



A

Pushbutton

# 8500 Series Subminiature Pushbutton Switches



## Features/Benefits

- Pre-travel or over-travel models available
- Ratings up to 3 AMPS
- Reliable contact design
- RoHS compliant

## Typical Applications

- Detection
- Telecommunications and networking equipment
- Computers and peripherals



Models Available

## Specifications

CONTACT RATING: Q contact material (853X Models): 1 AMP @ 120 V AC or 28 V DC; (855X Models): 3 AMPS @ 120 V AC or 28 V DC. See page A-65 for additional ratings.

ELECTRICAL LIFE:  
853X MODELS: 250,000 actuations at full load.  
855X MODELS: 10,000 actuations at full load.

CONTACT RESISTANCE: Below 30 mΩ typ. initial @ 2-4 V DC, 100 mA, for both silver and gold plated contacts.

INSULATION RESISTANCE: 10<sup>9</sup>Ω min.

DIELECTRIC STRENGTH: 1,000 Vrms min. @ sea level.

OPERATING TEMPERATURE: -30°C to 65°C.

**NOTE:** Any models supplied with 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: Glass filled phenolic or diallyl phthalate (DAP) (UL 94V-0).

PLUNGER: Phenolic or glass filled polyester, black standard (UL94V-0).

CAP & FRAME: Nylon, black, standard.

BUSHING: Brass, nickel plated.

CONTACTS: Q contact material: Coin silver, silver plated. See page A-65 for additional contact materials.

TERMINALS: Q contact material: Copper alloy, silver plated. See page A-65 for additional contact materials.

TERMINAL SEAL: Epoxy.

HARDWARE: Nut: Brass, nickel plated; Lockwasher: Steel, bright 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-63 thru A-66. For additional options not shown in catalog, consult Customer Service Center. All models have epoxy terminal seal and are compatible with all "bottom-wash" PCB cleaning methods.

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<b>Switch Function</b> <b>8531</b> SPST Off-Mom. 1 Amp <b>8532</b> SPST Off-Mom. 1 Amp <b>8533</b> SPST On-Mom. 1 Amp <b>8534</b> SPST On-Mom. 1 Amp <b>8551</b> SPST Off-Mom. 3 Amps <b>8552</b> SPST Off-Mom. 3 Amps	<b>Actuator or Plunger</b> <b>M</b> .150" high <b>J81</b> Snap-in with frame <b>J82</b> Snap-in with frame for LED <b>S</b> .210" high <b>T</b> 15/32 bushing <b>T1</b> 15/32 bushing with frame (8532 and 8534 only)	<b>Terminations</b> <b>Z</b> Solder lug <b>AV</b> Right angle, PC thru-hole <b>C</b> PC Thru-hole	<b>Contact Material</b> <b>Q</b> Silver <b>B</b> Gold <b>G</b> Gold over silver	<b>Seal</b> <b>E</b> Epoxy <b>D</b> No epoxy seal	<b>Cap or Plunger Color</b> <b>2</b> Black <b>1</b> White <b>3</b> Red <b>9</b> Gray	<b>Frame Color</b> <b>2</b> Black <b>NONE</b> Models without frame



Dimensions are shown: Inches (mm)  
Specifications and dimensions subject to change

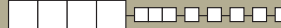
# 8500 Series Subminiature Pushbutton Switches



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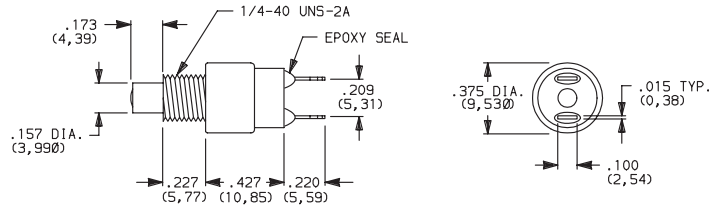
Pushbutton

## SWITCH FUNCTION



NO. POLES	MODEL NO.	RATING	SWITCH FUNCTION		TOTAL TRAVEL	ACTUATION FORCE	SCHEMATIC
			POS. 1	POS. 2			
SP	<b>8531</b>	1 AMP	OFF	MOM.	.095 (2,41) TYP. with overtravel .042 (1,07) TYP.	7.7 oz (220g) TYP.	N.O. with overtravel
	<b>8551</b>	3 AMPS					

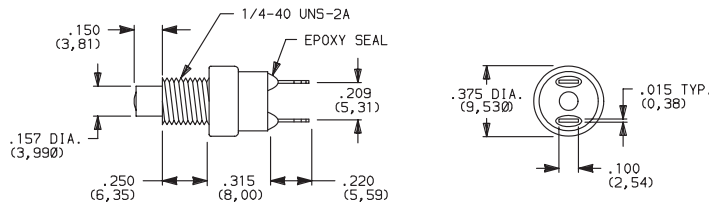
### SPST



Part number shown: 8531MZO2

SP	<b>8532</b>	1 AMP	OFF	MOM.	.050 (1,27) TYP.	6 oz (170g) TYP.	N.O.
	<b>8552</b>	3 AMPS					

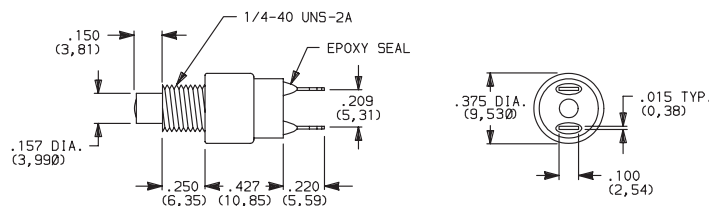
### SPST



Part number shown: 8532MZO2


SP	<b>8533</b>	1 AMP	ON	MOM.	.080 (2,03) TYP. with pretravel .057 (1,45) TYP.	11.5 oz (456 g) TYP.	N.C. with pretravel
	<b>8534</b>	1 AMP	ON	MOM.	.032 (0,81) TYP. with overtravel .028 (0,71) TYP.	10.3 oz (282g) TYP.	N.C. with overtravel

### SPST



Part number shown: 8533MZO2

MOM. = Momentary

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



Third Angle  
Projection

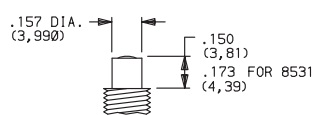
Dimensions are shown: Inches (mm)  
Specifications and dimensions subject to change

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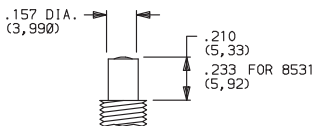
# 8500 Series Subminiature Pushbutton Switches

## PLUNGER

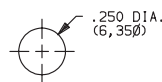
### M .150" HIGH PLUNGER



### S .210" HIGH PLUNGER



### PANEL MOUNTING

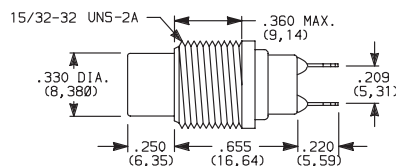


OPTION CODE	PLUNGER COLOR
2	BLACK
3	RED

**NOTE:** One mounting nut and lockwasher supplied with all actuators (except T actuator: two nuts supplied).

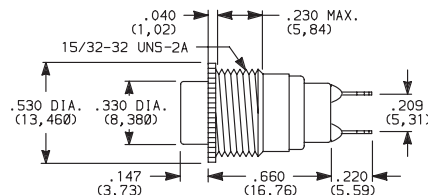
## ACTUATOR

### T 15/32 BUSHING



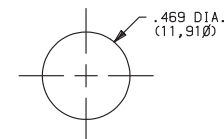
**NOTE:** No frame color choice required.

### T1 15/32 BUSHING WITH FRAME



**NOTE:** No frame color choice required.  
Available with 8532 and 8534 models only.

### PANEL MOUNTING



OPTION CODE	CAP COLOR
2	BLACK
1	WHITE
3	RED
9	GRAY

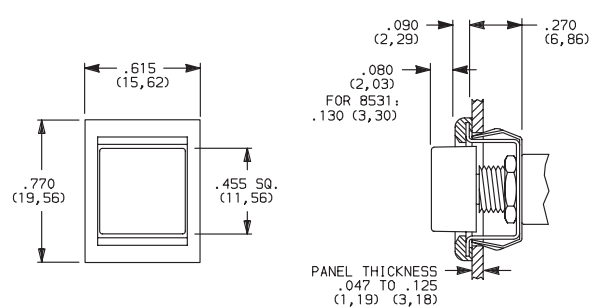
Cap Finish: gloss. Other colors available, consult Customer Service Center.

One mounting nut and lockwasher supplied with all actuators (except T actuator: two nuts supplied).

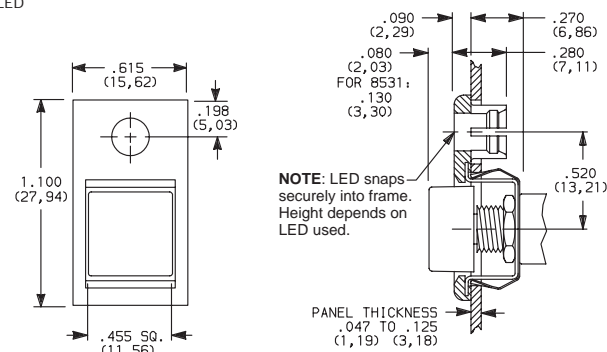
**NOTE:** Caps available for plunger options, see page A-65.

## ACTUATOR—SNAP-IN FRONT MOUNT

### J81 SNAP-IN WITH FRAME



### J82 SNAP-IN WITH FRAME FOR LED



**NOTE:** LED snaps securely into frame. Height depends on LED used.

**LED not included.**  
For LED information, see page A-66.

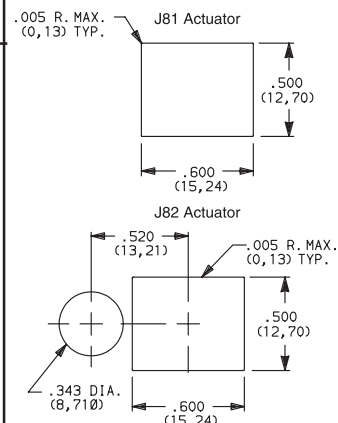
OPTION CODE	CAP AND FRAME COLOR
2	BLACK

Cap and Frame Finish: matte. Other colors available, consult Customer Service Center.

One mounting nut and lockwasher supplied with all actuators.

**NOTE:** Caps & frames available separately, see pages A-65 and A-66.

### PANEL MOUNTING



Dimensions are shown: Inches (mm)  
Specifications and dimensions subject to change

**C&K**

# 8500 Series Subminiature Pushbutton Switches



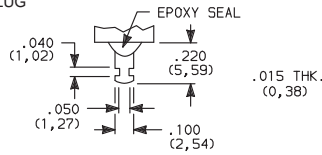
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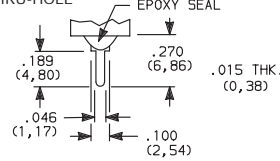
## TERMINATIONS



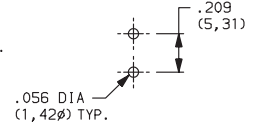
### Z SOLDER LUG



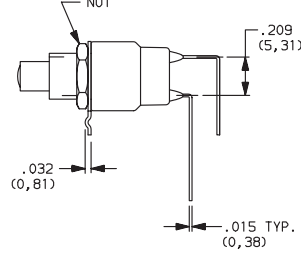
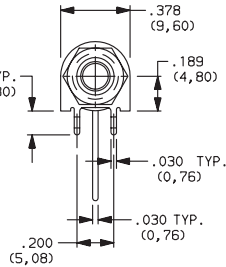
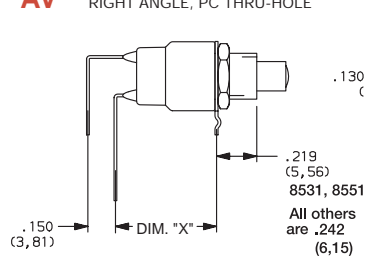
### C PC THRU-HOLE



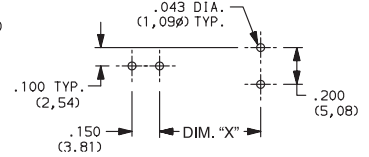
### PC MOUNTING



### AV RIGHT ANGLE, PC THRU-HOLE



### PC MOUNTING



MODEL NO.	DIM "X"
8531, 8533, 8551	0.550
8532, 8534, 8552	0.438

NOTE: Available with M or S plunger models only

## CONTACT MATERIAL



OPTION CODE	RoHS COMPLIANT *	RoHS COMPATIBLE *	TERMINAL PLATING	CONTACT MATERIAL	RATINGS	
B	YES	YES	GOLD <sup>1</sup>	GOLD	LOW LEVEL/DRY CIRCUIT	0.4 VA MAX. @ 20 V AC OR DC MAX.
Q	YES	YES	SILVER <sup>4</sup>	SILVER <sup>5</sup>	POWER	853X MODELS: 1 AMP @ 120 V AC OR 28 V DC. 855X MODELS: 3 AMPS @ 120 V AC OR 28 V DC.
G	YES	YES	GOLD OVER SILVER <sup>2</sup>	GOLD <sup>3</sup>	LOW LEVEL/DRY CIRCUIT OR POWER	0.4 V MAX @20 V AC OR DC MAX. OR 853X MODELS: 1 AMP @ 120 V AC OR 28 V DC. 855X MODELS: 3 AMPS @120 V AC OR 28 V DC.

\* 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.

<sup>2</sup> CONTACTS: Coin silver, with gold plate over nickel plate.

<sup>3</sup> TERMINALS: Copper alloy, with gold plate over nickel plate.

<sup>4</sup> CONTACTS: Coin silver, silver plated.

<sup>5</sup> TERMINALS: Copper alloy, silver plated.

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

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

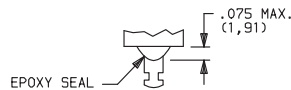
Q contact material standard with C, Z terminations.

8551 & 8552 available with Q contact material only.

## SEAL

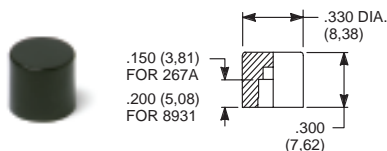


### E EPOXY SEAL



## REPLACEMENT HARDWARE

### Cap for 0.157" dia. plungers



#### PART NO.

267A01000 WHITE  
267A02000 BLACK  
267A03000 RED  
267A09000 GRAY

85X2T, 8534T models only

Material: Nylon  
Finish: Gloss

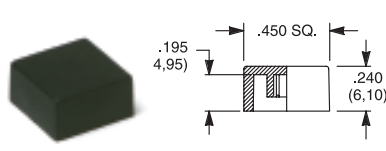
#### PART NO.

893101000 WHITE  
893102000 BLACK  
893103000 RED  
893109000 GRAY

85X1T, 8532T1, 8533T, 8534T1 models only

Material: Nylon  
Finish: Gloss

### Cap, J80, J81 & J 82 options only



#### PART NO.

448901000 WHITE  
448902000 BLACK  
448903000 RED  
448909000 GRAY

Material: Nylon  
Finish: Gloss or matte

### Frame



#### PART NO.

613302263 BLACK

Material: Nylon  
Finish: Matte



Dimensions are shown: Inches (mm)  
Specifications and dimensions subject to change



Other colors available, consult Customer Service Center.