

B  
1

### SPECIFICATIONS

**CONTACT RATING:** 5A @ 120 VAC or 28 VDC ( Q Terminal )  
**ELECTRICAL LIFE:** 50,000 make-and-break cycles at full load  
**CONTACT RESISTANCE:** 10 mOhms max. initial @ 2-4 VDC, 100 mA  
**INSULATION RESISTANCE:** 1,000 MOhm min.  
**DIELECTRIC STRENGTH:** 1,500 V RMS @ sea level.  
**OPERATING TEMPERATURE:** -30 deg. C TO 85 deg. C

### MATERIALS

**CASE -** diallyl phthalate (DAP)  
**ACTUATOR -** ABS, black Standard.  
**FRAME -** Nylon ( UL 94V-0 ) , black  
**BUSHING -** Brass or Zinc, nickel plated  
**HOUSING -** Stainless Steel  
**CONTACT AND TERMINAL -** Copper alloy, silver plated

How do you build the switches you need!!

The straight terminal type , please see the (A) ;

The right angle P.C terminals, please see the (B)

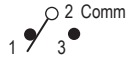
(A) R8015 - R11 - 2 - C - Q - E - S20

Switches Function				Actuator	Actuator Color	Frame Color	Termination	Vertical support Bracket		
R8015	SP	R8017	DP	on-none-on	R11	1 white	B solder lug	(none)	S20 11.68	
R8015A	SP	R8017A	DP	on-none-(on)	P21	2 black(std)	C P.C 1.27width	1 black (std.)	S25 16.00	
R8016	SP	R8018	DP	on-off-on	P13	3 red	D Quick connect	1 white	S35 11.68	
R8016A	SP	R8018A	DP	(on)-off-(on)	P23	4 orange	D1 wire wrap 19.05	the standard color of frame is black, the code is "blank"	S40 16.00	
R8016B	SP	R8018B	DP	on-off-(on)	R15	5 yellow	D3 wire wrap 10.8		V20 snap-in 11.68	
R8301V	3P	R8401V	4P	on-none-on	R12	6 green	<b>Contact Materia</b>		V25 snap-in 16.00	
R8303V	3P	R8403V	4P	on-none-(on)	R22	7 blue			Q silver plated	V35 snap-in 11.68
R8305V	3P	R8405V	4P	on-off-on	P14	8 brown	R gold plated	<b>Epoxy seal</b>	V40 snap-in 16.00	
R8307V	3P	R8407V	4P	(on)-off-(on)	P24	9 gray	G gold over silver		(none) none seal	
R8309V	3P	R8409V	4P	on-off-(on)			K tin-lead	E epoxy seal		
<b>3 way position switches</b>										
R818		SP3T	on-on-on							
R845V		DP3T	on-on-on							

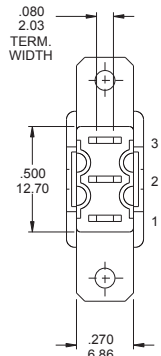
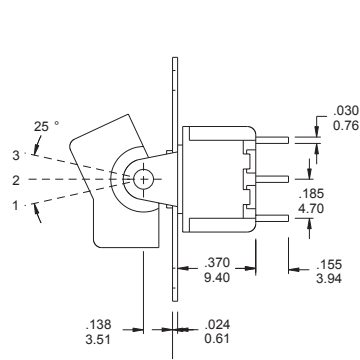
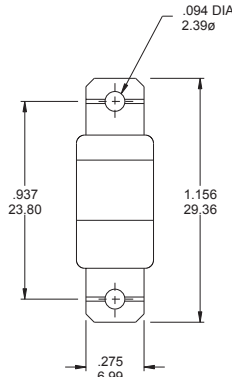
(A) R8015P - R11 - 2 - Q - E - S

Horizon Right Angle	Vertical Right Angle	Switches Function	Actuator	Actuator Color	Contact Material	Epoxy seal
R8015P	R8015L / R8013L	SP on-none-on	R11	1 white	Q silver plated	(none) none seal
R8015PA	R8015LA / R8013LA	SP on-none-(on)	R21	2 black(std)	R gold plated	E epoxy seal
R8016P	R8016L / R8014L	SP on-off-on	P13	3 red	G gold over silver	<b>support Bracket type</b>
R8016PA	R8016LA / R8014LA	SP (on)-off-(on)	P23	4 orange	K tin-lead	
R8016PB	R8016LB / R8014LB	SP on-off-(on)	The right angle type cannot have frame.	5 yellow		S snap-in type
R8017P	R8017L / R8011L	DP on-none-on		6 green		
R8017PA	R8017LA / R8011LA	DP on-none-(on)		7 blue		
R8018	R8018L / R8012L	DP on-off-on		8 brown		
R8018PA	R8018LA / R8012LA	DP (on)-off-(on)		9 gray		
R8018PB	R8018LB / R8012LB	DP on-off-(on)		now the available is code "1/2/3/4/7/9" the other please inquiry first		
	R8301L	3P on-none-on				
	R8303L	3P on-none-(on)				
	R8305L	3P on-off-on				
	R8307L	3P (on)-off-(on)				
	R8309L	3P on-off-(on)				
	R8401L	4P on-none-on				
	R8403L	4P on-none-(on)				
	R8405L	4P on-off-on				
	R8407L	4P (on)-off-(on)				
	R8409L	4P on-off-(on)				
<b>3 way position switches</b>						
R818P/R818L/ R812L		SP3T on-on-on				
R845L		DP3T on-on-on				

### SPDT



Model No.	Switching position		
R8015	ON	none	ON
R8015A	ON	none	(ON)
R8016	ON	OFF	ON
R8016A	(ON)	OFF	(ON)
R8016B	ON	OFF	(ON)
Term. Comm.	2-3	open	2-1

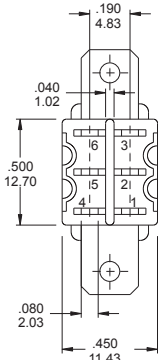
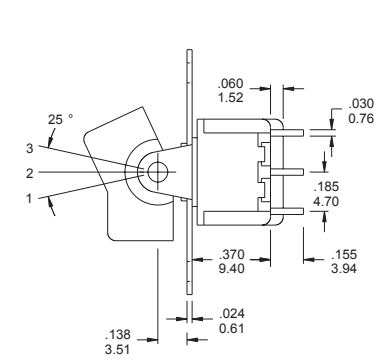
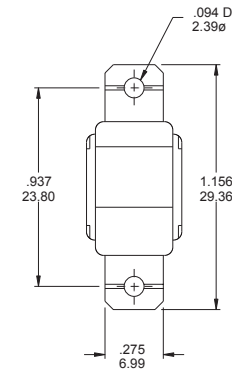


R8015 - R11-2-BQ

### DPDT



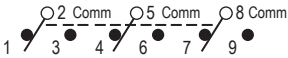
Model No.	Switching position		
R8017	ON	none	ON
R8017A	ON	none	(ON)
R8018	ON	OFF	ON
R8018A	(ON)	OFF	(ON)
R8018B	ON	OFF	(ON)
Term. Comm.	2-3,5-6	open	2-1,5-4
3 way switches (SP3T)			
R818	ON	ON	ON
Term. Comm.	2-3,5-6	2-3,5-4	2-1,5-4



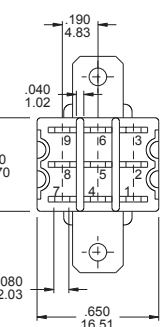
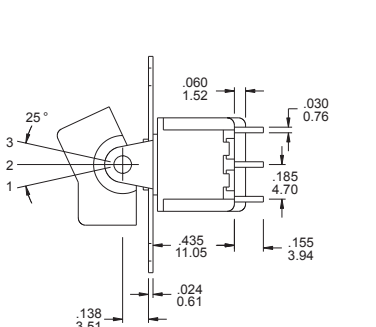
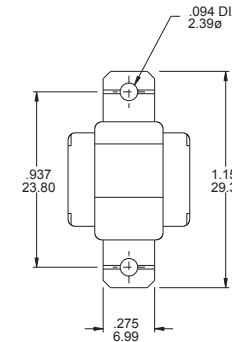
R8017 - R11-2-BQ

Please see page B8 to know more about R818 (3-way Switches)

### 3PDT



Model No.	Switching position		
R8301V	ON	none	ON
R8303V	ON	none	(ON)
R8305V	ON	OFF	ON
R8307V	(ON)	OFF	(ON)
R8309V	ON	OFF	(ON)
Term. Comm.	2-3,5-6 8-9	open	2-1,5-4 8-7

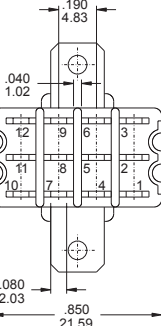
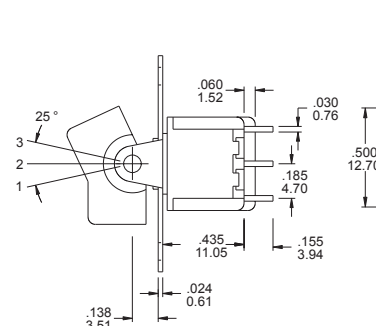
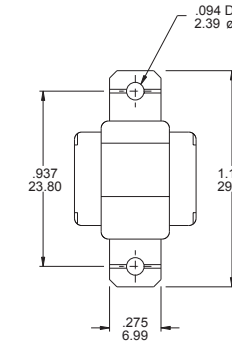


R8301V- R11-2-BQ

### 4PDT



Model No.	Switching position		
R8401V	ON	none	ON
R8403V	ON	none	(ON)
R8405V	ON	OFF	ON
R8407V	(ON)	OFF	(ON)
R8409V	ON	OFF	(ON)
Term. Comm.	2-3,5-6 8-9,11-12	open	2-1,5-4 8-7,11-10
3 way switches (DP3T)			
R845V	ON	ON	ON
Term. Comm.	2-3,5-6 8-9,11-12	2-3,5-4 8-9,11-10	2-1,5-4 8-7,11-10

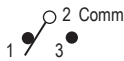


R8401V -R11-2-BQ

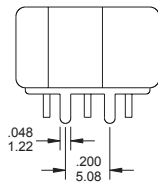
Please see page B8 to know more about R845V (3-way Switches)

### HORISON RIGHT ANGLE

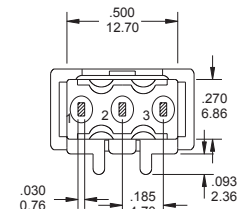
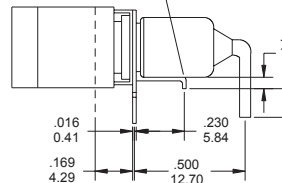
SPDT



Model No.	Switching position		
R8015P	ON	none	ON
R8015PA	ON	none	(ON)
R8016	ON	OFF	ON
R8016PA	(ON)	OFF	(ON)
R8016PB	ON	OFF	(ON)
Term. Comm.	2-3	open	2-1



SWITCH SUPPORT  
PIVOT

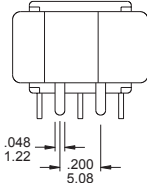


R8015P- R11-2-Q

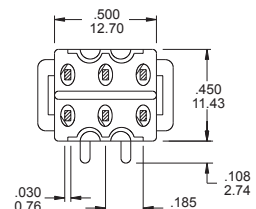
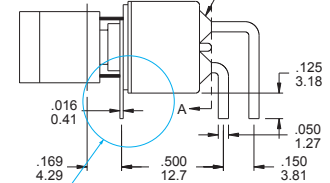
DPDT



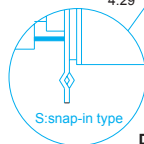
Model No.	Switching position		
R8017P	ON	none	ON
R8017PA	ON	none	(ON)
R8018P	ON	OFF	ON
R8018PA	(ON)	OFF	(ON)
R8018PB	ON	OFF	(ON)
Term. Comm.	2-3,5-6	open	2-1,5-4
3 way switches (SP3T)			
R818P	ON	ON	ON
Term. Comm.	2-3,5-6	2-3,5-4	2-1,5-4



PIVOT  
EPOXY SEAL



SECTION A-A

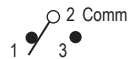


R8017P - R11-2-Q / R8017P - R11-2-Q-S

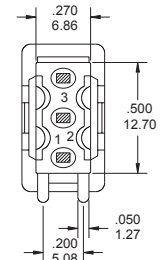
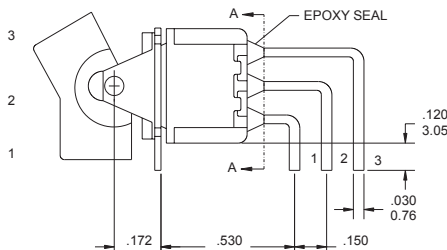
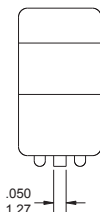
Please see page B-8 to know more about R818P (3-way Switches)

### VERTICAL RIGHT ANGLE

SPDT

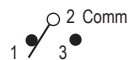


Model No.	Switching position		
R8015L	ON	none	ON
R8015LA	ON	none	(ON)
R8016L	ON	OFF	ON
R8016LA	(ON)	OFF	(ON)
R8016LB	ON	OFF	(ON)
Term. Comm.	2-3	open	2-1

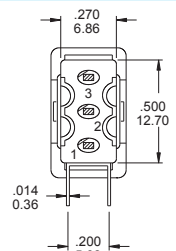
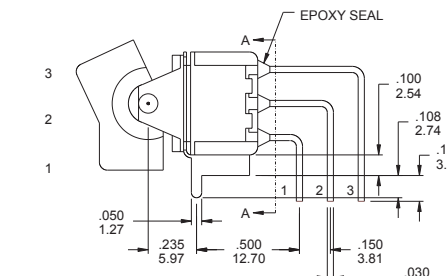
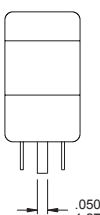


R8015L - R11-2-Q

SPDT



Model No.	Switching position		
R8013L	ON	none	ON
R8013LA	ON	none	(ON)
R8014L	ON	OFF	ON
R8014LA	(ON)	OFF	(ON)
R8014LB	ON	OFF	(ON)
Term. Comm.	2-3	open	2-1



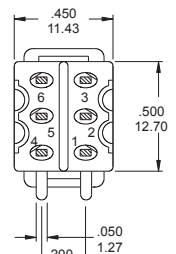
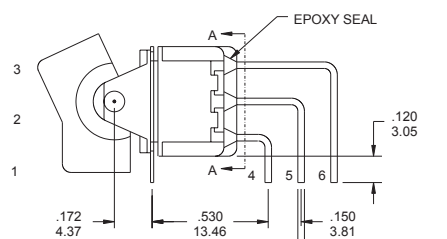
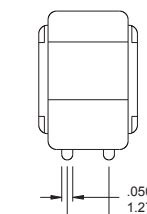
SECTION A-A

R8013L- R11-2-Q

DPDT



Model No.	Switching position		
R8017L	ON	none	ON
R8017LA	ON	none	(ON)
R8018L	ON	OFF	ON
R8018LA	(ON)	OFF	(ON)
R8018LB	ON	OFF	(ON)
Term. Comm.	2-3,5-6	open	2-1,5-4
3 way switches (SP3T)			
R818L	ON	ON	ON
Term. Comm.	2-3,5-6	2-3,5-4	2-1,5-4



SECTION A-A

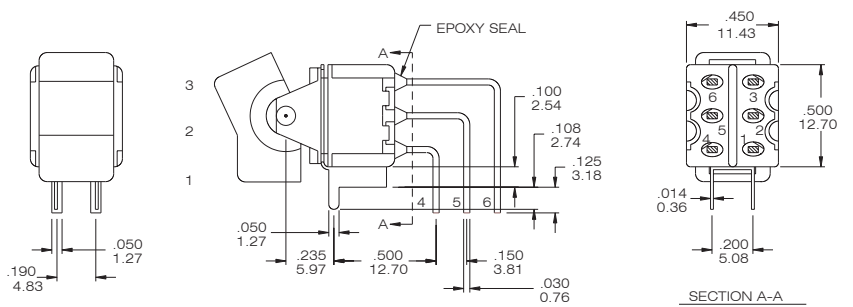
R8017L - R11-2-Q

### VERTICAL RIGHT ANGLE PAGE

#### DPDT



Model No.	Switching position		
R8011L	ON	none	ON
R011LA	ON	none	(ON)
R8012L	ON	OFF	ON
R8012LA	(ON)	OFF	(ON)
R8012LB	ON	OFF	(ON)
Term. Comm.	2-3,5-6	open	2-1,5-4
3 way switches (SP3T)			
R812L	ON	ON	ON
Term. Comm.	2-3,5-6	2-3,5-4	2-1,5-4



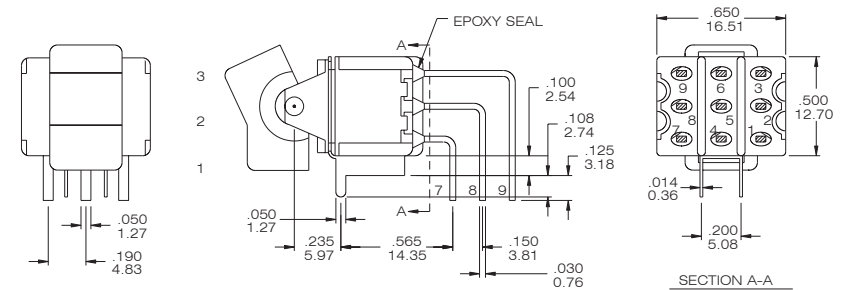
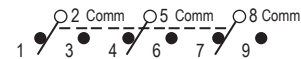
R8011L - R11-2-Q

Please see page B-8 to know more about R812L ( 3-way Switches)

#### 3PDT



Model No.	Switching position		
R8301L	ON	none	ON
R8303L	ON	none	(ON)
R8305L	ON	OFF	ON
R8307L	(ON)	OFF	(ON)
R8309L	ON	OFF	(ON)
Term. Comm.	2-3,5-6	open	2-1,5-4
	8-9		8-7

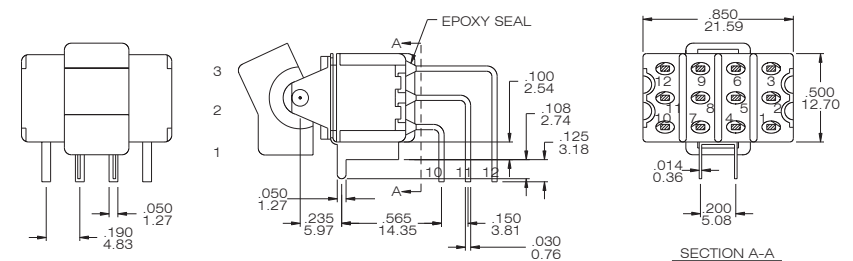


R8301L- R11-2-Q

#### 4PDT



Model No.	Switching position		
R8401L	ON	none	ON
R8403L	ON	none	(ON)
R8405L	ON	OFF	ON
R8407L	(ON)	OFF	(ON)
R8409L	ON	OFF	(ON)
Term. Comm.	2-3,5-6	open	2-1,5-4
	8-9,11-12		8-7,11-10
3 way switches (DP3T)			
R845L	ON	ON	ON
Term. Comm.	2-3,5-6	2-3,5-4	2-1,5-4
	8-9,11-12	8-9,11-10	8-7,11-10



R8401L - R11-2-Q

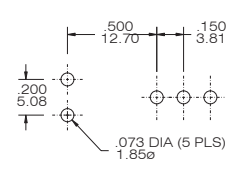
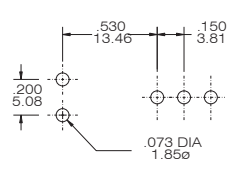
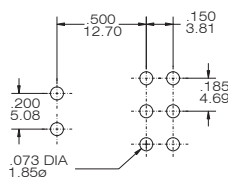
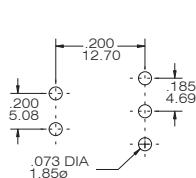
Please see page B-8 to know more about R845L( 3-way Switches)

FOR R8015P-T8016P

FOR R8017P-R8018P

FOR R8015L-R8016L

FOR R8013L-R8014L

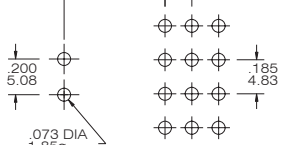
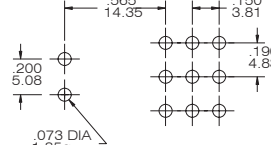
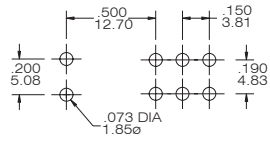
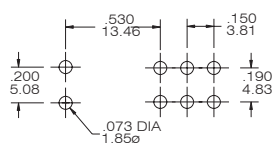


FOR R8017L-R8018L

FOR R8011L-R8012L

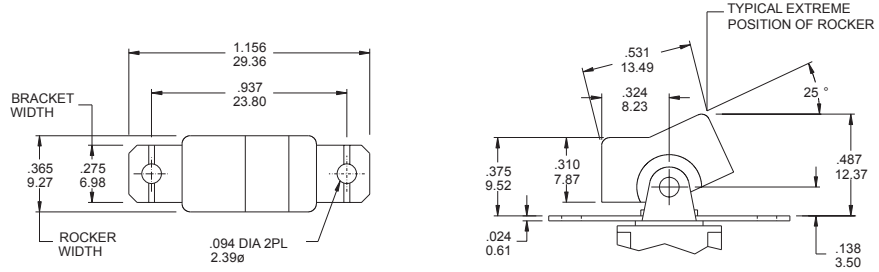
FOR R8301L-R8309L

FOR R8401L-R8409L

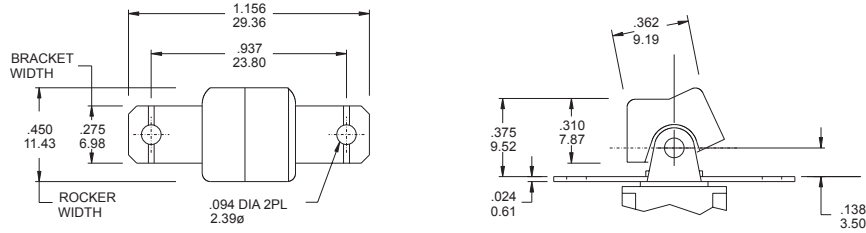


### Actuator Option(PANEL REAR MOUNT) only for the straight type (Page B-2)

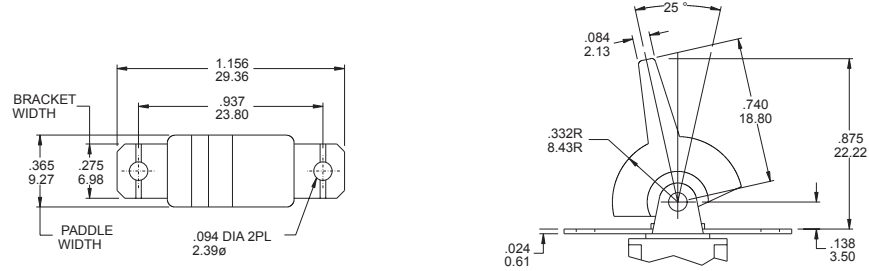
R11



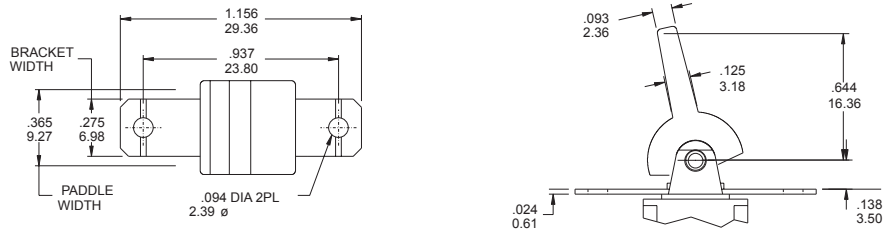
R21



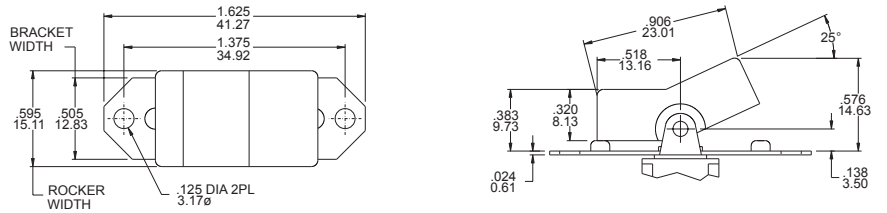
P13



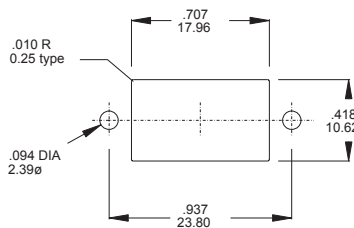
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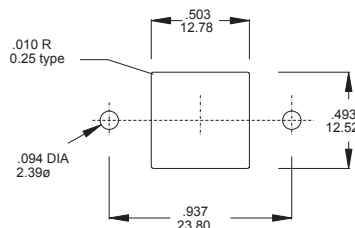
R15



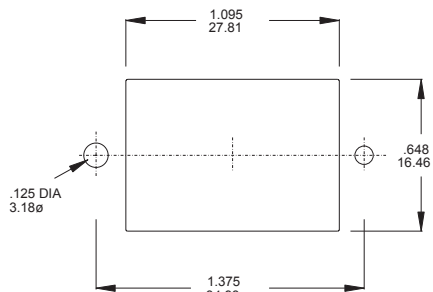
### PANEL MOUNTING



R11 / P13



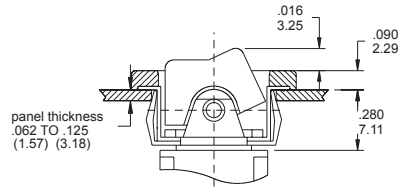
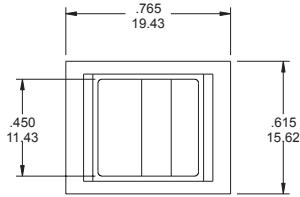
R21 / P23



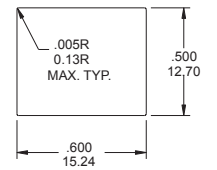
R15

### Actuator Option(SNAP-IN FRONT MOUNT) only for the straight type (Page B-2)

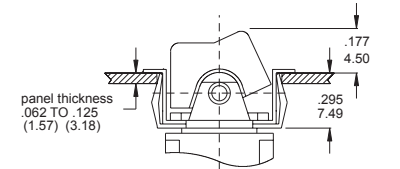
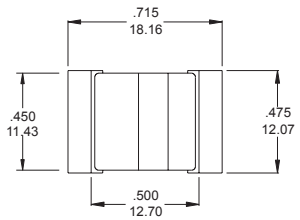
R12



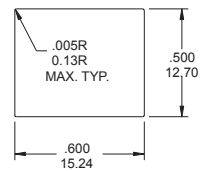
PANEL MOUNTING



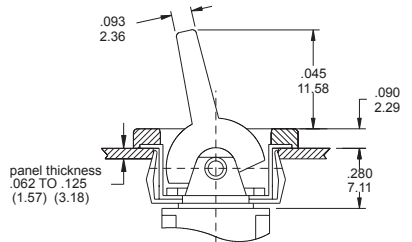
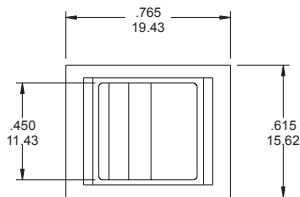
R22



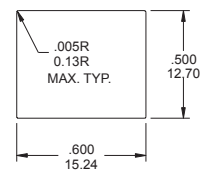
PANEL MOUNTING



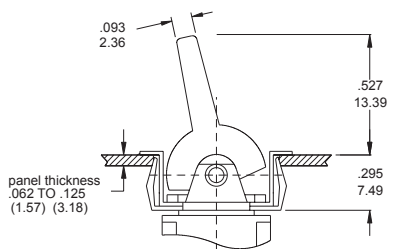
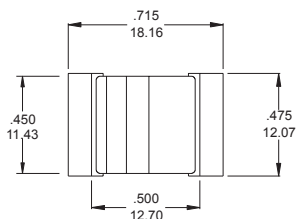
P14



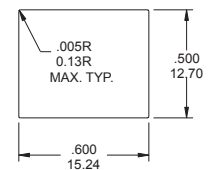
PANEL MOUNTING



P24

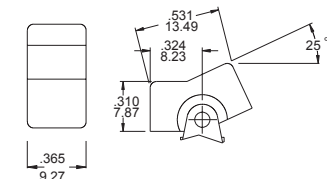
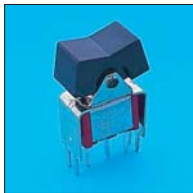


PANEL MOUNTING

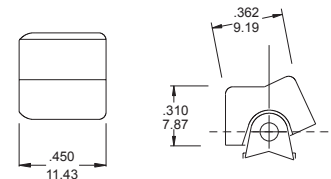


### Actuator Option (P.C.B MOUNT)

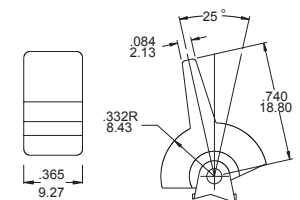
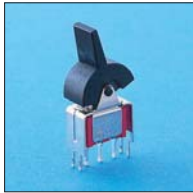
R11



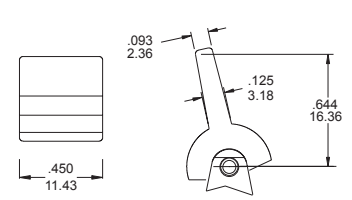
R21



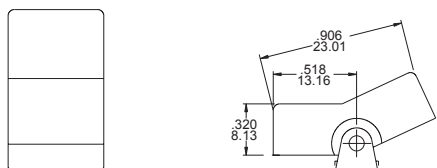
P13



P23



R15



Actuator Color Option

ACTUATOR AND FRAME COLORS					
1	White	4	Orange	7	Blue
2	Black(Std.)	5	Yellow	8	Brown
3	Red	6	Green	9	Gray

### TERMINAL OPTION (ONLY FOR THE STRAIGHT TYPE R8015~R8401)

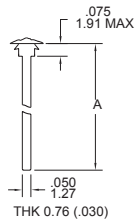
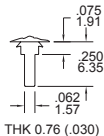
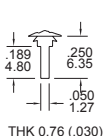
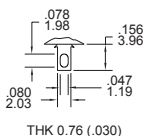
### TERMINAL SEAL OPTION

B SOLDER LUG

C PRINTED CIRCUIT

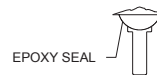
D QUICK CONNECT

WIREWRAP



CODE	"A" dimension
D1	.750 (19.05)
D3	.425 (10.8)

E TERMINAL SEAL



### CONTACT MATERIAL OPTIONS

CODE	CONTACT MATERIAL	TERMINAL MATERIAL	RATING
Q	Silver plated	Silver plated	5 A @ 120V AC or 28 V DC; 2 A @ 250 VAC
R	Gold plated over nickel plated	Gold plated over nickel plated	0.4VA MAX @ 20 V AC or DC MAX
G	Gold plated over silver plated	Gold plated over silver plated	0.4 VA MAX @ 20 V AC or DC MAX or 5 A @ 120V AC or 28 V DC; 2 A @ 250 VAC
K	Gold plated over nickel plated	Tin-lead over nickel plated	0.4VA MAX @ 20 V AC or DC MAX

\* THE K option is only for some special item. Please inquiry first when you need the "K" option

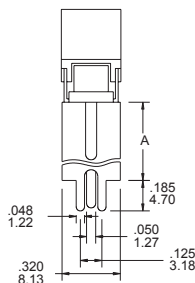
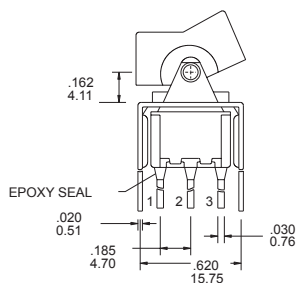
### VERTICAL SUPPORT BRACKET OPTION

(only apply the straight type terminal -page B 2. Please build the terminal option is "c" code)

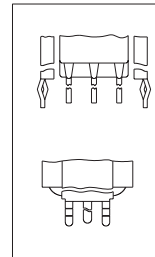
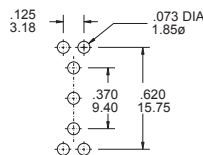
S20 / S25/ V20/V25



SPDT



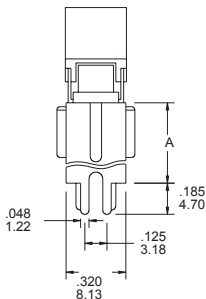
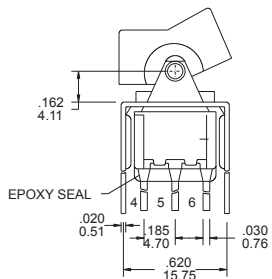
P.C. MOUNTING



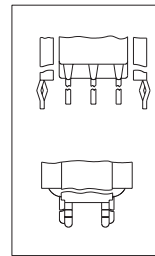
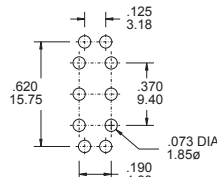
SNAP-IN  
V20/ V25

R8015-R11-2-CQ-S20(S25)

DPDT



P.C. MOUNTING



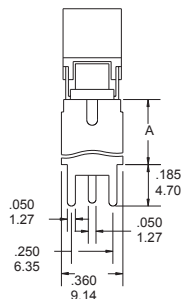
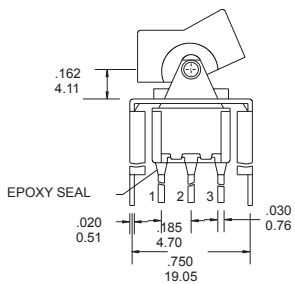
SNAP-IN  
V20/ V25

R8017 - R11-2-CQ-S20(S25)

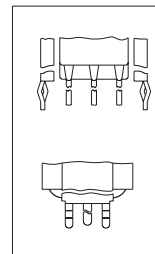
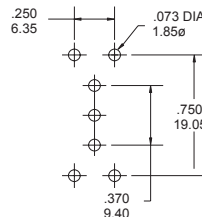
S35/S40 /V35/V40



SPDT



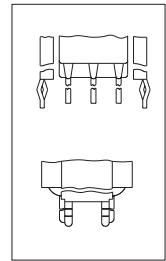
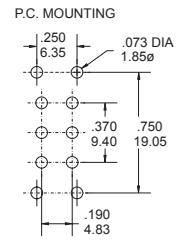
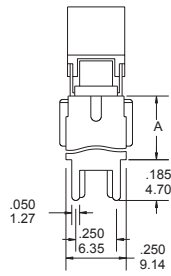
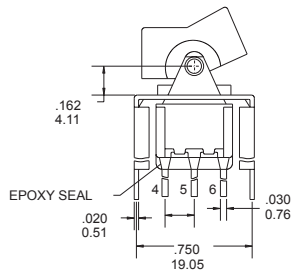
P.C. MOUNTING



SNAP-IN  
V35/ V40

R8015-R11-2-CQ-S35(S40)

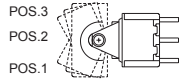
option Code	A dimension
S35/V35	.460 11.68
S40/V40	.630 16.00
V35/V40 : the snap-in type	



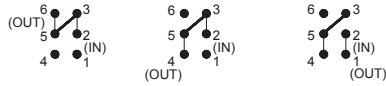
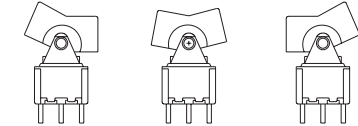
SNAP-IN  
V35/ V40

R8015-R11-2-CQ-S35(S40)

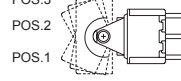
### The information of 3-way toggle switches



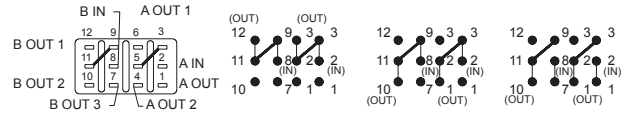
SINGLE POLE, 3 POSITION



SP3T



SINGLE POLE, 3 POSITION



DP3T