



## 22mm Illuminated Pushbutton Switches

# KPB22

### SPECIFICATIONS

**RATING** : 1th 5A/250VAC. resistive load 3A/250VAC.  
**CONTACT RESISTANCE** : 50mΩ MAX.@1A 12VDC(initial value).  
**INSULATION RESISTANCE** : 1,000MΩ MIN at 500VDC.  
**DIELECTRIC STRENGTH** : 2,000V RMS@sea level.  
**OPERATION TEMPERATURE** : -20°C to 55°C.  
**MECHANICAL LIFE** : Momentary 1,000,000 cycles  
 Lock 500,000 cycles  
**ELECTRICAL LIFE** : 50,000 make-and-break cycles at full load.  
**TORQUE** : 1~3Nm.  
**PANEL THICKNESS** : 6mm (Ø22.00mm)  
**OPERATION PRESSURE** : 1Pole 2.5±1N / 2Poles 3.5±1N  
**TRAVEL** : ABOUT 3.2mm.  
**INGRESS PROTECTION** : IP65



### MATERIALS

**BEZEL** : PC  
**BASE** : PBT(UL 94-V0) & PC(UL 94-V2)  
**ACTUATOR** : PC & POM.  
**INNER ASSEMBLY** : POM. / PA66.  
**SPRING** : Stainless steel.  
**SEALING** : Silicone.  
**O-Ring** : Silicone.  
**TERMINAL / CONTACT** : Brass, Silver plated.  
**HEX NUT** : PC.

### HOW TO ORDER

**KPB22**

Bezel color  
 8 Silver

Actuator Type  
 000 Transparent Actuator,below all LED color available  
 100 White Actuator,below all LED color available  
 200 Black Actuator,Non-LED  
 300 Transparent Red Actuator,LED in Red only.  
 400 Transparent Orange Actuator,LED in Yellow only.  
 600 Transparent Green Actuator,LED in Green only.  
 700 Transparent Blue Actuator,LED in Blue only.  
 800 Silver Actuator,Non-LED  
 8P1 Silver Actuator+White power,below all LED color available  
 8P2 Silver Actuator+Black power,Non-LED  
 8P3 Silver Actuator+Red power,LED in red only  
 8P6 Silver Actuator+Green power,LED in Green only  
 8P7 Silver Actuator+Blue power,LED in Blue only

Button type  
 F Flat

Contact configuration  
 1 1NO 1NC  
 2 2NO 2NC

Operating type  
 0 Momentary  
 1 Lock

Terminal plating  
 Q Silver  
 R Gold

Terminal shape  
 J Solder terminal

LED voltage (20mA)

ITEM NO	VOLTAGE
0	Without LED or resistor
3	3V
6	6V
12	12V
24	24V
36	36V
110	110V
220	220V

LED color

ITEM NO	COLOR
0	Without LED
1	White
3	Red
5	Yellow
6	Green
7	Blue

EXAMPLE:

KPB22-88P1-F10-□□-JQ

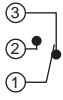
LED color □ □ LED voltage

# KPB22

## 22mm Illuminated Pushbutton Switches

### CIRCUIT

POSITION 1

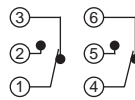


Without LED (1 Pole)

POSITION 2

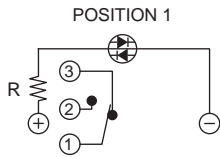
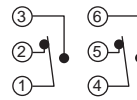


POSITION 1

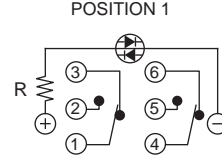
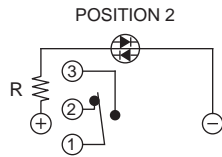


Without LED (2 Poles)

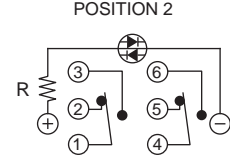
POSITION 2



Single Color Led (1 Pole)

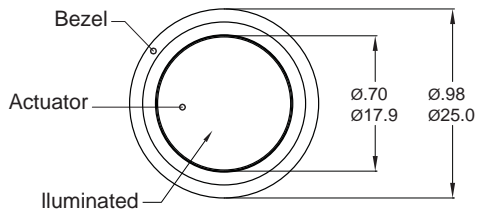


Dual Color Led (2 Poles)

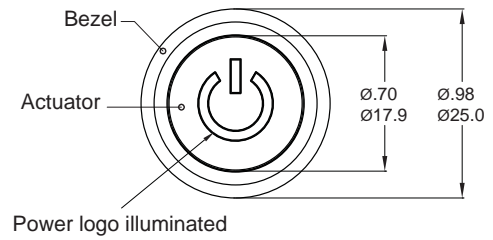


### ACTUATOR TYPE

X00 Transparent Actuator

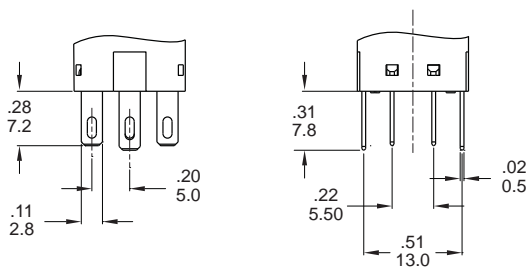


8PX Power



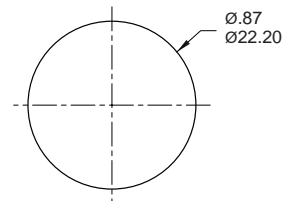
### TERMINAL TYPE

J Solder terminal (std)



### PANEL MOUNTING

Max. Panel thickness: 6.0mm [.24]



### O-RING INSTALLATION

Proposal	In front of the panel
Installation Diagram	

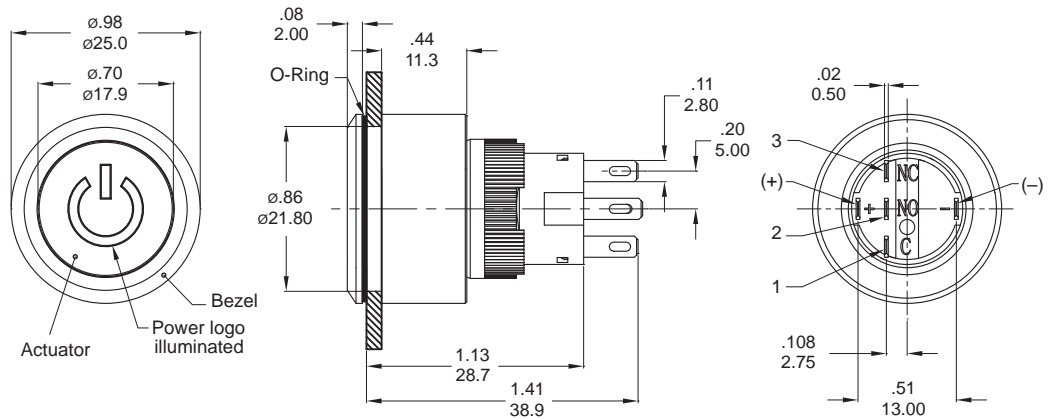
## 22mm Illuminated Pushbutton Switches

### ACTUATOR TYPE

8P1



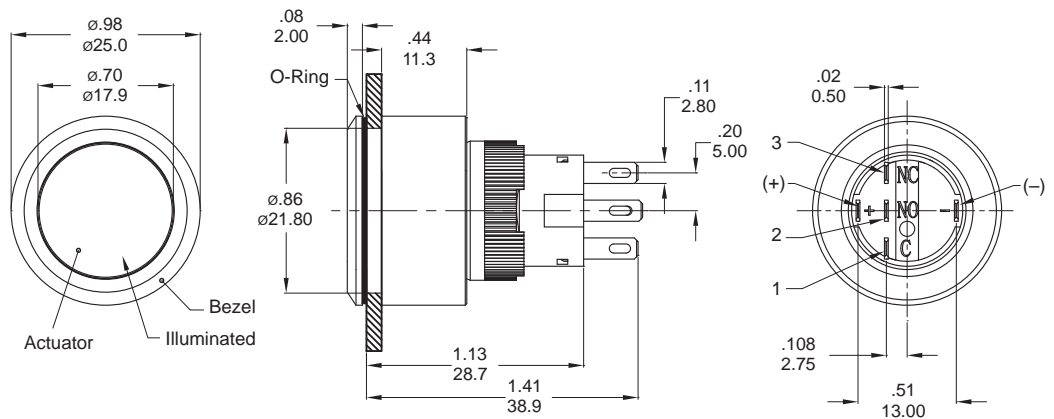
Part No. Shown :  
KPB22-88P1-F10-□□-JQ



000



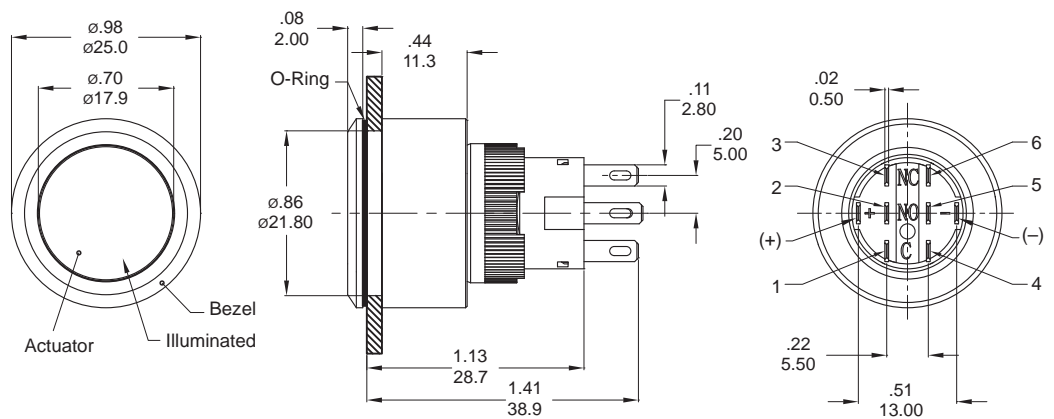
Part No. Shown :  
KPB22-8000-F10-□□-JQ



400



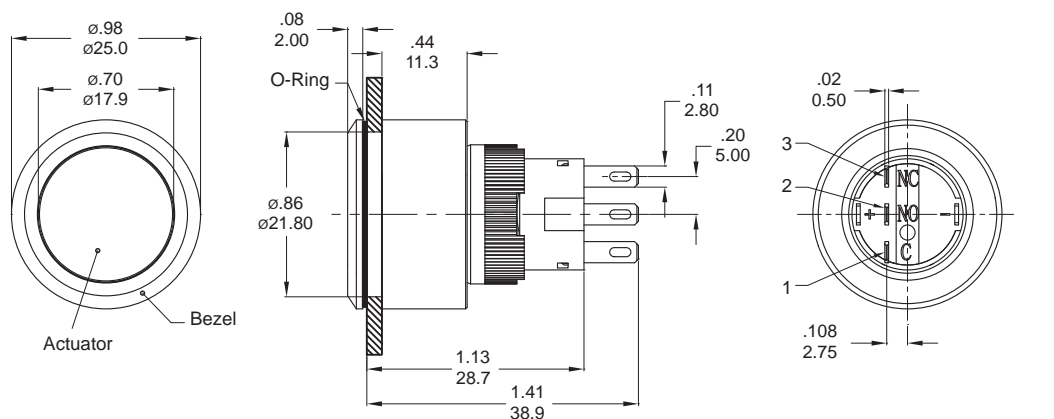
Part No. Shown :  
KPB22-8400-F20-5□□-JQ



800 Non-LED



Part No. Shown :  
KPB22-8800-F10-JQ



### SPECIFICATIONS

**RATING :** 5-24V / 1A DC

**OPERATING LIFE :** 50 MILLION CYCLE MIN.

**CONTACT RESISTANCE :** 1Ω MAX.

**OPERATING TEMPERATURE:** -20°C to 65°C.

### MATERIALS

**BUSHING:** Aluminum alloy / Stainless steel.

**CAP :** PC ; Aluminum alloy / Stainless steel.

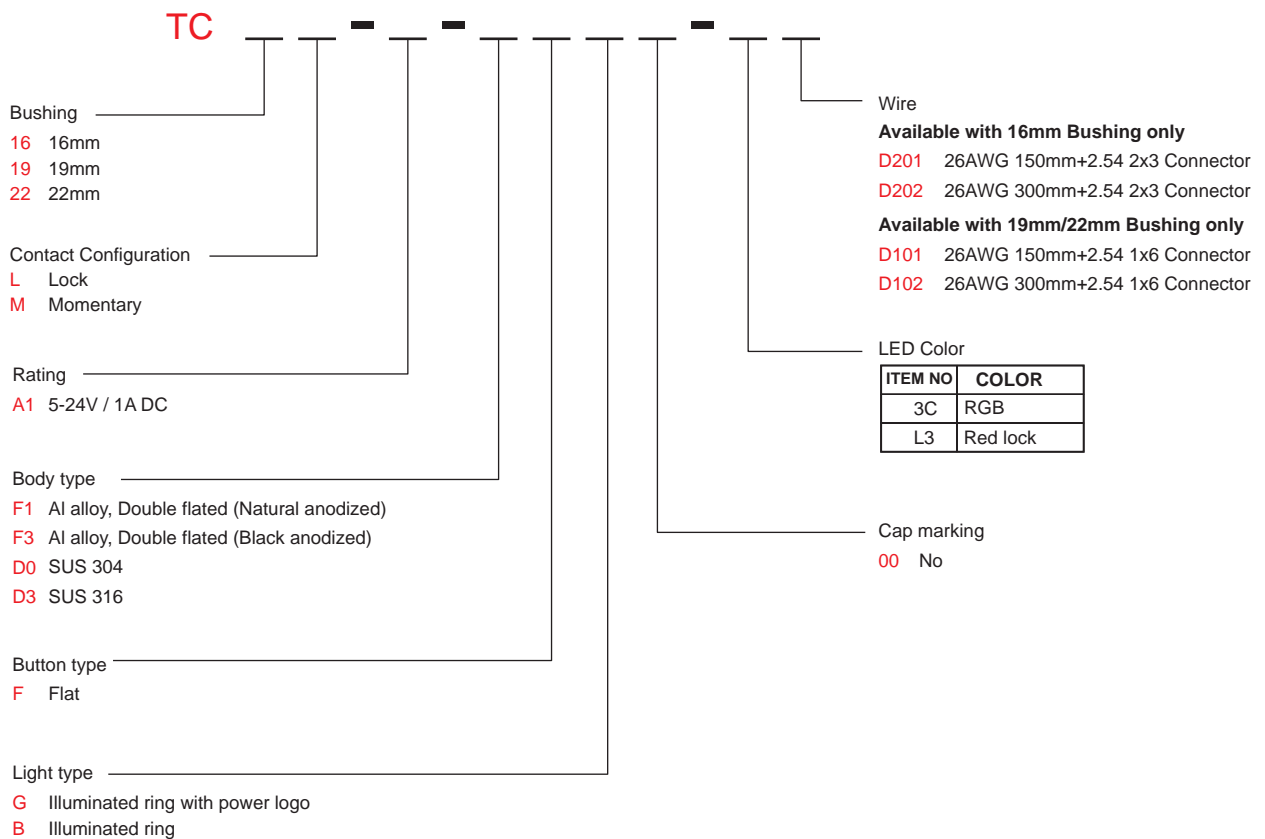
**SEALING :** Silicone,EPOXY.

**O-RING:** Silicone.

**HEX NUT :** Nickel plated brass.



### HOW TO ORDER



### EXAMPLE:

TC16M-A1-F1FG00-3CD201

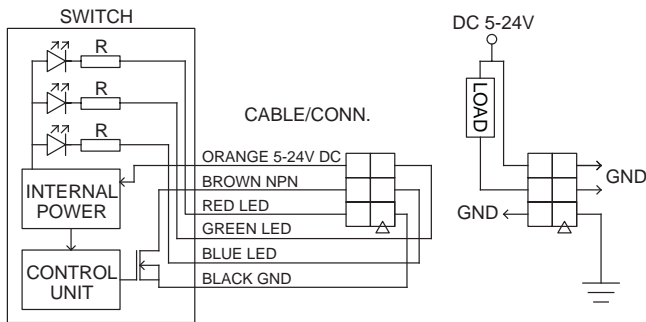
TC19M-A1-F1F□00-3CD101

Light type Wire

### CIRCUIT

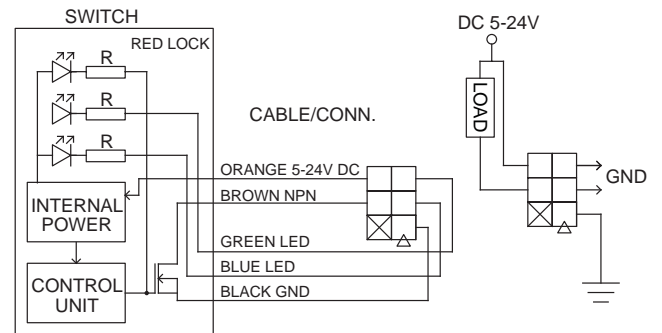
#### 3C color led application diagram

Available with 16mm Bushing only



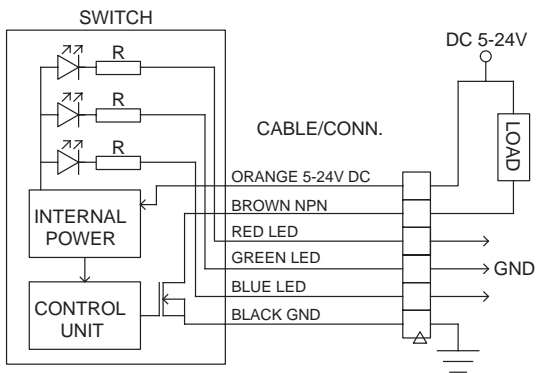
#### L3 color led application diagram

Available with 16mm Bushing only



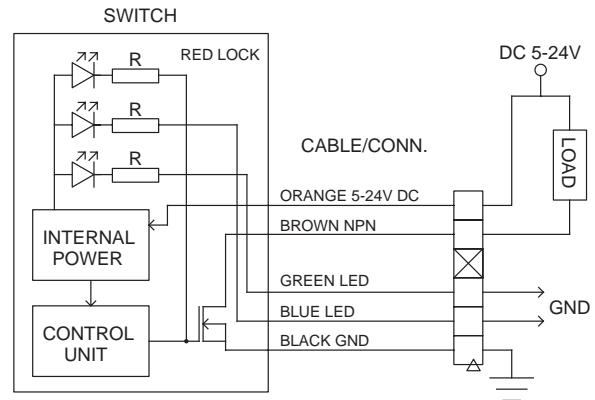
#### 3C color led application diagram

Available with 19mm/22mm Bushing only



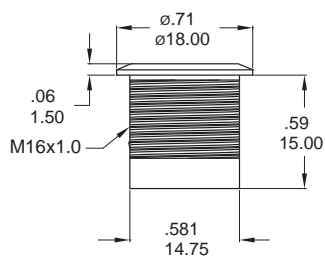
#### L3 color led application diagram

Available with 19mm/22mm Bushing only

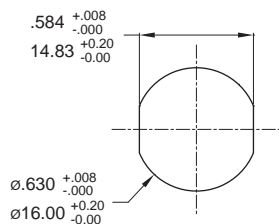


### BUSHING

#### 16mm

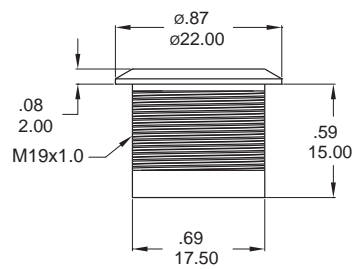


#### PANEL CUTOUT

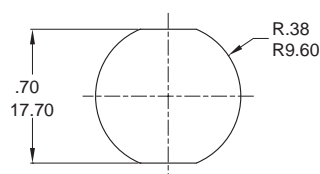


Max. Panel thickness: 8.0mm [.315] (Max.)

#### 19mm

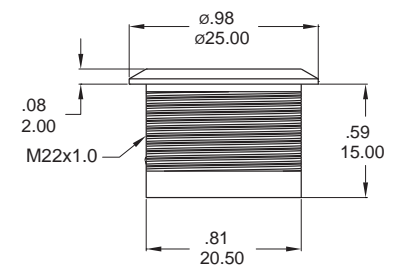


#### PANEL CUTOUT

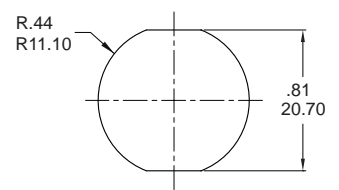


Max. Panel thickness: 10.0mm [.394]

#### 22mm



#### PANEL CUTOUT



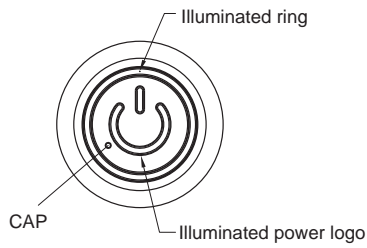
Max. Panel thickness: 10.0mm [.394]

# TC

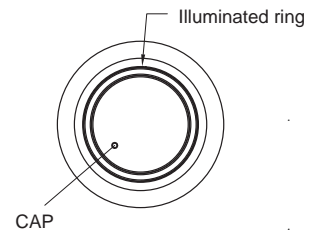
## Capacitive switches

LIGHT TYPE

**G** Illuminated Ring with Power logo

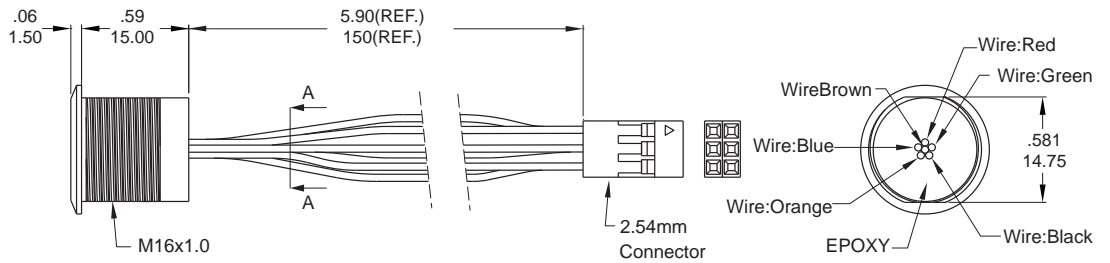


**B** Illuminated Ring



### BUSHING

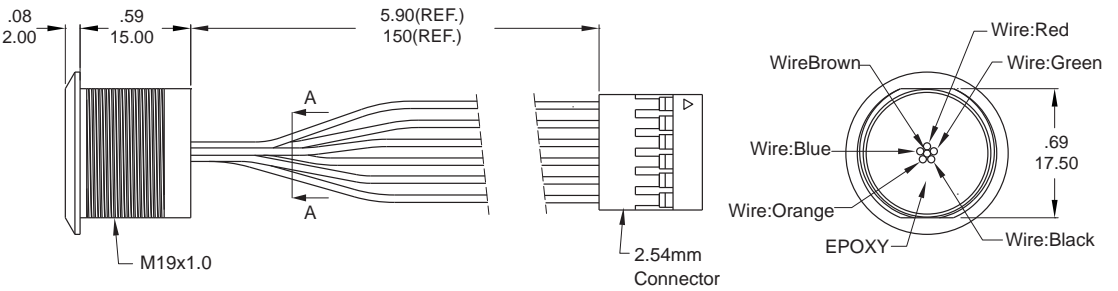
**TC16**



Part No. Shown :  
TC16□-A1-F1FB00-3CD201

SECTION A-A

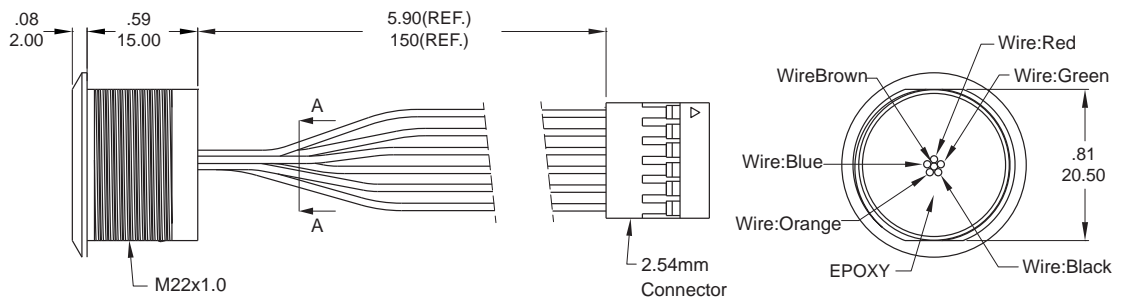
**TC19**



Part No. Shown :  
TC19□-A1-F1FG00-3CD101

SECTION A-A

**TC22**



Part No. Shown :  
TC22□-A1-F1FG00-3CD101

SECTION A-A



# Piezo switches (Pulse)

### SPECIFICATIONS

**RATING :** 5-24VADC/1A PULSE MODE.

**OPERATING LIFE :** 50 MILLION CYCLE MIN.

**CONTACT RESISTANCE :** 1Ω MAX.

**OPERATING TEMPERATURE:** -20°C to 65°C.

### MATERIALS

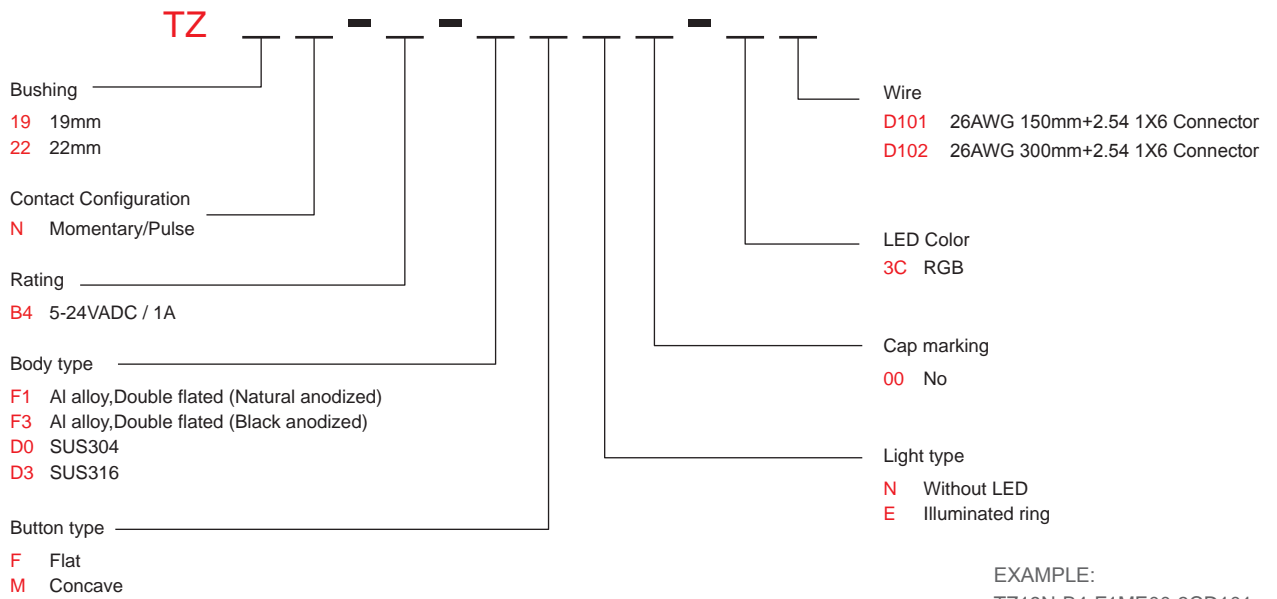
**BUSHING:** Aluminum alloy / Stainless steel.

**SEALING :** Silicone,EPOXY.

**HEX NUT :** Nickel plated brass.

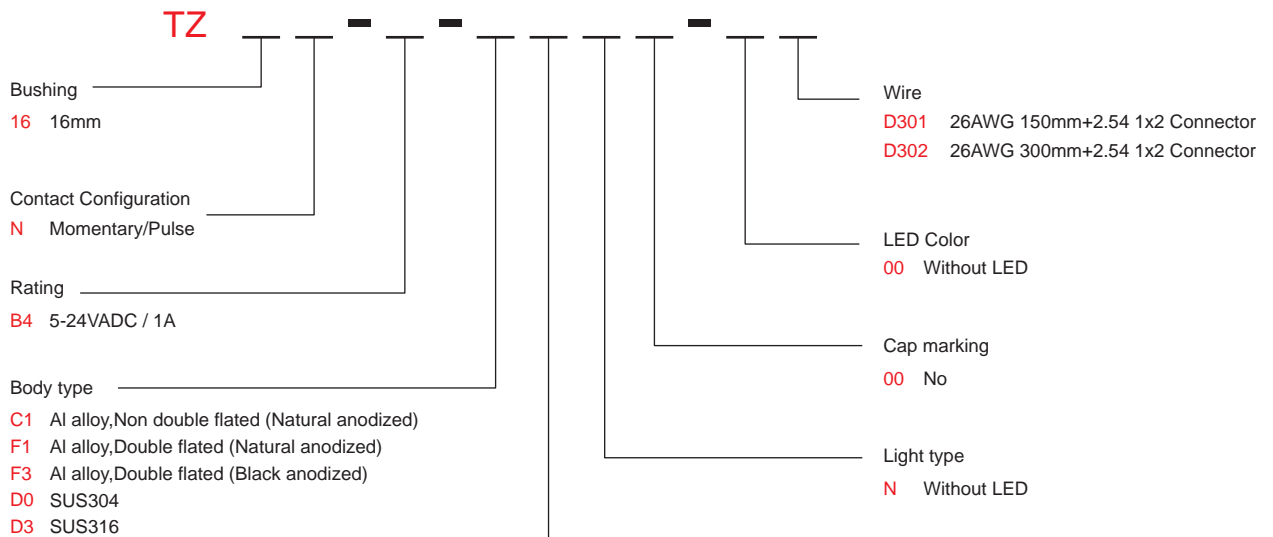


### HOW TO ORDER



EXAMPLE:  
TZ19N-B4-F1ME00-3CD101  
Wire

### HOW TO ORDER

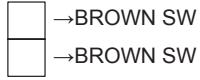


EXAMPLE:  
TZ16N-B4-C1HN00-00D301  
Wire

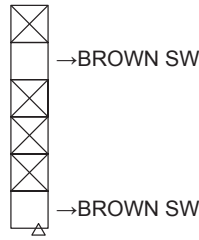
### CIRCUIT

#### 00 Without led application diagram

Available with 16mm Bushing only

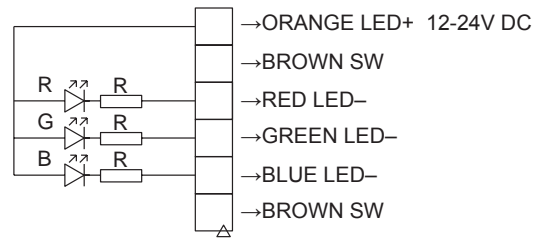


Available with 19mm/22mm Bushing only



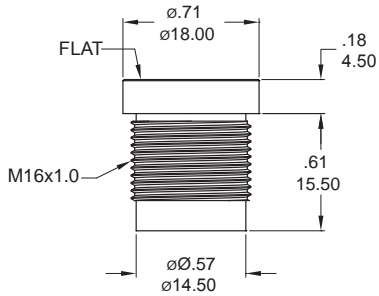
#### 3C Color led application diagram

Available with 19mm/22mm Bushing only

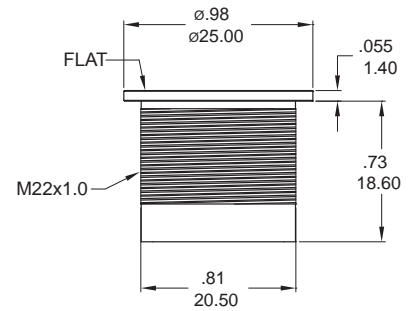
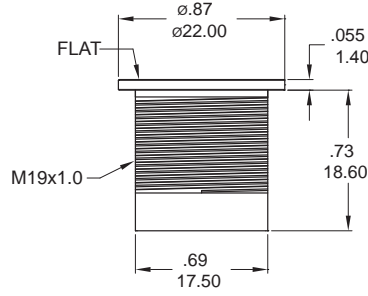


### BUSHING

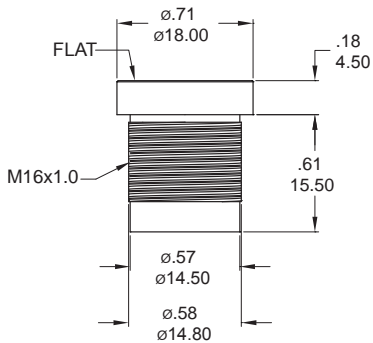
#### F Flat button type Non double flated



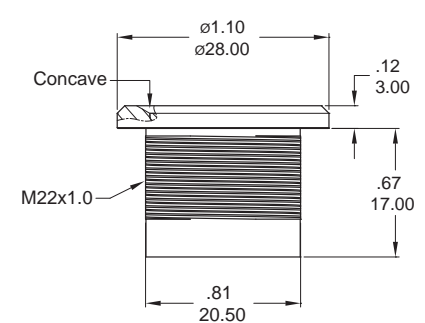
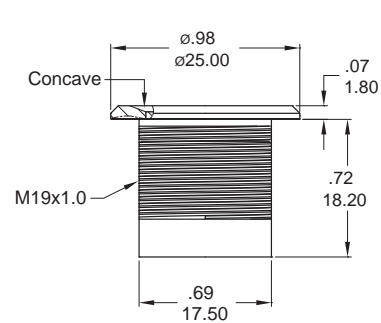
#### F Flat button type Double flated



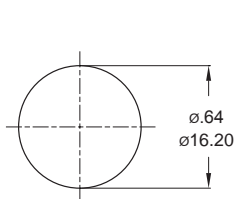
#### F Flat button type Double flated



#### M Concave button type Double flated

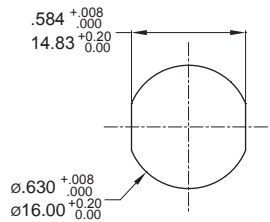


### PANEL CUTOUT

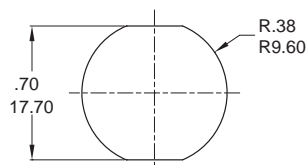


Non double flated

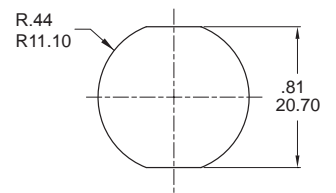
Available with 16mm Bushing only  
Max.Panel thickness:8.0mm[.315](Max.)



Double flated



Available with 19mm Bushing only  
Max.Panel thickness:10.0mm[.394]



Available with 22mm Bushing only  
Max.Panel thickness:10.0mm[.394]