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

® **SU**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 m Ω typ. initial @

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

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

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

OPERATING TEMPERATURE: -30°C to 65°C.

TORQUE SPECS: T, T1 15/32" bushings - 50 in. lbs max. All other 1/4 -40 bushing types 12 in. lbs max.

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.

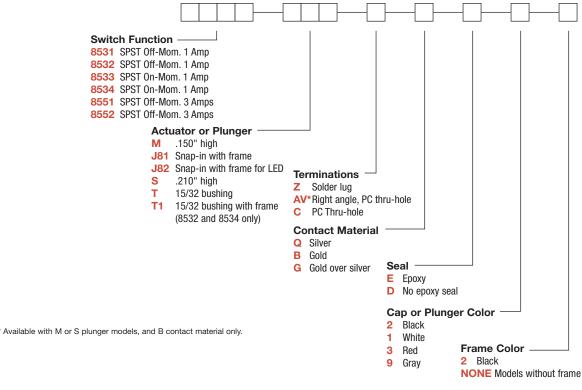
HARDWARE: Nut: Brass, nickel plated; Lockwasher: Steel, bright nickel plated.

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.

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.



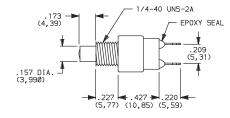


Dimensions are shown: Inches (mm) Specifications and dimensions subject to change

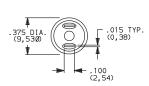
8500 Series **Subminiature Pushbutton Switches**

			SWITCH F	UNCTION					
			POS. 1	POS. 2					
NO. POLES	MODEL NO.	RATING	1	•	TOTAL	TRAVEL	ACTUATION FORCE	SCHEMATIC	
$\overline{}$					4				
SP	8531	1 AMP	OFF	мом.	.095 (2,41) TYP.	with overtravel	7.7 oz (220g) TYP.	N.O. with overtravel	

SPST



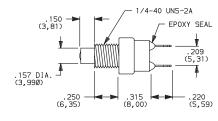
SWITCH FUNCTION

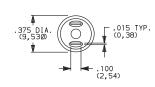


Part number shown: 8531MZQE2

SP	8532	1 AMP	OFF	MOM.	.050 (1,27) TYP.	6 oz (170g) TYP.	N.O.	
Oi	8552	3 AMPS	OIT	IVIOIVI.	.000 (1,27) 111.	0 02 (170g) 111.	N.O.	↑ ↑

SPST

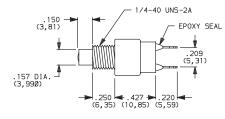


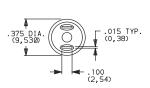


Part number shown: 8532MZQE2

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

SPST

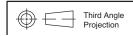




MOM. = Momentary

Part number shown: 8533MZQE2

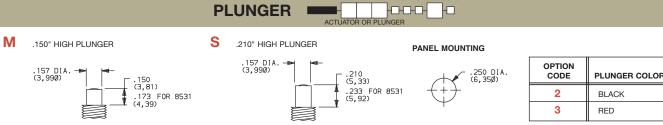
All models $_{\odot}$ \mathbf{All} with all options when ordered with G or Q contact material.

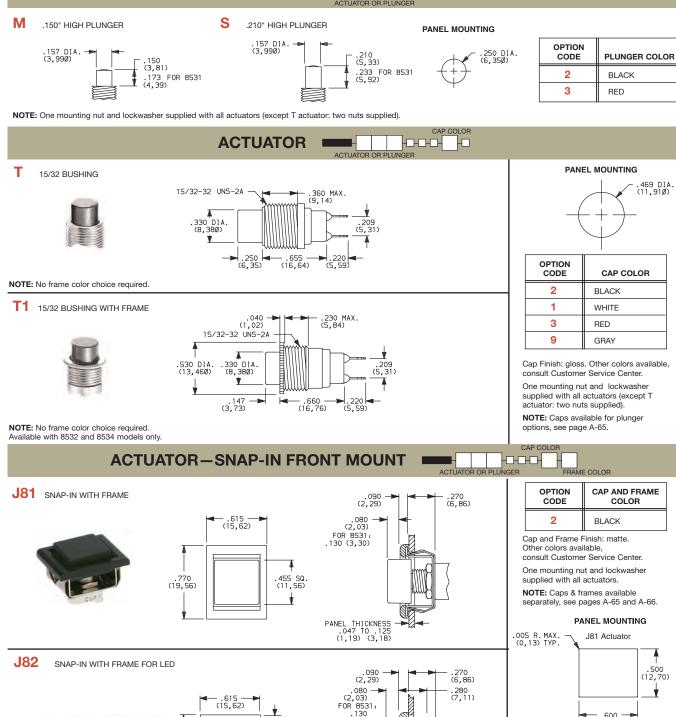


Dimensions are shown: Inches (mm) Specifications and dimensions subject to change



8500 Series **Subminiature Pushbutton Switches**

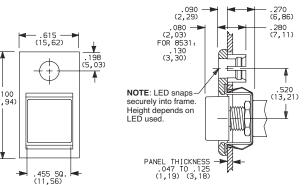


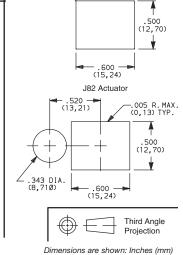






LED not included.For LED information, see page A-66.





Specifications and dimensions subject to change

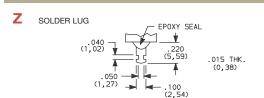
.200 (5,08)

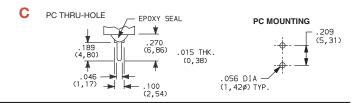
0.550

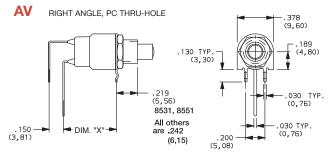
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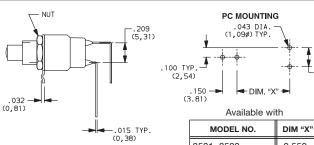
8500 Series **Subminiature Pushbutton Switches**











8531, 8533

8532, 8534

NOTE: Available with M or S plunger models, and B contact material only

CONTACT MATERIAL

OPTION CODE	RoHS COMPLIANT *	RoHS COMPATIBLE *	TERMINAL PLATING	CONTACT MATERIAL	RATINGS		
В	YES	YES	GOLD ¹	GOLD	LOW LEVEL/DRY CIRCUIT	0.4 VA MAX. @ 20 V AC OR DC MAX.	
Q	YES	YES	SILVER ⁴	SILVER 5	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 ²	GOLD ³	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.

- ¹ CONTACTS & TERMINALS: Copper alloy, with gold plate over nickel plate.
- ² CONTACTS: Coin silver, with gold plate over nickel plate.
- ³ TERMINALS: Copper alloy, with gold plate over nickel plate.
- ⁴ CONTACTS: Coin silver, silver plated.
- $^{\rm 5}$ TERMINALS: Copper alloy, silver plated.

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

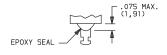
All models with all options when ordered with G or Q contact material. Q contact material standard with C, Z terminations.

8551 & 8552 available with Q contact material only.

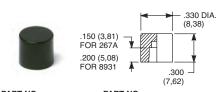
SEAL ---



Cap for 0.157" dia. plungers



REPLACEMENT HARDWARE



Material: Nylon

RED

PART NO. PART NO. 893101000 **267A01000** WHITE WHITE 267A02000 BLACK 893102000 267A03000 RED 893103000 267A09000 GRAY 893109000 GRAY 85X2T 8534T 85X1T 8532T1 8533T, 8534T1 models only Cap, J80, J81 & J 82 options only .195 4,95) .240 (6,10)

PART NO. 448901000 WHITE 448902000 BLACK 448903000 RED 448909000 GRAY Material: Nylon inish: Gloss or matte

Other colors available, consult Customer Service Center.



PART NO. 613302263 BLACK Material: Nvlon Finish: Matte



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



Material: Nylon

8500 Series **Subminiature Pushbutton Switches**

AVAILABLE HARDWARE

Frame



NOTE: Additional nuts, locking rings and lockwashers available separately, see section "Technical Data and Additional Hardware".

Other 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.

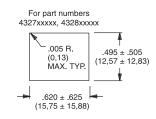




.047" (1,19) PANEL THK. .062" (1,57) PANEL THK. .090" (2,29) PANEL THK. .125" (3,18) PANEL THK.

PART NO. PART NO. PART NO. PART NO.
432502263 432602263 432702263 BLACK

PANEL MOUNTING



SECURELY INTO INSERT (P/N 8949).
HEIGHT DEPENDS ON LE.D. USED.

PANEL P/N 8949
PANEL W/O LE.D. HOLE P/N 4766

(19,43)

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

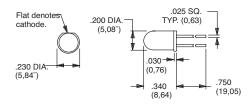
476602000 BLACK

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

LED INFORMATION

Process Information: Soldering to LED leads must be completed within 5 seconds at 500°F (260°C) maximum.

LEDs are not supplied with J82 option. LED snaps into switch frame surrounding actuator and is wired externally.



Suggested LED for J82 option. Dimensions for reference only.





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