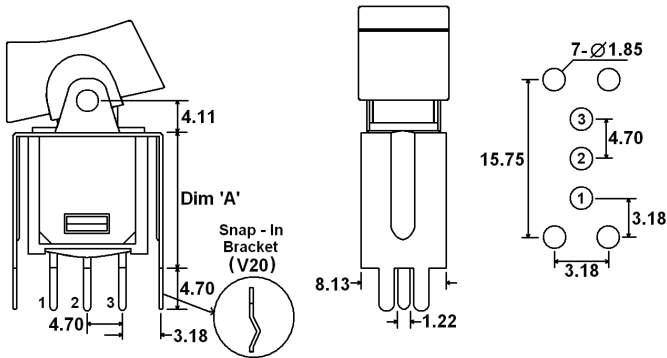
Terminal Options



V = Vertical mount, right angle PC pins, three pole

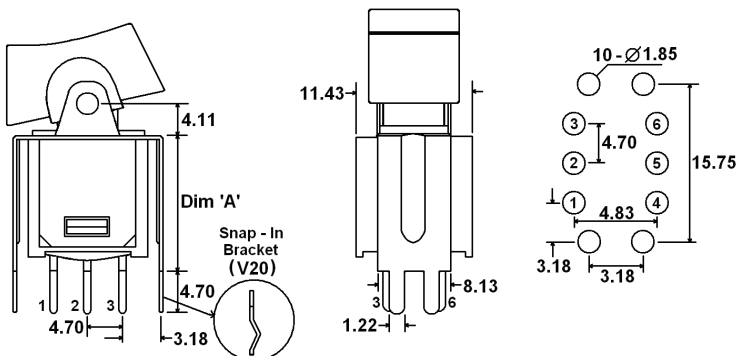


V = Vertical mount, right angle PC pins, four pole



| Terminal Option | "A" Dimension |
|-----------------|---------------|
| S20 / V20 | 11.68 |
| S25 / V25 | 16.00 |

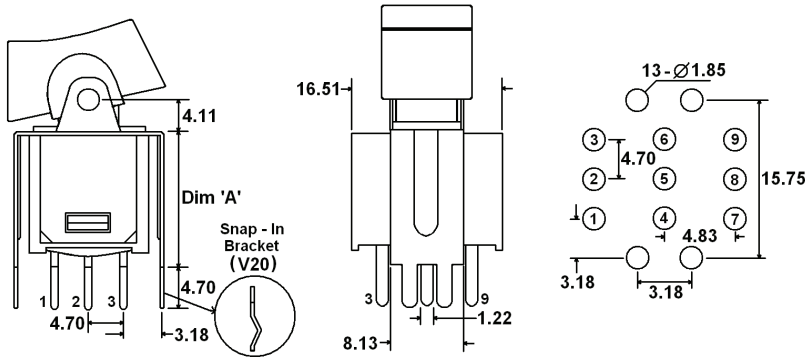
S20/25 (V20/25 - Snap In) = PC pins with support bracket, single pole



| Terminal Option | "A" Dimension |
|-----------------|---------------|
| S20 / V20 | 11.68 |
| S25 / V25 | 16.00 |

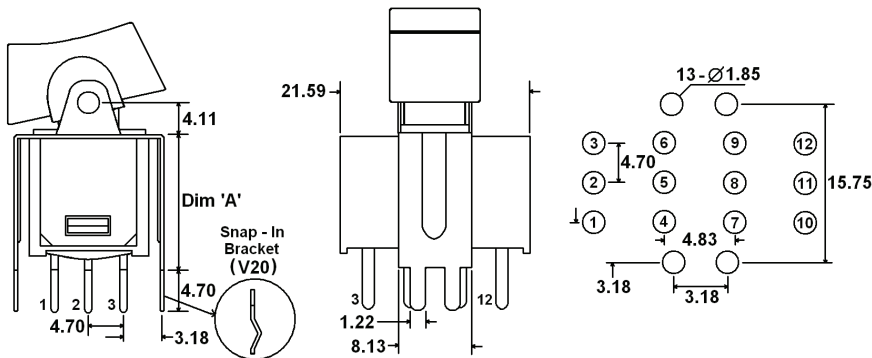
S20/25 (V20/25 - Snap In) = PC pins with support bracket, double pole

Terminal Options



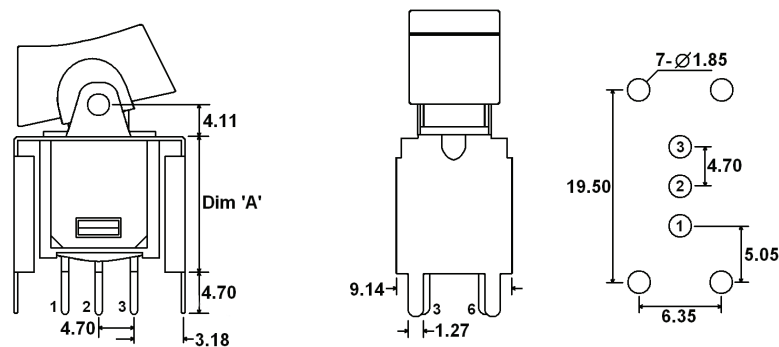
| Terminal Option | "A" Dimension |
|-----------------|---------------|
| S20 / V20 | 11.68 |
| S25 / V25 | 16.00 |

S20/25 (V20/25 - Snap In) = PC pins with support bracket, three pole



| Terminal Option | "A" Dimension |
|-----------------|---------------|
| S20 / V20 | 11.68 |
| S25 / V25 | 16.00 |

S20/25 (V20/25 - Snap In) = PC pins with support bracket, four pole



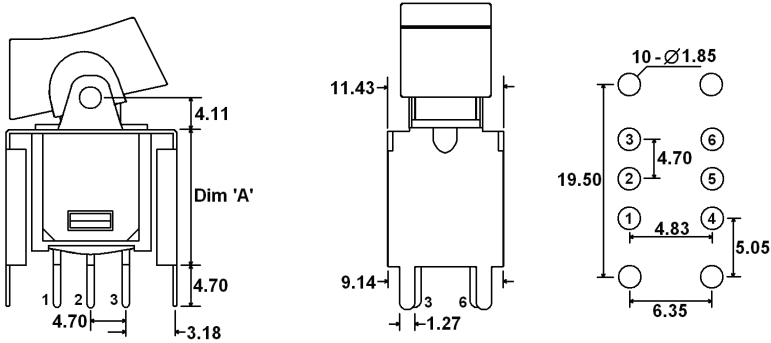
| Terminal Option | "A" Dimension |
|-----------------|---------------|
| S35 | 11.68 |
| S40 | 16.00 |

S40 (V40 - Snap In) = PC pins with support bracket, single pole

ANR

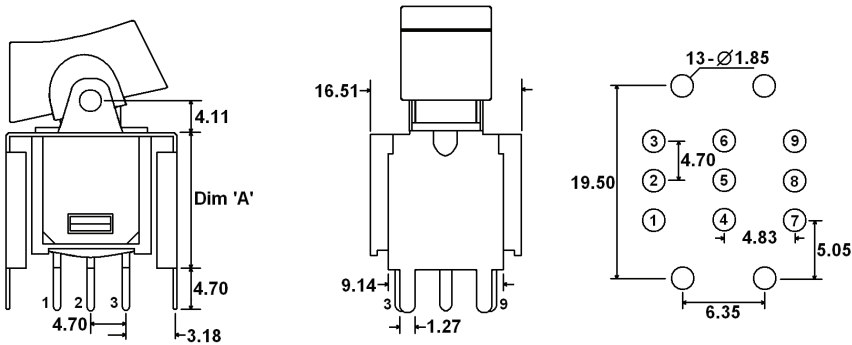
Miniature Rocker

Terminal Options



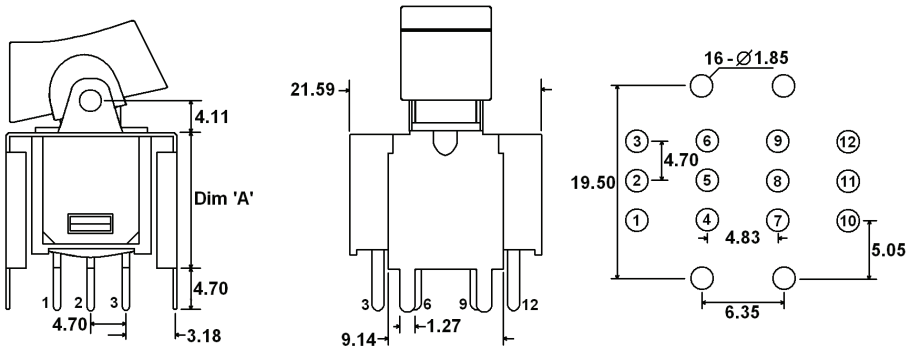
| Terminal Option | "A" Dimension |
|-----------------|---------------|
| S35 | 11.68 |
| S40 | 16.00 |

S40 (V40 - Snap In) = PC pins with support bracket, double pole



| Terminal Option | "A" Dimension |
|-----------------|---------------|
| S35 | 11.68 |
| S40 | 16.00 |

S40 (V40 - Snap In) = PC pins with support bracket, three pole



| Terminal Option | "A" Dimension |
|-----------------|---------------|
| S35 | 11.68 |
| S40 | 16.00 |

S40 (V40 - Snap In) = PC pins with support bracket, four pole

Contact Options

| Designator | Contact Material | Terminal Material | Electrical Ratings |
|------------|--------------------------|--------------------------|---|
| Q | Silver Plating | Silver Plating | 5A @ 120VAC, 28VDC; 2A @ 250VAC |
| R | Gold over Nickel Plating | Gold over Nickel Plating | 0.4VA max @ 20VAC or VDC max |
| G | Gold over Silver Plating | Gold over Silver Plating | 0.4VA max @ 20VAC or VDC max or 5A @ 120VAC, 28VDC; 2A @ 250VAC |

Three Way Wiring Diagram

