TP series

Tiny washable momentary pushbutton switches

Distinctive features and specifications

UG1410A



- **Process sealed**
  - Single piece case
  - O-ring seal between actuator and bushing
  - Epoxy sealed terminals
- **Wide variety of contact materials**
- **Same PCB layout as TL, TR and TG tiny switches**

B2

ELECTRICAL SPECIFICATIONS

- Max. current/voltage rating with resistive load :
  - gold plated contacts : 0,4VA 20V max. AC or DC
  - silver plated contacts : 0,5A 48V max. AC or DC
- Minimum load : 10mA 50mV - 10µA 5VDC
- Contact resistance : 50 mΩ max.
- Insulation resistance : 1.000 MΩ min. at 500VDC
- 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

GENERAL SPECIFICATIONS

- Total travel :
  - function 2 : 1 mm (.039)
  - function 3 : 0,8 mm (.031)
- Strength of terminals : pull-out force - 10N max.
- Operating temperature : -30°C to +85°C
- Moisture : 21 days 95 % (NFC 20-603 - IEC 68-2-3)
- Cleaning : solvents or water + detergent
- Wave soldering : 260°C - 5 sec.

MATERIALS

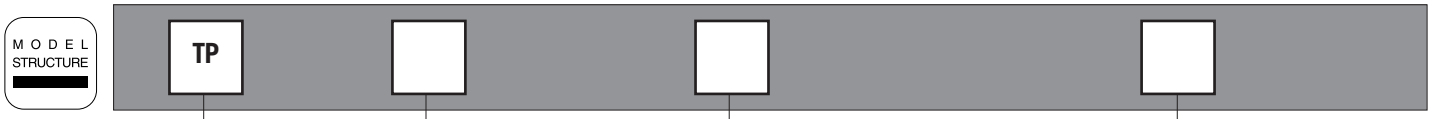
- Case : PBT
- Actuator : polyamide, glass filled
- Contacts and terminals :
  0 : brass, gold plated
  1 : brass, silver plated
  3 : brass, gold plated (1,27 micron gold)
  8 : contact brass, gold plated + tin plated terminals
  9 : contact brass, gold plated (1,27 micron gold) + tin plated terminals
- Terminal seal : epoxy

The company reserves the right to change specifications without notice.

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Overview



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
MW	Wire-wrap

B2



Contacts and terminal materials

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 (SP only)

Plungers

- Short - standard
- Long
- Flush

Codes : see "Options" pages.

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)
30	Wire-wrap on bracket mounting models
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 :
- model structure of switches
- options in the same order as in above chart

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

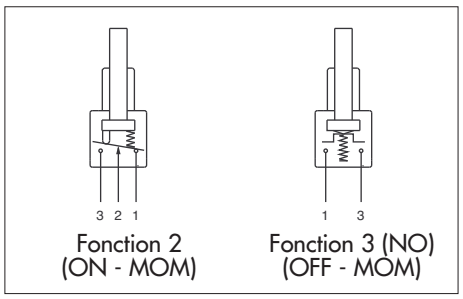
NOTICE : please note that not all combinations of above numbers are available.
Refer to the following pages for further information.

Packaging unit : 100 pieces, except for models with WW terminals (50 pieces).

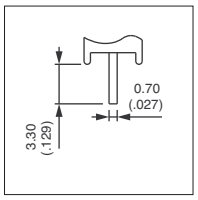
TP series

Tiny washable momentary pushbutton switches

MODEL STRUCTURE

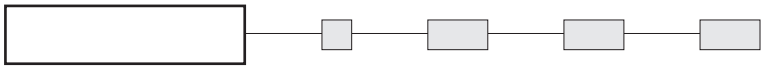


- Straight PC, right angle or wire-wrap terminals
- 1 and 2 pole configurations



B2

MODEL STRUCTURE

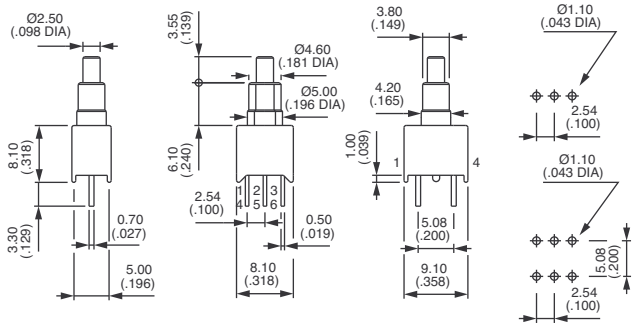


Shown in function 2, with standard plunger

Straight PC terminals : TP..P0



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

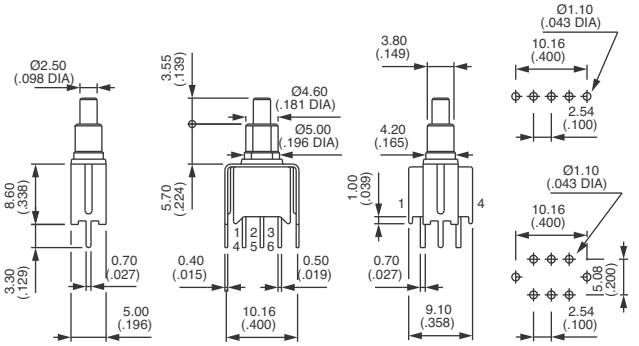


Function 3 has two terminals only (3 and 1) per pole

Straight terminals - bracket mounting : TP..Y0



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

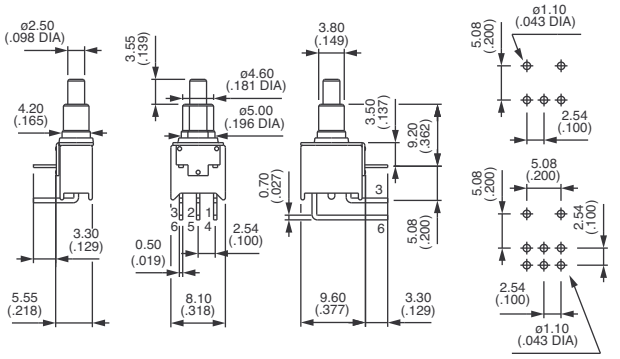


Function 3 has two terminals only (3 and 1) per pole

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

TP series

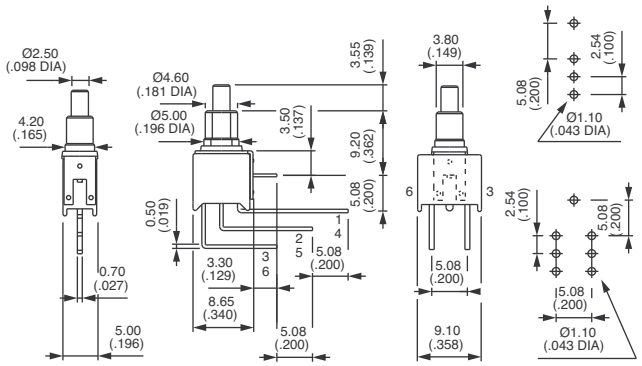
Tiny washable momentary pushbutton switches

Shown in function 2, with standard plunger

Right angle terminals - vertical mounting : TP..WW



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

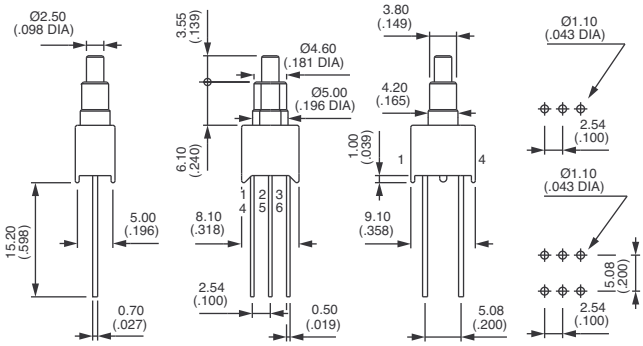


Function 3 has two terminals only (3 and 1) per pole

Wire-wrap terminals : TP..MW

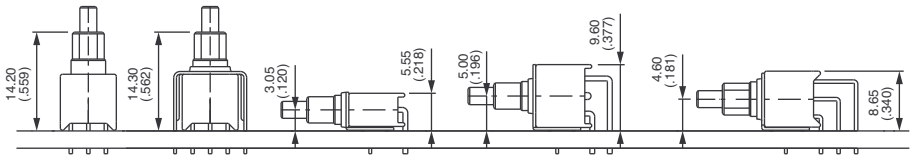


Single pole	Double pole		
TP32MW	**TP42MW**	ON	MOM
TP33MW	**TP43MW**	OFF	MOM



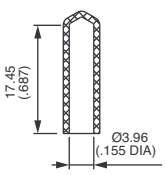
Function 3 has two terminals only (3 and 1) per pole

PCB MOUNTING



CAP FOR PCB PROCESSING

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



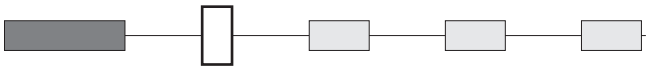
U3502

TP series

Tiny washable momentary pushbutton switches

OPTIONS

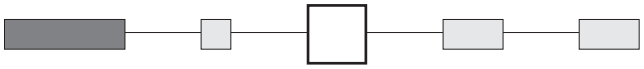
CONTACT AND TERMINAL MATERIALS



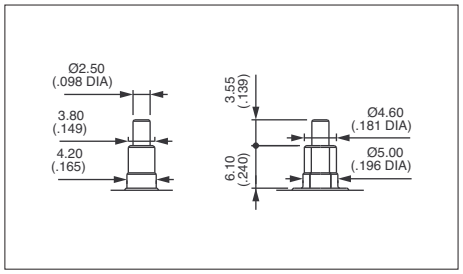
0	Brass, gold plated
1	Brass, silver plated
3	Brass, gold plated (1,27 micron gold)
8	Contact brass, gold plated + tin plated terminals
9	Contact brass, gold plated (1,27 micron gold) + tin plated terminals (single pole only)

B2

PLUNGERS

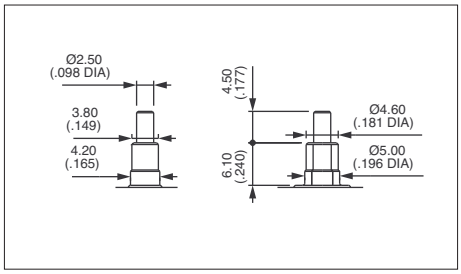


Standard plunger colour is black.



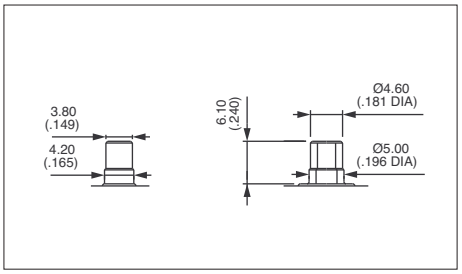
Short - standard

With blue case	With black case
30	**80**



Long

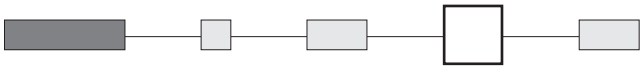
With blue case	With black case
35	**85**



Flush

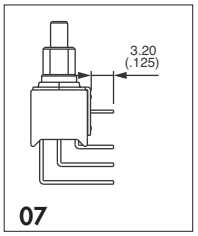
With black case
82

SPECIAL OPTIONS

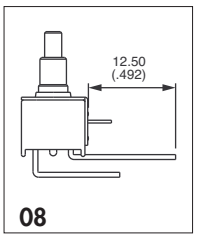


00 No special requirement

07 **Trimmed terminals** - length 3,2 mm (.125) for TP..WW models only

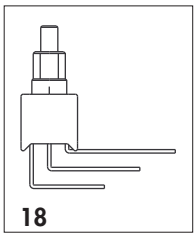


08 **Extended terminals** for TP..W0 models only

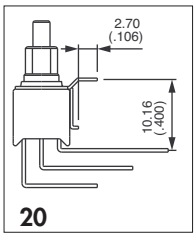


SPECIAL OPTIONS (continued)

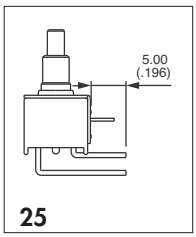
18 Switch **without ground plate** for TP..WW models only



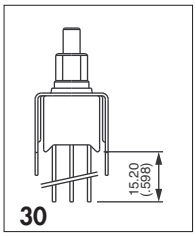
20 **Ground plate with 2 pins** for TP..WW models only



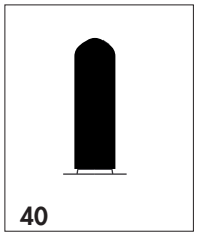
25 **Trimmed terminals** - length 5 mm (.196) for all models, except TP..WW



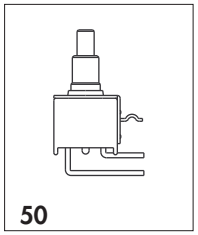
30 **Wire-wrap terminals** on models with mounting **bracket**



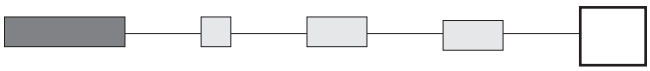
40 With cap U3500 mounted over plunger and bushing
Further protects the switch during PCB processing



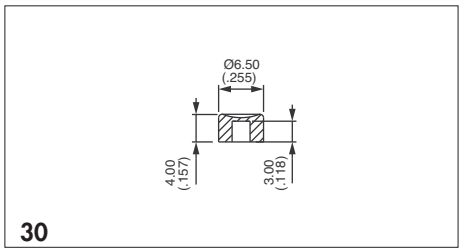
50 **Crimping of ground plate pins**.
Retains switch on PC during handling and wave soldering.
For models TP..W0, TP..WW and TP..Y0 single and double pole.



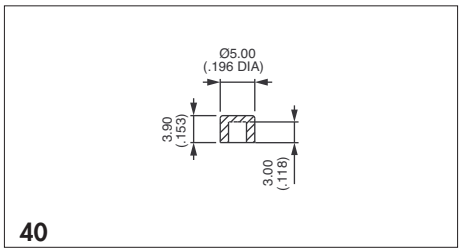
CAPS



Blank Without cap



P/N U4310 - for long plunger only



P/N U4320 - for long plunger only

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

Cap colours	
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