

ILLUMINATED SWITCHES

TM AND TR SERIES: PUSHBUTTON SWITCHES WITH LED INDICATORS



FEATURES

- SPST switches with two terminals per pole, momentary action
- Three contact types available - conductive rubber / silver / gold
- Optional LED illumination, red, green, yellow
- Wide variety of accessories available including colour buttons and mounting frames

DESCRIPTION

A series of PCB mounted, sub miniature pushbutton switches with momentary action, available with conductive rubber, silver or gold plated metal contact versions to suit a large number of applications. LED illumination is available with either one or two LEDs fitted to indicate the system state. The LEDs are available in red, green and yellow and accessories include nine different coloured buttons and mounting frames.

SPECIFICATIONS

Electrical TM series (metal contacts)

Rating	48V DC max 50mA max
Contact Resistance	100mΩ max (200μV AC 1.5mA)
Insulation Resistance	100MΩ min @ 100V DC
Dielectric Strength	250V AC for 1 minute

Mechanical

Operating Life	300,000 operations
Operating Temperature	-25°C to +70°C
Operating Force	1.4N +/- 0.4N

Electrical Performance –LED TM/R 2

	IF	V _F Typical	V _F Max	V _R
Red	30mA	2.0V	2.8V	5VDC
Yellow	20mA	1.95 V	2.5V	5VDC
Green	20mA	1.9V	2.5V	5VDC

Electrical Performance – LED TM/R 3

	IF	V _F Typical	V _F Max	V _R
Red	20mA	2.1V	2.8V	4VDC
Yellow	25mA	2.1V	2.8V	4VDC
Green	25mA	2.1V	2.8V	4VDC

Electrical TR series (conductive rubber)

Rating	12V DC 10mA
Contact Resistance	500Ω max (2V DC 1mA)
Insulation Resistance	100MΩ min @ 100V DC
Dielectric Strength	250V AC for 1 minute

Mechanical TR series (conductive rubber)

Operating Life	100,000 operations
Operating Temperature	25°C to +70°C
Operating Force	1.0N +/- 0.4N

Electrical Performance – LED TM/R 4

	IF	V _F Typical	V _F Max	V _R
Red	25mA	2.1V	2.8V	4VDC
Yellow	30mA	2.1V	2.8V	4VDC
Green	30mA	2.1V	2.8V	4VDC

Soldering

Jet wave or Dip type 245°C +/- 10°C. Hand Soldering 20W
Max 270°C max, 3 sec max **Not suitable for immersion washing**

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ORDERING INFORMATION

I R (G) - 1 01 - L2

Series Code

Contacts
M Metal
R Rubber

Metal contacts Material
None Silver
G Gold

Construction
1 No LED
2 Central LED
3 LED in side frame
4 LED in side frame-Protruding

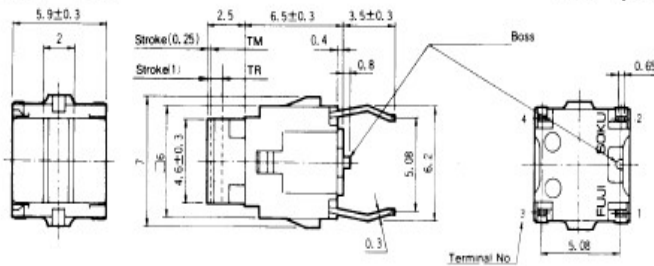
Type
01 TM/R 1,3 and 4
21 TM/R 2

Colour code
2 Red
5 Green
8 Yellow

LED Position (when button is mounted) Replace x with LED Colour code.			
	TMR 2	TMR 3	TMR 4
Lx			
L0x			
L00x			
Lx0x			

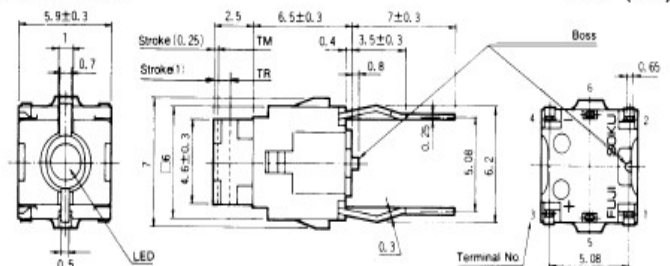
DIMENSIONS

TM1 · TR1



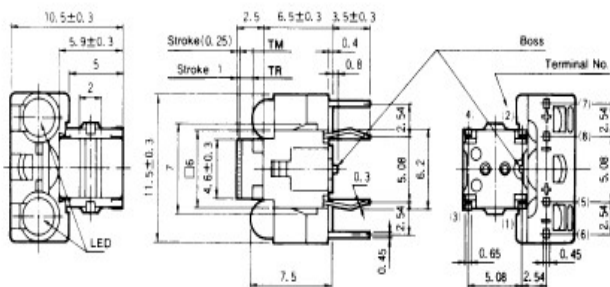
OFF-(ON)

TM2 · TR2



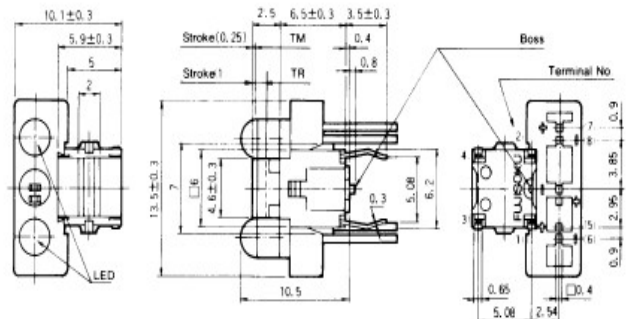
OFF-(ON)

TM3 · TR3



OFF-(ON)

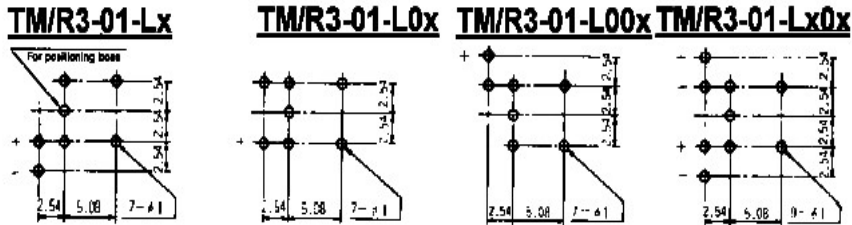
TM4 · TR4



OFF-(ON)

ILLUMINATED SWITCHES

PCB LAYOUT



OPTIONAL ACCESSORIES

TZ 0 3 10

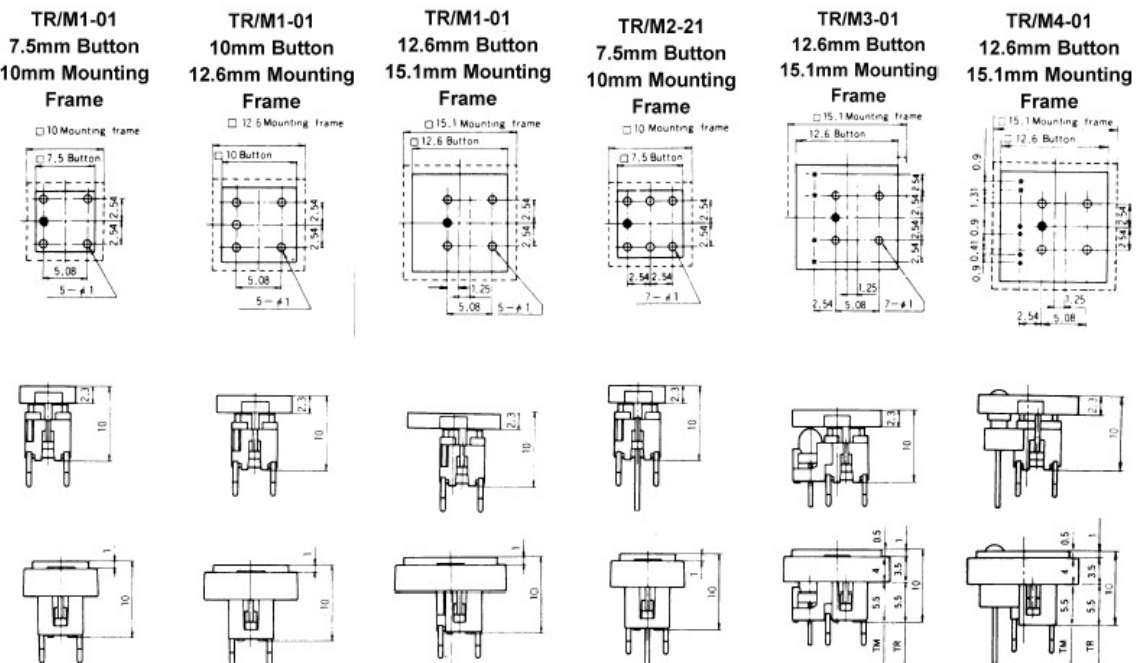
Series Code

Contacts
 0 TM/R 1, 2 or 3
 4 TM/R 4

Button	Size	LED	Switch
0	7.5mm	None	TM/R1
1	7.5mm	Centre	TM/R2
2	10.0mm	None	TM/R1
3	12.5mm	None	TM/R1
4	12.5mm	Left	TM/R3,4
5	12.5mm	Centre	TM/R3,4
6	12.5mm	Right	TM/R3,4
7	12.5mm	Dual	TM/R3,4
8	10.0mm	Centre	TM/R2

Colour
 02 Red
 04 Grey
 05 Green
 06 Blue
 09 Brown
 10 Dark Grey
 11 Light Grey
 12 Ivory
 13 Silver

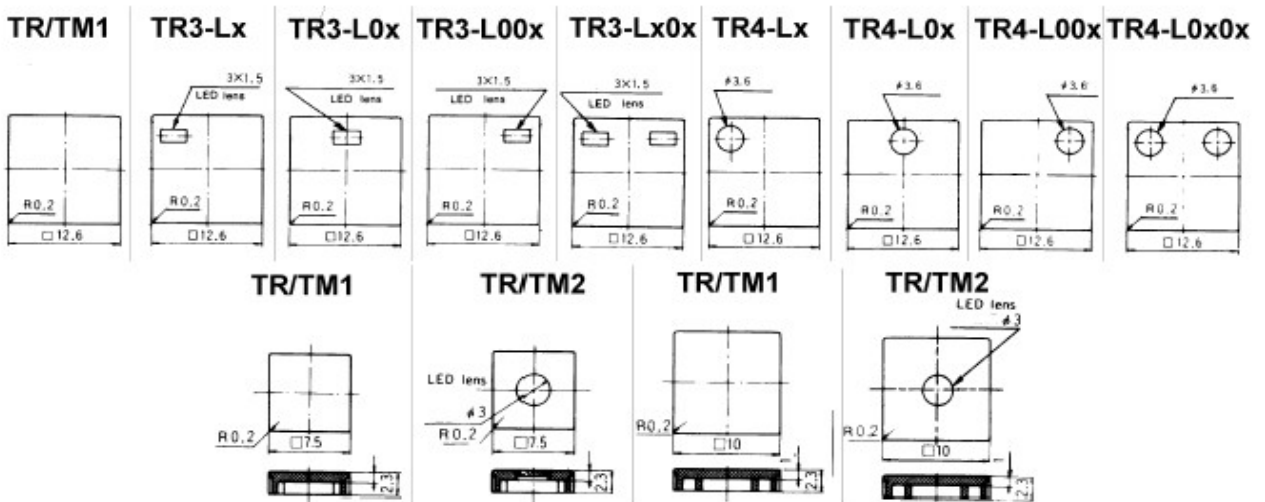
MOUNTING DIMENSIONS



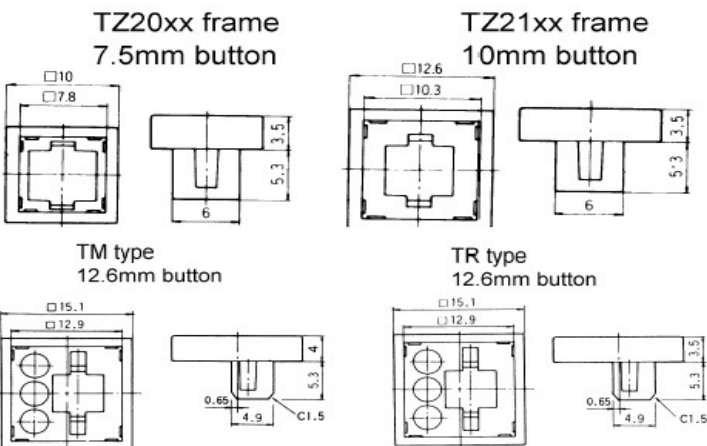
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BUTTON DIMENSIONS



MOUNTING FRAMES



Colour	TR/M1/2 7.5mm button	TR/M 1/2 12.5mm button
Dark Grey	TZ2010	TZ2110
Grey	TZ2004	TZ2104
Light Grey	TZ2011	TX2111

Colour	TM 3/4 12.5mm button	TR3/4 12.5mm button
Dark Grey	MD0340215	MD0340151
Grey	MD0340216	MD0340152
Light Grey	MD0340217	MD0340153

All measurements are in mm. Tolerance +/- 0.3mm unless shown. This leaflet is believed to contain the best information at time of printing, but is subject to change without notice.



DEVLIN COMPONENTS

