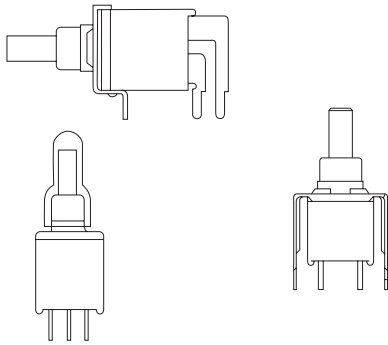


**FEATURES:**

1. Sealed construction - internal plunger o-ring and epoxy terminal seal standard
2. Carry the IP67 approvals



**IP67 approvals**

**SPECIFICATIONS**

CONTACT RATING:R- 0.4 VA max @ 20 V AC or DC  
 ELECTRICAL LIFE:30,000 make-and-break cycles at full load  
 CONTACT RESISTANCE: 20 m $\Omega$  max. initial @2-4 VDC,100 mA  
 INSULATION RESISTANCE: 1,000 M $\Omega$  min.  
 DIELECTRIC STRENGTH: 1,500 V RMS @ sea level.  
 DEGREE OF PROTECTION : IP67  
 OPERATING TEMPERATURE: -30 $^{\circ}$  C to 85 $^{\circ}$  C

**MATERIALS**

CASE and BUSHING - glass filled nylon 6/6,flame retardant heat stabilized (UL94V-0)  
 PLUNGER - Thermoplastic polyester or glass filled nylon (UL94V-0)  
 CONTACT AND TERMINAL - Copper alloy , tin-lead plated  
 SWITCH SUPPORT - Brass , tin-lead  
 TERMINAL SEAL - Epoxy

**How do you build the switches you need!!**

**The ES-21 / ES-22 (straight terminal type ), please see the (A) ;**

**The ES-21A/ES-21B/ES-22A/ES-22B, (Right angle type )please see the (B)**

(A) **ES - 21 - CV - 1 - C R - A 5 S**

Switches Function		Cap		Cap color		Plunger		Terminal		Vertical support Bracket	
ES-21	SPST off-mom.	CV	5.08	1	white	(none)	std.	C	(std) P.C	(none)	
ES-22	SPDT on-mom.	CV1	7.62	2	black	FP	flush type			A5S	std. snap-in type
				3	red					A5	straight type
				4	orange			<b>Contact Material</b>			
				5	yellow			Q	silver plated		
				6	green			R	gold plated		
				7	blue			G	gold over silver		
				8	brown			K	gold / tin-lead		
				9	gray						

(B) **ES - 21 A - CV - 2 - R - S**

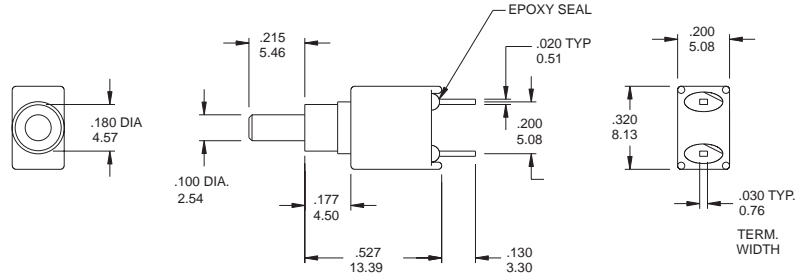
Horizon Right Angle		Vertical Right Angle		Switches Function		Cap		Cap color		Plunger		Support Bracket Option	
ES-21A		ES-21B		SPST off-mom.	CV	5.08	1	white	(none)	std.		S	(std.) snap-in type
ES-22A		ES-22B		SPDT on-mom.	CV1	7.62	2	black	FP	flush type			
							3	red			<b>Contact Material</b>		
							4	orange	Q	silver plated			
							5	yellow	R	gold plated			
							6	green	G	gold over silver			
							7	blue	K	gold / tin-lead			
							8	brown					
							9	gray					

**SPST**



Model No.	Switching position	
ES-21	off	Mom
Term. Comm.	open	1-2

SCHEMATIC



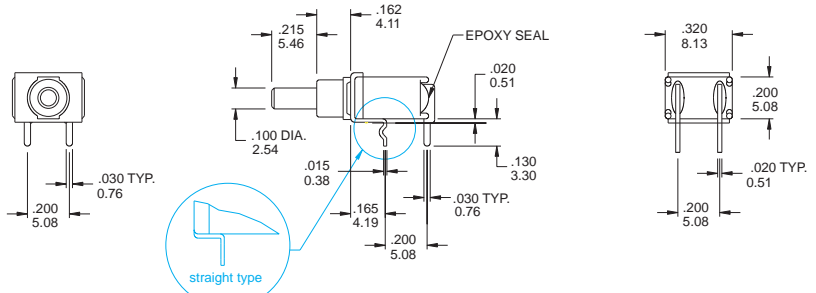
**ES-21- CR**

**SPST**



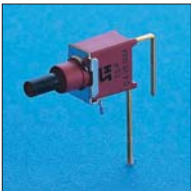
Model No.	Switching position	
ES-21A	off	Mom
Term. Comm.	open	1-2

SCHEMATIC



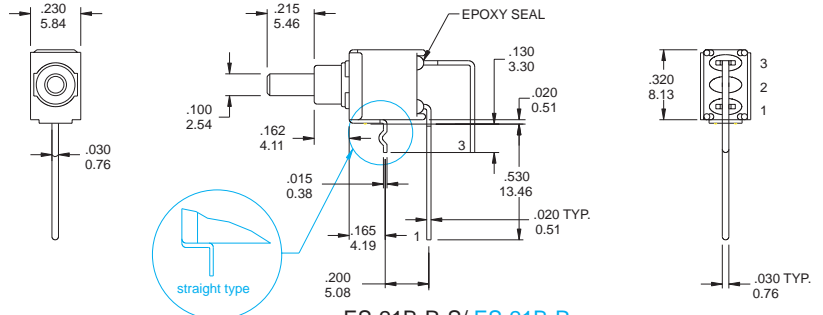
**ES-21A-R-S/ ES-21A-R**

**SPST**



Model No.	Switching position	
ES-21B	off	Mom
Term. Comm.	open	1-2

SCHEMATIC



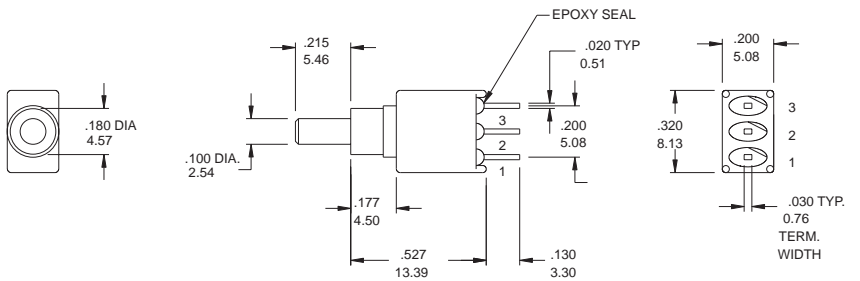
**ES-21B-R-S/ ES-21B-R**

**SPDT**



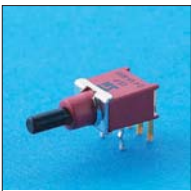
Model No.	Switching position	
ES-22	On	Mom
Term. Comm.	2-1	2-3

SCHEMATIC



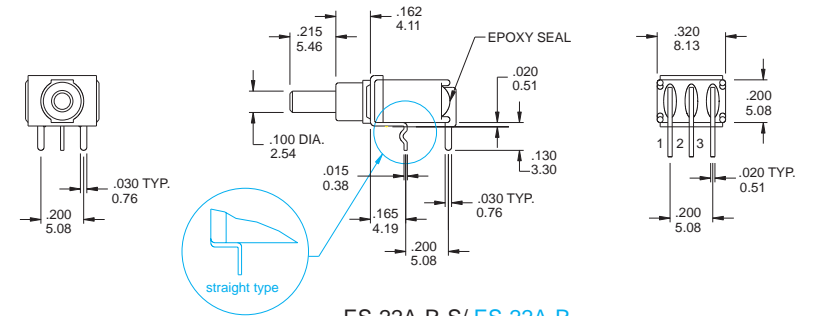
**ES-22-CR**

**SPDT**



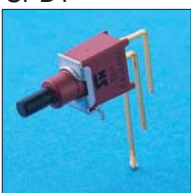
Model No.	Switching position	
ES-22A	On	Mom
Term. Comm.	2-1	2-3

SCHEMATIC



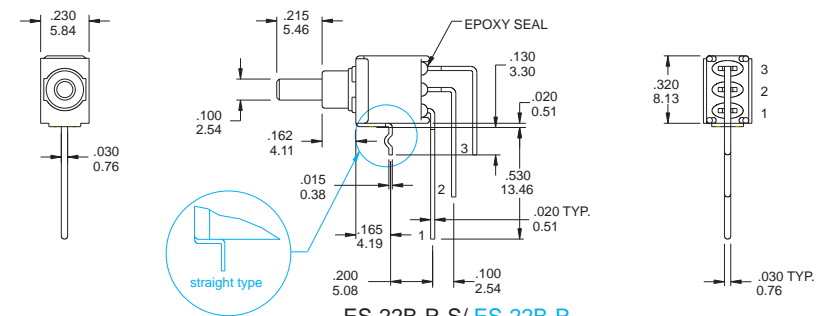
**ES-22A-R-S/ ES-22A-R**

**SPDT**



Model No.	Switching position	
ES-22B	On	Mom
Term. Comm.	2-1	2-3

SCHEMATIC

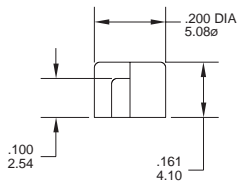


**ES-22B-R-S/ ES-22B-R**

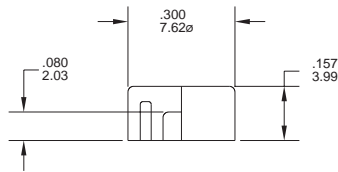
**Cap and Actuator Option**

**Cap color Option**

CV

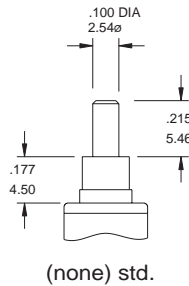


CV1

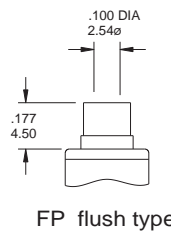


CAP & ACTUATOR OPTIONS	
1	White
2	Black(Std.)
3	Red
4	Orange
5	Yellow
6	Green
7	Blue
8	Brown
9	Gray

**The Plunger Option**



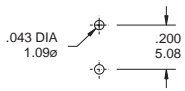
(none) std.



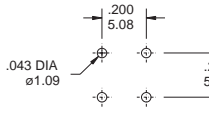
FP flush type

**The P.C.B MOUNTING**

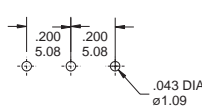
ES-21



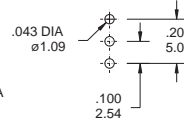
ES-21A



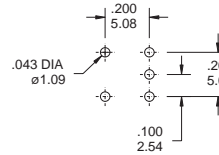
ES-21B



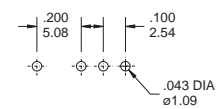
ES-22



ES-22A



ES-22B



**CONTACT MATERIAL OPTIONS**

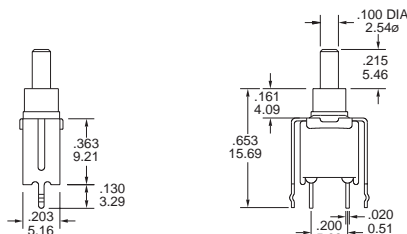
CODE	CONTACT MATERIAL	TERMINAL MATERIAL	RATING
Q	Silver plated	Silver plated	1 A @ 120V AC or 28 V DC;
R	Gold plated over nickel plated	Gold plated over nickel plated	0.4VA MAX @ 20 V AC or DC MAX
G	Gold plated over silver plated	Gold plated over silver plated	0.4 VA MAX @ 20 V AC or DC MAX or 1 A @ 120V AC or 28 V DC;
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

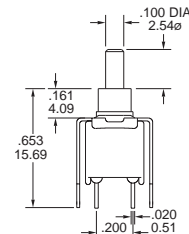
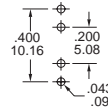
**VERTICAL SUPPORT BRACKET OPTION**

only for the ES-21/ES-22 .

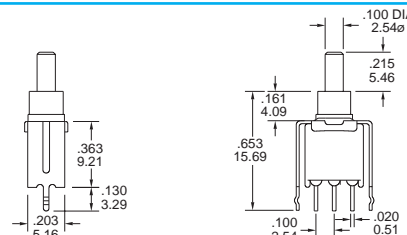
A5S



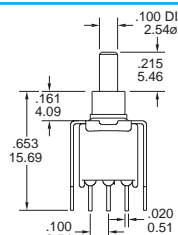
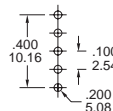
ES-21-CR-A5S (std.) snap-in type



A5 straight type



ES-22-CR-A5S (std.) snap-in type



A5 straight type

**FEATURES:**

1. Sealed construction - internal actuator o-ring and epoxy terminal seal standard
2. Carry the IP67 approvals
3. Surface mounting (SMT)
4. Tape and Reel package

**SPECIFICATIONS**

CONTACT RATING:R- 0.4 VA max @ 20 V AC or DC  
 ELECTRICAL LIFE:30,000 make-and-break cycles at full load  
 CONTACT RESISTANCE: 20 m? max. initial @2-4 VDC,100 mA  
 INSULATION RESISTANCE: 1,000 M? min.  
 DIELECTRIC STRENGTH: 1,500 V RMS @ sea level.  
 DEGREE OF PROTECTION : IP67  
 OPERATING TEMPERATURE: -30? C to 85? C

**MATERIALS**

CASE and BUSHING - glass filled nylon 4/6,flame retardant heat stabilized (UL94V-0)  
 PLUNGER - Thermoplastic polyester or glass filled nylon (UL94V-0)  
 CONTACT AND TERMINAL - Capper alloy , silver plated  
 SWITCH SUPPORT - Brass , tin-lead  
 TERMINAL SEAL - Epoxy



**How do you modify the switches you need!!**

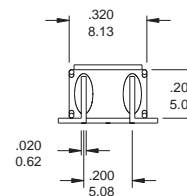
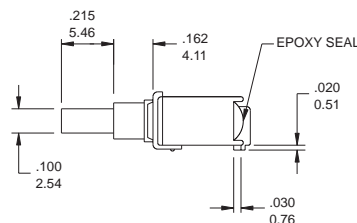
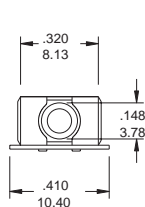
(A) E S - 2 0 - C V - 1 -     R

Switches Function		Cap		Cap color		Plunger		Contact Material	
ES-20	SPST off-mom. Sideward terminal	CV	5.08	1	white	(none)	std.	Q	silver plated
ES-20A	SPDT on-mom. Sideward terminal	CV1	7.62	2	black	FP	flush type	R	gold plated
ES-26	SPST off-mom. Backward terminal			3	red			G	gold over silver
ES-26A	SPDT on-mom. Backward terminal			4	orange			K	gold / tin-lead
ES-27	SPST off-mom. Backward terminal			5	yellow				
ES-27A	SPDT on-mom. Backward terminal			6	green				
				7	blue				
				8	brown				
				9	gray				

\* the Contact K only apply to the ES-26/ES-26A/ES-27/ES-27A

**SPST**

Model No.	Switching position	
ES-20	off	Mom
Term. Comm.	open	2-1



SCHEMATIC

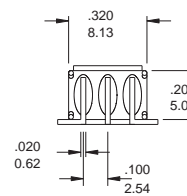
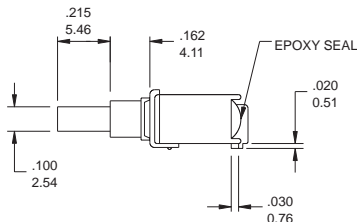
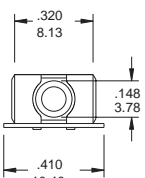


ES-20- R



**SPDT**

Model No.	Switching position	
ES-20A	on	Mom
Term. Comm.	2-1	2-3



SCHEMATIC

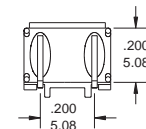
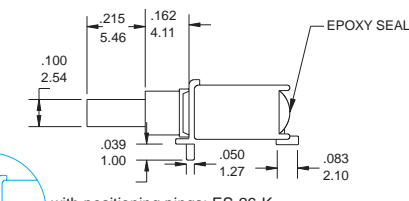
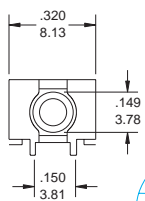


ES-20A- R

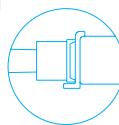


**SPST**

Model No.	Switching position	
ES-26	off	Mom
ES-27	off	Mom
Term. Comm.	open	2-1



SCHEMATIC

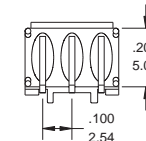
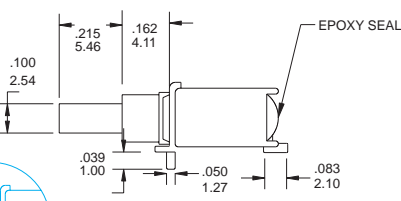
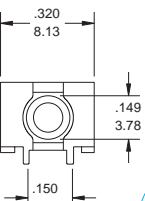


with positioning pings: ES-26-K  
without positioning pings: ES-27-K

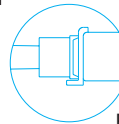
ES-26K / ES-27K

**SPDT**

Model No.	Switching position	
ES-26A	on	Mom
ES-27A	on	Mom
Term. Comm.	2-1	2-3



SCHEMATIC

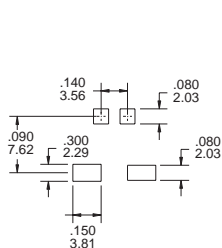


with positioning pings: ES-26A-K  
without positioning pings: ES-27A-K

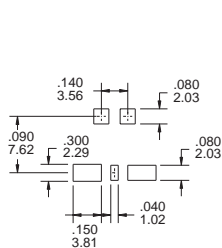
ES-26A- K / ES-27A-K

**Cap and Actuator Option / Cap color Option / Plunger Option please see the page D15**

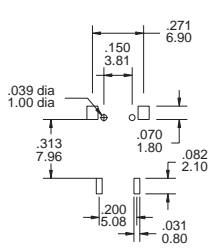
**THE P.C.B MOUNTING**



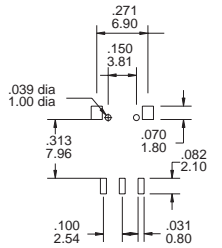
ES-20



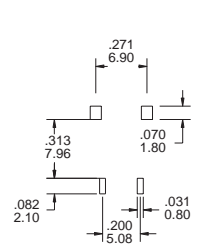
ES-20A



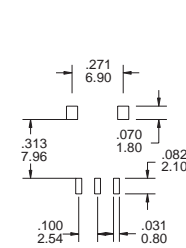
ES-26



ES-26A



ES-27



ES-27A

**CONTACT MATERIAL OPTIONS**

CODE	CONTACT MATERIAL	TERMINAL MATERIAL	RATING
Q	Silver plated	Silver plated	1 A @ 120V AC or 28 V DC;
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 1 A @ 120V AC or 28 V DC;
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 ES-26/ES-26A/ES-27/ES-27A