

TL series

Subminiature washable toggle switches



DISTINCTIVE FEATURES

- Process sealed
- Single piece case
- Front and rear sealing
- Wide variety of contact materials
- Same PCB layout as TP, TR and TG subminiature switches



ENVIRONMENTAL SPECIFICATIONS

- Operating temperature : -30 °C to +85 °C (-22 °F to +185 °F)
- Moisture : 21 days 95 % (NFC 20-603 - IEC 68-2-3)



ELECTRICAL SPECIFICATIONS

- Max. current/voltage rating with resistive load :
 - gold plated contacts : 0.4 VA 20 V max. AC or DC
 - silver plated contacts : 0.5 A 48 V max. AC or DC
- Minimum load : 10 mA 50 mV - 10 μ A 5 VDC
- Contact resistance : 20 m Ω max.
- Insulation resistance : 1,000 M Ω min. at 500 VDC
- 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



GENERAL SPECIFICATIONS

- Strength of terminals : pull-out force - 10 N max.
- Cleaning : solvents or water + detergent
- Wave soldering : 260 °C (500 °F) - 5 sec.

The company reserves the right to change specifications without notice.



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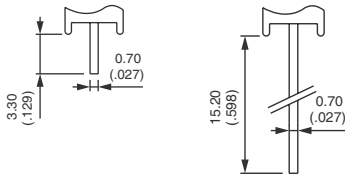
MATERIALS

- 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

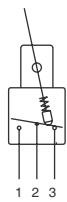
APEM products may be recycled at end-of-life for the re-claiming of valuable metal components.



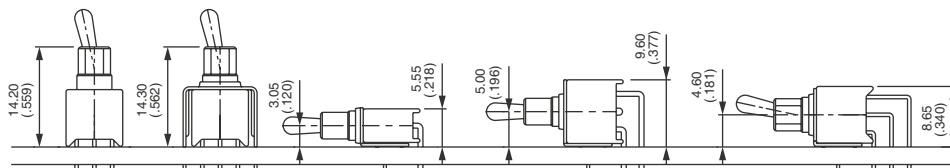
TERMINALS



ELECTRICAL FUNCTIONS

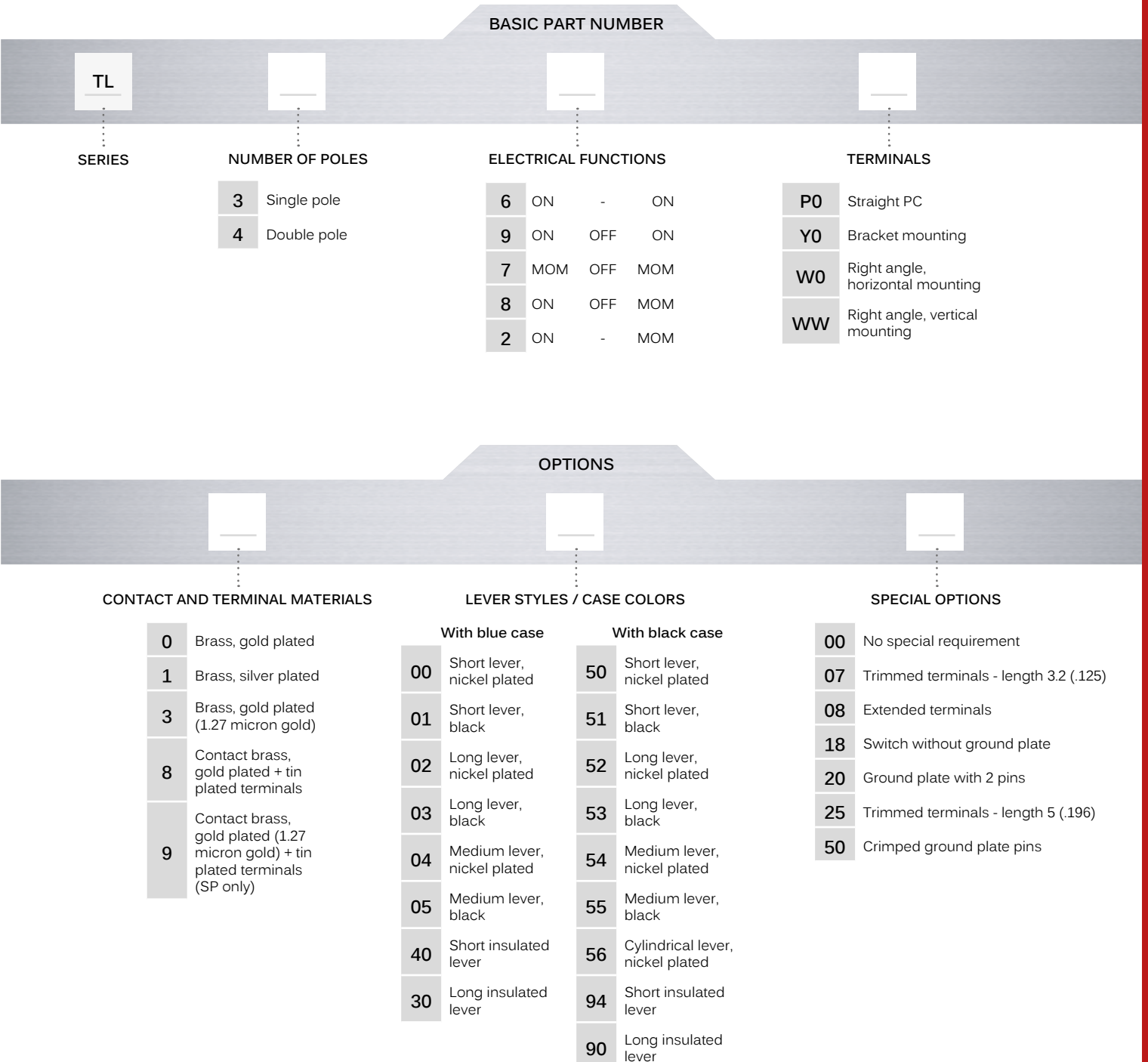


PCB MOUNTING





BUILD YOUR PART NUMBER



ABOUT THIS SERIES

On the following pages, you will find successively basic part numbers of switches and options in the same order as in above chart.



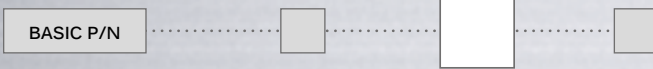
Notice : please note that not all combinations of above numbers are available. Refer to the following pages for further information.

CONTACT AND TERMINAL MATERIALS

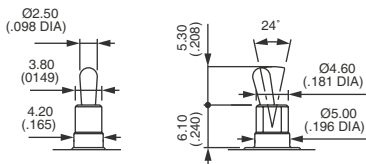


- 0 Brass, gold plated
- 1 Brass, silver plated
- 3 Brass, gold plated (1.27 micron gold)
- 8 Contact brass, gold plated + tin plated terminals
- 9 Contact brass, gold plated (1.27 micron gold) + tin plated terminals (single pole only)

LEVER AND CASE STYLES

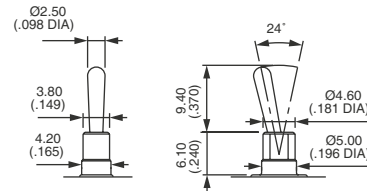


SHORT - STANDARD



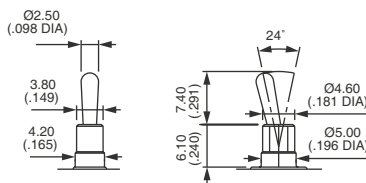
LEVER \ CASE	Blue	Black
Nickel plated	00	50
Black	01	51

LONG



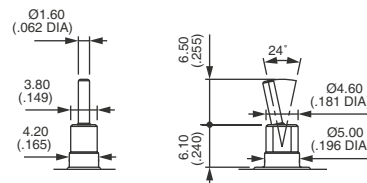
LEVER \ CASE	Blue	Black
Nickel plated	02	52
Black	03	53

MEDIUM



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

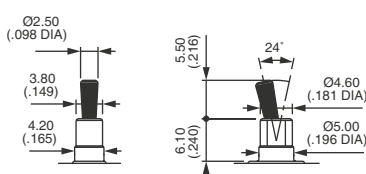
CYLINDRICAL



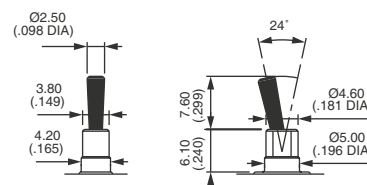
LEVER \ CASE	Blue	Black
Nickel plated	-	56

INSULATED LEVERS

Protected against electrostatic discharges (ESD) up to 10 KV.



LEVER \ CASE	Blue	Black
Black	40	94

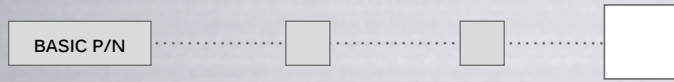


LEVER \ CASE	Blue	Black
Black	30	90

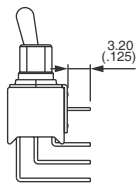
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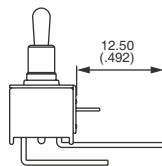
SPECIAL OPTIONS



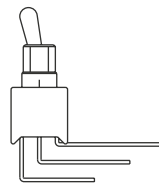
- 00 No special requirement
- 07 **Trimmed terminals** - length 3,2 mm (.125) for TL..WW models only
- 08 **Extended terminals** for TL..W0 models only
- 18 **Switch without ground plate** for TL..WW models only
- 20 **Ground plate with 2 pins** for TL..WW models only
- 25 **Trimmed terminals** - length 5 mm (.196) for all models, except TL..WW
- 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.



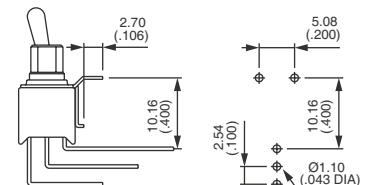
07



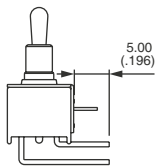
08



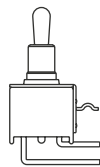
18



20



25



50