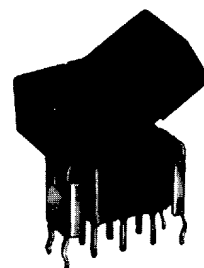
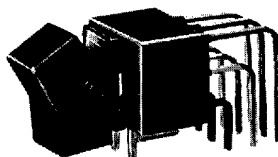


*Process sealed—withstands soldering and cleaning processes.



models available, see page C-14.

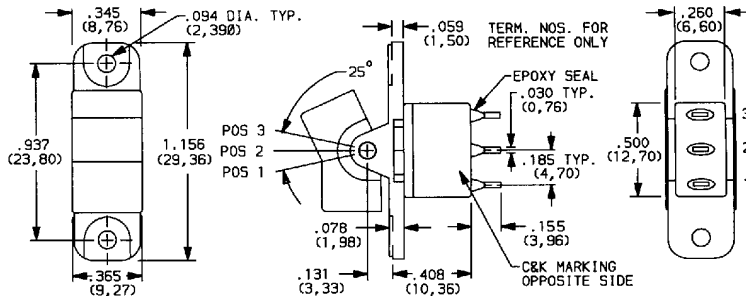
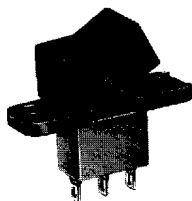
Easy Build-A-Switch:

Below is a complete listing of available options for E SERIES SEALED ANTI-STATIC ROCKER AND LEVER HANDLE SWITCHES. Build-A-Switch allows you to mix and match options to create the switch you need—simply select desired option from each category. Switches with standard options are shown on page C-13; all available options are shown and described on pages C-14 thru C-26. When building a part number, some ordering format boxes may not be filled. Dashes, hyphens or spaces in the part number are not significant, and are shown for clarity only. Complete HOW TO ORDER information is at the end of this section, page C-26. Hardware and accessories are available separately, see catalog section H. All models are process sealed to withstand machine soldering temperatures and pressure wash cleaning methods.

SWITCH FUNCTION	ACTUATOR	TERMINATIONS	CONTACT MATERIAL	SEAL	ACTUATOR COLOR	FRAME COLOR
			Silver	Epoxy	Black	Black
[] [] [] []	[] [] []	[] [] [] []	[]	[]	[]	[]
E101	J1	A	V61	B	E	1 (NONE)
E103	J2	A3	V71	G		1
E105	J3	AV2	V81	K		2
E107	J4	AV3	V91	L		C
E108	J5	AV5	W	M		S
E201	J11	AW	W1	Q		
E203	J21	AW1	W3			
E205	J50	AW3	W4			
E207	J54	AW4	W5			
E208	J60	AW5	Z			
E211	J64	C	Z3			
E213	J90	V2				
E215	J94	V3				
E301		V4				
E303		V5				
E305		V6				
E307		V7				
E308		V8				
		V9				
		V21				
		V31				
		V41				
		V51				
		V54				
		V55				

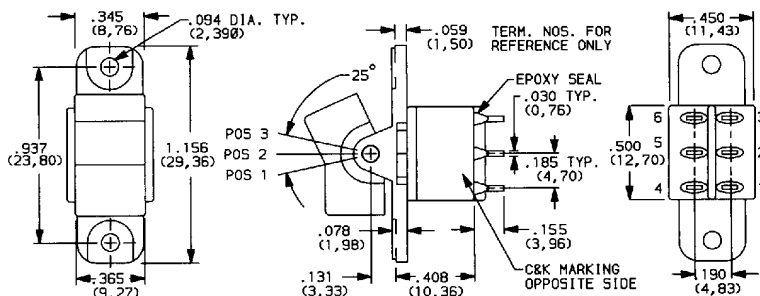
*Process sealed—withstands soldering and cleaning processes.

SWITCHES WITH STANDARD OPTIONS



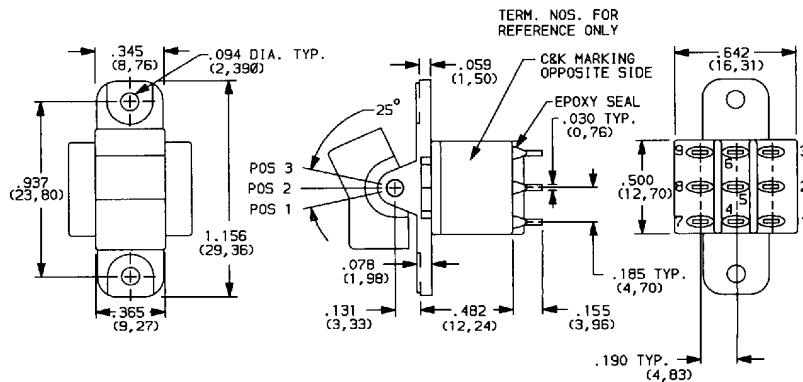
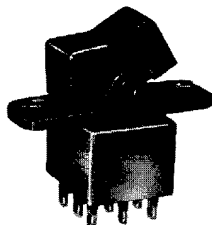
SPDT

Part No. Shown: E101J1ZBE2



DPDT

Part No. Shown: E201J1ZBE2



3PDT

Part No. Shown: E301J1ZBE2

*Process sealed-withstands soldering and cleaning processes.

SWITCH FUNCTION

NO. POLES	MODEL [†] NO.	SWITCH FUNCTION			CONNECTED TERMINALS			SCHEMATIC
		POS. 1	POS. 2	POS. 3	POS. 1	POS. 2	POS. 3	
SP	E101	ON	NONE	ON	2-3	OPEN	2-1	 SPDT
	E103	ON	OFF	ON				
	E105	MOM.	OFF	MOM.				
	E107	ON	OFF	MOM.				
	E108	ON	NONE	MOM.				
DP	E201	ON	NONE	ON	2-3,5-6	OPEN	2-1,5-4	 DPDT
	E203	ON	OFF	ON				
	E205	MOM.	OFF	MOM.				
	E207	ON	OFF	MOM.				
	E208	ON	NONE	MOM.				
	E211**	ON	ON	ON				
	E213**	ON	ON	MOM.				
E215**	MOM.	ON	MOM.					
3P	E301	ON	NONE	ON	2-3,5-6,8-9	OPEN	2-1,5-4,8-7	 3PDT
	E303	ON	OFF	ON				
	E305	MOM.	OFF	MOM.				
	E307	ON	OFF	MOM.				
	E308	ON	NONE	MOM.				

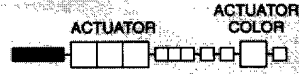
MOM. = MOMENTARY

[†] All models with all options when ordered with G, L, M or Q contact material. See AGENCY APPROVALS, page VIII.

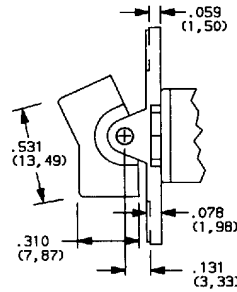
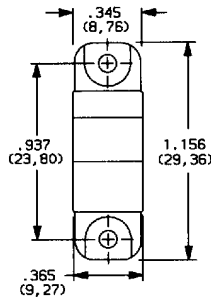
** Wiring for 3-way switch, see page X.

*Process sealed—withstands soldering and cleaning processes.

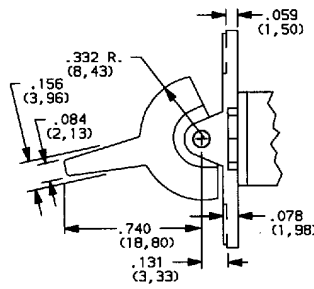
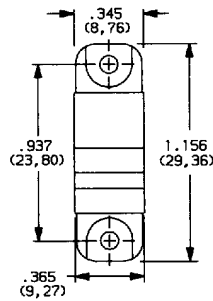
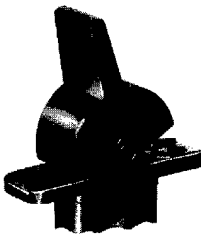
ACTUATORS—PANEL REAR MOUNT



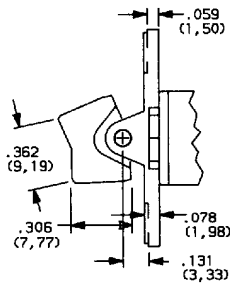
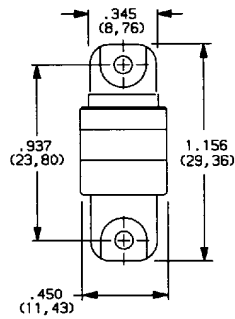
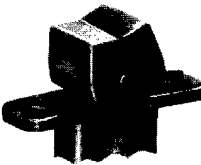
J1 (STD.)



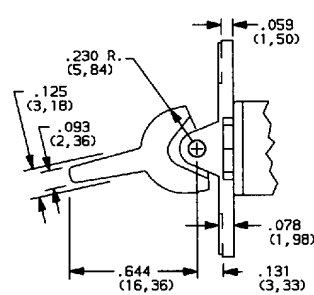
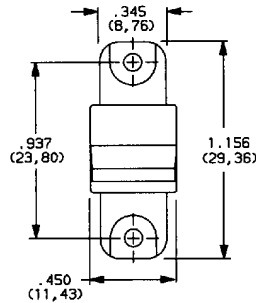
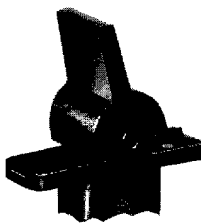
J2



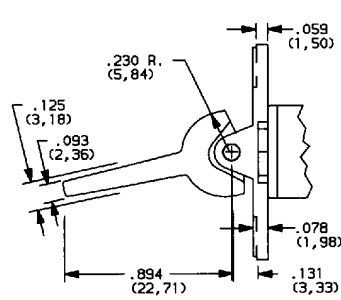
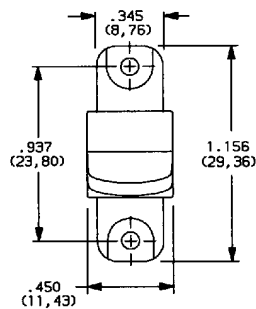
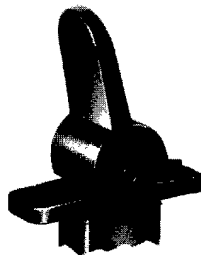
J54



J64



J94



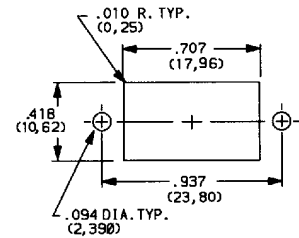
ACTUATOR COLOR

OPTION CODE	ACTUATOR COLOR
1	WHITE
2	BLACK (std.)
3	RED
4	ORANGE
5	YELLOW
6	GREEN
7	BLUE
8	BROWN
9	GRAY

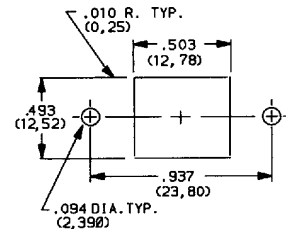
Select actuator color from chart. Place option code in appropriate box of ordering format. Finish: matte. Custom actuator markings and legends available, consult factory. Mounting hardware included, see HOW TO ORDER, page C-26. Internal o-ring actuator seal std. Actuators and hardware are available separately, see catalog section H.

Available with Z, C, Z3 or W-W5 terminations.

J1 - J2 PANEL MOUNTING



J54 - J64 - J94 PANEL MOUNTING

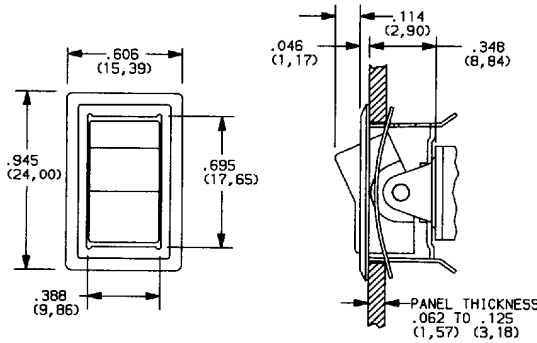


C

*Process sealed—withstands soldering and cleaning processes.

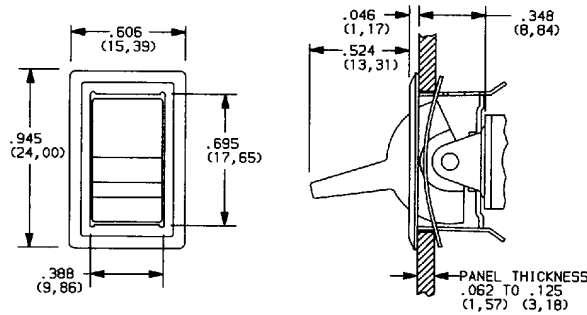
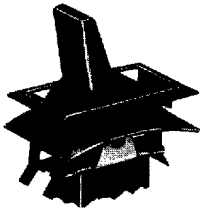
ACTUATORS—REAR MOUNT

J11



NOTE: This option has reduced anti-static capability.

J21



NOTE: This option has reduced anti-static capability.

ACTUATOR COLOR

OPTION CODE	ACTUATOR COLOR
1	WHITE
2	BLACK (std.)
3	RED
4	ORANGE
5	YELLOW
6	GREEN
7	BLUE
8	BROWN
9	GRAY

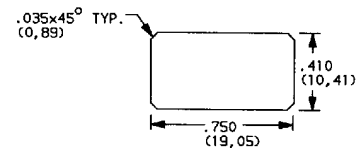
FRAME COLOR

OPTION CODE	FRAME COLOR
1	WHITE
2	BLACK (std.)
C	BRIGHT CHROME
S	SATIN CHROME

Select actuator and frame colors from respective charts. Place option codes in appropriate boxes of ordering format. Actuator finish: matte, frame finish: gloss. Custom actuator markings and legends available, consult factory. Internal o-ring actuator seal std. Frames are available separately, see catalog section H.

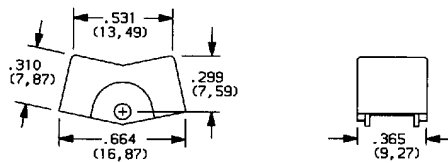
Available with Z, C, Z3 or W-W5 terminations.

J11 - J21 PANEL MOUNTING



ACTUATORS—P.C. MOUNT

J1



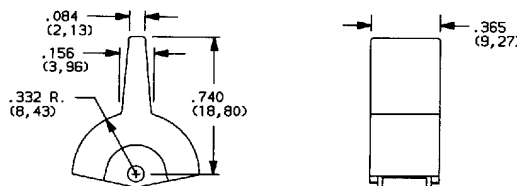
ACTUATOR COLOR

OPTION CODE	ACTUATOR COLOR
1	WHITE
2	BLACK (std.)
3	RED
4	ORANGE
5	YELLOW
6	GREEN
7	BLUE
8	BROWN
9	GRAY

Select actuator color from chart. Place option code in appropriate box of ordering format. Finish: matte. Custom actuator markings and legends available, consult factory. Internal o-ring actuator seal std. Actuators available separately, see catalog section H.

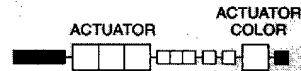
Available with A, A3, AW-AW5, AV2-AV5, V2-V91 terminations.

J2

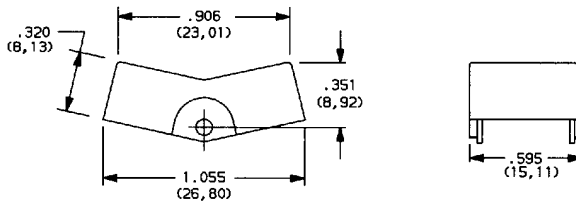
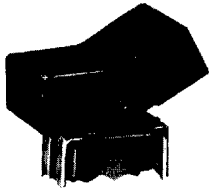


*Process sealed—withstands soldering and cleaning processes.

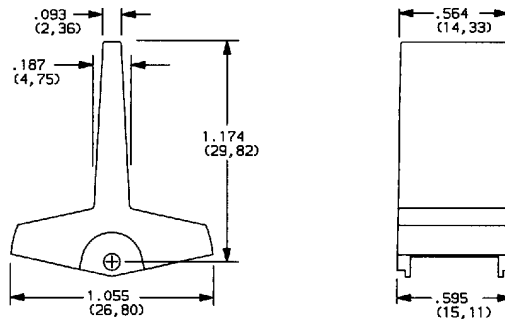
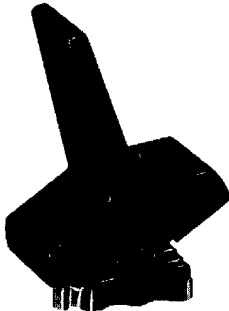
ACTUATORS—PC MOUNT



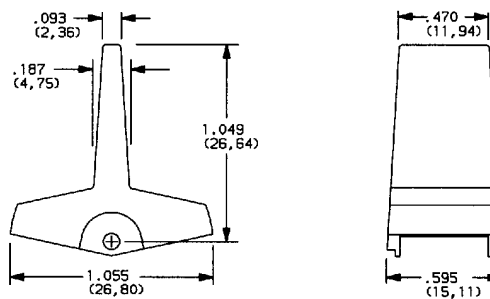
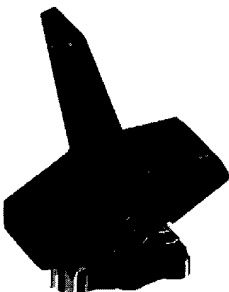
J3



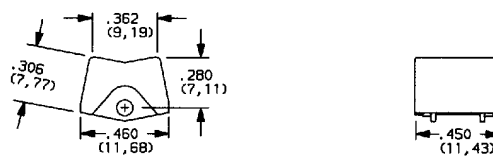
J4



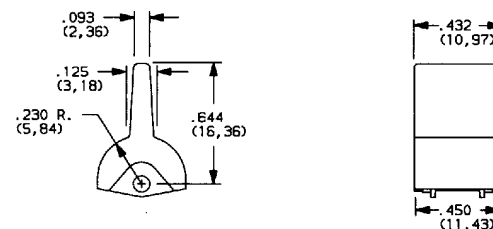
J5



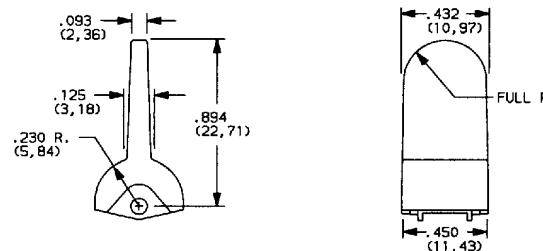
J50



J60



J90



ACTUATOR COLOR

OPTION CODE	ACTUATOR COLOR
1	WHITE
2	BLACK (std.)
3	RED
4	ORANGE
5	YELLOW
6	GREEN
7	BLUE
8	BROWN
9	GRAY

Select actuator color from chart. Place option code in appropriate box of ordering format. Finish: matte. Custom actuator markings and legends available, consult factory. Internal o-ring actuator seal std. Actuators are available separately, see catalog section H.

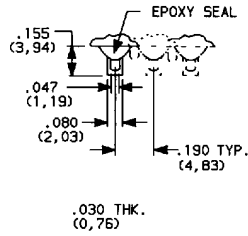
J3, J4, J5 actuators available with AV2-AV5, V2-V91 terminations. Some permissible actuator/termination combinations may lack clearance between actuator and PC board, and care must be exercised to accommodate this condition.

J50, J60, J90 actuators available with A (DP, 3P models only), A3, AW-AW5, AV2-AV5, V2-V91 terminations.

*Process sealed—withstands soldering and cleaning processes.

TERMINATIONS

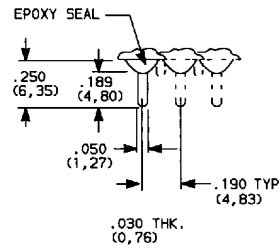
Z (STD.)



B contact material std.
Available actuators, see pages C-15 and C-16.
Not available with K, L, or M contact materials.

SPDT thru
3PDT

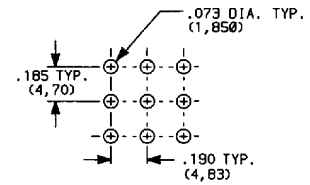
C



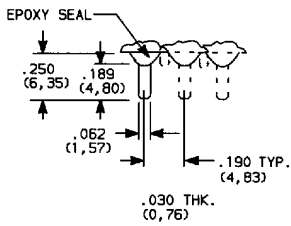
SPDT thru
3PDT

B contact material std.
Available actuators, see pages C-15 and C-16.

PC MOUNTING



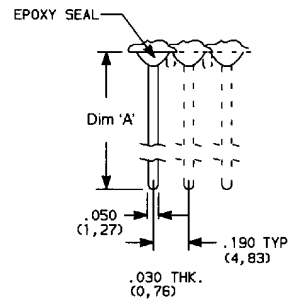
Z3 QUICK CONNECT



B contact material std.
Available actuators, see pages C-15 and C-16.
Not available with K, L, or M contact materials.
Mating quick connect available; order P/N 530100000.

SPDT thru
3PDT

W-W1-W3-W4-W5 WIRE WRAP

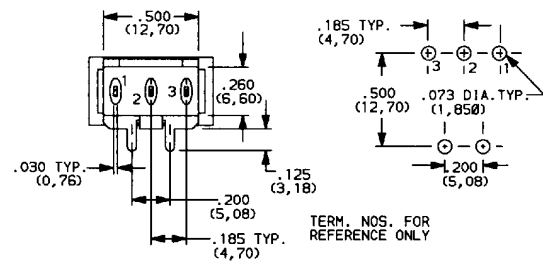
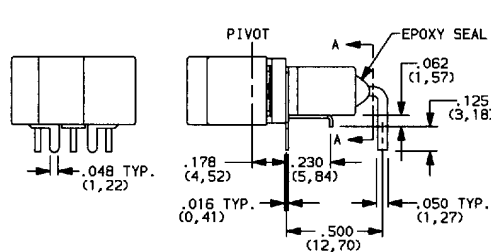


SPDT thru
3PDT

B contact material std.
Available actuators, see pages C-15 and C-16.

Option	DIM 'A'
W	.750 (19,05)
W1	.964 (24,48)
W3	.425 (10,80)
W4	1.062 (26,97)
W5	1.305 (33,15)

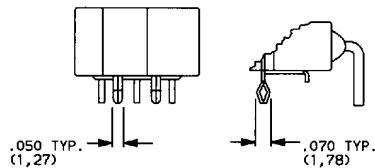
A



SECTION A-A

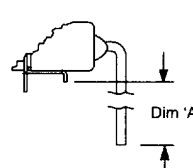
Part No. Shown: E101J1ABE2

A3 SNAP-IN



SNAP-IN DESIGN RETAINS SWITCH.

AW-AW1-AW3-AW4-AW5 EXTENDED



Option	DIM 'A'
AW	.44 (11,2)
AW1	.66 (16,8)
AW3	.14 (3,6)
AW4	.77 (19,6)
AW5	1.02 (25,9)



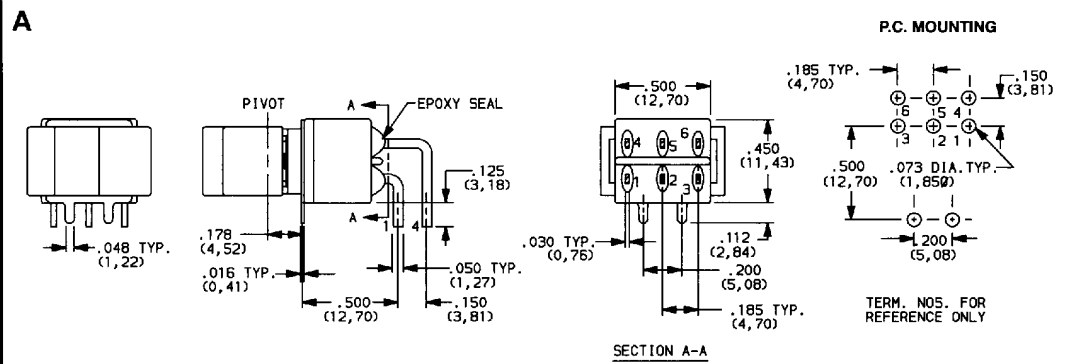
A

SPDT

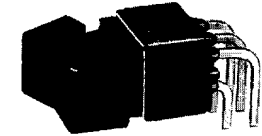
Term. bend radii and lead-in mfg. option.
Actuator shown in pos. 1.
B contact material std.
Note: PC pattern must clear switch support leg.
Available actuators, see pages C-16 and C-17.

*Process sealed—withstands soldering and cleaning processes.

TERMINATIONS



Part No. Shown: E201J1ABE2

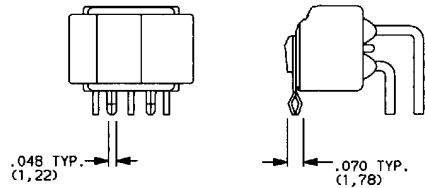


DPDT

A

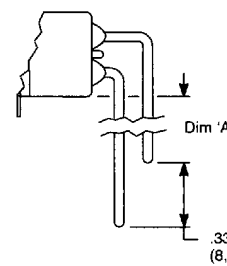
Term. bend radii and lead-in mfg. option.
Actuator shown in pos. 1.
B contact material std.
Available actuators, see pages C-16
and C-17.

A3 SNAP-IN

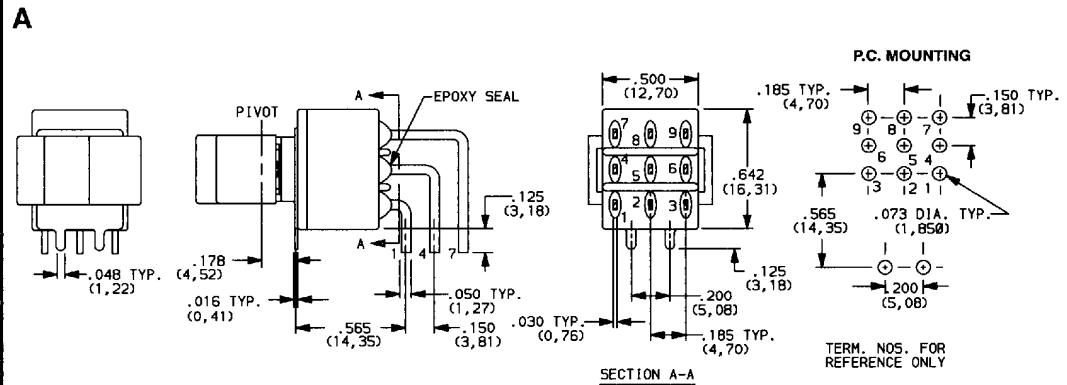


SNAP-IN DESIGN RETAINS SWITCH.

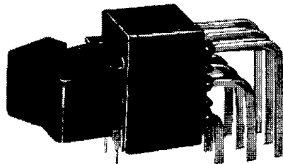
AW-AW1-AW4-AW5 EXTENDED



Option	DIM 'A'
AW	.21 (5,3)
AW1	.42 (10,7)
AW4	.52 (13,2)
AW5	.76 (19,3)



Part No. Shown: E301J1ABE2

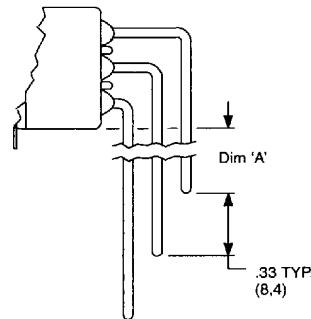


3PDT

A

Term. bend radii and lead-in mfg. option.
Actuator shown in pos. 1.
B contact material std.
Available actuators, see pages C-16
and C-17.

AW4-AW5 EXTENDED

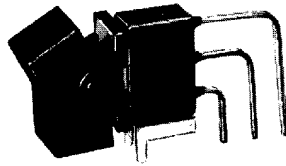
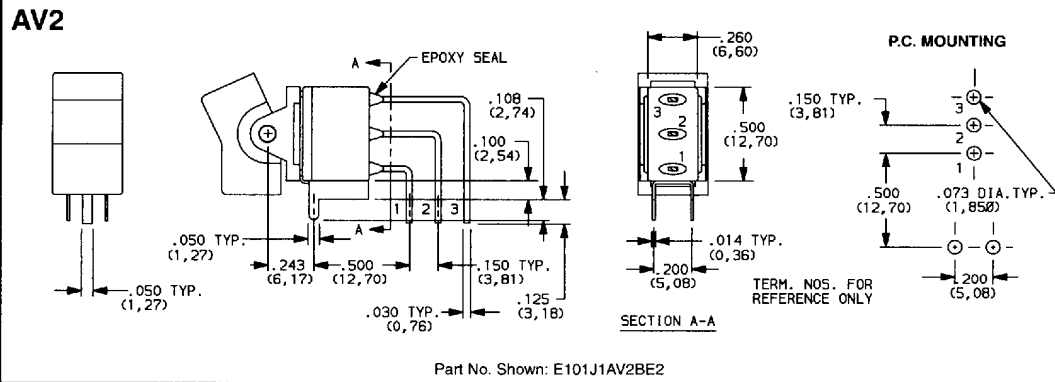


Option	DIM 'A'
AW4	.18 (4,6)
AW5	.42 (10,7)

C

*Process sealed—withstands soldering and cleaning processes.

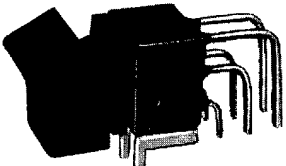
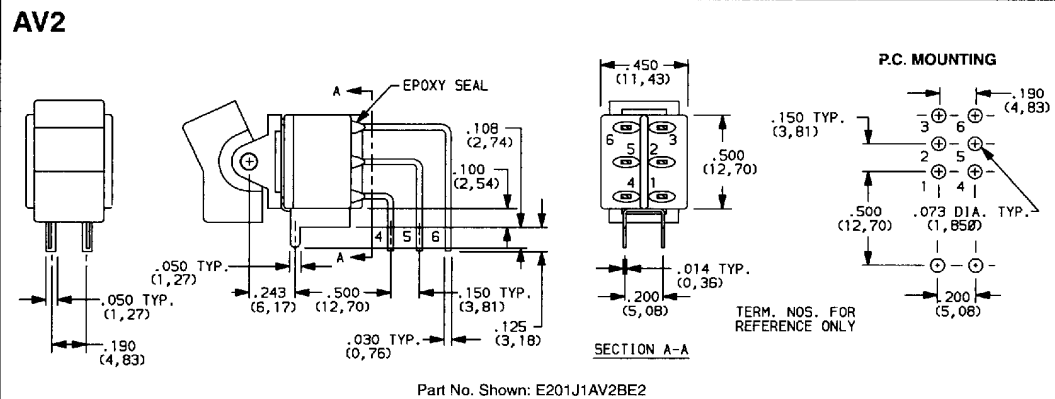
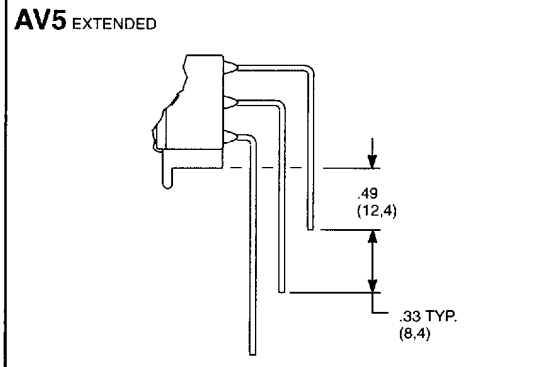
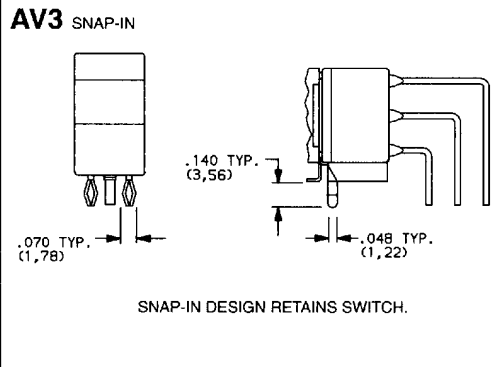
TERMINATIONS



AV2

SPDT

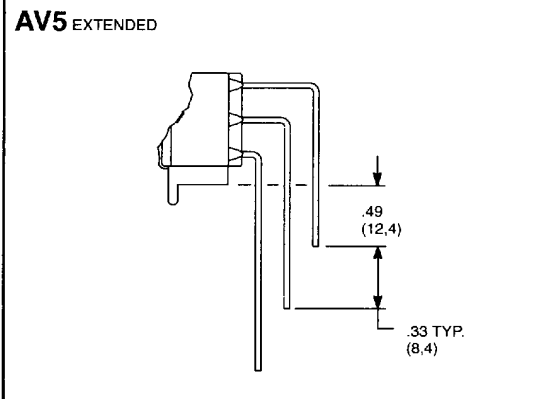
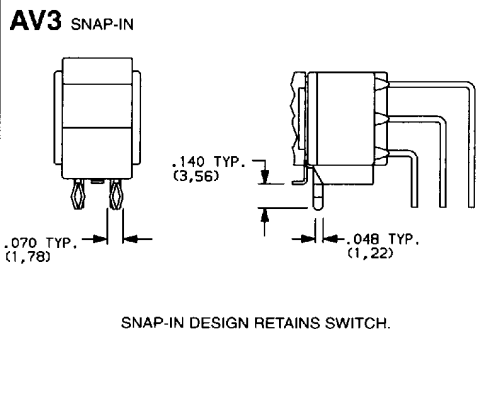
Term. bend radii and lead-in mfg. option.
Actuator shown in pos.1.
B contact material std.
Available actuators, see pages C-16
and C-17.



AV2

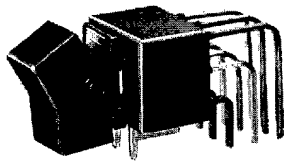
DPDT

Term. bend radii and lead-in mfg. option.
Actuator shown in pos.1.
B contact material std.
Available actuators, see pages C-16
and C-17.



*Process sealed-withstands soldering and cleaning processes.

TERMINATIONS

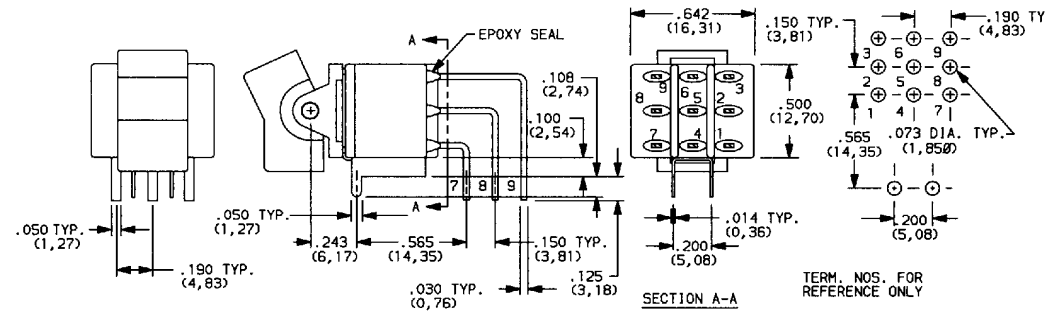


AV2

3PDT

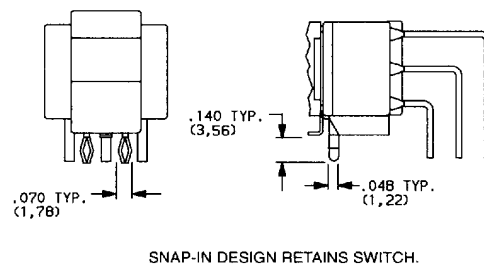
Term. bend radii and lead-in mfg. option.
Actuator shown in pos.1.
B contact material std.
Available actuators, see pages C-16
and C-17.

AV2

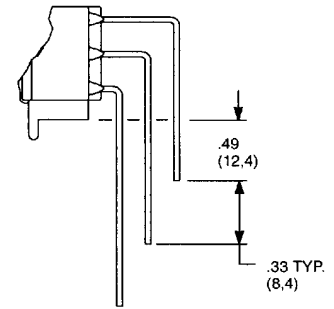


Part No. Shown: E301J1AV2BE2

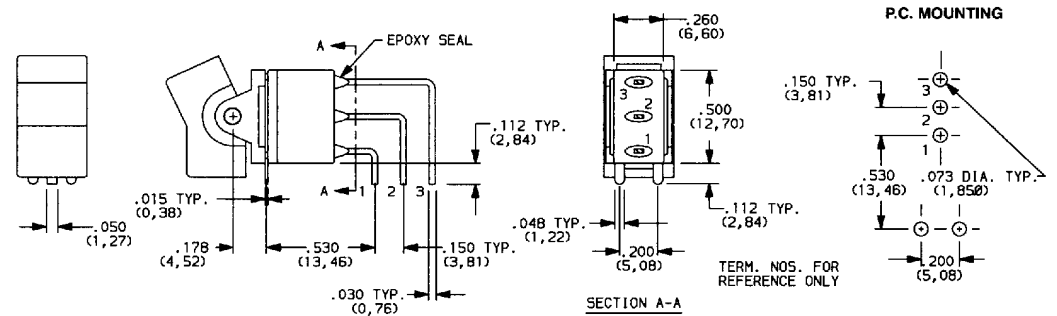
AV3 SNAP-IN



AV5 EXTENDED

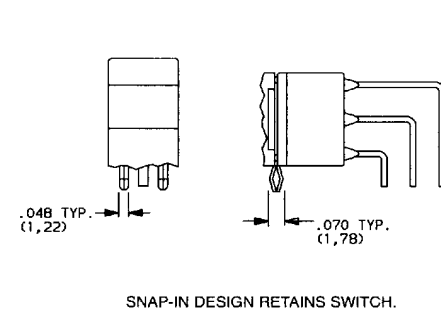


V5

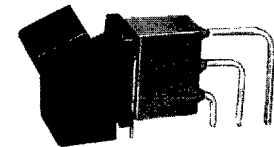
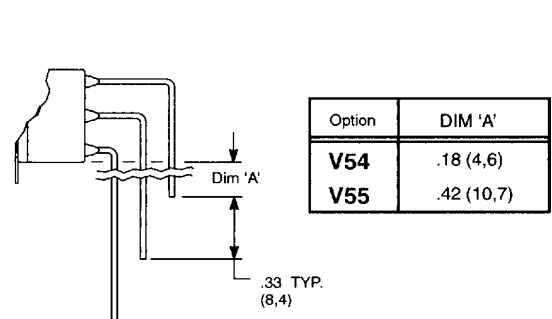


Part No. Shown: E101J1V5BE2

V51 SNAP-IN



V54-V55 EXTENDED



V5

SPDT

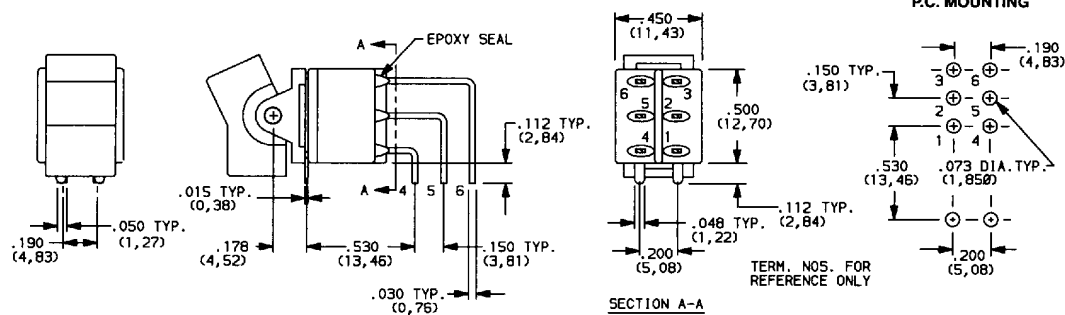
Term. bend radii and lead-in mfg. option.
Actuator shown in pos.1.
B contact material std.
Available actuators, see pages C-16
and C-17.

C

*Process sealed—withstands soldering and cleaning processes.

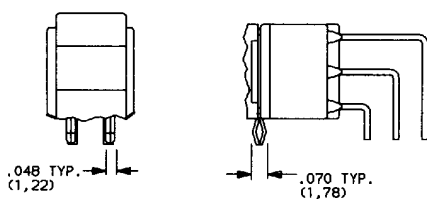
TERMINATIONS

V5

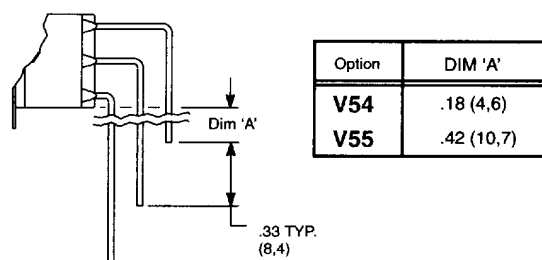


Part No. Shown: E201J1V5BE2

V51 SNAP-IN



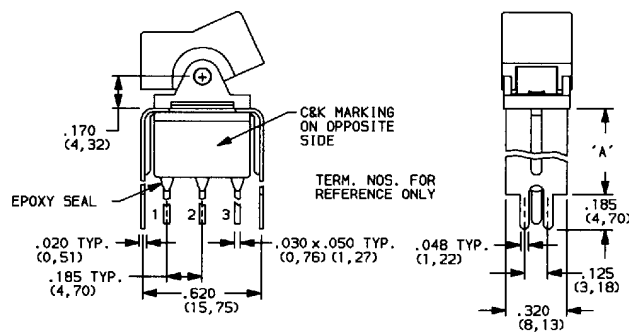
V54-V55 EXTENDED



DPDT

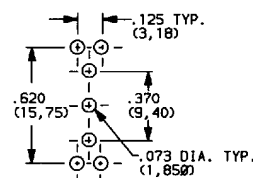
Term. bend radii and lead-in mfg. option. Actuator shown in pos. 1. B contact material std. Available actuators, see pages C-16 and C-17.

V3-V4-V9

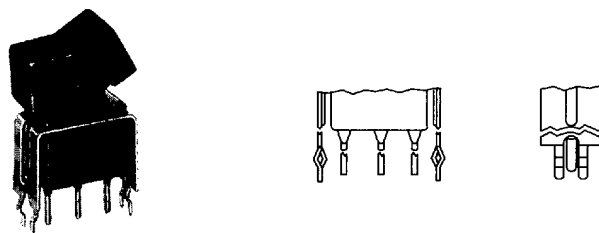


Part No. Shown: E101J1V__BE2

P.C. MOUNTING



V31-V41-V91 SNAP-IN



V31

SNAP-IN DESIGN RETAINS SWITCH.

Option	DIM 'A'
V3, V31	.460 (11,68)
V4, V41	.630 (16,00)
V9, V91	1.150 (29,21)

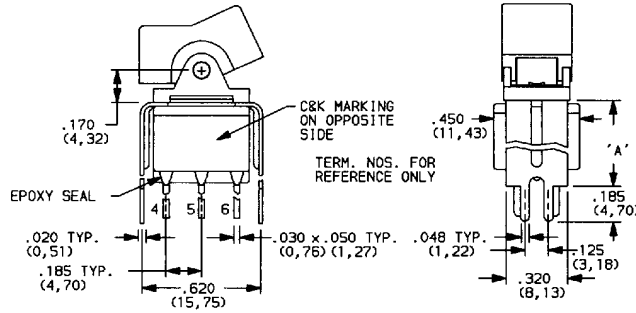
SPDT

Actuator shown in pos. 1. B contact material std. Available actuators, see pages C-16 and C-17.

*Process sealed-withstands soldering and cleaning processes.

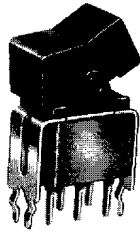
TERMINATIONS

V3-V4-V9

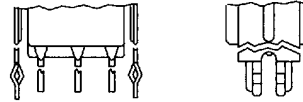


Part No. Shown: E201J1V_BE2

V31-V41-V91 SNAP-IN

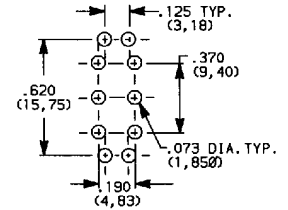


V31

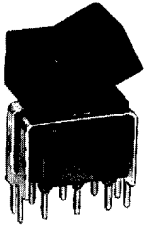


SNAP-IN DESIGN RETAINS SWITCH.

P.C. MOUNTING



Option	DIM 'A'
V3, V31	.460 (11,68)
V4, V41	.630 (16,00)
V9, V91	1.150 (29,21)

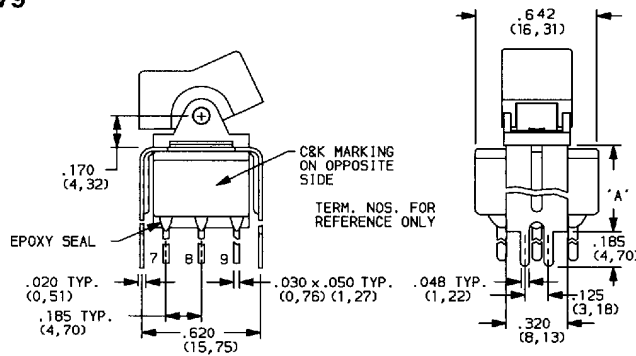


V3

DPDT

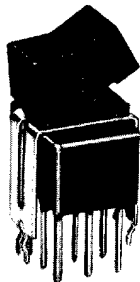
Actuator shown in pos.1.
B contact material std.
Available actuators, see pages C-16
and C-17.

V4-V9

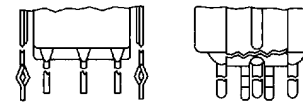


Part No. Shown: E301J1V_BE2

V41-V91 SNAP-IN

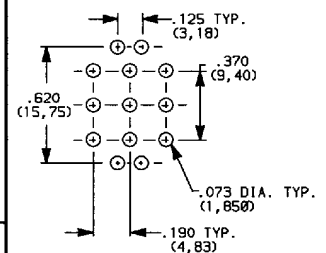


V41

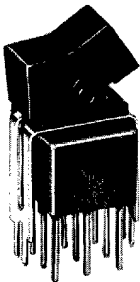


SNAP-IN DESIGN RETAINS SWITCH.

P.C. MOUNTING



Option	DIM 'A'
V4, V41	.630 (16,00)
V9, V91	1.150 (29,21)



V4

3PDT

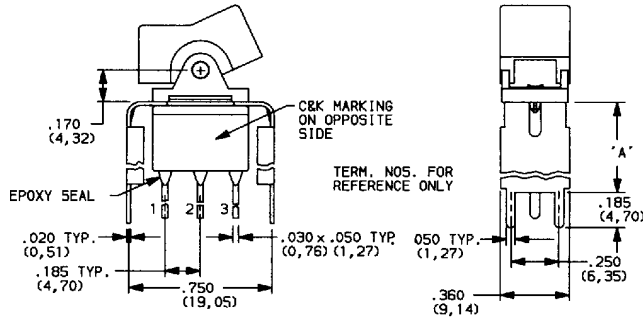
Actuator shown in pos.1.
B contact material std.
Available actuators, see pages C-16
and C-17.

C

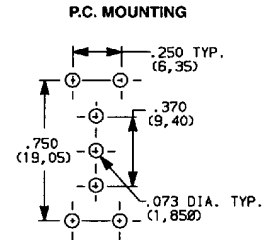
*Process sealed—withstands soldering and cleaning processes.

TERMINATIONS

V2-V6-V7-V8

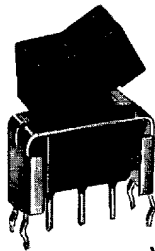


Part No. Shown: E101J1V__BE2

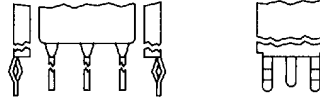


Option	DIM 'A'
V2, V21	.555 (14,10)
V6, V61	.460 (11,68)
V7, V71	.630 (16,00)
V8, V81	.953 (24,21)

V21-V61-V71-V81 SNAP-IN



V61

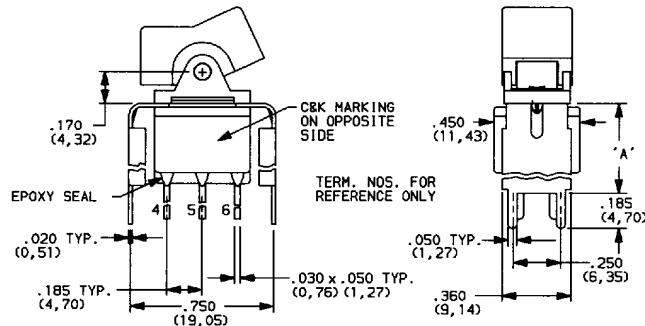


SNAP-IN DESIGN RETAINS SWITCH.

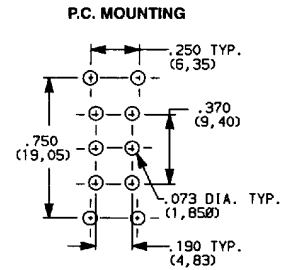
SPDT

Actuator shown in pos.1.
B contact material std.
Available actuators, see pages C-16
and C-17.

V2-V6-V7-V8



Part No. Shown: E201J1V__BE2

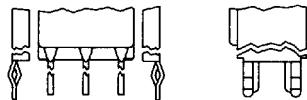


Option	DIM 'A'
V2, V21	.555 (14,10)
V6, V61	.460 (11,68)
V7, V71	.630 (16,00)
V8, V81	.953 (24,21)

V21-V61-V71-V81 SNAP-IN



V61



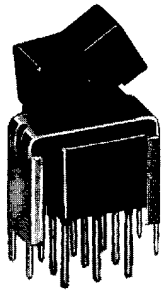
SNAP-IN DESIGN RETAINS SWITCH.

DPDT

Actuator shown in pos.1.
B contact material std.
Available actuators, see pages C-16
and C-17.

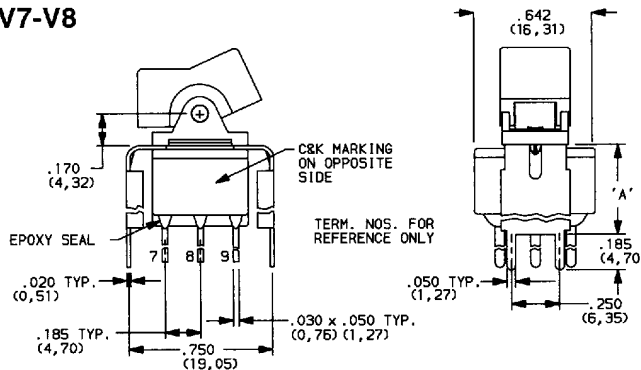
*Process sealed—withstands soldering and cleaning processes.

TERMINATIONS



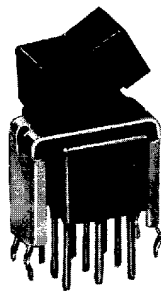
V7

V2-V7-V8

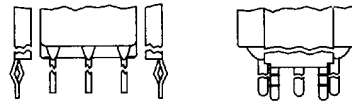


Part No. Shown: E301J1V__BE2

V21-V71-V81 SNAP-IN

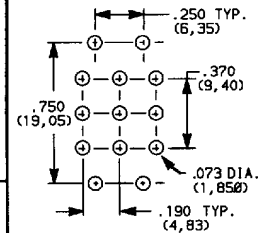


V71



SNAP-IN DESIGN RETAINS SWITCH.

PC MOUNTING



Option	DIM 'A'
V2, V21	.555 (14,10)
V7, V71	.630 (16,00)
V8, V81	.953 (24,21)

3PDT

Actuator shown in pos.1.
B contact material std.
Available actuators, see pages C-16 and C-17.

CONTACT MATERIAL

OPTION CODE	CONTACT MATERIAL	TERMINAL PLATING	RATINGS	
B K	GOLD ¹	GOLD ¹	LOW LEVEL/DRY CIRCUIT	0.4 VA MAX. @ 20 V AC OR DC MAX.
		TIN-LEAD ⁶		
Q M	SILVER ^{4,5}	SILVER ⁵	POWER	E1XX & E2XX MODELS: 7.5 AMPS @ 125 V AC OR 28 V DC; 3 AMPS @ 250 V AC. E3XX MODELS: 5 AMPS @ 125 V AC OR 28 V DC; 2 AMPS @ 250 V AC.
		TIN-LEAD ⁶		
G L	GOLD OVER SILVER ^{2,3}	GOLD ³	LOW LEVEL/DRY CIRCUIT OR POWER	E1XX AND E2XX MODELS: 0.4 VA MAX @ 20 V AC OR DC MAX. OR 7.5 AMPS @ 125 V AC OR 28 V DC; 3 AMPS @ 250 V AC. E3XX MODELS: 0.4 VA MAX. @ 20 V AC OR DC MAX. OR 5 AMPS @ 125 V AC OR 28 V DC; 2 AMPS @ 250 V AC.
		TIN-LEAD ⁶		

CONTACT MATERIAL / APPLICATION RECOMMENDATIONS — SEE CHART, PAGE X.

- 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 materials.
See pages B-20 and VIII.

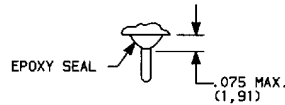
B contact material standard with all terminations.
K, L, M contact materials not available with Z, Z3 terminations.

C


*Process sealed—withstands soldering and cleaning processes.

SEAL 

E (STD.)

**HOW TO ORDER**

All available E SERIES SEALED ANTI-STATIC ROCKER AND LEVER HANDLE SWITCH options are listed on page C-12, and are described on pages C-13 thru C-26. Switches with standard options are shown on page C-13. When selecting options and building a part number, some ordering format boxes may not be filled. Dashes, hyphens or spaces in the part number are not significant, and are shown for clarity only.

All models are process sealed to withstand machine soldering temperatures and pressure wash cleaning methods.  models available, see page C-14.

Hardware: two each—mounting screws, nuts, lockwashers and standoffs for 1/8 in. thick panel are supplied standard on switches with panel mounting bracket. Hardware for other panel thicknesses also available. Actuators, frames and mounting hardware are available separately, see catalog section H.

SPECIFICATIONS

CONTACT RATING: 0.4 VA max. @ 20 V AC or DC max. (B contact material).

ELECTRICAL LIFE: E1XX and E2XX models: 40,000 make-and-break cycles at full load. E3XX models: 30,000 cycles.

CONTACT RESISTANCE: Below 10 milliohms typ. initial @ 2-4 V DC, 100 mA, for both silver and gold plated contacts.

INSULATION RESISTANCE: 10^9 ohms min.

ELECTROSTATIC DISCHARGE (ESD) RESISTANCE: All actuator options: 15,000 V DC min. @ sea level, actuator to terminals.

DIELECTRIC STRENGTH: 1,000 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 hr. steam aging).

MATERIALS

CASE & BUSHING: Glass filled nylon 6/6, flame retardant, heat stabilized (UL 94V-0).

ACTUATOR: Nylon, black standard Internal o-ring seal standard with all actuators.

FRAME: Spring steel, black standard.

SWITCH SUPPORT: Brass or steel, tin plated.

ACTUATOR PIVOT & MOUNTING BRACKET: Nylon.

ACTUATOR PIVOT RETAINER: Stainless steel.

CONTACTS & TERMINALS: Copper alloy, with gold plate over nickel plate (B contact material).

TERMINAL SEAL: Epoxy.

HARDWARE: Nut, Screw, & Lockwasher—Stainless steel.
Standoff—Nylon standard Aluminum available, consult factory.

NOTE: Specifications and materials listed above are general specifications. Specifications available for specific and custom switches, consult factory.