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 V rms 50 Hz min. between terminals
  - 1,000 V rms 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 (0.590 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)

<table>
<thead>
<tr>
<th></th>
<th>9533-9233</th>
<th>9532-9232</th>
<th>9533N 9233N-9133</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total travel</td>
<td>1.10 (.043)</td>
<td>1.80 (.070)</td>
<td>1 (.039)</td>
</tr>
<tr>
<td>Pre-travel</td>
<td>0.80 (.031)</td>
<td>1.00 (.039)</td>
<td>-</td>
</tr>
<tr>
<td>Over travel</td>
<td>0.30 (.011)</td>
<td>0.75 (.029)</td>
<td>-</td>
</tr>
</tbody>
</table>


# 9000 series
Subminiature momentary pushbutton switches

## Overview

### Model Structure

<table>
<thead>
<tr>
<th>Series</th>
<th>Number of poles</th>
<th>Electrical functions</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>3</td>
<td>2 Normally closed (NC)</td>
</tr>
</tbody>
</table>

### 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

### 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

**Threaded bushing - solder lugs: 9500**

<table>
<thead>
<tr>
<th>Model</th>
<th>Function</th>
<th>Contact Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>9532</td>
<td>NC</td>
<td>Normally Closed</td>
</tr>
<tr>
<td>9533</td>
<td>NO</td>
<td>Normally Open</td>
</tr>
</tbody>
</table>

**Threaded bushing - straight PC terminals: 9200**

<table>
<thead>
<tr>
<th>Model</th>
<th>Function</th>
<th>Contact Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>9232</td>
<td>NC</td>
<td>Normally Closed</td>
</tr>
<tr>
<td>9233</td>
<td>NO</td>
<td>Normally Open</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Model</th>
<th>Function</th>
<th>Contact Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>9232Y</td>
<td>NC</td>
<td>Normally Closed</td>
</tr>
<tr>
<td>9233Y</td>
<td>NO</td>
<td>Normally Open</td>
</tr>
</tbody>
</table>
9000 series
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Right angle terminals: 9200WW

- 9232WW  Normally Closed
- 9233WW  Normally Open

PANEL CUT-OUT

For threaded bushing models.

STANDARD HARDWARE

9500 - 9200
- M4 x 0.70 (3.17 X 0.70 (5))
- 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

Threaded bushing - solder lugs: 9500N

Threaded bushing - straight PC terminals - 8.90 (.350) PCB to panel

Threaded bushing - straight PC terminals - 7.10 (.279) PCB to panel
9000 series
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Straight PC or right angle terminals: 9200NY - 9100Y - 9100WW

Straight PC terminals - tall bracket: 9200NY

Right angle terminals - vertical: 9100WW

Panel cut-out

Hardware:

9500N - 9200N - 9100

For threaded bushing models.

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.

PLUNGERS

Standard  with long case  with short case
Long  with long case  with short case
Flush

① O-rings
9000 series
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CAPS

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MOUNTING BEZEL

For 9500 model (case height 8 mm) only

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: Ø 8.15 mm ± 0.05 (.320 DIA ± .002)

Shown with cap U570.