

Pushbuttons

Product Selection Guide

Pushbutton									
Series	ELUM	EP	TP	E020	8020	E010	8060	8500	KM
Switch Type	Mom./Latching	Tiny	Tiny	Snap-acting Mom.	Snap-acting Mom.	Miniature	Alternate Action	Sub-miniature	Sub-miniature
Poles/Throws	SPDT	SPST, SPDT, DPST	SPST, SPDT, DPST	SPDT, DPDT	SPDT, DPDT, 3PDT, 4PDT	SPDT	SPDT, DPDT	SPST	SPST, SPDT
Max. Current	3.5 VA	1 Amp	1 Amp	1 Amp	1 Amp	4 Amps	6 Amps	3 Amps	1 Amp
Process Sealed		•		•		•			
Illuminated	•				•		•	•	
PCB Mount Options									
Thru-hole	•	•	•	•	•	•	•	•	•
Vertical		•	•	•	•	•	•	•	•
Right Angle	•	•	•	•	•	•	•	•	•
Surface Mount	•	•							
Panel Mount			•		•	•	•	•	•
Page No.	A-3	A-9	A-15	A-21	A-29	A-46	A-52	A-62	A-67

Pushbutton							
Series	8600	8700	GP	PN	PHA	F	NE-18
Switch Type	Micro-miniature	Over Travel	Ultra-miniature	Alternate & Mom. Action	Short Stroke	Alternate & Mom. Action	Mains / Power
Poles/Throws	SPST	SPST	SPST, SPDT	SPDT, DPDT, 4PDT	DPDT, 4PDT, 6PDT	DPDT, 4PDT, 6PDT, 8PDT, 10PDT	DPST, DPDT Varied
Max. Current	500 mA	1 Amp	0.4 V	200 mA	100 mA	500 mA	6 A
Process Sealed			•				
PCB Mount Options							
Thru-hole	•	•	•	•	•	•	•
Vertical	•	•	•				
Right Angle			•	•	•	•	•
Surface Mount			•				
Panel Mount	•	•				•	•
Page No.	A-71	A-74	A-77	A-81	A-84	A-88	A-98

TP Series

Tiny Pushbutton Switches

SWITCH FUNCTION

NO. POLES	MODEL NO.	SWITCH FUNCTION		CONNECTED TERMINALS		SCHEMATIC
		POS. 1	POS. 2	POS. 1	POS. 2	
		C&K marking on opposite side		C&K marking on opposite side		
SP	TP11	OFF	MOM.	OPEN	1-3	SPST
	TP12	ON	MOM.	2-1	2-3	SPDT
SPDT Part number shown: TP12SHZQE Terminal Nos. For Reference Only						
DP	TP21	OFF	MOM.	OPEN	1-3,4-6	DPST
DPST Part number shown: TP21SHZQE Terminal Nos. For Reference Only						

MOM. = Momentary

All models with all options when ordered with G, L, Q or R contact material.

ACTUATOR—SNAP-IN FRONT MOUNT

CAP COLOR

ACTUATOR OR BUSHING

FRAME COLOR

J81 SNAP-IN WITH FRAME



PANEL MOUNTING

PANEL THICKNESS .047 TO .125 (1,19) (3,18)

OPTION CODE	CAP COLOR
2	BLACK
1	WHITE

OPTION CODE	FRAME COLOR
2	BLACK
NONE	No Frame Color (J80 option)

Cap and Frame Finish: matte. Other colors available, consult Customer Service Center.

NOTE: Available with Z, C, or W terminations.

NOTE: Caps & frames available separately, see page A-18.



Third Angle Projection

Dimensions are shown: Inches (mm)

Specifications and dimensions subject to change

TP Series Tiny Pushbutton Switches



A

Pushbutton

SH .155" HIGH PLUNGER,
.220" HIGH BUSHING,
THREADED, FLAT

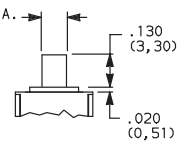
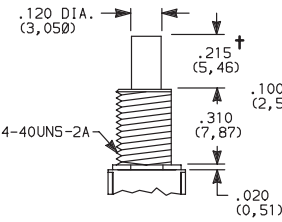
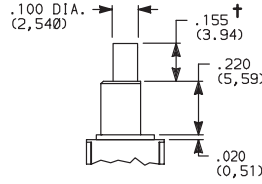
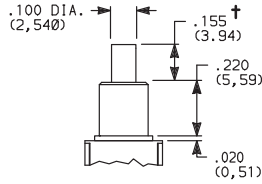
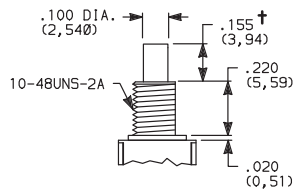
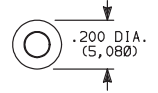
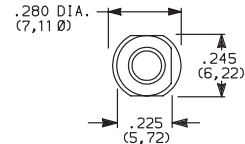
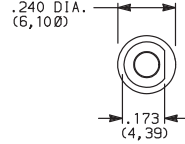
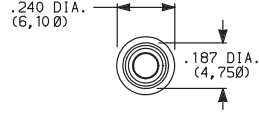
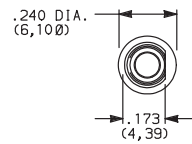
SH8 .155" HIGH PLUNGER,
.220" HIGH BUSHING,
UNTHREADED

SH9 .155" HIGH PLUNGER,
.220" HIGH BUSHING,
UNTHREADED, FLAT

LT .215" HIGH PLUNGER,
.310" HIGH BUSHING,
THREADED

MS9 .130" HIGH
PLUNGER

LT9 .215" HIGH PLUNGER,
.310" HIGH BUSHING,
UNTHREADED



Standard with Z, C, W terminations.

Standard with A, AV, V3 terminations.

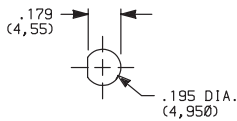
Not available with
Z terminations.

† Subtract .016 (0,41) for models with A, AV or V3 terminations.

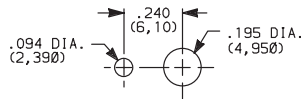
NOTE: Caps available for plunger options, see page A-20.

PANEL MOUNTING

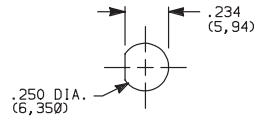
10-48 BUSHING



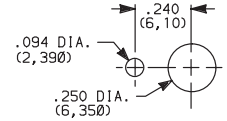
Without locking ring



With standard locking ring



Without locking ring



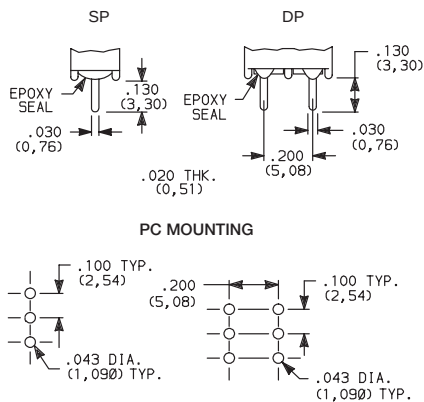
With standard locking ring

NOTE: One mounting nut, locking ring and lockwasher supplied standard with 10-48 threaded bushings (two nuts with 1/4-40 bushings).
Optional mounting nut and locking ring styles and finishes available separately, see section "Technical Data and Additional Hardware".

TERMINATIONS

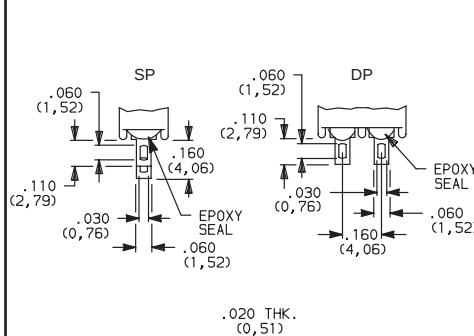


C PC THRU-HOLE



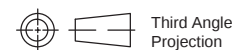
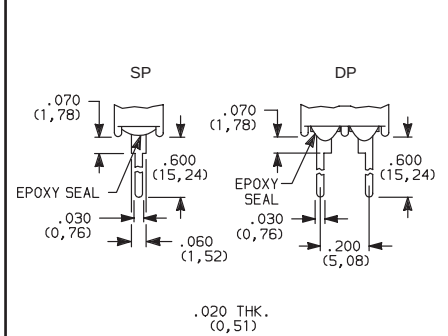
Omit center holes
for TP11 models

Z SOLDER LUG



Not available with MS9 bushing or P
or R contact material.

W WIRE WRAP



Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change

C&K



A

Pushbutton

TP Series Tiny Pushbutton Switches

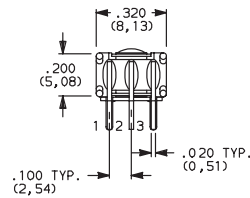
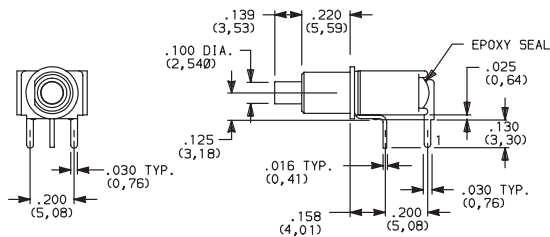
TERMINATIONS



A RIGHT ANGLE, PC THRU-HOLE

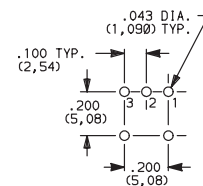


TP12SH9ABE
SPDT



TP11 Models:
omit terminal 2.

PC MOUNTING

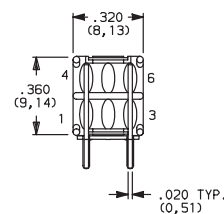
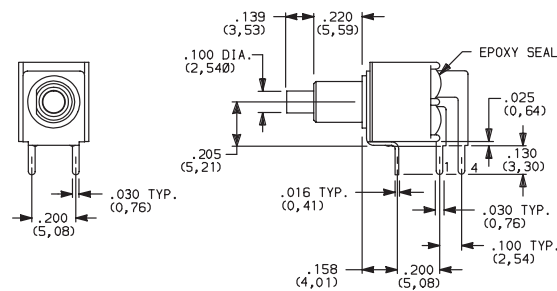


TP11 Models:
omit hole 2.

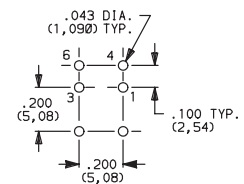
A RIGHT ANGLE, PC THRU-HOLE



TP21SH9ABE
DPST



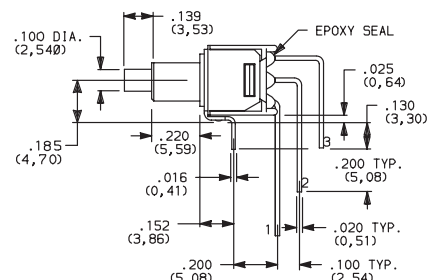
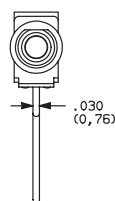
PC MOUNTING



AV VERTICAL RIGHT ANGLE, PC THRU-HOLE

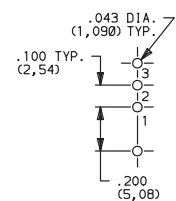


TP12SH9AVBE
SPDT



TP11 Models:
omit terminal 2.

PC MOUNTING



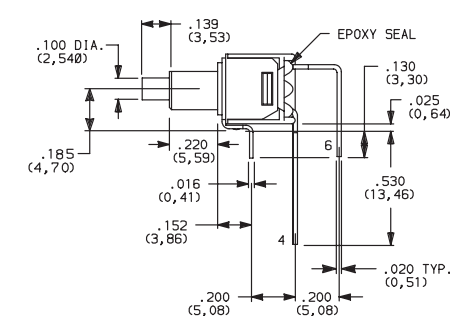
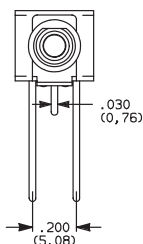
TP11 Models:
omit hole 2.

NOTE: Terminal bend radii and lead-in manufacturing option.

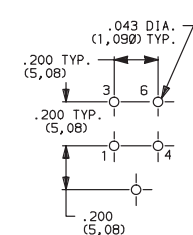
AV VERTICAL RIGHT ANGLE, PC THRU-HOLE



TP21SH9AVBE
DPST



PC MOUNTING



NOTE: Terminal bend radii and lead-in manufacturing option.

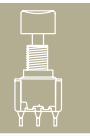


Third Angle
Projection

C&K

Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change

TP Series Tiny Pushbutton Switches



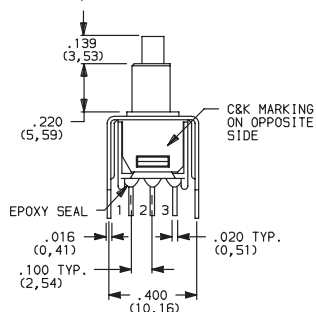
A

Pushbutton

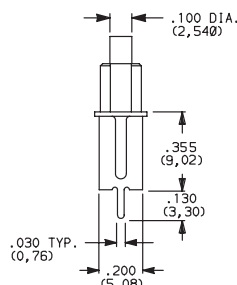
TERMINATIONS



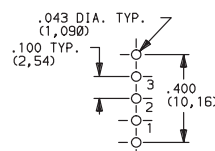
V3 VERTICAL MOUNT, V-BRACKET



TP11 Models:
omit terminal 2.



PC MOUNTING

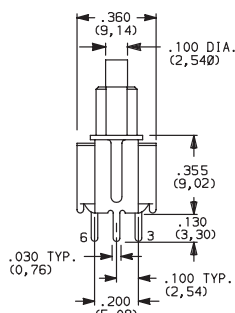
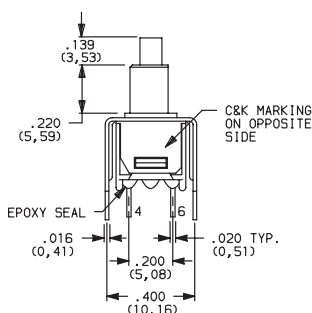


TP11 Models:
omit hole 2.

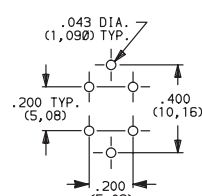


TP12SH9V3BE
SPDT

V3 VERTICAL MOUNT, V-BRACKET



PC MOUNTING



TP21SH9V3BE
DPST

CONTACT MATERIAL



OPTION CODE	CONTACT MATERIAL	TERMINAL PLATING	RATINGS	
B	GOLD ¹	GOLD ¹	LOW LEVEL/DRY CIRCUIT	0.4 VA MAX. @ 20 V AC OR DC MAX.
P		MATTE-TIN ⁶		
Q	SILVER ^{4,5}	SILVER ⁵	POWER	1 AMP @ 120 V AC OR 28 V DC.
G	GOLD OVER SILVER ^{2,3}	GOLD ³	LOW LEVEL/DRY CIRCUIT OR POWER	0.4 VA MAX @ 20 V AC OR DC MAX. OR 1 AMP @ 120 V AC OR 28 V DC.
R		MATTE-TIN ⁶		

* Note: See Technical Data section of this catalog for RoHS compliant and compatible definitions and specifications.

¹ CONTACTS & TERMINALS: Copper alloy, with gold plate over nickel plate.

² END CONTACTS: Coin silver, with gold plate over nickel plate.

³ CENTER CONTACTS & ALL TERMINALS: Copper alloy, with gold plate over nickel plate.

⁴ END CONTACTS: Coin silver, silver plated.

⁵ CENTER CONTACT & ALL TERMINALS: Copper alloy, silver plated.

⁶ TERMINALS: Copper alloy, with matte-tin over nickel plate.

NOTE: Any models supplied with P, R, Q, B or G contact material are RoHS compliant.

All models  with all options when ordered with R, G, L or Q contact material.

B contact material standard with A, AV, V3 & W terminations.

Q contact material standard with C & Z terminations.

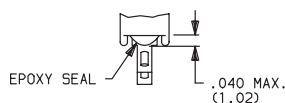
P, R contact materials not available with Z terminations.

K, L and M options represent Non RoHS tin lead product and are not recommended for new designs. For additional information please contact Customer Service.

SEAL



E EPOXY SEAL



Dimensions are shown: Inches (mm)
Specifications and dimensions subject to change

C&K