

TL series

Tiny washable toggle 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 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

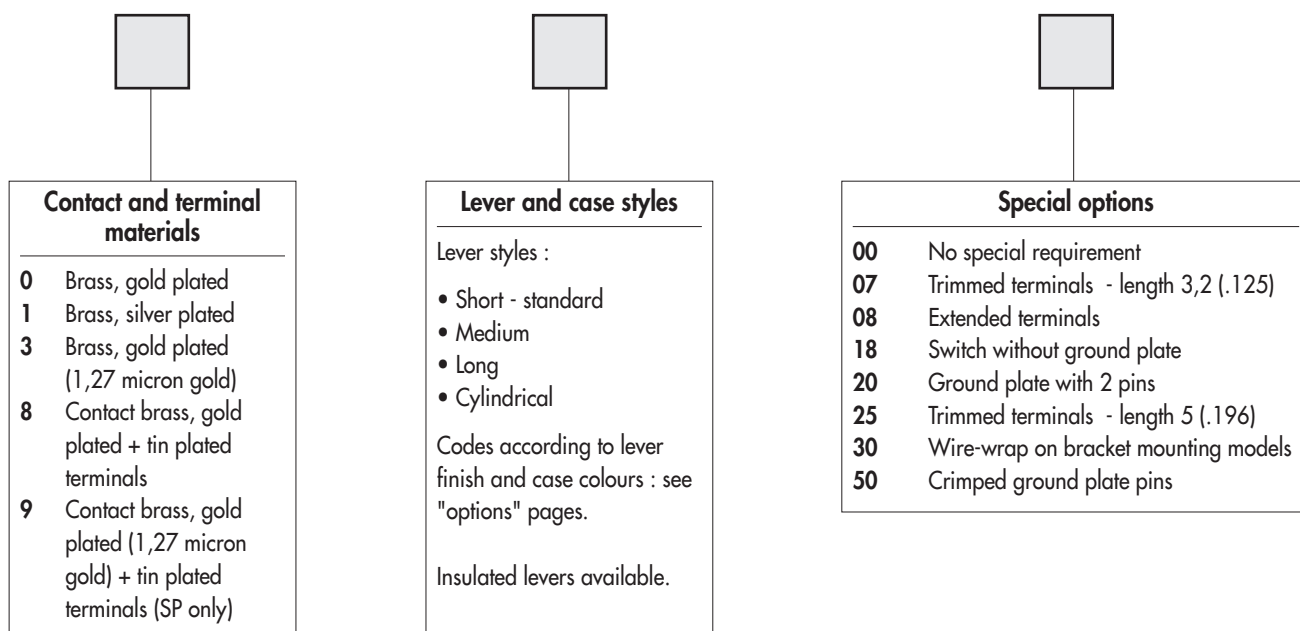
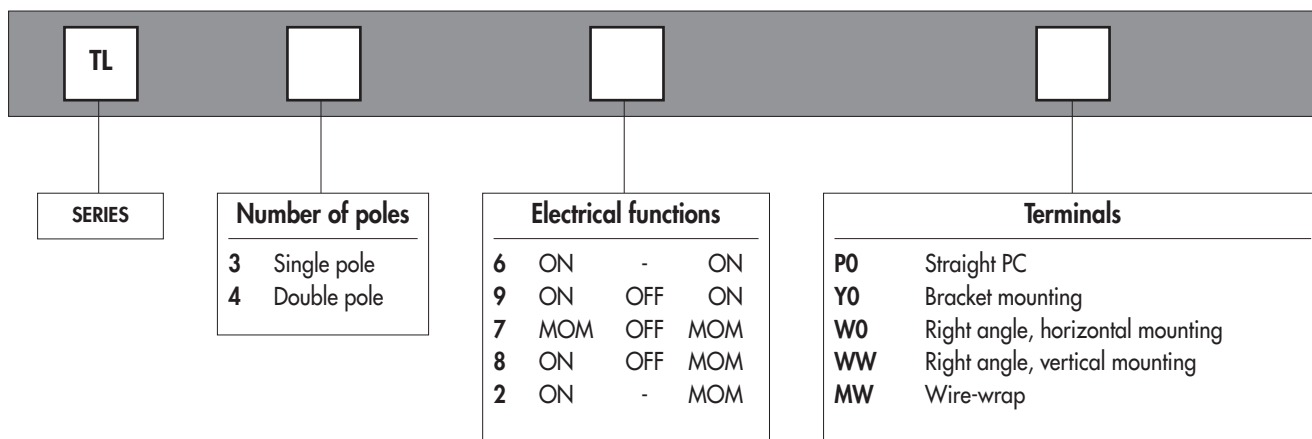
- Strength of terminals : pull-out force - 10N max.
- Operating temperature : -30°C to +85°C
- Moisture : 21 days 95 % (NFC 20-603 - IEC 68-2-3)
- Cleaning : solvents or water + detergent
- Wave soldering : 260°C - 5 sec.

The company reserves the right to change specifications without notice.

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Overview



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.

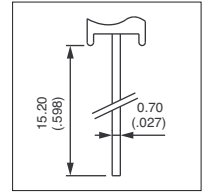


NOTICE : please note that not all combinations of above numbers are available. Refer to the following pages for further information.



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

██████████



Shown with standard lever

Technical drawings of three types of pins: Pin A, Pin B, and Pin C. Each drawing shows a side view and a cross-sectional view with dimensions in inches and millimeters.

Pin A:

- Side View Dimensions:
 - Top diameter: $\varnothing 2.50$ (.098 DIA)
 - Top section height: 8.60 (.356)
 - Bottom section height: 3.30 (.129)
 - Bottom diameter: $\varnothing 5.00$ (.196)
- Cross-sectional View Dimensions:
 - Top diameter: $\varnothing 4.60$ (.181 DIA)
 - Top section height: 5.30 (.208)
 - Bottom section height: 5.70 (.224)
 - Bottom diameter: $\varnothing 5.00$ (.196 DIA)
 - Pin diameter: $\varnothing 5.00$ (.196 DIA)
 - Pin length: 10.16 (.400)
 - Pin diameter: $\varnothing 5.00$ (.196 DIA)
 - Pin length: 10.16 (.400)
 - Pin diameter: $\varnothing 5.00$ (.196 DIA)
 - Pin length: 10.16 (.400)

Pin B:

- Side View Dimensions:
 - Top diameter: $\varnothing 3.80$ (.149)
 - Top section height: 4.20 (.165)
 - Bottom section height: 1.00 (.039)
 - Bottom diameter: $\varnothing 9.10$ (.358)
- Cross-sectional View Dimensions:
 - Top diameter: $\varnothing 4.60$ (.181 DIA)
 - Top section height: 5.30 (.208)
 - Bottom section height: 5.70 (.224)
 - Bottom diameter: $\varnothing 5.00$ (.196 DIA)
 - Pin diameter: $\varnothing 5.00$ (.196 DIA)
 - Pin length: 10.16 (.400)
 - Pin diameter: $\varnothing 5.00$ (.196 DIA)
 - Pin length: 10.16 (.400)
 - Pin diameter: $\varnothing 5.00$ (.196 DIA)
 - Pin length: 10.16 (.400)

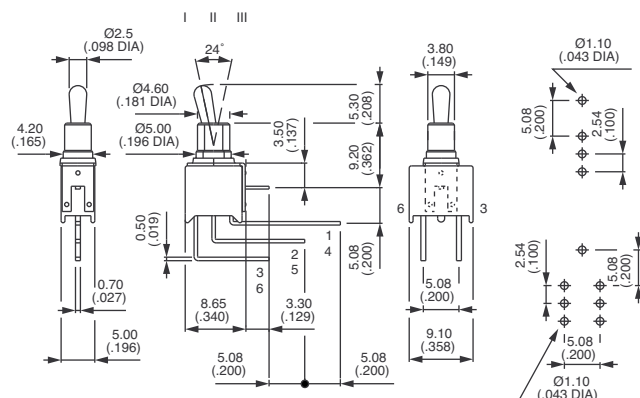
Pin C:

- Side View Dimensions:
 - Top diameter: $\varnothing 1.10$ (.043 DIA)
 - Top section height: 10.16 (.400)
 - Bottom section height: 5.08 (.200)
 - Bottom diameter: $\varnothing 1.10$ (.043 DIA)
- Cross-sectional View Dimensions:
 - Top diameter: $\varnothing 1.10$ (.043 DIA)
 - Top section height: 10.16 (.400)
 - Bottom section height: 5.08 (.200)
 - Bottom diameter: $\varnothing 1.10$ (.043 DIA)
 - Pin diameter: $\varnothing 1.10$ (.043 DIA)
 - Pin length: 10.16 (.400)
 - Pin diameter: $\varnothing 1.10$ (.043 DIA)
 - Pin length: 10.16 (.400)
 - Pin diameter: $\varnothing 1.10$ (.043 DIA)
 - Pin length: 10.16 (.400)

Right angle terminals - vertical mounting : TL..WW



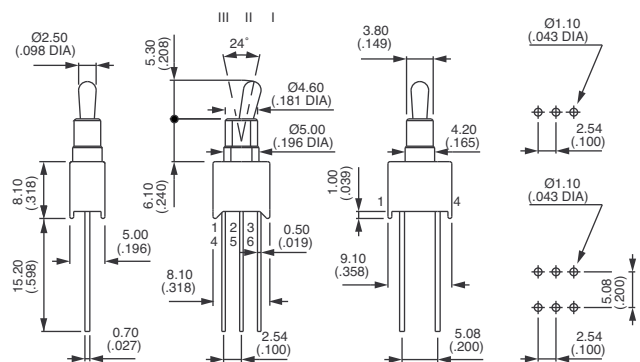
Single pole	Double pole			
TL36WW	TL46WW	ON	-	ON
TL39WW	TL49WW	ON	OFF	ON
TL37WW	TL47WW	MOM	OFF	MOM
TL38WW*	TL48WW*	ON	OFF	MOM
TL32WW*	TL42WW*	ON	-	MOM



Wire-wrap terminals : TL..MW

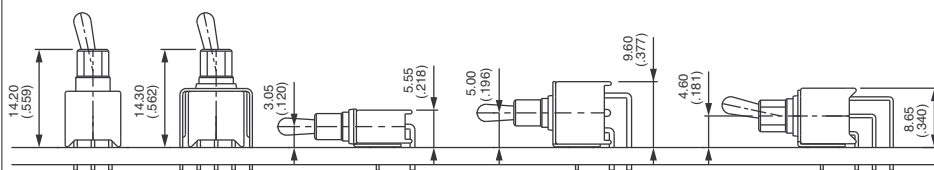


Single pole	Double pole			
TL36MW	TL46MW	ON	-	ON
TL39MW	TL49MW	ON	OFF	ON
TL37MW	TL47MW	MOM	OFF	MOM
TL38MW	TL48MW	ON	OFF	MOM
TL32MW	TL42MW	ON	-	MOM



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

PCB MOUNTING

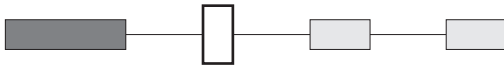


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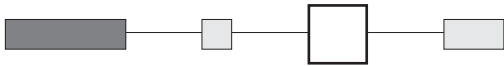
OPTIONS
● ● ●

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)

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	

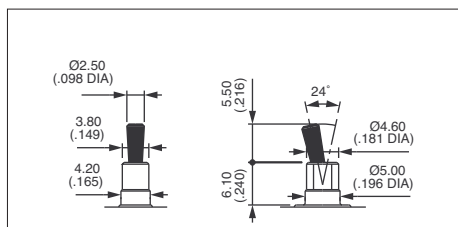


TL series

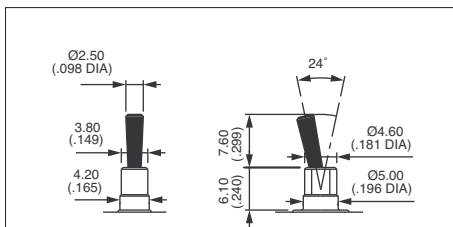
Tiny washable toggle switches

LEVER AND CASE STYLES (continued)

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

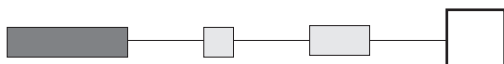


40 With blue case
94 With black case



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

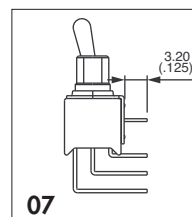
18 Switch **without ground plate** for TL..WW models only

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

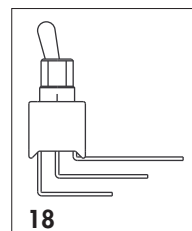
25 **Trimmed terminals** - length 5 mm (.196) for all models, except TL..WW

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

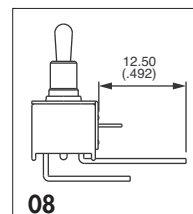
50 **Crimped ground plate pins.**
Retains switch on PCB during handling and wave soldering.
For models TL..W0, TL..WW and TL..Y0 single and double pole.



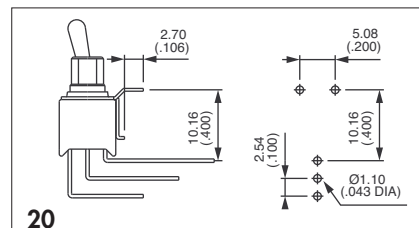
07



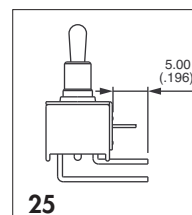
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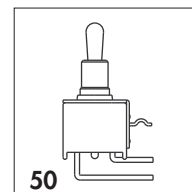
08



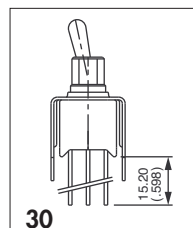
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Mouser Electronics

Authorized Distributor

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TL36P000200	TL36WS84000	TL32WW05050	TL37W000050	TL32W005000	TL32WW05000	TL36P019400
TL36W000000	TL36W005000	TL36W005200	TL36WW00000	TL36WW05000	TL37W000000	TL38W009000
TL39P000200	TL39P005000	TL39W005000	TL39WW00000	TL39WW05000	TL42P005000	TL42W005000
TL42WW05000	TL46P000200	TL46P005000	TL46W005000	TL46W005200	TL49P000200	TL49P080400
TL49W000000	TL49W000250	TL49W005000	TL49WW05000	TL32W000000	TL32WW00000	TL32Y000000
TL36Y000000	TL37WW00000	TL37Y000000	TL38W000000	TL38Y000000	TL39Y000000	TL42W000000
TL42WW00000	TL46W000000	TL46WW00000	TL46Y000000	TL47WW00000	TL48WW00000	TL48Y000000
TL49WW00000	TL49Y000000	TL32P000000	TL32P005000	TL32W000050	TL32WS84000	TL32WS84065
TL32WW00050	TL32Y000050	TL36P000000	TL36P005000	TL36W000050	TL36W004050	TL36W019400
TL36WS84065	TL36WW00050	TL36Y000050	TL37MW05000	TL37P000000	TL37P005000	TL37WS84000
TL37WS84065	TL37WW00050	TL37Y000050	TL38P000000	TL38W000050	TL38W005050	TL38WS84000
TL38WS84065	TL38WW00050	TL39P000000	TL39W000000	TL39W000050	TL39W005050	TL39WS84000
TL39WS84065	TL39WW00050	TL39WW05050	TL39Y000050	TL39Y081650	TL42P000000	TL42W000050
TL46MW00000	TL46P000000	TL46W000050	TL46WW00050	TL46Y000050	TL47P000000	TL48P000000
TL49P000000	TL49W000050					