9000 series

Momentary pushbutton switches

Distinctive features and specifications



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

B2

ELECTRICAL SPECIFICATIONS

- Max. current/voltage rating with resistive load :
  - silver contact (A) : 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

MODEL STRUCTURE

9				
SERIES		Number of poles	Electrical functions	

Number of poles

3	Single pole

Electrical functions

2	Normally closed (NC)
3	Normally open (NO)
5	Combined (NC/NO)

Terminals, case and bushing

Case length 11,2 (.440)	All models have Ø 6,35 (1/4) threaded bushing.
4	Straight PC terminals
6	Solder lug terminals
4..Y	Straight PC terminals, bracket mounting
Case length 8,5 (.334)	
4..N	Straight PC terminals
6..N	Solder lug terminals
6..NZ1	Quick-connect terminals

OPTIONS

Contact materials

A	Silver
CD	Brass, gold plated

Sealing

B	Epoxy sealed terminals (standard)
KB	Front panel sealing by two O-rings - not available with 9400Y.

Special options

X1146	Bushing Ø 16 (.630)
X601	Special contact, lower rating

Caps

U900	Ø 5 (.196)
U1140	Ø 8 (.314)
U1720	Ø 9,4 (.370)
U480	Ø 10 (.393) standard
U630	Ø 15 (.590)
U2430	Square - Height 4 (.157)
U2020	Square - Height 6 (.236)

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 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.

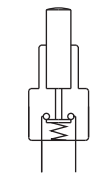
Packaging unit : 50 pieces, except for 9400Y (25 pieces)

9000 series

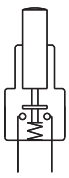
Momentary pushbutton switches

9600 - 9400 - 9400Y

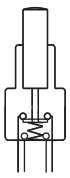
MODEL STRUCTURE



Function 2 (NC)



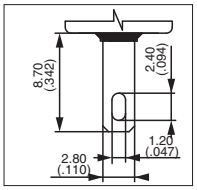
Function 3 (NO)



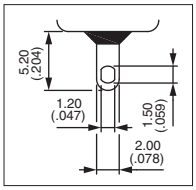
Function 5 (combined)

- Single pole
- Solder lug or straight PC terminals
- Epoxy sealed terminals

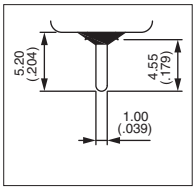
9600Z1



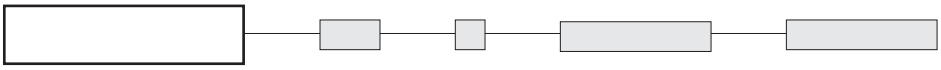
9600



9400



MODEL STRUCTURE

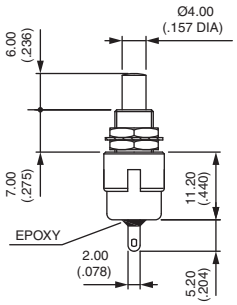


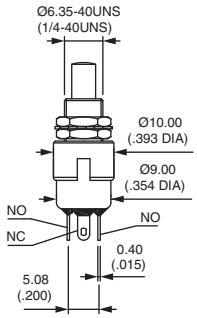
B2

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



9632B		Normally Closed
9635B		Combined function



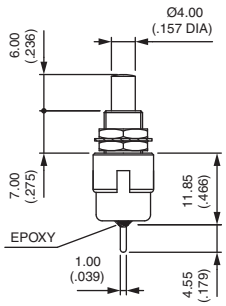


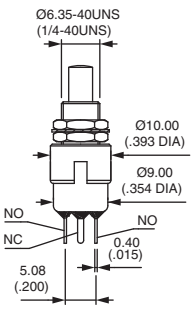
For Normally Open (function 3), see next page.

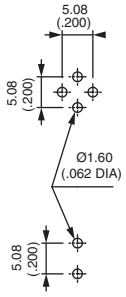
Straight PC terminals - case length 11,2 (.440) : 9400



9432B		Normally Closed
9433B		Normally Open
9435B		Combined function



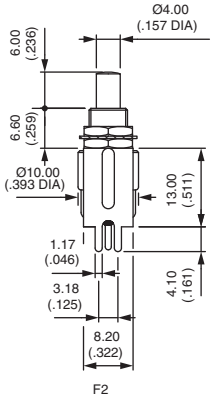


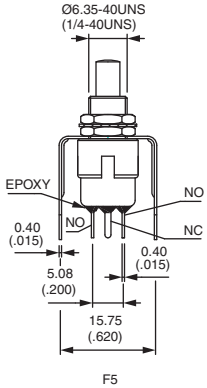


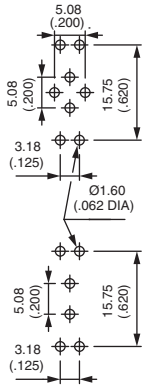
Bracket mounting - case length 11,2 (.440) : 9400Y



9432YB		Normally Closed
9433YB		Normally Open
9435YB		Combined function





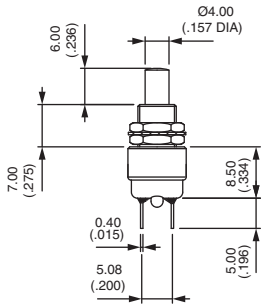


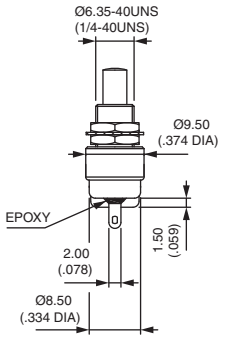
The bracket is not fastened to the switch.

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



9633NB Normally Open



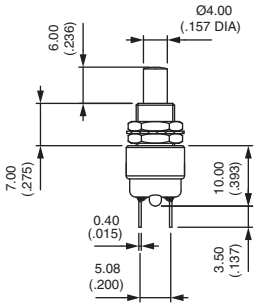


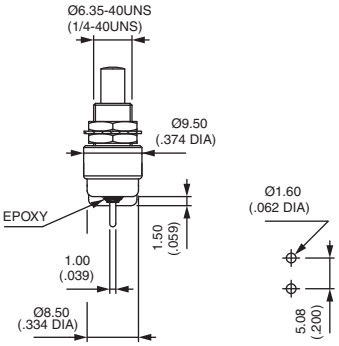
Also available with quick-connect terminals 2,8 x 0,5 mm : **9633NZ1**

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

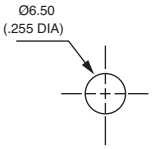


9433NB Normally Open





PANEL CUT-OUT

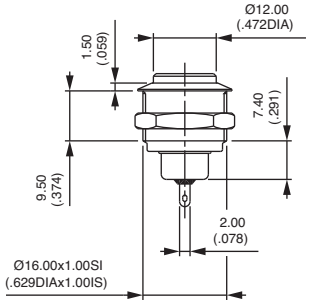


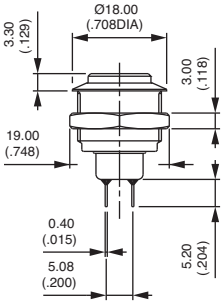
Bushing Ø 16 (.630) - metal button : 9633•X1146



Silver contacts
9633AX1146 Normally open

Gold plated silver contacts
9633ADX1146 Normally open

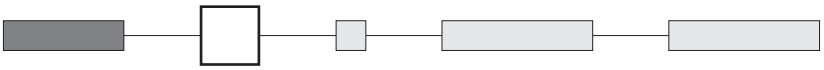




Panel cut-out : Ø 16,2 (.637)
Max. current/voltage rating. : 1A 30VDC
Epoxy sealed terminals. Options of the following pages not applicable.

Hex nut 19 (.748) across flats

CONTACT MATERIALS

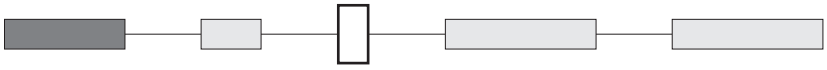


A Silver
CD Brass, gold plated

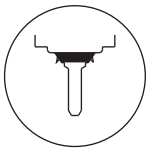
Special contact, lower rating : see X601 under "Special options".

B2

SEALING

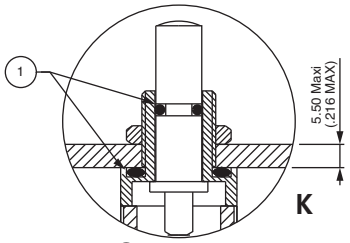


B Epoxy sealed terminals (standard)



KB Combined sealings
Epoxy sealed terminals + front panel sealing by two O-rings.
Protects the switch against water and dust.
Panel seal withstands 0,1 bar pressure.

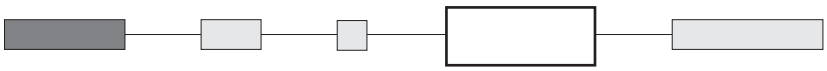
Option KB not available on 9400Y model.



① O-rings

Sealing boots : see section H.

SPECIAL OPTIONS

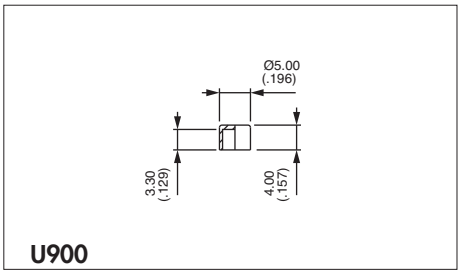


X601 **Silver plated brass contacts**
Current/voltage rating for an electrical life of 20.000 cycles : 0,5A 30VDC.
Minimum quantity : 5.000 pieces per model and shipment.

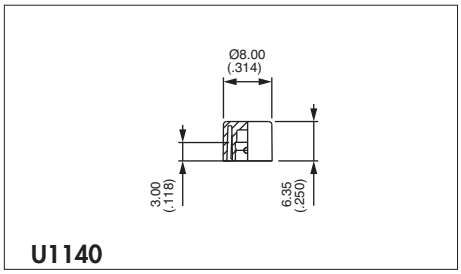
X1146 **Model with dia. 16 (.630) bushing and metal plunger**
See previous page.

CAPS

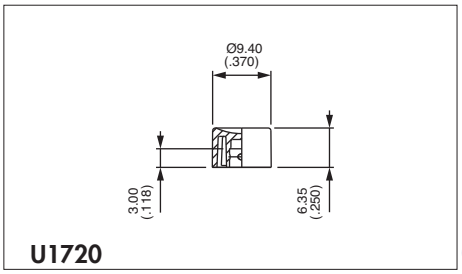




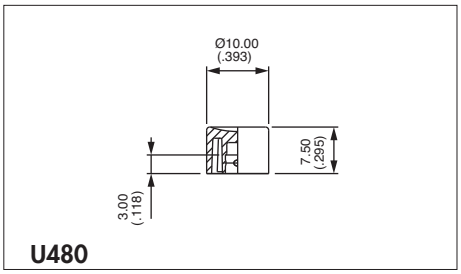
U900



U1140

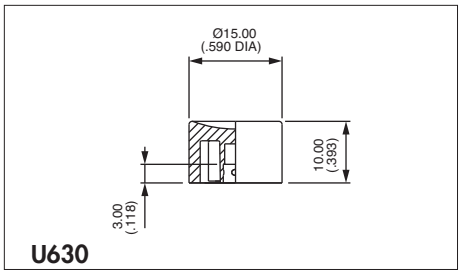


U1720

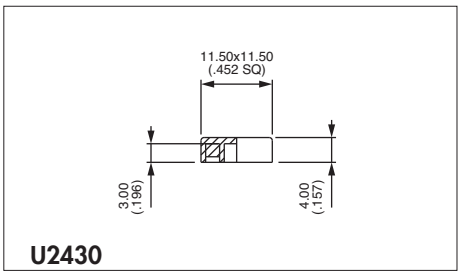


U480

Standard

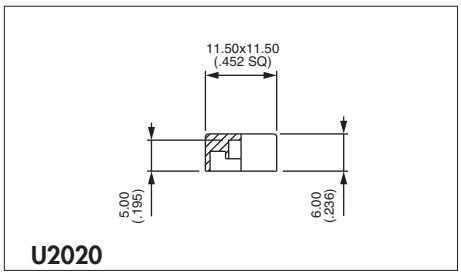


U630



U2430

Square



U2020

Square

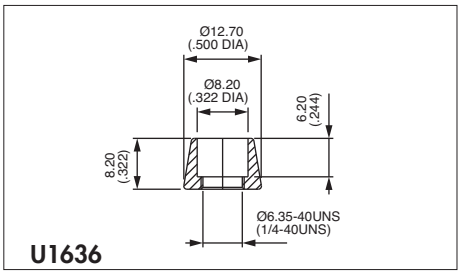
Cap colours

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

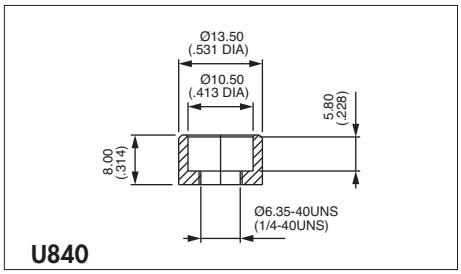
DRESS NUTS

Chrome plated. Order separately.



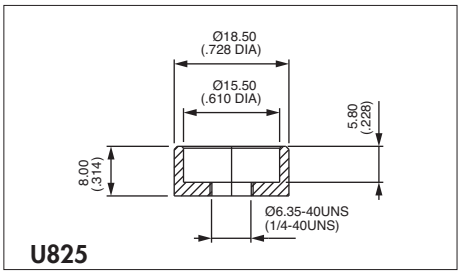
U1636

For cap U1140



U840

For cap U480



U825

For cap U630

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**

B2

ELECTRICAL SPECIFICATIONS

- Max. current/voltage rating with resistive load and electrical life :
  - silver contacts (A) : 1A 28VDC - 250.000 cycles
    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.

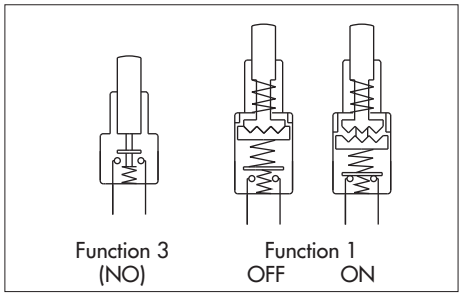
MATERIALS

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

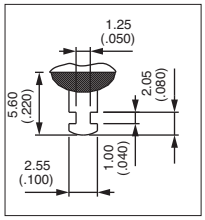
GENERAL SPECIFICATIONS

- 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)



- Single pole
- Solder lug terminals
- Epoxy sealed terminals

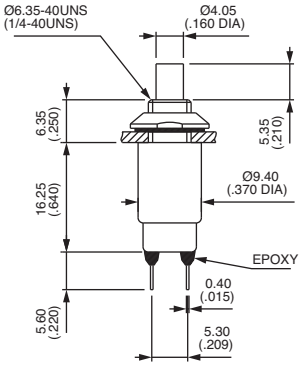


Bushing Ø 6,35 (1/4) - Alternate action - tactile feedback



Gold plated contacts
9631CDB ON - OFF

Silver contacts
9631AB ON - OFF

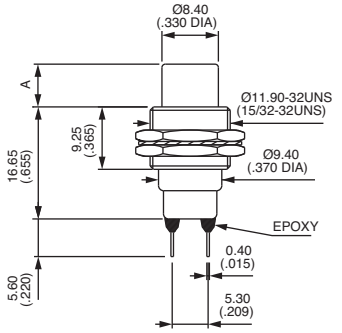


Standard hardware : 1 conic nut and 1 lockwasher

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) across flats and 1 lockwasher