

TL series

Tiny washable toggle switches

Distinctive features and specifications



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

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

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.

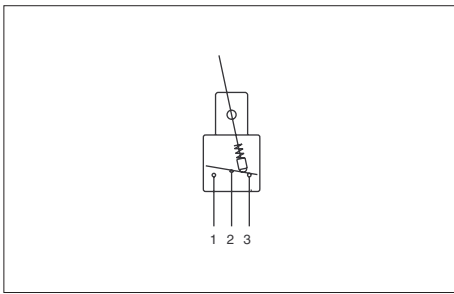


Packaging unit : 100 pieces, except for models with WW terminals (50 pieces)

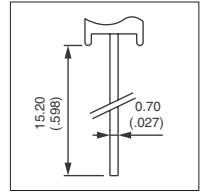
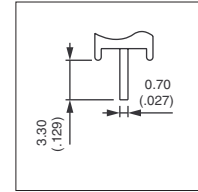


TL series

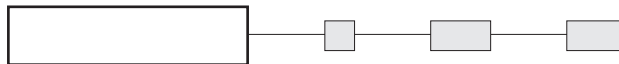
Tiny washable toggle switches



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



MODEL
STRUCTURE



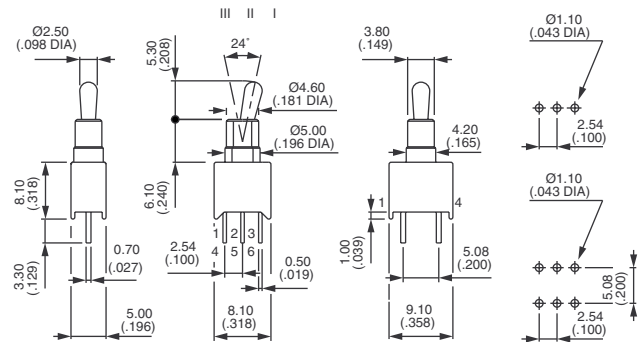
Shown with standard lever

Straight PC terminals : TL..PO



| Single pole | Double pole |
|-------------|-------------|
| TL36PO | TL46PO |
| TL39PO | TL49PO |
| TL37PO | TL47PO |
| TL38PO | TL48PO |
| TL32PO | TL42PO |

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

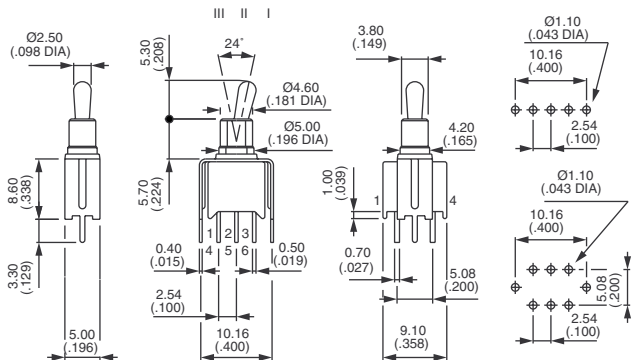


Straight PC terminals - bracket mounting : TL..YO



| Single pole | Double pole |
|-------------|-------------|
| TL36YO | TL46YO |
| TL39YO | TL49YO |
| TL37YO | TL47YO |
| TL38YO | TL48YO |
| TL32YO | TL42YO |

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

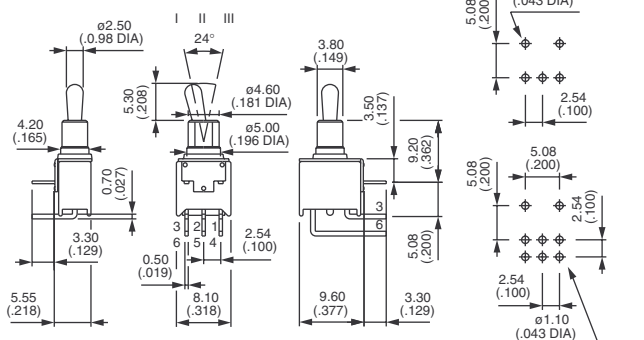


Right angle terminals - horizontal mounting : TL..WO



| Single pole | Double pole |
|-------------|-------------|
| TL36WO | TL46WO |
| TL39WO | TL49WO |
| TL37WO | TL47WO |
| TL38WO | TL48WO |
| TL32WO | TL42WO |

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



TL series

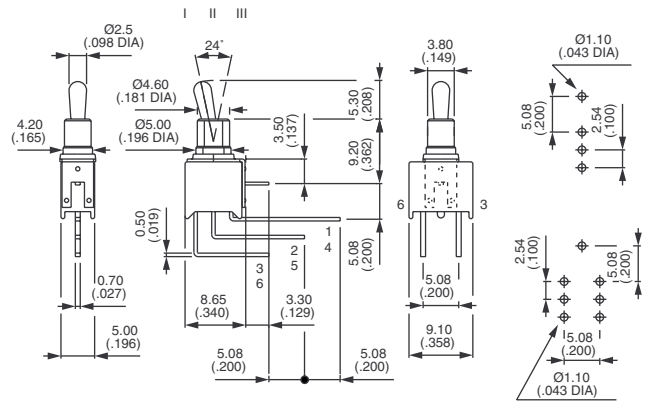
Tiny washable toggle switches

MODEL
STRUCTURE

Right angle terminals - vertical mounting : TL..WW



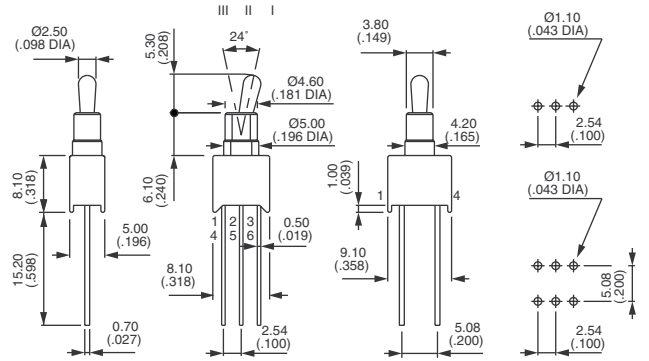
| Single pole | Double pole | III | II | I |
|-------------|-------------|-----|-----|-----|
| TL36WW | TL46WW | ON | - | ON |
| TL39WW | TL49WW | ON | OFF | ON |
| TL37WW | TL47WW | MOM | OFF | MOM |
| TL38WW* | TL48WW* | ON | OFF | MOM |
| TL32WW* | TL42WW* | ON | - | MOM |



Wire-wrap terminals : TL..MW

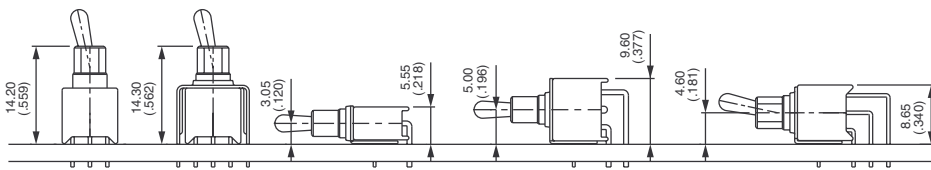


| Single pole | Double pole | III | II | I |
|-------------|-------------|-----|-----|-----|
| TL36MW | TL46MW | ON | - | ON |
| TL39MW | TL49MW | ON | OFF | ON |
| TL37MW | TL47MW | MOM | OFF | MOM |
| TL38MW | TL48MW | ON | OFF | MOM |
| TL32MW | TL42MW | ON | - | MOM |



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

PCB MOUNTING

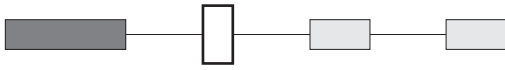




TL series

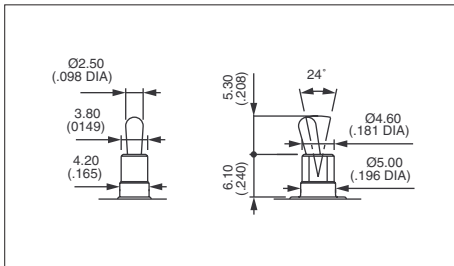
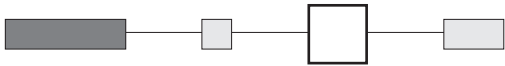
Tiny washable toggle switches

CONTACT AND TERMINAL MATERIALS



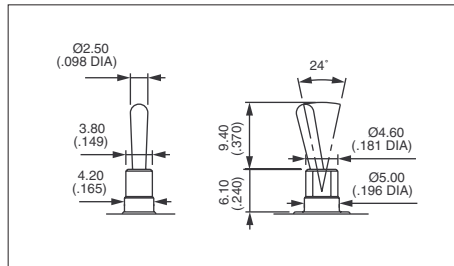
- 0 Brass, gold plated
- 1 Brass, silver plated
- 3 Brass, gold plated (1,27 micron gold)
- 8 Contact brass, gold plated + tin plated terminals
- 9 Contact brass, gold plated (1,27 micron gold) + tin plated terminals

LEVER AND CASE STYLES



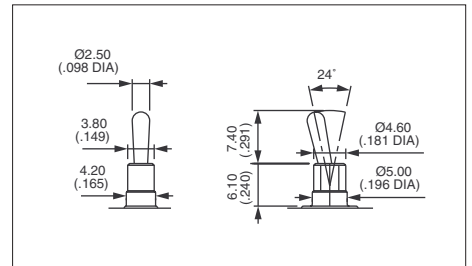
Short - standard

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



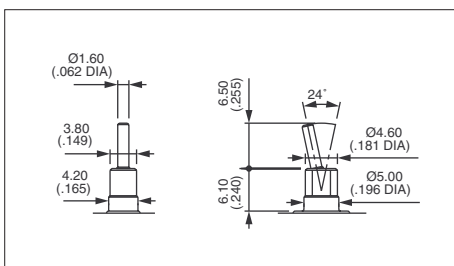
Long

| 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 |

A

TL series

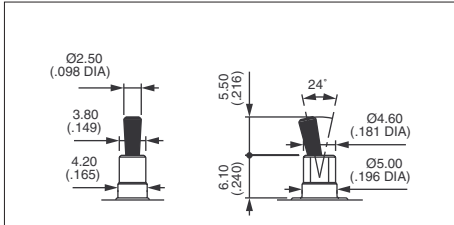
Tiny washable toggle switches

OPTIONS

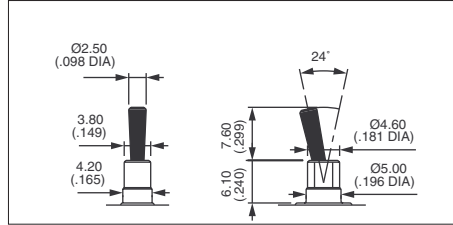


LEVER AND CASE STYLES (continued)

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

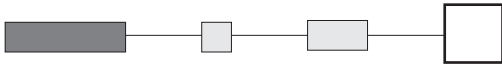


40 With blue case
94 With black case

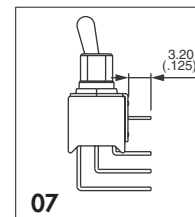


30 With blue case
90 With black case

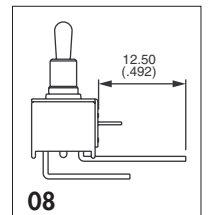
SPECIAL OPTIONS



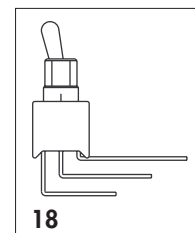
- 00** No special requirement
- 07** **Trimmed terminals** - length 3,2 mm (.125) for TL..WW models only
- 08** **Extended terminals** for TL..W0 models only
- 18** Switch **without ground plate** for TL..WW models only
- 20** **Ground plate with 2 pins** for TL..WW models only
- 25** **Trimmed terminals** - 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.



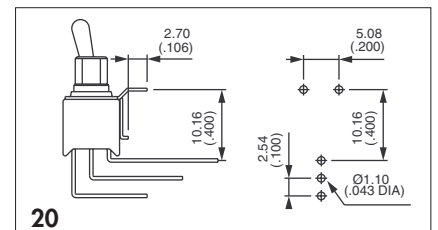
07



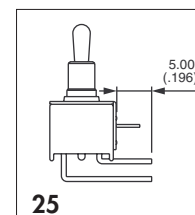
08



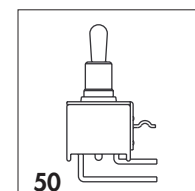
18



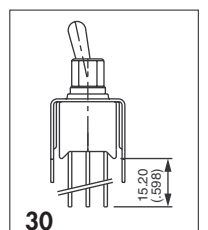
20



25



50



30