

13000 series

Professional quick-break
momentary pushbutton switches



DISTINCTIVE FEATURES

PC and panel mount models

Bushing Ø 6.35 (1/4) and 11.9 (15/32)

UL and CECC approved



ELECTRICAL SPECIFICATIONS

- Max. current/voltage rating with resistive load :
 - silver contacts (A-AD2) : 4 A 30 VDC
 - gold plated contacts (CD) : 100 mA 30 V
- Minimum load (AD2-CD contacts) : 10 mA 50 mV, 10 µA 5 V min.
- Initial contact resistance : 10 mΩ max.
- Insulation resistance : 1,000 MΩ min. at 5 00VDC
- 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	4 A 30 VDC	50,000
AD2	4 A 30 VDC (gold plating : 100 mA 30 VDC max.)	20,000
CD	100 mA 30 VDC	50,000
	Low level or mechanical life	150,000



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 (-40 °F to +185 °F)

The company reserves the right to change specifications without notice.



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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.



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



2 A 125 VAC/250 VAC



CECC 96401-001

Designed to **MIL** specifications

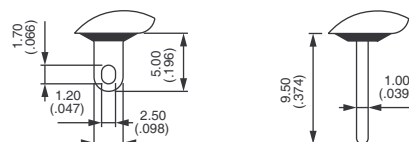
Availability :

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.

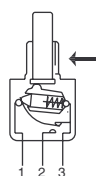


TERMINALS



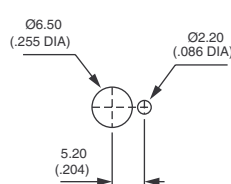
ELECTRICAL FUNCTION

→ KEYWAY

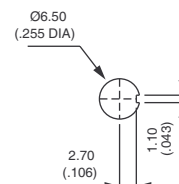


PANEL CUT-OUT

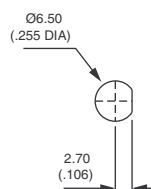
FOR Ø 6,35 (1/4) BUSHING



Standard



With K sealing option



With X640 sealing option

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BUILD YOUR PART NUMBER

BASIC PART NUMBER				
13				
SERIES	TERMINALS AND BUSHINGS	NUMBER OF POLES	ELECTRICAL FUNCTION	TERMINALS
	2 Straight PC terminals, bushing Ø 6.35 (1/4) 4 Solder lugs, bushing Ø 6.35 (1/4) or 11.9 (15/32) Right angle terminals, bushing Ø 6.35 (1/4)	3 Single pole 4 Double pole	5 ON - MOM	Blank Solder lugs or straight PC depending on model W Right angle, horizontal mounting
OPTIONS				
				ORDER SEPARATELY.
CONTACT MATERIALS	FINISH	SPECIAL OPTIONS		CAPS
A Silver AD2 Silver, gold plated (2 micron gold) CD Brass, gold plated	Blank Brass, nickel plated G Black finish on bushing, plunger and hardware	Blank No special requirement X640 Reinforced sealing by three O-rings X768 Bushing Ø 11.9 (15/32) + front panel sealing (double pole only)		U900 Ø 5 (.196) U1140 Ø 8 (.314) U1720 Ø 9.4 (.370) U480 Ø 10 (.393) std U630 Ø 15 (.590) U2430 Square, height 4 (.157) U2020 Square, height 6 (.236) For models with Ø 4 (.157) plunger only.
	PLUNGERS	SEALING	APPROVALS	
	Blank Standard for Ø 6.35 (1/4) bushing -4 4 mm (.157) long, for Ø 11.9 (15/32) bushing (X768) -9 9 mm (.354) long, for Ø 11.9 (15/32) bushing (X768)	Blank Epoxy sealed terminals standard K Front panel sealing by one O-ring and sealing washer Reinforced sealing, see X640 under "Special options".	UL CECC Consult factory for details of approved models.	



ABOUT THIS SERIES

On the following pages, you will find successively basic part numbers of switches and options in the same order as in above chart.



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. See "Sealing Boots" section.

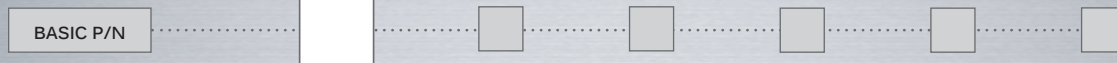


Mounting accessories : standard hardware supplied with all models : 2 hex nuts 8 mm (.314) across flats, 1 locking ring and 1 lockwasher. Standard and special hardware is presented in the "Hardware" section of website.

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CONTACTS MATERIALS



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

PLUNGERS



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)

FINISH



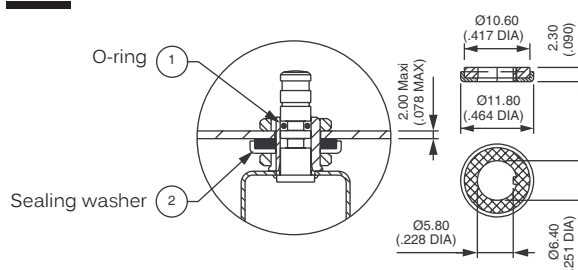
- Blank Bright chrome finish
- G Black finish on bushing, actuator and hardware

SEALING

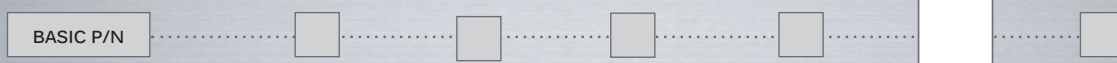


- K Front panel sealing by one O-ring and sealing washer. Protects the switch against water and dust. Panel seal withstands 1 bar pressure and remains sealed even when switch is operated.

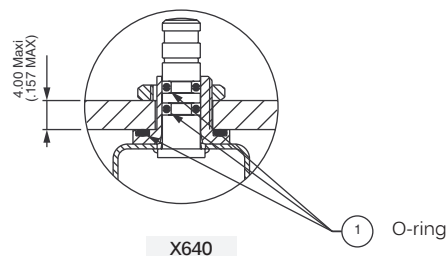
Reinforced sealing : see X640 under "Special options".



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
- X768 Sealed switch with Ø 11.9 (15/32) flatted bushing. Chrome plated actuator. Solder lug terminals, double pole. Contact and finish options available. See previous pages.



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AGENCY APPROVALS

BASIC P/N

UL
CECC CECC 96401-001
Blank No agency approval required.

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.

CAPS

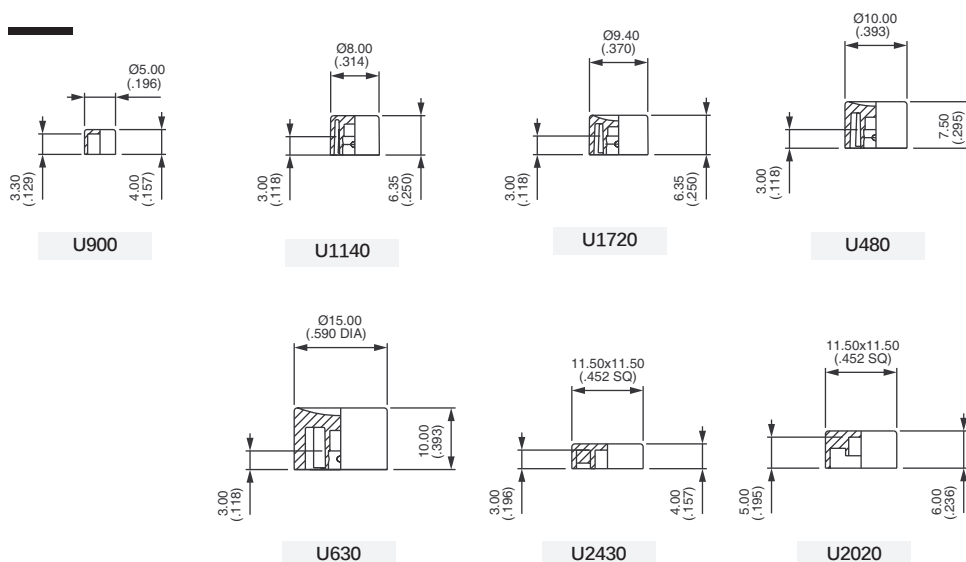
Order separately

The caps below are for Ø 4 mm plungers (standard and -9), except U2600.

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 |



Mouser Electronics

Authorized Distributor

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