

- 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



cULus - E222871

SPECIFICATIONS

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



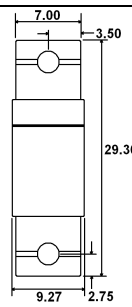
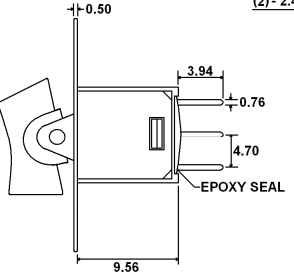
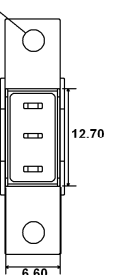


MATERIALS ←RoHS COMPLIANT

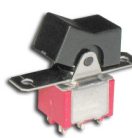
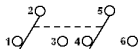
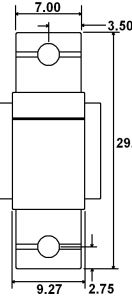
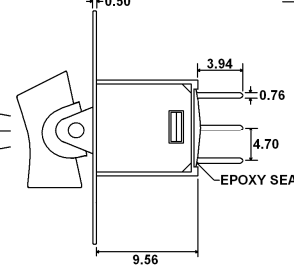
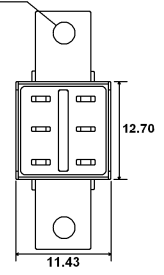


| | |
|-----------|------------------------------|
| Actuator | ABS |
| Housing | DAP – Diallyl Phthalate |
| Frame | 6/6 Nylon |
| Bushing | Brass or Zinc, Nickel Plated |
| Contacts | Copper Alloy, Silver Plated |
| Terminals | Brass, Silver Plated |


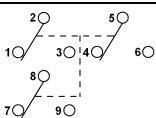
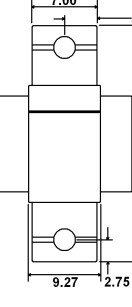
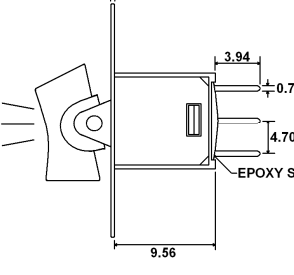
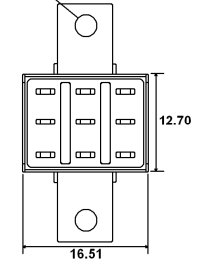


ORDERING INFORMATION

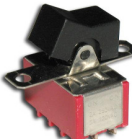
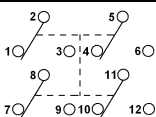
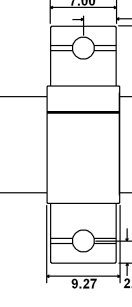
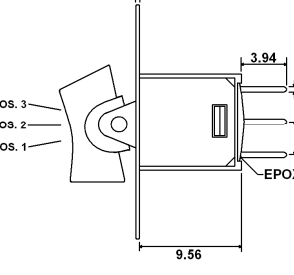
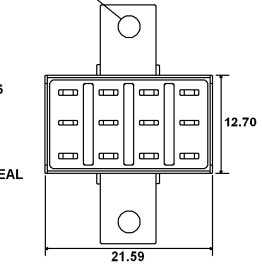


| | | | | | | | | | |
|---|------------|----------|----------|------------|----------|--|----------|----------|----------|
| 1. Series: | ANR | 1 | 1 | R11 | 2 | | B | Q | E |
| ANR | | | | | | | | | |
| 2. Number of Poles: | | | | | | | | | |
| 1 = SPDT | | | | | | | | | |
| 2 = DPDT | | | | | | | | | |
| 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 Three 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) | | | | | | | | | |
| P53R = 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 or S25 = PC Pin with Support Bracket; V20 or V25 = Snap-in Support Bracket | | | | | | | | | |
| S35 or S40 = PC Pin with Support Bracket; S35 or V40 = Snap-in 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 | Toggle 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 | | | | |

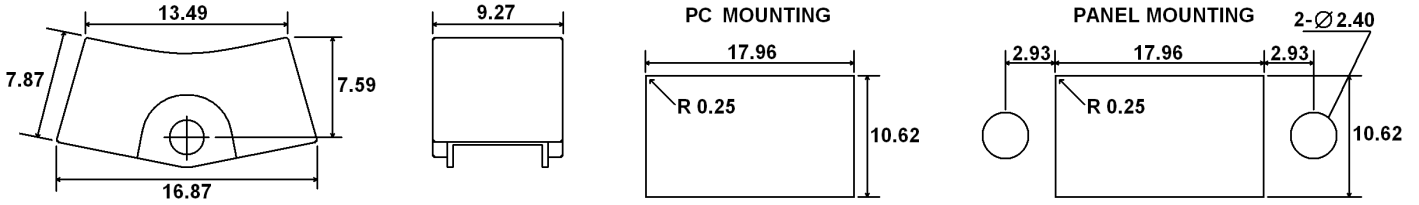
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|---|------------|-----------------|---|---|---|--|---|
|  DPDT  | Function | Toggle Position | | |  |  |  |
| | | |  |  | | | |
| | 1 | ON | NONE | ON | | | |
| | 2 | ON | NONE | (ON) | | | |
| | 3 | ON | OFF | ON | | | |
| | 4 | (ON) | OFF | (ON)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

| | | | | | | | |
|--|-------------------|-----------------|---|---|---|--|---|
|  3PDT  | Function | Toggle 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 | | | | |

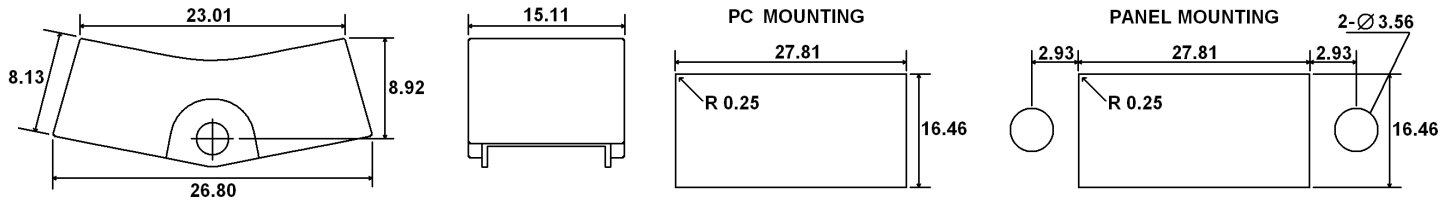
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|--|----------------------------|----------------------------|---|---|---|--|---|
|  4PDT  | Function | Toggle Position | | |  |  |  |
| | | |  |  | | | |
| | 1 | ON | NONE | ON | | | |
| | 2 | ON | NONE | (ON) | | | |
| | 3 | ON | OFF | ON | | | |
| | 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 | | | | |
| 6 | ON | ON | ON | | | | |
| 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 | | | | |

ACTUATOR OPTIONS (PC MOUNT / PANEL MOUNT)

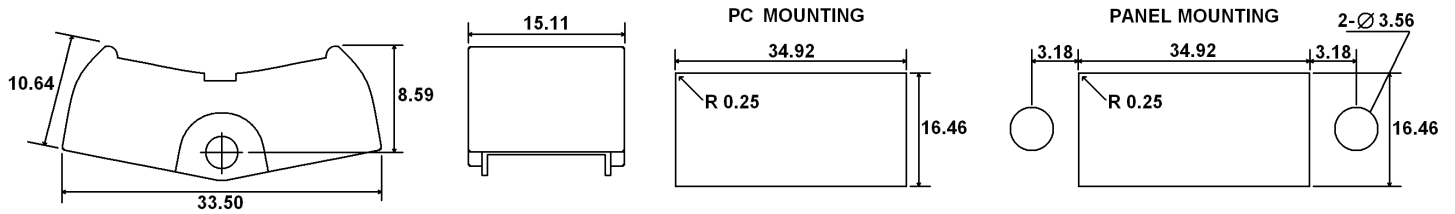
R11P / R11



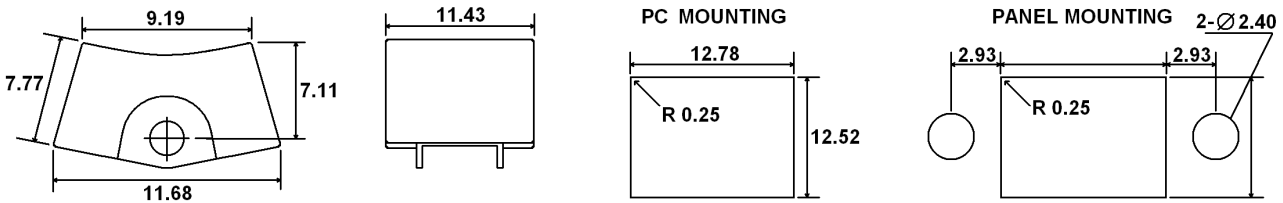
R15P / R15



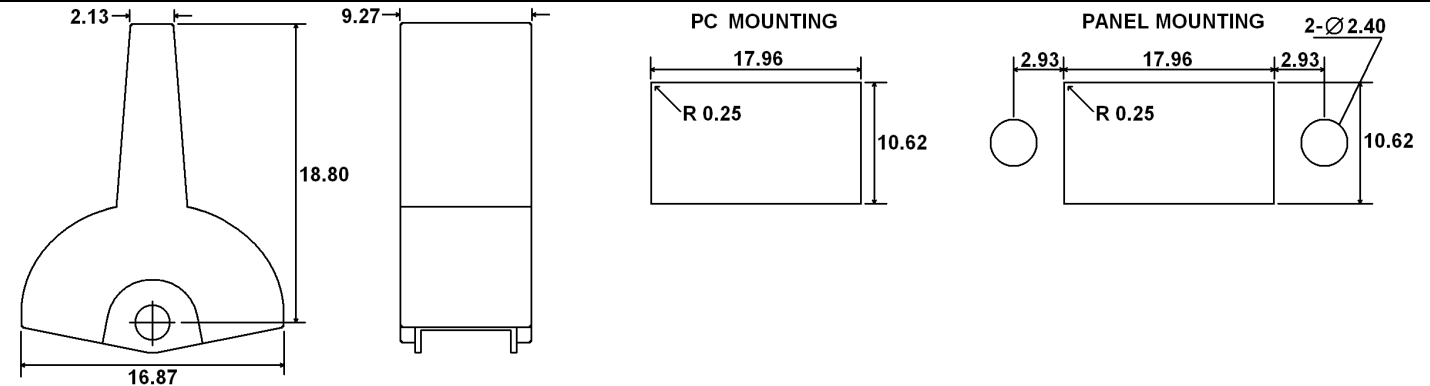
R19P / R19



R21P / R21

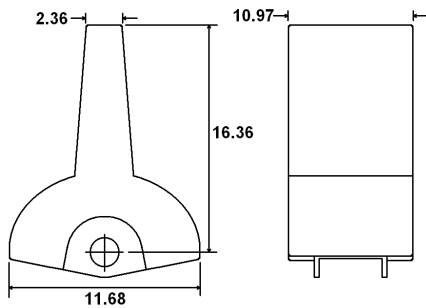


P13P / P13

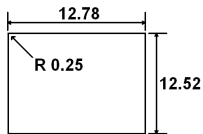


ACTUATOR OPTIONS (PC MOUNT / PANEL MOUNT)

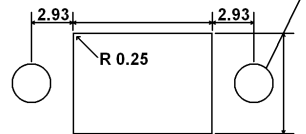
P23P / P23



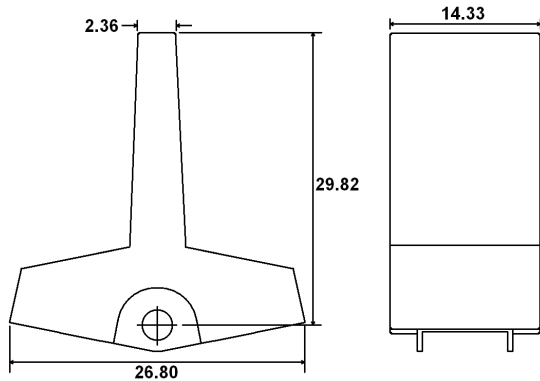
PC MOUNTING



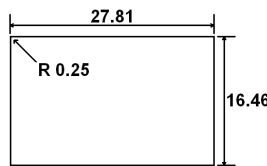
PANEL MOUNTING 2-Ø2.40



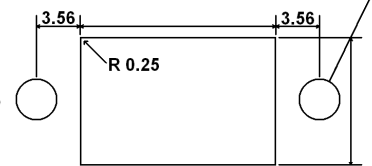
P43P / P43



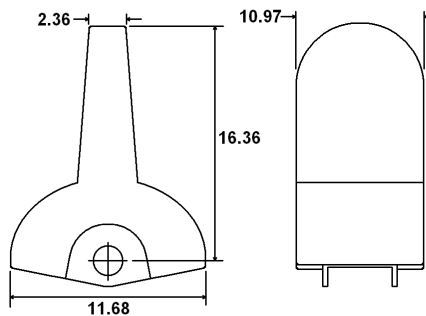
PC MOUNTING



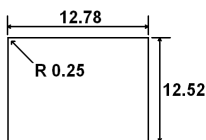
PANEL MOUNTING 2-Ø3.18



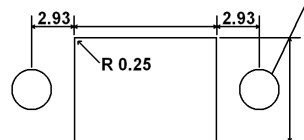
P47P / P47



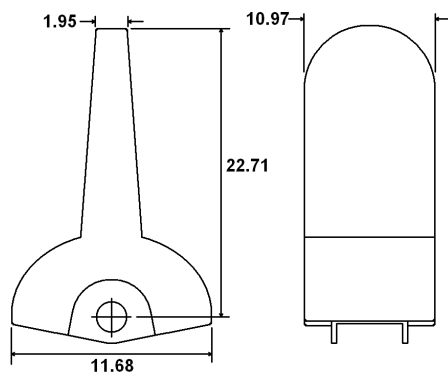
PC MOUNTING



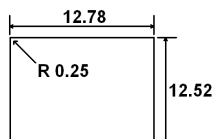
PANEL MOUNTING 2-Ø2.40



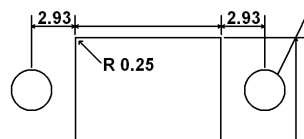
P48P / P48



PC MOUNTING



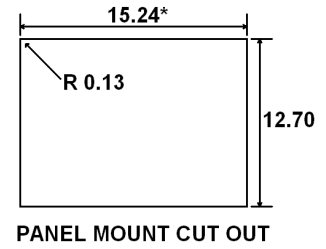
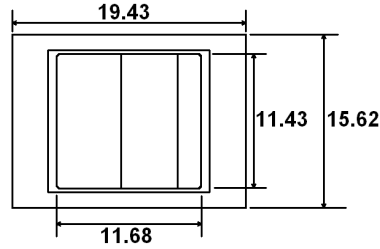
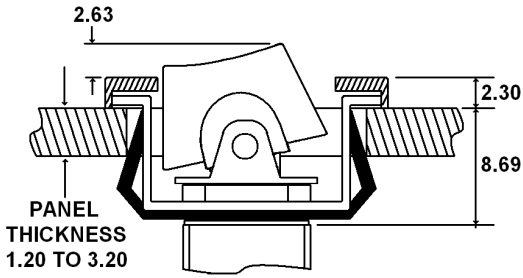
PANEL MOUNTING 2-Ø2.40



ACTUATOR OPTIONS (SNAP-IN PANEL MOUNT)

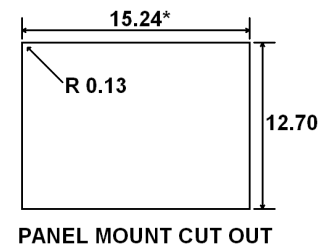
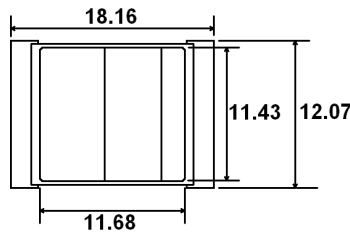
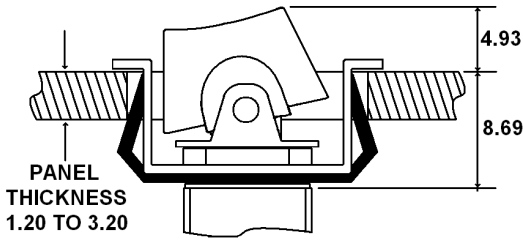
R12

**** Increase the length dimension to 15.75/15.88 for 1.50/3.20 thick panels**



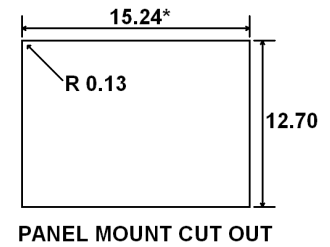
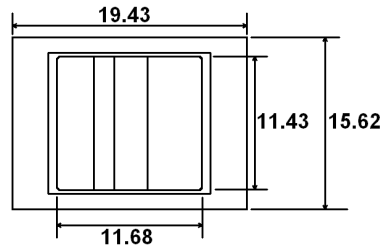
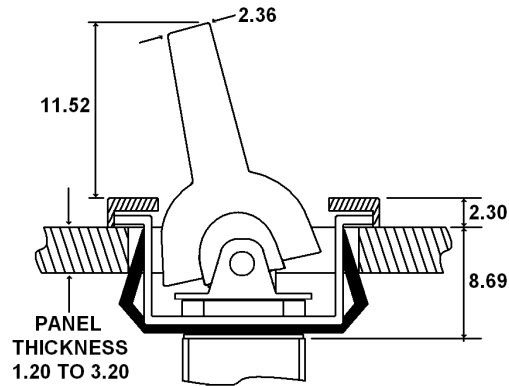
R22

**** Increase the length dimension to 15.75/15.88 for 1.50/3.20 thick panels**



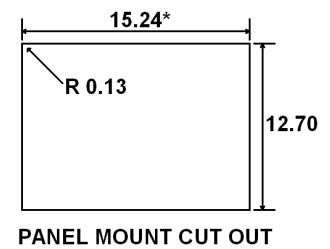
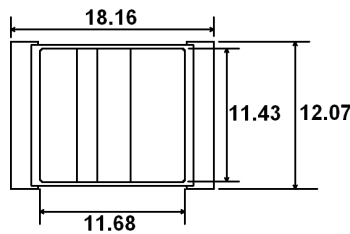
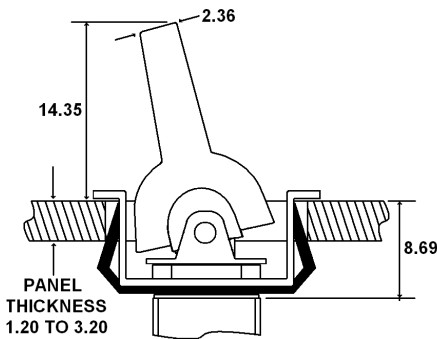
P14

**** Increase the length dimension to 15.75/15.88 for 1.50/3.20 thick panels**



P24

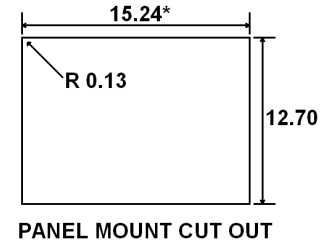
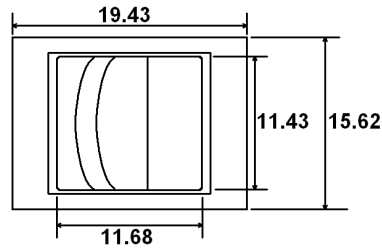
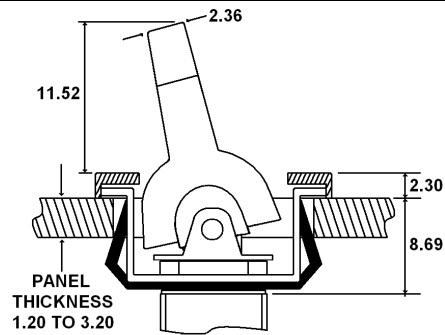
**** Increase the length dimension to 15.75/15.88 for 1.50/3.20 thick panels**



ACTUATOR OPTIONS (SNAP-IN PANEL MOUNT)

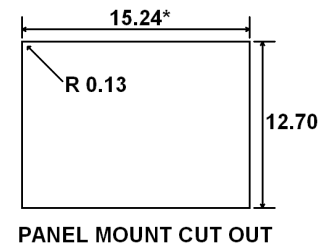
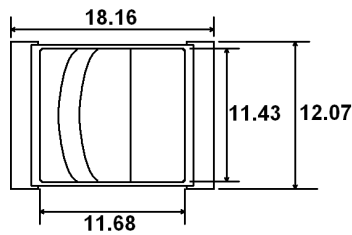
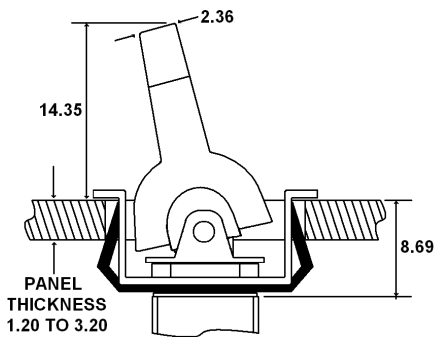
P17

**** Increase the length dimension to 15.75/15.88 for 1.50/3.20 thick panels**



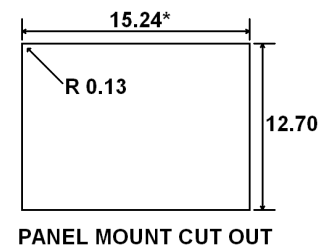
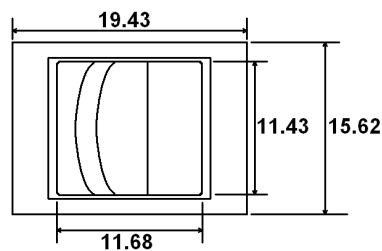
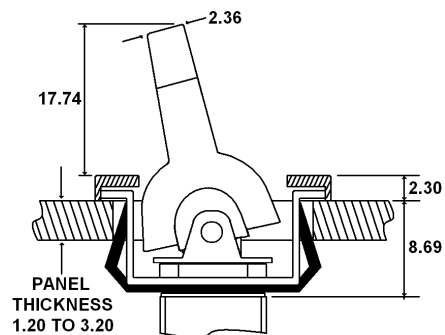
P27

**** Increase the length dimension to 15.75/15.88 for 1.50/3.20 thick panels**



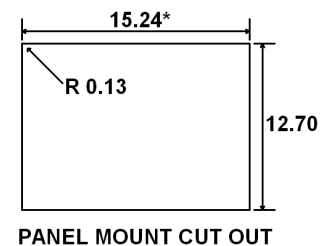
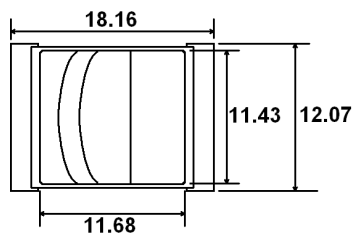
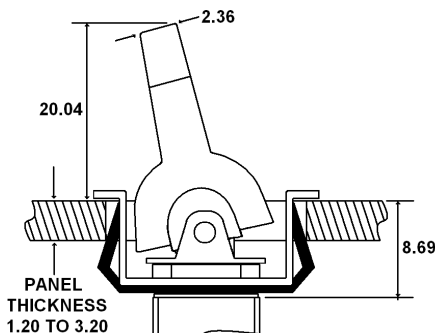
P18

**** Increase the length dimension to 15.75/15.88 for 1.50/3.20 thick panels**



P28

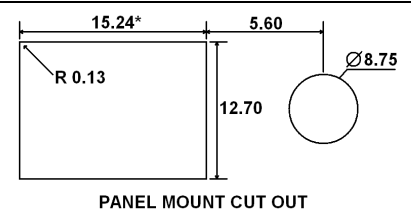
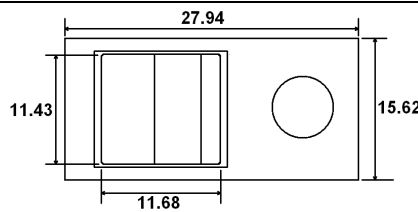
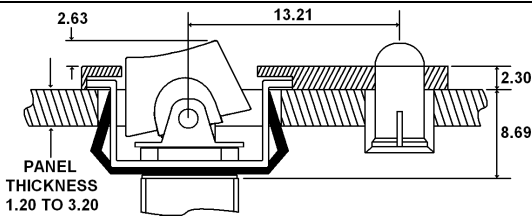
**** Increase the length dimension to 15.75/15.88 for 1.50/3.20 thick panels**



ACTUATOR OPTIONS (SNAP-IN PANEL MOUNT)

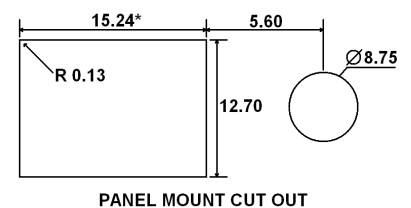
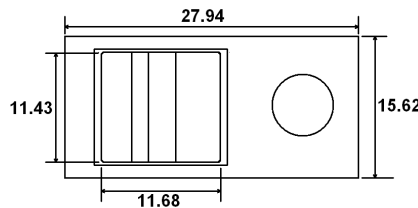
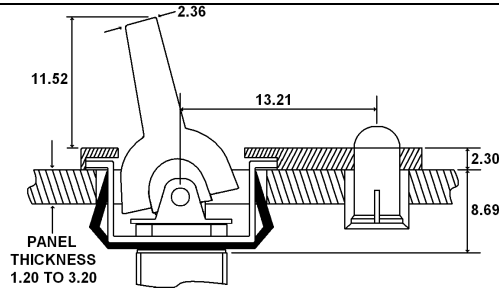
R51R

** Increase the length dimension to 15.75/15.88 for 1.50/3.20 thick panels

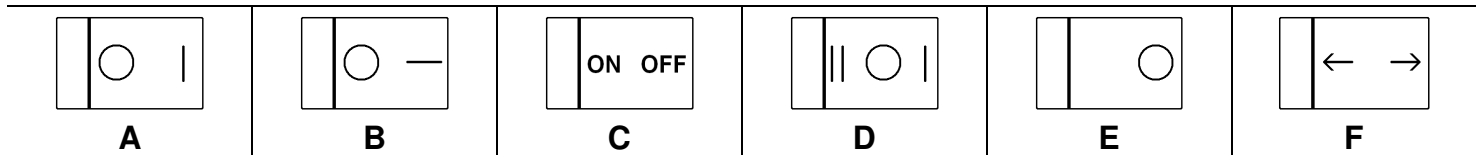


P53R

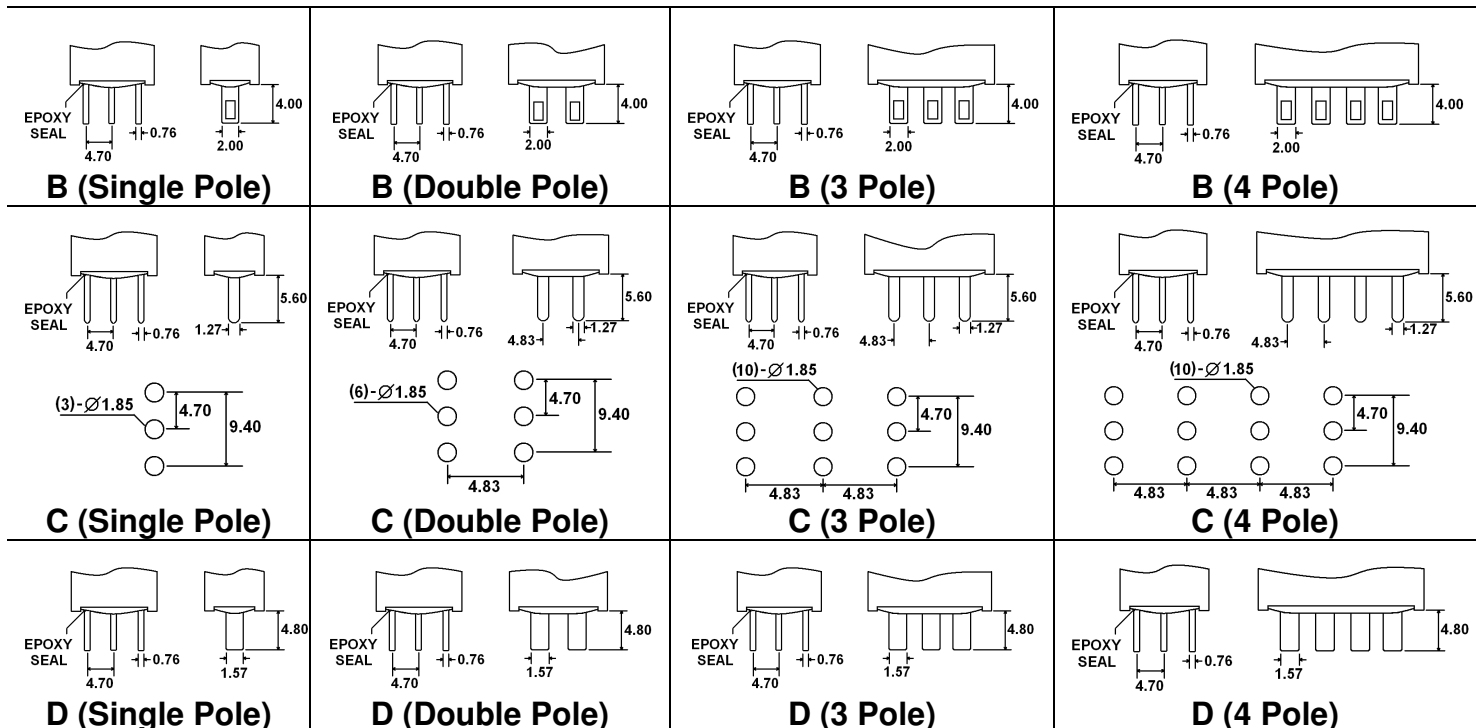
** Increase the length dimension to 15.75/15.88 for 1.50/3.20 thick panels



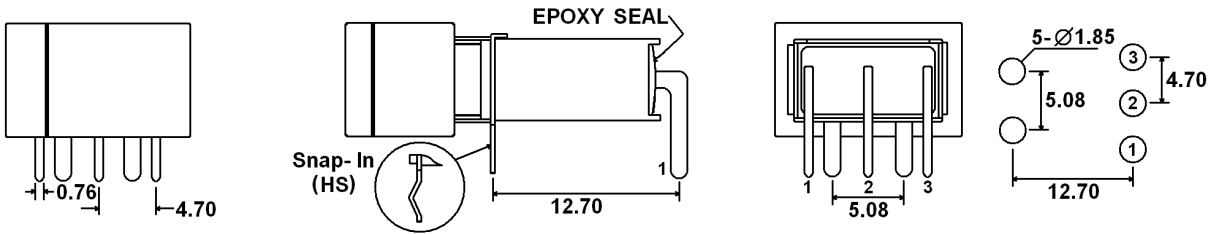
ACTUATOR MARKINGS



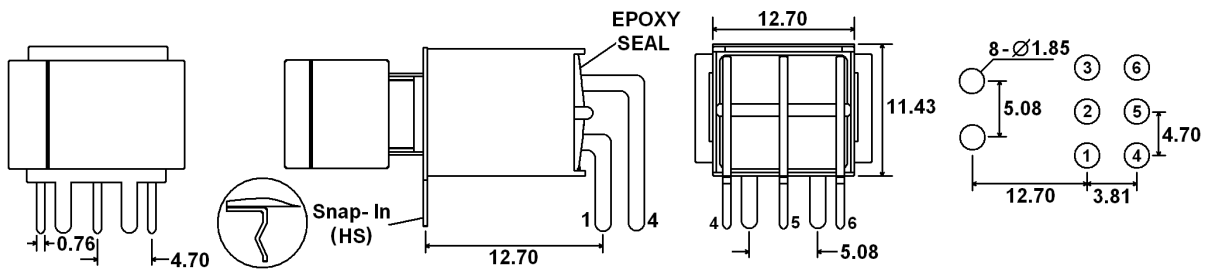
TERMINAL OPTIONS



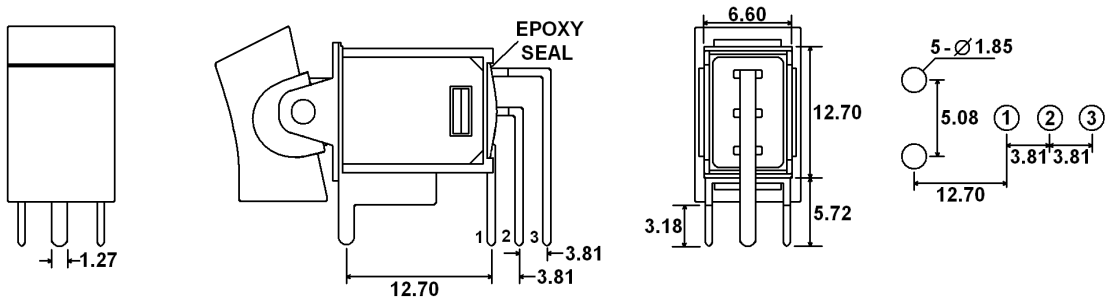
TERMINAL OPTIONS



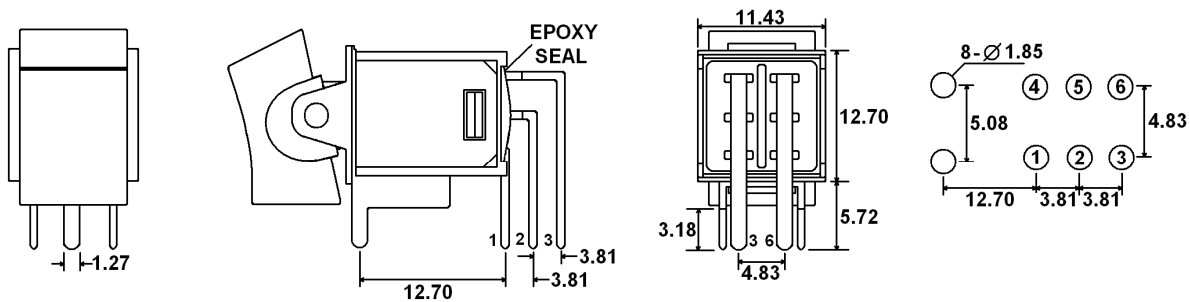
H (HS – Snap-in) = Horizontal Mount, Right Angle PC Pins (Single Pole)



H (HS – Snap-in) = Horizontal Mount, Right Angle PC Pins (Double Pole)

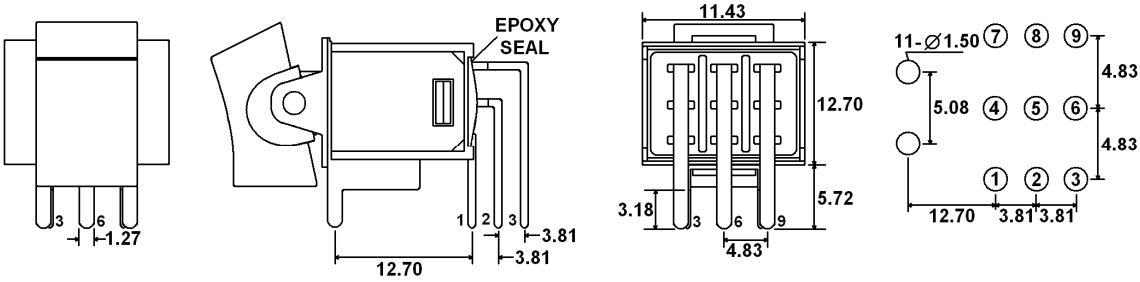


V = Vertical Mount, Right Angle PC Pins (Single Pole)

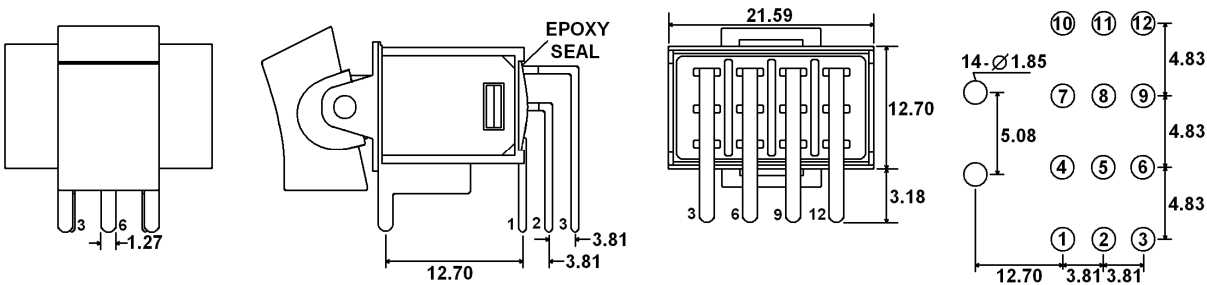


V = Vertical Mount, Right Angle PC Pins (Double Pole)

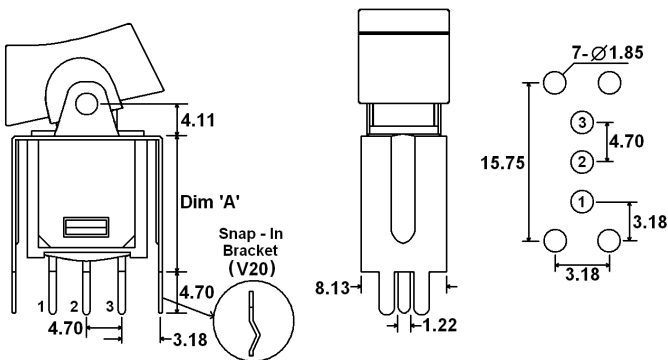
TERMINAL OPTIONS



V = Vertical Mount, Right Angle PC Pins (Three Pole)

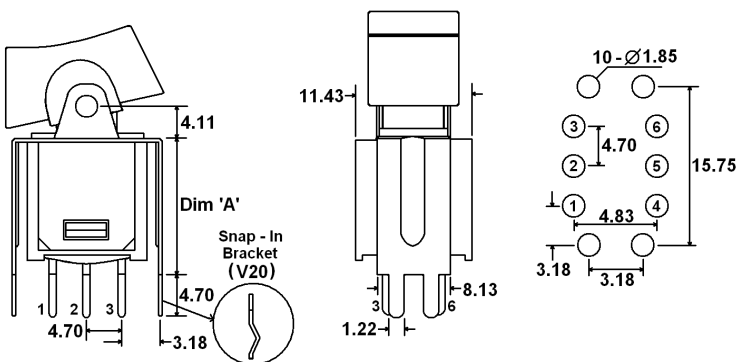


V = Vertical Mount, Right Angle PC Pins (Four Pole)



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

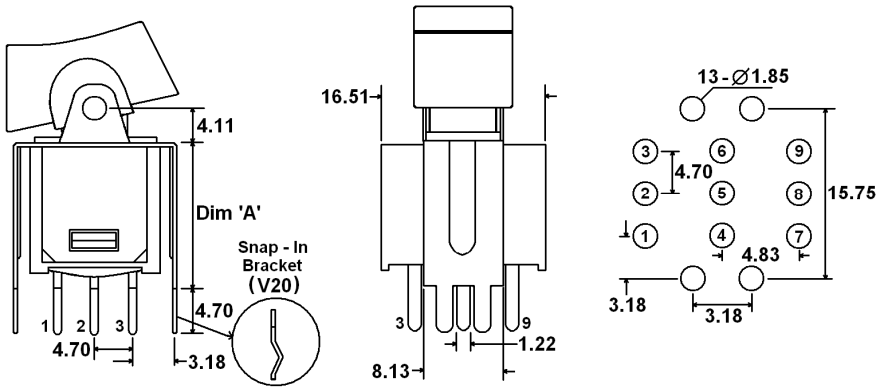
S20/S25 (V20/V25 – Snap-in Bracket) = PC Pins with Support Bracket (Single Pole)



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

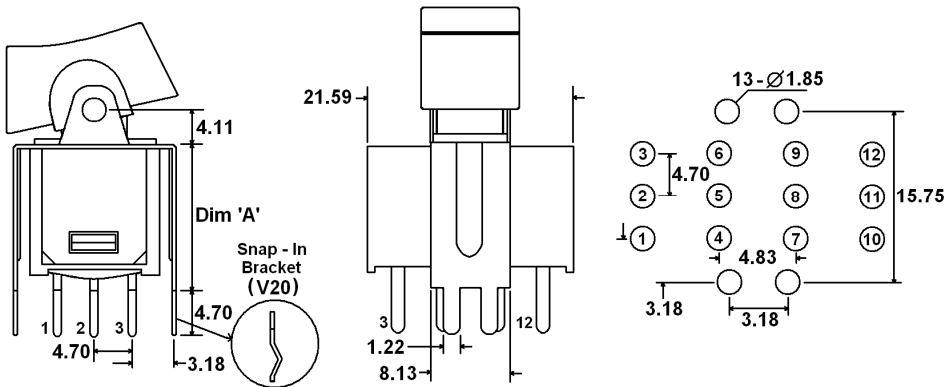
S20/S25 (V20/V25 – Snap-in Bracket) = PC Pins with Support Bracket (Double Pole)

TERMINAL OPTIONS



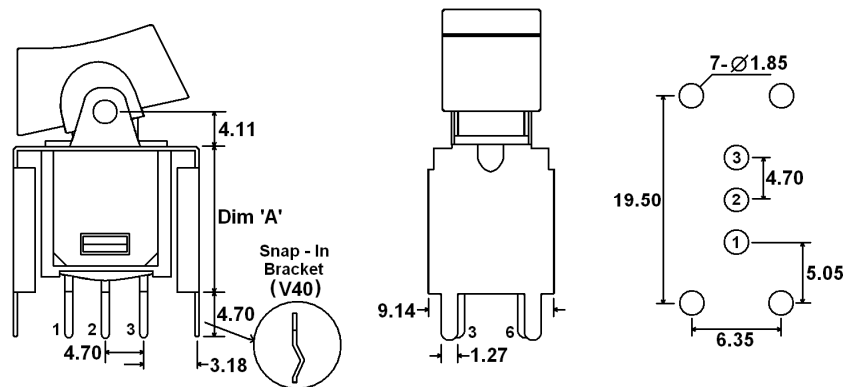
| Terminal Option | "A" Dimension |
|-----------------|---------------|
| S20-V20 | 11.68 |
| S25-V25 | 16.00 |

S20/S25 (V20/V25 – Snap-in Bracket) = PC Pins with Support Bracket (Three Pole)



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

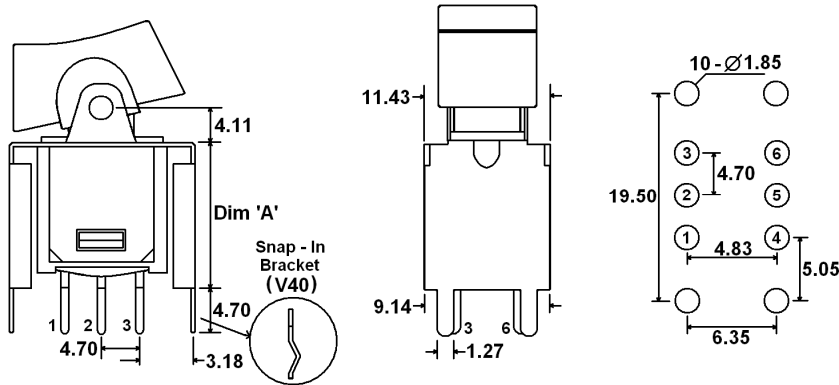
S20/S25 (V20/V25 – Snap-in Bracket) = PC Pins with Support Bracket (Four Pole)



| Terminal Option | "A" Dimension |
|-----------------|---------------|
| S35-V35 | 11.68 |
| S40-V40 | 16.00 |

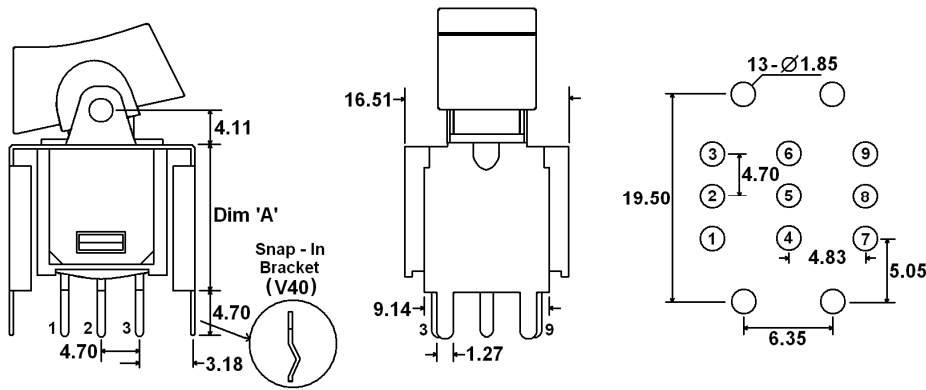
S40 (V40 – Snap-in Bracket) = PC Pins with Support Bracket (Single Pole)

TERMINAL OPTIONS



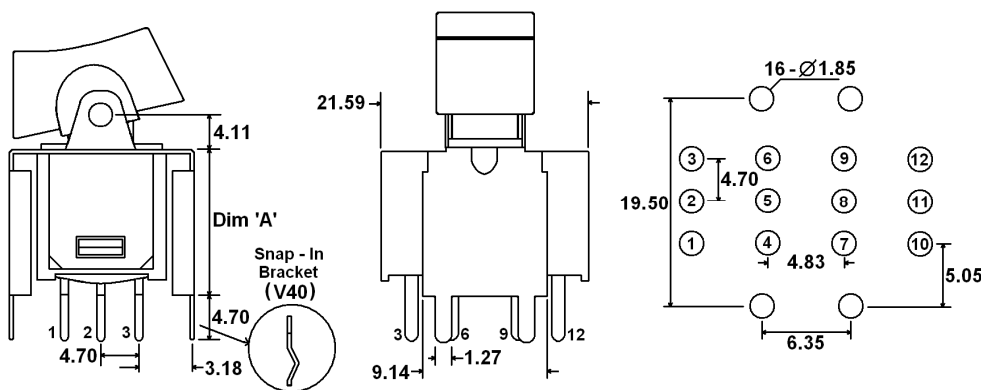
| Terminal Option | "A" Dimension |
|-----------------|---------------|
| S35-V35 | 11.68 |
| S40-V40 | 16.00 |

S40 (V40 – Snap-in Bracket) = PC Pins with Support Bracket (Double Pole)



| Terminal Option | "A" Dimension |
|-----------------|---------------|
| S35-V35 | 11.68 |
| S40-V40 | 16.00 |

S40 (V40 – Snap-in Bracket) = PC Pins with Support Bracket (Three Pole)



| Terminal Option | "A" Dimension |
|-----------------|---------------|
| S35-V35 | 11.68 |
| S40-V40 | 16.00 |

S40 (V40 – Snap-in Bracket) = 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 | .4 VA max @ 20VAC or VDC max |
| G | Gold over Silver Plating | Gold over Silver Plating | .4 VA max @ 20VAC or VDC max or 5A @ 120VAC, 28VDC; 2A @ 250VAC |

THREE WAY WIRING DIAGRAM

