

# 9000 series

## Subminiature momentary pushbutton switches

*Distinctive features and specifications*

UG1410A



- Panel and PC mount models, horizontal or vertical
- Self-cleaning and butt action contacts
- Several plunger options

### ELECTRICAL SPECIFICATIONS

- Max. current/voltage rating with resistive load : 100mA 30VDC
- Initial contact resistance : 30 mΩ max.
- Insulation resistance : 1.000 MΩ min. at 500VDC
- Dielectric strength :  
500 Vrms 50 Hz min. between terminals  
1.000 Vrms 50 Hz min. between terminals and frame
- Electrical life at full load :  
9100 - 9200N and 9500N : 250.000 cycles  
9200 - 9500 : 100.000 cycles

### MATERIALS

- Case : Pa6T
- Actuator : polyamide, glass filled
- Bushing : brass, nickel plated
- Contacts :  
**CD** : brass, gold plated
- Terminal seal : epoxy

### GENERAL SPECIFICATIONS

- Torque : 0,5 Nm (.590 Ft.lb) max. applied to nut
- Operating temperature : -30°C to +65°C
- Panel thickness : 1,50 mm (.059) max.
- Travels : see table below  
Tolerance : +/- 0,3 mm (.011)

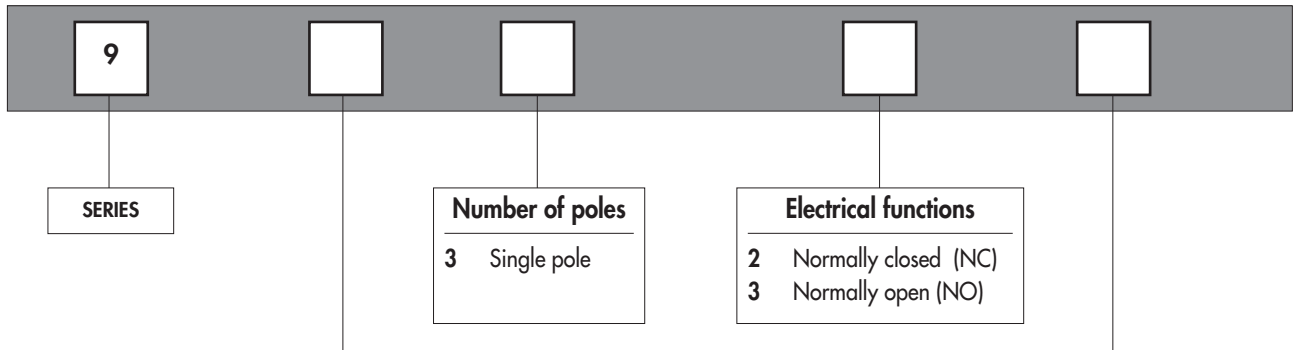
	9533-9233	9532-9232	9533N 9233N-9133
Total travel	1,10 (.043)	1,80 (.070)	1 (.039)
Pre-travel	0,80 (.031)	1,00 (.039)	-
Over travel	0,30 (.011)	0,75 (.029)	-

The company reserves the right to change specifications without notice.

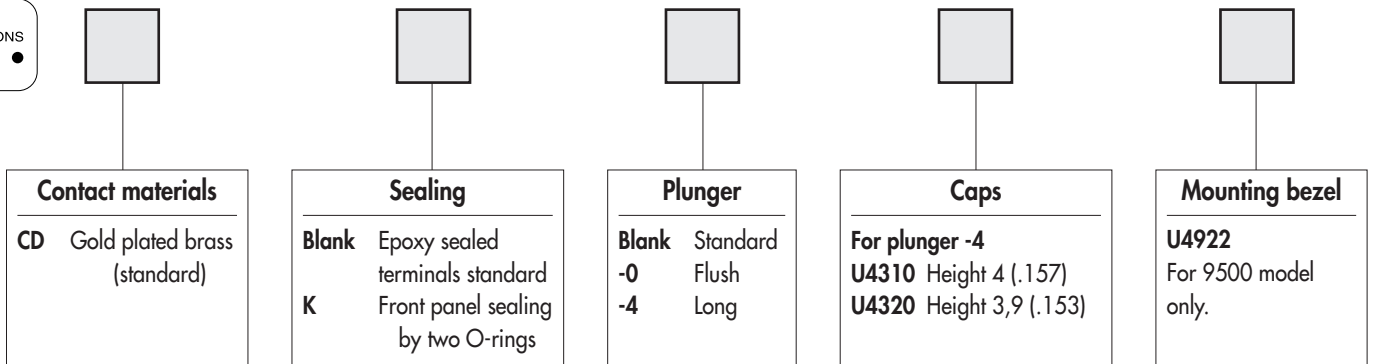
# 9000 series

## Subminiature momentary pushbutton switches

Overview



Terminals, case and bushing	
<b>Case height 8 (.314)</b>	
2	Straight terminals - threaded bushing
2..Y	Tall bracket - plain bushing
2..WW	Right angle terminals - plain bushing
5	Solder lugs - threaded bushing
<b>Case height 6,1 (.240)</b>	
1	Straight terminals - threaded bushing - 7,10 (.279) PCB to panel
1..Y	Short bracket - plain bushing
1..WW	Right angle terminals - plain bushing
2..N	Straight terminals - threaded bushing - 8,90 (.350) PCB to panel
2..NY	Tall bracket - plain bushing
5..N	Solder lugs - threaded bushing



### ABOUT THIS SERIES

On the following pages, you will find successively :  
 - model structure of switches  
 - their options in the same order as in above chart

**Dimensions** : first dimensions are in mm while inches are shown as bracketed numbers.



**NOTICE** : please note that not all combinations of above numbers are available. Refer to the following pages for further information.



**Sealing boots** are available to protect the switches. They are presented in section H.



**Mounting accessories** : standard hardware supplied with all threaded bushing models : 1 nickel plated hex nut 5 (.196) across flats, part number U544. This nut is presented after model structure of switches.

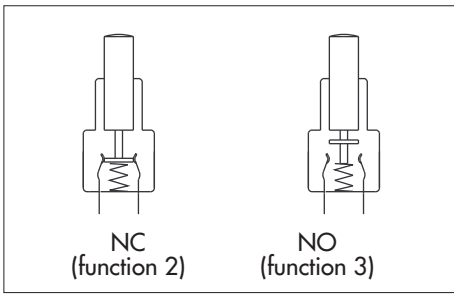


**Packaging unit** : 100 pieces.

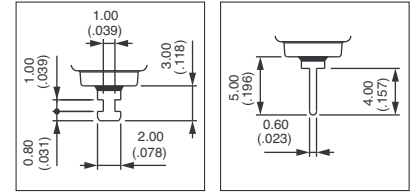
# 9000 series

## Subminiature momentary pushbutton switches

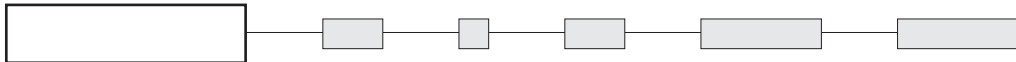
Solder lug or straight PC terminals : 9500 - 9200 - 9200Y



- Case height 8 (.314)
- With over travel
- Self-cleaning contacts
- Epoxy sealed terminals standard



### MODEL STRUCTURE



B2

### Threaded bushing - solder lugs : 9500

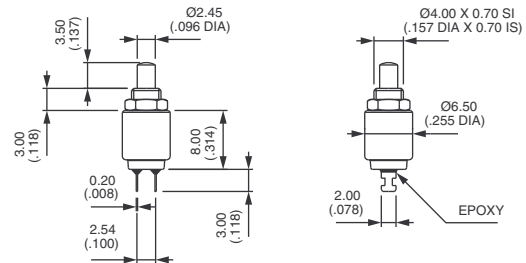


9532

Normally Closed

9533

Normally Open



### Threaded bushing - straight PC terminals : 9200

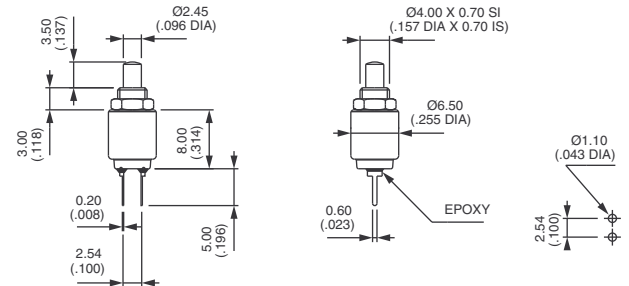


9232

Normally Closed

9233

Normally Open



### Straight PC terminals - bracket mounting : 9200Y

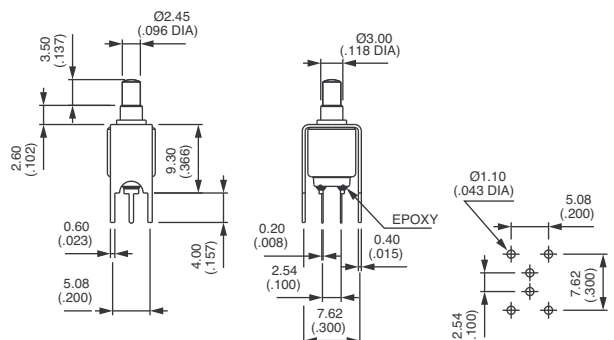


9232Y

Normally Closed

9233Y

Normally Open





# 9000 series

## Subminiature momentary pushbutton switches

Right angle terminals : 9200WW

### Right angle terminals : 9200WW

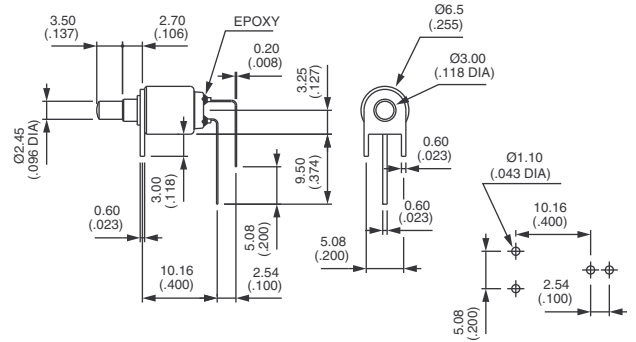


9232WW  $\begin{matrix} \uparrow \\ \circ \text{---} \circ \end{matrix}$

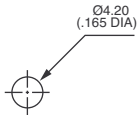
Normally Closed

9233WW  $\begin{matrix} \uparrow \\ \circ \text{---} \circ \end{matrix}$

Normally Open



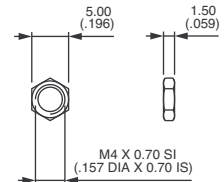
### PANEL CUT-OUT



For threaded bushing models.

### STANDARD HARDWARE

9500 - 9200

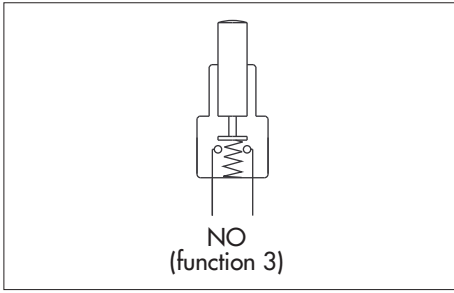


**U544** (nickel plated)

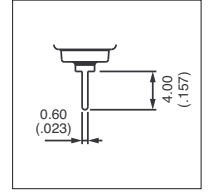
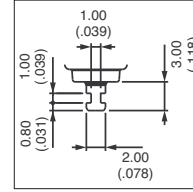
# 9000 series

## Subminiature momentary pushbutton switches

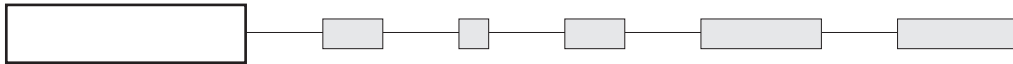
Solder lug or straight PC terminals : 9500N - 9200N - 9100



- Case height 6,1 (.240)
- Epoxy sealed terminals
- Butt action contacts



MODEL  
STRUCTURE



B2

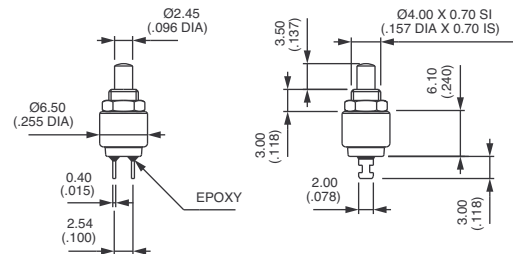
### Threaded bushing - solder lugs : 9500N



9533N



Normally Open



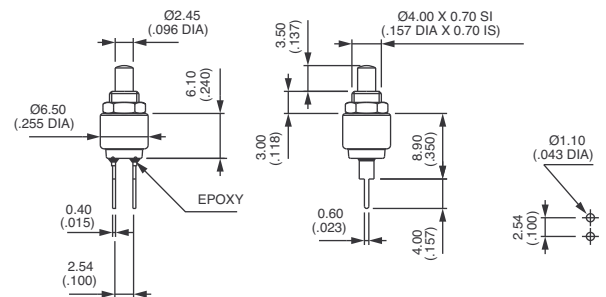
### Threaded bushing - straight PC terminals - 8,90 (.350) PCB to panel



9233N



Normally Open



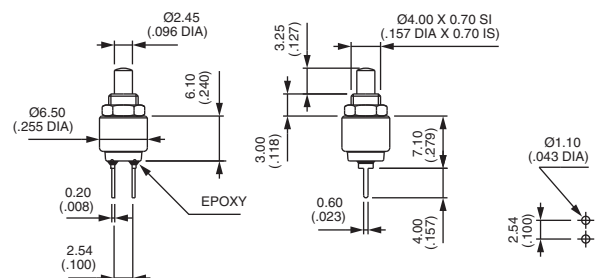
### Threaded bushing - straight PC terminals - 7,10 (.279) PCB to panel



9133



Normally Open





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## Subminiature momentary pushbutton switches

Straight PC or right angle terminals : 9200NY - 9100Y - 9100WW

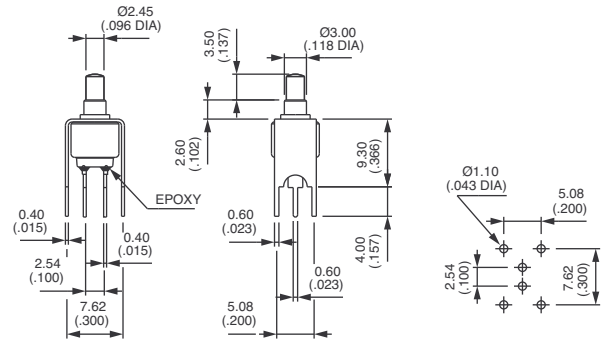
### Straight PC terminals - tall bracket : 9200NY



9233NY



Normally Open



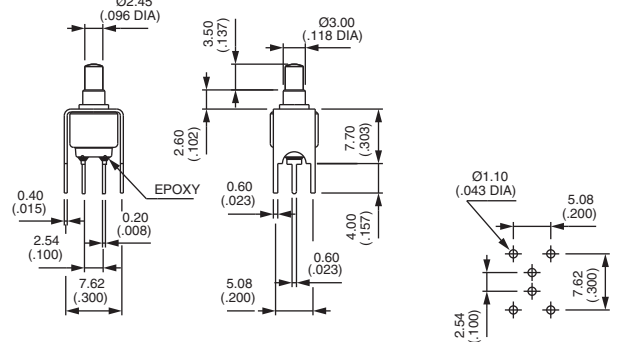
### Straight PC terminals - short bracket : 9100Y



9133Y



Normally Open



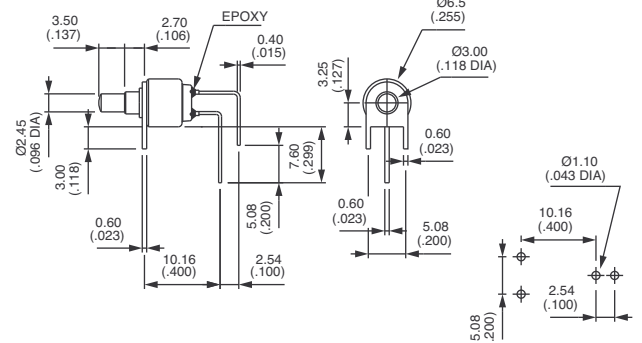
### Right angle terminals - vertical : 9100WW



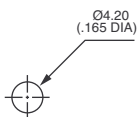
9133WW



Normally Open



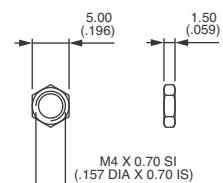
#### PANEL CUT-OUT



For threaded bushing models.

#### STANDARD HARDWARE

9500N - 9200N - 9100



M4 X 0.70 SI (.157 DIA X 0.70 IS)

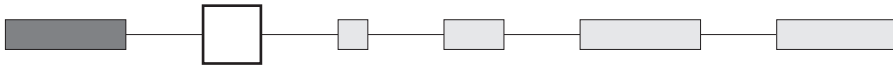
U544 (nickel plated)

# 9000 series

## Subminiature momentary pushbutton switches

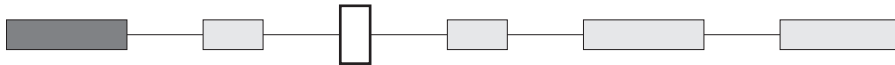


### CONTACT MATERIALS



**CD** Gold plated brass (standard)

### SEALING

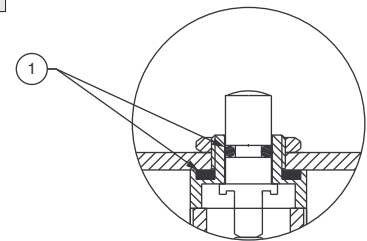


**Blank** Epoxy sealed terminals standard

**K** Front panel sealing by two O-rings. Protects the switch against water and dust. Panel seal withstands 0,1 bar pressure.

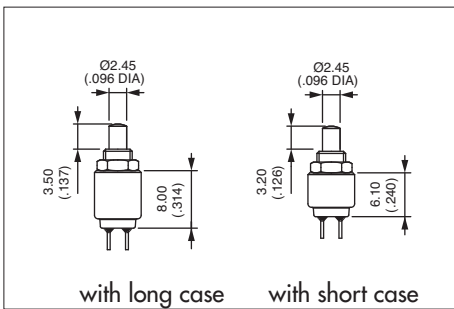


Option K for models 9533N, 9233N and 9133 only.

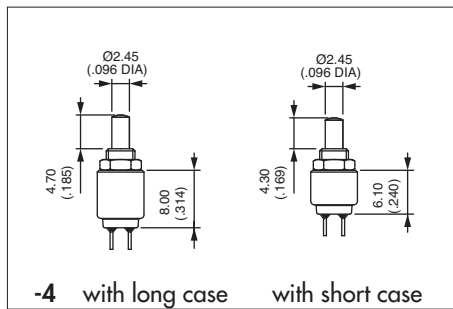


① O-rings

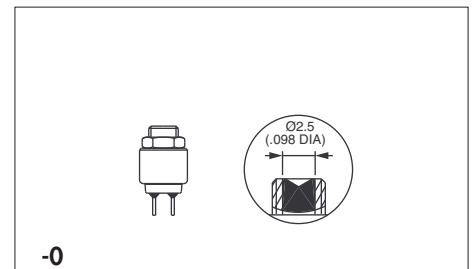
### PLUNGERS



Standard



Long



-0

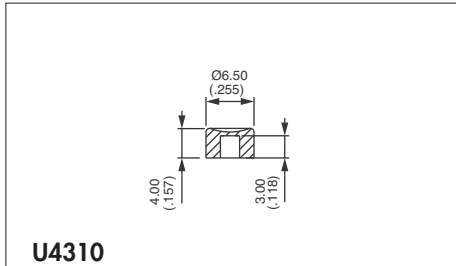
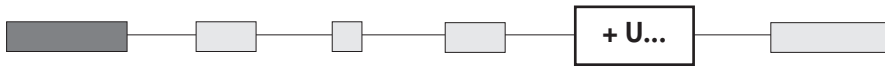
Flush



# 9000 series

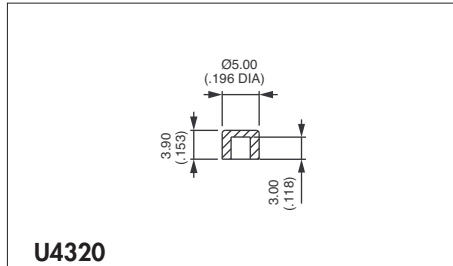
## Subminiature momentary pushbutton switches

### CAPS



**U4310**

For use with plunger -4 only



**U4320**

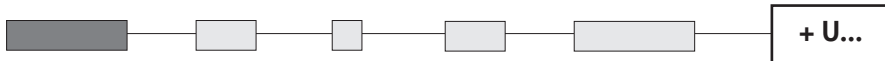
For use with plunger -4 only

#### Cap colours

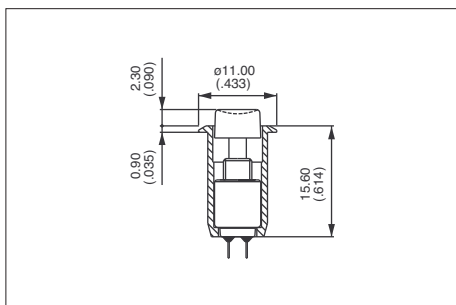
Replace "0" by number

- |     |           |
|-----|-----------|
| 1   | blue      |
| 1/4 | dark blue |
| 2   | black     |
| 3   | green     |
| 4   | grey      |
| 5   | yellow    |
| 6   | red       |
| 7   | ivory     |
| 7/1 | white     |
| 9   | orange    |

### MOUNTING BEZEL



For 9500 model (case height 8 mm) only



Shown with cap U570.

The mounting bezel U4922 has been designed to facilitate the mounting of the 9500 series pushbutton switch onto a panel. The switch + bezel assembly is snapped into the equipment through the front of the panel, then electrically connected by solder lug terminals.

Panel cut-out :  $\varnothing 8,15 \text{ mm} \pm 0,05$   
(.320 DIA  $\pm .002$ )