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# IP68 Sub-Miniature Pushbutton Switches

**Key Features**

- **IP68 Rated (1Meter, 60 Minutes)**
- **Normally Open and Normally Closed Versions**
- **Various Cap Options**
- **LED illuminated flat cap versions**
- **Various cap and color illuminations**
- **Leaded options for ease of installation**
- **LED illumination technology for long-term reliability**



TE Connectivity's Sub-Miniature Pushbutton range is a portfolio of high quality,IP68 rated switches that comprises various cap styles and LED illumination options.

These Pushbutton Switches are offered in High Cap, Round Cap, Flat Cap, and LED Flat Cap actuators. For ease of installation without the need of soldering, they are also available with 500mm leaded options.

As they are available in 5 different cap colors, including black, Red, Yellow, Green, and Blue as well as multi-color LED options for the flat cap, these switches can be used in a wide variety of applications.

## Applications

- Industrial Equipment
- Instrumentation
- Communication Equipment
- Control Equipment

## Benefits

- Ease of installation with available solderable or 500mm leaded terminations
- Various colored caps for easy visibility

## Switch Function / Schematic

| NO. POLES | MODEL NO. | SWITCH FUNCTION | | SCHEMATIC | |
|---|---|---|---|---|---|
| | | POS. 1 | POS. 2 | POS. 1 | POS. 2 |
| | |  |  |  |  |
| SP | PB6 | OFF | MOM(ON) | OPEN  | CLOSE  |
| SP | PB7 | ON | MOM(OFF) | CLOSE  | OPEN  |

MOM = MOMENTARY

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Sealed Pushbutton Switches

## Specifications





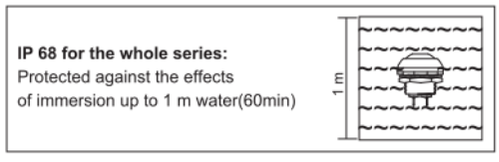


| | |
|---|---|
| **MAX. CURRENT/VOLTAGE RATING WITH RESISTIVE LOAD:** | 400 mA 32 VAC – 200 mA 50 VDC – 125 mA 125 VAC |
| **INITIAL CONTACT RESISTANCE:** | Without leads: 50mΩmax.<br>Leaded: 100mΩmax. * Resistance of the wire not included |
| **INSULATION RESISTANCE:** | 1GΩmin.at 500 VDC |
| **DIELECTRIC STRENGTH:** | 1,500 VAC RMS |
| **ELECTRICAL LIFE AT FULL LOAD:** | 500,000 cycles |
| **OPERATING TEMPERATURE:** | -30°C to 85°C |
| **PANEL THICKNESS:** | 1.5 (.059) to 4 (.157) |
| **TOTAL TRAVEL:** | 1.5 (.059) |
| **OPERATING FORCE:** | 3 to 6N |
| **CONTACT BOUNCE:** | 10 ms. |
| **MECHANICAL LIFE:** | 1,000,000 cycles |
| **TORQUE:** | 0.5 Nm max. applied to nut |
| **DEGREE OF PROTECTION:** | IP68 |
| **MANUAL SOLDERING:** | Use soldering iron of 30 watts, controlled at 350°C approximately 5 seconds while applying solder |
| **WAVE SOLDERING:** | Recommended Soldering Temperature:260 + 5°C<br>*Ambient temperature of the soldered surface of PC board. 110°C Max.<br>Duration of solder Immersion: Max 5 sec (PCB is 1.6mm) |



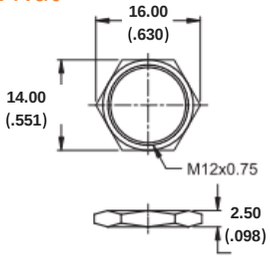
## Materials

**CAP:** Polyamide 6/6
**PLUNGER:** PB6:PC / PB7: Polyamide 6/6
**RUBBER:** Silicone
**BUSHING:** POLYAMIDE 6/6
**CASE:** Diallyl phthalate (DAP)(UL94V-0)
**TERMINAL/CONTACT:** Copper Alloy, Gold over Silver plated

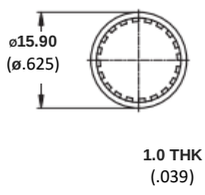



## Hardware

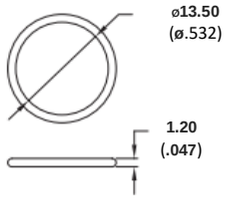
### M12 Nut




### Lock Washer




### O-Ring

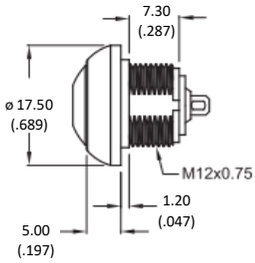


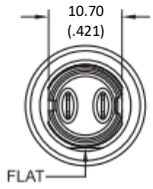
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## Bushing Type

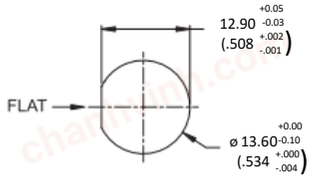
### B2



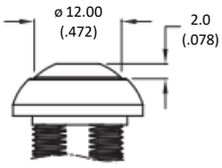

### Panel Cut-Out

THICKNESS 1.5 to 4.0mm

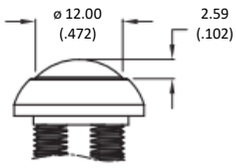



## Cap Options

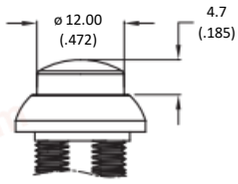
### Flat




### Round without LED

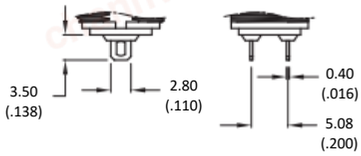



### High without LED

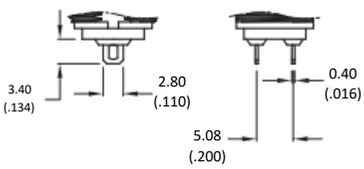



## Termination Options

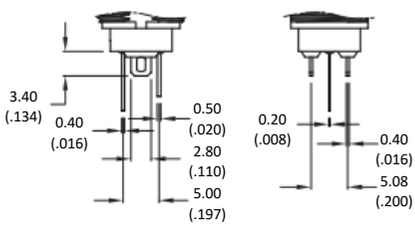
### M1 Solder Lug (PB6)



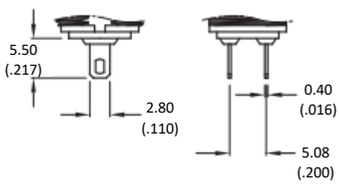

### M1 Solder Lug (PB7)



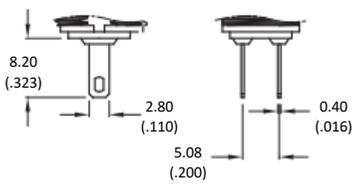

### M1 Solder Lug (PB6, with LED)



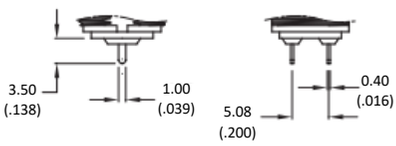

### M2 Solder Lug (PB6)




### M3 Solder Lug (PB6)




### M4 PC Thru-hole (PB6)

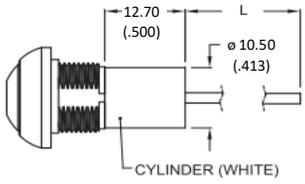


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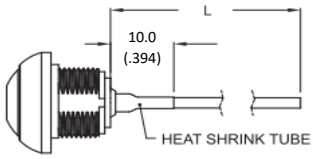


## Wire Option

### S500 500mm Lead




### Y500 500mm Lead with Heat Shrink




| WIRE LENGTH | |
|---|---|
| Code | DIM "L" |
| S500 | 500+10 (19.7± .394) |
| Y500 | 500±10 (19.7± .394) |

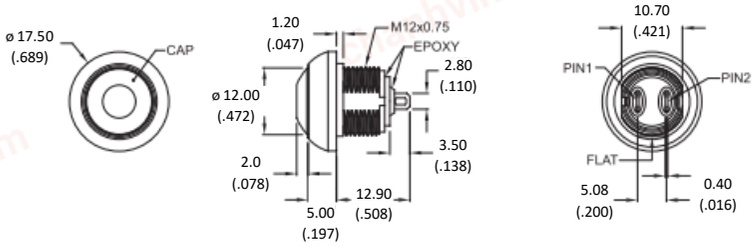
| NON - LED | |
|---|---|
| DESCRIPTION | WIRE COLOR |
| TERMINAL 1 | BLACK |
| TERMINAL 2 | BLACK |

| WITH LED | |
|---|---|
| DESCRIPTION | WIRE COLOR |
| TERMINAL 1 | BLACK |
| TERMINAL 2 | BLACK |
| LED+ | RED |
| LED- | GREEN |

*Multi-wire lead AWG20, section 0.6mm , UL approved

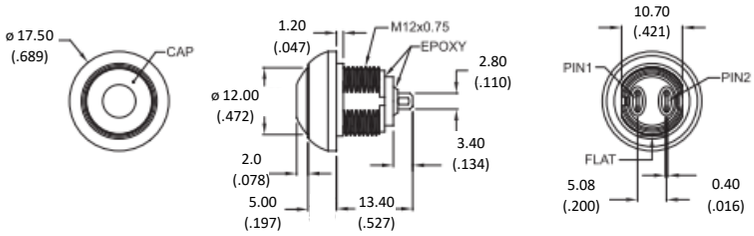
### PB6 M1





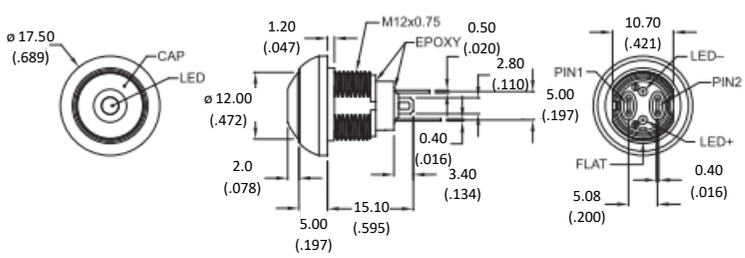

### PB7 M1






### PB6 M1 with LED





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## How To Order




Model NO.
PB6 OFF-MOM (ON)
PB7 ON -MON(OFF)

Bushing
B2 Threaded bushing

Cap Shape & Appearance
FM Flat Cap Matte (with and without LED)
RS Round Cap Shiny (without LED)
HS High Cap Shiny (without LED)
*Only flat cap available with LED

Cap Color
2 Black
3 Red
5 Yellow
6 Green
7 Blue

Termination
M1 3.50 High, Solder Lug (PB6 only, Non-LED)
3.40 High, Solder Lug (with LED and PB7 Non-LED)
M2 5.50 High, Solder Lug, (PB6 only, Non-LED)
M3 8.20 High, Solder Lug, (PB6 only, Non-LED)
M4 3.50 High, PC Thru-Hole, (PB6 only, Non-LED)

Contact Material & Finish
C Gold Over , Gold over Silver

Seal
A Sealed

LED Color
L00 Without LED
L01 White
L03 Red
L05 Yellow
L06 Green
L07 Blue
*Only flat cap available with LED

Wire
S500 500mm Lead
Y500 500mm Heat Shrink Lead