

# 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 - 10 $\mu$ A 5VDC
- Contact resistance : 50 m $\Omega$  max.
- Insulation resistance : 1.000 M $\Omega$  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

### 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

### GENERAL SPECIFICATIONS

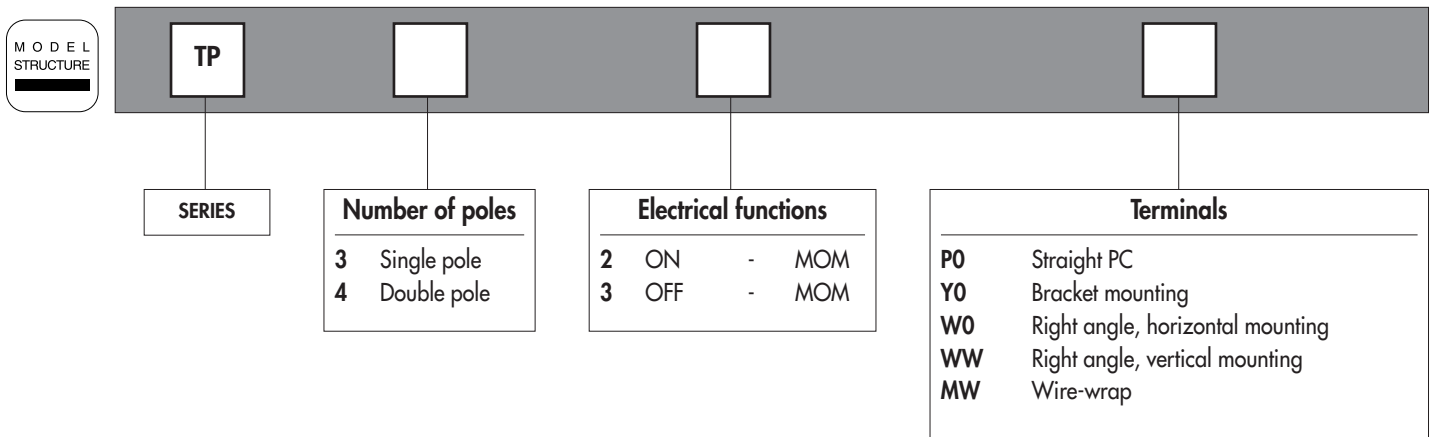
- Total travel :
  - function 2 : 1 mm (.039)
  - function 3 : 0,8 mm (.031)
- Strength of terminals : pull-out force - 10N max.
- Operating temperature : -30°C to +85°C
- Moisture : 21 days 95 % (NFC 20-603 - IEC 68-2-3)
- Cleaning : solvents or water + detergent
- Wave soldering : 260°C - 5 sec.

The company reserves the right to change specifications without notice.

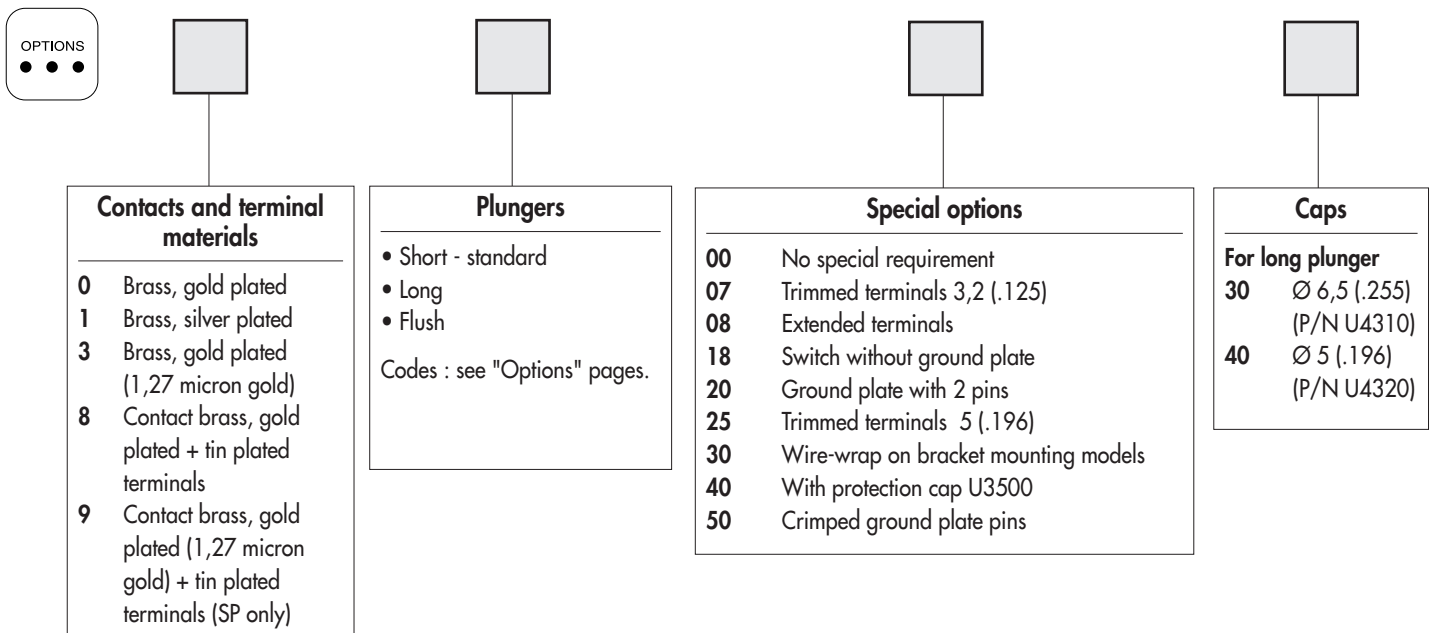
# TP series

## Tiny washable momentary pushbutton switches

Overview



B2



### 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.



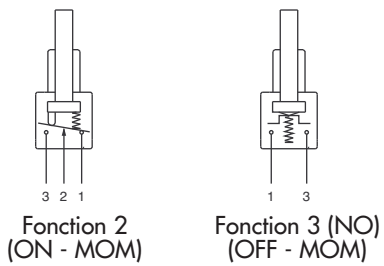
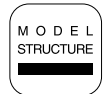
**NOTICE** : please note that not all combinations of above numbers are available. Refer to the following pages for further information.



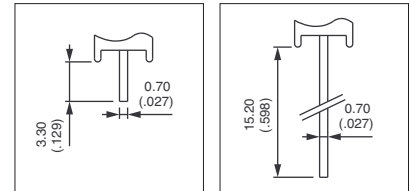
**Packaging unit** : 100 pieces, except for models with WW terminals (50 pieces).

# TP series

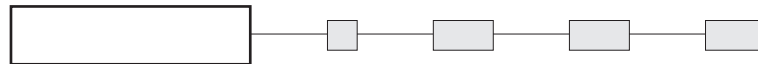
Tiny washable momentary pushbutton switches



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



## MODEL STRUCTURE

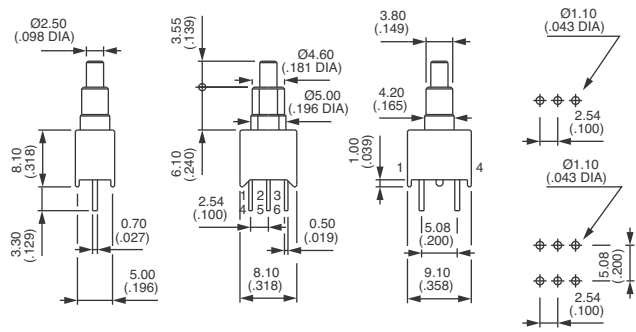


Shown in function 2, with standard plunger

### Straight PC terminals : TP..PO



	Single pole	Double pole	ON	MOM
TP32PO	TP42PO			
TP33PO	TP43PO	OFF		MOM

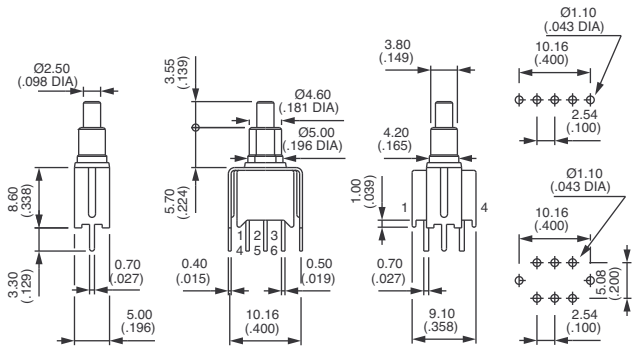


Function 3 has two terminals only (3 and 1) per pole

### Straight terminals - bracket mounting : TP..YO



	Single pole	Double pole	ON	MOM
TP32YO	TP42YO			
TP33YO	TP43YO	OFF		MOM

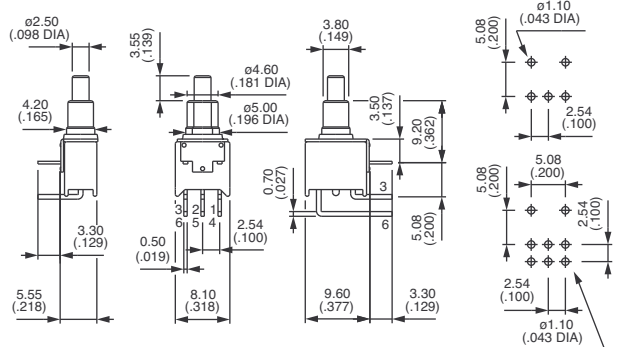


Function 3 has two terminals only (3 and 1) per pole

### Right angle terminals - horizontal mounting : TP..WO



	Single pole	Double pole	ON	MOM
TP32WO	TP42WO			
TP33WO	TP43WO	OFF		MOM



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



# TP series

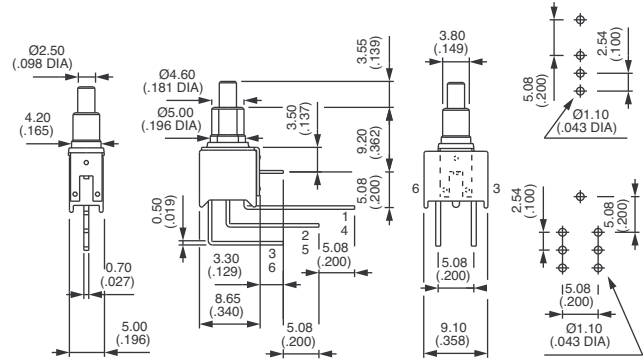
## Tiny washable momentary pushbutton switches

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

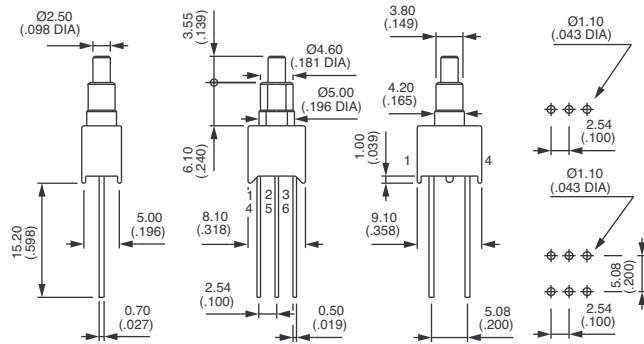


Function 3 has two terminals only (3 and 1) per pole

### Wire-wrap terminals : TP..MW

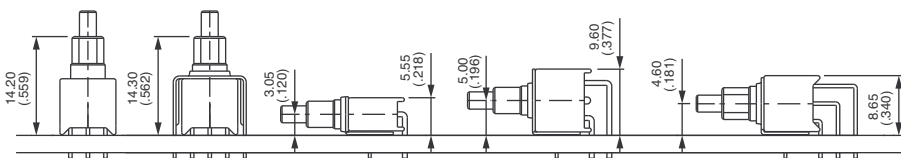


	Single pole	Double pole		
TP32MW		TP42MW	ON	MOM
TP33MW		TP43MW	OFF	MOM



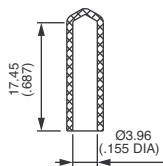
Function 3 has two terminals only (3 and 1) per pole

### PCB MOUNTING



### CAP FOR PCB PROCESSING

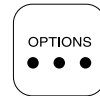
Provide additional protection during PCB processing.  
 Supplied separately. For cap mounted on the switch, see special option 40.  
 Material : vinyl



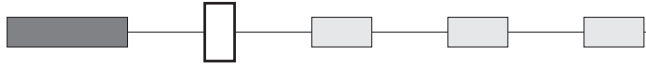
U3502

# TP series

Tiny washable momentary pushbutton switches



## CONTACT AND TERMINAL MATERIALS



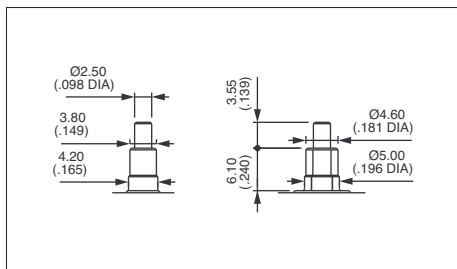
- 0 Brass, gold plated
- 1 Brass, silver plated
- 3 Brass, gold plated (1,27 micron gold)
- 8 Contact brass, gold plated + tin plated terminals
- 9 Contact brass, gold plated (1,27 micron gold) + tin plated terminals (single pole only)

B2

## PLUNGERS



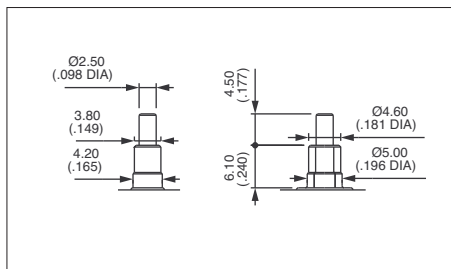
Standard plunger colour is black.



Short - standard

With blue case  
**30**

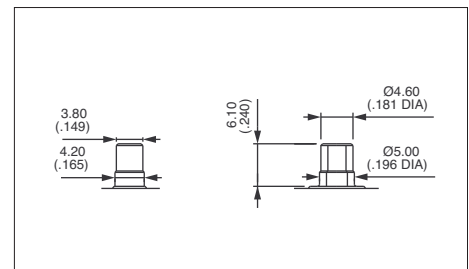
With black case  
**80**



Long

With blue case  
**35**

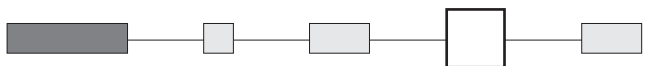
With black case  
**85**



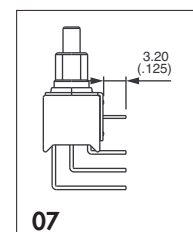
Flush

With black case  
**82**

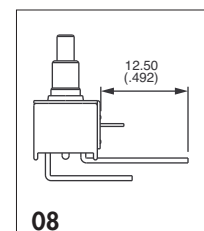
## SPECIAL OPTIONS



- 00 No special requirement
- 07 **Trimmed terminals** - length 3,2 mm (.125) for TP..WW models only
- 08 **Extended terminals** for TP..WO models only



07



08



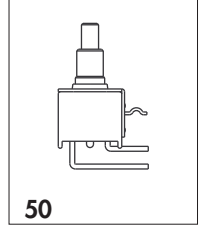
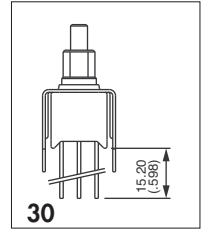
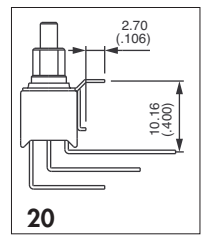
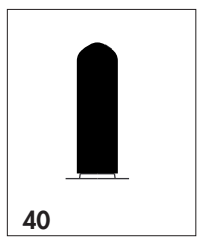
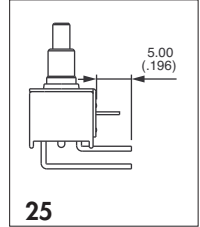
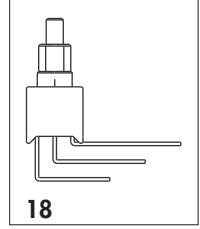
# TP series

## Tiny washable momentary pushbutton switches

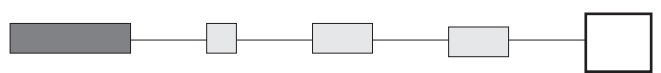
B2

### SPECIAL OPTIONS (continued)

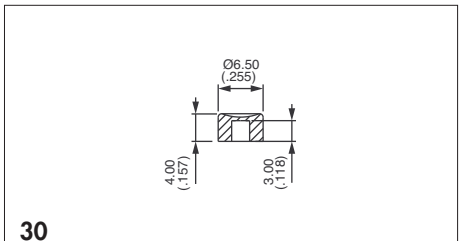
- 18 Switch **without ground plate** for TP..WW models only
- 20 **Ground plate with 2 pins** for TP..WW models only
- 25 **Trimmed terminals** - length 5 mm (.196) for all models, except TP..WW
- 30 **Wire-wrap terminals** on models with mounting **bracket**
- 40 With cap U3500 mounted over plunger 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.



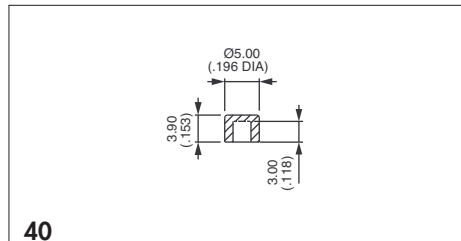
### CAPS



Blank Without cap



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...).

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



## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Pushbutton Switches](#) category:*

*Click to view products by [Apem](#) manufacturer:*

Other Similar products are found below :

[LW1L-M1C10V-A](#) [LW2L-A1C20M-GD](#) [LW2L-M1C20M-A](#) [60324L](#) [M7E-HRN2](#) [67021K512](#) [67081K512X](#) [701PB580](#) [719-5504-000](#)  
[MDPSSGLFS](#) [810KSV30B](#) [FLT 2U EE 01A](#) [MML21KA3ABK](#) [MML23KA3AC05K-001](#) [MML23KW3AA01W](#) [8418K2](#) [8646AB6X718UL](#)  
[8646ABUL](#) [FSDWH](#) [9001KXRK](#) [9001T8BK](#) [9533CD4+U574+U4922](#) [1203MRA](#) [A22EM01S](#) [A595](#) [1202A6](#) [12037A2ULCSA](#) [1203A2UL](#)  
[ABD122N-B](#) [1211390004](#) [ABN111-Y](#) [ABN400-R](#) [1211500044](#) [1211580012](#) [1212MRA](#) [1232A6NF](#) [RA3CSH6A](#) [1241.1183.7047](#)  
[1241.2511](#) [1241.3428](#) [1223A2ULCSA](#) [1223MRA](#) [1232AX2119](#) [1241.1183.8000](#) [1241.1183.8029](#) [1241.2506](#) [1241.2606](#) [12MA6](#)  
[1301940184](#) [RELBARF6X10\(PLASTIC\)](#)