

# 9000 series

## Momentary pushbutton switches

*Distinctive features and specifications*



- Two case lengths
- Three electrical functions
- Sealing options
- Model X1146 with Ø 16 (.630) bushing

**B**

### ELECTRICAL SPECIFICATIONS

- Max. current/voltage rating with resistive load :
  - silver contact (A) : 0,3A 250VAC - 0,6A 125VAC - 1A 30VDC
  - gold plated contacts (CD) : 100mA 30VDC
- Initial contact resistance : 50 mΩ max.
- Insulation resistance : 1.000 MΩ min. at 500VDC
- Dielectric strength :
  - 1.000 Vrms 50 Hz min. between terminals
  - 1.500 Vrms 50 Hz min. between terminals and frame
- Electrical life : 250.000 cycles

### MATERIALS

- Case : thermoplastique UL94-V0
- Actuator : polyamide, glass filled
- Bushing : brass, nickel plated
- Contacts :
  - A : silver
  - CD : brass, gold plated
- Terminal seal : epoxy

### GENERAL SPECIFICATIONS

- Total travel :

9600-9400-9400Y		9600N-9400N
Functions 3 and 5	Function 2	Function 3
1,3 mm	2 mm	0,9 mm

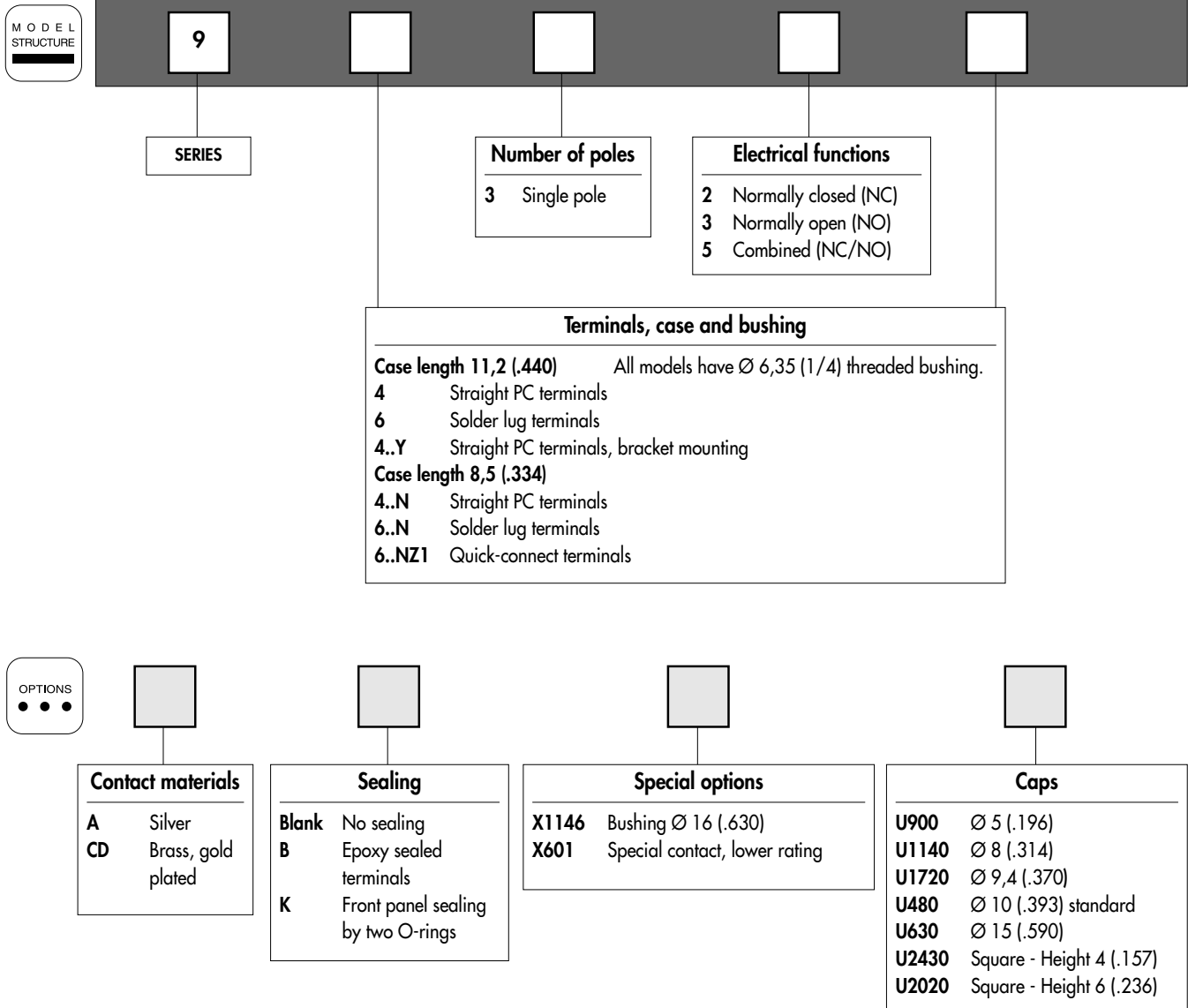
- Torque : 1,25 Nm (.922 Ft.lb) max. applied to nut
- Operating temperature : -30°C to +65°C

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## Momentary pushbutton switches

Overview

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### 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 bracketted 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 against dust and water. They are presented in section H.



**Mounting accessories** : standard hardware supplied with all switches : 2 hex nuts 8 mm (.314) across flats and 1 lockwasher. Standard and special hardware available are presented in section I.

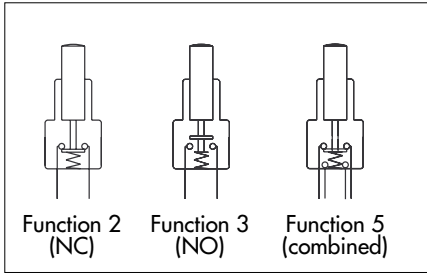


**Packaging unit** : 50 pieces, except for 9400Y (25 pieces)

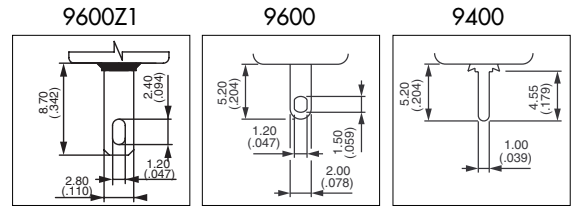
# 9000 series

## Momentary pushbutton switches

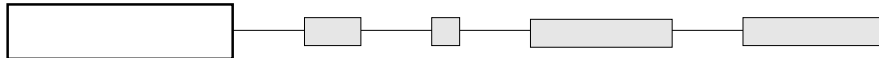
9600 - 9400 - 9400Y



- Single pole
- Solder lug or straight PC terminals



### MODEL STRUCTURE

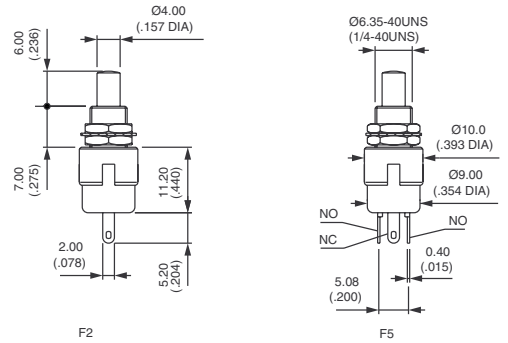


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### Solder lug terminals - case length 11,2 (.440) : 9600



- |      |  |                   |
|------|--|-------------------|
| 9632 |  | Normally Closed   |
| 9635 |  | Combined function |

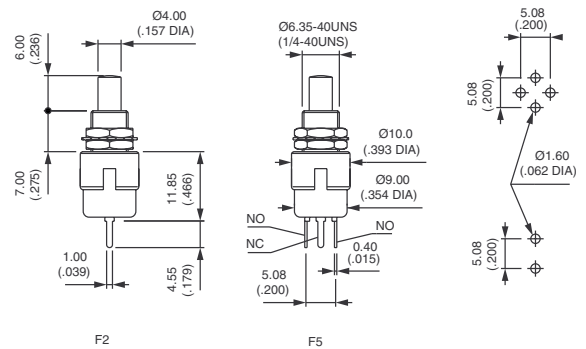


For Normally Open (function 3), see next page.

### Straight PC terminals - case length 11,2 (.440) : 9400



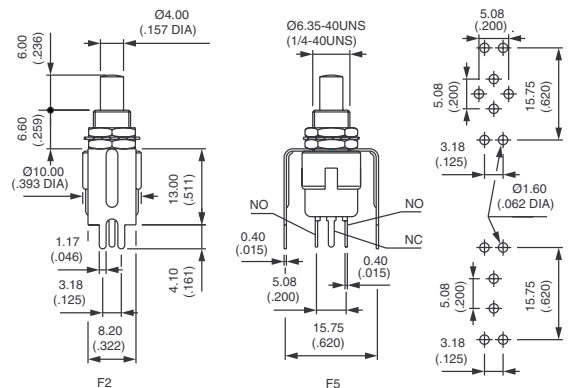
- |      |  |                   |
|------|--|-------------------|
| 9432 |  | Normally Closed   |
| 9433 |  | Normally Open     |
| 9435 |  | Combined function |



### Bracket mounting - case length 11,2 (.440) : 9400Y



- |       |  |                   |
|-------|--|-------------------|
| 9432Y |  | Normally Closed   |
| 9433Y |  | Normally Open     |
| 9435Y |  | Combined function |



The bracket is not fastened to the switch.



# 9000 series

## Momentary pushbutton switches

9600N - 9400N

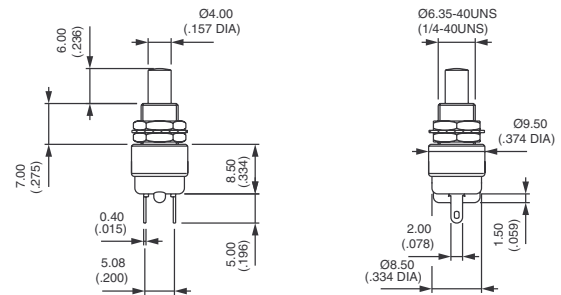
### Solder lug terminals - case length 8,5 (.334) : 9600N



9633N



Normally Open



Also available with quick-connect terminals 2,8 x 0,5 mm : 9633NZ1

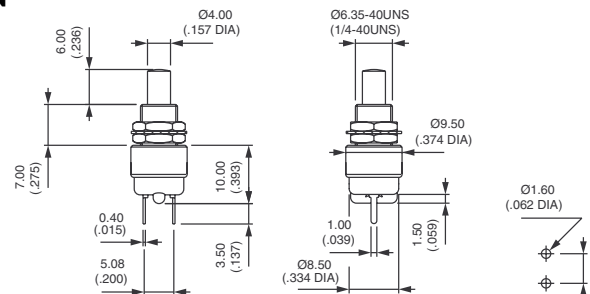
### Straight PC terminals - case length 8,5 (.334) : 9400N



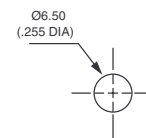
9433N



Normally Open



### PANEL CUT-OUT



### Bushing Ø 16 (.630) - metal button : 9633•X1146



Silver contacts  
9633AX1146

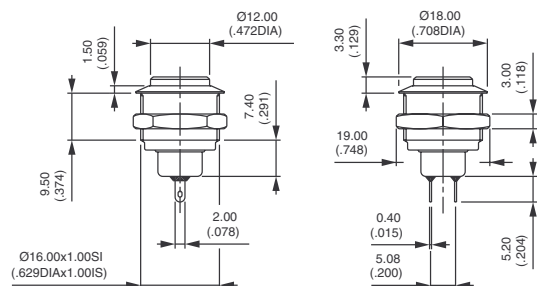


Normally open

Gold plated silver contacts  
9633ADX1146



Normally open



Panel cut-out : Ø 16,2 (.637)

Max. current/voltage rating. : 0,3A 250VAC - 1A 30VDC

Epoxy sealed terminals. Options of the following pages not applicable.

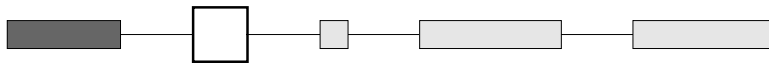
Hex nut 19 (.748) across flats

# 9000 series

## Momentary pushbutton switches



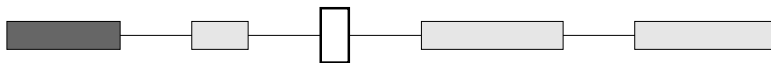
### CONTACT MATERIALS



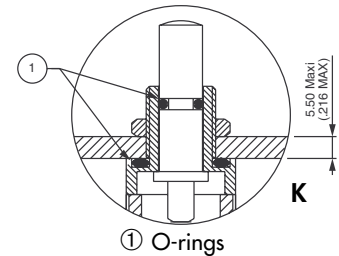
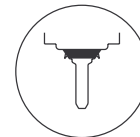
- A Silver
- CD Brass, gold plated

Special contact, lower rating : see X601 under "Special options".

### SEALING



- Blank No sealing
  - B Epoxy sealed terminals
  - K Front panel sealing by two O-rings. Protects the switch against water and dust. Panel seal withstands 0,1 bar pressure and remains tight even when switch is operated.
  - KB Combined sealings
- Sealing boots : see section H.



### SPECIAL OPTIONS



- X601 **Silver plated brass contacts**  
Current/voltage rating for an electrical life of 20.000 cycles :  
0,2A 250VAC - 0,4A 125VAC - 0,5A 30VDC.  
Minimum quantity : 5.000 pieces per model and shipment.
- X1146 **Model with dia. 16 (.630) bushing and metal plunger**  
See previous page.

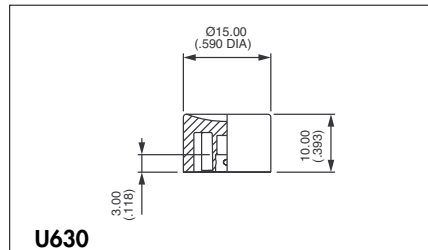
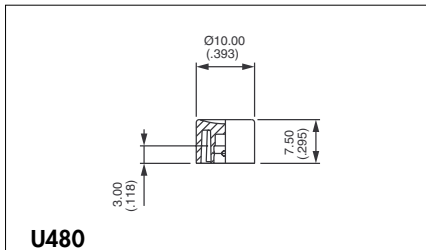
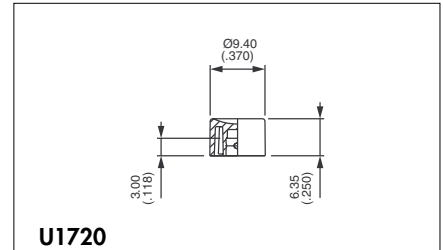
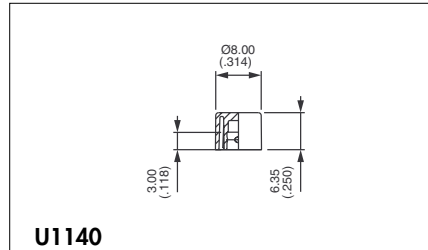
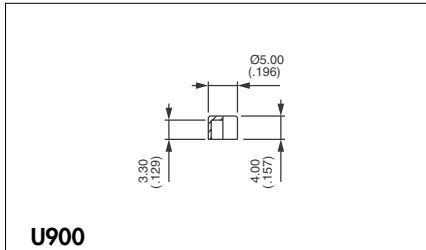
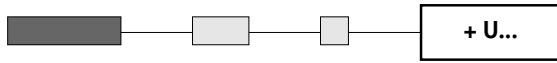


# 9000 series

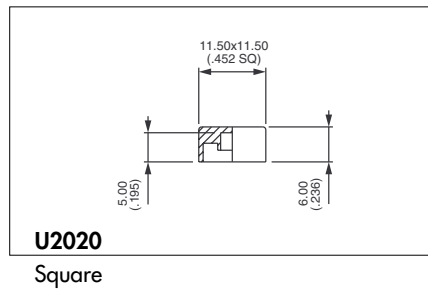
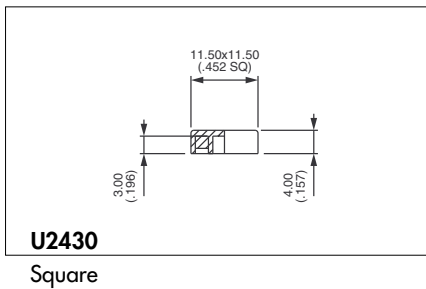
## Momentary pushbutton switches

**B**

### CAPS

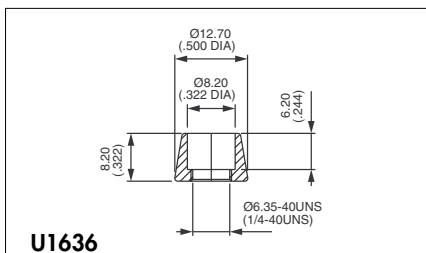


Cap colours	
Replace last "0" by number	
1	blue
1/4	dark blue
2	black
3	green
4	grey
5	yellow
6	red
7	ivory
7/1	white
9	orange

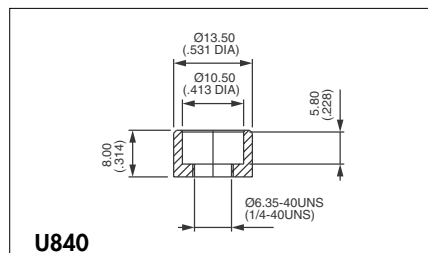


### DRESS NUTS

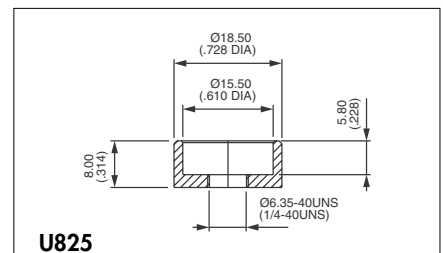
Chrome plated



For cap U1140



For cap U480



For cap U630

Dress nuts are to be ordered separately.

# 9000 series

## Alternate action or momentary pushbutton switches

*Distinctive features and specifications*

❑ Bushing Ø 6,35 (1/4) and 11,9 (15/32)

❑ Two electrical functions

B

### ELECTRICAL SPECIFICATIONS

- Max. current/voltage rating with resistive load and electrical life :
  - silver contacts (A) : 0,5A 250VAC - 1A 28VDC - 250.000 cycles  
1,5A 250VAC - 3A 28VDC - 10.000 cycles
  - gold plated contacts (CD) : 0,4VA 20V max. AC or DC
- Initial contact resistance : 10 mΩ max. at 0,1A 3VDC
- Insulation resistance : 10.000 MΩ min.
- Dielectric strength :  
1.000 Vrms 50 Hz min.

### MATERIALS

- Case : diallyphthalate
- Actuator : nylon  
black for series 9630M  
white for series 9631
- Bushing : brass, nickel plated
- Contacts :
  - A : silver
  - CD : brass, gold plated
- Terminal seal : epoxy

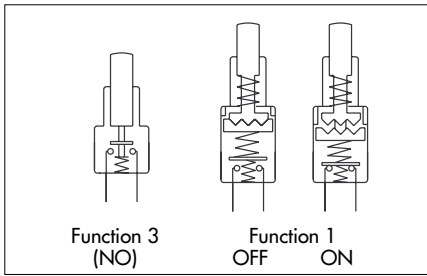
### GENERAL SPECIFICATIONS

- Operating temperature : -30°C to +85°C
- Travels : see table below.

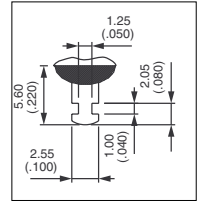
MODELS	9631	9633M
Total travel	3,48 (.137)	2,79 (.110)
Pre-travel	0,66 (.026)	-
Over travel	2,69 (.106)	0,51 (.020)

# 9000 series

## Alternate action or momentary pushbutton switches



- Single pole
- Solder lug terminals
- Epoxy sealed terminals



### Bushing Ø 6,35 (1/4) - Alternate action - tactile feedback

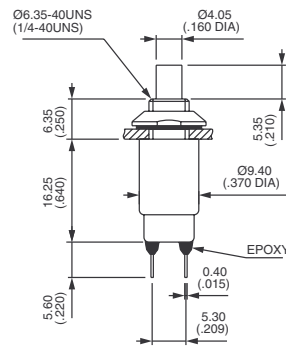


Gold plated contacts  
**9631CDB**

ON - OFF

Silver contacts  
**9631AB**

ON - OFF



Standard hardware : 1 conic nut and 1 lockwasher

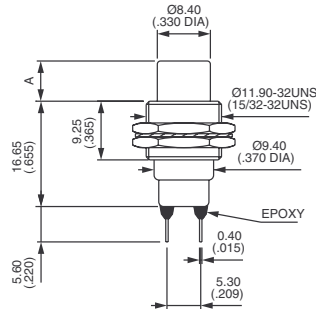
### Bushing Ø 11,9 (15/32) - front or rear mounting - NO



**9633MCDB**



Normally open



MODEL	A
9633M	6.35 (.250)

Standard hardware : 2 hex nuts 14 mm (.551) cross flats and 1 lockwasher

B