

9000 series

Subminiature momentary pushbutton switches

Distinctive features and specifications



- ☐ 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 : PPS
- 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	1,60 (.062)	1,80 (.070)	0,9 (.035)
Pre-travel	0,75 (.029)	1,00 (.039)	-
Over travel	0,70 (.027)	0,75 (.029)	-

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Overview



9

SERIES

Number of poles

3 Single pole

Electrical functions

2 Normally closed (NC)
3 Normally open (NO)

Terminals, case and bushing

Case height 8 (.314)

2 Straight terminals - threaded bushing
2..Y Tall bracket - plain bushing
2..WW Right angle terminals - plain bushing
5 Solder lugs - threaded bushing

Case height 6,1 (.240)

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

OPTIONS

Contact materials

CD Gold plated brass (standard)

Sealing

Blank Epoxy sealed terminals standard
K Front panel sealing by two O-rings

Plunger

Blank Standard
-0 Flush
-4 Long

Caps

For plunger -4
U4310 Height 4 (.157)
U4320 Height 3,9 (.153)

Mounting bezel

U4922
For 9500 model only.

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.



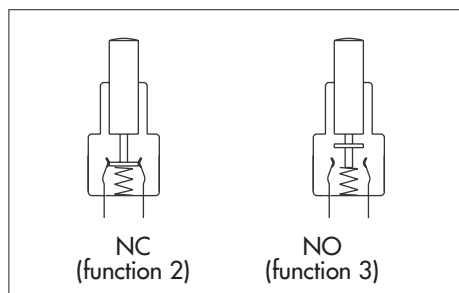
Packaging unit : 100 pieces.



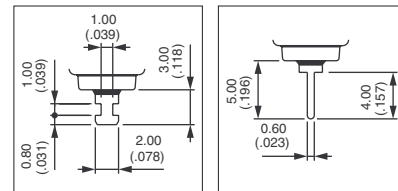
9000 series

Subminiature momentary pushbutton switches

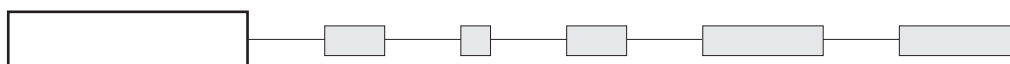
Solder lug or straight PC terminals : 9500 - 9200 - 9200Y



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



MODEL
STRUCTURE



B

Threaded bushing - solder lugs : 9500

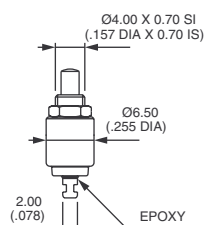
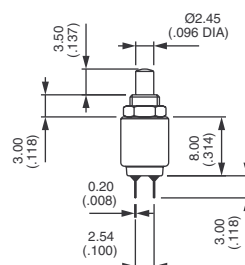


9532

Normally Closed

9533

Normally Open



Threaded bushing - straight PC terminals : 9200

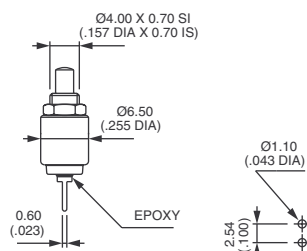
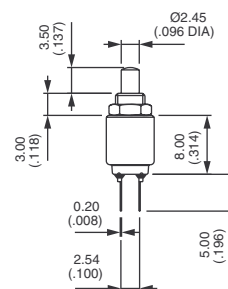


9232

Normally Closed

9233

Normally Open



Straight PC terminals - bracket mounting : 9200Y

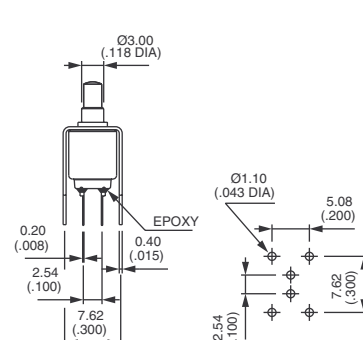
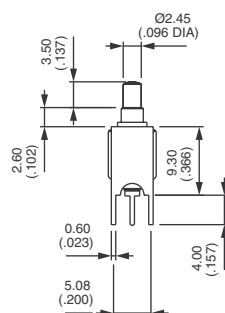


9232Y

Normally Closed

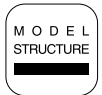
9233Y

Normally Open



Subminiature momentary pushbutton switches

Right angle terminals : 9200WW



Right angle terminals : 9200WW



9232WW

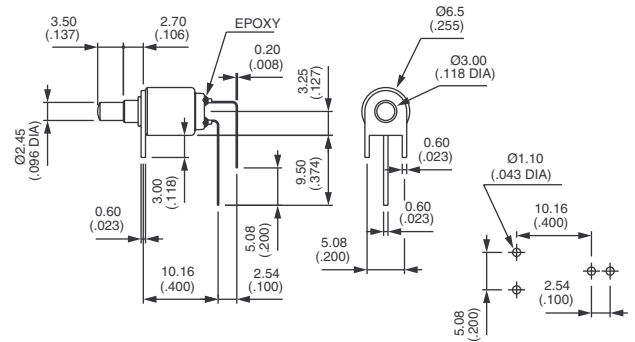


Normally Closed

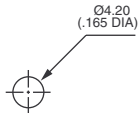
9233WW



Normally Open



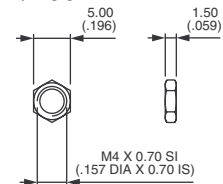
PANEL CUT-OUT



For threaded bushing models.

STANDARD HARDWARE

9500 - 9200

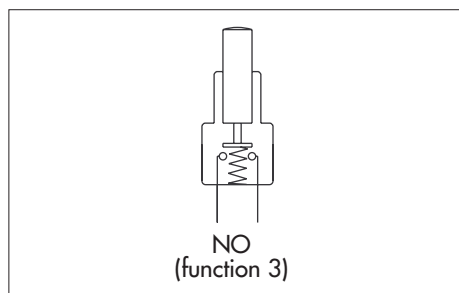


U544 (nickel plated)

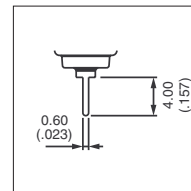
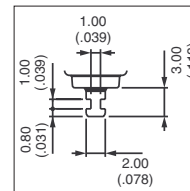
9000 series

Subminiature momentary pushbutton switches

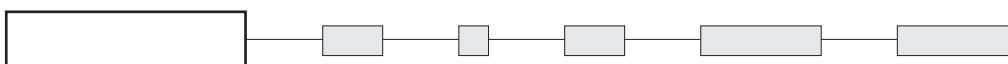
Solder lug or straight PC terminals : 9500N - 9200N - 9100



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



MODEL
STRUCTURE



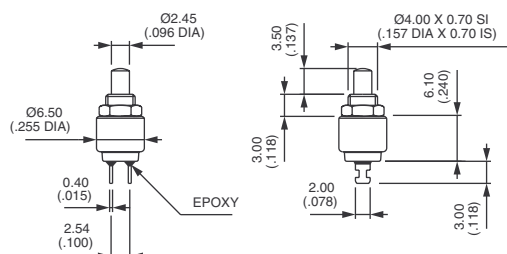
Threaded bushing - solder lugs : 9500N



9533N



Normally Open



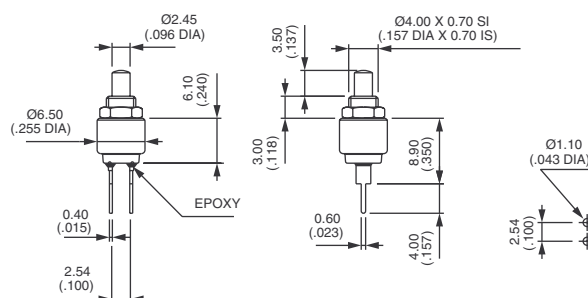
Threaded bushing - straight PC terminals - 8,90 (.350) PCB to panel



9233N



Normally Open



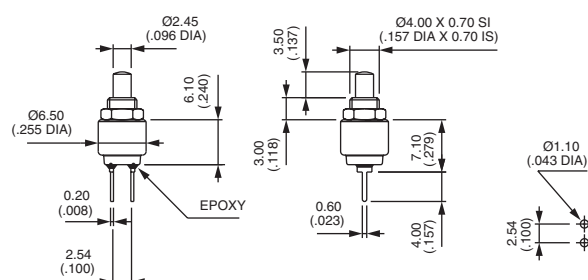
Threaded bushing - straight PC terminals - 7,10 (.279) PCB to panel



9133



Normally Open



9000 series

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

MODEL
STRUCTURE

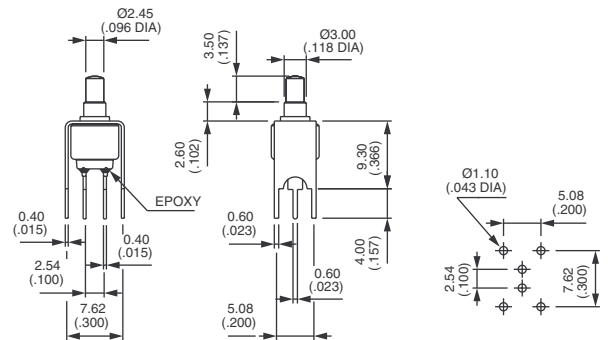
Straight PC terminals - tall bracket : 9200NY



9233NY



Normally Open



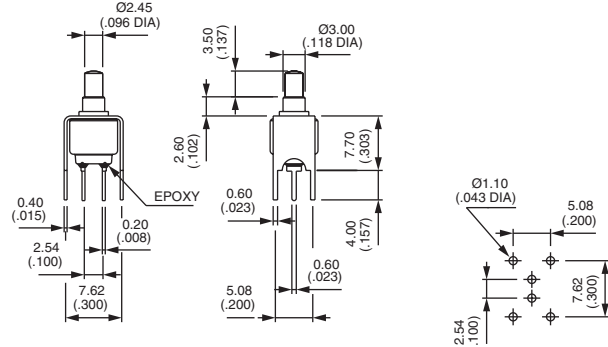
Straight PC terminals - short bracket : 9100Y



9133Y



Normally Open



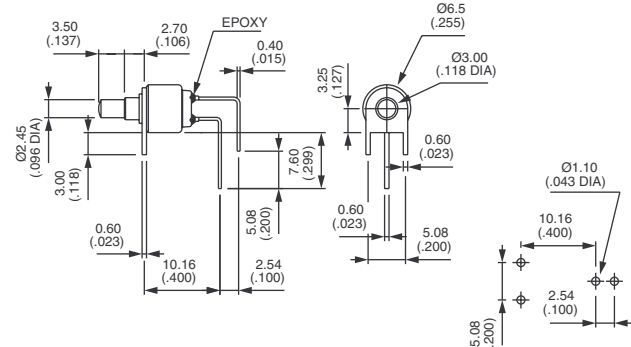
Right angle terminals - vertical : 9100WW



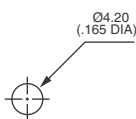
9133WW



Normally Open



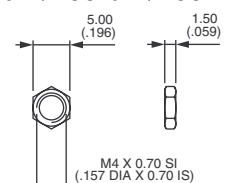
PANEL CUT-OUT



For threaded bushing models.

STANDARD HARDWARE

9500N - 9200N - 9100



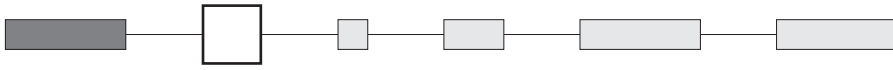
U544 (nickel plated)



9000 series

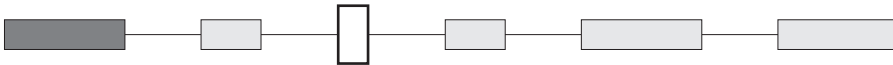
Subminiature momentary pushbutton switches

CONTACT MATERIALS



CD Gold plated brass (standard)

SEALING

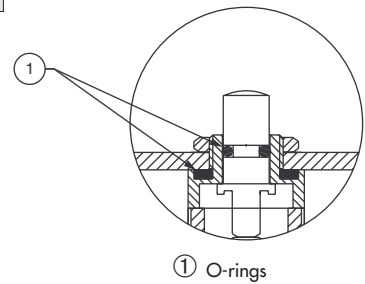


Blank Epoxy sealed terminals standard

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

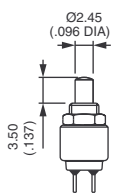


Option K for models 9533N, 9233N and 9133 only.



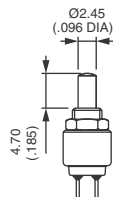
① O-rings

PLUNGERS



Blank

Standard



-4

Long



-0

Flush

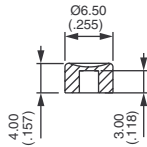
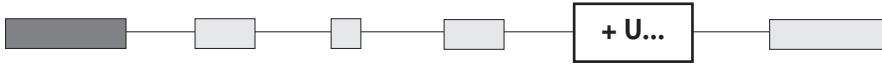
9000 series

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OPTIONS

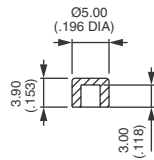


CAPS



U4310

For use with plunger -4 only



U4320

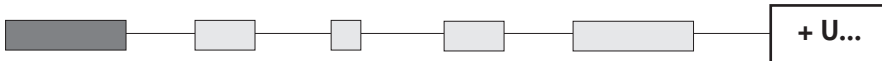
For use with plunger -4 only

Cap colours

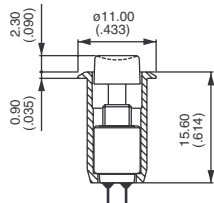
Replace "0" by number

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



U4922

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 $\pm .002$)