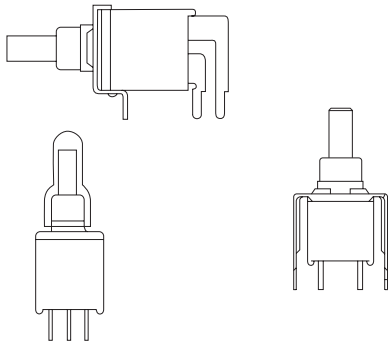


FEATURES:

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 Ω max. initial @2-4 VDC,100 mA
 INSULATION RESISTANCE: 1,000 M Ω 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			Contact Material			
				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**

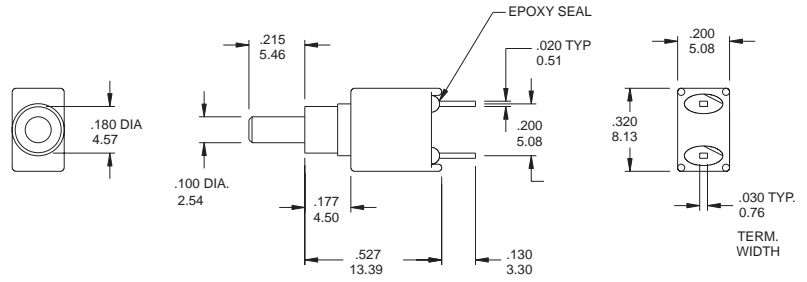
Horizon Right Angle	Vertical Right Angle	Switches Function	Cap		Cap color		Plunger		Support Bracket Option	
ES-21A	ES-21B	SPST off-mom.	CV	5.08	1	white	(none)	std.	S	(std.) snap-in type
ES-22A	ES-22B	SPDT on-mom.	CV1	7.62	2	black	FP	flush type		
					3	red			Contact Material	
					4	orange		Q	silver 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



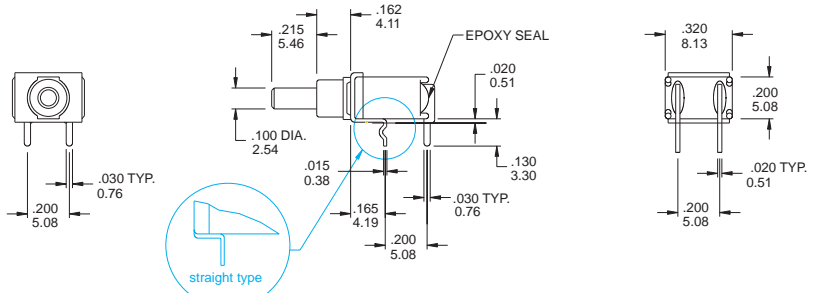
ES-21- CR

SPST



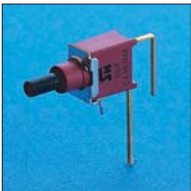
Model No.	Switching position	
ES-21A	off	Mom
Term. Comm.	open	1-2

SCHEMATIC



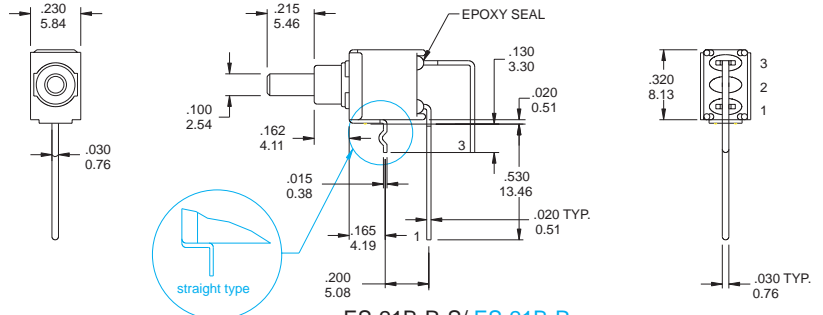
ES-21A-R-S/ ES-21A-R

SPST



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

SCHEMATIC



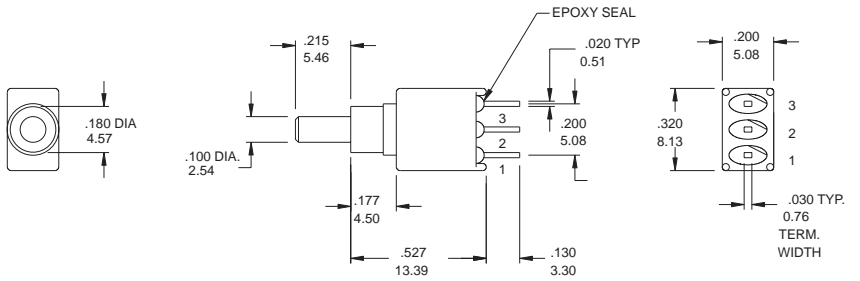
ES-21B-R-S/ ES-21B-R

SPDT



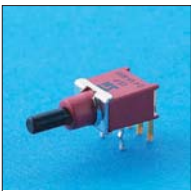
Model No.	Switching position	
ES-22	On	Mom
Term. Comm.	2-1	2-3

SCHEMATIC



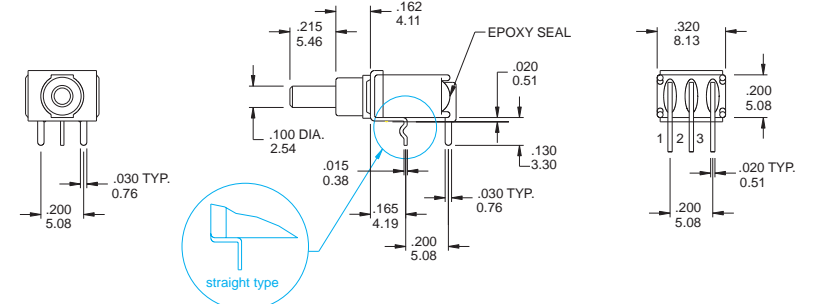
ES-22-CR

SPDT



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

SCHEMATIC



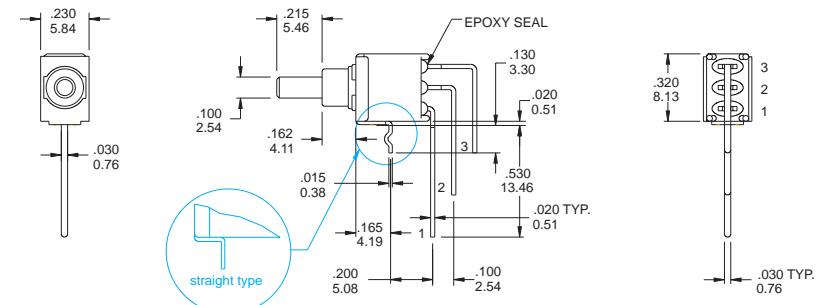
ES-22A-R-S/ ES-22A-R

SPDT



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

SCHEMATIC

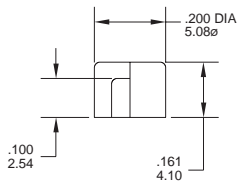


ES-22B-R-S/ ES-22B-R

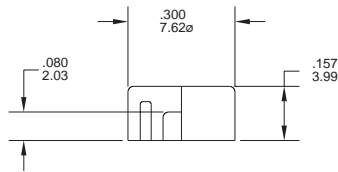
Cap and Actuator Option

Cap color Option

CV

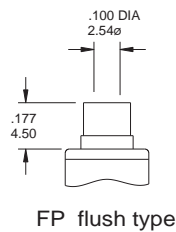
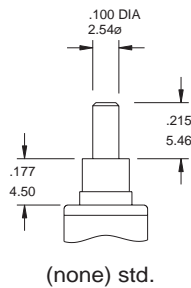


CV1



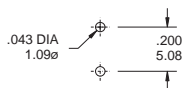
CAP & ACTUATOR OPTIONS	
1	White
2	Black(Std.)
3	Red
4	Orange
5	Yellow
6	Green
7	Blue
8	Brown
9	Gray

The Plunger Option

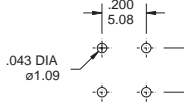


The P.C.B MOUNTING

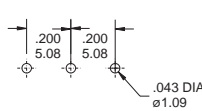
ES-21



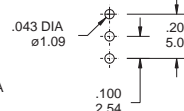
ES-21A



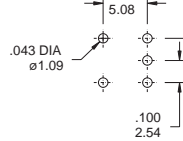
ES-21B



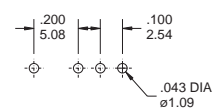
ES-22



ES-22A



ES-22B



CONTACT MATERIAL OPTIONS

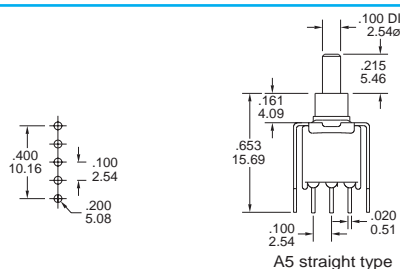
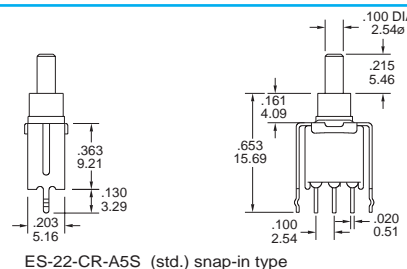
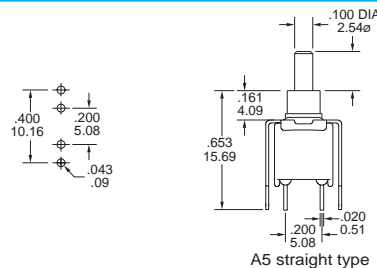
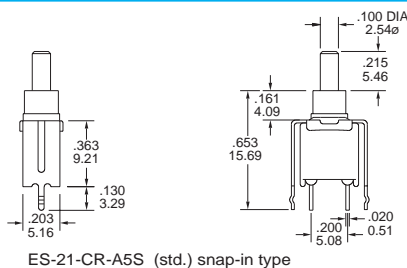
CODE	CONTACT MATERIAL	TERMINAL MATERIAL	RATING
Q	Silver plated	Silver plated	1 A @ 120V AC or 28 V DC;
R	Gold plated over nickel plated	Gold plated over nickel plated	0.4VA MAX @ 20 V AC or DC MAX
G	Gold plated over silver plated	Gold plated over silver plated	0.4 VA MAX @ 20 V AC or DC MAX or 1 A @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



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!!

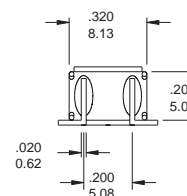
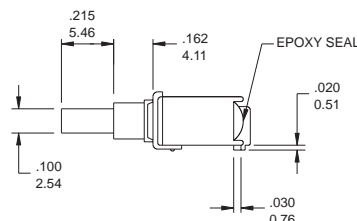
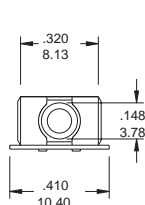
(A) E S - 2 0 - C V - 1 - R

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

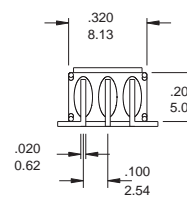
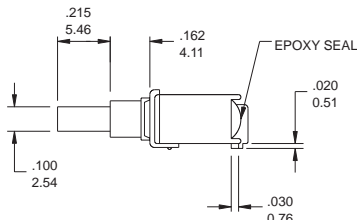
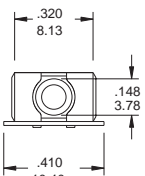


ES-20- R



SPDT

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



SCHEMATIC

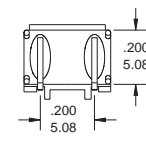
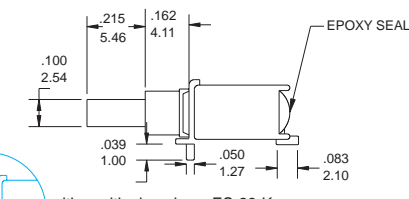
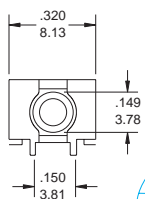


ES-20A- R

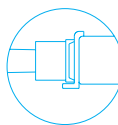


SPST

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



SCHEMATIC

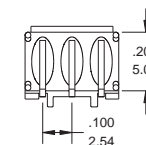
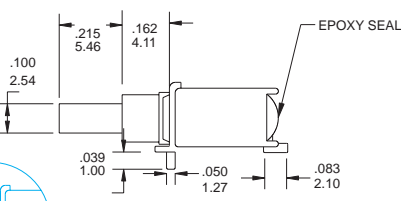
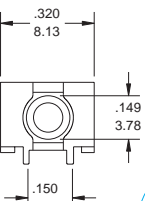


with positioning pings: ES-26-K
without positioning pings: ES-27-K

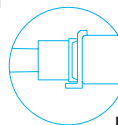
ES-26K / ES-27K

SPDT

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



SCHEMATIC

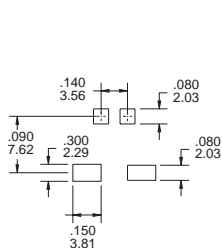


with positioning pings: ES-26A-K
without positioning pings: ES-27A-K

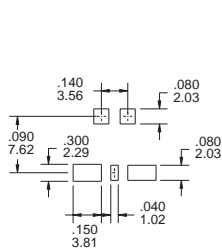
ES-26A- K / ES-27A-K

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

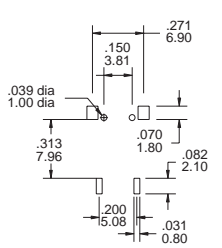
THE P.C.B MOUNTING



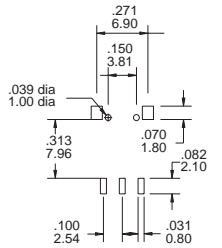
ES-20



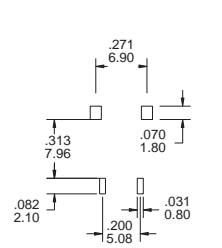
ES-20A



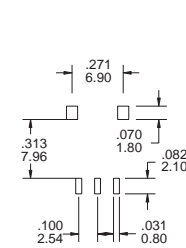
ES-26



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