

TL series

Tiny washable toggle switches

Distinctive features and specifications



☐ 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.

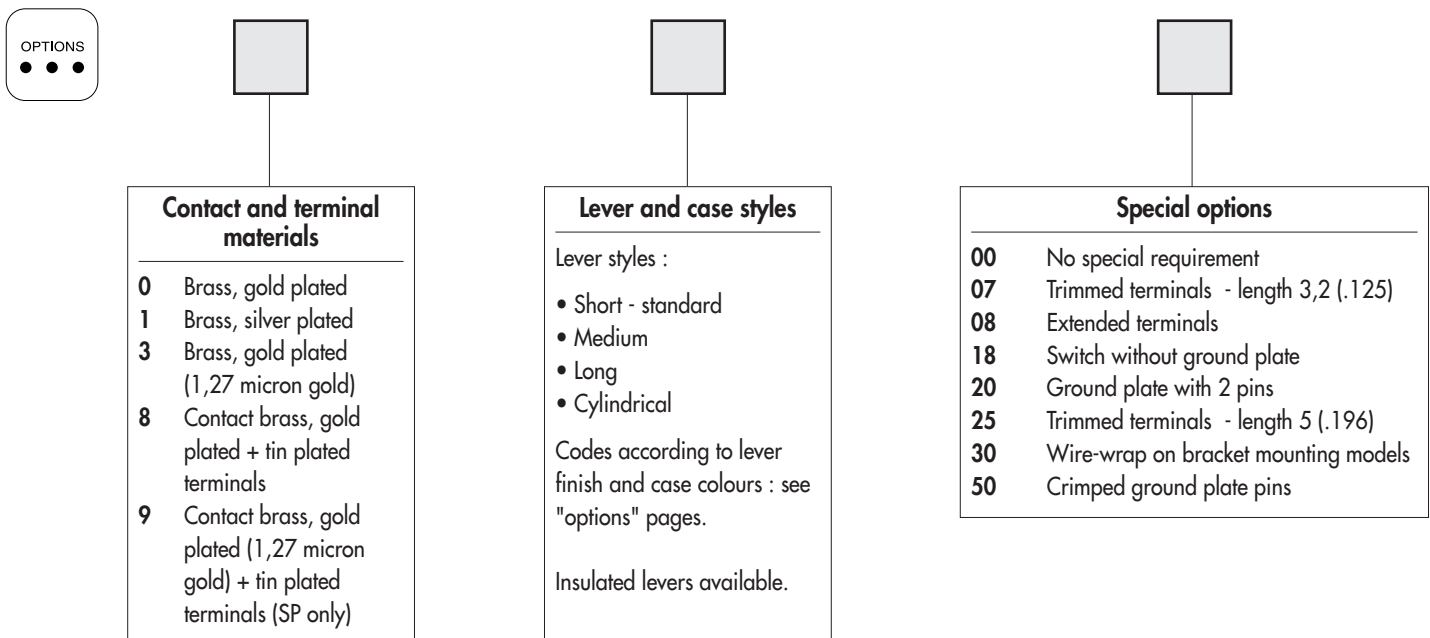
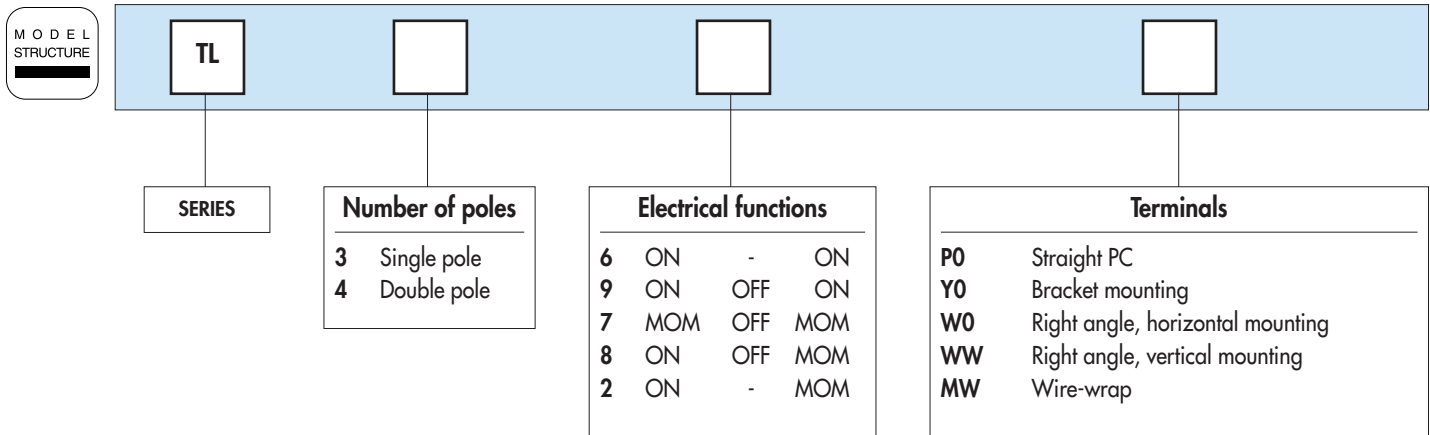
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Overview

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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.



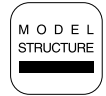
NOTICE : please note that not all combinations of above numbers are available. Refer to the following pages for further information.



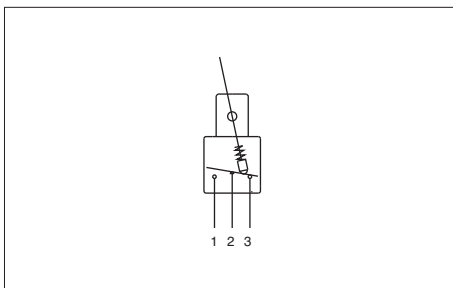
Packaging unit : 100 pieces, except for models with WW terminals (50 pieces)

TL series

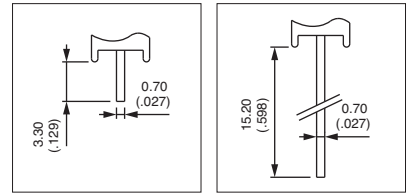
Tiny washable toggle switches



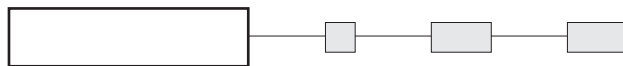
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- Straight PC, right angle or wire-wrap terminals
- 1 and 2 pole configurations



MODEL STRUCTURE

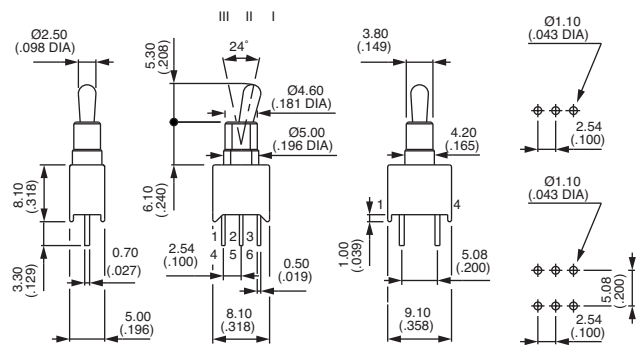


Shown with standard lever

Straight PC terminals : TL..PO



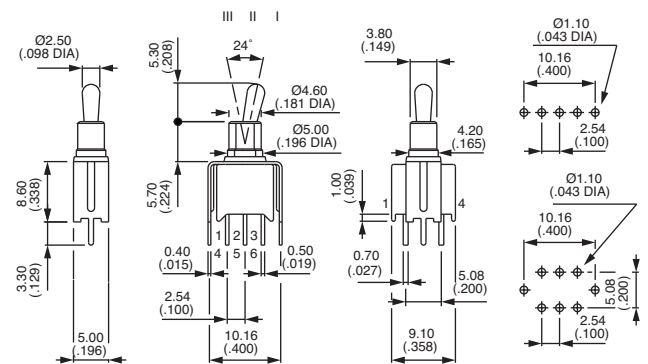
	Single pole	Double pole	III	II	I
TL36PO	TL46PO	ON	-	ON	
TL39PO	TL49PO	ON	OFF	ON	
TL37PO	TL47PO	MOM	OFF	MOM	
TL38PO	TL48PO	ON	OFF	MOM	
TL32PO	TL42PO	ON	-	MOM	



Straight PC terminals - bracket mounting : TL..YO



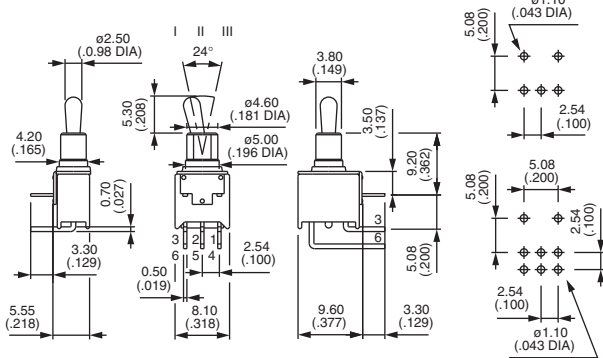
	Single pole	Double pole	III	II	I
TL36YO	TL46YO	ON	-	ON	
TL39YO	TL49YO	ON	OFF	ON	
TL37YO	TL47YO	MOM	OFF	MOM	
TL38YO	TL48YO	ON	OFF	MOM	
TL32YO	TL42YO	ON	-	MOM	



Right angle terminals - horizontal mounting : TL..WO



	Single pole	Double pole	III	II	I
TL36WO	TL46WO	ON	-	ON	
TL39WO	TL49WO	ON	OFF	ON	
TL37WO	TL47WO	MOM	OFF	MOM	
TL38WO	TL48WO	ON	OFF	MOM	
TL32WO	TL42WO	ON	-	MOM	





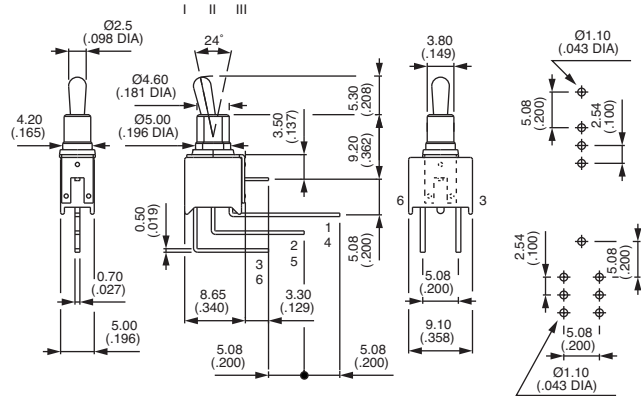
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Right angle terminals - vertical mounting : TL..WW



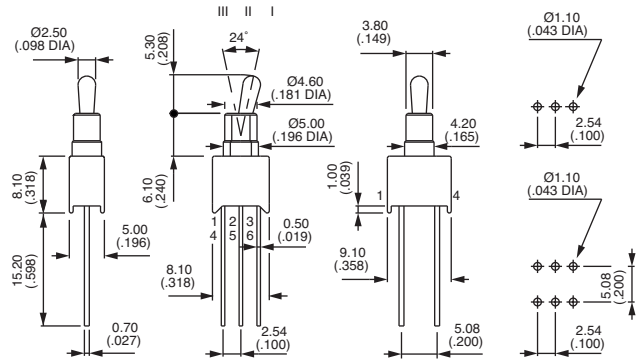
	III	II	I
Single pole			
TL36WW	ON	-	ON
TL39WW	ON	OFF	ON
TL37WW	MOM	OFF	MOM
TL38WW*	ON	OFF	MOM
TL32WW*	ON	-	MOM
Double pole			
TL46WW			
TL49WW			
TL47WW			
TL48WW*			
TL42WW*			



Wire-wrap terminals : TL..MW

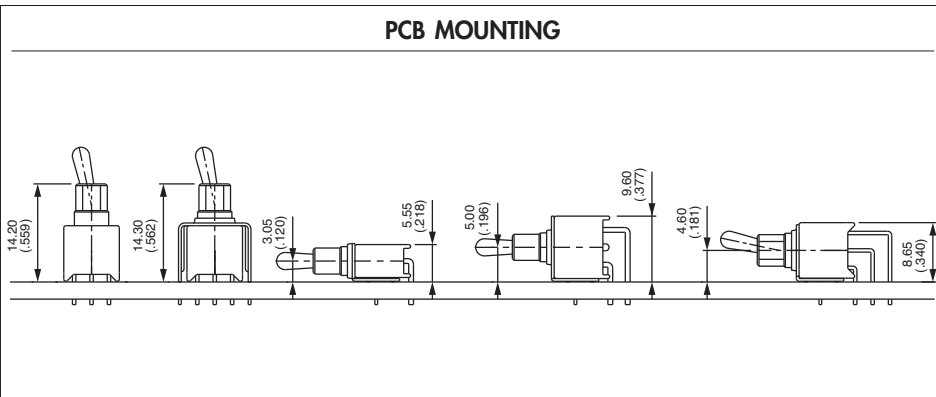


	III	II	I
Single pole			
TL36MW	ON	-	ON
TL39MW	ON	OFF	ON
TL37MW	MOM	OFF	MOM
TL38MW	ON	OFF	MOM
TL32MW	ON	-	MOM
Double pole			
TL46MW			
TL49MW			
TL47MW			
TL48MW			
TL42MW			



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

PCB MOUNTING



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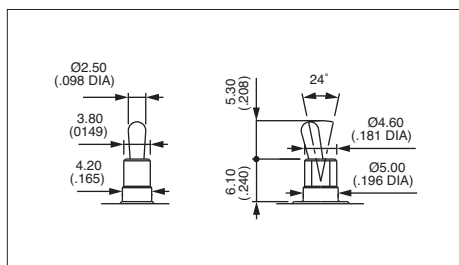
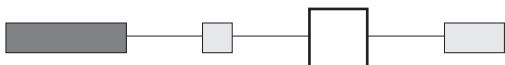


CONTACT AND TERMINAL MATERIALS

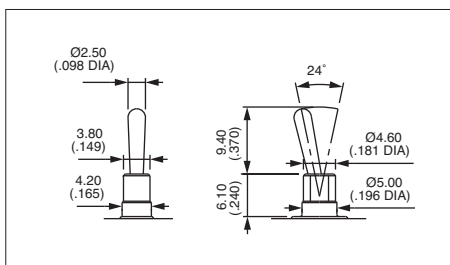


- 0** Brass, gold plated
- 1** Brass, silver plated
- 3** Brass, gold plated (1,27 micron gold)
- 8** Contact brass, gold plated + tin plated terminals
- 9** Contact brass, gold plated (1,27 micron gold) + tin plated terminals (single pole only)

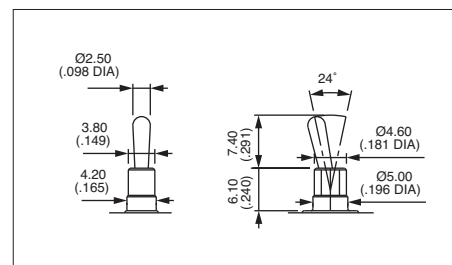
LEVER AND CASE STYLES



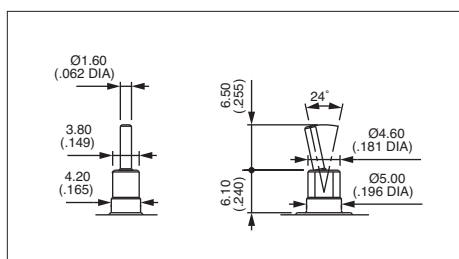
Short - standard			
LEVER	CASE	Blue	Black
Nickel plated		00	50
Matt black		01	51



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



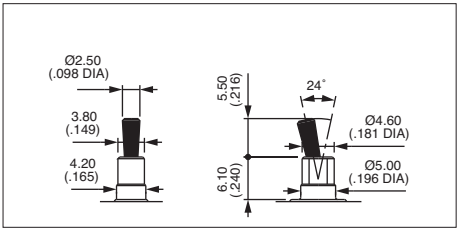
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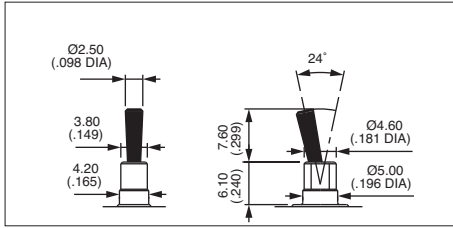
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LEVER AND CASE STYLES (continued)

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

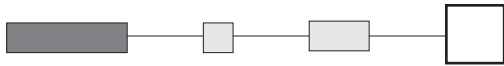


40 With blue case
94 With black case

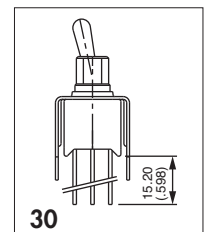
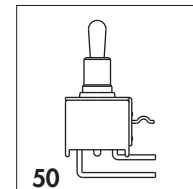
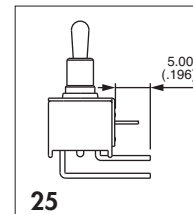
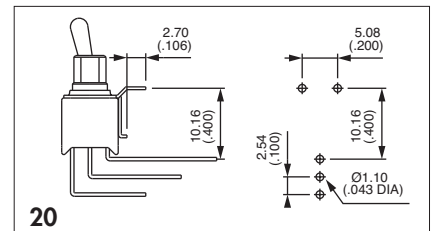
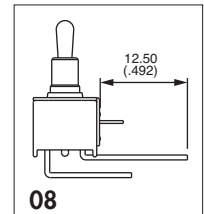
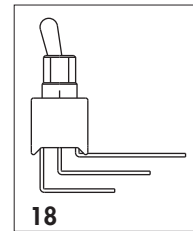
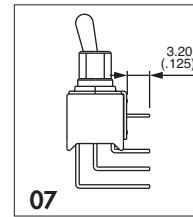


30 With blue case
90 With black case

SPECIAL OPTIONS



- 00** No special requirement
- 07** **Trimmed terminals** - length 3,2 mm (.125) for TL..WW models only
- 08** **Extended terminals** for TL..W0 models only
- 18** Switch **without ground plate** for TL..WW models only
- 20** **Ground plate with 2 pins** for TL..WW models only
- 25** **Trimmed terminals** - length 5 mm (.196) for all models, except TL..WW
- 30** **Wire-wrap terminals** on models with mounting **bracket**
- 50** **Crimped ground plate pins.**
Retains switch on PCB during handling and wave soldering.
For models TL..W0, TL..WW and TL..YO single and double pole.



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