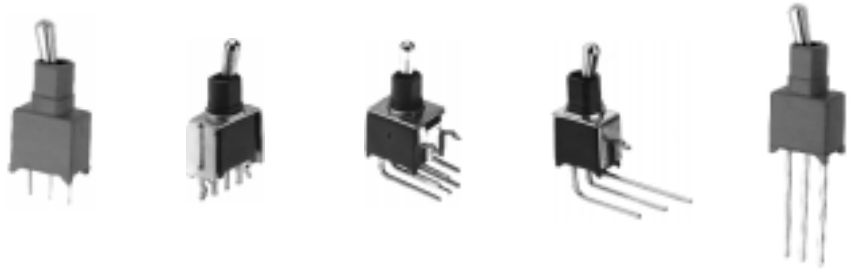
TL SERIES - WASHABLE TINY TOGGLE SWITCHES, P.C. MOUNTING



FEATURES

- **Wave solderable.**
- **Fully sealed for process compatibility.**
- **Ultra-compact case size.**
- **Case color options - blue or black.**
- **SPDT & DPDT models.**
- **Models with electrostatic discharge protection.**

SPECIFICATIONS

Contact ratings (resistive loads):	Gold plated brass; 0.4 Volt-Amps max. at 20 V max. Silver plated brass; 0.5 Amps at 48 V max.
Minimum load:	10 mA at 50 mV - 10µA at 5 VDC
Initial contact resistance:	20 milliohms maximum
Insulation resistance:	1000 megohms minimum at 500 VDC
Dielectric strength:	1000 V rms minimum between terminals and frame. 500 V rms between terminals..
Electrical life:	2 position switches - 60,000 cycles minimum. 3 position switches - 30,000 cycles minimum.
Operating temperature range:	-30°C to +85°C
Washing:	Permissible with water, detergents and freons.

MATERIALS

Contacts & Terminals:	Gold or silver plated brass
Actuator:	Nickel plated brass
Bracket:	Tin plated steel
Case:	PBT
Terminal seal:	Epoxy

ABOUT THIS SERIES

The material in this series is organized in the following sequence:

a. Completely specified switch models
b. 'build your own switch' order format
c. Option drawings & special options

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

APEM, PO BOX 544, WAKEFIELD, MA USA 01880 TEL: (781) 246-1007 FAX: (781) 245-4531 TOLL FREE SALES: (877) 246-7890

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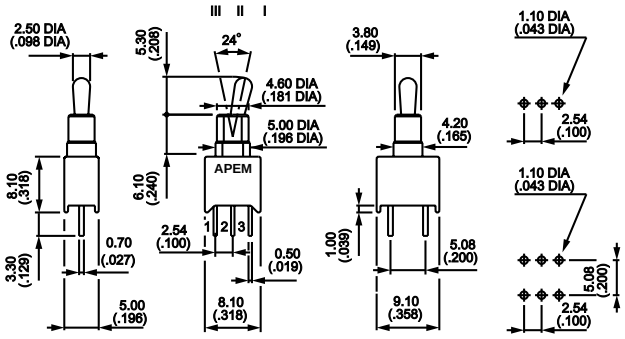
Straight p.c. terminals - gold plated brass contacts

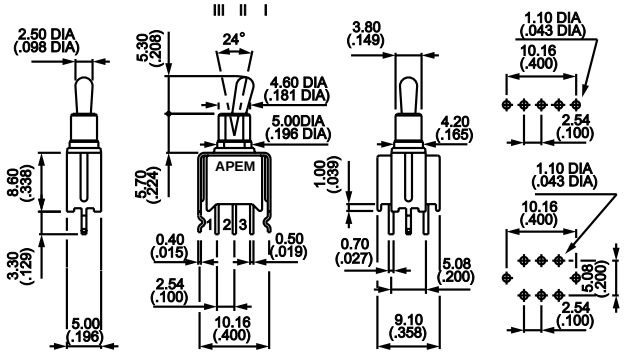
SINGLE POLE MODEL NO.	DOUBLE POLE MODEL NO.	CIRCUIT		
TL36P000000	TL46P000000	ON	-	ON
TL39P000000	TL49P000000	ON	OFF	ON
TL37P000000	TL47P000000	MOM	OFF	MOM
TL38P000000	TL48P000000	ON	OFF	MOM
TL32P000000	TL42P000000	ON	-	MOM
Handle position (see dwg.) :		III	II	I
Terminals connected:	SP & DP	2-3		2-1
	DP	5-6		4-5



SP DP

Straight p.c. terminals - mounting bracket - gold plated brass contacts

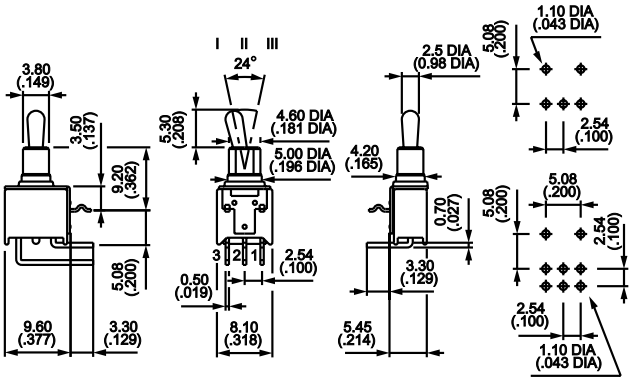
SINGLE POLE MODEL NO.	DOUBLE POLE MODEL NO.	CIRCUIT		
TL36Y000050	TL46Y000050	ON	-	ON
TL39Y000050	TL49Y000050	ON	OFF	ON
TL37Y000050	TL47Y000050	MOM	OFF	MOM
TL38Y000050	TL48Y000050	ON	OFF	MOM
TL32Y000050	TL42Y000050	ON	-	MOM
Handle position (see dwg.) :		III	II	I
Terminals connected:	SP & DP	2-3		2-1
	DP	5-6		4-5



SP DP

Horizontal right angle terminals - gold plated brass contacts

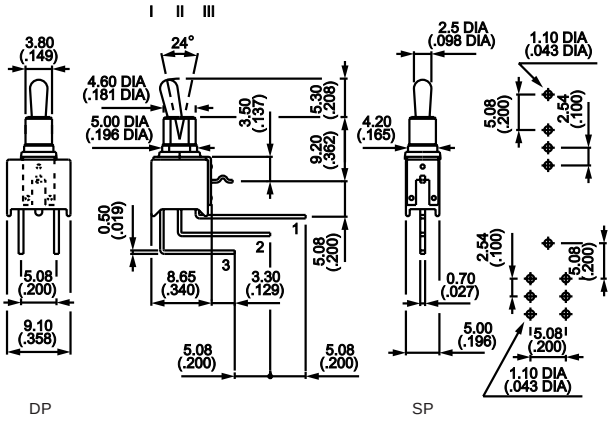
SINGLE POLE MODEL NO.	DOUBLE POLE MODEL NO.	CIRCUIT		
TL36W000050	TL46W000050	ON	-	ON
TL39W000050	TL49W000050	ON	OFF	ON
TL37W000050	TL47W000050	MOM	OFF	MOM
TL38W000050	TL48W000050	ON	OFF	MOM
TL32W000050	TL42W000050	ON	-	MOM
Handle position (see dwg.) :		III	II	I
Terminals connected:	SP & DP	2-3		2-1
	DP	5-6		4-5



DP SP

Vertical right angle terminals - gold plated brass contacts

SINGLE POLE MODEL NO.	DOUBLE POLE MODEL NO.	CIRCUIT		
TL36WW00050	TL46WW00050	ON	-	ON
TL39WW00050	TL49WW00050	ON	OFF	ON
TL37WW00050	TL47WW00050	MOM	OFF	MOM
TL38WW00050	TL48WW00050	ON	OFF	MOM
TL32WW00050	TL42WW00050	ON	-	MOM
Handle position (see dwg.) :		III	II	I
Terminals connected:	SP & DP	2-3		2-1
	DP	5-6		4-5



DP SP

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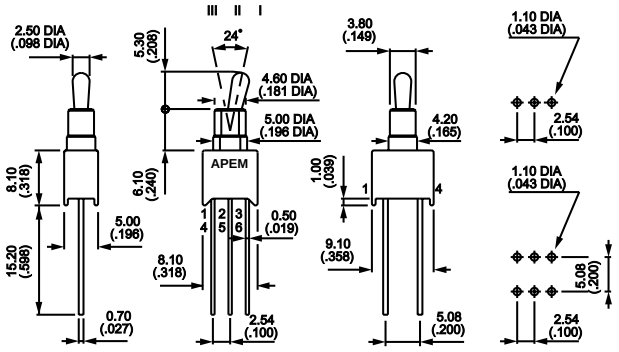
Wire-wrap terminals - gold plated brass contacts

SINGLE POLE MODEL NO.	DOUBLE POLE MODEL NO.	CIRCUIT		
TL36MW00000	TL46MW00000	ON	-	ON
TL39MW00000	TL49MW00000	ON	OFF	ON
TL37MW00000	TL47MW00000	MOM	OFF	MOM
TL38MW00000	TL48MW00000	ON	OFF	MOM
TL32MW00000	TL42MW00000	ON	-	MOM
Handle position (see dwg.) :		III	II	I
Terminals connected:	SP & DP	2-3		2-1
	DP	5-6		4-5



Additional ordering information: Commonly ordered models are shown above with complete model numbers and specifications. Below is an order format that enables you to 'build your own switch' and specify the correct switch model number by simply selecting from all available options shown and filling in the boxes.

'BUILD YOUR OWN SWITCH' ORDER FORMAT

Fill in boxes with selections shown for **Model Structure**, then add **Options** selections for complete model number.
(Allowable options are shown below each respective box).

Model Structure:

Series | **Number of poles** | **Electrical functions** | **Terminals**

T L

3	Single pole	**6**	ON	-	ON	**P**	**0**	Straight p.c.
4	Double pole	**9**	ON	OFF	ON	**Y**	**0**	Straight p.c.with bracket
		7	MOM	OFF	MOM	**W**	**0**	Horizontal right angle
		8	ON	OFF	MOM	**W**	**W**	Vertical right angle
		2	ON	-	MOM	**M**	**W**	Wire-wrap

Options:

Contact & terminal mat'ls.

- **0** Brass, gold plated
- **1** Brass, silver plated
- **3** Brass, gold plated - (1.27 microns gold)
- **8** Brass, gold plated contacts with tin plated terminals
- **9** Contacts brass, gold plated - (1.27 microns gold) and tin plated terminals

Actuators & case colors

Specify **00, 01, 02, 03, 04, 05, 30, 40, 50, 51, 52, 53, 54, 55, 56, 90,** or **94**
See drawings below with specifications and dimensions.

Special options

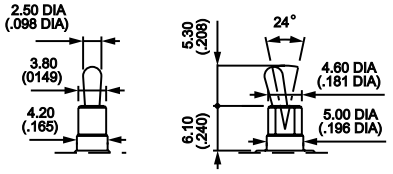
- **0 0** No special requirement
- **5 0** Crimped bracket terminals - specify for models with brackets

See additional listings on following page.

Example of completely specified model number: **TL36W015150**

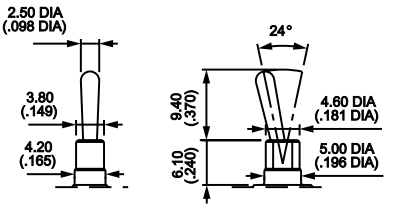
OPTION DRAWINGS

Brass actuators & case colors



Short (standard)

	Blue case	Black case
nickel plated	00	50
matte black	01	51



Long

	Blue case	Black case
nickel plated	02	52
matte black	03	53

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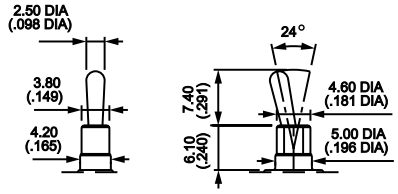
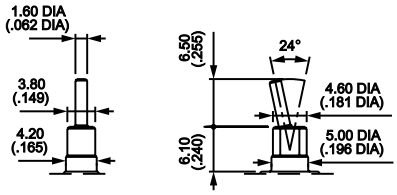
Brass actuators & case colors (cont'd.)



Medium

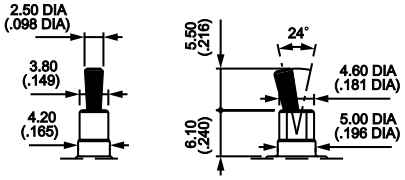
	Blue case	Black case
nickel plated	04	54
matte black	05	55



Cylindrical

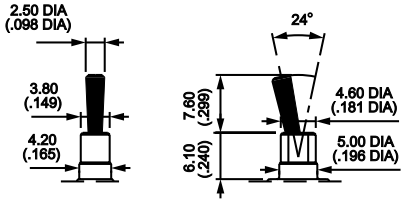
	Black case
nickel plated	56

Black plastic insulative actuators & case colors (protects against electrostatic discharges (ESD) up to 10 KV)



Short

	Blue case	Black case
nickel plated	40	94



Long

	Blue case	Black case
nickel plated	30	90

SPECIAL OPTIONS

00 No special requirement

07 Trimmed terminals for **WW** models only - .125" (3.2mm).

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

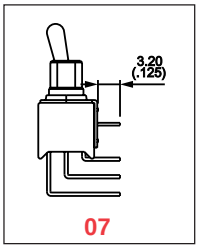
18 **WW** models without mounting bracket.

20 Mounting bracket for **WW** models with p.c. board spacer tab.

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

30 Wire-wrap terminals on models with **Y** bracket.

50 Crimped bracket terminals (retains switch on p.c. board during assembly and soldering). For models with **W0, WW** & **Y0** terminals.



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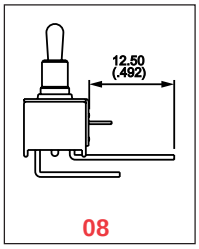

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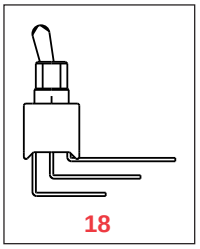

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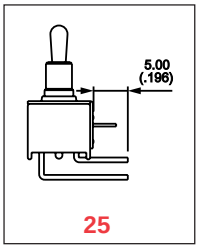

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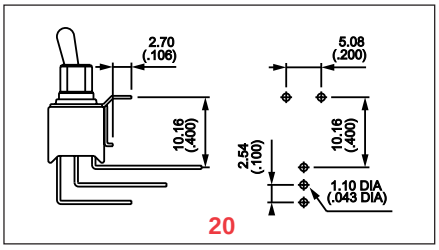

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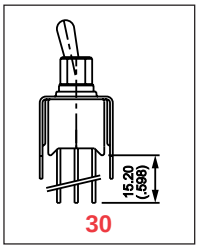

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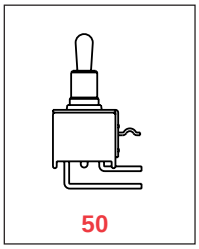

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