chanhvinh.com

SW-TP-1803

TP series

Subminiature washable momentary pushbutton switches



DISTINCTIVE FEATURES

Process sealed
Single piece case
Front and rear sealing
Wide variety of contact materials
Same PCB layout as TL, TR and TG subminiature switches



ELECTRICAL SPECIFICATIONS

- Max. current/voltage rating with resistive load :
  - gold plated contacts : 0.4 VA 20 V max. AC or DC
  - silver plated contacts : 0.5 A 48 V max. AC or DC
- Minimum load : 10 mA 50 mV - 10 µA 5 VDC
- Contact resistance : 50 mΩ max.
- Insulation resistance : 1,000 MΩ min. at 500 VDC
- Dielectric strength :
  1,000 Vrms 50 Hz min. between terminals and frame
  500 Vrms 50 Hz min. between terminals
- Electrical life at full load :
  - gold plated contacts : 60,000 cycles
  - silver plated contacts : 20,000 cycles

ENVIRONMENTAL SPECIFICATIONS

- Operating temperature : -30 °C to +85 °C (-22 °F to +185 °F)
- Moisture : 21 days 95 % (NFC 20-603 - IEC 68-2-3)

GENERAL SPECIFICATIONS

- Total travel :
  - function 2 : 1 mm (.039)
  - function 3 : 0.8 mm (.031)
- Strength of terminals : pull-out force - 10 N max.
- Cleaning : solvents or water + detergent
- Wave soldering : 260 °C (500 °F) - 5 sec.

The company reserves the right to change specifications without notice.

TP series

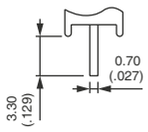
Subminiature washable momentary pushbutton switches

MATERIALS

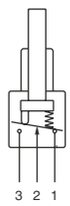
- Case : PBT
- Actuator : polyamide, glass filled
- Contacts and terminals :
  - **0** : brass, gold plated
  - **1** : brass, silver plated
  - **3** : brass, gold plated (1.27 micron gold)
  - **8** : contact brass, gold plated + tin plated terminals
  - **9** : contact brass, gold plated (1.27 micron gold) + tin plated terminals
- Terminal seal : epoxy

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

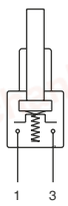
TERMINALS



ELECTRICAL FUNCTIONS

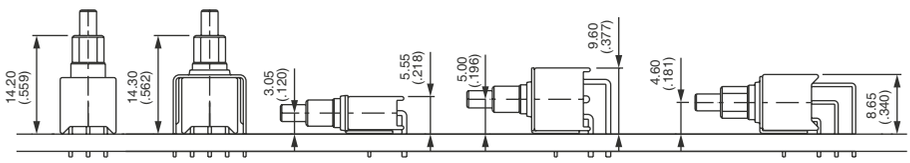


Function 2
(ON - MOM)



Function 3 (NO)
(OFF - MOM)

PCB MOUNTING



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BUILD YOUR PART NUMBER

BASIC PART NUMBER

TP — ___ — ___ — ___

SERIES

NUMBER OF POLES

3	Single pole
4	Double pole

ELECTRICAL FUNCTIONS

2	ON - MOM
3	OFF - MOM

TERMINALS

P0	Straight PC
Y0	Bracket mounting
W0	Right angle, horizontal mounting
WW	Right angle, vertical mounting

OPTIONS

___ — ___ — ___ — ___

CONTACTS AND TERMINAL MATERIALS

0	Brass, gold plated
1	Brass, silver plated
3	3 Brass, gold plated (1.27 micron gold)
8	Contact brass, gold plated + tin plated terminals
9	Contact brass, gold plated (1.27 micron gold) + tin plated terminals (SP only)

PLUNGERS / CASE COLOR

With blue case

30	Short - standard
35	Long

With black case

80	Short - standard
85	Long
82	flush

SPECIAL OPTIONS

00	No special requirement
07	Trimmed terminals 3.2 (.125)
08	Extended terminals
18	Switch without ground plate
20	Ground plate with 2 pins
25	Trimmed terminals 5 (.196)
40	With protection cap U3500
50	Crimped ground plate pins

CAPS

For long plunger

30	Ø 6.5 (.255) (P/N U4310)
40	Ø 5 (.196) (P/N U4320)

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.

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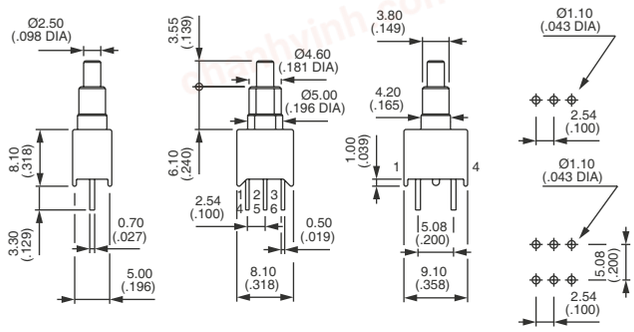
STRAIGHT PC TERMINALS : TP..P0



Single pole	Double pole		
TP32P0	TP42P0	ON	MOM
TP33P0	TP43P0	OFF	MOM

Function 3 has two terminals only (3 and 1) per pole

Shown in function 2, with standard plunger

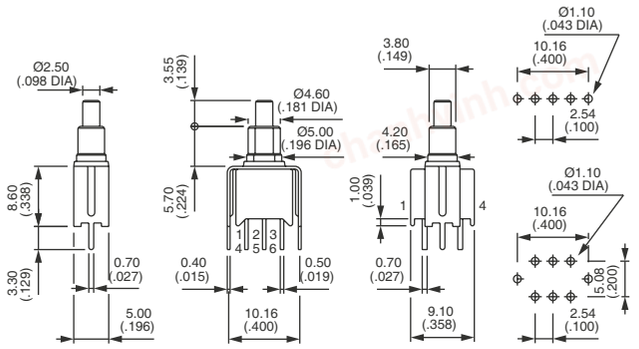


STRAIGHT TERMINALS BRACKET MOUNTING : TP..Y0



Single pole	Double pole		
TP32Y0	TP42Y0	ON	MOM
TP33Y0	TP43Y0	OFF	MOM

Function 3 has two terminals only (3 and 1) per pole

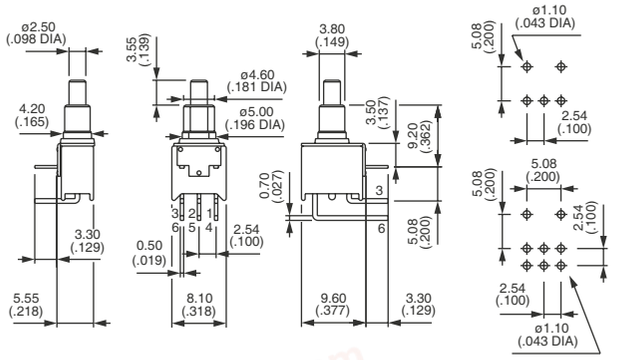


RIGHT ANGLE TERMINALS HORIZONTAL MOUNTING : TP..W0

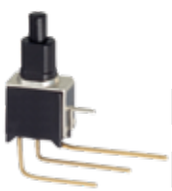


Single pole	Double pole		
TP32W0	TP42W0	ON	MOM
TP33W0	TP43W0	OFF	MOM

Function 3 has two terminals only (3 and 1) per pole

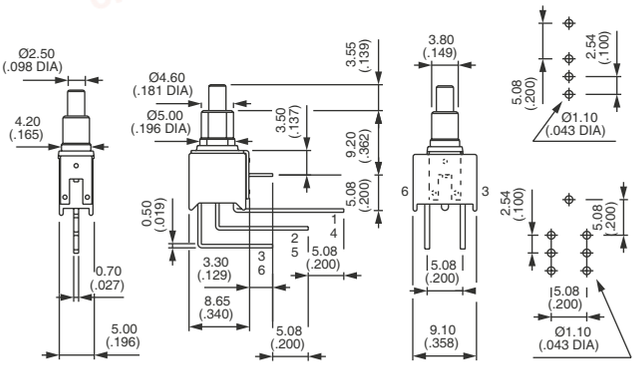


RIGHT ANGLE TERMINALS VERTICAL MOUNTING : TP..WW



Single pole	Double pole		
TP32WW	TP42WW	ON	MOM
TP33WW	TP43WW	OFF	MOM

Function 3 has two terminals only (3 and 1) per pole



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CONTACT AND TERMINAL MATERIALS

BASIC P/N

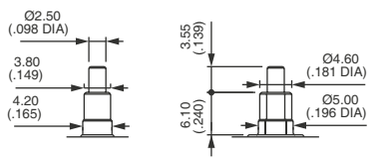
0	Brass, gold plated
1	Brass, silver plated
3	Brass, gold plated (1.27 micron gold)
8	Contact brass, gold plated + tin plated terminals
9	Contact brass, gold plated (1.27 micron gold) + tin plated terminals (single pole only)

PLUNGERS

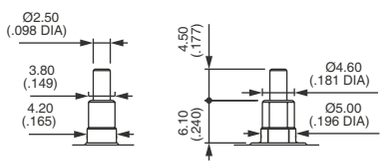
BASIC P/N

Standard plunger color is black.

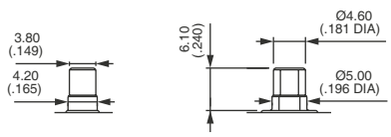
30	Short - standard - with blue case
80	Short - standard - with black case
35	Long with blue case
85	Long with black case
82	Flush with black case



Short - standard



Long

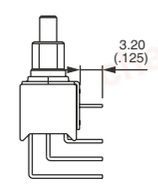


Flush

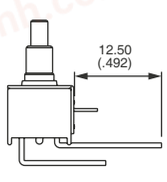
SPECIAL OPTIONS

BASIC P/N

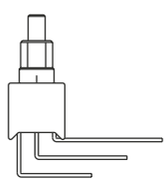
00	No special requirement
07	**Trimmed terminals** - length 3.2 mm (.125) for TP..WW models only
08	**Extended terminals** for TP..W0 models only
18	Switch **without ground plate** for TP..WW models only
20	**Ground plate with 2 pins** for TP..WW models only
25	**Trimmed terminals** - length 5 mm (.196) for all models, except TP..WW



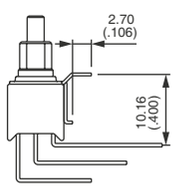
07



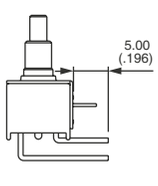
08



18



20



25

TP series

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SPECIAL OPTIONS (CONTINUED)

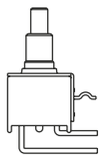
BASIC P/N

40 With cap U3500 mounted over plunger and bushing. Further protects the switch during PCB processing

50 **Crimping of ground plate pins**.
Retains switch on PC during handling and wave soldering.
For models TP..W0, TP..WW and TP..Y0 single and double pole.



40



50

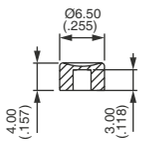
CAPS

BASIC P/N

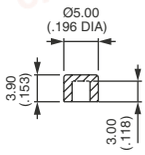
Blank Without cap
30 P/N U4310 - for long plunger only
40 P/N U4320 - for long plunger only

To order caps separately, use their part number (U...).

For cap colors, replace "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



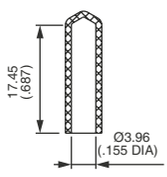
30



40

CAPS FOR PCB PROCESSING

Order separately
Provide additional protection during PCB processing. Supplied separately. For cap mounted on the switch, see special option 40.
Material : vinyl



U3502