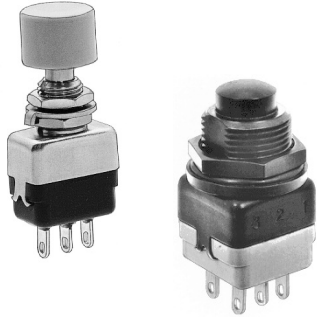


# 13000 series

## Professional quick-break momentary pushbutton switches

*Distinctive features and specifications*



PC and panel mount models

UG1410A-R1

Bushing Ø 6,35 (1/4) and 11,9 (15/32)

UL and CECC approved

B2

### ELECTRICAL SPECIFICATIONS

- Max. current/voltage rating with resistive load :
  - silver contacts (A-AD2) : 4A 30VDC
  - gold plated contacts (CD) : 100mA 30V
- Minimum load (AD2-CD contacts) : 10mA 50mV, 10µA 5V min.
- Initial contact resistance : 10 mΩ max.
- Insulation resistance : 1.000 MΩ min. at 500VDC
- Dielectric strength :
  - 1.000 Vrms 50 Hz min. between terminals
  - 2.000 Vrms 50 Hz min. between poles and between terminals and frame
- Contact bounce : 2 ms max.
- Electrical life :

Contacts	Max. current/voltage rating	Number of cycles
A	4A 30VDC	50.000
AD2	4A 30VDC (gold plating : 100mA 30VDC max.)	20.000
CD	100mA 30VDC	50.000
	Low level or mechanical life	150.000

### MATERIALS

- Case : diallylphthalate (DAP)
- Actuator : brass, nickel plated
- Bushing : brass, nickel plated
- Housing : brass, nickel plated
- Contacts : **A** : silver  
**AD2** : silver, gold plated  
(2 micron gold)  
**CD** : brass, gold plated
- Terminal seal : epoxy

Note : AD2 contacts can be used for high level applications. In this case, the gold layer is considered only as a protection against oxidation during storage.

### GENERAL SPECIFICATIONS

- Torque : 1,25 Nm (.922 Ft.lb) max. applied to nut
- Standard panel thickness : 2 mm (.078 ) max.
- Total travel : 2 mm (.078)
- Operating temperature : -40°C to +85°C

The company reserves the right to change specifications without notice.

# 13000 series

## Professional quick-break momentary pushbutton switches

Specifications

### RELIABILITY - RUN-IN TEST

Upon request, each individual switch can be submitted to a low level run-in test of 50 or 250 cycles to ensure suitability for special applications requiring a very high level of reliability (military, space, etc.).

### AGENCY APPROVALS



Designed to **MIL** specifications

#### Availability :

UL : all models with silver or gold plated silver contacts

CECC : consult factory for details of approved models.

**Marking** : to order switches marked UL or CECC, complete appropriate box of ordering format.

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



**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 models : 2 hex nuts 8 mm (.314) across flats, 1 locking ring and 1 lockwasher.

Standard and special hardware available are presented in section I.

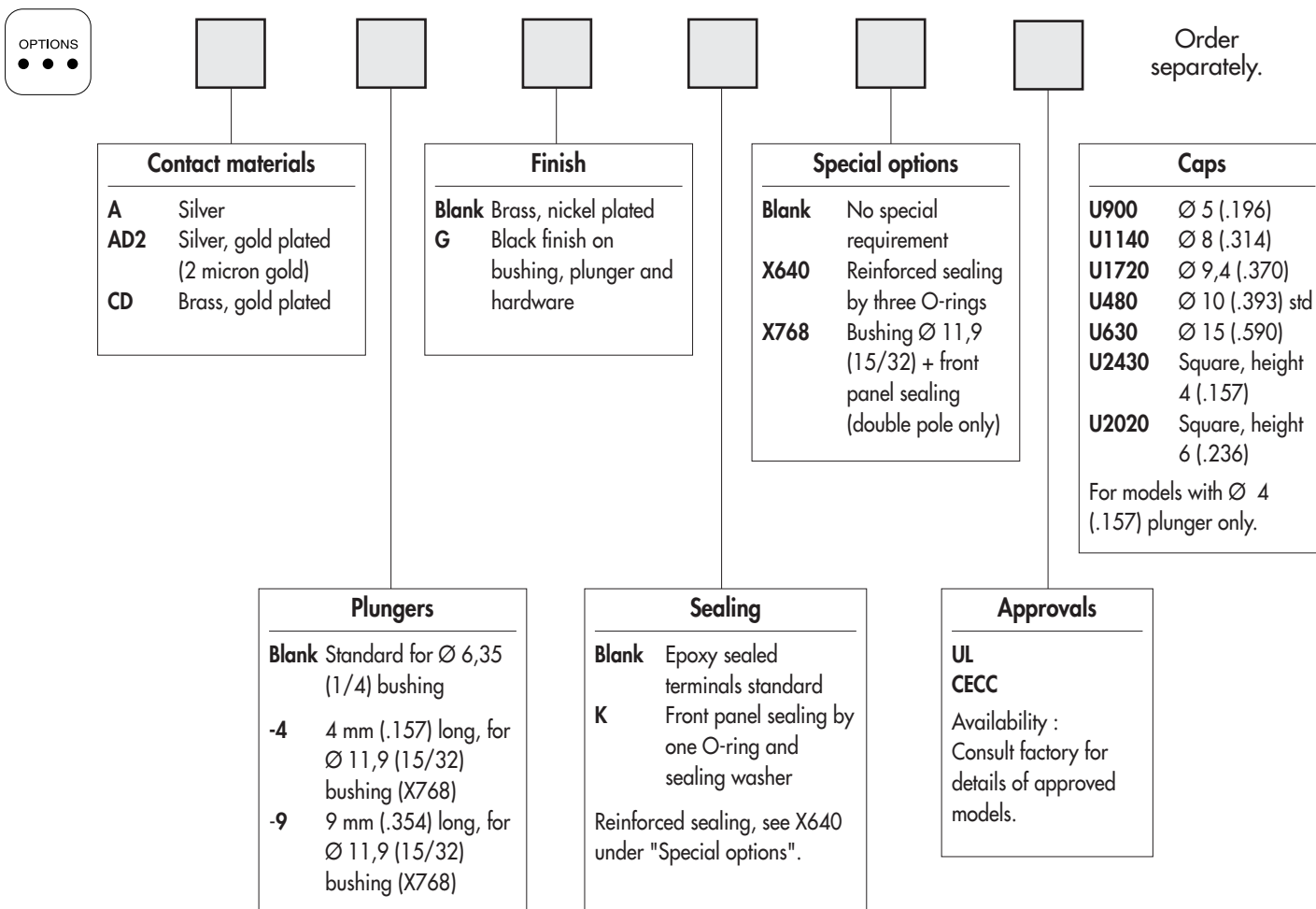
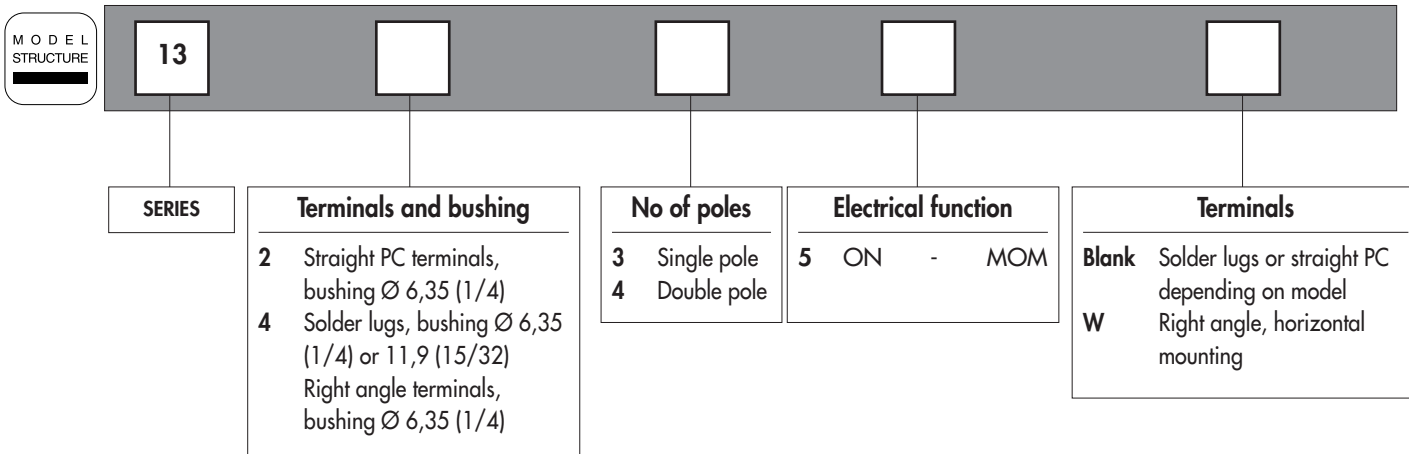


**Packaging unit** : 50 pieces.

# 13000 series

## Professional quick-break momentary pushbutton switches

### Overview



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

#### ABOUT THIS SERIES

On the following pages, you will find successively :

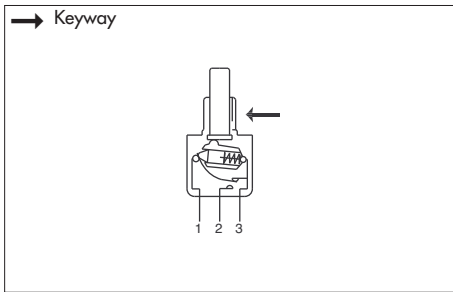
- model structure of switches
- options in the same order as in above chart



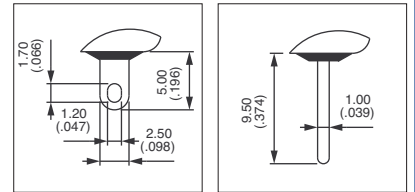
# 13000 series

Professional quick-break momentary pushbutton switches

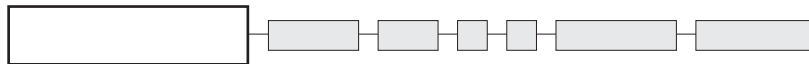
Solder lug terminals : 13400 - Straight PC terminals : 13200



- Threaded bushing  $\varnothing 6,35$  mm (1/4)
- Epoxy sealed terminals standard



MODEL STRUCTURE



B2

## Solder lug terminals : 13400

→ Keyway



Single pole  
**13435**

Double pole  
**13445**



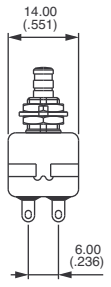
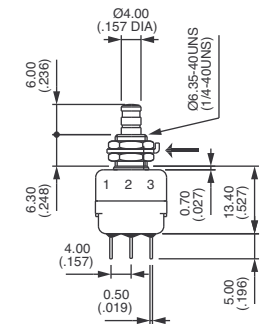
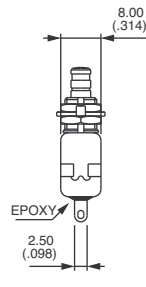
1-3

ON



1-2

MOM



## Straight PC terminals : 13200

→ Keyway



Single pole  
**13235**

Double pole  
**13245**



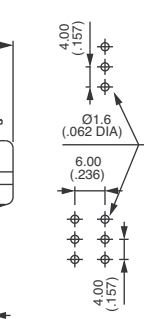
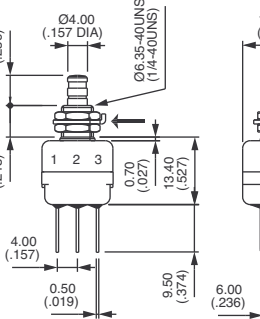
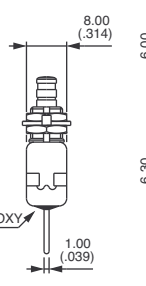
1-3

ON



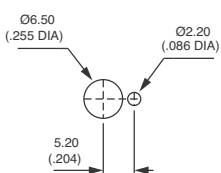
1-2

MOM

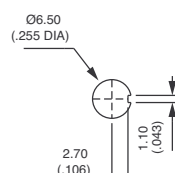


## PANEL CUT-OUT

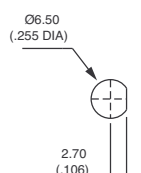
### 13400 - 13200



Standard



With **K**  
sealing option



With **X640**  
sealing option

# 13000 series

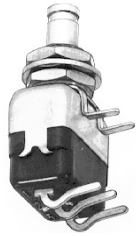
Professional quick-break momentary pushbutton switches

Right angle terminals : 13400W

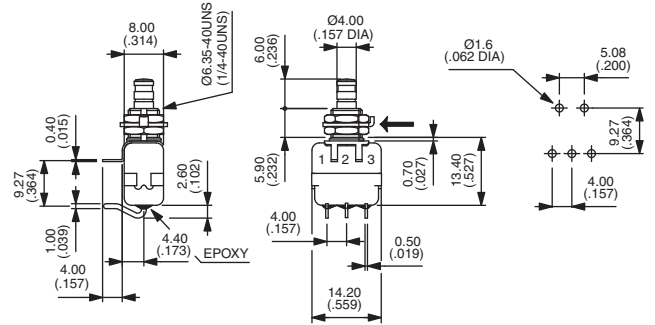
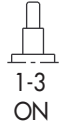


## Right angle terminals - single pole

→ Keyway



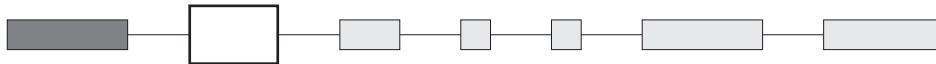
13435W



B2

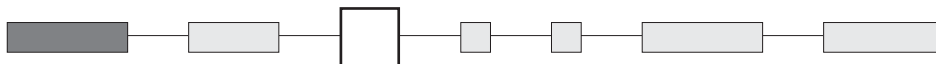
Panel cut-out, see previous page.

## CONTACT MATERIALS



- A Silver
- AD2 Silver, gold plated (2 micron gold)
- CD Brass, gold plated

## PLUNGER



Dash compulsory before plunger code.

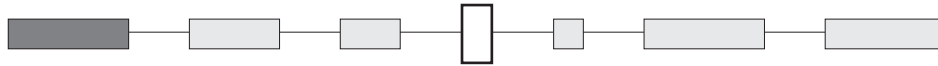
- Blank Standard plunger for Ø 6,35 (1/4) bushing
- 4 4 mm (.157) long plunger for Ø 11,9 (15/32) bushing (X768 option)
- 9 9 mm (.354) long plunger for Ø 11,9 (15/32) bushing (X768 option)



# 13000 series

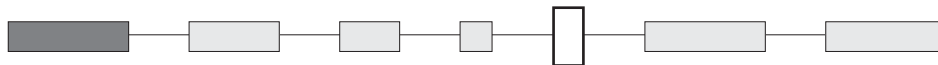
## Professional quick-break momentary pushbutton switches

### FINISH



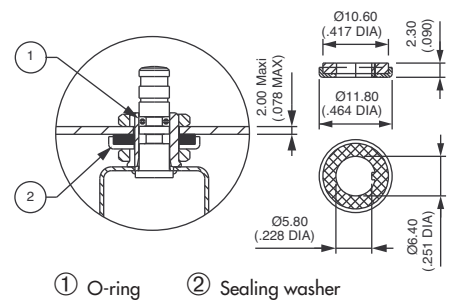
- Blank** Bright chrome finish
- G** Black finish on bushing, actuator and hardware

### SEALING

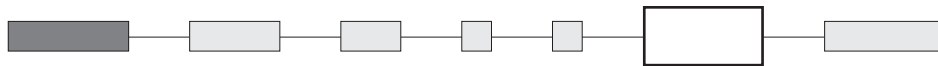


- K** Front panel sealing by one O-ring and sealing washer. Protects the switch against water and dust. Panel seal withstands 1 bar pressure and remains sealed even when switch is operated.


Reinforced sealing : see X640 under "Special options".



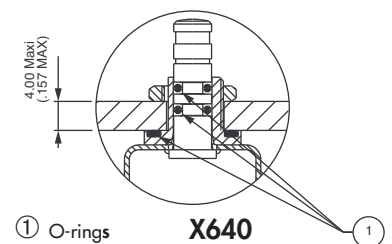
### SPECIAL OPTIONS



- X640** Front panel sealing by three O-rings. Flatted bush for precise orientation. Protects the switch against water and dust. Panel seal withstands 1 bar pressure and remains sealed even when switch is operated.

 Available on models with Ø 6,35 (1/4) bushing only.

- X935** C-ring on plunger for positive stop



# 13000 series

Professional quick-break momentary pushbutton switches



**X768** Sealed switch with  $\varnothing 11,9$  (15/32) flatted bushing. Chrome plated actuator. Solder lug terminals, double pole. Contact and finish options available.

Security cap for this model : see section I.

B2



With short plunger  
**13445 -4 X768**

With long plunger  
**13445 -9 X768**

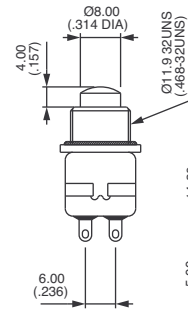


ON

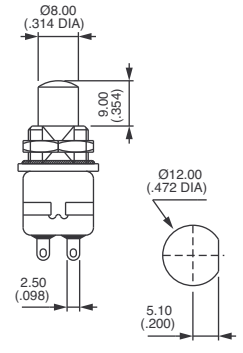
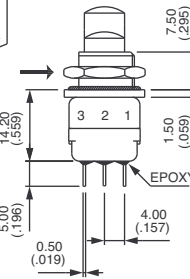


MOM

→ Flat

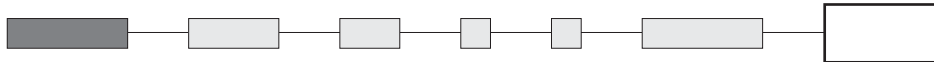


Short (-4)



Long (-9)

## AGENCY APPROVALS



UL

CECC CECC 96401-001

### Availability :

UL : all models with silver or gold plated silver contacts  
CECC : consult factory for details of approved models.

**Marking** : to order switches marked UL or CECC, please complete above box with desired approval.  
Blank : no agency approval required.

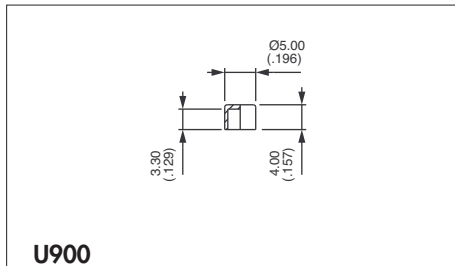


# 13000 series

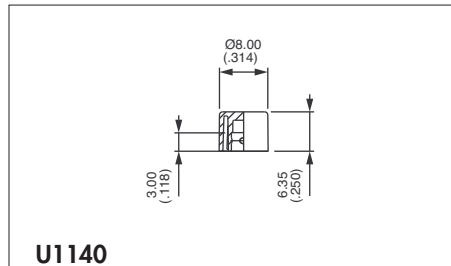
## Professional quick-break momentary pushbutton switches

### CAPS

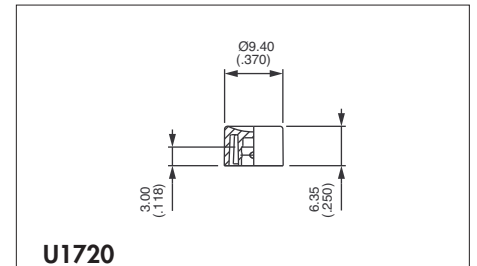
Order separately.



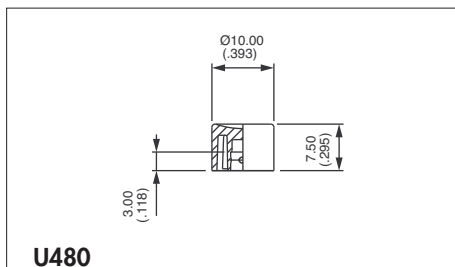
**U900**



**U1140**

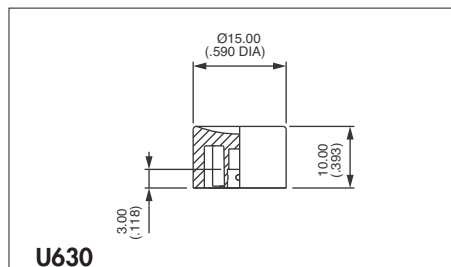


**U1720**

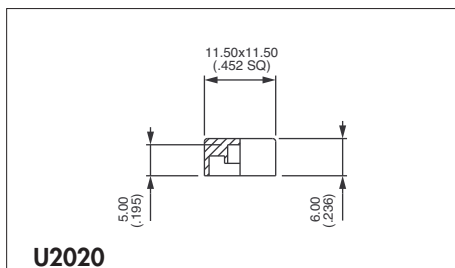


**U480**

Standard

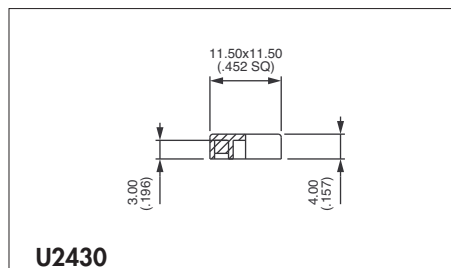


**U630**



**U2020**

Square



**U2430**

Square



For models with Ø 6,35 (1/4) bushing only.

#### Cap colours

Replace last "0" by number

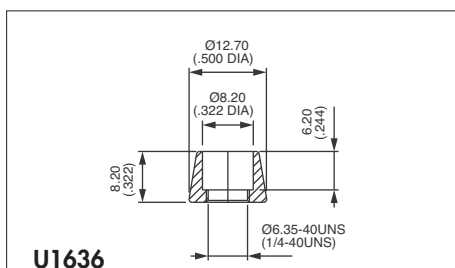
- 1 blue
- 1/4 dark blue
- 2 black
- 3 green
- 4 grey
- 5 yellow
- 6 red
- 7 ivory
- 7/1 white
- 9 orange

### DRESS NUTS

Chrome plated

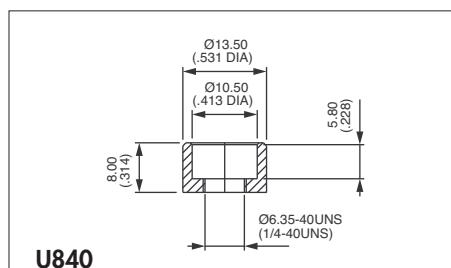


For models with Ø 6,35 (1/4) bushing only.



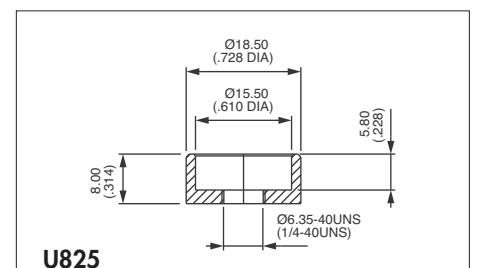
**U1636**

For cap U1140



**U840**

For cap U480



**U825**

For cap U630

Dress nuts are to be ordered separately.



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[13435AG](#) [13440AD2G25X822+U4546](#) [13445A4GX768](#)