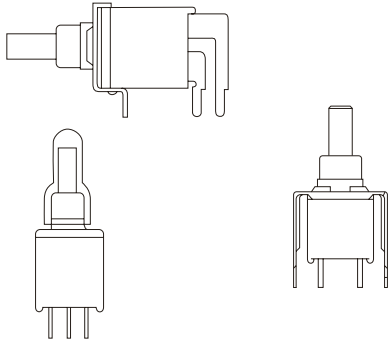


FEATURES:

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 V_{Amax} @ 20 VAC or DC □
- ELECTRICAL LIFE: 30,000 make-and-break cycles at full load □
- CONTACT RESISTANCE: 20 mOhm max. initial @2-4 VDC, 100 mA □
- INSULATION RESISTANCE: 1,000 MOhm min. □
- DIELECTRIC STRENGTH: 1,500 V RMS@sea level. □
- DEGREE OF PROTECTION : IP67 □
- OPERATING TEMPERATURE: -30 deg. C to 85 deg. 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) **E S - 2 1 - C V - 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) **E S - 2 1 A - C V - 2 - R - S**

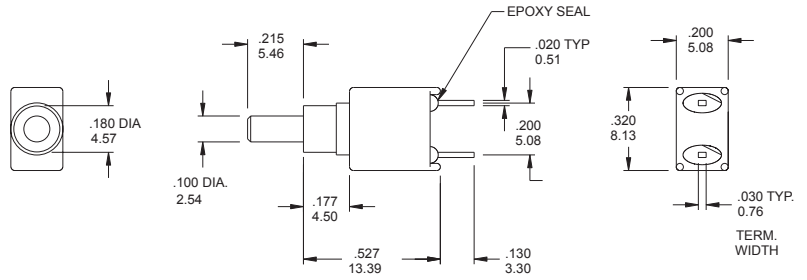
Horizon Right Angle	Vertical Right Angle	Switches Function	Cap		Cap color		Plunger		Support Bracket Option	
ES-21A	ES-21B □	SPST off-mom.	CV	5.08 □	1	white	(none)	std.	S	(std.) snap-in type
ES-22A	ES-22B	SPDT on-mom.	CV1	7.62	2	black	FP	flush type		
					3	red			Contact Material	
					4	orange		Q	silver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



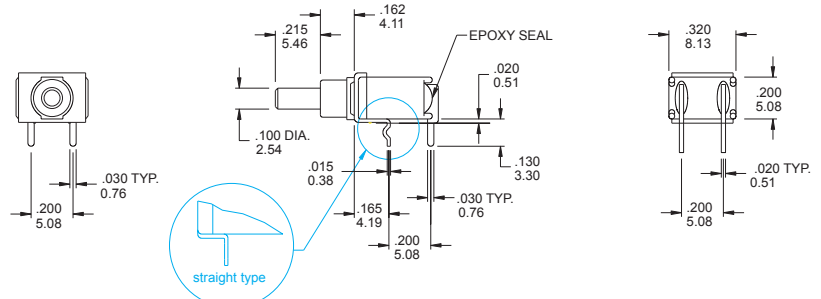
ES-21- CR

SPST



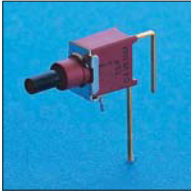
Model No.	Switching position	
ES-21A	off	Mom
Term. Comm.	open	1-2

SCHEMATIC



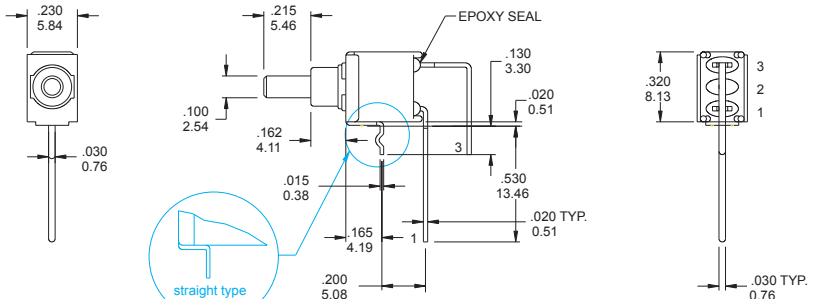
ES-21A-R-S/ ES-21A-R

SPST



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

SCHEMATIC



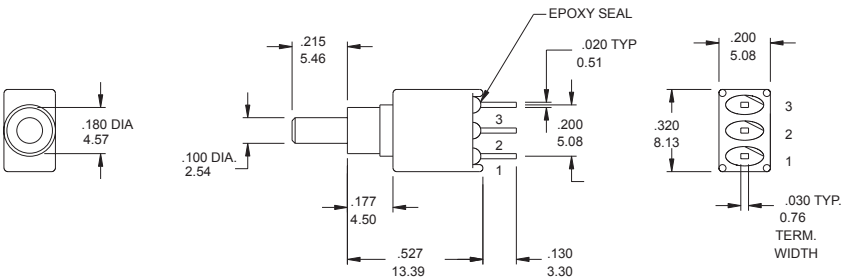
ES-21B-R-S/ ES-21B-R

SPDT



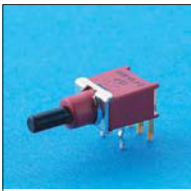
Model No.	Switching position	
ES-22	On	Mom
Term. Comm.	2-1	2-3

SCHEMATIC



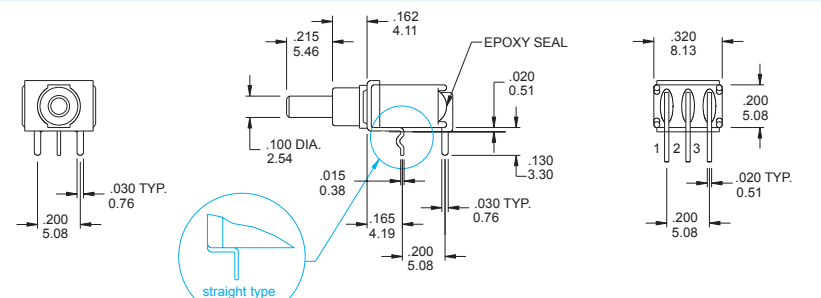
ES-22-CR

SPDT



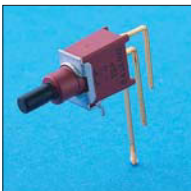
Model No.	Switching position	
ES-22A	On	Mom
Term. Comm.	2-1	2-3

SCHEMATIC



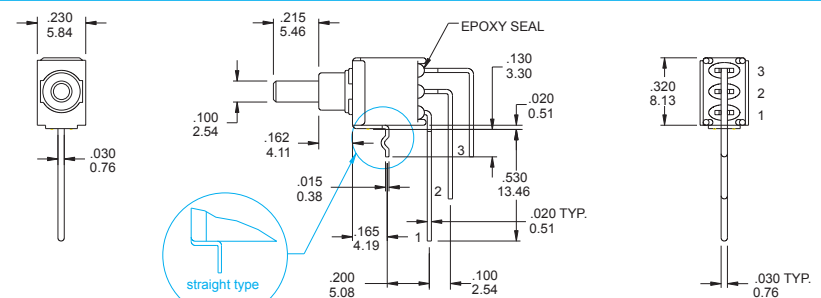
ES-22A-R-S/ ES-22A-R

SPDT



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

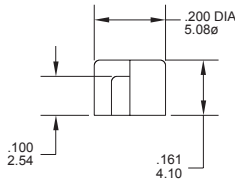
SCHEMATIC



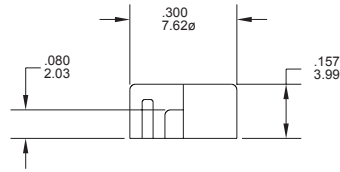
ES-22B-R-S/ ES-22A-R

Cap and Actuator Option

CV



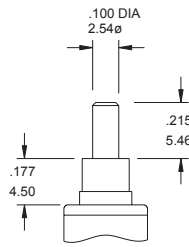
CV1



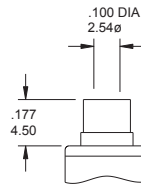
Cap color Option

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



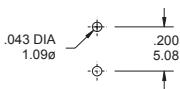
(none) std.



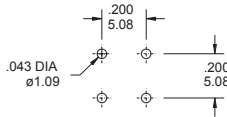
FP flush type

The P.C.B MOUNTING

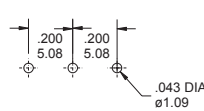
ES-21



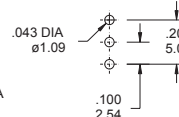
ES-21A



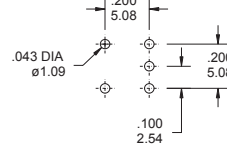
ES-21B



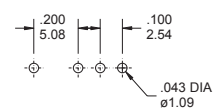
ES-22



ES-22A



ES-22B



CONTACT MATERIAL OPTIONS

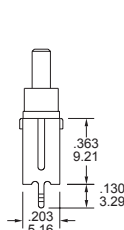
CODE	CONTACT MATERIAL	TERMINAL MATERIAL	RATING
Q	Silver plated	Silver plated	1 A @ 120V AC or 28 V DC;
R	Gold plated over nickel plated	Gold plated over nickel plated	0.4VA MAX @ 20 V AC or DC MAX
G	Gold plated over silver plated	Gold plated over silver plated	0.4 VA MAX @ 20 V AC or DC MAX or 1 A @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

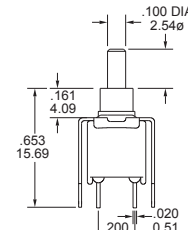
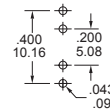
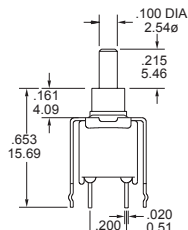
VERTICAL SUPPORT BRACKET OPTION

only for the ES-21/ES-22 .

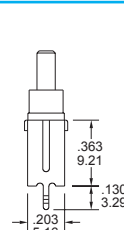
A5S



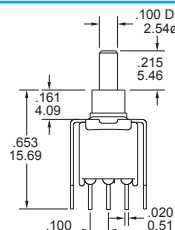
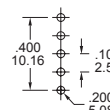
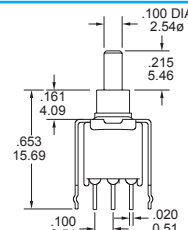
ES-21-CR-A5S (std.) snap-in type



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 mOhm max. initial @2-4 VDC,100 mA
INSULATION RESISTANCE: 1,000 MOhm min.
DIELECTRIC STRENGTH: 1,500 V RMS @ sea level.
DEGREE OF PROTECTION : IP67
OPERATING TEMPERATURE: -30 deg. C to 85 deg.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



D
16

How do you modify the switches you need!!

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

Switches Function	
ES-20	SPST off-mom. Sideward terminal
ES-20A	SPDT on-mom. Sideward terminal
ES-26	SPST off-mom. Backward terminal
ES-26A	SPDT on-mom. Backward terminal
ES-27	SPST off-mom. Backward terminal
ES-27A	SPDT on-mom. Backward terminal

Cap	
CV	5.08
CV1	7.62

Cap color	
1	white
2	black
3	red
4	orange
5	yellow
6	green
7	blue
8	brown
9	gray

Plunger	
(none)	std.
FP	flush type

Contact Material	
Q	silver plated
R	gold plated
G	gold over silver
K	gold / tin-lead

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

