SP series

Washable snap-action pushbutton switches



DISTINCTIVE FEATURES

Process sealed
Front and rear sealing
Process compatible (plain bushing models)
Wave solderable
Washable



ELECTRICAL SPECIFICATIONS

- Max. current/voltage rating with resistive load :
  - gold plated brass contacts : 100 mA 30 VDC
  - silver or gold plated silver contacts : 1 A 30 VDC
- Initial contact resistance : 50 mΩ max.
- Insulation resistance : 1,000 MΩ min.
- Dielectric strength : 1,000 Vrms 50 Hz min.
- Electrical life : 60,000 cycles

ENVIRONMENTAL SPECIFICATIONS

- Operating temperature : -20 °C to +85 °C (-4 °F to +185 °F)
- Storage temperature : -40 °C to +85 °C (-40 °F to +185 °F)
- Moisture : The insulating materials employed and the complete seal permit the switches to withstand a 56 days moisture test (IEC 68-2-3).
- Solderability : The switches are tested at 235°C according to IEC 68-2-20 after accelerated aging.

GENERAL SPECIFICATIONS

- Torque : 0.25 Nm (.18 Ft.lb) applied to nut (threaded bushing)
- Total travel : 0.50 mm (.019)
- Mechanical strength : Terminals are strengthened by a bracket or a ground plate ensuring the rigidity of the switch on the board. Actuator strength is 10 N max.
- Soldering - thermal shock (plain bushing models only) : The switches are especially designed for flow soldering at 260 °C (500 °F) during 5 seconds owing to high temperature polymer parts.
- Iron soldering (threaded bushing models) : 300 °C (572 °F) max., 5 seconds max.

The company reserves the right to change specifications without notice.

SP series

Washable snap-action pushbutton switches

MATERIALS

- Case and cover : UL94-V0, polyamide, glass filled or PES
- Actuator : polyamide, glass filled
- Contacts
  0 : brass, gold plated
  1 : silver
  2 : silver, gold plated
- Terminal seal : epoxy

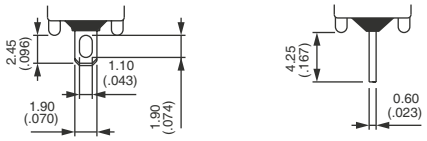
APEM products may be recycled at end-of-life for the re-claiming of valuable metal components.

AGENCY APPROVAL

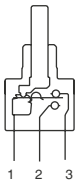
1 A 120 VAC

Availability : all models with silver or gold plated silver contacts.
Marking : to order switches marked UL , complete appropriate box of ordering format.

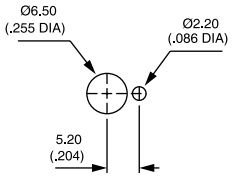
TERMINALS



ELECTRICAL FUNCTIONS



PANEL CUT-OUT



SP series

Washable snap-action pushbutton switches

BUILD YOUR PART NUMBER

BASIC PART NUMBER

SERIES	NUMBER OF POLES	ELECTRICAL FUNCTION	TERMINALS
SP	3 Single pole 4 Double pole	5 ON - MOM	P0 Straight PC Y0 Straight PC and bracket mounting W0 Right angle, horizontal mounting WW Right angle, vertical mounting S0 Solder lug terminals, (threaded bushing)

OPTIONS

CONTACT AND TERMINAL MATERIALS	PLUNGERS	OPTIONS/APPROVAL	CAPS (MOUNTED)
0 Brass, gold plated 1 Silver 2 Silver, gold plated	00 Standard 02 Short	00 Standard model 01 UL marking on standard model 02 UL marking on threaded bushing model (SP only) 76 Short bushing for plunger 02 (SP only) 77 Threaded bushing	10 Ø 5 (.196) 20 Ø 8 (.314) 30 Ø 9,4 (.370) 40 Ø 10 (.393) 80 Ø 15 (.590) 70 Square Height 4 (.157) 50 Square Height 6 (.236)

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.

Mounting accessories : Standard hardware supplied with all models with Ø 6.35 (1/4) threaded bushing : 2 hex nuts 8 mm (.314) across flats, 1 locking ring and 1 lockwasher. Standard and special hardware available is presented in the "Accessories" section of website.

SP series

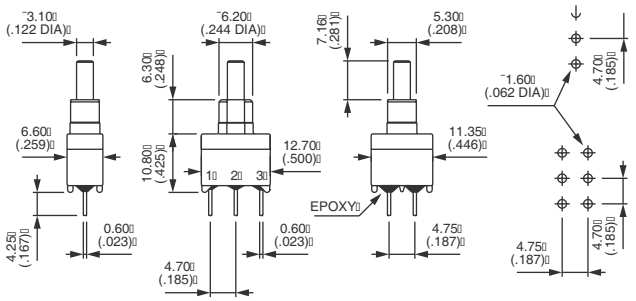
Washable snap-action pushbutton switches

PLAIN BUSHING -STRAIGHT PC TERMINALS



	1-3	1-2
Single pole		
SP35P0... 00	ON	MOM
Double pole		
SP45P0... 00	ON	MOM

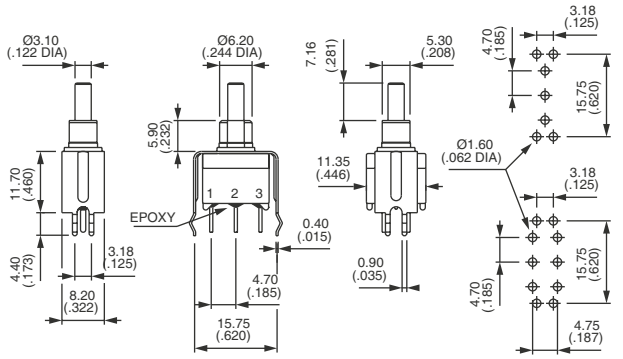
Shown with standard plunger



PLAIN BUSHING - BRACKET MOUNTING



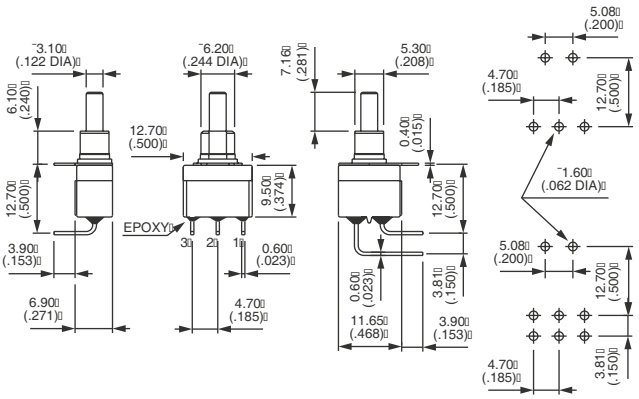
	1-3	1-2
Single pole		
SP35Y0... 00	ON	MOM
Double pole		
SP45Y0... 00	ON	MOM



PLAIN BUSHING -RIGHT ANGLE TERMINALS HORIZONTAL



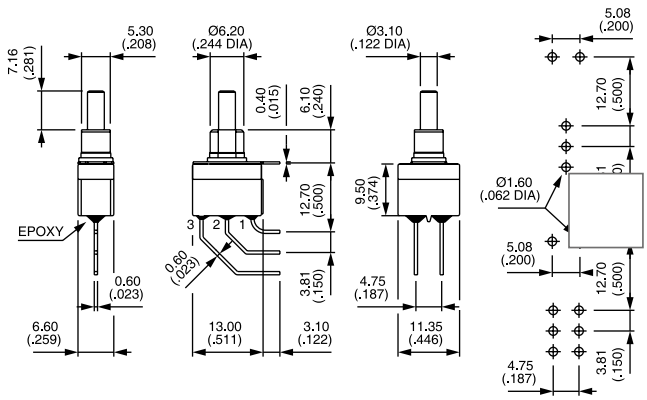
	1-3	1-2
Single pole		
SP35W0... 00	ON	MOM
Double pole		
SP45W0... 00	ON	MOM



PLAIN BUSHING - RIGHT ANGLE TERMINALS VERTICAL



	1-3	1-2
Single pole		
SP35WW... 00	ON	MOM
Double pole		
SP45WW... 00	ON	MOM



SP series

Washable snap-action pushbutton switches

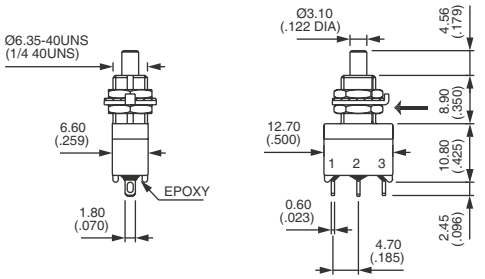
THREADED BUSHING - SOLDER LUG TERMINALS



	1-3	1-2
Single pole		
SP35S0... 77	ON	MOM

Shown with standard plunger

→ KEYWAY

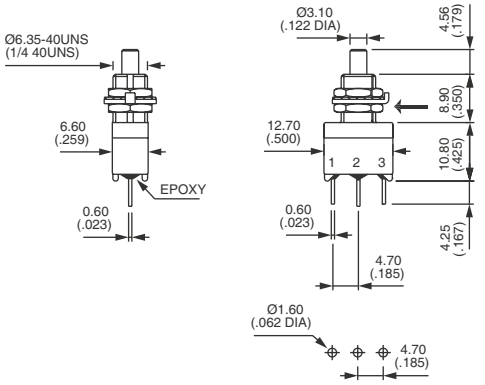


THREADED BUSHING - STRAIGHT PC TERMINALS



	1-3	1-2
Single pole		
SP35P0... 77	ON	MOM

→ KEYWAY



CONTACT & TERMINAL MATERIALS

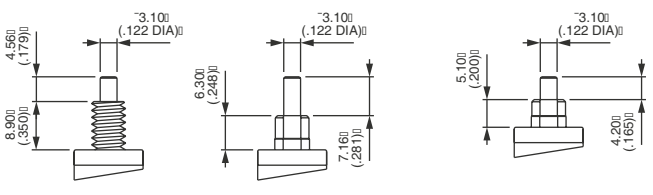
BASIC P/N

0	Brass, gold plated (standard)
1	Silver
2	Silver, gold plated

PLUNGERS

BASIC P/N

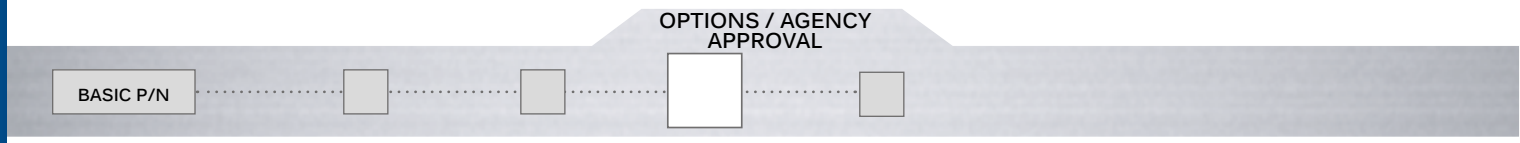
00	Standard plunger
02	Short (for models with plain bushing, single pole only) Order with option 76 below.



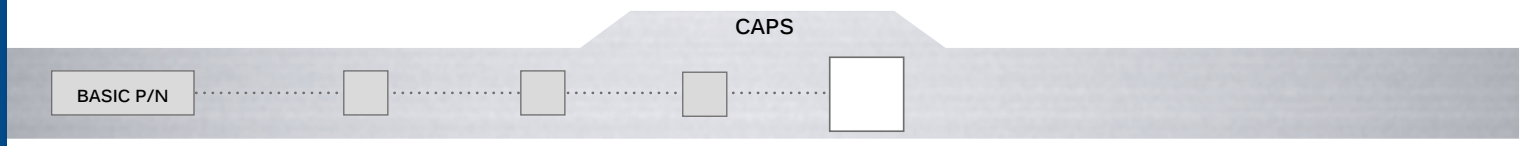
00 02

SP series

Washable snap-action pushbutton switches



00	Standard model
01	UL marking for standard model
02	UL marking for threaded bushing model (single pole models only)
76	Short plain bushing for 02 plunger (single pole models only)
77	Threaded bushing (included in basic part numbers on previous page)

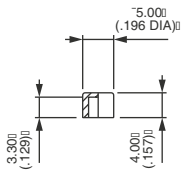


Blank	Without cap
10	P/N U2400
20	P/N U2510
30	P/N U2130
40	Standard - P/N U2900
50	Square - P/N U2340. Not available with plunger 02
70	Square - P/N U910
80	P/N U3400. Not available with plunger 02

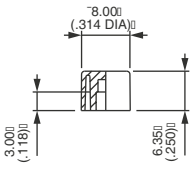
For cap colors, replace «**0**» with number :

1	Blue
1/4	Dark blue
2	Black
3	Green
4	Grey
5	Yellow
6	Red
7	Ivory
7/1	White
9	Orange

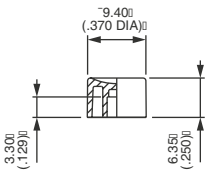
To order caps separately, use their P/N (U...) (for threaded bushing order only separately).



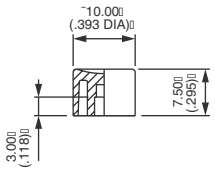
10



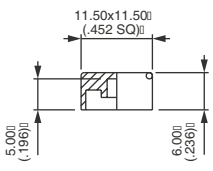
20



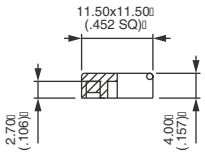
30



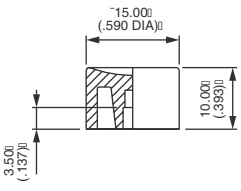
40



50



70



80

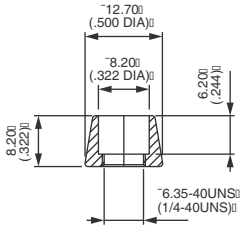
SP series

Washable snap-action pushbutton switches

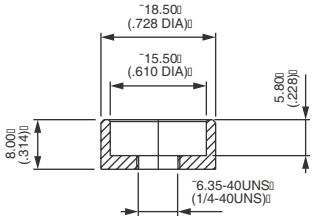
DRESS NUT

For threaded bushing models only

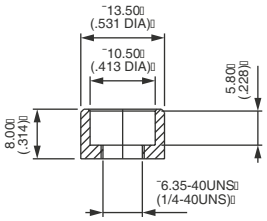
Dress nuts are to be ordered separately.



U1636
For cap U2510



U825
For cap U3400



U840
For cap U2900