

# MJTP SERIES 6MM THRU-HOLE MTG. TACT SWITCHES

## FEATURES

- Numerous single pole-single throw momentary configurations.
- Excellent tactile feed-back (Snap dome).
- Ultra-compact size.
- Long operating life for high reliability.
- Molded-in terminals minimize wicking of flux or solder.

## MATERIALS

Case: Thermoplastic, color black. UL94HB Standard.  
 Actuator: Thermoplastic  
 Cover/Bracket: PET film, tin plated brass or stainless steel.  
 Terminals: Silver plated brass.  
 Shorting Contact: Phosphor bronze or stainless steel with silver plating.  
 L.E.D. rating: Forward voltage- 2.1 V (3.0 V Max.). Cont. fwd. current 20mA max. @ 25°C.

Gold plating available on contacts & terminals - consult factory.

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

## GENERAL SPECIFICATIONS

### ELECTRICALS

Contact rating: 50 mA @ 12 VDC  
 Insulation resistance: 100 megohms min. (100 VDC)  
 Dielectric withstanding voltage: 250 VAC for 1 minute  
 Contact resistance: 100 milliohms max. @ 5 VDC, 10 mA  
 Electrical life: 100,000 cycles min. (except models MJTP1243 & 1250- 50,000 cycles)  
 1,000,000 cycles available - consult factory  
 Contact bounce: less than 10 msec.

### MECHANICALS, THERMALS, ENVIRONMENTALS

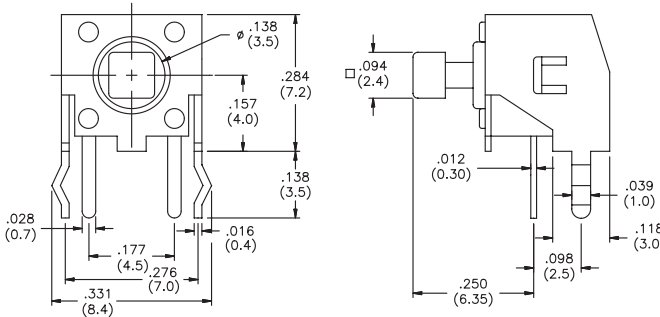
Plunger travel: .010" + .008", - .004" (0,25 +0,2, -0,1 mm)  
 Actuation force: 160 grams ±30 grams  
 Operating temperature range: -20°C to +70°C  
 Storage temperature range: -30°C to +80°C for 96 hours  
 Shock resistance: 30G per method 213, MIL-STD-202  
 Vibration resistance: passes method 201, MIL-STD-202

### SOLDERING (note - non-washable except for models indicated 'process compatible' below).

IR reflow soldering: 240°C max. for 20 seconds max.  
 Wave soldering: 255°C max. for 5 seconds max.  
 Hand soldering: 320°C max. for 3.5 seconds max. (40 watt iron max.)

#### MJTP1105T

Right angle, grounding

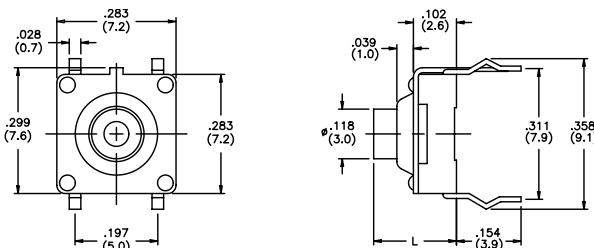


Caps available - see end of section.  
Bulk packaged.

#### US # MJTP1109

#### EU # PHAP3350

Process compatible, grounding

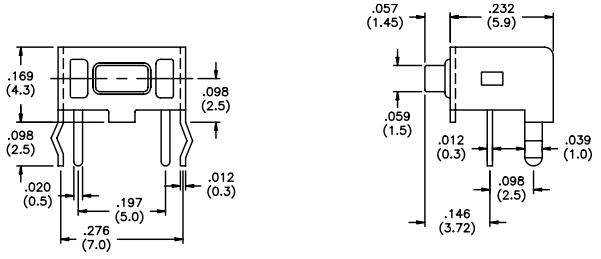


| US Model No. | Dim. L (In./mm) | EU Model No. |
|--------------|-----------------|--------------|
| MJTP1109     | .197 (5.0)      | PHAP3350     |
| MJTP1109A    | .354 (9.0)      | PHAP3350A    |
| MJTP1109B    | .512 (13.0)     | PHAP3350B    |

Bulk packaged.

M

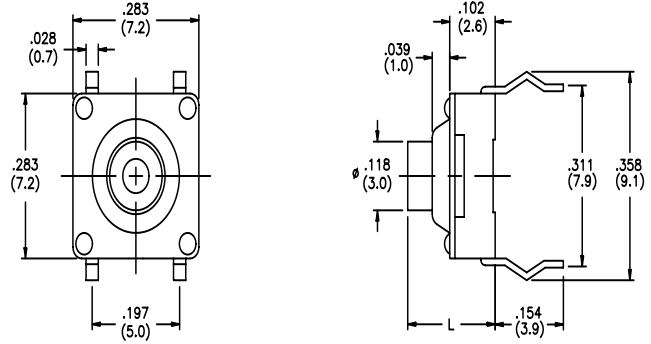
**US # MJTP1117**  
**EU # PHAP3363**  
 Right angle,  
 grounding



Bulk packaged.

New!

**US # MJTP1119**  
**EU # PHAP3351**  
 Process compatible

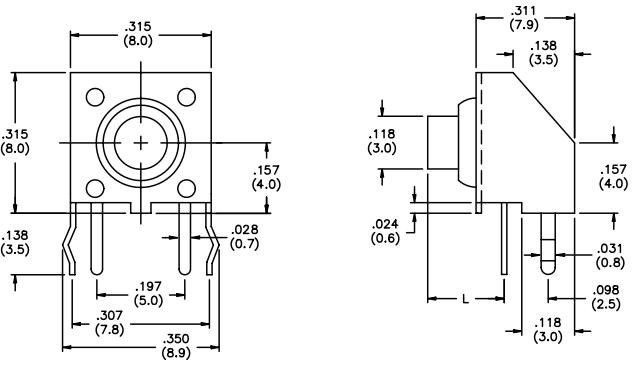


| US Model No.     | Dim. L (in./mm) | EU Model No.     |
|------------------|-----------------|------------------|
| <b>MJTP1119</b>  | .197 (5.0)      | <b>PHAP3351</b>  |
| <b>MJTP1119A</b> | .354 (9.0)      | <b>PHAP3351A</b> |
| <b>MJTP1119B</b> | .512 (13.0)     | <b>PHAP3351B</b> |

Bulk packaged.

New!

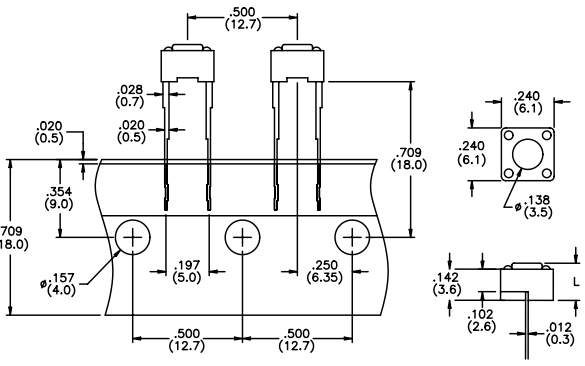
**US # MJTP1129**  
**EU # PHAP1152**  
 Right angle,  
 grounding,  
 process compatible



| US Model No.     | Dim. L (in./mm) | EU Model No.     |
|------------------|-----------------|------------------|
| <b>MJTP1129</b>  | .171 (4.35)     | <b>PHAP3352</b>  |
| <b>MJTP1129A</b> | .329 (8.35)     | <b>PHAP3352A</b> |
| <b>MJTP1129B</b> | .486 (12.35)    | <b>PHAP3352B</b> |

Bulk packaged.

**US # MJTP1141**  
**EU # PHAP3307**  
 Long terminals



| US Model No.     | Dim. L (in./mm) | EU Model No.     |
|------------------|-----------------|------------------|
| <b>MJTP1141</b>  | .169 (4.3)      | <b>PHAP3307</b>  |
| <b>MJTP1141A</b> | .197 (5.0)      | <b>PHAP3307A</b> |

Packaged on tape. Note: other models available with this tape packaging - consult factory.

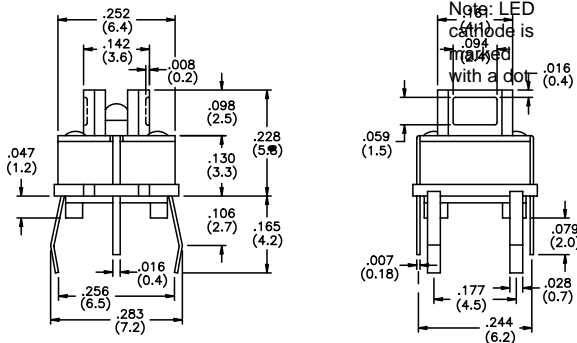
M

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

**US # MJTP1193**  
**EU # PHAP3308**  
With L.E.D.



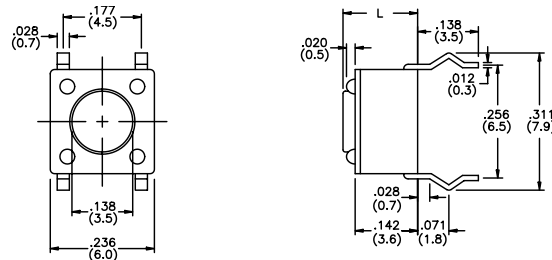
**New!**



| US Model No.     | L.E.D. Color | EU Model No.     |
|------------------|--------------|------------------|
| <b>MJTP1193</b>  | No L.E.D.    | <b>PHAP3308</b>  |
| <b>MJTP11936</b> | Red          | <b>PHAP3308R</b> |
| <b>MJTP11935</b> | Yellow       | <b>PHAP3308Y</b> |
| <b>MJTP11933</b> | Green        | <b>PHAP3308G</b> |

Caps available with lens - see end of section.  
Bulk packaged.

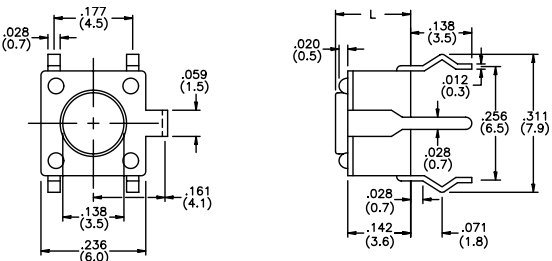
**US # MJTP1230**  
**EU # PHAP3301**



| US Model No.     | Dim. L (in./mm) | EU Model No.     |
|------------------|-----------------|------------------|
| <b>MJTP1230</b>  | .170 (4,3)      | <b>PHAP3301</b>  |
| <b>MJTP1230A</b> | .197 (5,0)      | <b>PHAP3301A</b> |
| <b>MJTP1230B</b> | .374 (9,5)      | <b>PHAP3301B</b> |
| <b>MJTP1230C</b> | .315 (8,0)      | <b>PHAP3301C</b> |
| <b>MJTP1230D</b> | .512 (13,0)     | <b>PHAP3301D</b> |
| <b>MJTP1230E</b> | .287 (7,3)      | <b>PHAP3301E</b> |
| <b>MJTP1230F</b> | .335 (8,5)      | <b>PHAP3301F</b> |
| <b>MJTP1230G</b> | .275 (7,0)      | N/A              |

Bulk packaged.

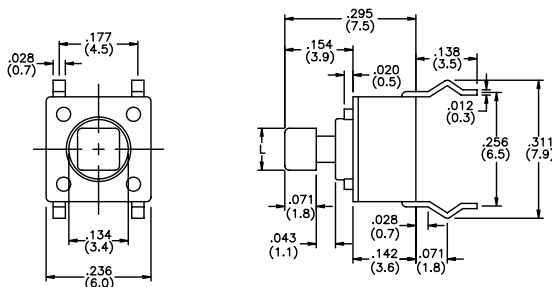
**US # MJTP1232**  
**EU # PHAP3302**  
Grounding



| US Model No.     | Dim. L (in./mm) | EU Model No.     |
|------------------|-----------------|------------------|
| <b>MJTP1232</b>  | .170 (4,3)      | <b>PHAP3302</b>  |
| <b>MJTP1232A</b> | .197 (5,0)      | <b>PHAP3302A</b> |
| <b>MJTP1232B</b> | .374 (9,5)      | <b>PHAP3302B</b> |
| <b>MJTP1232C</b> | .315 (8,0)      | <b>PHAP3302C</b> |
| <b>MJTP1232D</b> | .512 (13,0)     | <b>PHAP3302D</b> |
| <b>MJTP1232E</b> | .287 (7,3)      | <b>PHAP3302E</b> |
| <b>MJTP1232F</b> | .335 (8,5)      | <b>PHAP3302F</b> |
| <b>MJTP1232G</b> | .275 (7,0)      | <b>PHAP3302G</b> |

Bulk packaged.

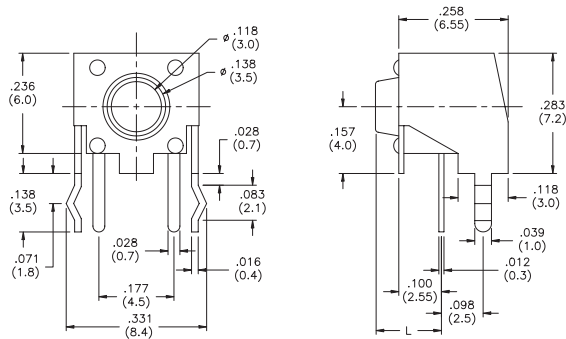
**US # MJTP1234**  
**EU # PHAP3303**



| US Model No.     | Dim. L (in./mm) | EU Model No.     |
|------------------|-----------------|------------------|
| <b>MJTP1234</b>  | .094 (2,4)      | <b>PHAP3303</b>  |
| <b>MJTP1234A</b> | .110 (2,8)      | <b>PHAP3303A</b> |

Caps available - see end of section.  
Bulk packaged.

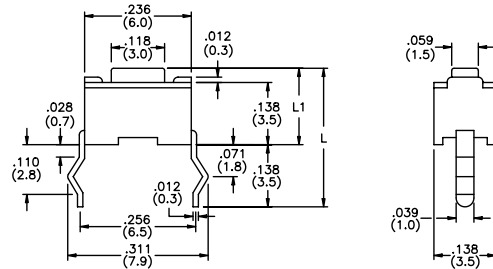
**US # MJTP1236**  
**EU # PHAP3305**  
 Right angle,  
 grounding



| US Model No.     | Dim. L (in./mm) | EU Model No.     |
|------------------|-----------------|------------------|
| <b>MJTP1236</b>  | .124 (3,1)      | <b>PHAP3305</b>  |
| <b>MJTP1236A</b> | .152 (3,9)      | <b>PHAP3305A</b> |
| <b>MJTP1236B</b> | .329 (8,4)      | <b>PHAP3305B</b> |
| <b>MJTP1236C</b> | .270 (6,9)      | <b>PHAP3305C</b> |
| <b>MJTP1236D</b> | .466 (11,9)     | <b>PHAP3305D</b> |
| <b>MJTP1236E</b> | .244 (6,2)      | <b>PHAP3305E</b> |
| <b>MJTP1236F</b> | .289 (7,3)      | N/A              |
| <b>MJTP1236G</b> | .230 (5,8)      | N/A              |

Bulk packaged.

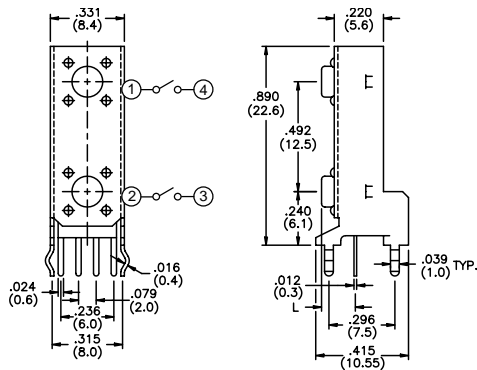
**US # MJTP1243 & MJTP1250**



| US # Model No.  | Dim. L1 (in./mm) | Dim. L (in./mm) |
|-----------------|------------------|-----------------|
| <b>MJTP1243</b> | .169 (4,3)       | .307 (7,8)      |
| <b>MJTP1250</b> | .197 (5,0)       | .335 (8,5)      |

Bulk packaged.

**US # MJTP2205**  
**EU # PHAP3306**  
 2 switch vertical  
 gang assembly,  
 black actuators

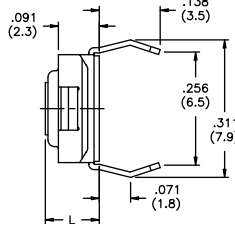
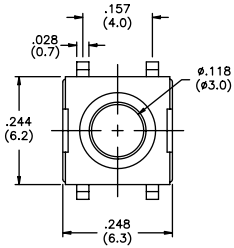


| US Model No.     | Dim. L (in./mm) | EU Model No.     |
|------------------|-----------------|------------------|
| <b>MJTP2205</b>  | .124 (3,15)     | <b>PHAP3306</b>  |
| <b>MJTP2205A</b> | .152 (3,85)     | <b>PHAP3306A</b> |
| <b>MJTP2205B</b> | .329 (8,35)     | <b>PHAP3306B</b> |
| <b>MJTP2205C</b> | .270 (6,85)     | <b>PHAP3306C</b> |
| <b>MJTP2205D</b> | .466 (11,85)    | <b>PHAP3306D</b> |
| <b>MJTP2205E</b> | .242 (6,15)     | <b>PHAP3306E</b> |

Bulk packaged.

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE.

**US # MJTPSHW**  
Process compatible



| US # Model No.  | Dim. L (in./mm) |
|-----------------|-----------------|
| <b>MJTPSHW</b>  | .122 (3,1)      |
| <b>MJTPSHWA</b> | .091 (2,3)      |
| <b>MJTPSHWB</b> | .146 (3,8)      |

Bulk packaged.

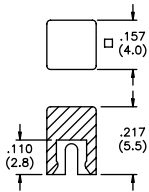
**CAPS** (for MJTP1105T and MJTP1234 only)

**CAPS** (for MJTP1193 only)

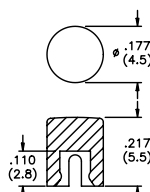
**New!**

**CAP COLORS**

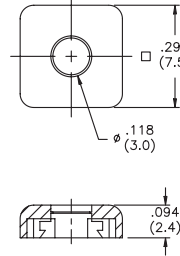
**MJ61** Square cap



**MJ62** Round cap



**MJ3** Square cap (w/clear lens in center for LED illumination)



Note - add digit from table to cap part number for color. Example - **MJ612** indicates square black cap.

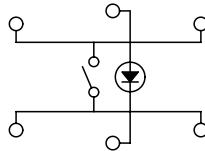
| No.      | Color  |
|----------|--------|
| <b>1</b> | blue   |
| <b>2</b> | black  |
| <b>3</b> | green  |
| <b>5</b> | yellow |
| <b>6</b> | red    |
| <b>7</b> | ivory  |

**SCHEMATICS**

MJTP1109  
MJTP1119  
MJTP1193  
MJTP1230  
MJTP1232

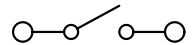
MJTP1234  
MJTP2205  
MJTP4102  
MJTP5302  
MJTPSHW

Note: LED is for MJTP1193 only.



MJTP1105  
MJTP1117  
MJTP1129  
MJTP1141  
MJTP1144  
MJTP1145

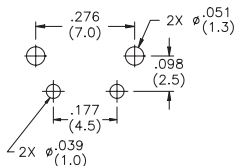
MJTP1236  
MJTP1243  
MJTP1250  
MJTP2205  
MJTP4102  
MJTP5302



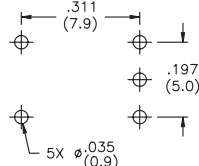
**M**

**PRINTED CIRCUIT BOARD LAYOUTS**

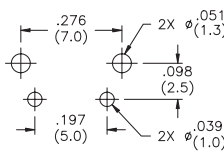
Layout tolerances; Linear:  $\pm .004"$  ( $\pm 0,1\text{MM}$ ) Holes:  $\pm .002"$  ( $\pm 0,05\text{MM}$ )



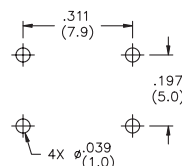
**MJTP1105T**



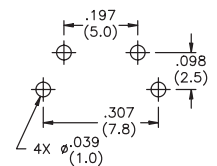
**MJTP1109**



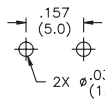
**MJTP1117**



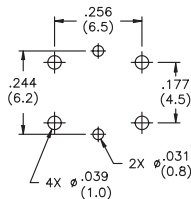
**MJTP1119**



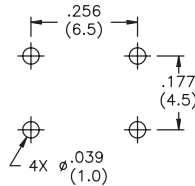
**MJTP1129**



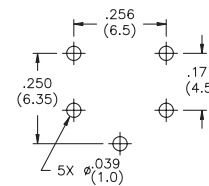
**MJTP1141, 44 & 45**



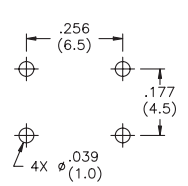
**MJTP1193**



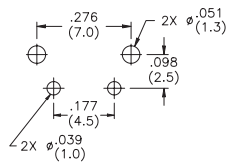
**MJTP1230**



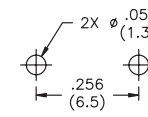
**MJTP1232**



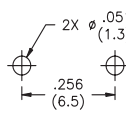
**MJTP1234**



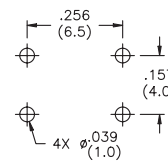
**MJTP1236**



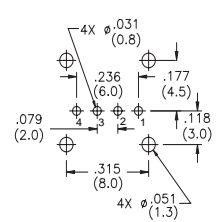
**MJTP1243**



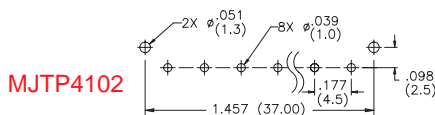
**MJTP1250**



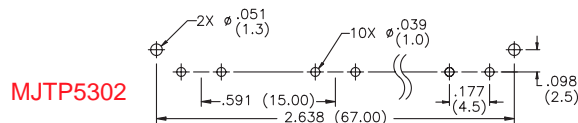
**MJTPSHW**



**MJTP2205**



**MJTP4102**



**MJTP5302**

## Apem:

[MJTP1129](#) [MJTP1119](#) [MJTPSHW](#) [MJTPSHWB](#) [MJTPSHWA](#) [MJTP11933 \(BULK\)](#) [MJTP1230D](#) [MJTP1230E](#)  
[MJTP1230](#) [MJTP1234](#) [MJTP1250](#) [MJTP1141](#) [MJTP1164TR](#) [MJTP1119A](#) [MJTP1105T](#) [MJTP1109](#) [MJTP1109A](#)  
[MJTP1109B](#) [MJTP1117](#) [MJTP1119B](#) [MJTP1129A](#) [MJTP1129B](#) [MJTP1141A](#) [MJTP1144](#) [MJTP1144A](#) [MJTP1193](#)  
[MJTP11935](#) [MJTP11936](#) [MJTP1230A](#) [MJTP1230B](#) [MJTP1230BL](#) [MJTP1230C](#) [MJTP1230F](#) [MJTP1230G](#)  
[MJTP1232](#) [MJTP1232A](#) [MJTP1232AL](#) [MJTP1232B](#) [MJTP1232C](#) [MJTP1232D](#) [MJTP1232E](#) [MJTP1232F](#)  
[MJTP1232G](#) [MJTP1234A](#) [MJTP1234G](#) [MJTP1236](#) [MJTP1236A](#) [MJTP1236B](#) [MJTP1236BV0](#) [MJTP1236C](#)  
[MJTP1236D](#) [MJTP1236E](#) [MJTP1236F](#) [MJTP1236G](#) [MJTP1243](#) [MJTP2205](#) [MJTP2205A](#) [MJTP2205B](#) [MJTP2205C](#)  
[MJTP2205D](#) [MJTP2205E](#) [MJTP1236CBK](#) [MJ625](#) [MJ621](#) [MJ32](#) [MJ37](#) [MJ36](#) [MJ35](#) [MJ33](#) [MJ626](#) [MJ623](#)