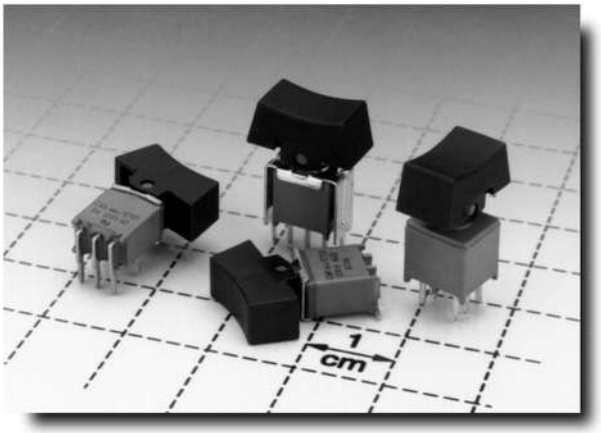
C&K ET Series
Sealed Subminiature Rocker Switches



Features/Benefits

- ***Sealed against solder and cleaning process contaminants***
- ***Rocker, bushing & case—UL 94V-0***
- ***Small footprint—saves space***

Typical Applications

- ***Telecommunications***
- ***Instrumentation***
- ***Computers & peripherals***

Models Available

Build-A-Switch

Our easy Build-A-Switch concept allows you to mix and match options to create the switch you need. Below is a complete listing of options shown in catalog. To order, simply select desired option from each category and place in the appropriate box. Switches with standard options are shown on pages F-37 and F-38. Available options are shown and described on pages F-38 thru F-42. For additional options not shown in catalog, consult Customer Service Center. All models are process sealed to withstand machine soldering temperatures and pressure wash cleaning methods.

Typical Example: E T 0 1 — J 1 — C — — — Q — E — 2

Switch Function
- ET01 **(STD.) SP On-None-On**
- ET03 **(STD.) SP On-Off-On**
- ET21 **(STD.) SP On-None-On**
- ET02 SP Off-None-On
- ET05 SP Mom.-Off-Mom.
- ET07 3P On-Off-Mom.
- ET08 3P On-None-Mom.
- ET23 DP On-Off-On
- ET24 DP On-On-On
- ET25 DP Mom.-Off-Mom.
- ET27 DP On-Off-Mom.
- ET28 DP On-None-Mom.

Actuator
- J1 **(STD.) Rocker**
- J6 **(STD.) Rocker**

Terminations
- A **(STD.) Right angle, PC thru-hole**
- AV **(STD.) Vertical Right angle, PC thru-hole**
- C **(STD.) PC Thru-hole**
- V3 **(STD.) V-bracket**
- AV2 Vertical Right angle, PC thru-hole
- AV3 Vertical Right angle, snap-in, PC thru-hole
- SA Surface mount
- V31 V-bracket, snap-in
- W Wire wrap

Contact Material
- B **(STD.) Gold**
- K Gold
- Q Silver
- M Silver
- G Gold over silver
- L Gold over silver

Seal
- E **(STD.) Epoxy**

Actuator Color
- 2 **(STD.) Black**
- 1 White
- 3 Red

F
Rocker

Specifications

CONTACT RATING: B contact material: 0.4 VA max. @ 20 V AC or DC max. See page F-42 for additional ratings.

ELECTRICAL LIFE: ETX1 models: 60,000 make-and-break cycles at full load. All other models: 30,000 cycles.

CONTACT RESISTANCE: Below 20 milliohms typ. initial @ 2-4 V DC, 100 mA, for both silver and gold plated contacts.

INSULATION RESISTANCE: 10^9 ohms min.

DIELECTRIC STRENGTH: 1000 V RMS min. @ sea level.

OPERATING TEMPERATURE: –30°C to 85°C.

SOLDERABILITY: Per MIL-STD-202F method 208D, or EIA RS-186E method 9 (1 hour steam aging).

PACKAGING: Surface mount switches available in tape and reel packaging, see page L-39 for drawings and reel information.

Materials

CASE & BUSHING: Glass filled nylon 6/6, flame retardant, heat stabilized (UL 94V-0). SA surface mount: High temperature material, glass filled 4/6 nylon, flame retardant, heat stabilized (UL 94V-0).

ACTUATOR: Nylon, black standard. Internal o-ring seal standard with all actuators. SA surface mount: High temperature material, glass filled 4/6 nylon, flame retardant, heat stabilized (UL 94V-0).

SWITCH SUPPORT: Brass, tin plated.

CONTACTS & TERMINALS: B contact material: Copper alloy, with gold plate over nickel plate. See page F-42 for additional contact materials.

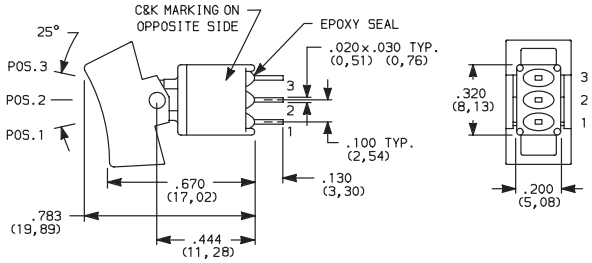
TERMINAL SEAL: Epoxy.

NOTE: Specifications and materials listed above are general specifications for switches with standard options. For information on specific and custom switches, consult Customer Service Center.

SWITCHES WITH STANDARD OPTIONS

PART NUMBER	FUNCTION	POS. 1	POS. 2	POS. 3
ET01J6CBE2	SPDT	ON	NONE	ON

NOTE: For PC mounting information, see page F-39.



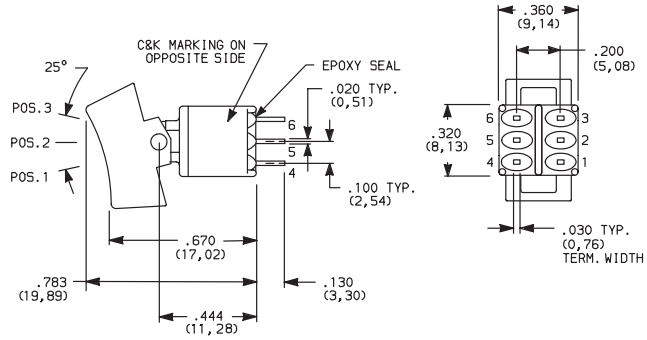
ET02 Models:
Omit terminal 2.



ET01J6CBE2
SPDT

PART NUMBER	FUNCTION	POS. 1	POS. 2	POS. 3
ET21J6CBE2	DPDT	ON	NONE	ON

NOTE: For PC mounting information, see page F-39.

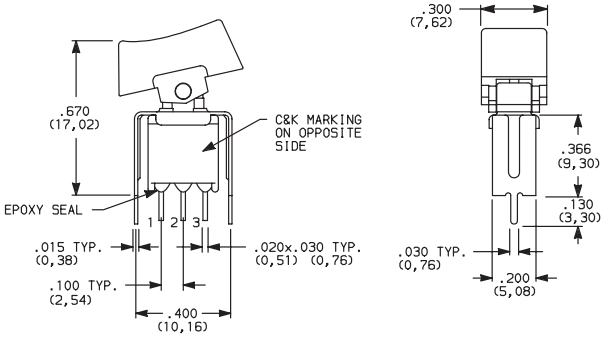




ET21J6CBE2
DPDT

PART NUMBER	FUNCTION	POS. 1	POS. 2	POS. 3
ET01J1V3BE2	SPDT	ON	NONE	ON

NOTE: For PC mounting information, see page F-39.



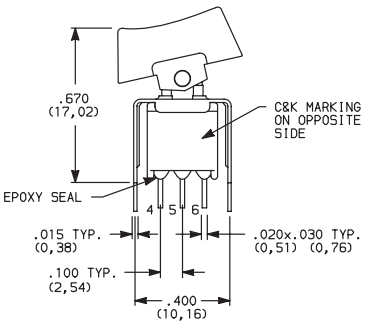


ET01J1V3BE2
SPDT

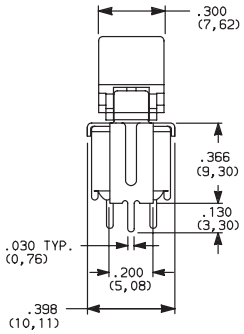
SWITCHES WITH STANDARD OPTIONS



ET21J1V3BE2
DPDT



Actuator Shown In Pos. 1

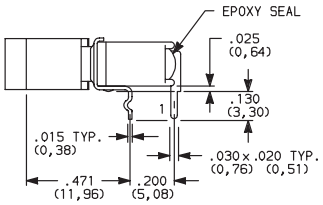


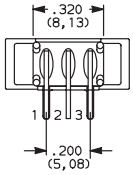
PART NUMBER	FUNCTION	POS. 1	POS. 2	POS. 3
ET21J1V3BE2	SPDT	ON	NONE	ON

NOTE: For PC mounting information, see page F-42.



ET01J6ABE2
Horizontal Actuation
SPDT



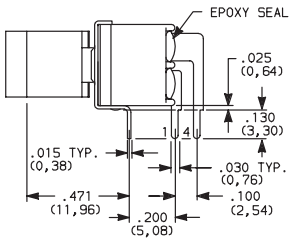


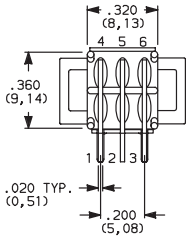
PART NUMBER	FUNCTION	POS. 1	POS. 2	POS. 3
ET01J6ABE2	DPDT	ON	NONE	ON

NOTE: For PC mounting information, see page F-39.



ET21J1ABE2
Horizontal Actuation
DPDT





PART NUMBER	FUNCTION	POS. 1	POS. 2	POS. 3
ET21J1ABE2	SPDT	ON	NONE	ON

NOTE: For PC mounting information, see page F-40.

SWITCH FUNCTION

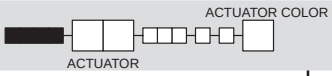
NO. POLES	MODEL NO.	SWITCH FUNCTION POS. 1	SWITCH FUNCTION POS. 2	SWITCH FUNCTION POS. 3	CONNECTED TERMINALS POS. 1	CONNECTED TERMINALS POS. 2	CONNECTED TERMINALS POS. 3	SCHEMATIC
SP	ET01 (STD.)	ON	NONE	ON	2-3	OPEN	2-1	2 (COMM) 1 3 SPDT
	ET03 (STD.)	ON	OFF	ON				
	ET05	MOM.	OFF	MOM.				
	ET07	ON	OFF	MOM.				
	ET08	ON	NONE	MOM.				
	ET02	OFF	NONE	ON	OPEN	N/A	3-1	SPST 1 3
DP	ET21 (STD.)	ON	NONE	ON	2-3,5-6	OPEN	2-1,5-4	2 (COMM) 5 1 3 4 6 DPDT
	ET23	ON	OFF	ON				
	ET25	MOM.	OFF	MOM.				
	ET27	ON	OFF	MOM.				
	ET28	ON	NONE	MOM.				
	ET24**	ON	ON	ON	2-3,5-6	2-3,5-4	2-1,5-4	

MOM. = Momentary

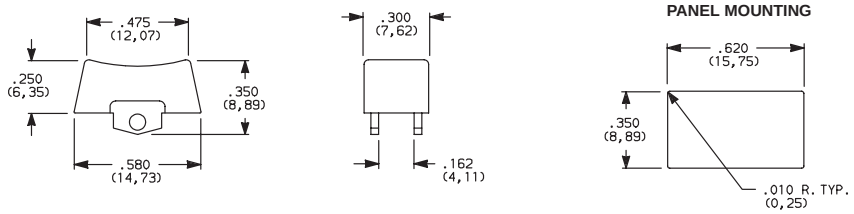
** Wiring for 3-way switch, see page L-29.

All models ® with all options when ordered with G, L, M or Q contact material.

ACTUATOR

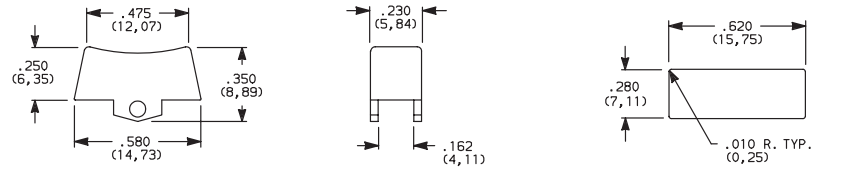


J1 (STD.) ROCKER



Available with all models except ET0X with A & SA terminations.

J6 (STD.) ROCKER



Standard with ET0X model with A & SA terminations.

OPTION CODE	ACTUATOR COLOR
2	(STD.) BLACK
1	WHITE
3	RED

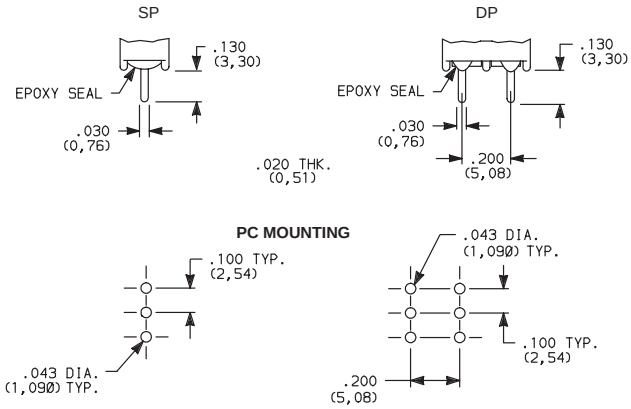
Finish: Matte. Other colors, custom actuator markings and legends available, consult Customer Service Center.

NOTE: Internal o-ring actuator seal standard. Actuators are available separately, see section L.

TERMINATIONS



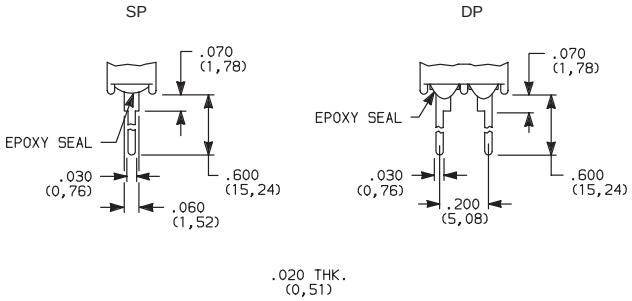
C (STD.) PC THRU-HOLE



ET02 Models: Omit center hole.

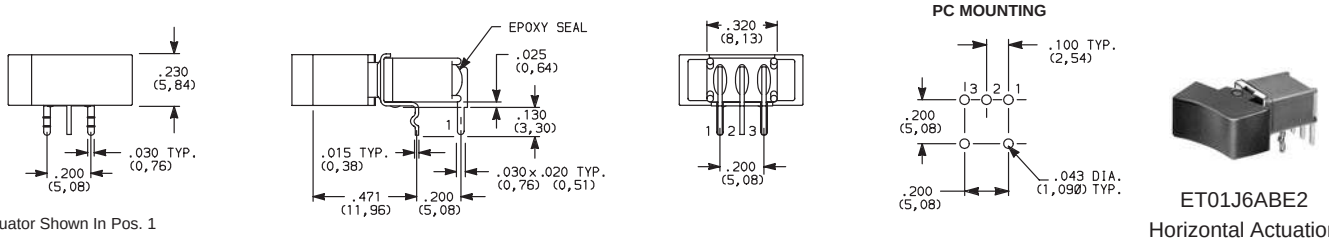
SP & DP

W WIRE WRAP



SP & DP

A (STD.) RIGHT ANGLE, PC THRU-HOLE



Actuator Shown In Pos. 1

ET01J6ABE2
Horizontal Actuation
SPDT

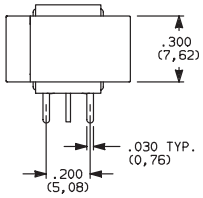
Not available with ET02 model.
J6 actuator std. only on ET0X models with A terminations.

TERMINATIONS

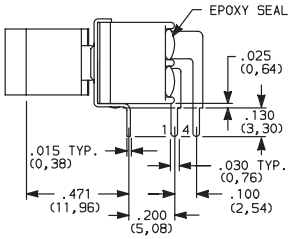
A (STD.) RIGHT ANGLE, PC THRU-HOLE

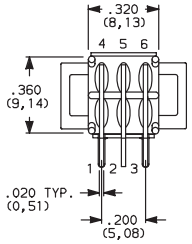


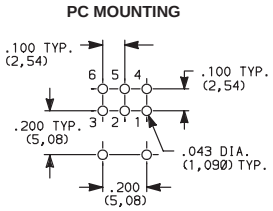
ET21J1ABE2
Horizontal Actuation
DPDT



Actuator Shown In Pos. 1



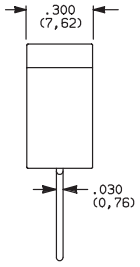




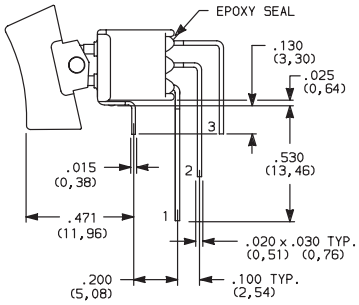
AV (STD.) VERTICAL RIGHT ANGLE, PC THRU-HOLE



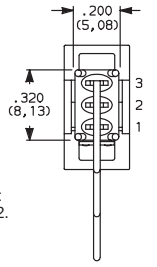
ET01J1AVBE2
Vertical Actuation
SPDT

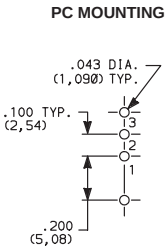


Actuator Shown In Pos. 1



ET02 Models:
Omit terminal 2.



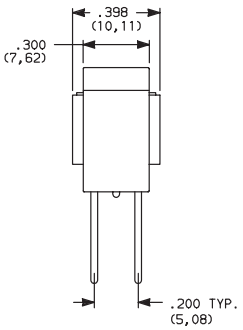


NOTE: Terminal bend radii and lead-in manufacturing option.

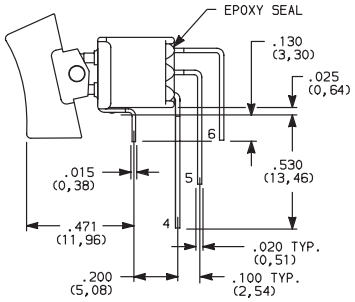
AV (STD.) VERTICAL RIGHT ANGLE, PC THRU-HOLE

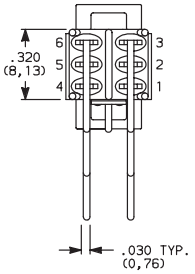


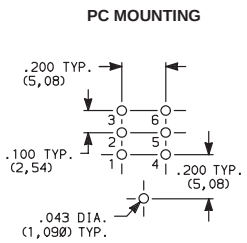
ET21J1AVBE2
Vertical Actuation
DPDT



Actuator Shown In Pos. 1



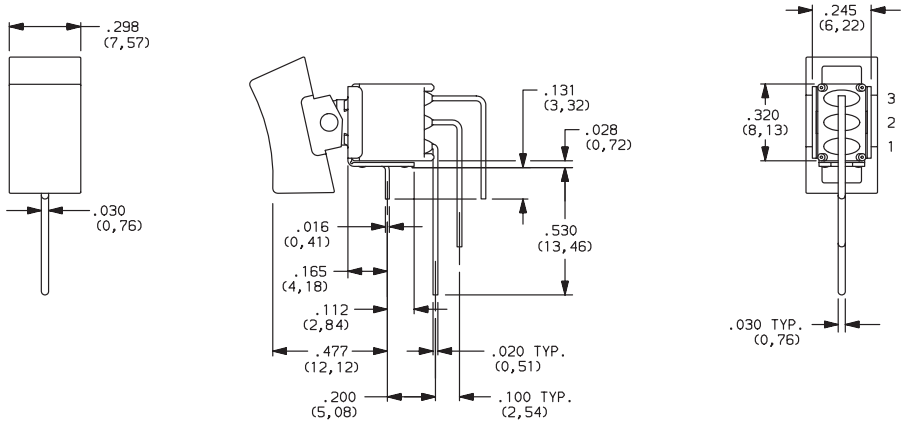




NOTE: Terminal bend radii and lead-in manufacturing option.

TERMINATIONS

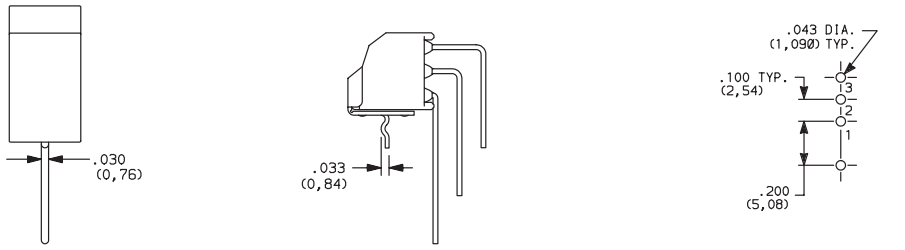
AV2 VERTICAL RIGHT ANGLE, PC THRU-HOLE



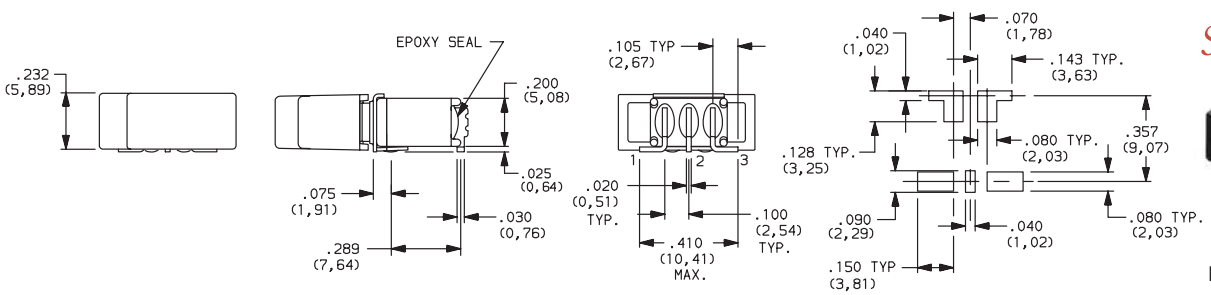


ET01J1AV2BE2
Vertical Actuation
SPDT

AV3 VERTICAL RIGHT ANGLE, SNAP-IN, PC THRU-HOLE



SA SURFACE MOUNT



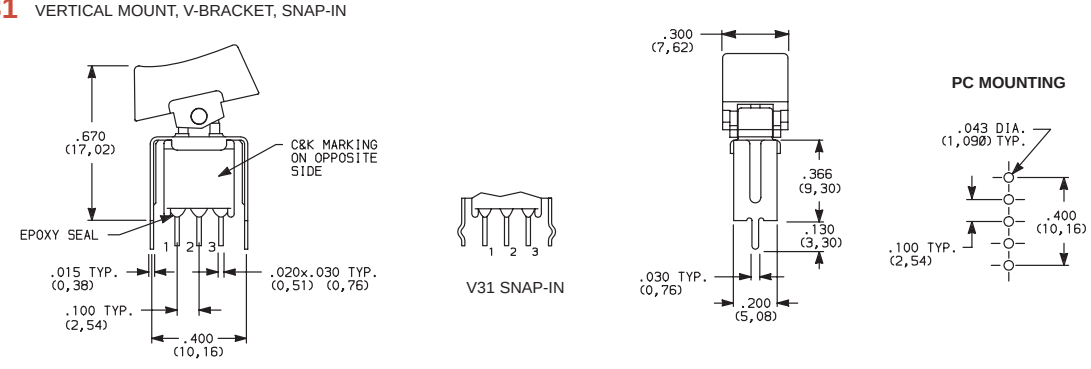


ET01J6SABE2
Horizontal Actuation
SPDT

NOTE: Actuator should be assembled after processing.

V3 (STD.) VERTICAL MOUNT, V-BRACKET

V31 VERTICAL MOUNT, V-BRACKET, SNAP-IN



Actuator Shown In Pos. 1



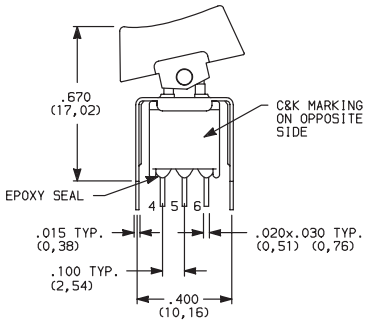
ET01J1V3BE2
SPDT

TERMINATIONS

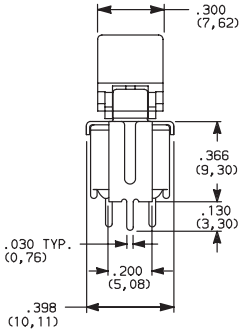
V3 **(STD.) VERTICAL MOUNT, V-BRACKET**



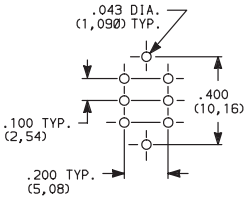
ET21J1V3BE2
DPDT



Actuator Shown In Pos. 1



PC MOUNTING



CONTACT MATERIAL

OPTION CODE	CONTACT MATERIAL	TERMINAL PLATING	RATINGS	
B (STD.)	GOLD [1]	GOLD [1]	LOW LEVEL/DRY CIRCUIT	0.4 VA MAX. @ 20 V AC OR DC MAX.
K		TIN-LEAD [6]		
Q	SILVER [4,5]	SILVER [5]	POWER	ETX1 MODELS: 3 AMPS @ 120 V AC OR 28 V DC. ALL OTHER MODELS: 2 AMPS @ 120 V AC OR 28 V DC.
M		TIN-LEAD [6]		
G	GOLD OVER SILVER [2,3]	GOLD [3]	LOW LEVEL/DRY CIRCUIT OR POWER	ETX1 MODELS: 0.4 VA MAX @ 20 V AC OR DC MAX. OR 3 AMPS @120 V AC OR 28 V DC. ALL OTHER MODELS: 0.4 VA MAX @ 20 V AC OR DC MAX. OR 2 AMPS @ 120 V AC OR 28 V DC.
L		TIN-LEAD [6]		

CONTACT MATERIAL/APPLICATION RECOMMENDATIONS–SEE CHART, PAGE L-31.

[1] CONTACTS & TERMINALS: Copper alloy, with gold plate over nickel plate.

[2] END CONTACTS: Coin silver, with gold plate over nickel plate.

[3] CENTER CONTACTS & ALL TERMINALS: Copper alloy, with gold plate over nickel plate.

[4] END CONTACTS: Coin silver, silver plated.

[5] CENTER CONTACT & ALL TERMINALS: Copper alloy, silver plated.

[6] TERMINALS: Copper alloy, with tin-lead alloy over nickel plate.

All models with all options when ordered with G, L, M or Q contact material.

SEAL

E **(STD.) EPOXY SEAL**

