

TL series

Tiny washable toggle switches

Distinctive features and specifications

UG1006-A



Process sealed

- Single piece case
- O-ring seal between actuator and bushing
- Epoxy sealed terminals

Wide variety of contact materials

Same PCB layout as TP, TR and TG tiny switches

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 μ A 5VDC
- Contact resistance : 20 m Ω max.
- Insulation resistance : 1.000 M Ω 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 :

Contacts	Number of cycles	
	2 positions	3 positions
Gold plated	60.000	30.000
Silver plated	20.000	10.000

MATERIALS

- Case : PBT
- Actuator : brass, nickel plated
- 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

- 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.

TL series

Tiny washable toggle switches

Overview

MODEL
STRUCTURE

TL

SERIES

Number of poles

- 3 Single pole
- 4 Double pole

Electrical functions

6	ON	-	ON
9	ON	OFF	ON
7	MOM	OFF	MOM
8	ON	OFF	MOM
2	ON	-	MOM

Terminals

P0	Straight PC
Y0	Bracket mounting
W0	Right angle, horizontal mounting
WW	Right angle, vertical mounting
MW	Wire-wrap

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 (SP only)

Lever and case styles

Lever styles :

- Short - standard
- Medium
- Long
- Cylindrical

Codes according to lever finish and case colours : see "options" pages.

Insulated levers available.

Special options

- 00 No special requirement
- 07 Trimmed terminals - length 3,2 (.125)
- 08 Extended terminals
- 18 Switch without ground plate
- 20 Ground plate with 2 pins
- 25 Trimmed terminals - length 5 (.196)
- 30 Wire-wrap on bracket mounting models
- 50 Crimped ground plate pins

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 bracketted numbers.



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

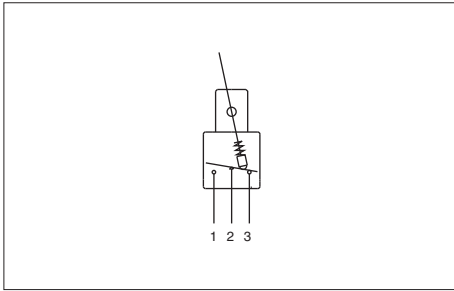


Packaging unit : 100 pieces, except for models with WW terminals (50 pieces)

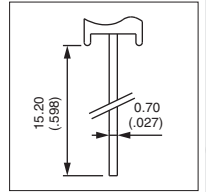
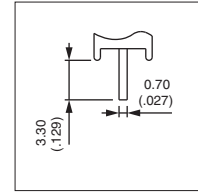


TL series

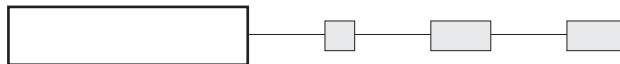
Tiny washable toggle switches



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



MODEL
STRUCTURE



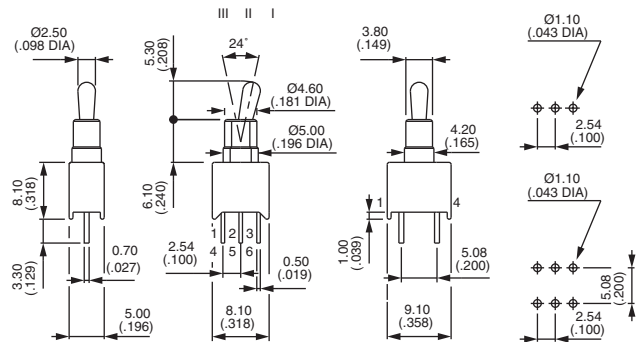
Shown with standard lever

Straight PC terminals : TL..P0



Single pole	Double pole
TL36P0	TL46P0
TL39P0	TL49P0
TL37P0	TL47P0
TL38P0	TL48P0
TL32P0	TL42P0

III	II	I
ON	-	ON
ON	OFF	ON
MOM	OFF	MOM
ON	OFF	MOM
ON	-	MOM

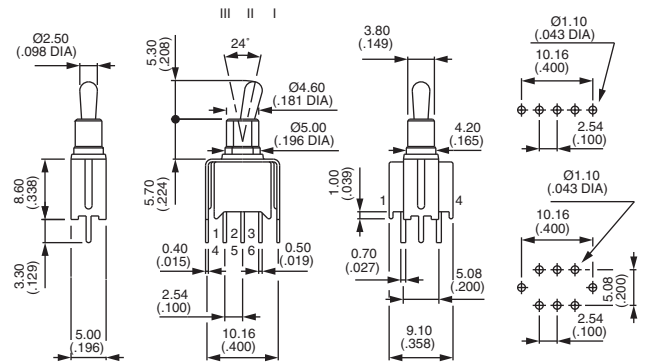


Straight PC terminals - bracket mounting : TL..Y0



Single pole	Double pole
TL36Y0	TL46Y0
TL39Y0	TL49Y0
TL37Y0	TL47Y0
TL38Y0	TL48Y0
TL32Y0	TL42Y0

III	II	I
ON	-	ON
ON	OFF	ON
MOM	OFF	MOM
ON	OFF	MOM
ON	-	MOM

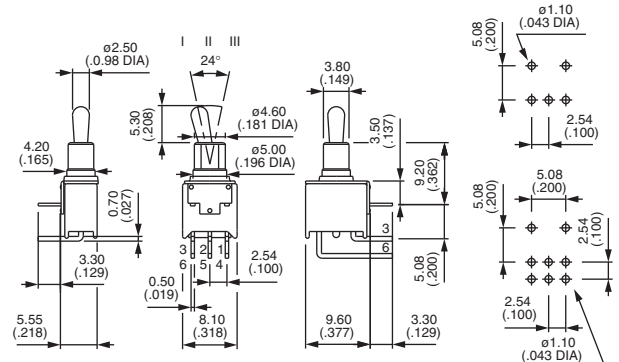


Right angle terminals - horizontal mounting : TL..W0



Single pole	Double pole
TL36W0	TL46W0
TL39W0	TL49W0
TL37W0	TL47W0
TL38W0	TL48W0
TL32W0	TL42W0

III	II	I
ON	-	ON
ON	OFF	ON
MOM	OFF	MOM
ON	OFF	MOM
ON	-	MOM



TL series

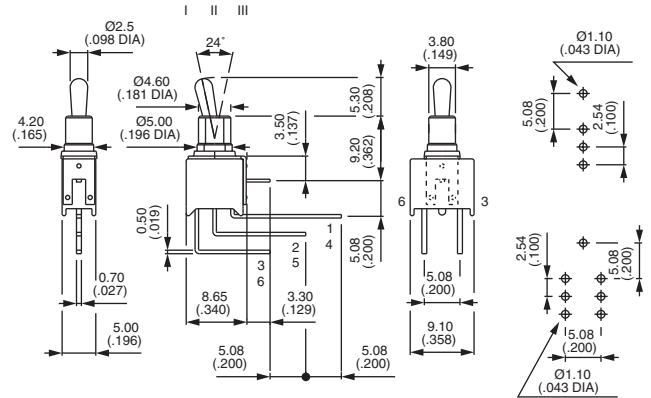
Tiny washable toggle switches

MODEL
STRUCTURE

Right angle terminals - vertical mounting : TL..WW



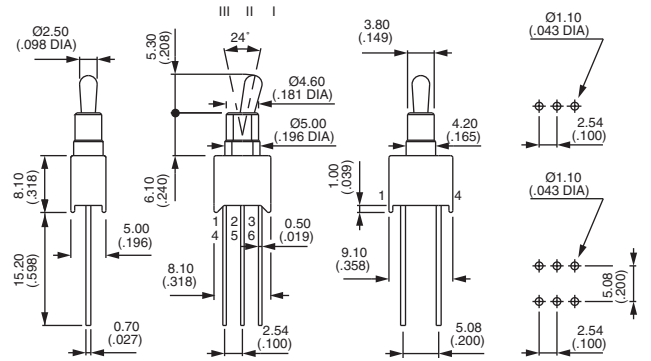
Single pole	Double pole	III	II	I
TL36WW	TL46WW	ON	-	ON
TL39WW	TL49WW	ON	OFF	ON
TL37WW	TL47WW	MOM	OFF	MOM
TL38WW*	TL48WW*	ON	OFF	MOM
TL32WW*	TL42WW*	ON	-	MOM



Wire-wrap terminals : TL..MW

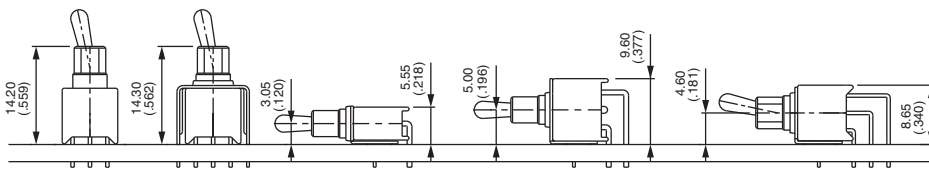


Single pole	Double pole	III	II	I
TL36MW	TL46MW	ON	-	ON
TL39MW	TL49MW	ON	OFF	ON
TL37MW	TL47MW	MOM	OFF	MOM
TL38MW	TL48MW	ON	OFF	MOM
TL32MW	TL42MW	ON	-	MOM



* Functions 2 and 8 : reversed connection available. Consult factory.

PCB MOUNTING

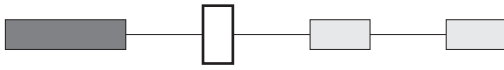




TL series

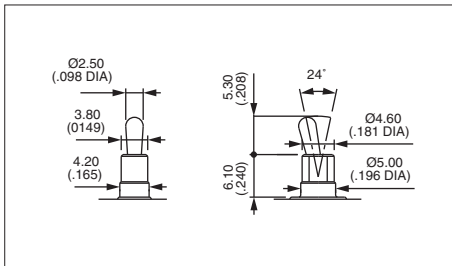
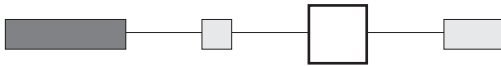
Tiny washable toggle switches

CONTACT AND TERMINAL MATERIALS



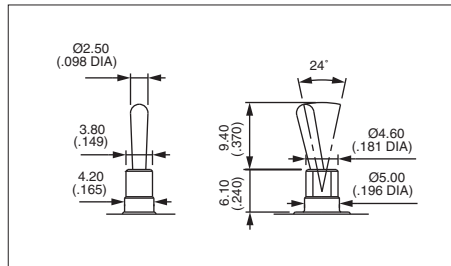
- 0 Brass, gold plated
- 1 Brass, silver plated
- 3 Brass, gold plated (1,27 micron gold)
- 8 Contact brass, gold plated + tin plated terminals
- 9 Contact brass, gold plated (1,27 micron gold) + tin plated terminals (single pole only)

LEVER AND CASE STYLES



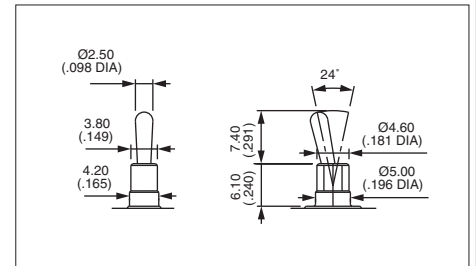
Short - standard

LEVER \ CASE	Blue	Black
Nickel plated	00	50
Matt black	01	51



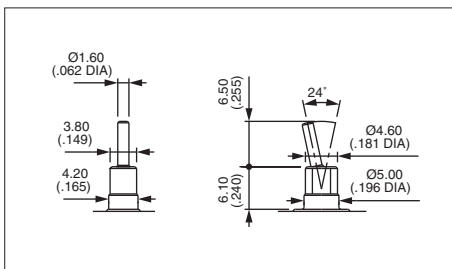
Long

LEVER \ CASE	Blue	Black
Nickel plated	02	52
Matt black	03	53



Medium

LEVER \ CASE	Blue	Black
Nickel plated	04	54
Matt black	05	55



Cylindrical

LEVER \ CASE	Blue	Black
Nickel plated	-	56

TL series

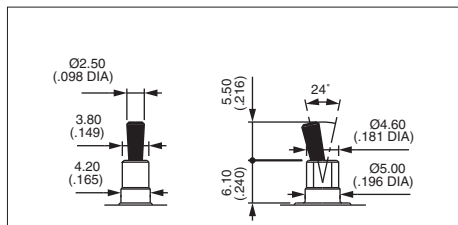
Tiny washable toggle switches

OPTIONS

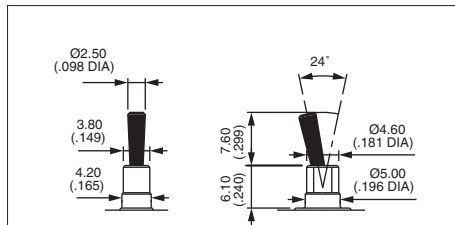


LEVER AND CASE STYLES (continued)

Insulated levers - Protected against electrostatic discharges (ESD) up to 10KV. Black colour.

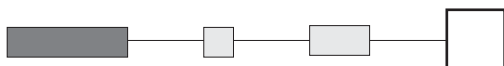


40 With blue case
94 With black case



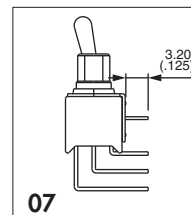
30 With blue case
90 With black case

SPECIAL OPTIONS



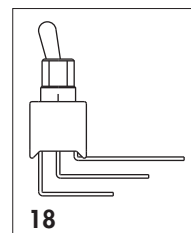
00 No special requirement

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

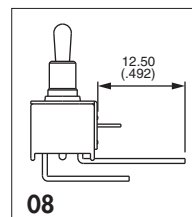


07

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



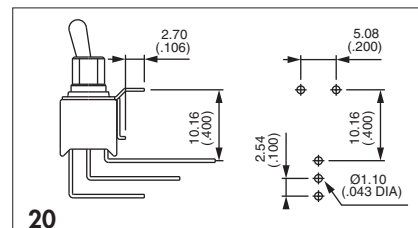
18



08

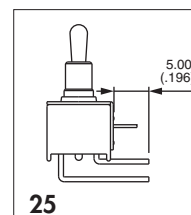
18 Switch **without ground plate** for TL..WW models only

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



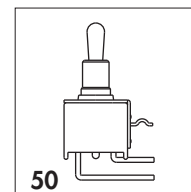
20

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



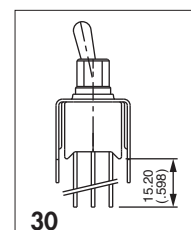
25

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



50

50 **Crimped ground plate pins.**
Retains switch on PCB during handling and wave soldering.
For models TL..W0, TL..WW and TL..Y0 single and double pole.



30