

## Features/Benefits

- Process sealed, withstands soldering and cleaning
- Long life contact design
- Snap-fitting plunger available, accepts a variety of caps
- RoHS compliant models available

## Typical Applications

- Instrumentation
- Telecommunications and networking equipment
- Computers and peripherals



## **Specifications**

CONTACT RATING: Q contact material: 4 AMPS @ 125 V AC or 28 V DC. See page A-50 for additional ratings.

ELECTRICAL LIFE: 40,000 make-and-break cycles at full load.

CONTACT RESISTANCE: Below 20 m $\Omega$  typ. initial @

2-4 V DC, 100 mA, for both silver and gold plated contacts.

INSULATION RESISTANCE:  $10^9\Omega$  min.

DIELECTRIC STRENGTH: 1000 Vrms min. @ sea level.

OPERATING TEMPERATURE: -30°C to 75°C.

CAP INSTALLATION FORCE: 10 lbs. max. permissible.

SOLDERABILITY: Per MIL-STD-202F method 208D, or

EIA RS-186E method 9 (1 hour steam aging).

NOTE: Any models supplied with P, Q, B or G contact material are RoHS compliant.

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

### **Materials**

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

PLUNGER: Glass filled nylon or glass filled polyester (PBT) (UL 94V-0), with internal o-ring seal standard.

SWITCH SUPPORT: Brass or steel, matte-tin plated.

SWITCH SUPPORT RETAINER: Stainless steel.

END CONTACTS: Q contact material: Coin silver, silver plated. See A-50 for additional ratings.

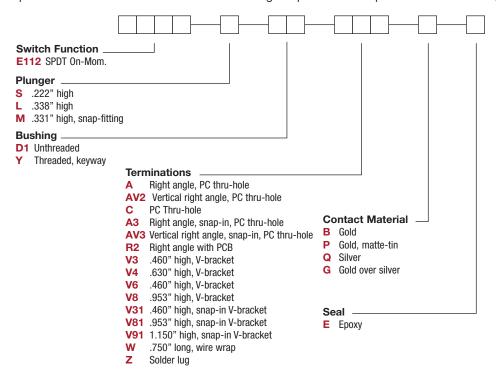
CENTER CONTACTS & ALL TERMINALS: Q contact material: Copper alloy, silver plated. See page A-50 for additional ratings.

TERMINAL SEAL: Epoxy.

HARDWARE: Nut & locking ring-Brass, nickel plated. Lockwasher-Steel, nickel plated.

### **Build-A-Switch**

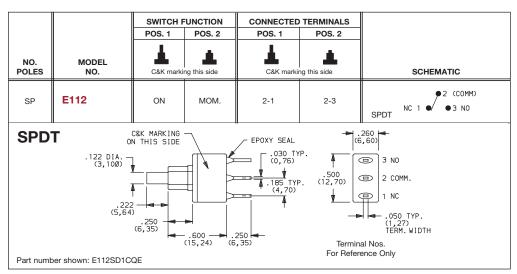
To order, simply select desired option from each category and place in the appropriate box. Available options are shown and described on pages A-47 thru A-51. For additional options not shown in catalog, consult Customer Service Center. All models are process sealed to withstand machine soldering temperatures and pressure wash cleaning methods.



A-46



#### **SWITCH FUNCTION**

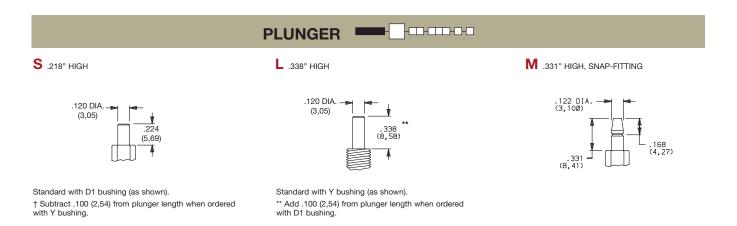


MOM. = Momentary

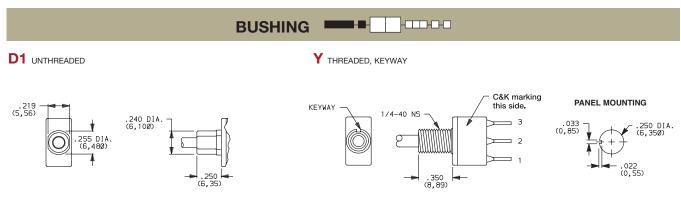
All models



with all options when ordered with G or Q contact material.



NOTE: Caps available for all plunger options, see pages A-50 and A-51.



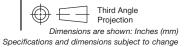
S plunger standard with D1 bushing.

L plunger standard with Y bushing. Available only with C, Z terminations. Hardware: One dress nut part number 299D01201, one hex nut and lockwasher supplied standard. Withstands 4 in./lbs. without distortion.



NOTE: Internal o-ring actuator seal standard for all bushing options.

A-47

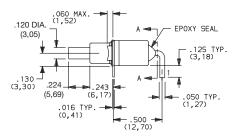


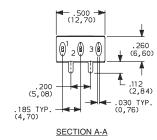
#### **TERMINATIONS** PC THRU-HOLE SOLDER LUG WIRE WRAP PC MOUNTING EPOXY SEAL EPOXY SEAL .073 DIA. (1,850) TYP .155 .250 (6,35) .189 .750 .030 THK. (19,05).030 THK. .050 SPDT **SPDT SPDT** Not available with P contact materials.

RIGHT ANGLE, PC THRU-HOLE







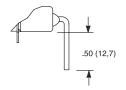


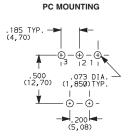
RIGHT ANGLE, SNAP-IN, PC THRU-HOLE

RIGHT ANGLE, EXTENDED, PC THRU-HOLE







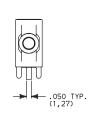


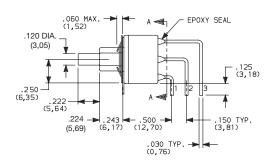
NOTE: Terminal bend radii and lead-in manufacturing option. Available with D1 bushing only.

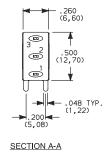
AV2 VERTICAL RIGHT ANGLE, PC THRU-HOLE, .150" PITCH



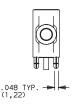




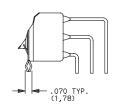




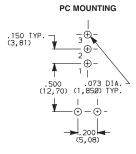
AV3 VERTICAL RIGHT ANGLE, SNAP-IN, PC THRU-HOLE,



NOTE: Terminal bend radii and lead-in manufacturing option. Available with D1 bushing only.



A-48

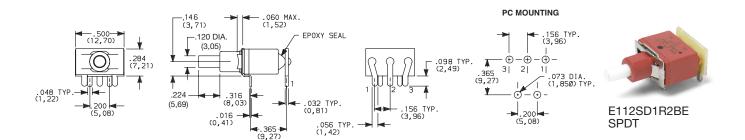






## TERMINATIONS ---

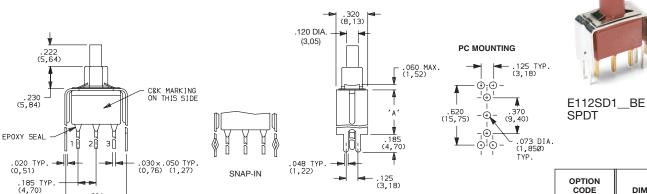
RIGHT ANGLE WITH PCB



NOTE: Available with D1 bushing and B contact material only.

V3, V4 VERTICAL MOUNT, V-BRACKET

V31, V91 VERTICAL MOUNT, V-BRACKET, SNAP-IN

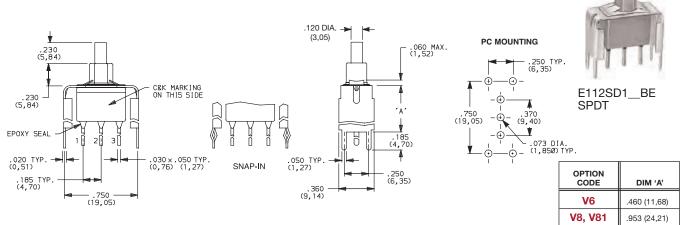


OPTION CODE	DIM 'A'	
V3, V31	.460 (11,68)	
<b>V</b> 4	.630 (16,00)	
V91	1.150 (29,21)	

NOTE: Available with D1 bushing only.

VERTICAL MOUNT, V-BRACKET

VERTICAL MOUNT, V-BRACKET, SNAP-IN



NOTE: Available with D1 bushing only.





## CONTACT MATERIAL

OPTION CODE	CONTACT MATERIAL	TERMINAL PLATING	RATINGS	
В	GOLD <sup>1</sup>	GOLD <sup>1</sup>		
Р	GOLD '	MATTE-TIN <sup>6</sup>	LOW LEVEL/DRY CIRCUIT	0.4 VA MAX. @ 20 V AC OR DC MAX.
Q	SILVER 4,5	SILVER 5	POWER	4 AMPS @ 125 V AC 0R 28 V DC.
G	GOLD OVER SILVER 2,3	GOLD <sup>3</sup>	LOW LEVEL/DRY CIRCUIT OR POWER	0.4 VA MAX. @ 20 V AC OR DC MAX. OR 4 AMPS @ 125 V AC 0R 28 V DC.

<sup>\*</sup> Note: See Technical Data section of this catalog for RoHS compliant and compatible definitions and specifications.

- <sup>1</sup> CONTACTS & TERMINALS: Copper alloy, with gold plate over nickel plate.
- $^{2}\ \mbox{END}$  CONTACTS: Coin silver, with gold plate over nickel plate.
- <sup>3</sup> CENTER CONTACTS & ALL TERMINALS: Coin silver, with gold plate over nickel plate.
- <sup>4</sup> END CONTACTS: Coin silver, silver plated.
- $^{\rm 5}$  CENTER CONTACTS & ALL TERMINALS: Copper alloy, silver plated.
- <sup>6</sup> TERMINALS: Copper alloy, with matte-tin over nickel plate.

NOTE: Any models supplied with P, Q, B or G contact material are RoHS compliant.

All models cases with all options when ordered with G or Q contact material.

B contact material standard with all terminations except C, Z.

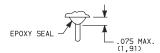
B contact material must be ordered with R2 terminations.

Q contact material standard with C, Z terminations.

P contact materials not available with Z terminations.



EPOXY SEAL



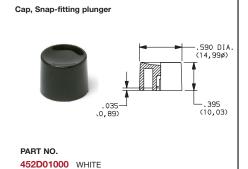
#### **AVAILABLE HARDWARE** Сар Cap Cap .310 DIA. .375 DIA. .200 DIA. (7,87ø) (9,53ø) .138 (5,08ø) (3,05) .250 (6,35).250-- 120 155 (3,94) PART NO. PART NO. PART NO. 708901000 WHITE 752701000 WHITE 801801000 WHITE 708902000 BLACK 801802000 BLACK 752702000 BLACK 708903000 RED 752703000 RED 801803000 RED Material: Nylon Material: Nylon Material: Nylon Finish: Gloss Finish: Gloss Finish: Gloss

NOTE: Additional nuts, locking rings and lockwashers available separately, see section "Technical Data and Additional Hardware". Other cap colors available, consult Customer Service Center.





## **AVAILABLE HARDWARE**

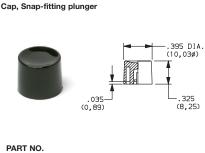


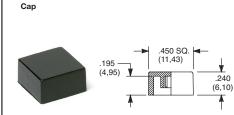
452D02000 BLACK

452D03000 RED

Material: Nylon

Finish: Gloss





PART NO. 484601000 484602000 484603000 RED

Finish: Gloss

WHITE BLACK Material: Nylon

798202263 **798203000** RED Material: Nylon

WHITE

BLACK

Finish: Matte

PART NO.

798201000

NOTE: Additional nuts, locking rings and lockwashers available separately, see section "Technical Data and Additional Hardware". Other cap colors available, consult Customer Service Center.

Frames snap into panel opening and are independent from switch mounting. Accurate positioning of the PC mounted switch relative to the panel opening is necessary to provide proper clearance between actuator and frame. Available in two basic styles and four panel thicknesses .047-.125 in. Material: Nylon. Finish: Matte.

894101000

894102000

894103000

Finish: Gloss

Material: Nylon

WHITE

BLACK

# TYPICAL APPLICATION

.090" (2,29) PANEL THK.

.125" (3,18) PANEL THK.

PART NO.

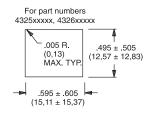
432702263

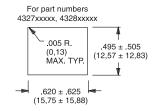
432802263 BLACK





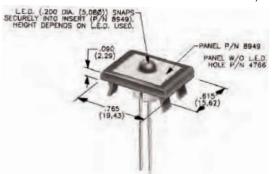
## PANEL MOUNTING





**Panel Inserts** 

Above frames (part nos. 432XXXXXX) are also available with insert which accepts LED for indicator light assembly. Order insert separately from frame. Blank insert panel (without hole for LED) also available. LED not included.



PANEL INSERT WITH HOLE FOR LED BLANK PANEL INSERT WITHOUT HOLE FOR LED

PART NO.

PART NO.

894902000

476602000 BLACK

Special colors, custom markings available, consult Customer Service Center.





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# **Mouser Electronics**

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452D07000 452D05000 452D06000