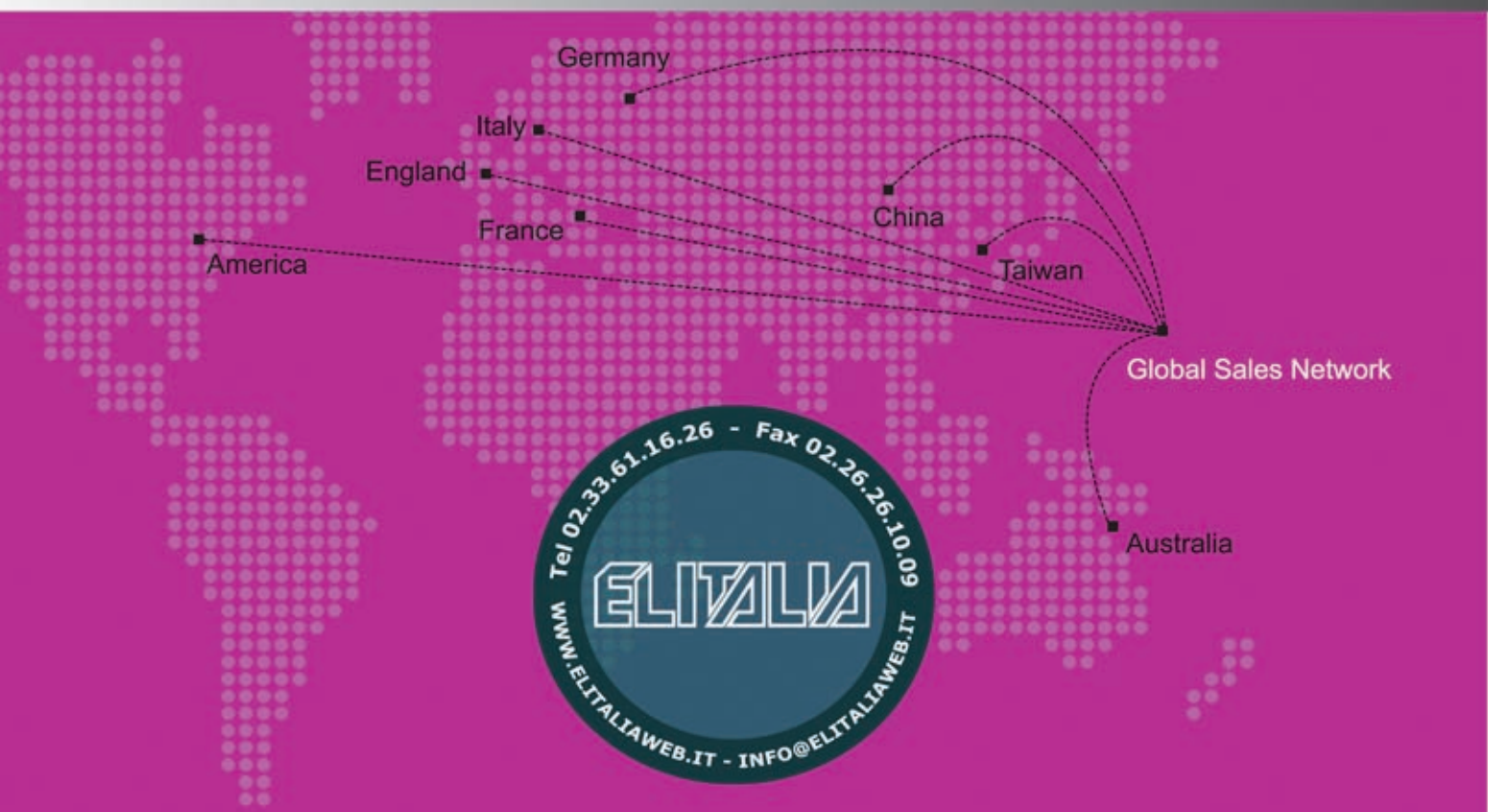




TAIWAY | **Turn on the world** |

PUSHBUTTON SWITCH CAT. part 3

IECQ QC 080000 / ISO 9001 / 14001



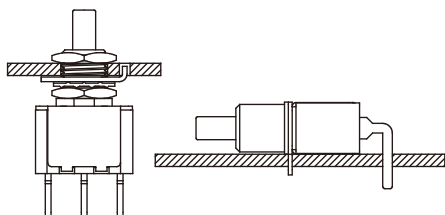
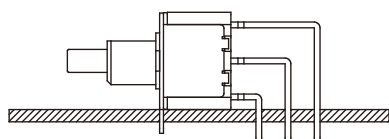
TAIWAY Since 1976

SPECIFICATIONS:

CONTACT RATING: Refer to "Contact Material Options" for more info.
 ELECTRICAL LIFE: 50,000 make and break cycles at full load.
 CONTACT RESISTANCE: 10mΩ max. initial @ 2-4 VDC.
 INSULATION RESISTANCE: 1,000 MΩ min.
 DIELECTRIC STRENGTH: 1,500V RMS @ sea level.
 OPERATION TEMPERATURE: -30°C TO +85°C.

MATERIALS:

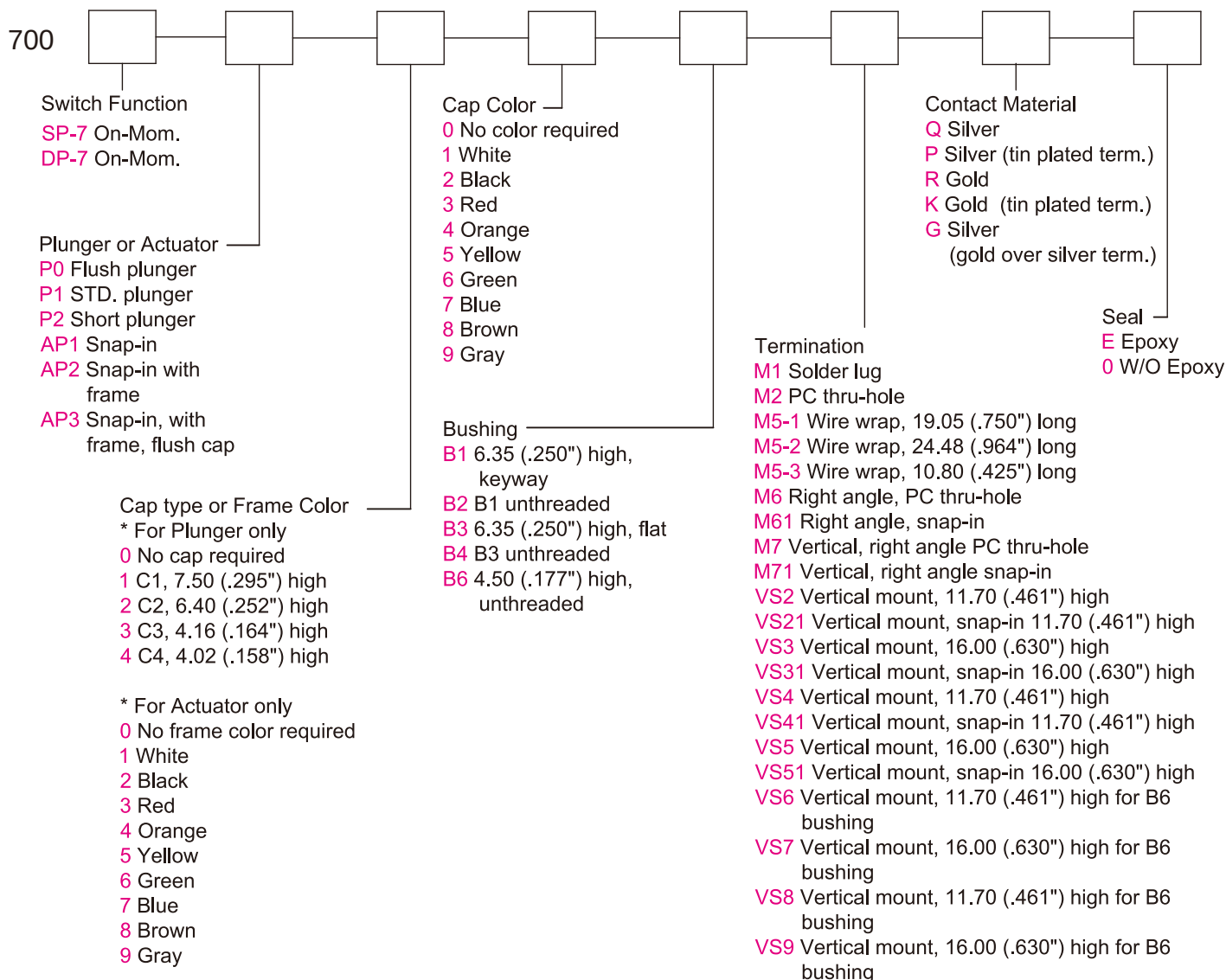
CASE: Diallyl phthalate(DAP)(UL 94V-0).
 PLUNGER: PBT or FR52 (UL 94V-0).
 BUSHING: Brass, nickel plated.
 HOUSING: Stainless steel.
 TERMINAL SEAL: Epoxy.



Specifications and Dimensions subject to change

If your preferred product configuration is not shown, please contact our sales representative for custom design.

HOW TO ORDER SYSTEM

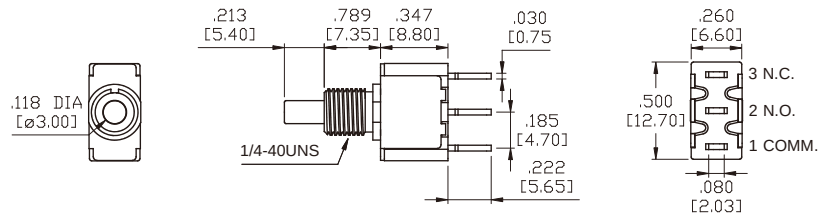


SPDT



Model No.	Type	
SP-7	ON	MOM
Term. Comm.	1-3	1-2

Schematic

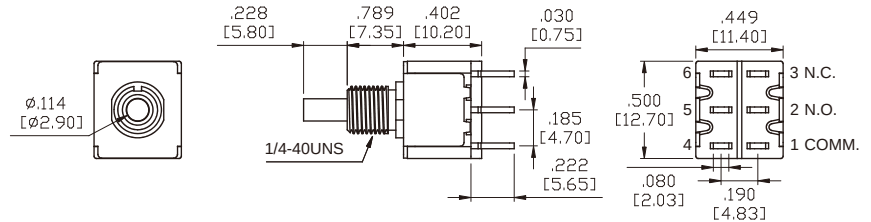
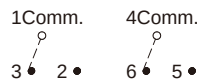


DPDT



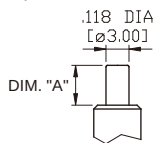
Model No.	Type	
DP-7	ON	MOM
Term. Comm.	1-3,4-6	1-2,4-5

Schematic



PLUNGER OPTIONS

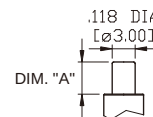
FOR B1,B2,B3,B4 ONLY



OPTION CODE	DIM. "A"
P0	.000 [0.00]
P1	.213 [5.40]
P2	.091 [2.30]

* Plunger length shown with SPDT model.

FOR B6 ONLY

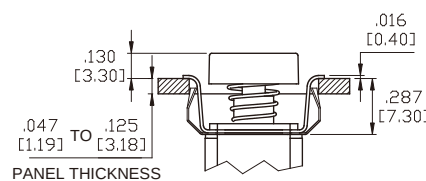
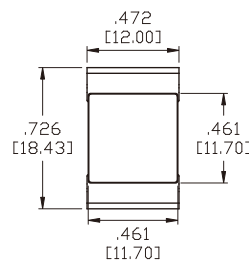
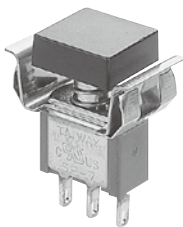


OPTION CODE	DIM. "A"
P1	.157 [4.00]
P2	.106 [2.70]

* Plunger length shown with SPDT model.

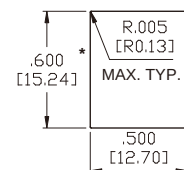
ACTUATOR OPTIONS FOR SNAP-IN FRONT MOUNT

AP1



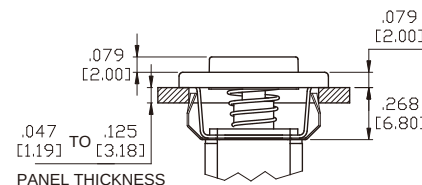
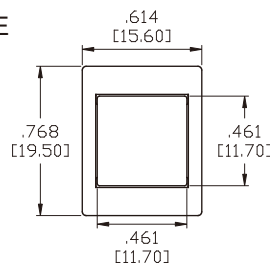
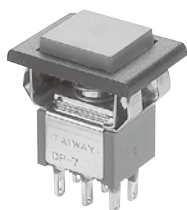
PANEL THICKNESS

PANEL MOUNTING



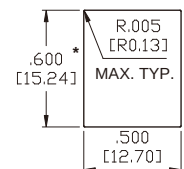
* Increase this dimension to .620/.625 [15.75/15.88] for .091/.125 [2.31/3.18] thk. panels.

AP2 WITH FRAME



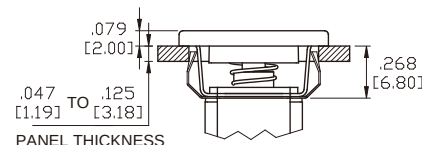
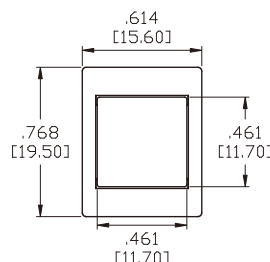
PANEL THICKNESS

PANEL MOUNTING



* Increase this dimension to .620/.625 [15.75/15.88] for .091/.125 [2.31/3.18] thk. panels.

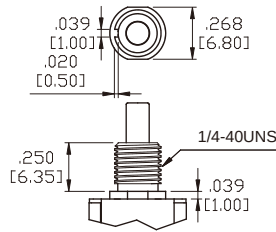
AP3 FLUSH CAP



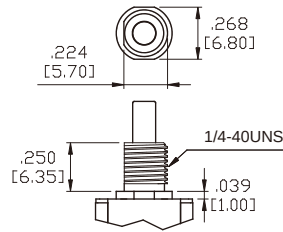
PANEL THICKNESS

BUSHING OPTIONS

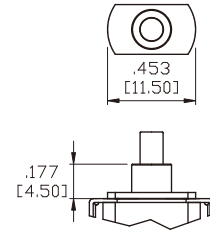
B1 THD STD
B2 NON-THD



B3 THD STD
B4 NON-THD

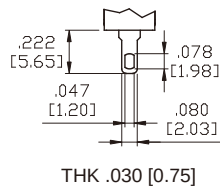


B6 NON-THD
(FOR TERMINATION OPTIONS VS6-VS9 ONLY)

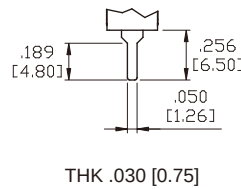


TERMINATION OPTIONS

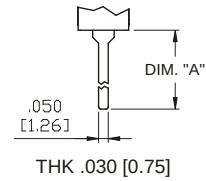
M1 STD. SOLDER LUG



M2 PC THRU-HOLE

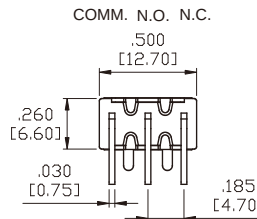
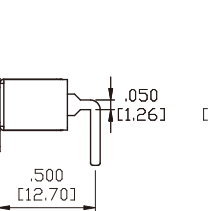
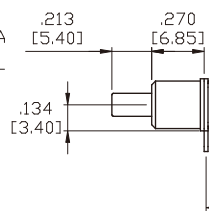
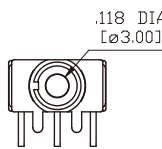


M5 WIRE WRAP

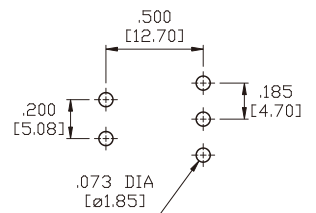


OPTION CODE	DIM. "A"
M5-1	.750 [19.05]
M5-2	.964 [24.48]
M5-3	.425 [10.80]

M6

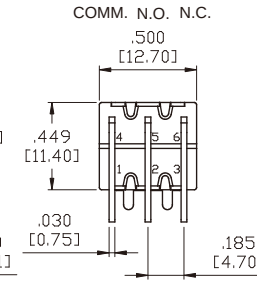
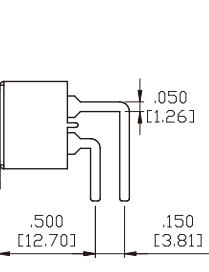
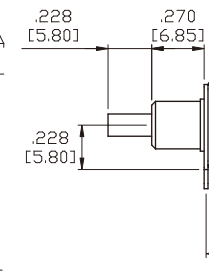
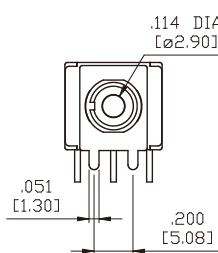


P.C.MOUNTING

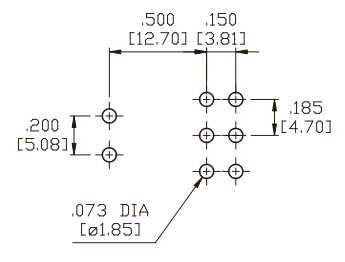


SPDT

M6

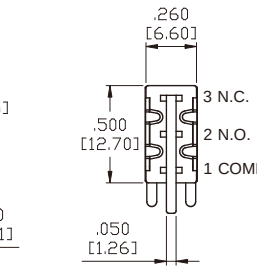
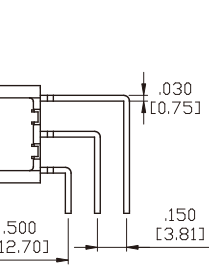
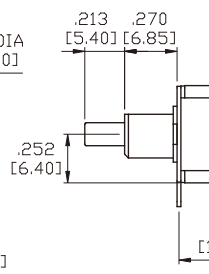
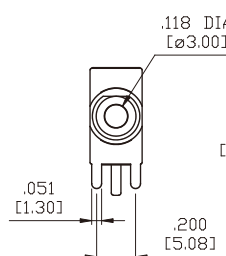
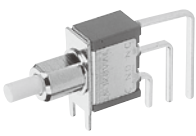


P.C.MOUNTING

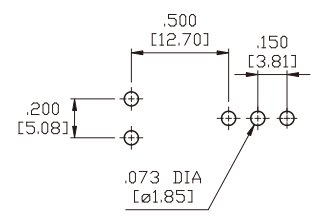


DPDT

M7



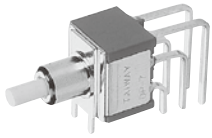
P.C.MOUNTING



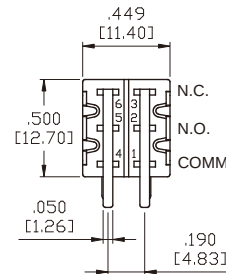
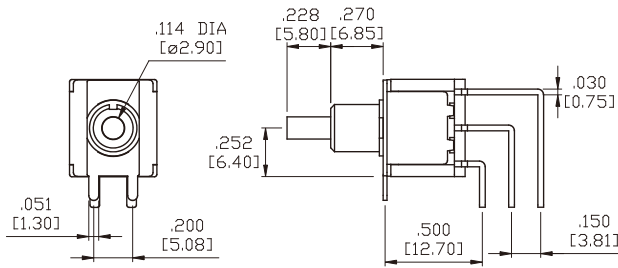
SPDT

TERMINATION OPTIONS

M7



DPDT

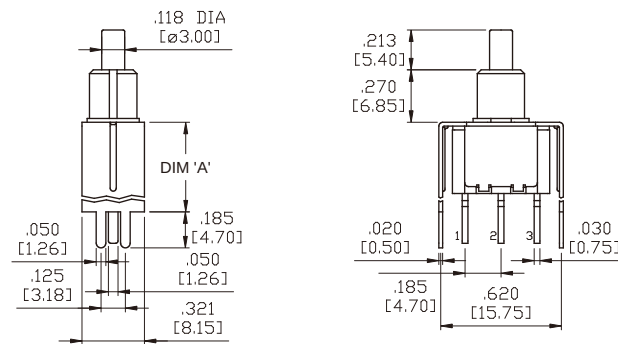


P.C.MOUNTING

VS2-VS3

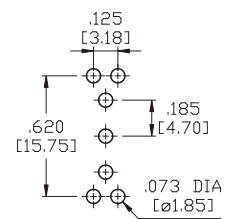


SPDT



OPTION CODE	DIM.'A'
VS2	.461 [11.70]
VS3	.630 [16.00]

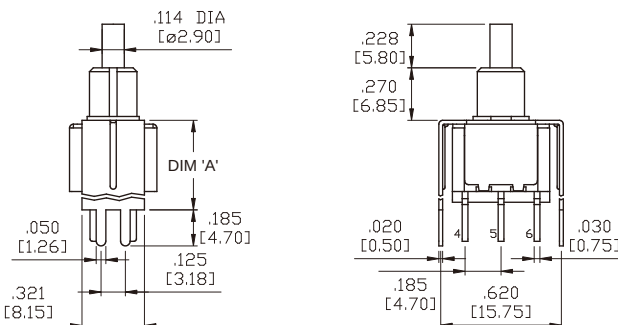
P.C.MOUNTING



VS2-VS3

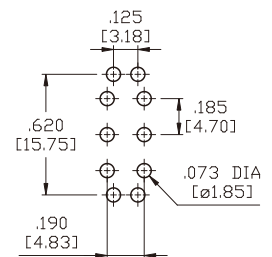


DPDT

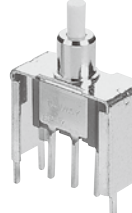


OPTION CODE	DIM.'A'
VS2	.461 [11.70]
VS3	.630 [16.00]

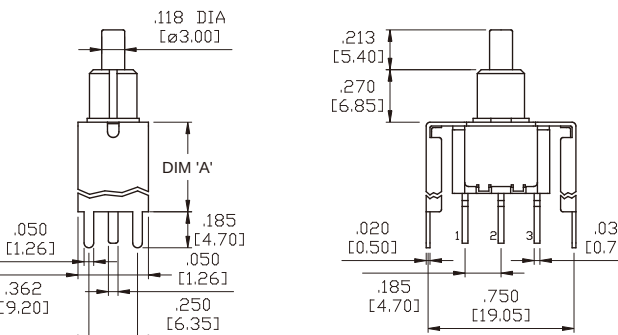
P.C.MOUNTING



VS4-VS5

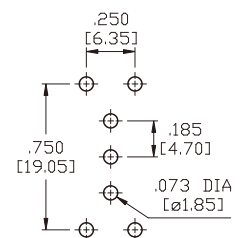


SPDT

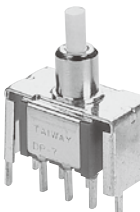


OPTION CODE	DIM.'A'
VS4	.461 [11.70]
VS5	.630 [16.00]

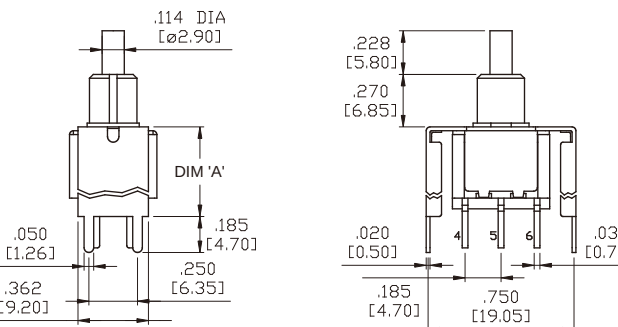
P.C.MOUNTING



VS4-VS5

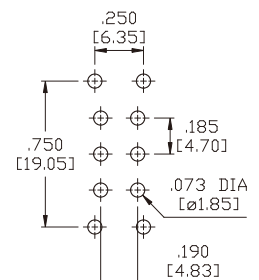


DPDT



OPTION CODE	DIM.'A'
VS4	.461 [11.70]
VS5	.630 [16.00]

P.C.MOUNTING



Toggle

Rocker

Slide

Pushbutton

AV

Rotary

Tact

Touch Key

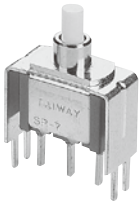
Miscellaneous

TERMINATION OPTIONS

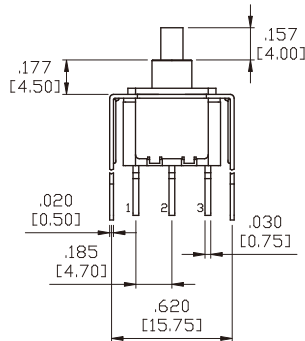
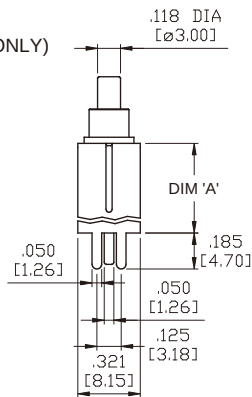
P.C.MOUNTING

VS6-VS7

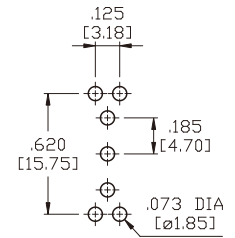
(FOR B6 BUSHING ONLY)



SPDT



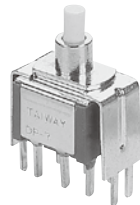
OPTION CODE	DIM.'A'
VS6	.461 [11.70]
VS7	.630 [16.00]



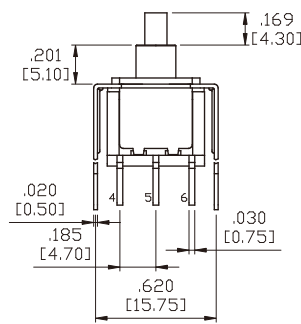
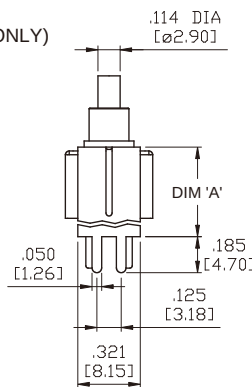
P.C.MOUNTING

VS6-VS7

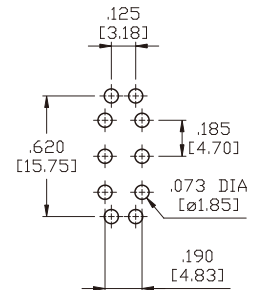
(FOR B6 BUSHING ONLY)



DPDT



OPTION CODE	DIM.'A'
VS6	.461 [11.70]
VS7	.630 [16.00]



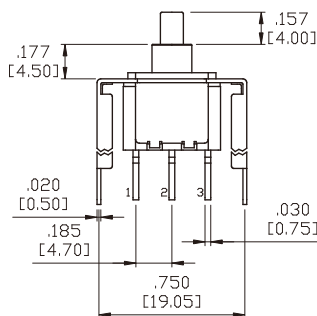
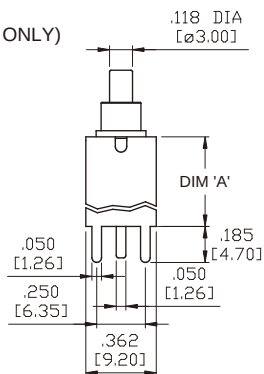
P.C.MOUNTING

VS8-VS9

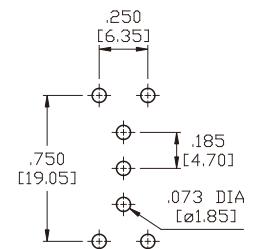
(FOR B6 BUSHING ONLY)



SPDT



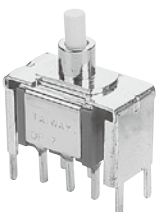
OPTION CODE	DIM.'A'
VS8	.461 [11.70]
VS9	.630 [16.00]



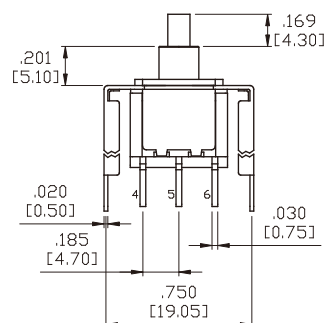
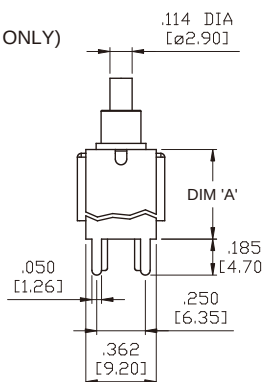
P.C.MOUNTING

VS8-VS9

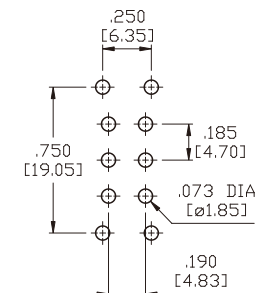
(FOR B6 BUSHING ONLY)



DPDT

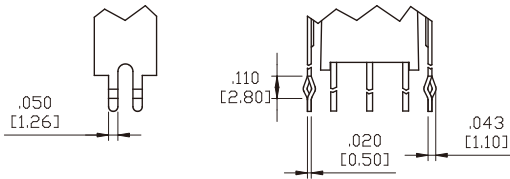


OPTION CODE	DIM.'A'
VS8	.461 [11.70]
VS9	.630 [16.00]

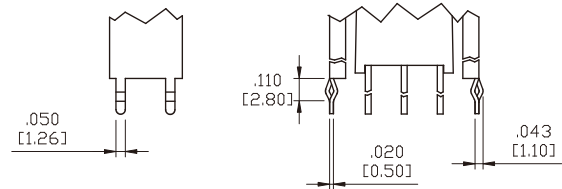


SNAP-IN TERMINATION OPTIONS

VS21,VS31



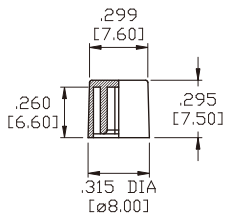
VS41,VS51



* PC Mounting for VS21,VS31,VS41,VS51 refer to VS2,VS3,VS4,VS5 respectively.

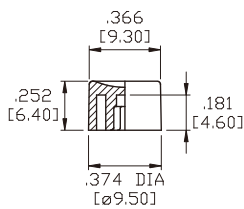
PLUNGER CAPS

C1



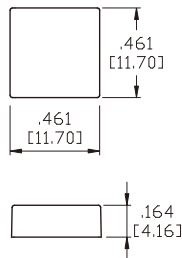
* MATERIAL: ABS.

C2



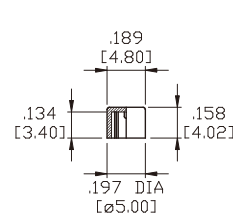
* MATERIAL: ABS.

C3



* MATERIAL: ABS.

C4

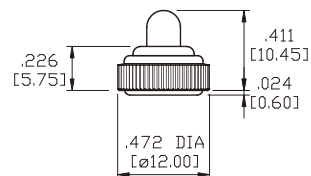


* MATERIAL: ABS.

CAP AND FRAME COLORS

1	White
2	Black
3	Red
4	Orange
5	Yellow
6	Green
7	Blue
8	Brown
9	Gray

E3 RUBBER HOOD



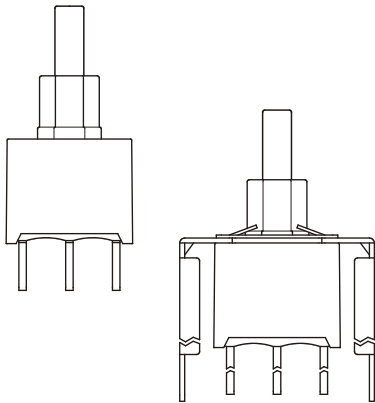
E3=INCH (STD.)
E3A=INCH WITH INTERNAL-ORING SEALED

* FOR P1 PLUNGER ONLY.

CONTACT MATERIAL OPTIONS

Coding	Contact Material	Terminal Plating	Rating	Agency Approvals
Q	Silver ¹	Silver plated ¹	1Amps @ 120VAC or 38VDC	UL
R	Gold ²	Gold plated ³	0.4VA max @ 20V max (AC or DC)	
G	Silver ¹	Gold over silver ⁴	1Amps @ 120VAC or 38VDC	UL

1. Movable Contact / Terminals: Copper alloy, silver plated.
2. Movable Contact: Copper alloy with gold plated over nickel plated.
3. Terminals: Copper alloy, with gold plated over nickel plated.
4. Terminals: Silver plated with outer layer in gold plating.

**SPECIFICATIONS:**

CONTACT RATING: Refer to "Contact Material Options" for more info.

ELECTRICAL LIFE: 50,000 make-and-break cycles at full load.

CONTACT RESISTANCE: 10mΩ max. initial @ 2-4 VDC
100 mA for both silver and gold plated contacts.

INSULATION RESISTANCE: 1,000MΩ min.

DIELECTRIC STRENGTH: 1,500V RMS min. @ sea level.

OPERATING TEMPERATURE: -30°C to +85°C.

CAP INSTALLATION FORCE: 10 lbs, max.

MATERIALS:

CASE & BUSHING: PA9T or FR52, flame retardant, heat stabilized (94V-0).

PLUNGER: Nylon 6/6 or PBT with internal o-ring sealed (700A).

PLUNGER: Nylon 6/6 or PBT (700C).

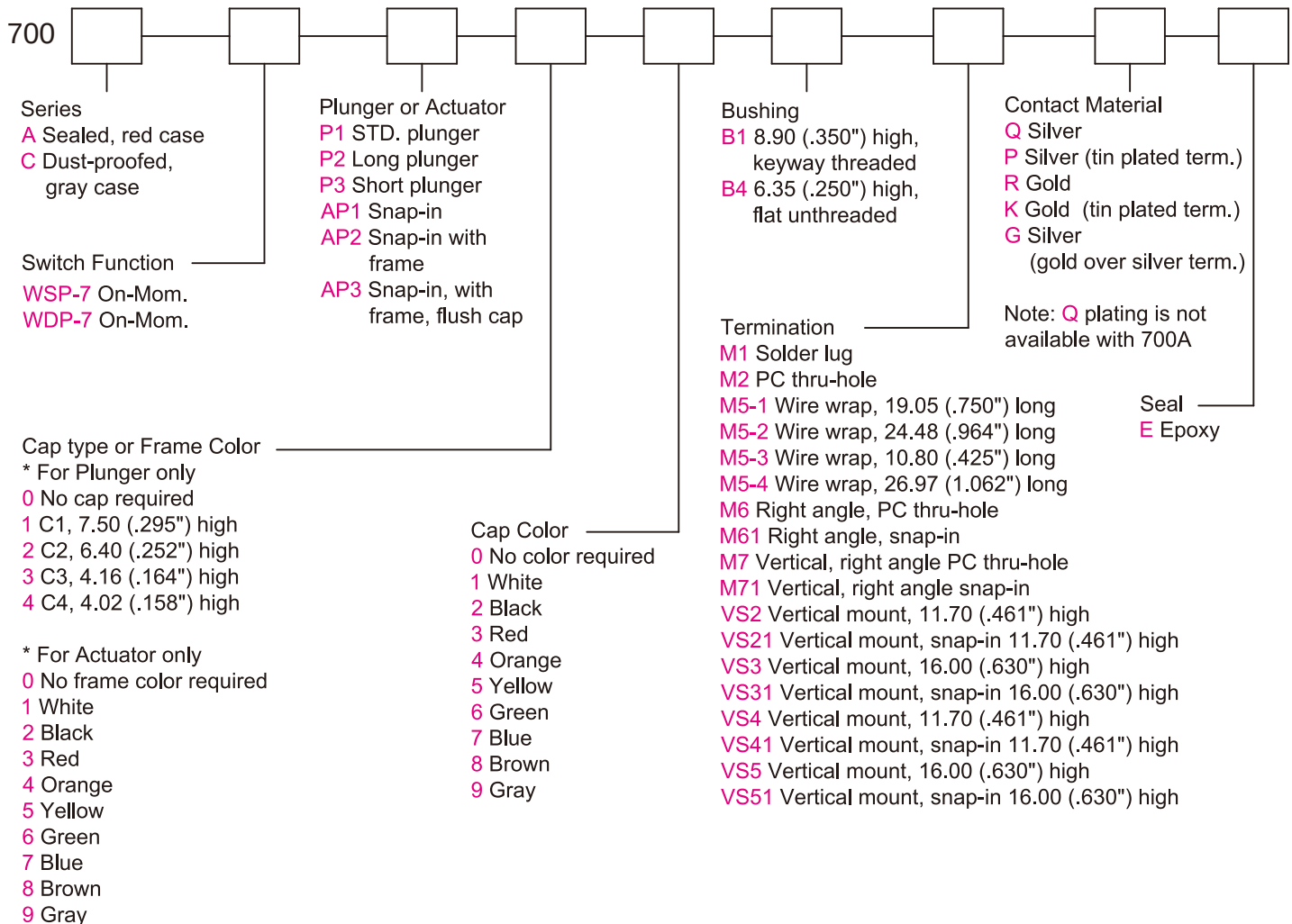
SWITCH SUPPORT: Brass or steel, tin plated.

SWITCH SUPPORT RETAINER: Stainless steel.

TERMINAL SEAL: Epoxy.

Specifications and Dimensions subject to change

If your preferred product configuration is not shown, please contact our sales representative for custom design.

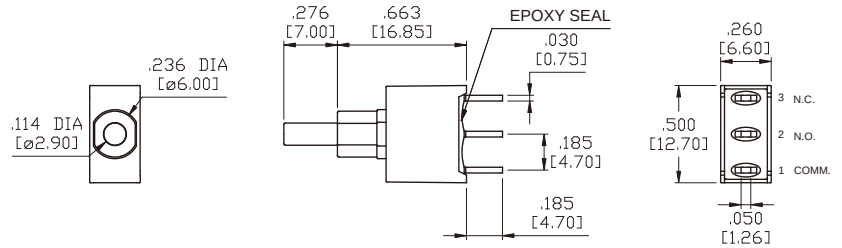
HOW TO ORDER SYSTEM

SPDT



Model No.	Type	
WSP-7	ON	MOM
Term. Comm.	1-3	1-2

Schematic

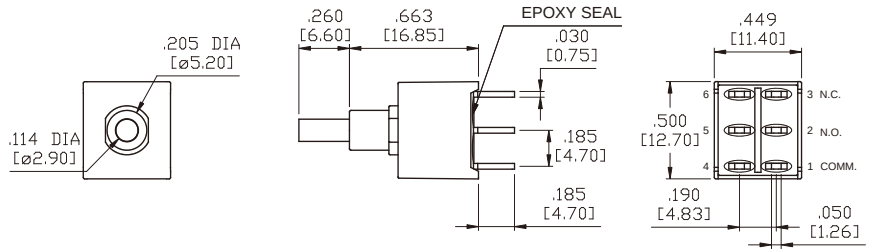
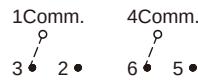


DPDT



Model No.	Type	
WDP-7	ON	MOM
Term. Comm.	1-3,4-6	1-2,4-5

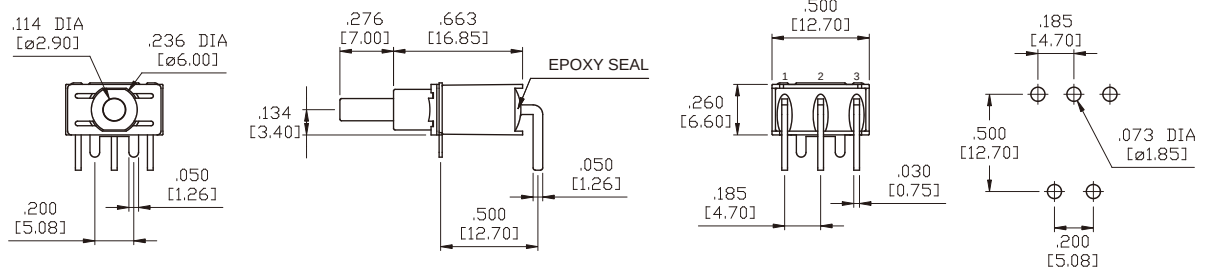
Schematic



M6



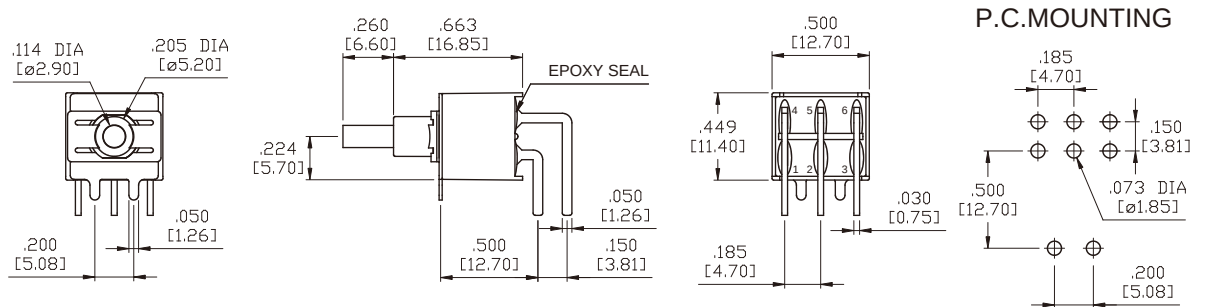
SPDT



M6

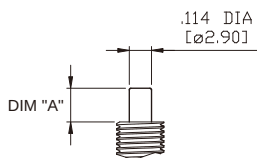


DPDT



PLUNGER OPTIONS

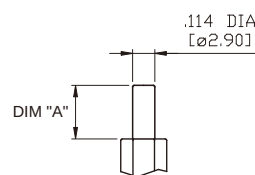
FOR B1 BUSHING



OPTION CODE	DIM. "A"
P1	.181 [4.60]
P2	.228 [5.80]
P3	.087 [2.20]

* Plunger length shown with SPDT model

FOR B4 BUSHING

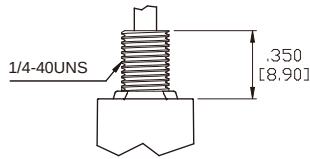


OPTION CODE	DIM. "A"
P1	.276 [7.00]
P2	.323 [8.20]
P3	.181 [4.60]

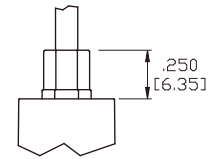
* Plunger length shown with SPDT model

BUSHING OPTIONS

B1

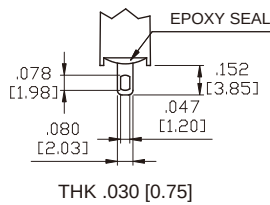


B4

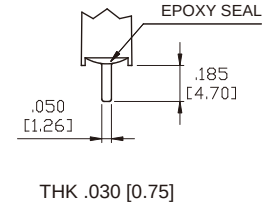


TERMINATION OPTIONS

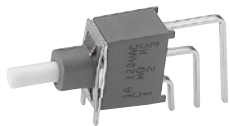
M1



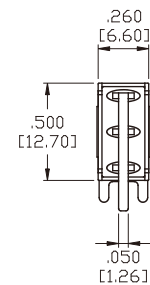
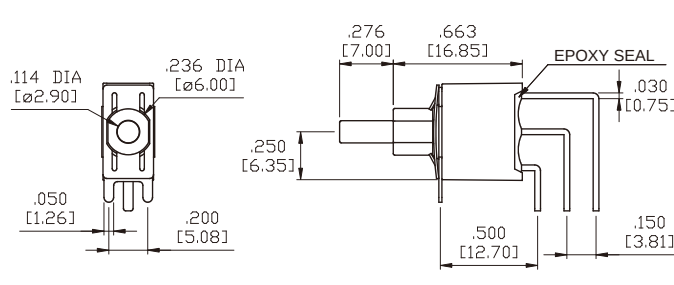
M2



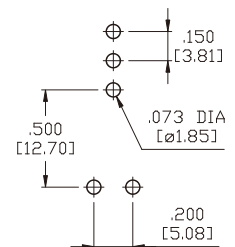
M7



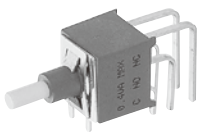
SPDT



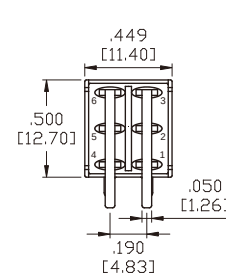
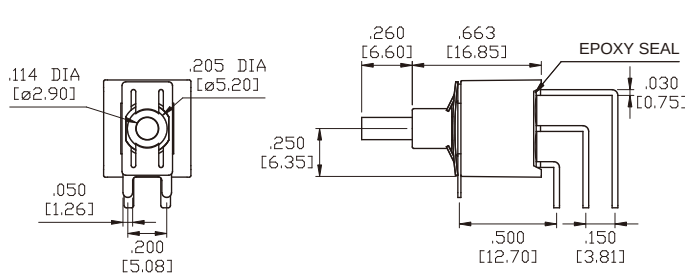
P.C.MOUNTING



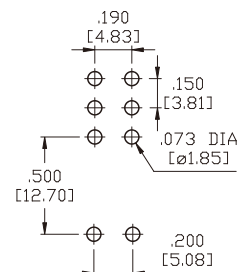
M7



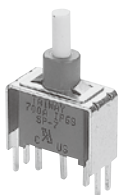
DPDT



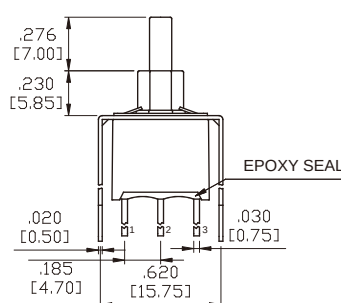
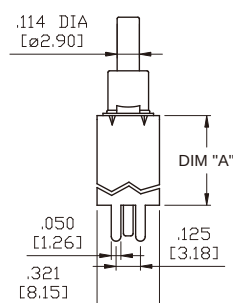
P.C.MOUNTING



VS2-VS3

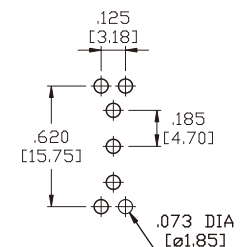


SPDT



OPTION CODE	DIM.'A'
VS2	.461 [11.70]
VS3	.630 [16.00]

P.C.MOUNTING

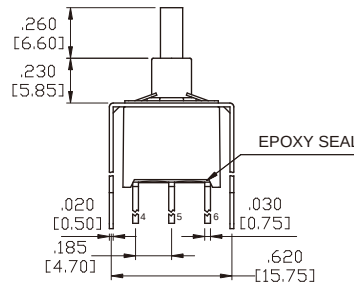
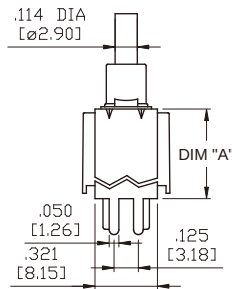


TERMINATION OPTIONS

VS2-VS3

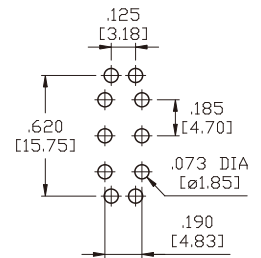


DPDT

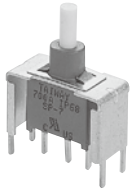


OPTION CODE	DIM.'A'
VS2	.461 [11.70]
VS3	.630 [16.00]

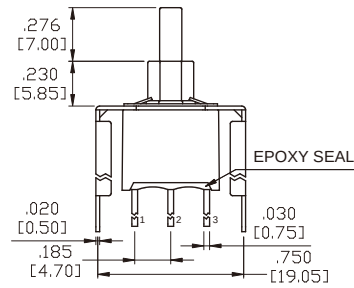
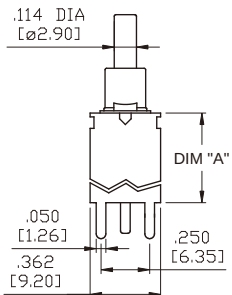
P.C.MOUNTING



VS4-VS5

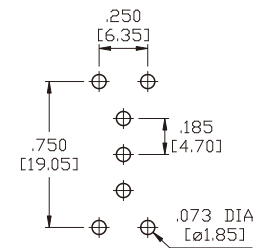


SPDT

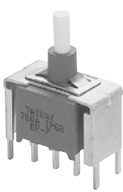


OPTION CODE	DIM.'A'
VS4	.461 [11.70]
VS5	.630 [16.00]

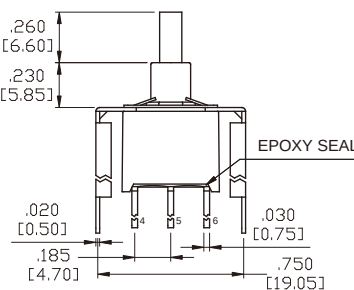
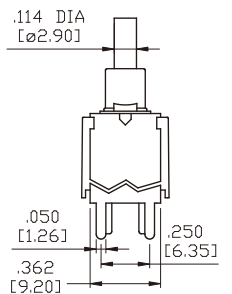
P.C.MOUNTING



VS4-VS5

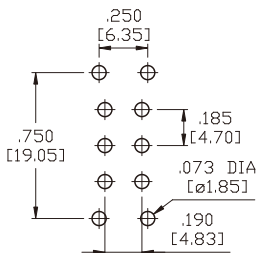


DPDT



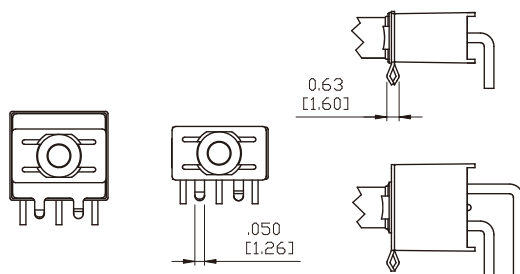
OPTION CODE	DIM.'A'
VS4	.461 [11.70]
VS5	.630 [16.00]

P.C.MOUNTING

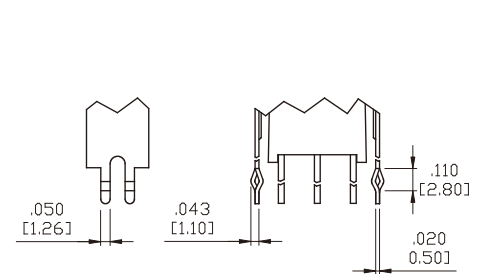


SNAP-IN TERMINATION OPTIONS

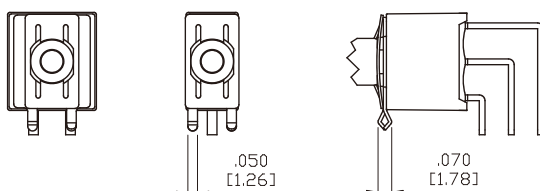
M61



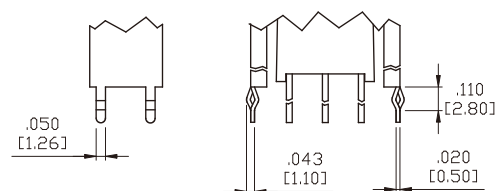
VS21,VS31



M71



VS41,VS51



* PC Mounting for M61,M71,VS21,VS31,VS41,VS51 refer to M6,M7,VS2,VS3,VS4,VS5 respectively.

PLUNGER CAPS

C1 * MATERIAL: ABS.	C2 * MATERIAL: ABS.	C3 * MATERIAL: ABS.	C4 * MATERIAL: ABS.	<table><tr><th colspan="2">CAP AND FRAME COLORS</th></tr><tr><td>1</td><td>White</td></tr><tr><td>2</td><td>Black</td></tr><tr><td>3</td><td>Red</td></tr><tr><td>4</td><td>Orange</td></tr><tr><td>5</td><td>Yellow</td></tr><tr><td>6</td><td>Green</td></tr><tr><td>7</td><td>Blue</td></tr><tr><td>8</td><td>Brown</td></tr><tr><td>9</td><td>Gray</td></tr></table>	CAP AND FRAME COLORS		1	White	2	Black	3	Red	4	Orange	5	Yellow	6	Green	7	Blue	8	Brown	9	Gray
CAP AND FRAME COLORS																								
1	White																							
2	Black																							
3	Red																							
4	Orange																							
5	Yellow																							
6	Green																							
7	Blue																							
8	Brown																							
9	Gray																							

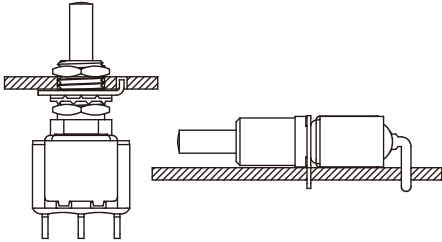
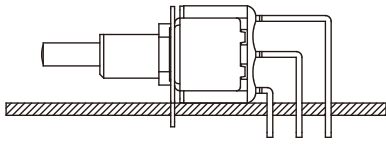
CONTACT MATERIAL OPTIONS

Coding	Contact Material	Terminal Plating	Rating	Agency Approvals
Q	Silver ¹	Silver plated ¹	1Amps @ 120VAC or 38VDC	 IP68
R	Gold ²	Gold plated ³	0.4VA max @ 20V max (AC or DC)	IP68
G	Silver ¹	Gold over silver ⁴	1Amps @ 120VAC or 38VDC	 IP68

* Standard G plating for sealed product.

1. Movable Contact / Terminals: Copper alloy, silver plated.
2. Movable Contact: Copper alloy with gold plated over nickel plated.
3. Terminals: Copper alloy, with gold plated over nickel plated.
4. Terminals: Silver plated with outer layer in gold plating.

* IP68 protection for 700A series only.



SPECIFICATIONS:

CONTACT RATING: Refer to "Contact Material Options" for more info.

ELECTRICAL LIFE: 50,000 make and break cycles at full load.

CONTACT RESISTANCE: 10mΩ max. initial @2-4VDC

INSULATION RESISTANCE: 1,000MΩ min.

DIELECTRIC STRENGTH: 1,500V RMS @ sea level.

OPERATION TEMPERATURE: -30°C to +85°C.

MATERIALS:

CASE: Diallyl phthalate(DAP)(UL 94V-0).

PLUNGER: Polybutylene terephthalate (PBT) or Nylon (UL 94V-0).

FRAME: Nylon 6/6 (UL 94HB), black standard.

BUTTON & CAP: Nylon 6/6 or ABS, black standard.

BUSHING: Brass, nickel plated.

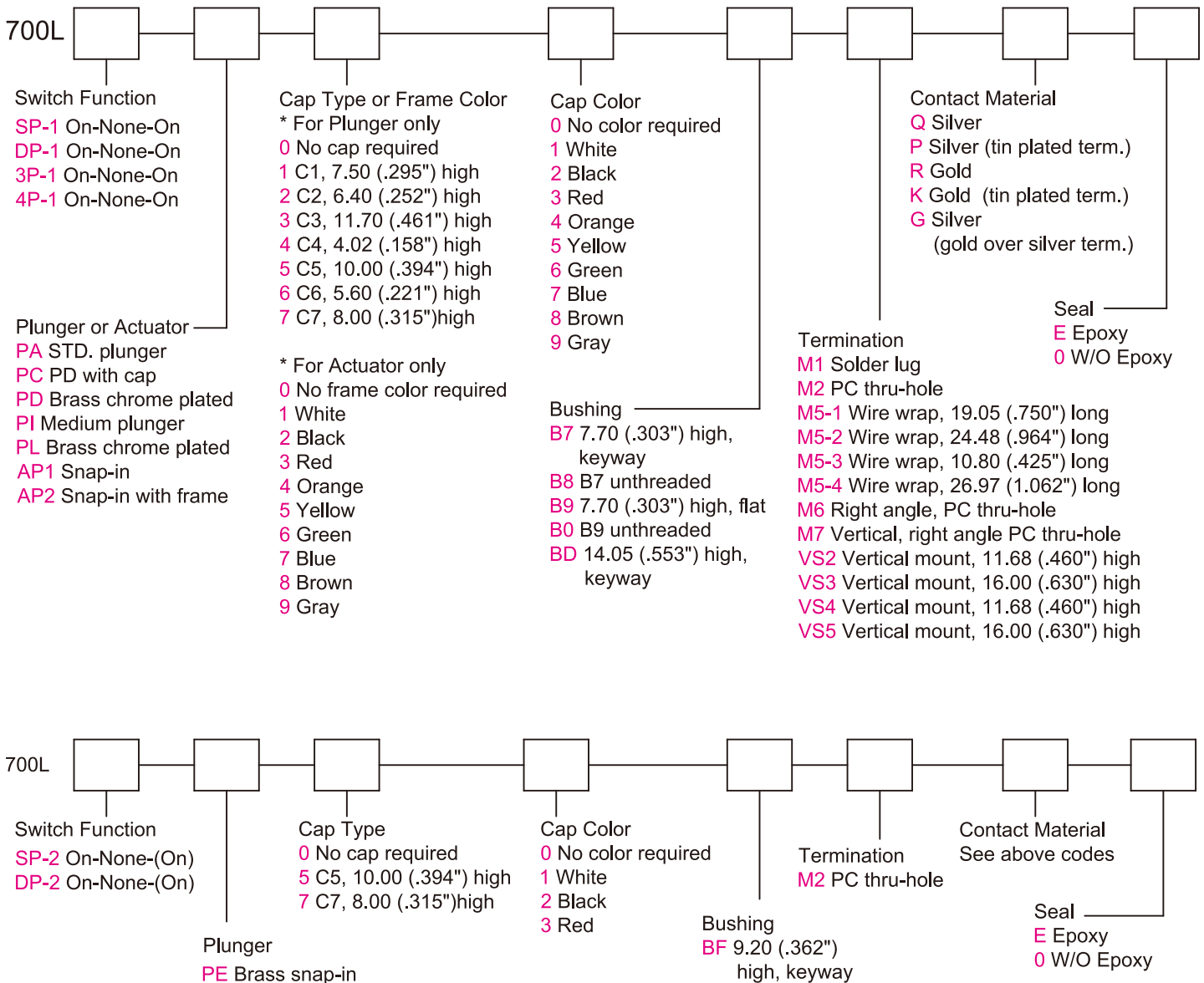
HOUSING: Stainless steel.

TERMINAL SEAL: Epoxy.

Specifications and Dimensions subject to change

If your preferred product configuration is not shown, please contact our sales representative for custom design.

HOW TO ORDER SYSTEM



Series 700L

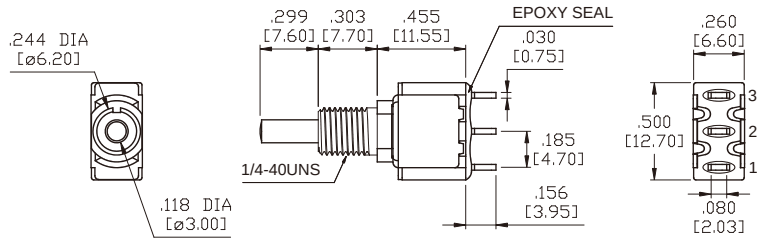
Alternate Acting Pushbutton Switches

SPDT



Model No.	Switching Position		
SP-1	ON	NONE	ON
Term. Comm.	2-3	OPEN	2-1

Schematic

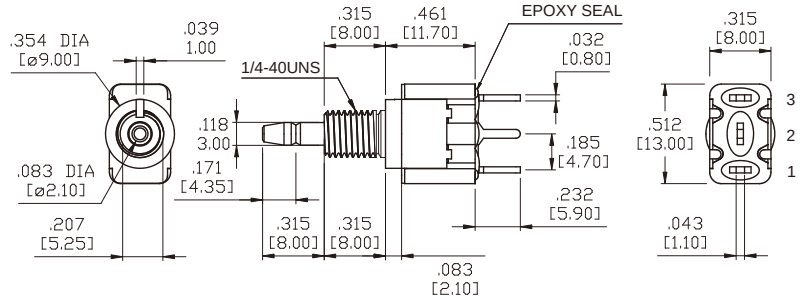


SPDT



Model No.	Switching Position		
SP-2	ON	NONE	(ON)
Term. Comm.	2-3	OPEN	2-1

Schematic

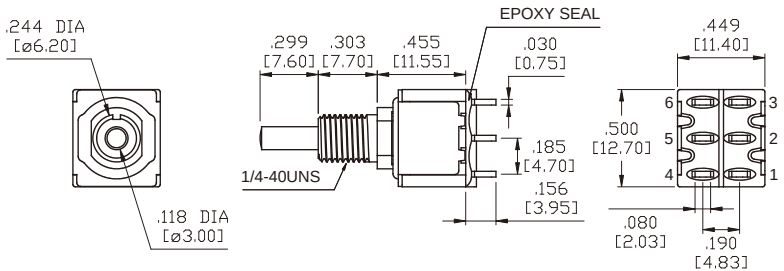
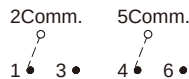


DPDT



Model No.	Switching Position		
DP-1	ON	NONE	ON
Term. Comm.	2-3,5-6	OPEN	2-1,5-4

Schematic

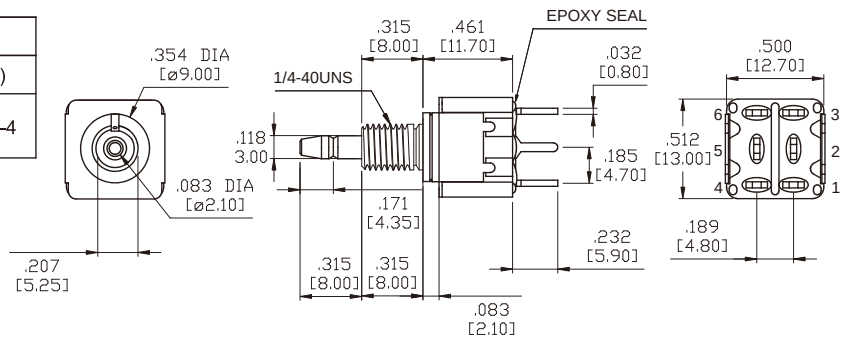
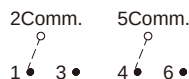


DPDT



Model No.	Switching Position		
DP-2	ON	NONE	(ON)
Term. Comm.	2-3,5-6	OPEN	2-1,5-4

Schematic

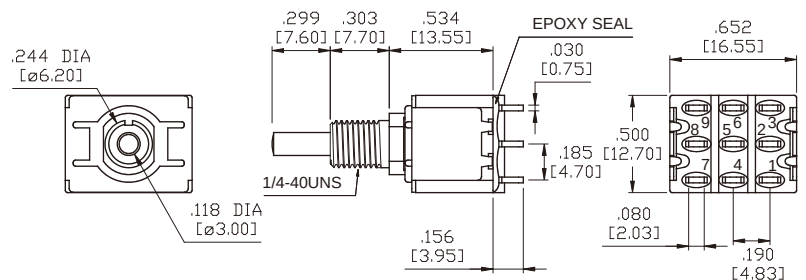


3PDT

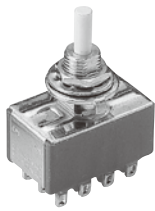


Model No.	Switching Position		
3P-1	ON	NONE	ON
Term. Comm.	2-3,5-6 8-9	OPEN	2-1,5-4 8-7

Schematic

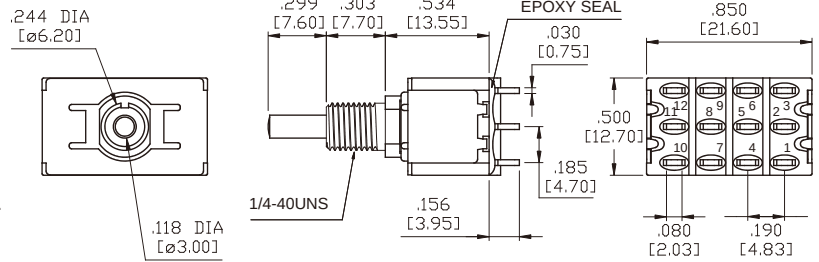
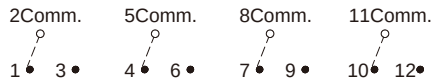


4PDT



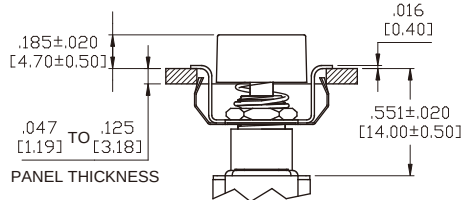
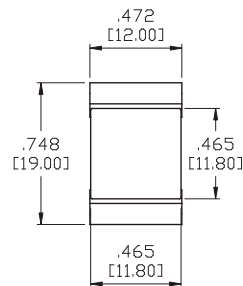
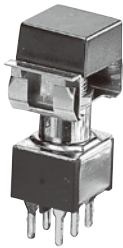
Model No.	Switching Position		
4P-1	ON	NONE	ON
Term. Comm.	2-3,5-6 8-9 11-12	OPEN	2-1,5-4 8-7 11-10

Schematic

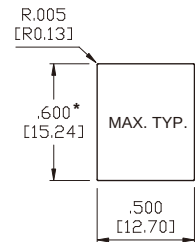


ACTUATOR OPTIONS FOR SNAP-IN FRONT MOUNT

AP1

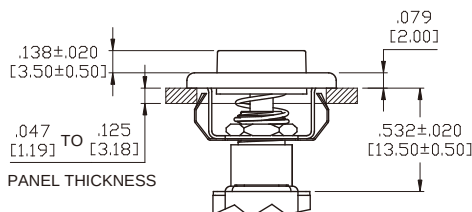
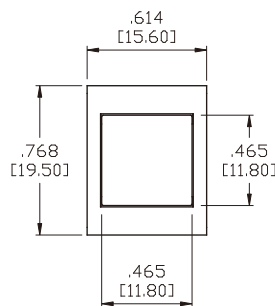
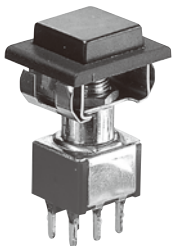


PANEL MOUNTING

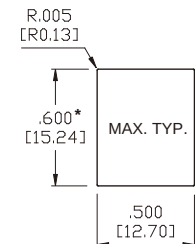


* Increase this dimension to .620/.625 [15.75/15.88] for .091/.125 [2.31/3.18] thk. panels.

AP2 WITH FRAME



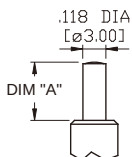
PANEL MOUNTING



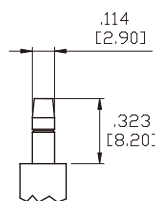
* Increase this dimension to .620/.625 [15.75/15.88] for .091/.125 [2.31/3.18] thk. panels.

PLUNGER OPTIONS (SP-1 & DP-1 MODEL)

PL

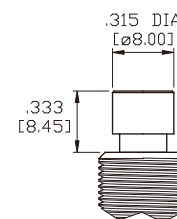


OPTION CODE	DIM "A"
PA	.299 [7.60]
PI	.244 [6.20]

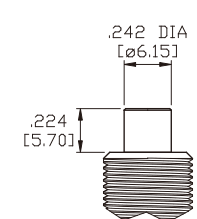


* Plunger material: Brass Nickel Plated

PC



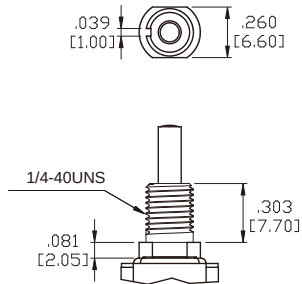
PD



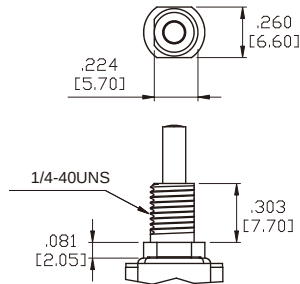
* Plunger material: Brass Chrome Plated
* PC,PD must configure with BD bushing

BUSHING OPTIONS (SP-1 & DP-1 MODEL)

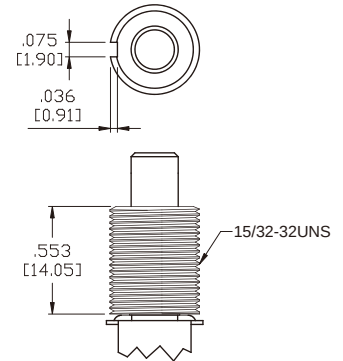
B7 THD STD
B8 NON-THD



B9 THD STD
B0 NON-THD

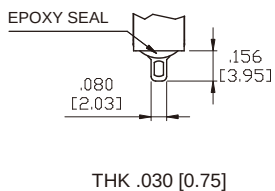


BD THD STD

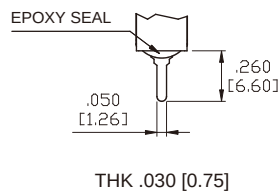


TERMINATION OPTIONS (SP-1 & DP-1 MODEL)

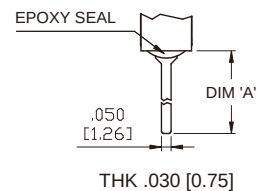
M1 STD. SOLDER LUG



M2 PC-THRU HOLE



M5 WIRE WRAP

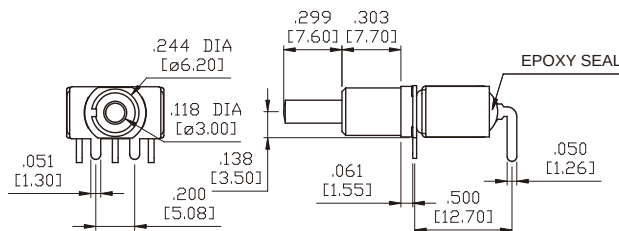


OPTION CODE	DIM. 'A'
M5-1	.750 [19.05]
M5-2	.964 [24.48]
M5-3	.425 [10.80]
M5-4	1.062 [26.97]

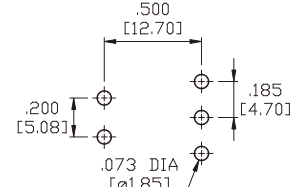
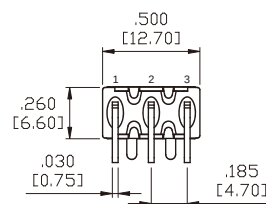
M6



SPDT



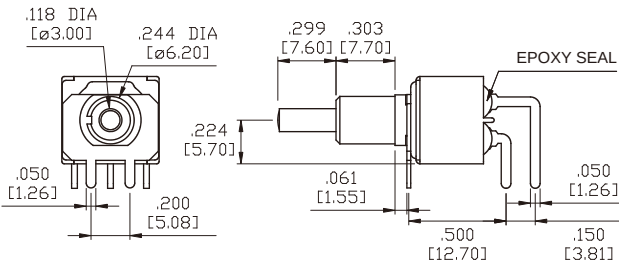
P.C.MOUNTING



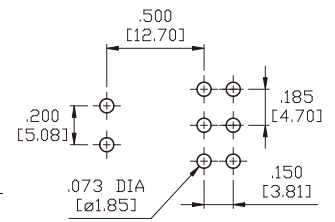
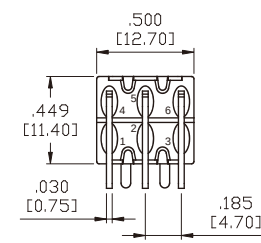
M6



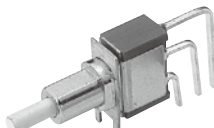
DPDT



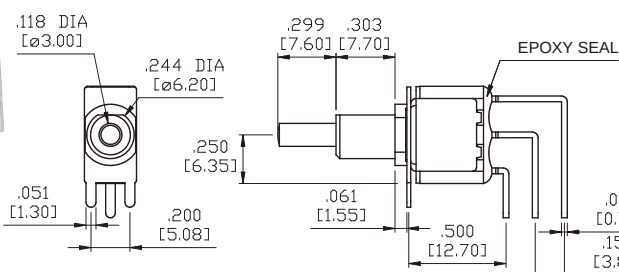
P.C.MOUNTING



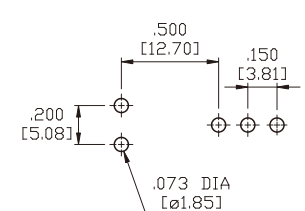
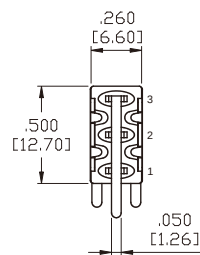
M7



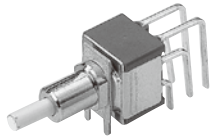
SPDT



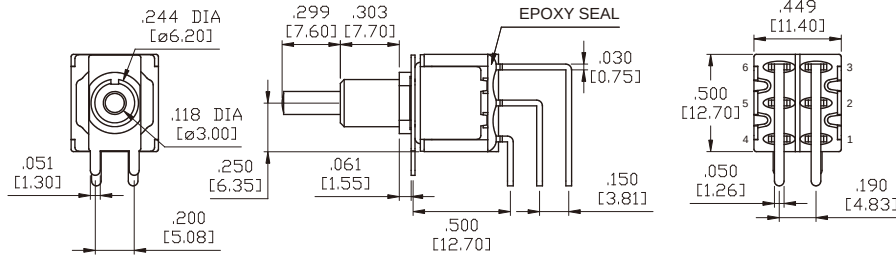
P.C.MOUNTING



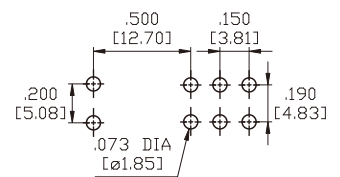
M7



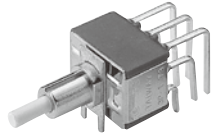
DPDT



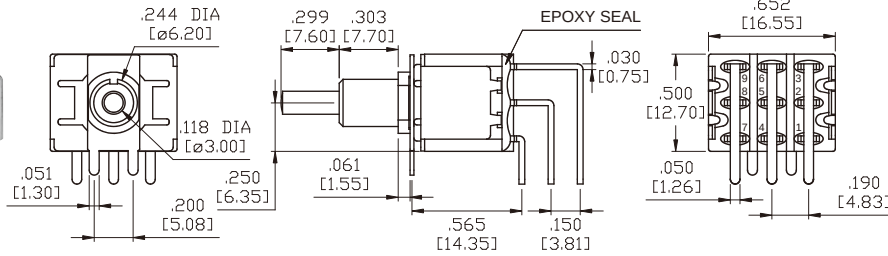
P.C.MOUNTING



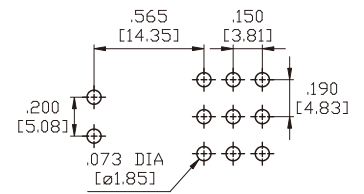
M7



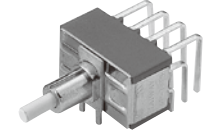
3PDT



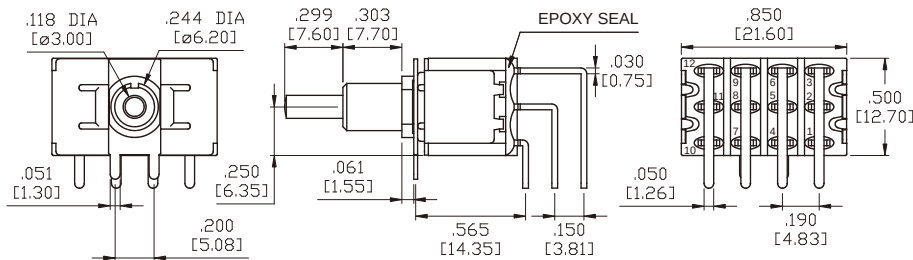
P.C.MOUNTING



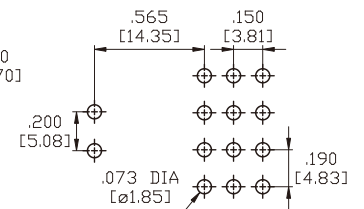
M7



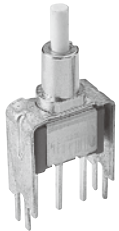
4PDT



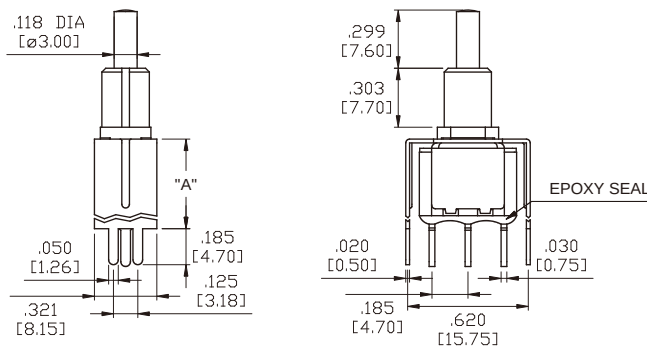
P.C.MOUNTING



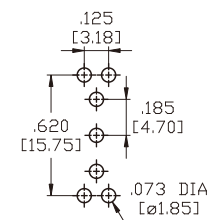
VS2-VS3



SPDT



P.C.MOUNTING

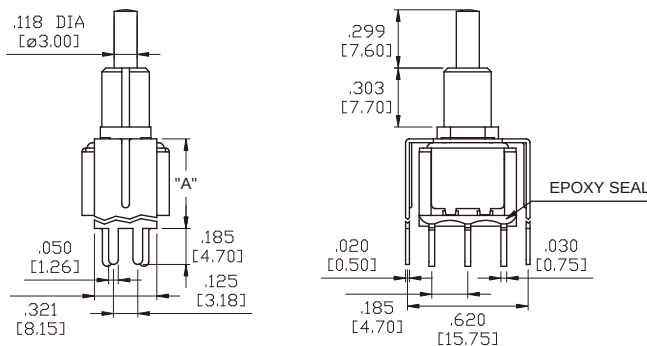


OPTION CODE	DIM.'A'
VS2	.461 [11.70]
VS3	.630 [16.00]

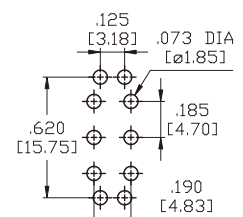
VS2-VS3



DPDT



P.C.MOUNTING



OPTION CODE	DIM.'A'
VS2	.461 [11.70]
VS3	.630 [16.00]

Toggle

Rocker

Slide

Pushbutton

AV

Rotary

Tact

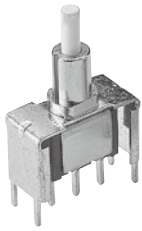
Touch Key

Miscellaneous

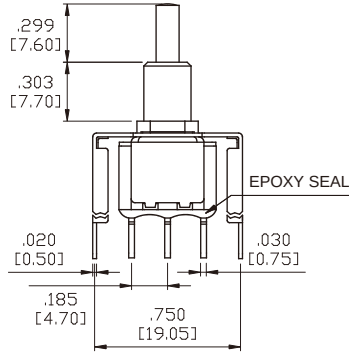
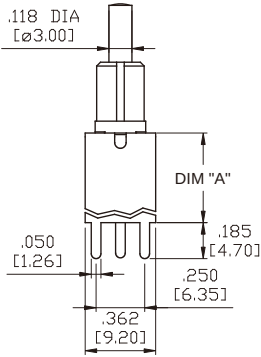
Series 700L

Alternate Acting Pushbutton Switches

VS4-VS5

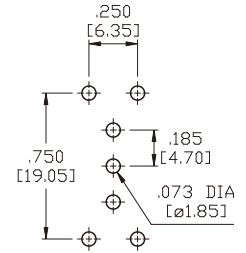


SPDT

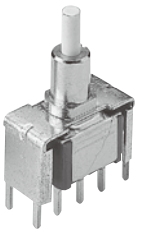


OPTION CODE	DIM.'A'
VS4	.461 [11.70]
VS5	.630 [16.00]

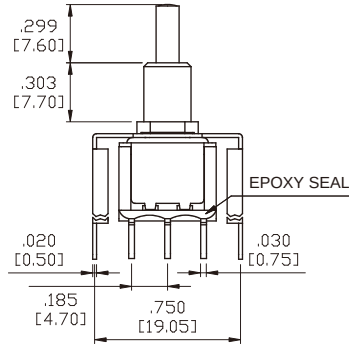
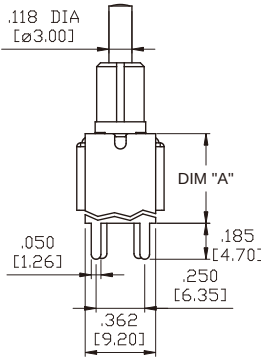
P.C.MOUNTING



VS4-VS5

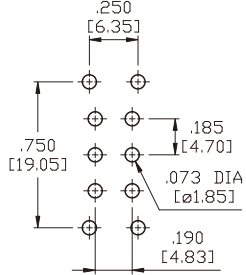


DPDT



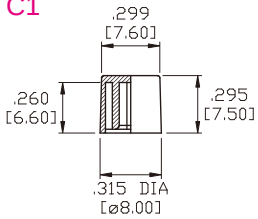
OPTION CODE	DIM.'A'
VS4	.461 [11.70]
VS5	.630 [16.00]

P.C.MOUNTING

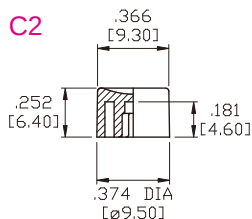


PLUNGER CAPS

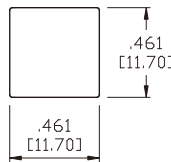
C1



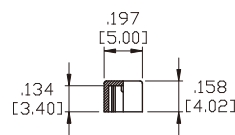
C2



C3

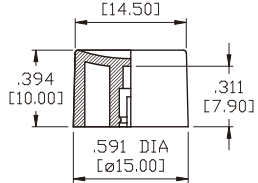


C4



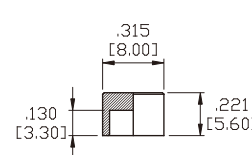
CAP AND FRAME COLORS	
1	White
2	Black
3	Red
4	Orange
5	Yellow
6	Green
7	Blue
8	Brown
9	Gray

C5



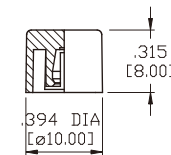
For PL plunger only

C6



For PD plunger only

C7

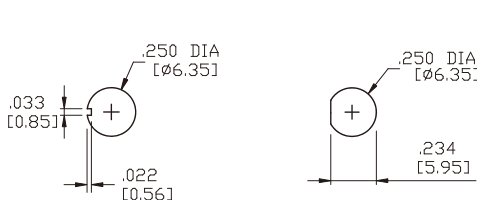


For PL plunger only

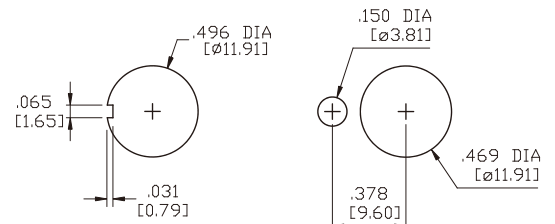
MATERIAL: ABS for C1-C5.
MATERIAL: Brass for C6
Chrome or nickel plated.

PANEL MOUNTING

1/4 INCH BUSHING

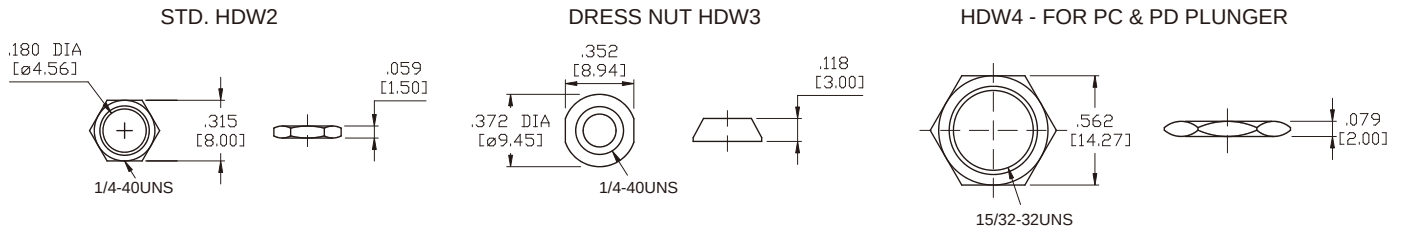


15/32 INCH BUSHING

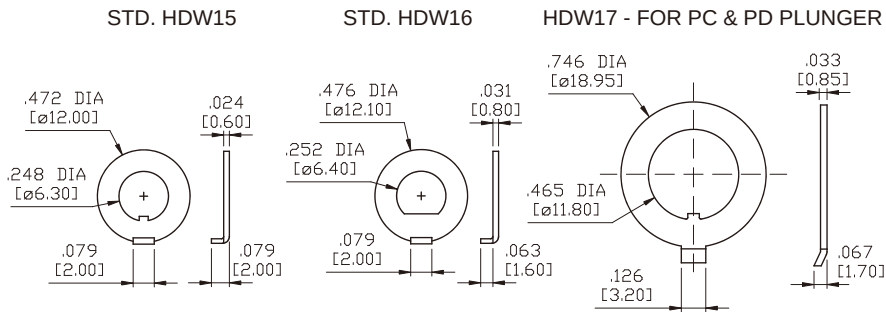


HARDWARE

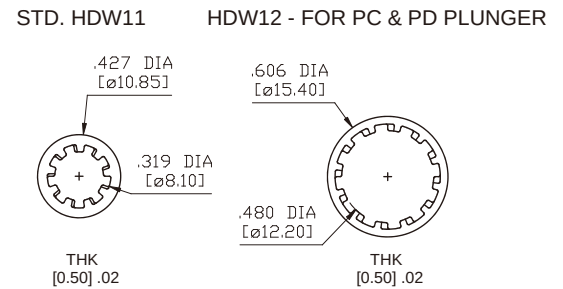
NUT



LOCKING RING



LOCK WASHER

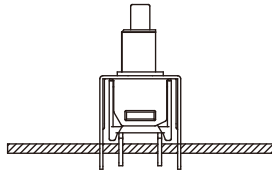
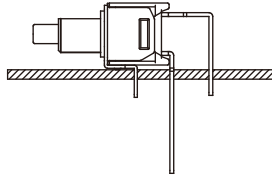


CONTACT MATERIAL OPTIONS

Coding	Contact Material	Terminal Plating	Rating	Agency Approvals
Q	Silver ¹	Silver plated ⁶	6Amps @ 125VAC or 28VDC 3Amps @ 250VAC	c  US
P		Tin plated ^{5 8}		
R	Gold ²	Gold plated ⁴	0.4VA max @ 20V max (AC or DC)	
K		Tin plated ^{5 7}		
G	Silver ¹	Gold over silver ³	6Amps @ 125VAC or 28VDC 3Amps @ 250VAC	c  US

1. Movable Contact: Coin silver, silver plated.
2. Movable Contact: Copper alloy with gold plated over nickel plated.
3. Terminals: Silver plated with outer layer in gold plating.
4. Terminals: Copper alloy, with gold plated over nickel plated.
5. Outer Terminals: Copper alloy with pure tin plated.
6. Terminals: Copper alloy, silver plated.
7. Terminal Contact: Gold plated over nickel plated.
8. Terminal Contact: Palladium nickel alloy (or Silver) plated.

* P, K not available with M1 termination.



SPECIFICATION:

CONTACT RATING: Refer to "Contact Material Options" for more info.
 ELECTRICAL LIFE: 30,000 make-and-break cycles at full load.
 CONTACT RESISTANCE: 20mΩ max. initial @2-4 VDC
 100mA for both silver and gold plated contacts.
 INSULATION RESISTANCE: 1000MΩ min.
 DIELECTRIC STRENGTH: 1500V RMS @ sea level.
 OPERATING TEMPERATURE: -30°C to +85°C.

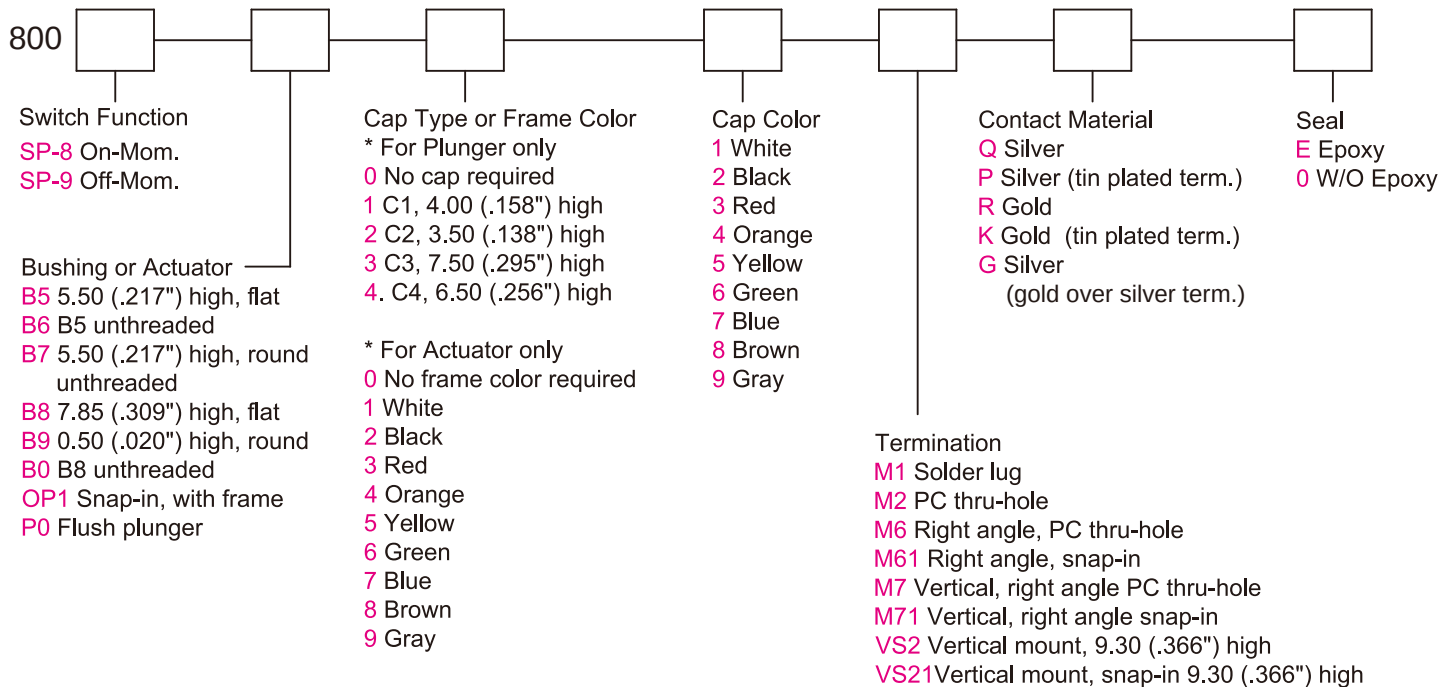
MATERIALS:

CASE: Diallyl phthalate(DAP)(UL 94V-0).
 PLUNGER: Polybutylene terephthalate (PBT) or Nylon 6/6.
 BUSHING: Brass, nickel plated.
 SWITCH SUPPORT: Brass, tin plated.
 HOUSING: Stainless steel.
 TERMINAL SEAL: Epoxy.

Specifications and Dimensions subject to change

If your preferred product configuration is not shown, please contact our sales representative for custom design.

HOW TO ORDER SYSTEM

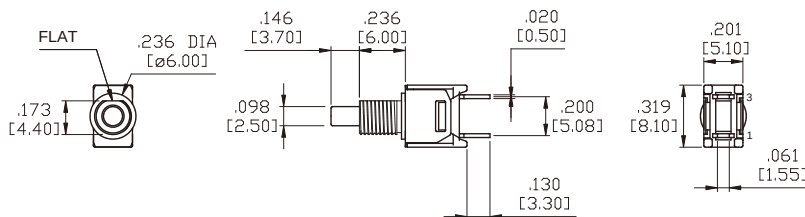


SPST

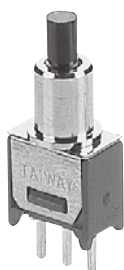


Model No.	Type	
SP-9	OFF	MOM

Schematic

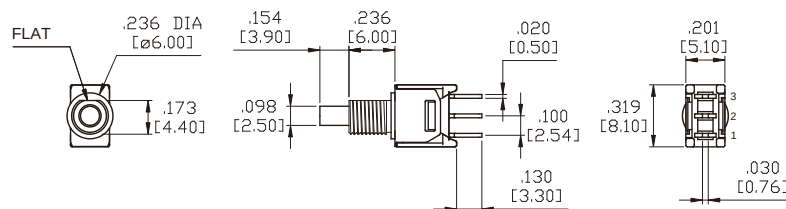


SPDT



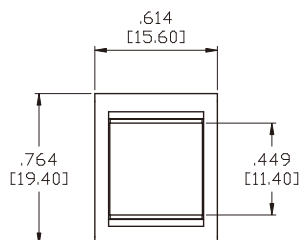
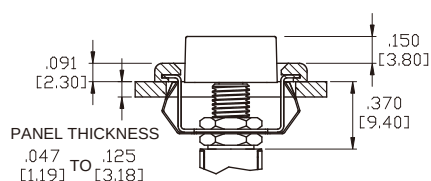
Model No.	Type	
SP-8	ON	MOM
Term. Comm.	2-1	2-3

Schematic

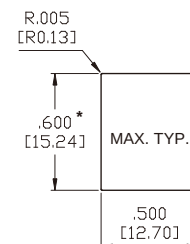


ACTUATOR OPTIONS FOR SNAP-IN FRONT MOUNT

OP1

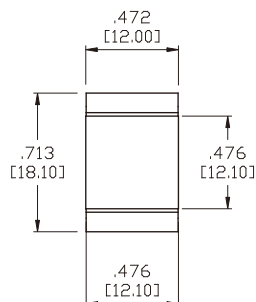
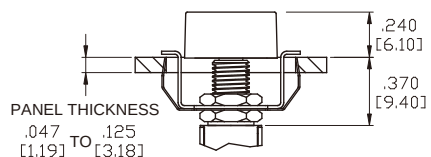


PANEL MOUNTING

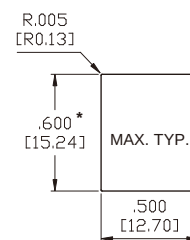


* Increase this dimension to .620/.625 [15.75/15.88] for .091/.125 [2.31/3.18] thk. panels.

OP1 WITHOUT FRAME



PANEL MOUNTING



* Increase this dimension to .620/.625 [15.75/15.88] for .091/.125 [2.31/3.18] thk. panels.

BUSHING OPTIONS

B5	B6	B7
B8	B9	B0

TERMINATION OPTIONS

M1	M2
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TERMINATION OPTIONS

M6 SPST			P.C.MOUNTING
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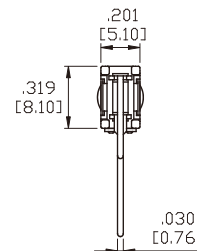
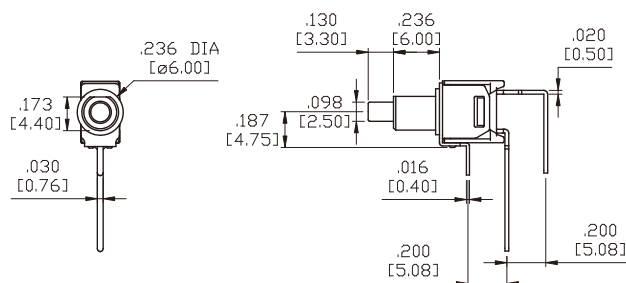
M6 SPDT			P.C.MOUNTING
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TERMINATION OPTIONS

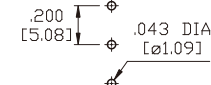
M7



SPST



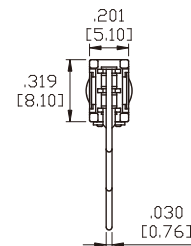
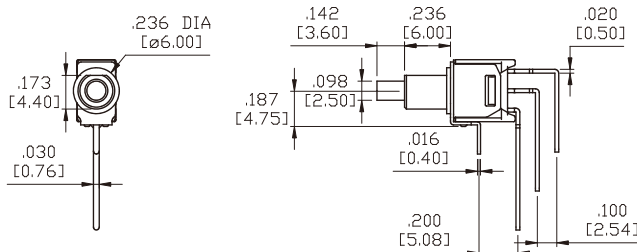
P.C.MOUNTING



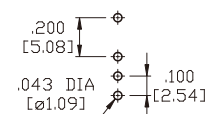
M7



SPDT



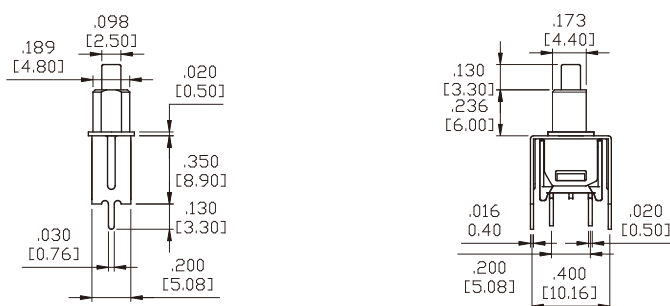
P.C.MOUNTING



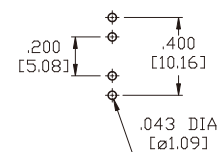
VS2



SPST



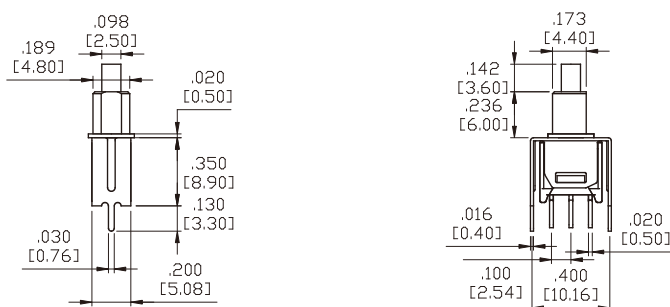
P.C.MOUNTING



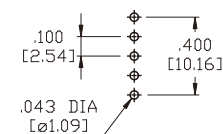
VS2



SPDT

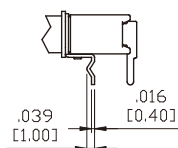


P.C.MOUNTING

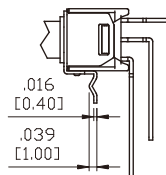


SNAP-IN TERMINATION OPTIONS

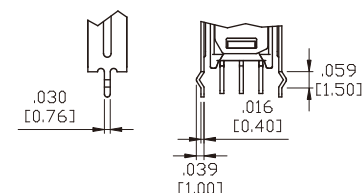
M61



M71



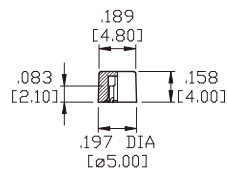
VS21



* PC Mounting for M61,M71,VS21 refer to M6,M7,VS2 respectively.

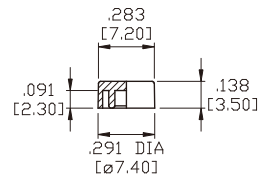
PLUNGER CAPS

C1



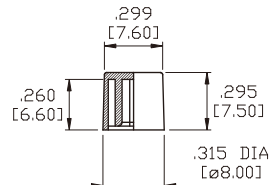
* MATERIAL: ABS.

C2



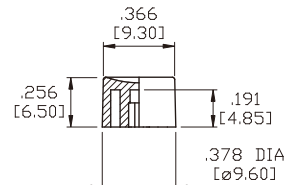
* MATERIAL: ABS.

C3



* MATERIAL: ABS.

C4



* MATERIAL: ABS.

CAP AND FRAME COLORS

1	White
2	Black
3	Red
4	Orange
5	Yellow
6	Green
7	Blue
8	Brown
9	Gray

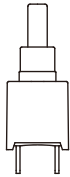
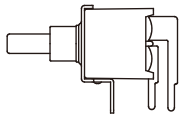
* C3 & C4 cap is only for plunger with B8 and B0 bushing.

CONTACT MATERIAL OPTIONS

Coding	Contact Material	Terminal Plating	Rating	Agency Approvals
Q	Silver ¹	Silver plated ¹	1Amps @ 125VAC or 28VDC	
P		Tin plated ⁵ ⁷		
R	Gold ²	Gold plated ⁴	0.4VA max @ 20V max (AC or DC)	
K		Tin plated ⁵ ⁶		
G	Silver ¹	Gold over silver ³	1Amps @ 125VAC or 28VDC	

1. Movable Contact / Terminals: Copper alloy, silver plated.
2. Movable Contact: Copper alloy with gold plated over nickel plated.
3. Terminals: Silver plated with outer layer in gold plating.
4. Terminals: Copper alloy, with gold plated over nickel plated.
5. Outer Terminals: Copper alloy with pure tin plated.
6. Terminal Contact: Gold plated over nickel plated.
7. Terminal Contact: Palladium nickel alloy (or Silver) plated.

* P, K is not available with M1 terminal.

**SPECIFICATIONS:**

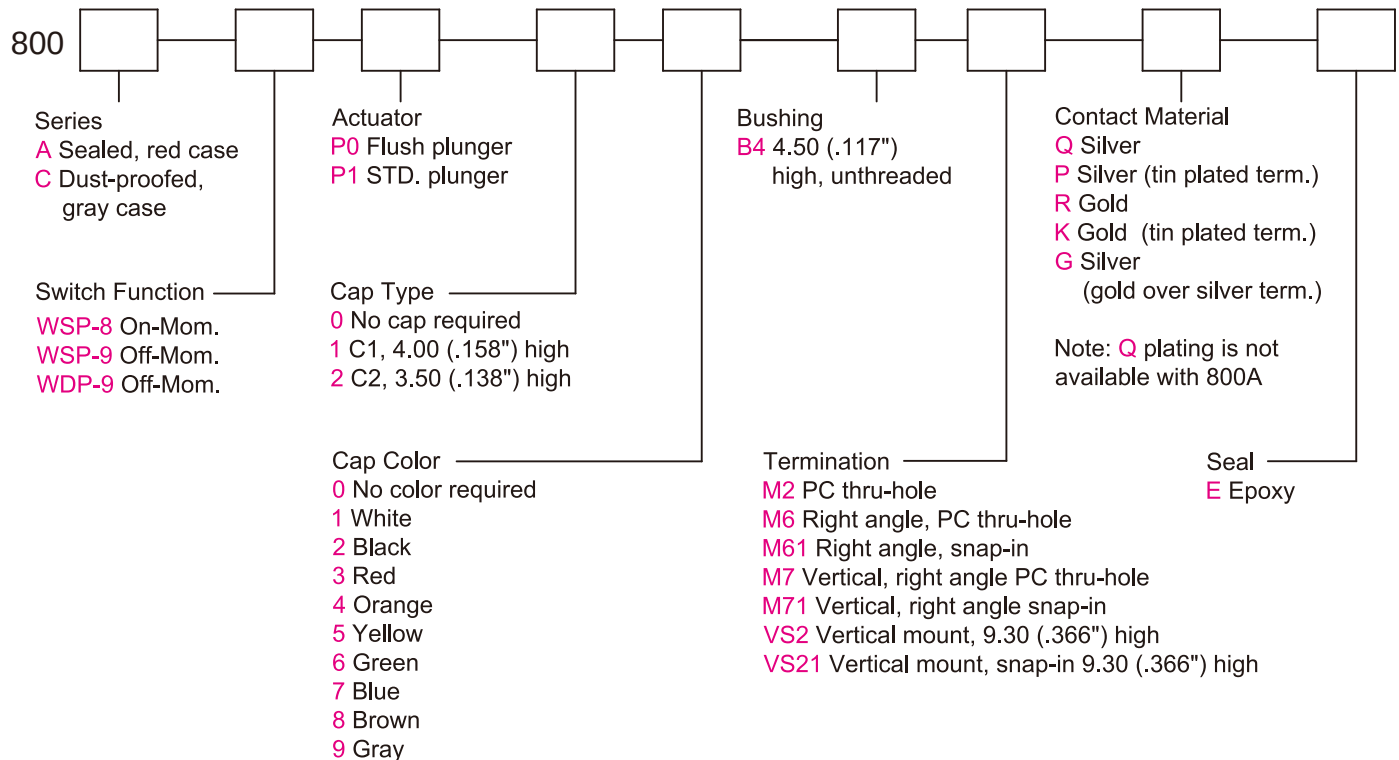
CONTACT RATING: Refer to "Contact Material Options" for more info.
ELECTRICAL LIFE: 30,000 make-and break cycles at full load.
CONTACT RESISTANCE: 20mΩ max. initial @ 2-4VDC
100mA for both silver and gold plated contacts.
INSULATION RESISTANCE: 1,000MΩ min.
DIELECTRIC STRENGTH: 1500V RMS min. @ sea level.
OPERATING TEMPERATURE: -30°C to +85°C.

MATERIALS:

CASE & BUSHING: PA9T or FR52, flame retardant, heat stabilized (UL 94V-0).
PLUNGER: FR52 (UL 94V-0), with internal o-ring sealed (800A).
PLUNGER: FR52 (UL 94V-0) (800C).
SWITCH SUPPORT: Brass, tin plated.
TERMINAL SEAL: Epoxy.

Specifications and Dimensions subject to change

If your preferred product configuration is not shown, please contact our sales representative for custom design.

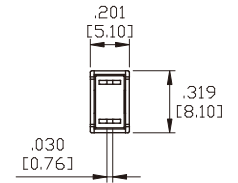
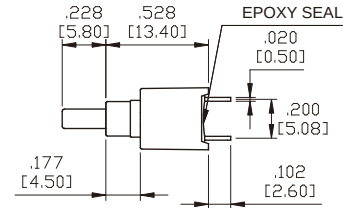
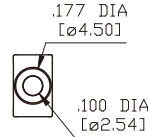
HOW TO ORDER SYSTEM

SPST



Model No.	Type	
WSP-9	OFF	MOM

Schematic

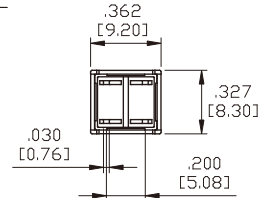
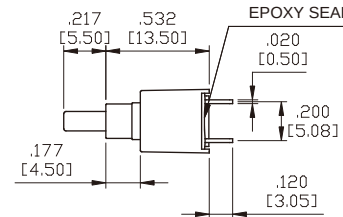
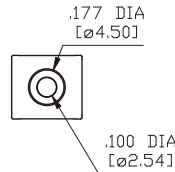
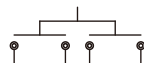


DPST



Model No.	Type	
WDP-9	OFF	MOM

Schematic

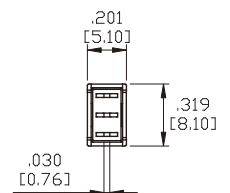
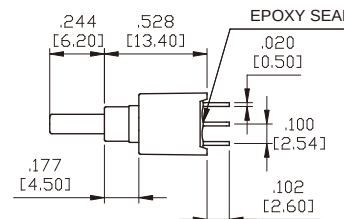
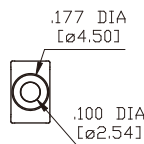


SPDT



Model No.	Type	
WSP-8	ON	MOM
Term. Comm.	2-1	2-3

Schematic

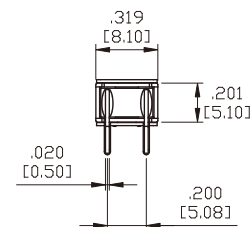
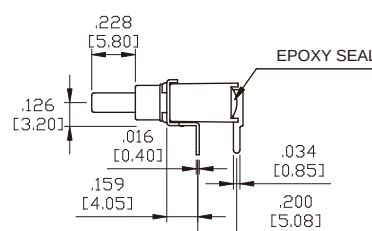
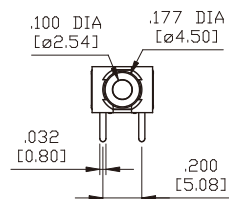


TERMINATION OPTIONS

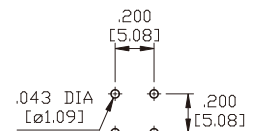
M6



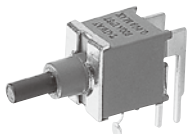
SPST



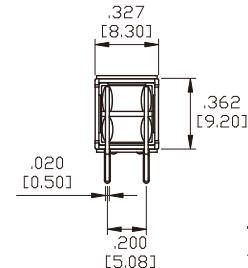
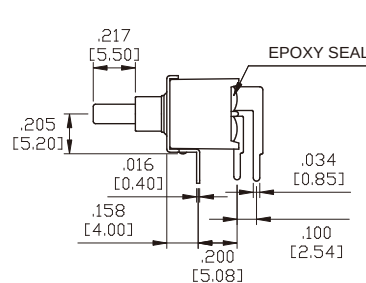
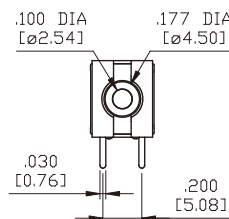
P.C.MOUNTING



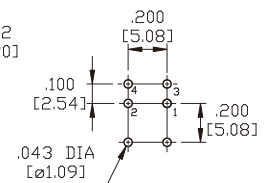
M6



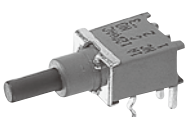
DPST



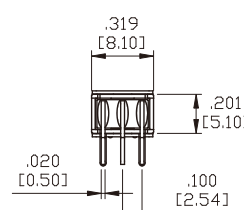
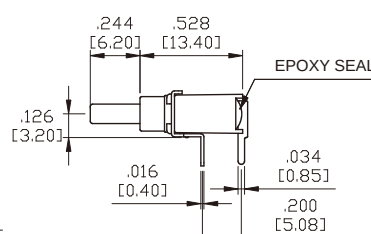
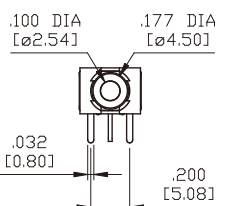
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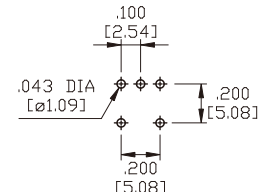
M6



SPDT



P.C.MOUNTING

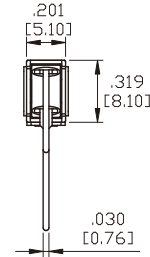
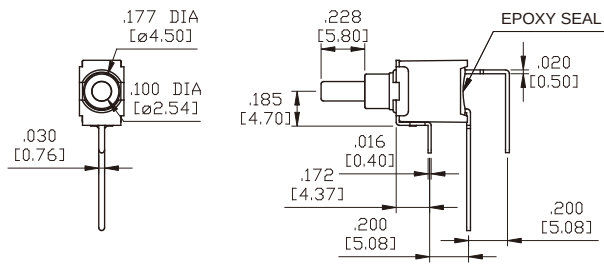


TERMINATION OPTIONS

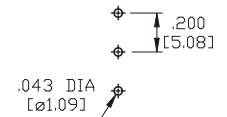
M7



SPST



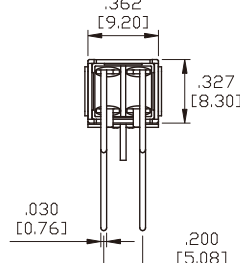
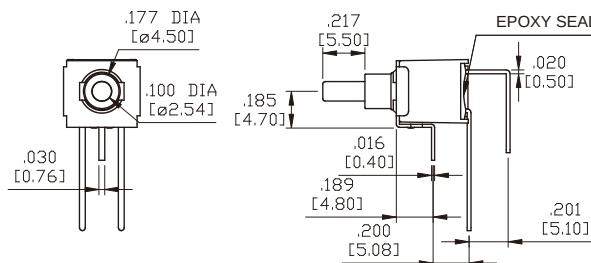
P.C.MOUNTING



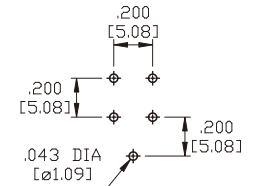
M7



DPST



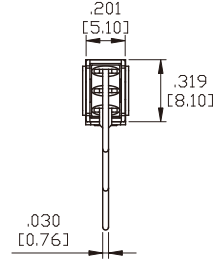
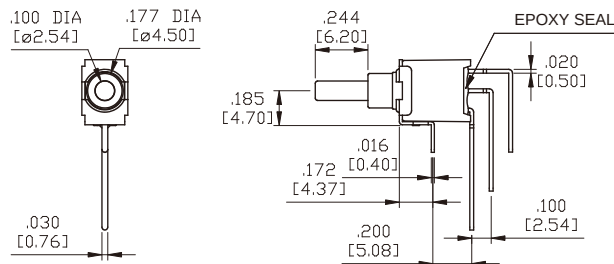
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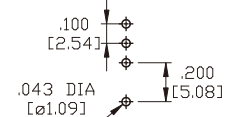
M7



SPDT



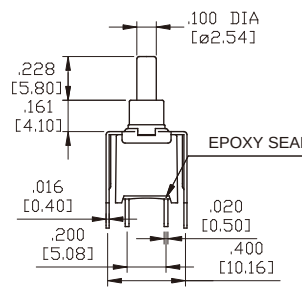
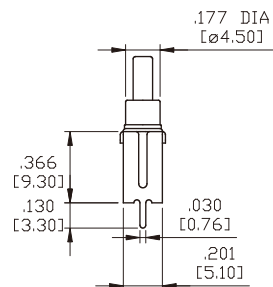
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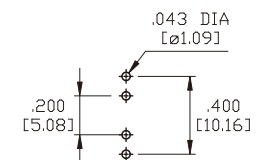
VS-2



SPST



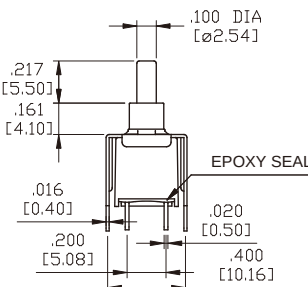
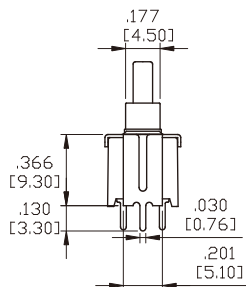
P.C.MOUNTING



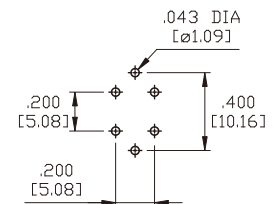
VS-2



DPST



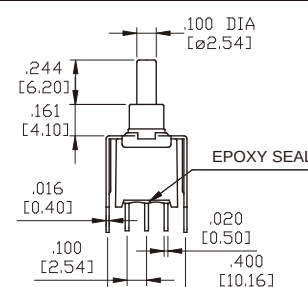
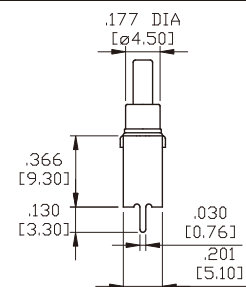
P.C.MOUNTING



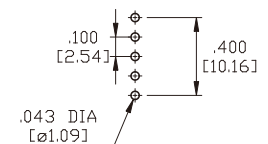
VS2



SPDT



P.C.MOUNTING



Toggle

Rocker

Slide

Pushbutton

AV

Rotary

Tact

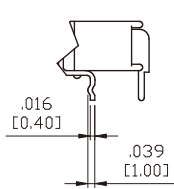
Touch Key

Miscellaneous

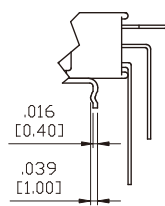
Series 800A/C (Sealed) Sub-Miniature Pushbutton Switches

SNAP-IN TERMINATION OPTIONS

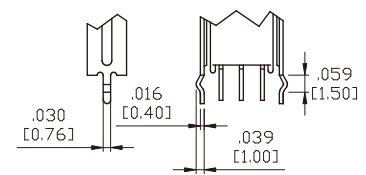
M61



M71



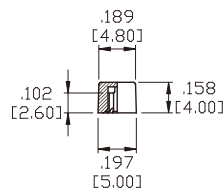
VS21



* PC Mounting for M61,M71,VS21 refer to M6,M7,VS2 respectively.

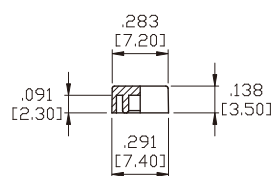
PLUNGER CAPS

C1



* MATERIAL: ABS.

C2



* MATERIAL: ABS.

CAP COLORS			
1	White	6	Green
2	Black	7	Blue
3	Red	8	Brown
4	Orange	9	Gray
5	Yellow		

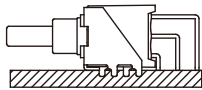
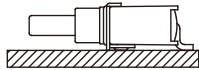
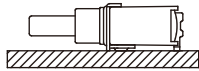
CONTACT MATERIAL OPTIONS

Coding	Contact Material	Terminal Plating	Rating	Agency Approvals
G	Silver ¹	Gold over silver ³	1Amps @ 125VAC or 28VDC	IP67
P		Tin plated ⁵ ⁷		
R	Gold ²	Gold plated ⁴	0.4VA max @ 20V max (AC or DC)	IP67
K		Tin plated ⁵ ⁶		

* Standard G plating for sealed product.

1. Movable Contact: Copper alloy, silver plated.
2. Movable Contact: Copper alloy with gold plated over nickel plated.
3. Terminals: Silver plated with outer layer in gold plating.
4. Terminals: Copper alloy, with gold plated over nickel plated.
5. Outer Terminals: Copper alloy with pure tin plated.
6. Terminal Contact: Gold plated over nickel plated.
7. Terminal Contact: Palladium nickel alloy (or Silver) plated.

* IP67 protection for 800A series only.



SPECIFICATIONS:

CONTACT RATING: Refer to "Contact Material Options".
ELECTRICAL LIFE: 30,000 make-and-break cycles at full load.
CONTACT RESISTANCE: 20mΩ max. initial @2-4VDC, 100mA
INSULATION RESISTANCE: 1,000mΩ min.
DIELECTRIC STRENGTH: 1,500V RMS min. @sea level.
OPERATING TEMPERATURE: -30°C to +85°C.

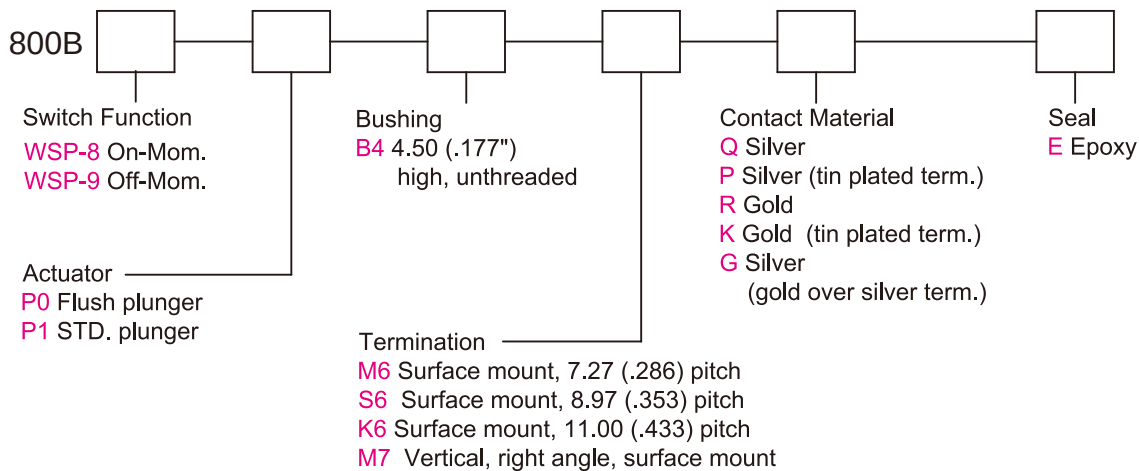
MATERIALS:

CASE & BUSHING: PA46 or FR52, flame retardant, heat stabilized(UL 94V-0).
PLUNGER: FR52 or PA46 (UL 94V-0), with internal o-ring sealed.
SURFACE PLATE: Brass (or Phosphor bronze), tin plated.
TERMINAL SEAL: Epoxy.

Specifications and Dimensions subject to change

If your preferred product configuration is not shown, please contact our sales representative for custom design.

HOW TO ORDER SYSTEM



M6

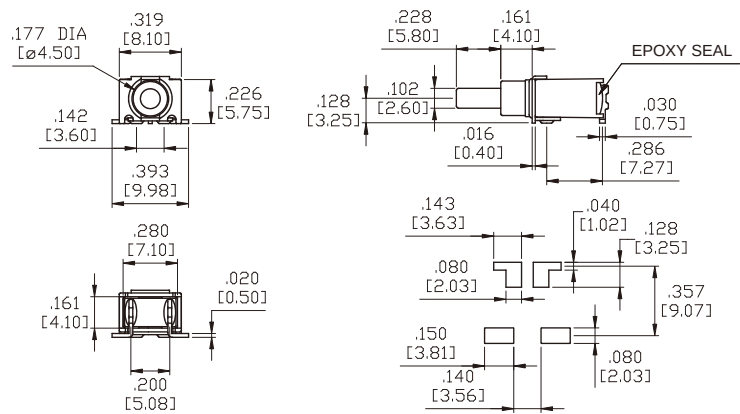


Model No.	Type	
WSP-9	OFF	MOM

Schematic



SPST

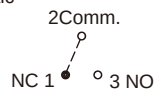


M6

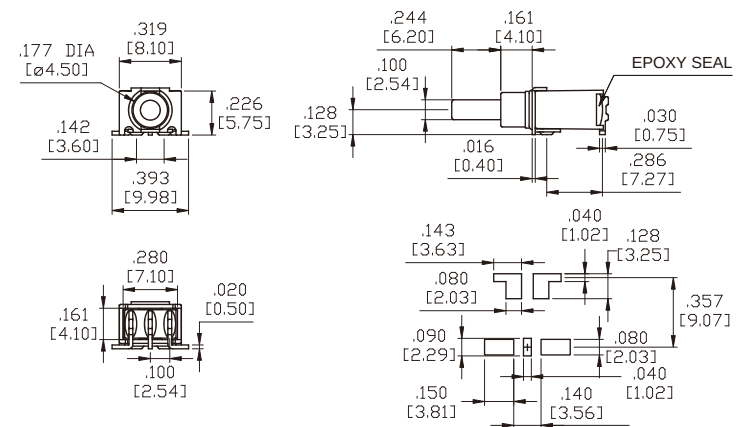


Model No.	Type	
WSP-8	ON	MOM
Term. Comm.	2-1	2-3

Schematic



SPDT



S6

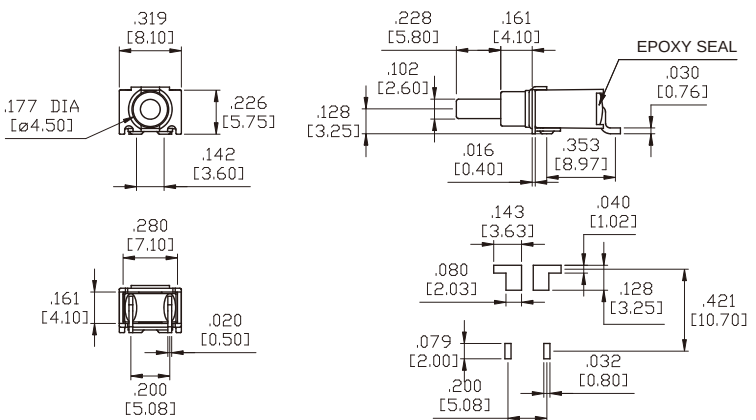


Model No.	Type	
WSP-9	OFF	MOM

Schematic



SPST

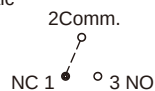


S6

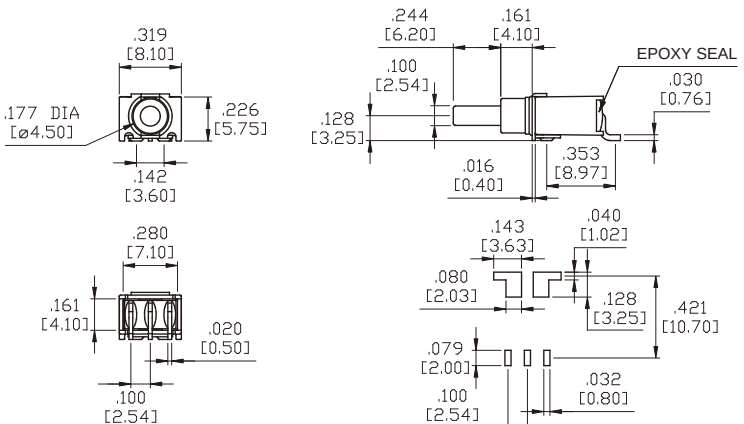


Model No.	Type	
WSP-8	ON	MOM
Term. Comm.	2-1	2-3

Schematic



SPDT



K6

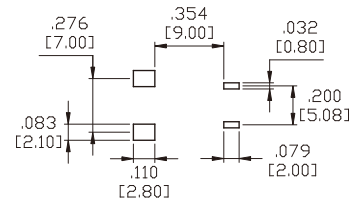
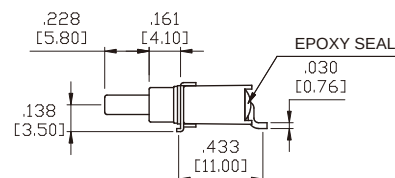
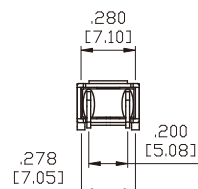
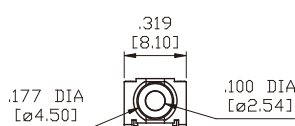


Model No.	Type	
WSP-9	OFF	MOM

Schematic



SPST



K6

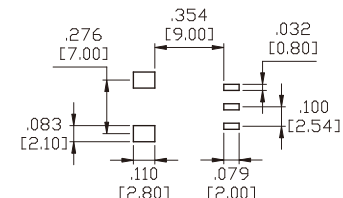
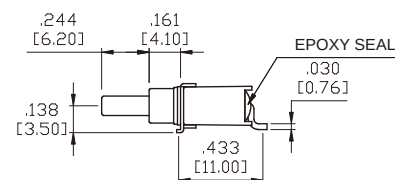
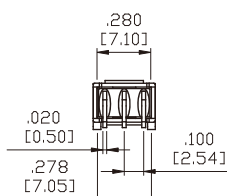
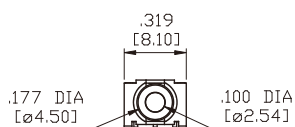


Model No.	Type	
WSP-8	ON	MOM
Term. Comm.	2-1	2-3

Schematic



SPDT



M7

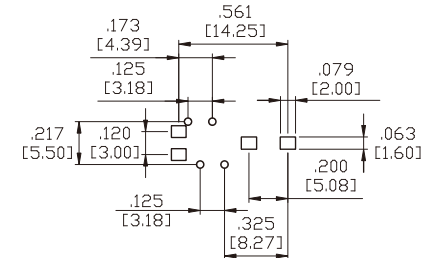
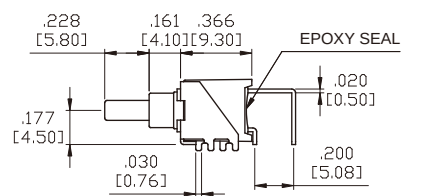
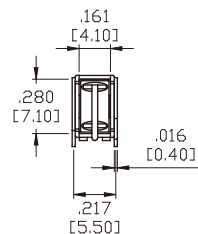
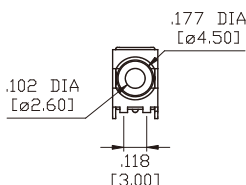


Model No.	Type	
WSP-9	OFF	MOM

Schematic



SPST

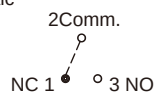


M7

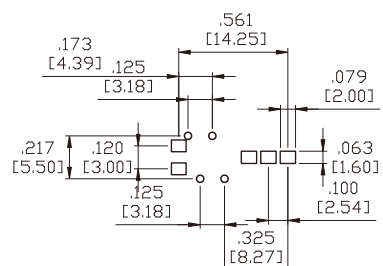
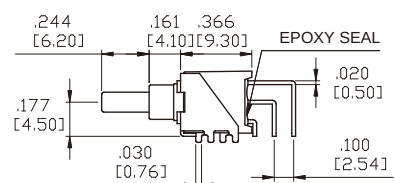
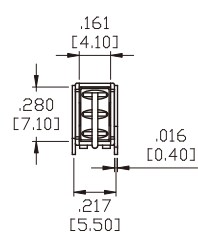
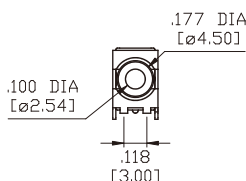


Model No.	Type	
WSP-8	ON	MOM
Term. Comm.	2-1	2-3

Schematic

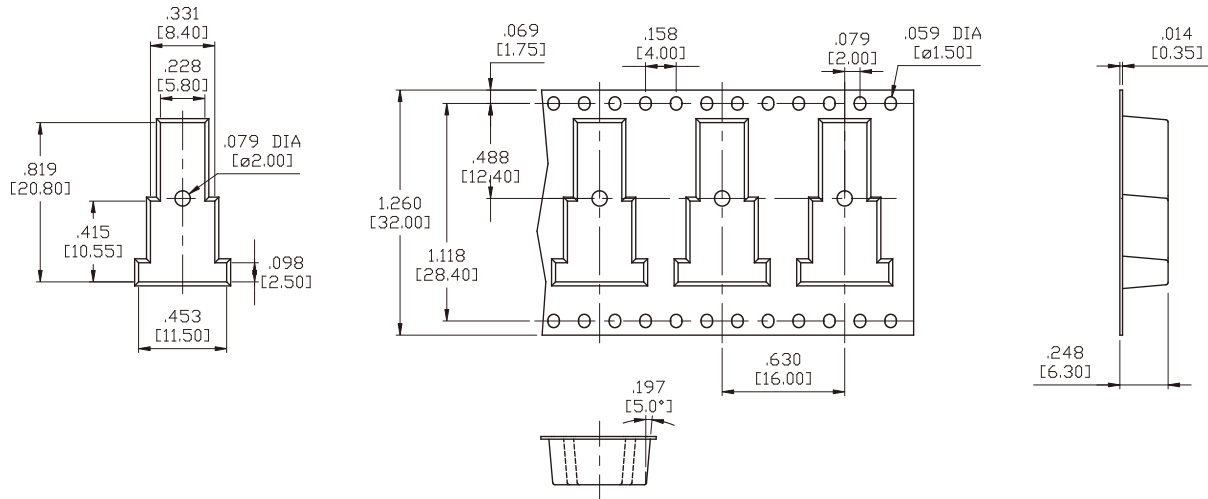


SPDT

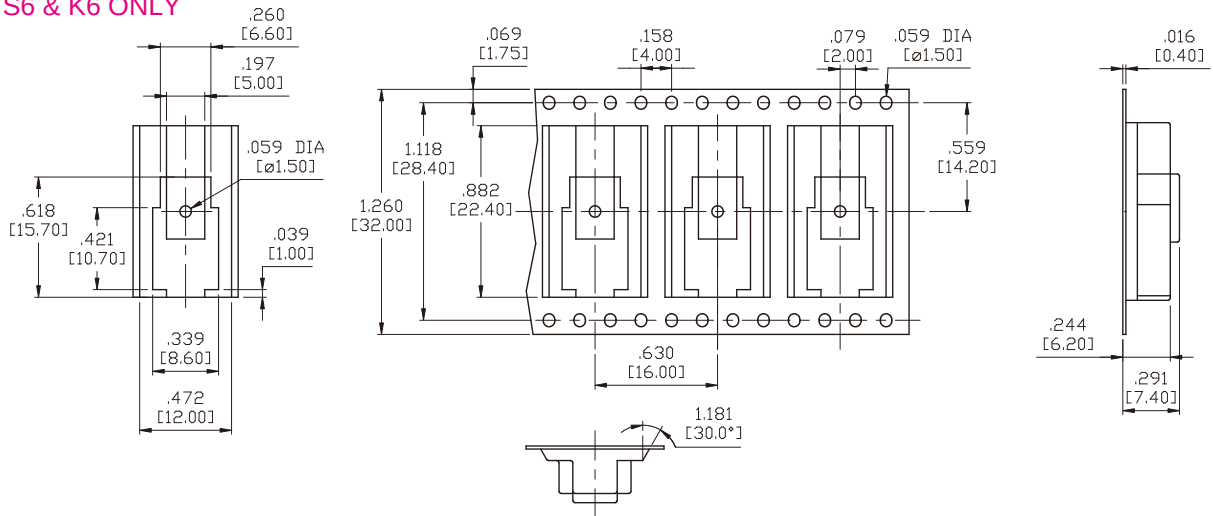


REEL TAPING

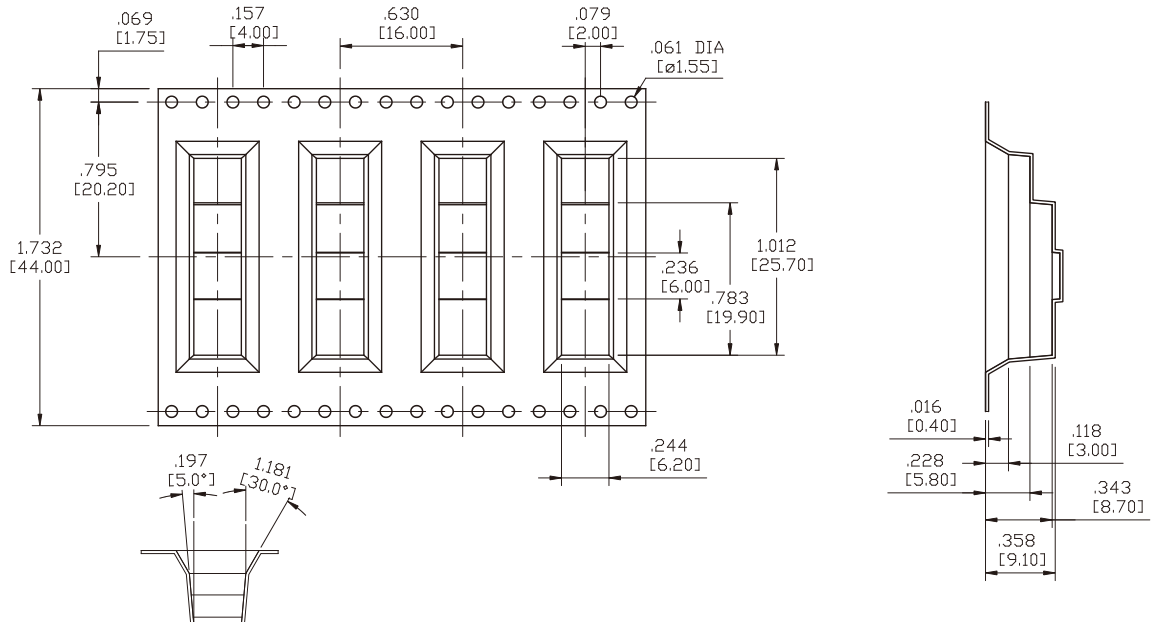
FOR M6 ONLY



FOR S6 & K6 ONLY



FOR M7 ONLY



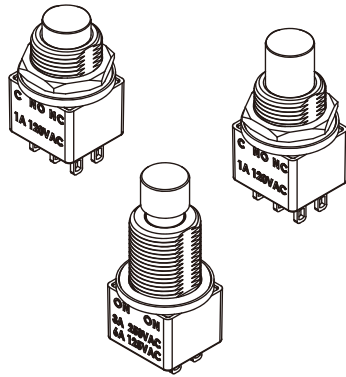
REEL TAPING

REEL INFORMATION	
OUTSIDE DIAMETER	12.99 [330.00]
PILOT HOLE	.502 [13.00]
QUANTITY PER REEL	500 400 (M7 model)

CONTACT MATERIAL OPTIONS

Coding	Contact Material	Terminal Plating	Rating	Agency Approvals
Q	Silver ¹	Silver plated ¹	1Amps @ 125VAC or 28VDC	IP67
P		Tin plated ⁵ ₇		
R	Gold ²	Gold plated ⁴	0.4VA max @ 20V max (AC or DC)	IP67
K		Tin plated ⁵ ₆		
G	Silver ¹	Gold over silver ³	1Amps @ 125VAC or 28VDC	IP67

1. Movable Contact / Terminals: Copper alloy, silver plated.
2. Movable Contact: Copper alloy with gold plated over nickel plated.
3. Terminals: Silver plated with outer layer in gold plating.
4. Terminals: Copper alloy, with gold plated over nickel plated.
5. Outer Terminals: Copper alloy with pure tin plated.
6. Terminal Contact: Gold plated over nickel plated.
7. Terminal Contact: Palladium nickel alloy (or Silver) plated.



NEW !
IP 67 Protection

SPECIFICATIONS:

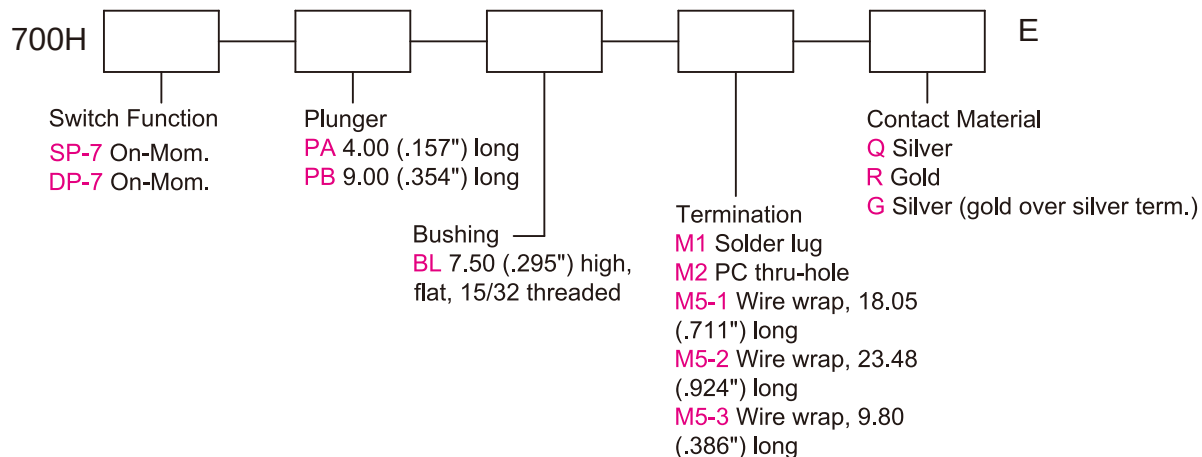
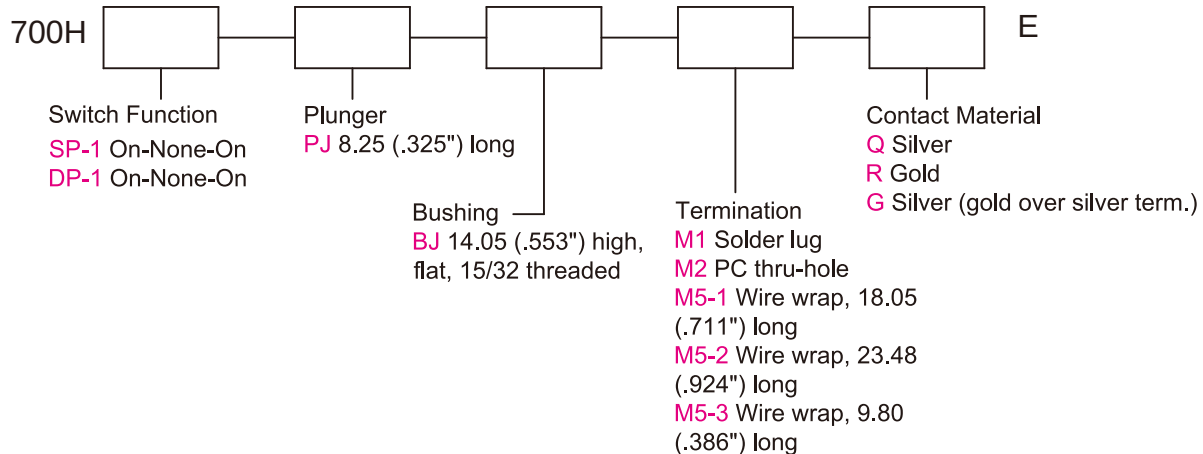
CONTACT RATING: Refer to "Contact Material Options" for more info.
ELECTRICAL LIFE: Min. 50,000 make-and-break cycles at full load.
CONTACT RESISTANCE: 10m-ohms max. initial @2-4VDC
100mA for both silver and gold plated contacts.
INSULATION RESISTANCE: 1,000M-ohms min.
DIELECTRIC STRENGTH: 1,500VAC for 1 minute.
OPERATING TEMPERATURE: -30°C to +85°C.

MATERIALS:

CASE: Diallyl phthalate(DAP)(UL 94V-0).
PLUNGER: Brass, black finish with o-ring sealed.
BUSHING: Brass, black finish with o-ring sealed.
EXTERNAL SHELL: FR52 (UL 94V-0).
TERMINAL SEAL: Epoxy.

If your preferred product configuration is not shown, please contact our sales representative for custom design.

HOW TO ORDER SYSTEM

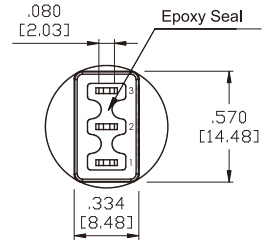
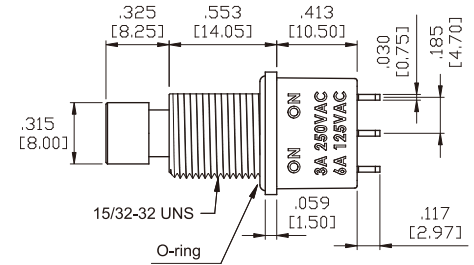
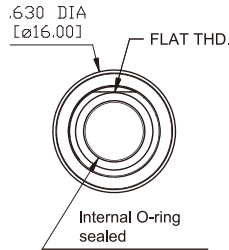


SPDT



Model No.	Switching Position		
SP-1	ON	NONE	ON
Term. Comm.	2-3	OPEN	2-1

Schematic

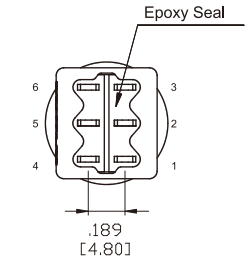
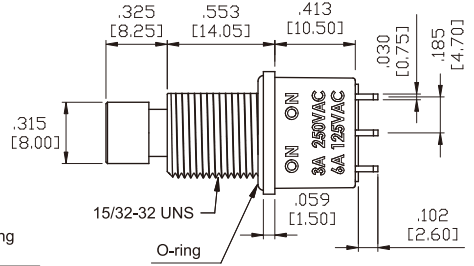
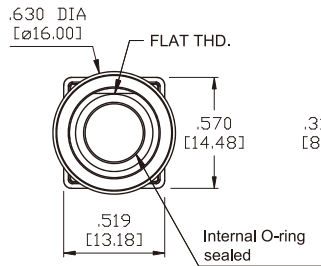
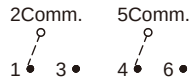


DPDT



Model No.	Switching Position		
DP-1	ON	NONE	ON
Term. Comm.	2-3,5-6	OPEN	2-1,5-4

Schematic



SPDT

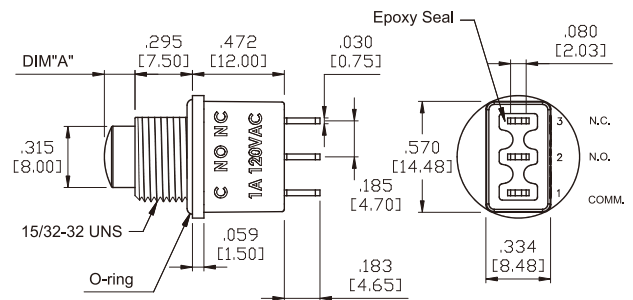
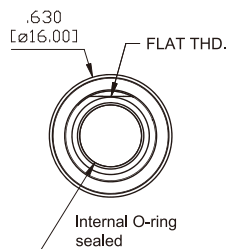


Model No.	Switching Position	
SP-7	ON	MOM
Term. Comm.	1-3	1-2

Schematic



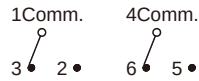
OPTION CODE	DIM. "A"
PA	.157 [4.00]
PB	.354 [9.00]



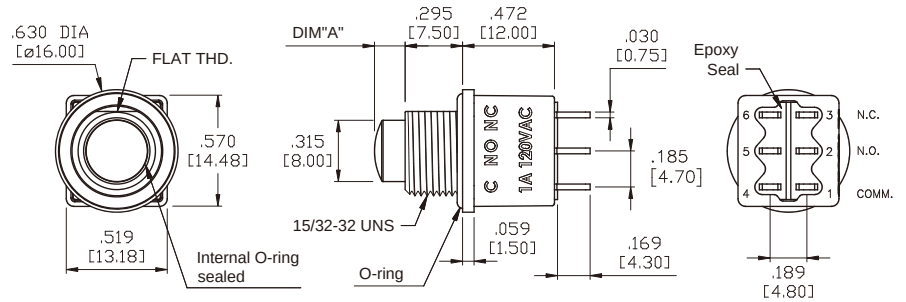
DPDT

Model No.	Switching Position	
DP-7	ON	MOM
Term. Comm.	1-3,4-6	1-2,4-5

Schematic

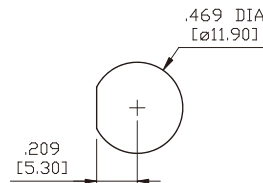


OPTION CODE	DIM. "A"
PA	.157 [4.00]
PB	.354 [9.00]



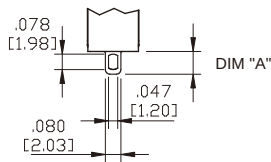
PANEL MOUNTING

15/32-32 UNS FLAT-CUT THD. BUSHING



TERMINATION OPTIONS

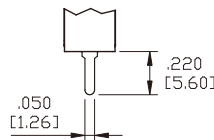
M1 STD. SOLDER LUG



THK .030 [0.75]

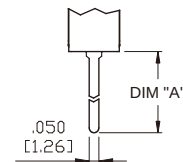
MODEL	DIM "A"
DP-1	.116 [2.95]
DP-7	.183 [4.65]

M2 PC THRU-HOLE



THK .030 [0.75]

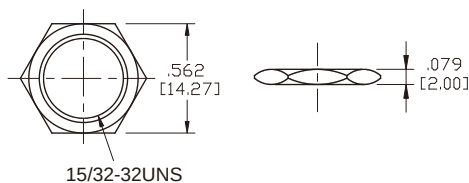
M5 WIRE WRAP



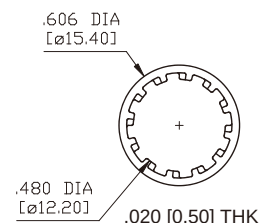
THK .030 [0.75]

OPTION CODE	DIM "A"
M5-1	.711 [18.05]
M5-2	.924 [23.48]
M5-3	.386 [9.80]

NUT



LOCK WASHER



CONTACT MATERIAL OPTIONS

Coding	Contact Material	Terminal Plating	Rating	Agency Approvals
Q	Silver ¹	Silver plated ¹	(DP-1) 6Amps @ 125VAC or 28VDC 3Amps @ 250VAC (DP-7) 1Amps @ 120VAC or 38VDC	 IP67
R	Gold ²	Gold plated ⁴	0.4VA max @ 20V max (AC or DC)	
G	Silver ¹	Gold over silver ³	(DP-1) 6Amps @ 125VAC or 28VDC 3Amps @ 250VAC (DP-7) 1Amps @ 120VAC or 38VDC	 IP67

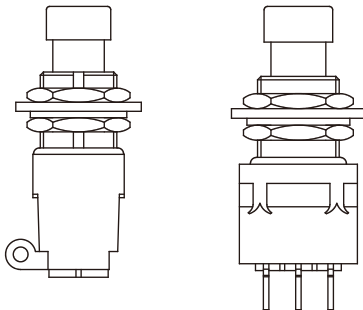
1. Movable Contact / Terminals: Copper alloy, silver plated.
2. Movable Contact: Copper alloy with gold plated over nickel plated.
3. Terminals: Silver plated with outer layer in gold plating.
4. Terminals: Copper alloy, with gold plated over nickel plated.

SPECIFICATIONS:

CONTACT RATING: 2A/4A 250/125VAC, 2A/4A 24/12VDC.
ELECTRICAL LIFE: 20,000 make-and-break cycles at full load.
CONTACT RESISTANCE: 50m-ohms max. initial @2-4VDC
INSULATION RESISTANCE: 500VDC 100M-ohms min.
DIELECTRIC STRENGTH: 1,500VAC for 1 minute.
OPERATING FORCE: SPDT (M1 & M2) 1500gf, DPDT (M1) 1600gf (M2) 1900gf, 3PDT (M1 & M2) 3500gf.
OPERATING TEMPERATURE: -20°C to +65°C

MATERIALS:

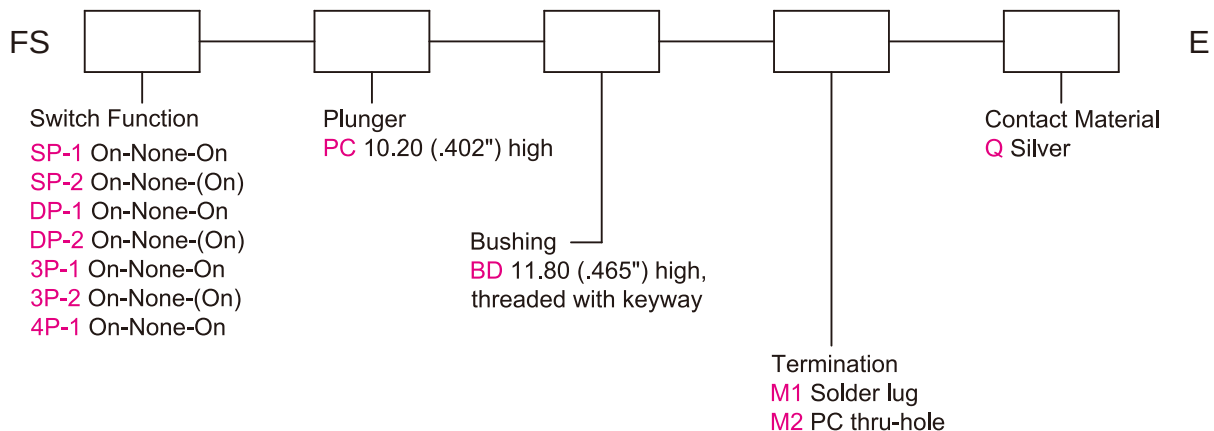
BASE: Nylon 66 (UL94V-0).
PLUNGER & CAP: Brass, nickel plated.
BUSHING: Brass, nickel plated
COVER: Stainless steel.
PIVOT PIN: Brass or POM.
SPRING: Piano wire.
TERMINAL & CONTACT: Copper, tin plated.
NUT: Brass, nickel plated.
RING: POM.
WASHER: Steel, nickel plated.



Specifications and Dimensions subject to change

If your preferred product configuration is not shown, please contact our sales representative for custom design.

HOW TO ORDER SYSTEM

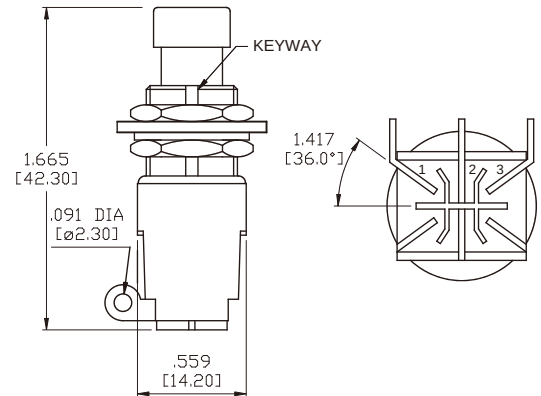
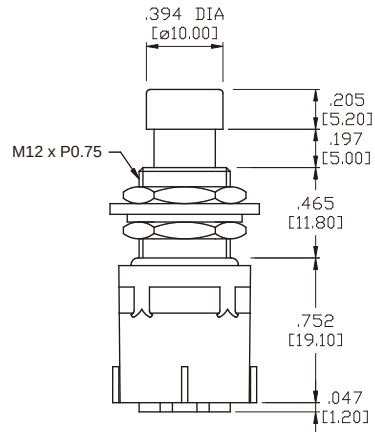


SPDT



Model No.	Switching Position		
SP-1	ON	NONE	ON
SP-2	ON	NONE	(ON)
Term. Comm.	2-3	OPEN	2-1

Schematic

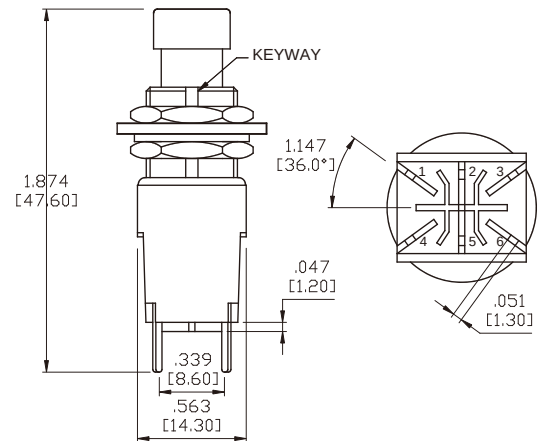
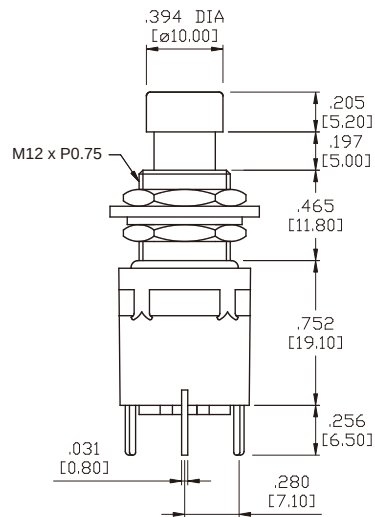
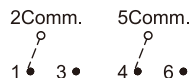


DPDT



Model No.	Switching Position		
DP-1	ON	NONE	ON
DP-2	ON	NONE	(ON)
Term. Comm.	2-3,5-6	OPEN	2-1,5-4

Schematic

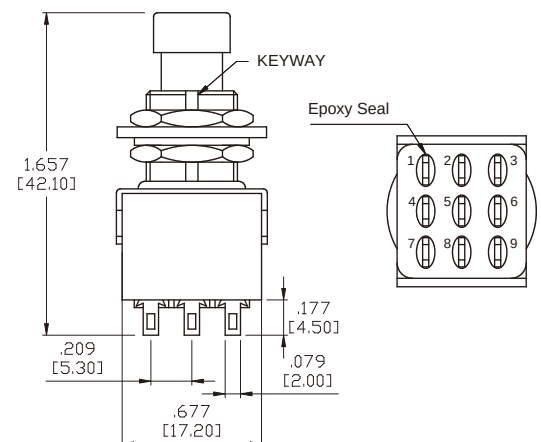
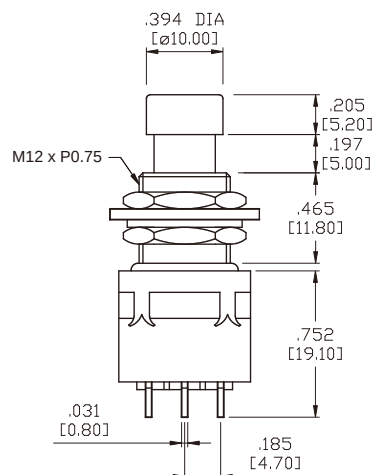


3PDT



Model No.	Switching Position		
3P-1	ON	NONE	ON
3P-2	ON	NONE	(ON)
Term. Comm.	2-3,5-6 8-9	OPEN	2-1,5-4 8-7

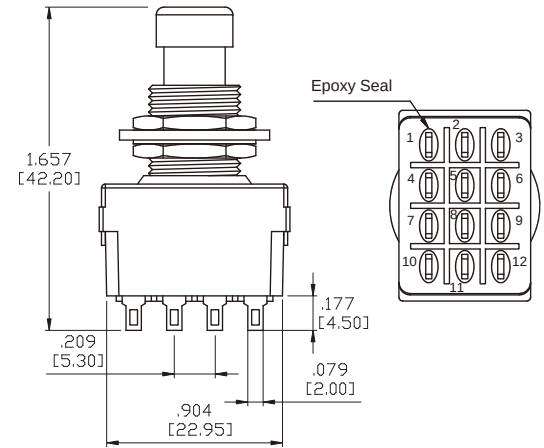
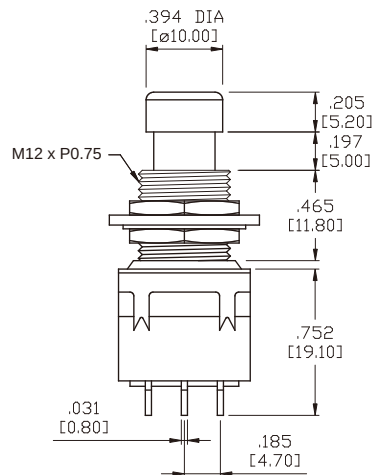
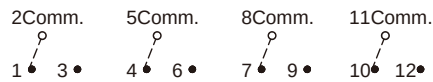
Schematic



4PDT

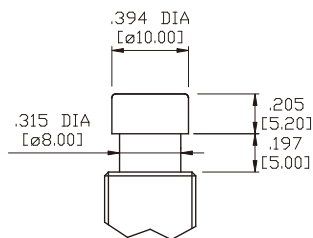
Model No.	Switching Position		
4P-1	ON	NONE	ON
Term. Comm.	2-3,5-6 8-9,11-12	OPEN	2-1,5-4 8-7,11-10

Schematic

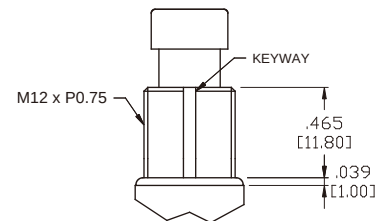


PLUNGER & BUSHING OPTIONS

PC

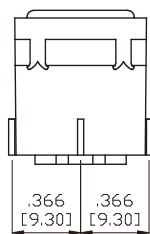


BD

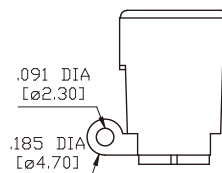


TERMINATION OPTIONS

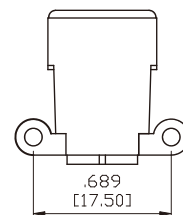
M1



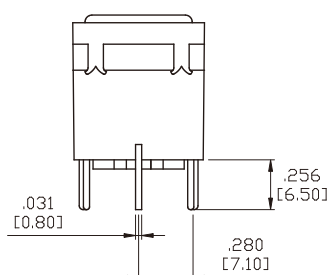
SP



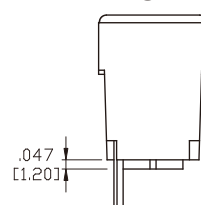
DP



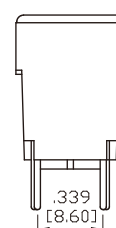
M2



SP

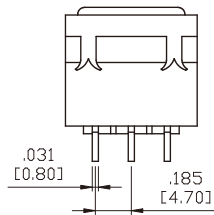


DP

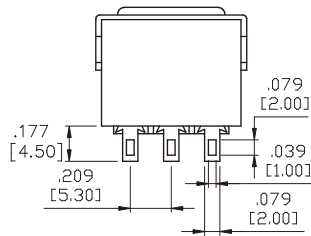


TERMINATION OPTIONS

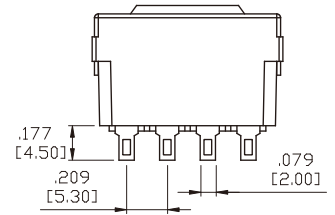
M1



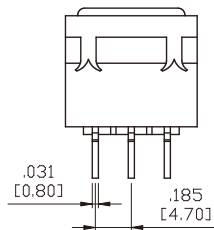
3P



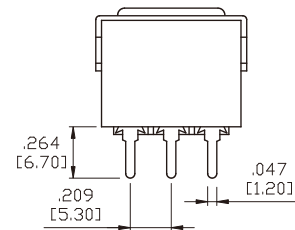
4P



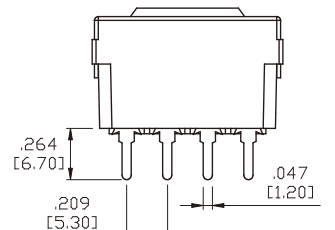
M2



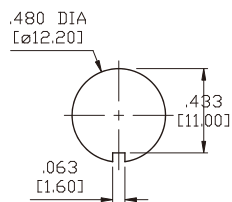
3P



4P

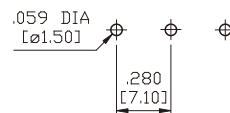


PANEL & PC MOUNTING

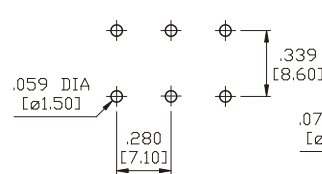


Panel Thickness 3.00mm max.

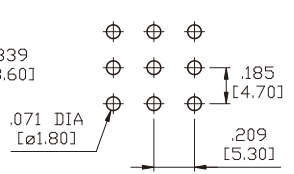
SP



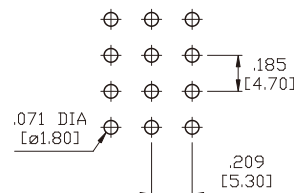
DP



3P



4P



SPECIFICATIONS:

RATING: 12mA 24VDC (SPDT), 50mA 12VDC (SPST).

INITIAL CONTACT RESISTANCE: 100mΩ max. (initial).

DIELECTRIC STRENGTH: 250V AC 1 minute (Except between terminals of LED).

INSULATION RESISTANCE: 100M min.(250V DC megger).

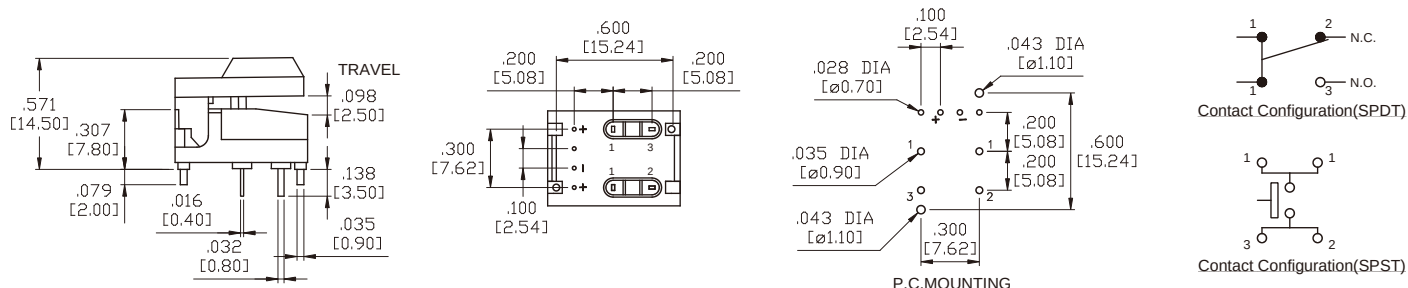
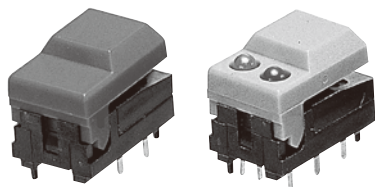
ELECTRICAL LIFE: 100,000 operations min. (Rated voltage and current).

STATIC CAPACITY: 1.5pF max.(1MHz)

OPERATING FORCE: 170gf±50gf (SPDT), 450gf±100gf (SPST).

FUNCTION: Momentary (SPDT), tactile (SPST).

OPERATION TEMPERATURE RANGE: -10°C to +60°C



CAP STYLES

A0 	A1 	A2
B0 	B1 	B2

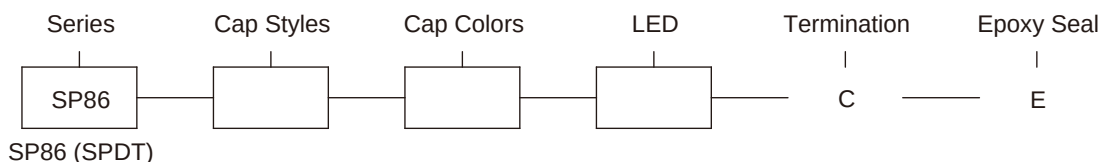
CAP COLORS

- | | |
|----------|----------|
| 1=RED | 6=ORANGE |
| 2=YELLOW | 7=BLUE |
| 3=GREEN | 8=BROWN |
| 4=WHITE | 9=GRAY |
| 5=BLACK | |

LED COLORS

- LEFT: 1=RED 2=YELLOW 3=GREEN
 RIGHT: 1=RED 2=YELLOW 3=GREEN

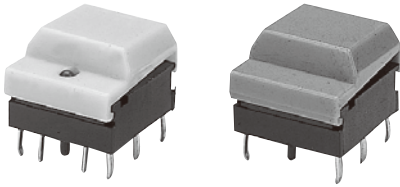
HOW TO ORDER



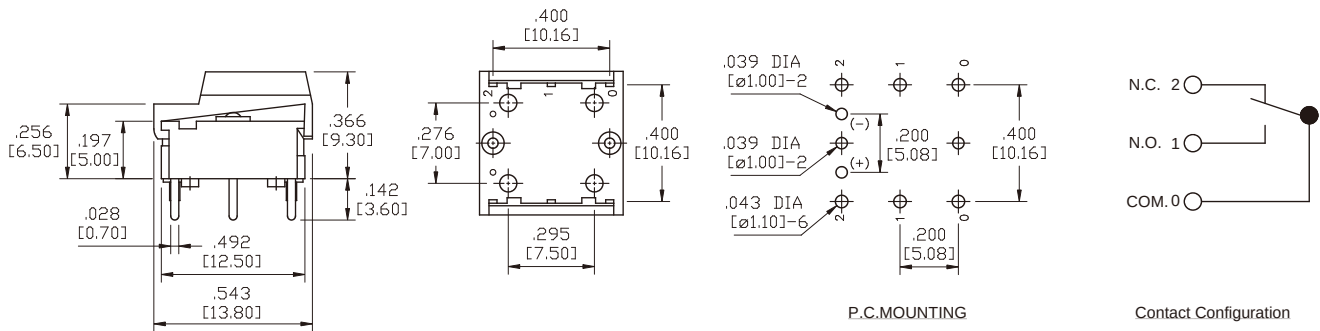
Specifications and Dimensions subject to change

SPECIFICATIONS:

RATING: 50mA 24VDC (Minimum 1μA current is acceptable)
INITIAL CONTACT RESISTANCE: 20m-ohms max. (AC 200μV, 5mA)
DIELECTRIC STRENGTH: 250V AC 1 minute (Except between terminals of LED)
INSULATION RESISTANCE: 100M-ohms min. (250V DC megger)
ELECTRICAL LIFE: 200,000 operations (Rated voltage and current)
STATIC CAPACITY: 1.5pF max. (1MHz)
SHOCK RESISTANCE: 30G (3 directions perpendicular to each other 3 times for each direction)
OPERATION TEMPERATURE RANGE: -10°C to +60°C

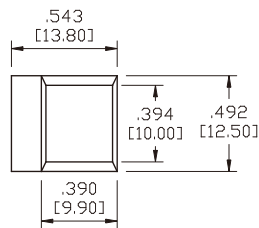


Specifications and Dimensions subject to change

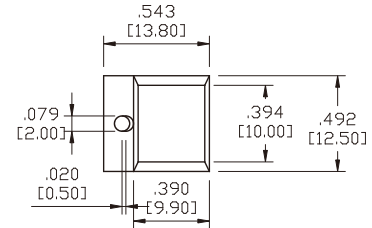


CAP STYLES

A0



A1



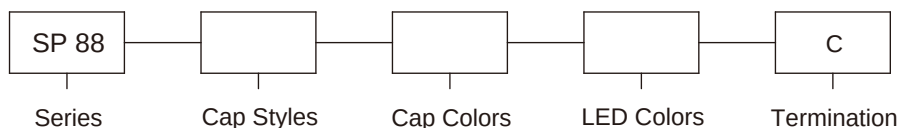
CAP COLORS

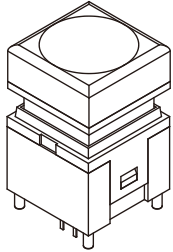
1=RED
2=YELLOW
3=GREEN
4=WHITE
5=BLACK
7=BLUE
8=Brown

LED COLORS

1=RED
2=YELLOW
3=GREEN

HOW TO ORDER



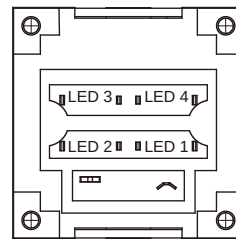
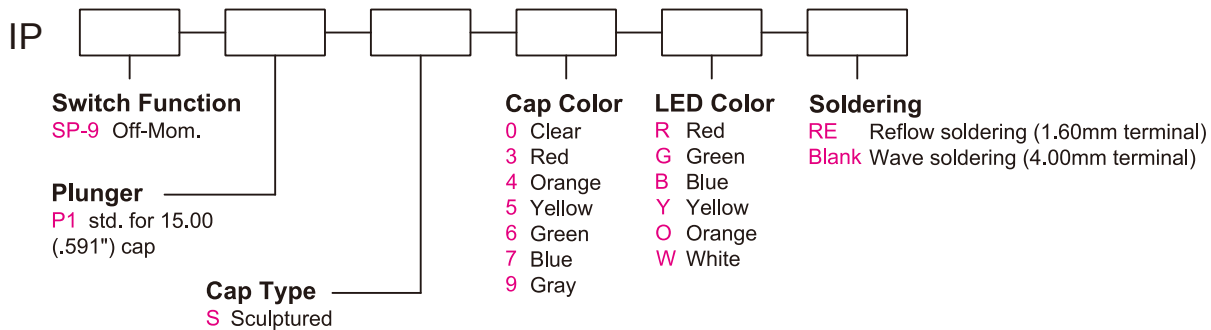
NEW !**SPECIFICATIONS:**

CONTACT RATING: 100mA @ 12VDC (resistive load).
 ELECTRICAL LIFE: 500,000 cycles min.
 CONTACT RESISTANCE: 200m-ohms max. initial.
 INSULATION RESISTANCE: 100M-ohms @ 250VDC min.
 DIELECTRIC STRENGTH: 1,500V RMS @ sea level for 1 minute.
 ACTUATION FORCE: 1.9N max.
 TRAVEL: Pretravel 2.90mm (.114"), Overtravel 1.40mm (.055"),
 Total Travel 4.30mm (.169").
 SOLDERING TEMPERATURE: 260°C for 3 seconds max.
 OPERATING TEMPERATURE: -25°C to +50°C.

MATERIALS:

LOWER HOUSING: Nylon 66 + 30% fibre glass.
 TERMINAL: Phosphor bronze, tin over nickel plated.
 MOVABLE CONTACT: Brass, gold over nickel plated.
 LED COVER: Nylon 66.
 PLUNGER: Nylon 66.
 UPPER HOUSING: Nylon 66.
 DIFFUSER: PC.
 SCULPTURED CAP: PC.

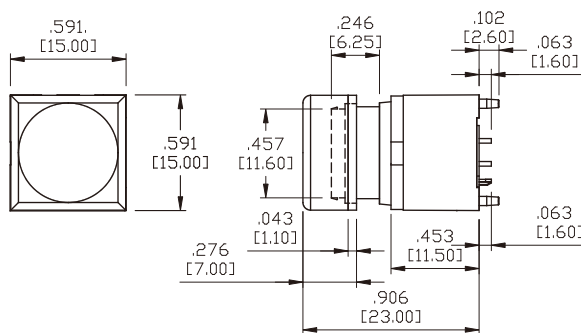
If your preferred product configuration is not shown, please contact our sales representative for custom design.

HOW TO ORDER SYSTEM**BOTTOM VIEW****Note:**

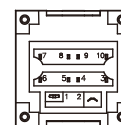
When Bi-color (ex. Red and Green) is requested, the LED placement sequence will be LED 1 and LED 3. The ordering part number will be:

IP-SP9-P1-S0-R0G0

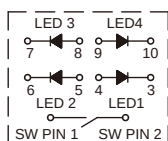
NON-TACTILE



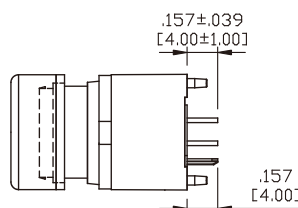
P/N: IP-SP9-P1-S0-xxxx-RE



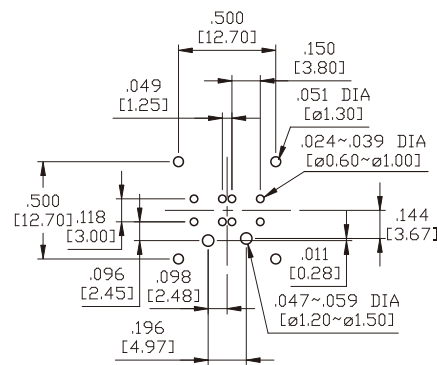
Model No.	Type
SP-9	OFF MOM



Schematic (BOTTOM VIEW)



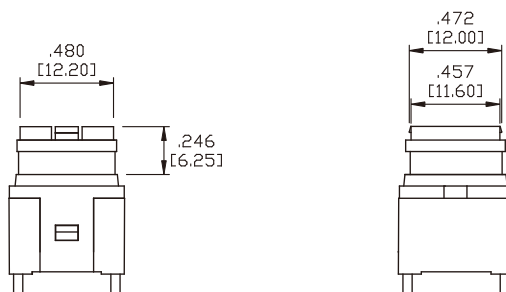
P/N: IP-SP9-P1-S0-xxxx



P.C.B Mounting

PLUNGER OPTIONS

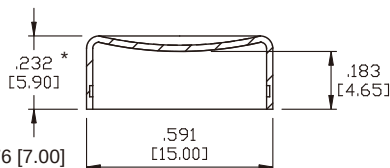
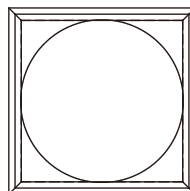
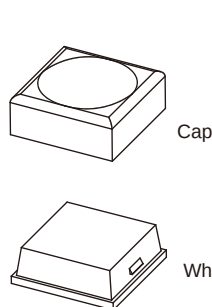
P1



* Plunger Color: White.

PLUNGER CAPS

S Sculptured Cap



* With Diffuser: .276 [7.00]

CAP COLORS	
0	Clear (Std.)
1	White
2	Black
3	Red
4	Orange
5	Yellow
6	Green
7	Blue
8	Brown
9	Gray

LED SPECIFICATIONS



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
DISCHARGE
SENSITIVE
DEVICES

	Red	Green	Blue	Yellow	Orange	White
Minimum Luminous (mcd)	70	380	50	36	70	480
Standard Luminous (mcd)	150	470	130	80	180	800
Forward Peak Current (mA)	155	150	150	150	175	150
Power Dissipation (mW)	75	102.5	120	75	75	120
Forward Voltage (V), Typ. at If = 20mA	1.85	3.10	3.30	2.10	2.00	3.30
Forward Voltage (V), Max. at If = 20mA	2.50	4.10	4.00	2.50	2.50	4.00
Reverse Voltage (V)	5	5	5	5	5	5
Dominant Wavelength (nm)	640	525	470	570	590	N/A
Spread Angle (degree)	120	120	120	120	120	120
Ambient Temperature Range	-40°C to +85°C					
Moisture Sensitivity Level	Level 4					

The specifications shown are determined at a room temperature of 25°C. LED is not available separately, it is isolated and requires an external power source. The IP pushbutton switch can be configured up to four LEDs for multi-illumination.

LEGENDS

Legend is not provided as a standard option, please consult factory for a customized legend. Film insert material is Clear Polyester with thickness of 0.1mm max.

SPECIFICATIONS:

RATING: 50V DC 200mA max.

CONTACT RESISTANCE: <30m-ohms.

INSULATION RESISTANCE: >100M-ohms DC 500V.

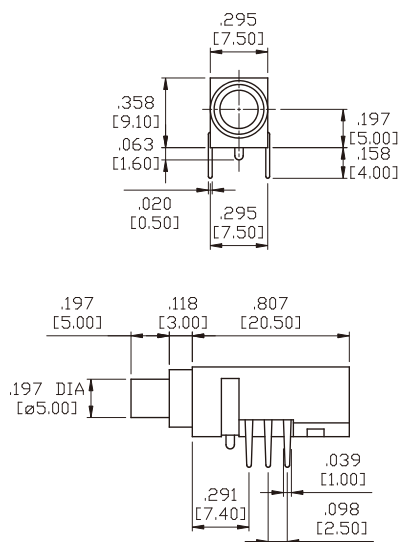
OPERATING FORCE: 200±100gf.

AMBIENT TEMPERATURE: -20°C to +70°C.

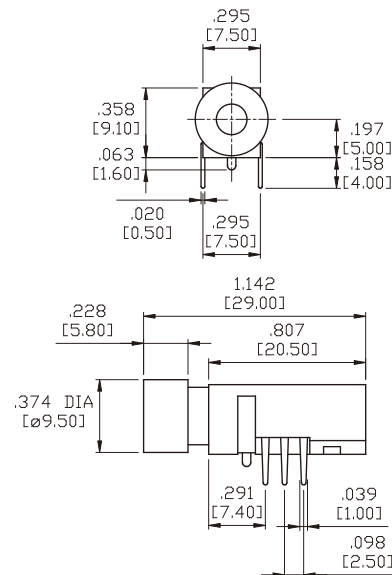
ELECTRICAL LIFE: 100,000 cycles.

Specifications and Dimensions subject to change

LS-A



LS-S



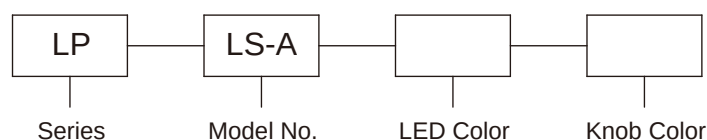
LED COLORS

Code	LED Color
R	Red
G	Green
Y	Yellow
B	Blue

KNOB COLORS

Code	LED Color
B	Black

HOW TO ORDER



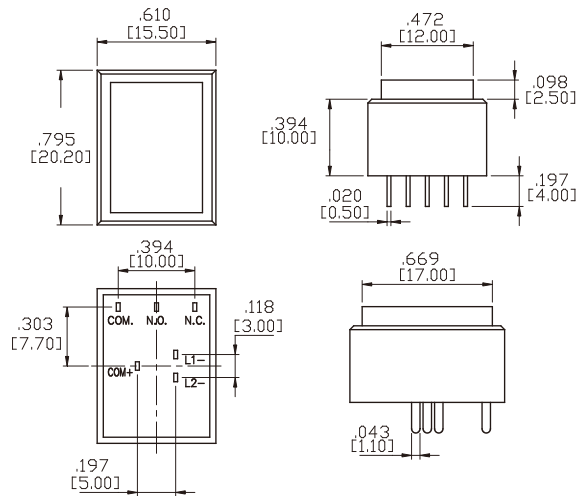
SPECIFICATIONS:

CONTACT: Silver contact (Gold plated).
 ELECTRICAL RATING: AC125, 250V 1A @ resistive load).
 INSULATION RESISTANCE: More than 100M-ohms at DC 500V.
 DIELECTRIC STRENGTH:
 a. 500V RMS(50/60Hz) between terminals.
 b. 1,000V RMS(50/60Hz) between terminals and ground for one minute.
 CONTACT RESISTANCE: Less than 30m-ohms initial @ 1A and 6VDC.
 MECHANICAL LIFE:
 a. MOMENTARY ACTION: More than 300,000 operations.
 b. ALTERNATE ACTION: More than 100,000 operations.
 ELECTRICAL LIFE: Over 30,000 operations max.
 OPERATING TEMPERATURE: -15°C ~ +50°C.
 AMBIENT HUMIDITY: 80% RH max.

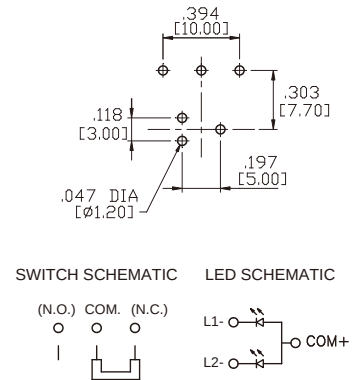
Specifications and Dimensions subject to change

WPL-25

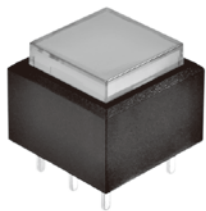
Model No.	LED COLOR
WPL-25R	Red
WPL-25G	Green
WPL-25RG	Red / Green



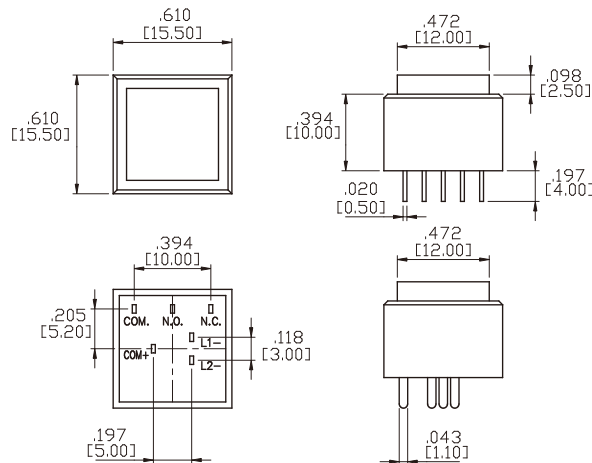
P.C.B. LAYOUT



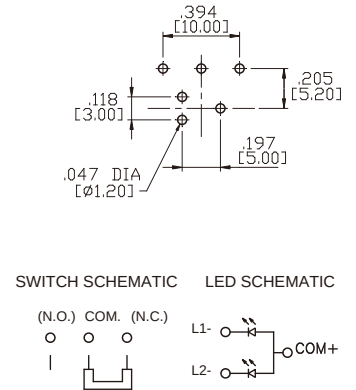
WPL-26



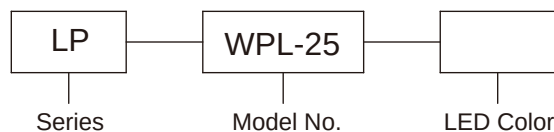
Model No.	LED COLOR
WPL-26R	Red
WPL-26G	Green
WPL-26RG	Red / Green



P.C.B. LAYOUT



HOW TO ORDER



SPECIFICATIONS:

CONTACT RATING: 5A 125/250VAC.

ELECTRICAL LIFE: 100,000 cycles with resistive load 3A 125VAC.

CONTACT RESISTANCE: 50m-ohms max (initial).

INSULATION RESISTANCE: 500VDC 200M-ohms min.

DIELECTRIC STRENGTH: 1,000V RMS 50~60Hz.

OPERATING TEMPERATURE: -25°C ~ +50°C.

OPERATING FORCE: 190±50gf max. (SPDT).

250±50gf max. (DPDT Square)

& 300±50gf max. (DPDT Rectangular).

TOTAL TRAVEL: 2.30±0.50mm.

SOLDERING: 360°C for 4sec. (Manual)

260°C for 3sec. (Wave).

MATERIALS:

SNAP-IN FRAME: Stainless steel.

HOUSING: PA.

BASE: PA.

CONTACT: Silver alloy.

SPRING: Piano wire.

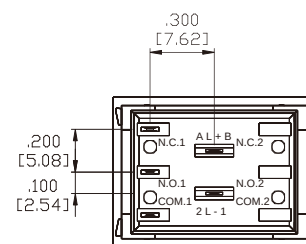
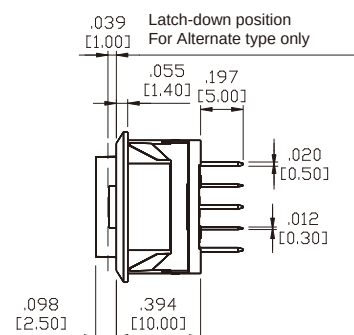
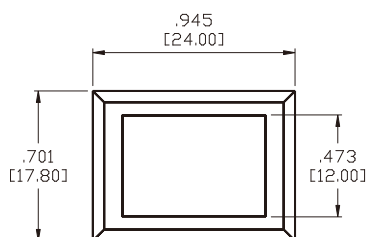
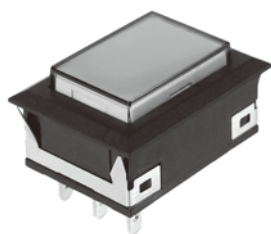
LED TERMINAL: PBS with Au plated.

TERMINAL: PBS with Au plated.

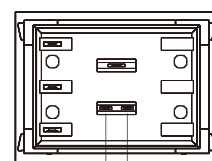
LED: Surface type LED.

Specifications and Dimensions subject to change

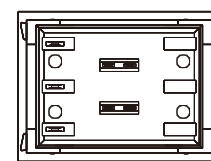
Rectangular Snap-in Style, SPDT, Solder lug



1 LED



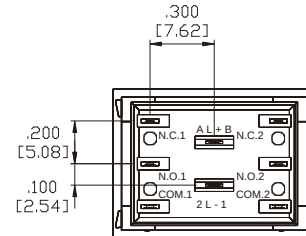
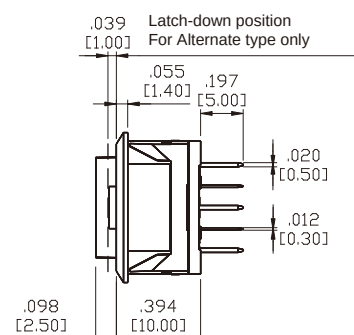
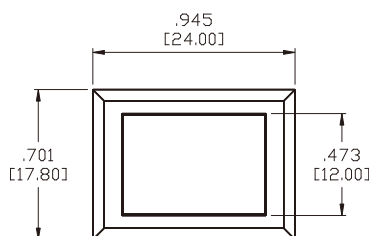
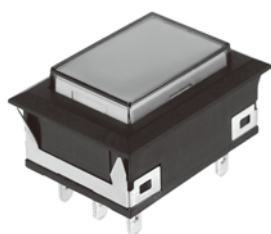
2 LED



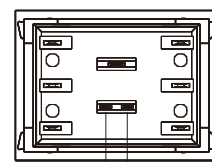
3 LED

Model No.	Type
WPL-251-M	Momentary
WPL-251-A	Alternate

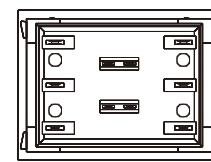
Rectangular Snap-in Style, DPDT, Solder lug



1 LED



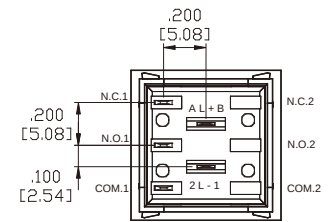
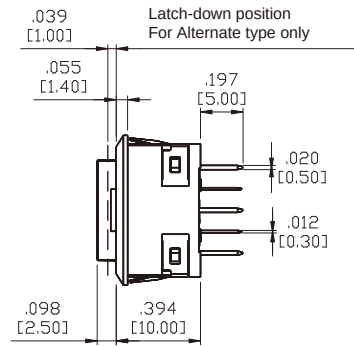
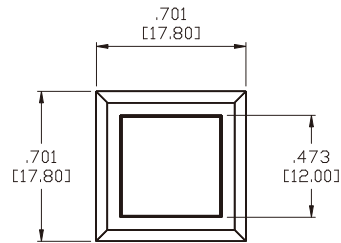
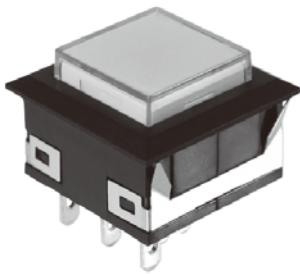
2 LED



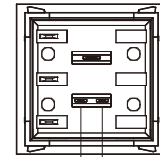
3 LED

Model No.	Type
WPL-252-M	Momentary
WPL-252-A	Alternate

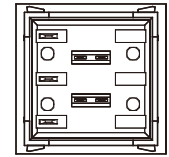
Square Snap-in Style, SPDT, Solder lug



1 LED



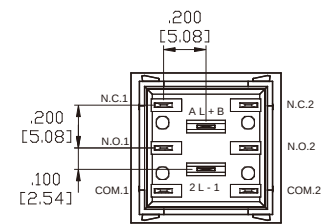
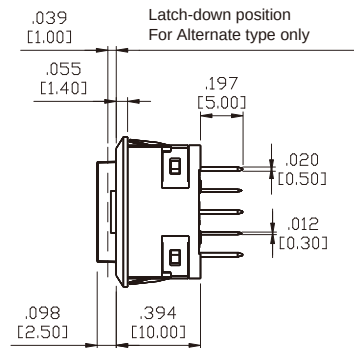
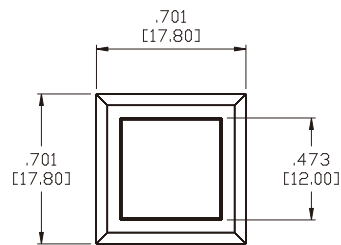
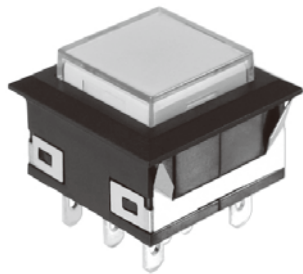
2 LED



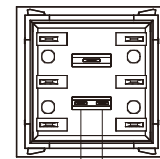
3 LED

Model No.	Type
WPL-261-M	Momentary
WPL-261-A	Alternate

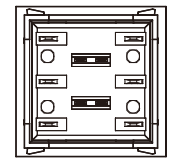
Square Snap-in Style, DPDT, Solder lug



1 LED



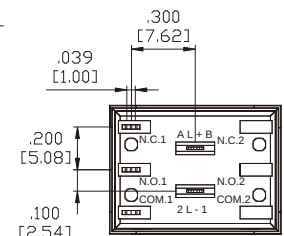
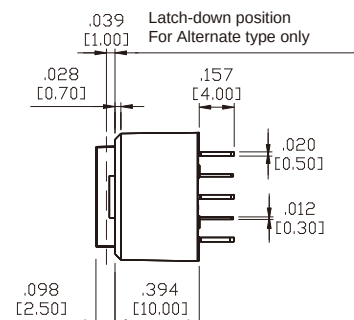
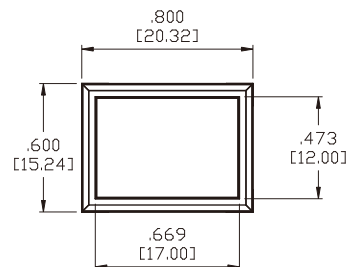
2 LED



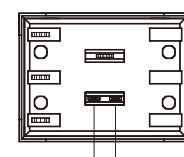
3 LED

Model No.	Type
WPL-262-M	Momentary
WPL-262-A	Alternate

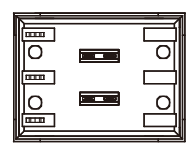
Rectangular Style, SPDT, PC Through-Hole



1 LED



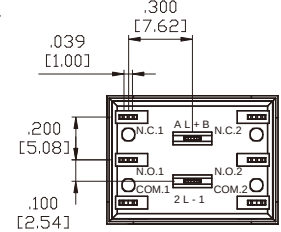
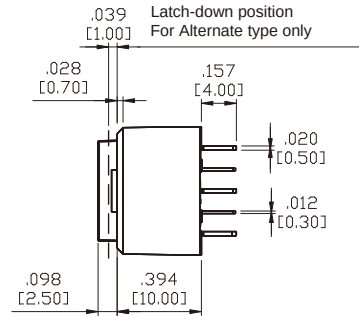
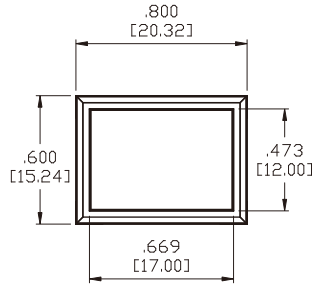
2 LED



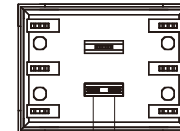
3 LED

Model No.	Type
WPL-251-M	Momentary
WPL-251-A	Alternate

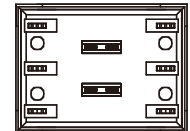
Rectangular Style, DPDT, PC Through-Hole



1 LED



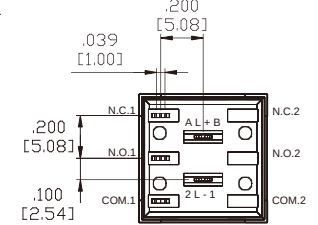
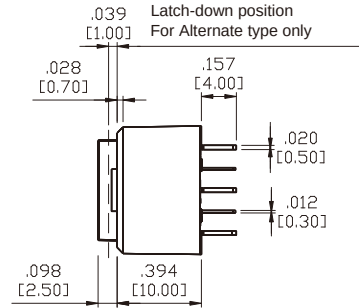
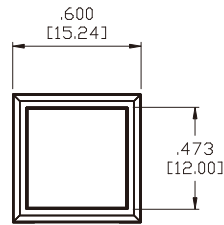
2 LED



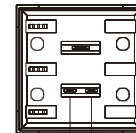
3 LED

Model No.	Type
WPL-252-M	Momentary
WPL-252-A	Alternate

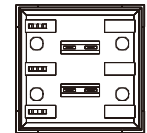
Square Style, SPDT, PC Through-Hole



1 LED



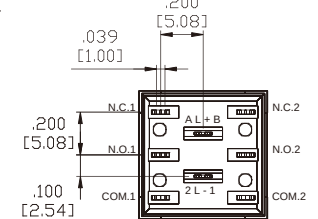
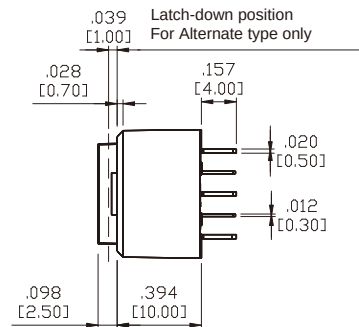
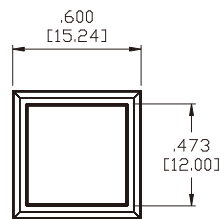
2 LED



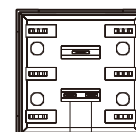
3 LED

Model No.	Type
WPL-261-M	Momentary
WPL-261-A	Alternate

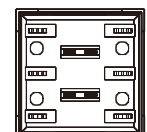
Square Style, DPDT, PC Through-Hole



1 LED



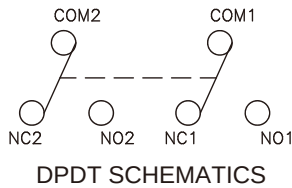
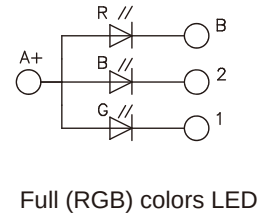
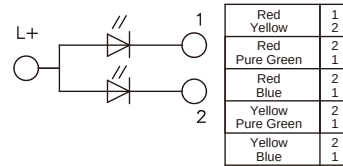
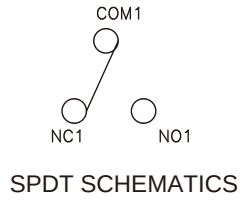
2 LED



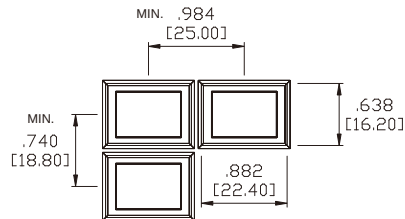
3 LED

Model No.	Type
WPL-262-M	Momentary
WPL-262-A	Alternate

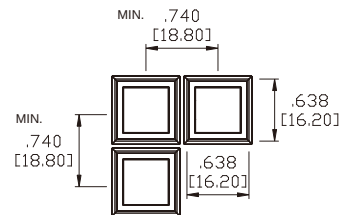
SWITCH & LED SCHEMATICS



PANEL MOUNTING (M1 TYPE)



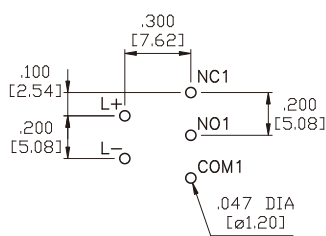
Panel Thickness: 1.0~3.2mm



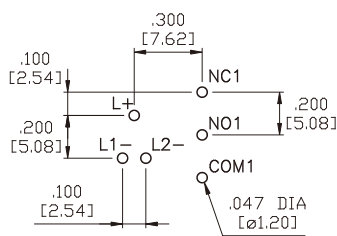
Panel Thickness: 1.0~3.2mm

PCB MOUNTING (M2 TYPE)

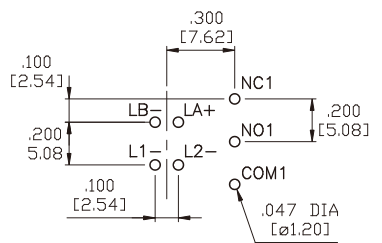
Rectangular SPDT



1 LED

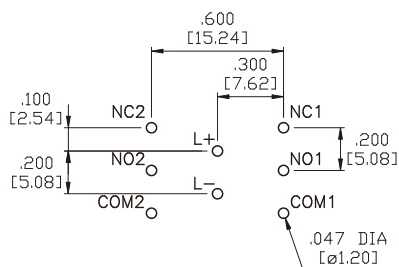


2 LEDs

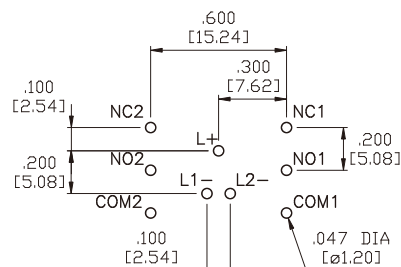


3 LEDs

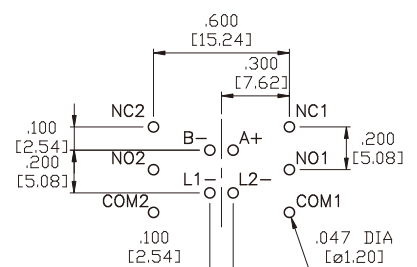
Rectangular DPDT



1 LED

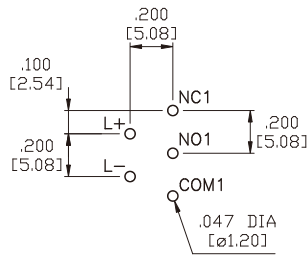


2 LEDs

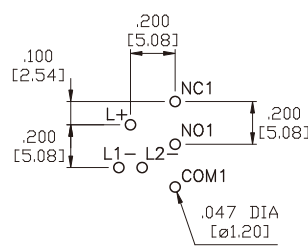


3 LEDs

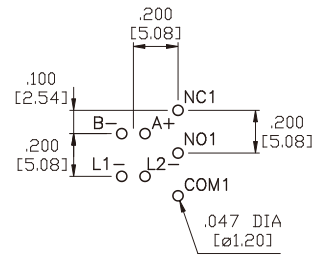
Square SPDT



1 LED

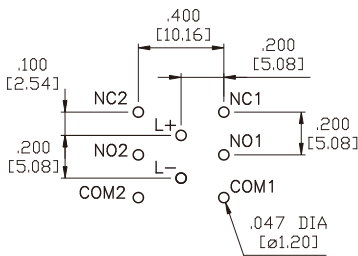


2 LEDs

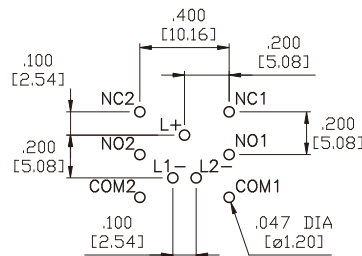


3 LEDs

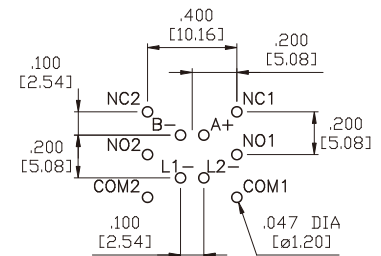
Square DPDT



1 LED



2 LEDs



3 LEDs

LED SPECIFICATIONS

Single Color	Forward Voltage Vf(V) at If=20mA			Dominant Wavelength dom(nm)			Luminous Intensity Iv(mcd) at If=20mA			Power Dissipation Pd(mW)
	Min	Typ	Max	Min	Typ	Max	Min	Typ	Max	
Red	-	1.8	2.6	-	643	-	3.7	13	-	60
Super Yellow	-	2.0	2.5	585	590	595	80	125	-	75
Pure Green	-	-	3.8	520	-	530	200	-	230	80
Blue	-	3.1	3.6	460	465	470	40	-	-	108
White	-	-	3.8	See note 1			300	-	400	100
Dual Colors										
Red	1.7	-	2.5	630	-	650	50	-	100	75
Super Yellow	1.7	-	2.5	585	-	595	80	-	160	75
Red	1.7	-	2.5	630	-	650	50	-	100	75
Pure Green	2.8	-	3.7	520	-	530	200	-	500	111
Red	1.7	-	2.5	630	-	650	50	-	100	75
Blue	2.8	-	3.7	460	-	470	40	-	80	111
Super Yellow	1.7	-	2.5	580	-	595	80	-	160	75
Pure Green	2.8	-	3.7	520	-	530	200	-	500	111
Super Yellow	1.7	-	2.5	585	-	595	80	-	160	75
Blue	2.8	-	3.7	460	-	470	40	-	80	111
Pure Green	-	-	3.8	-	525	-	200	250	-	80
Blue	-	-	3.8	-	465	-	50	70	-	80
RGB										
Red	-	2.0	2.5	632	637	642	50	65	-	75
Green	-	3.1	3.6	520	525	530	100	125	-	114
Blue	-	3.1	3.6	460	465	470	30	35	-	114

LED SPECIFICATIONS

Reverse Voltage Vr(V) max.	Reverse Current Ir(uA) at Vr=5V	Forward Current If(mA) max.
5V	100uA	30mA

Notes:

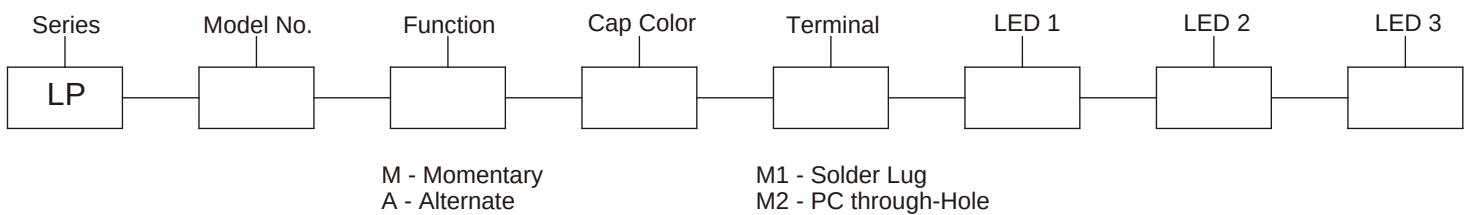
- 1.Chromaticity Coordinates
X=0.265 / Y=0.280
- 2.LED is static sensitive devices
- 3.LED circuit is isolated and requires external power source
- 4.LED is an integral part of the switch
- 5.Emitting color is $\pm 20\%$
- 6.Forward voltage is $\pm 0.1V$
- 7.Luminous intensity is $\pm 20\%$

CAP & LED OPTIONS

Code	Cap Color
1	Red
2	Green
3	Yellow
6	Black
8	Blue
9	Transparency

Code	Led Color
R	Red
G	Pure Green
Y	Yellow
B	Blue
0	Without LED

HOW TO ORDER



SPECIFICATIONS:

PROOF VOLTAGE: 1,500 V AC.
CONTACT RESISTANCE: 20m-ohms max.
ELECTRICAL LIFE: 50,000 cycles min.
MECHANICAL LIFE: 100,000 cycles min.

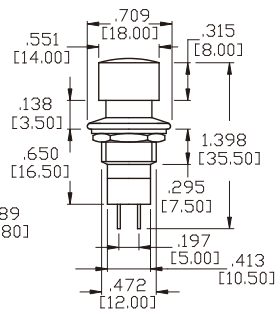
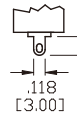
CIRCUITRY: S.P.S.T.
CONTACT RATING: 1A 250VAC, 3A 125VAC.
INSULATION RESISTANCE: 100M-ohms min.

Specifications and Dimensions subject to change



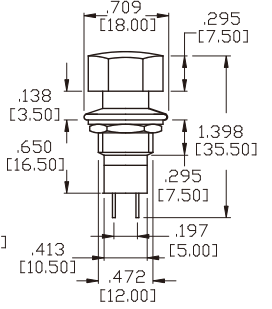
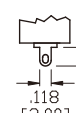
Model No.	Type
R18-21A	OFF-ON
R18-21B	OFF-(ON)

SCALE 1.5:2.44



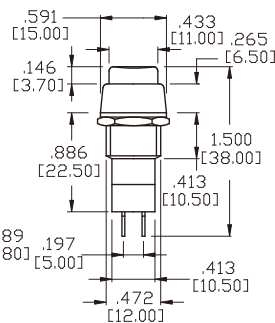
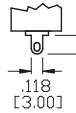
Model No.	Type
R18-22A	OFF-ON
R18-22B	OFF-(ON)

SCALE 1.5:2.44



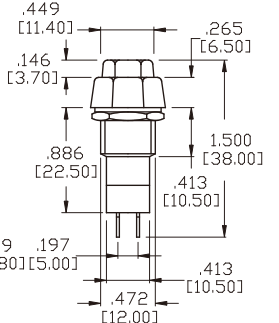
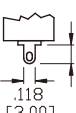
Model No.	Type
R18-23A	OFF-ON
R18-23B	OFF-(ON)

SCALE 1.5:2.61



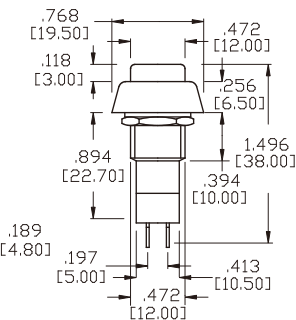
Model No.	Type
R18-24A	OFF-ON
R18-24B	OFF-(ON)

SCALE 1.5:2.46



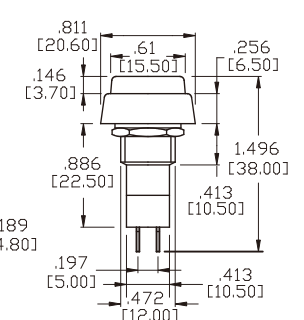
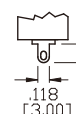
Model No.	Type
R18-25A	OFF-ON
R18-25B	OFF-(ON)

SCALE 1.5:2.44

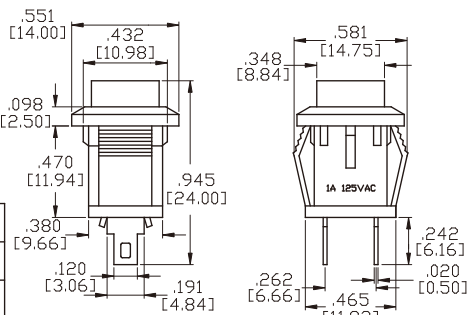


Model No.	Type
R18-26A	OFF-ON
R18-26B	OFF-(ON)

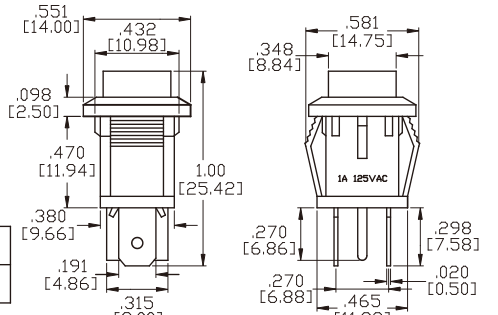
SCALE 1.5:2.5



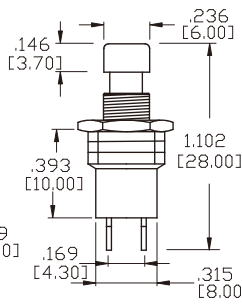
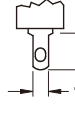
Model No.	Type
R18-27A	OFF-(ON)
R18-27B	ON-(OFF)



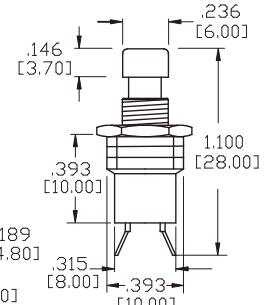
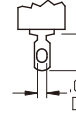
Model No.	Type
R18-28A	OFF-(ON)



Model No.	Type
R18-29A	OFF-(ON)
R18-29B	(OFF)-ON
R18-29C	OFF-ON

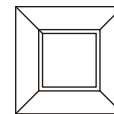
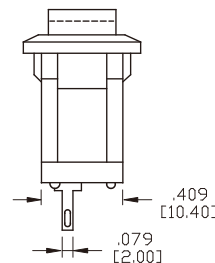
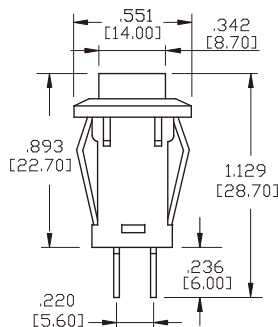


Model No.	Type
R18-30A	OFF-(ON)
R18-30B	ON-(OFF)





Model No.	Type
R18-32A	OFF-ON LOCK



SPECIFICATIONS:

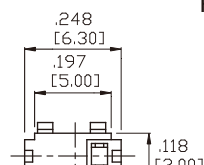
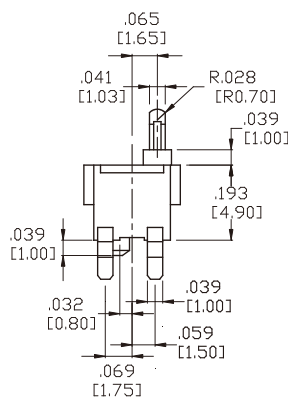
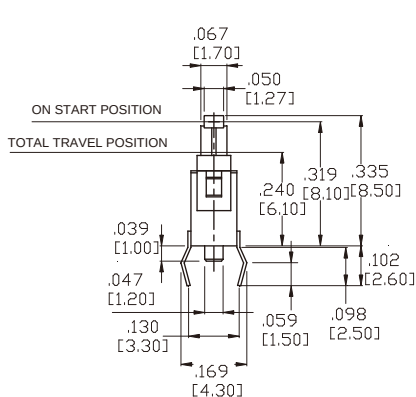
OPERATING TEMPERATURE: -10 to +60°C.
RATING: 30V DC 0.1A.
INSULATION RESISTANCE: 100V DC 1min 100M-ohms min.
SOLDERING TEMPERATURE: 230°C 3sec.
OPERATING LIFE: 50,000 cycles.

MATERIALS:

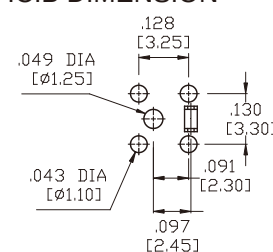
CASE: Nylon 6/6+GF 30%.
Cover: Nylon 6/6+GF 30%.
ACTUATOR: Acetal.
TERMINAL: Brass.

Specifications and Dimensions subject to change

R18-20



P.C.B DIMENSION



SPECIFICATIONS:

CONTACT RATING: 25mA max. @ 50V AC or DC max.
MECHANICAL LIFE: 50,000 actuations.
CONTACT RESISTANCE: 20m-ohms max.
INSULATION RESISTANCE: 100M-ohms min.
DIELECTRIC STRENGTH: 1,000V RMS min. @ sea level.
OPERATING TEMPERATURE: -30°C to +65°C.

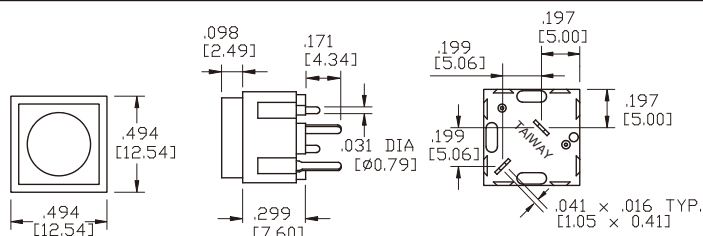
MATERIALS:

CASE: Glass filled nylon 6/6 or nylon 9T.
BUTTON: ABS.
SNAP DOME: Stainless steel with gold finish.
STATIONARY CONTACTS & TERMINAL: Copper alloy, silver plated.

Specifications and Dimensions subject to change



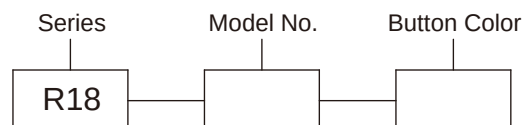
Model No.	Type
801	OFF-MOM



BUTTON COLOR OPTIONS

Color No.	Color	Color No.	Color
1	White	6	Green
2	Black	7	Blue
3	Red(std.)	8	Brown
4	Orange	9	Gray
5	Yellow		

HOW TO ORDER



SPECIFICATIONS:

RATING: DC 30V 0.1A 12V 0.3A.
OPERATING FORCE: 150gm (std).
CONTACT RESISTANCE: 50m-ohms max.
INSULATION RESISTANCE: 100M-ohms @ 500VDC.
DIELECTRIC STRENGTH: 250VAC for 1 min.

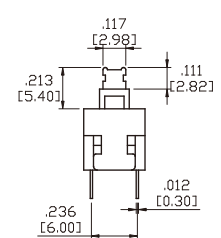
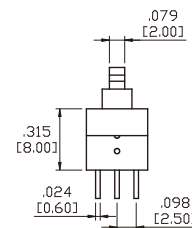
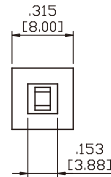
MATERIALS:

BOUNCE: 5m sec. max.
LIFE CYCLES: 10,000 cycles.
TEMPERATURE: -25°C to +65°C.
AMBIENT HUMIDITY: 80% RH max.

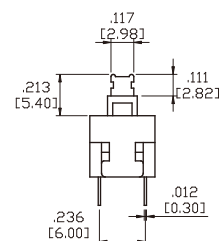
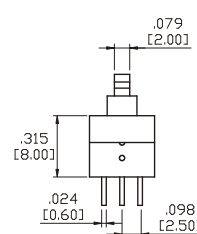
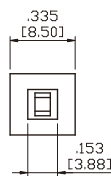
Specifications and Dimensions subject to change



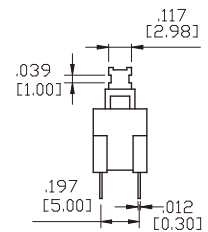
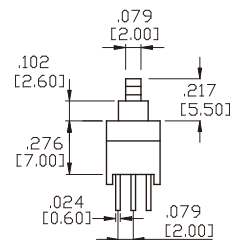
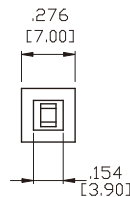
Model No.	Type
807	OFF-MOM
809	OFF-ON



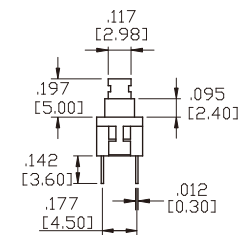
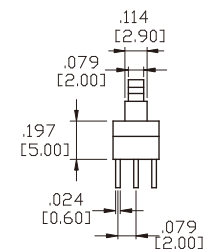
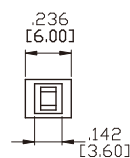
Model No.	Type
807-1	OFF-MOM
809-1	OFF-ON



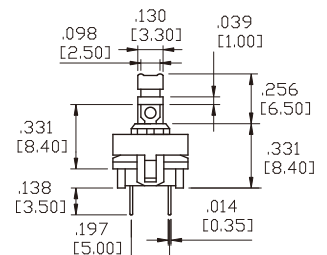
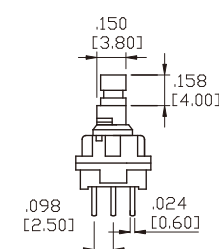
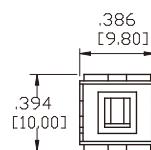
Model No.	Type
807-2	OFF-MOM
809-2	OFF-ON

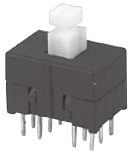


Model No.	Type
807-3	OFF-MOM
809-3	OFF-ON

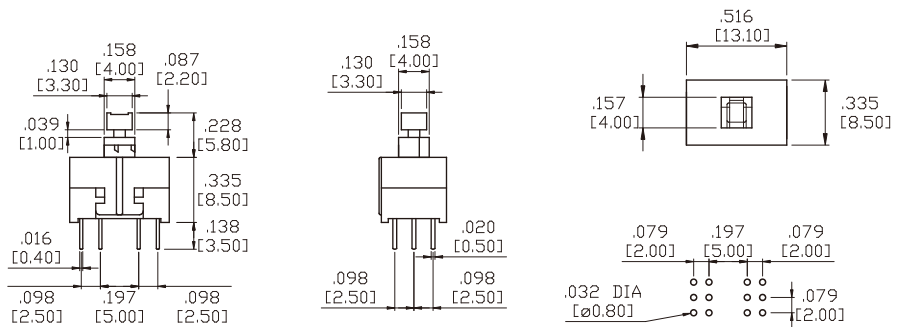


Model No.	Type
810	OFF-MOM
811	OFF-ON





Model No.	Type
812	ON-MOM
813	ON-ON



P.C.MOUNTING

SPECIFICATIONS:

RATING: 3A 125VAC, 1A 250VAC.
CONTACT RESISTANCE: 50m-ohms max.
INSULATION RESISTANCE: DC 500V 100M-ohms min.
DIELECTRIC STRENGTH: AC 1,500V 1 min.
ELECTRICAL LIFE: 6,000 cycles at full load.
MECHANICAL LIFE: 200,000 (min).
OPERATING TEMPERATURE: -30°C to +65°C.

MATERIALS:

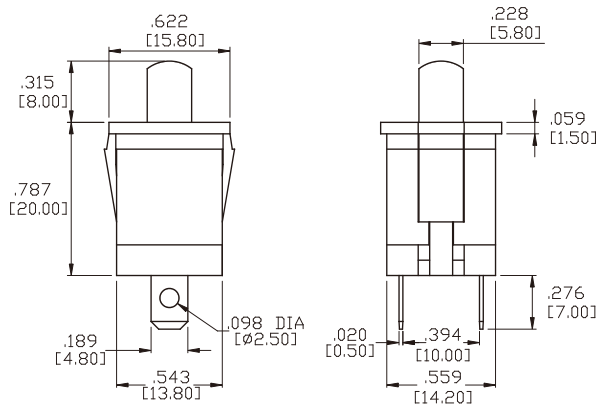
HOUSING: Nylon 6/6.
PUSHBUTTON: Nylon 6/6.
TERMINALS: Brass, silver plated.

Specifications and Dimensions subject to change

R18-504



Model No.	Type
R18-504	OFF-(ON)

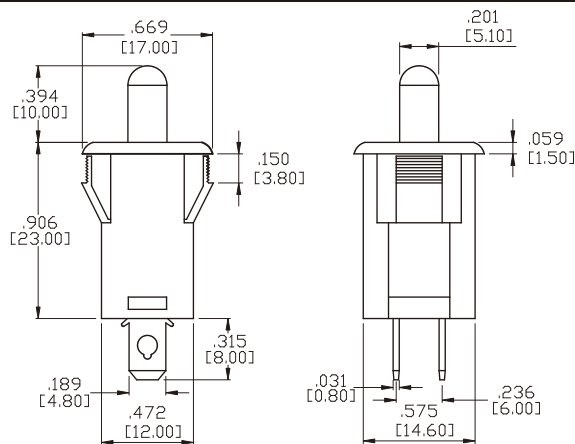


P.C.MOUNTING

R18-505



Model No.	Type
R18-505	OFF-(ON)

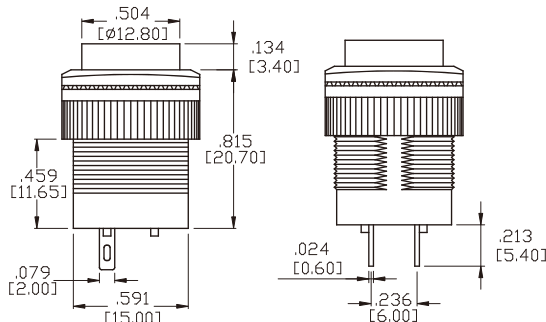


P.C.MOUNTING

R18-508



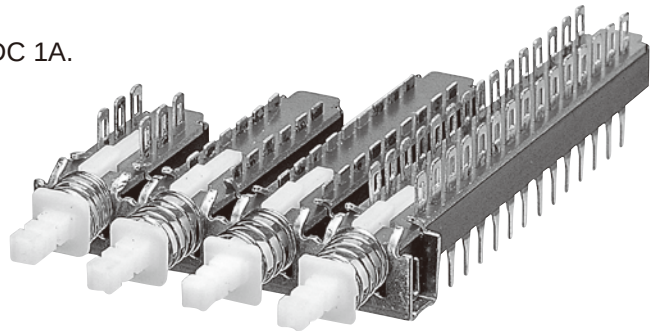
Model No.	Type
R18-508A	OFF-ON
R18-508B	OFF-(ON)
R18-508C	OFF-ON ILLUMINATED
R18-508D	OFF-(ON) ILLUMINATED



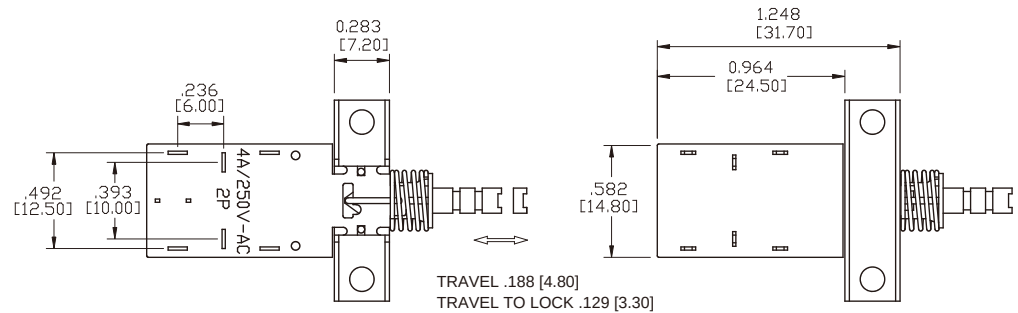
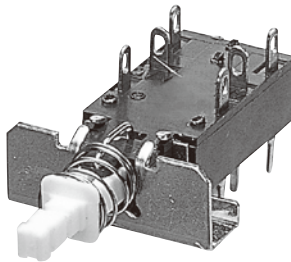
P.C.MOUNTING

SPECIFICATIONS:

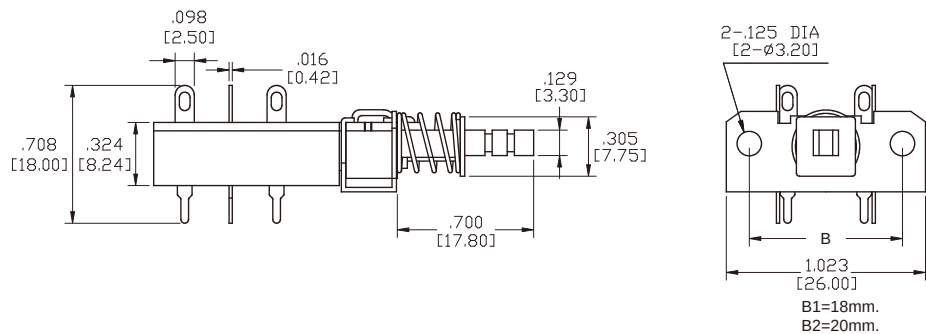
RATING: AC125V 7A, AC250V 4A.
CIRCUIT: DPDT.
CONTACT RESISTANCE: 20m-ohms max. @ 5VDC 1A.
DIELECTRIC STRENGTH: AC 1,500V for 1 min.
LIFE EXPECTANCY: 6-10 cycle / min.
ELECTRICAL LIFE: 6,000 cycle.
OPERATING FORCE: 550 ± 150gf.
OPERATING MODE: Latching and momentary.
TRAVEL: (Full) 4.8mm. (Lock) 3.3mm.



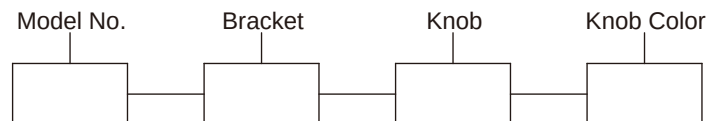
Specifications and Dimensions subject to change



Model No.	Type
WP-1	Momentary
WP-2	Latching



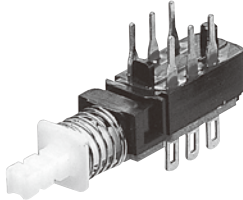
HOW TO ORDER



B0=No Bracket
B1=18mm
B2=20mm

APPLICATIONS:

WP Series pushbutton switches are suitable to be used in wide variety of applications, such as telecommunications, professional audio, sound and electronic test equipment.



FEATURES:

- Wiping for smooth, silent actuation stroke
- Up to 16 poles per module
- Mounting chassis
- Interlocked assemblies
- Optional terminal length
- Snap-on buttons
- Solder lugs on top for hand wiring
- Switch plunger with soldering contacts is removable from the front without disturbing electrical connections
- Enclosed housing protects inner contact area from dust and external intrusion
- Fixed terminals are "staked" in position providing an extra protection to help preventing weakening of solder or flux

SPECIFICATIONS:

CONTACT RESISTANCE: Initial 5m-ohms max., after 25,000 cycles 20m-ohms max.

CURRENT AND VOLTAGE: 0.5A @ 100VAC, 0.2A @ 250VAC, 1A @ 25VDC.

DIELECTRIC STRENGTH: 1,500VAC for 1 min.

INSULATION RESISTANCE: Adjacent Contacts- 2×10^{12} ohms min. (Dry Condition), 3×10^{11} ohms min. (100% Relative Humidity after 96 hrs @70°F); Life Test-100,000 cycles min.

LIFE CYCLE: $\geq 1 \times 10^5$.

MATERIALS:

HOUSING: Polycarbonate (UL94HB).

PLUNGER: Duracon (UL94HB).

TERMINAL BOARD: Polycarbonate.

MOVING CONTACTS: Brass base silver plated.

FIXED CONTACTS: Brass with silver plate over nickel plate.

MOVABLE CONTACT RETURN SPRING: Stainless steel spring.

PLUNGER RETURN SPRING: Baked & Zinc plated steel spring.

ALTERNATE ACTION STAPLE: Highly resistant steel-wire, Chrome plated.

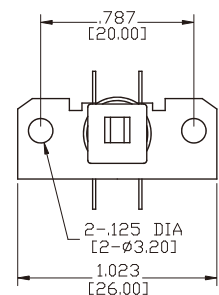
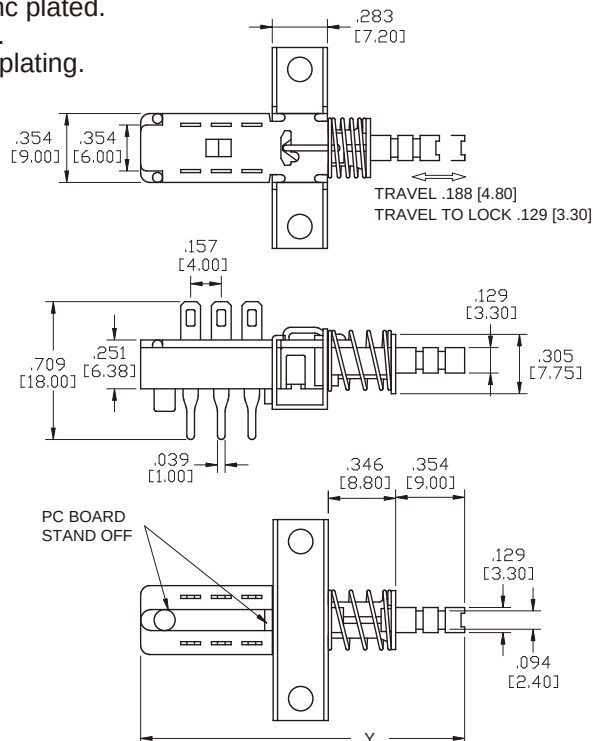
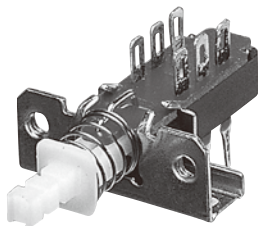
TERMINAL DIE BOND: High strength bonding red resin.

RELEASE BAR: Steel/Zinc plated.

CHASSIS: Steel/Nickel plated or steel/zinc plated.

RELEASE BAR SPRING: Stainless steel.

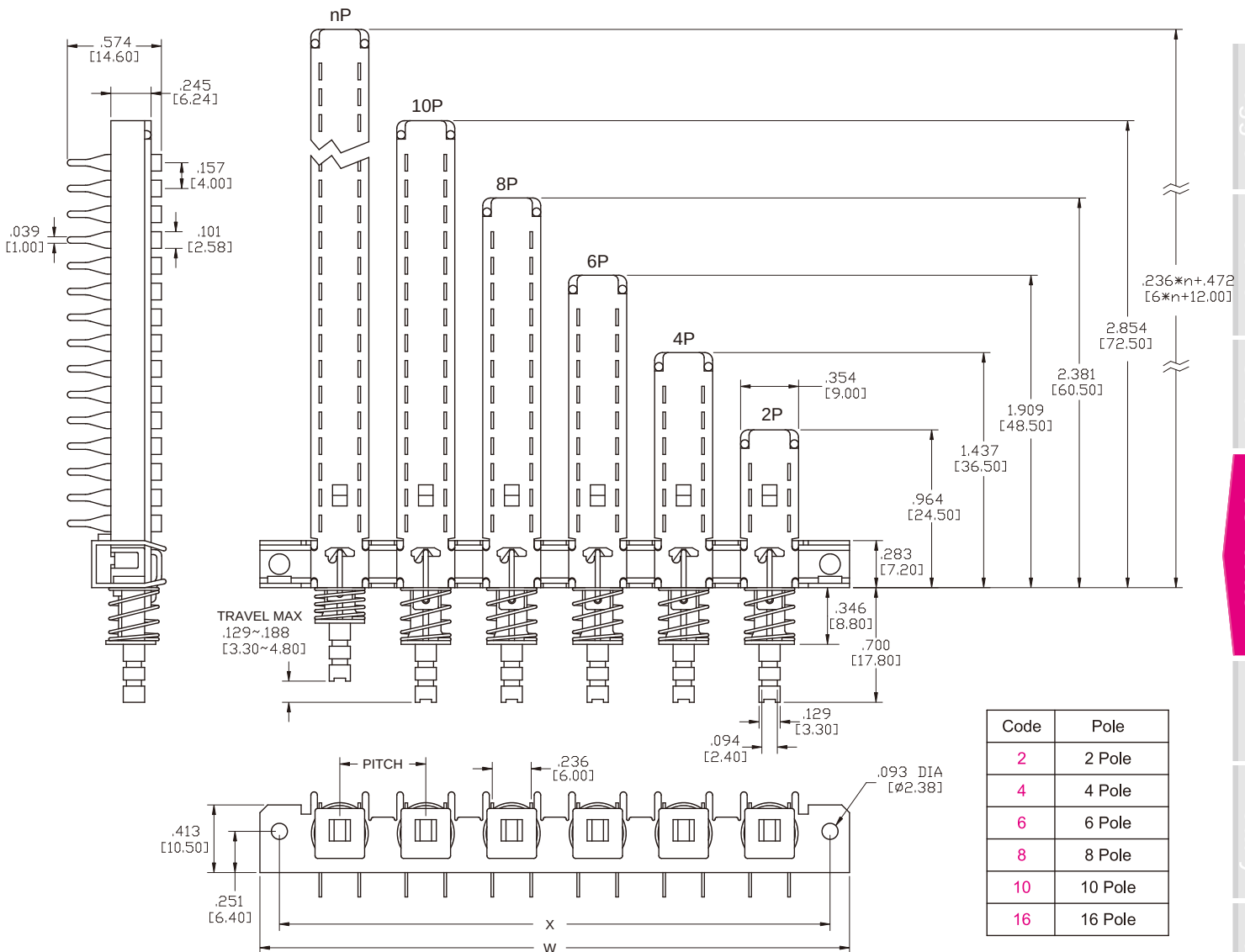
CONTACTS: (Q) Silver plating, (R) Gold plating.



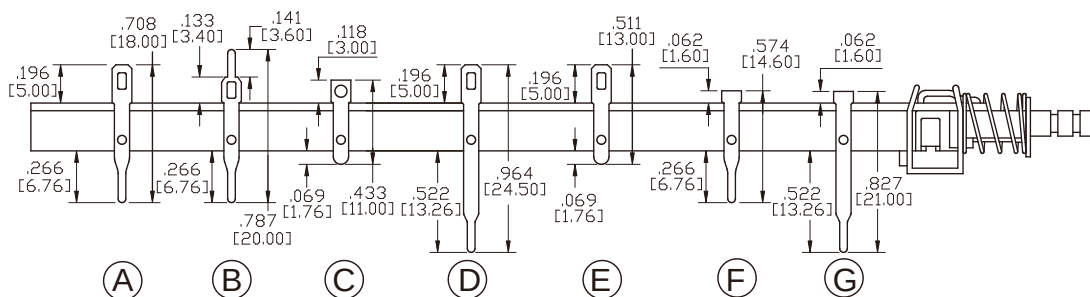
Model No.	Type
WP-3	Momentary
WP-4	Latching
WP-5	Interlocking

Pole	DIM. "Y"
2PDT	42.15
4PDT	54.15
6PDT	66.15
8PDT	78.15
10PDT	90.15
16PDT	126.15

POLE & PITCH & TERMINATION OPTIONS

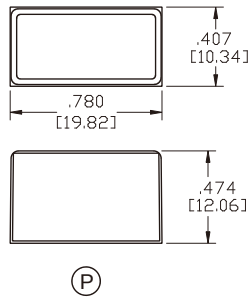
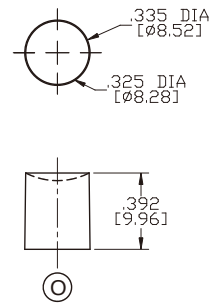
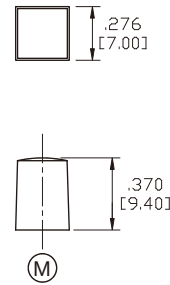
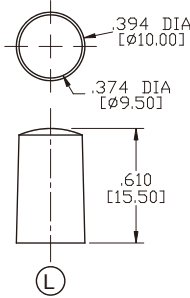
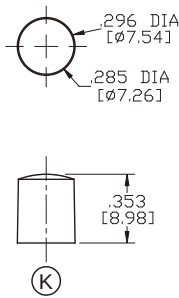
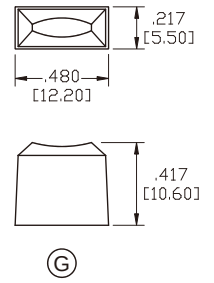
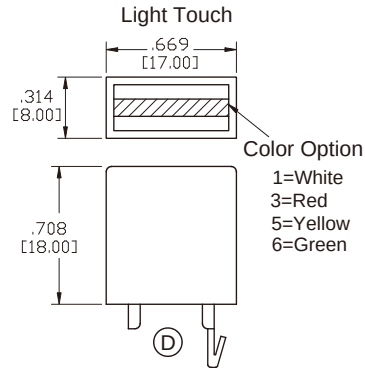
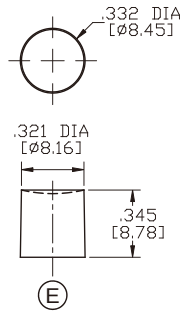
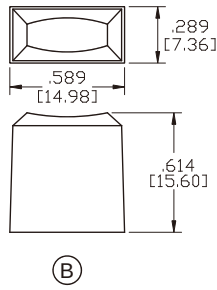


CODE OF SWITCH NUMBER		A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	
CODE OF PITCH (mm)	DIM.	Switch Number																			
		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
1(10.0)	W	36.0	46.0	56.0	66.0	76.0	86.0	96.0	106.0	116.0	126.0	136.0	146.0	156.0	166.0	176.0	186.0	196.0	206.0	216.0	
	X	30.0	40.0	50.0	60.0	70.0	80.0	90.0	100.0	110.0	120.0	130.0	140.0	150.0	160.0	170.0	180.0	190.0	200.0	210.0	
2(12.5)	W	38.5	51.0	63.5	76.0	88.5	101.0	113.5	126.0	138.5	151.0	163.5	176.0	188.5	201.0	213.5	226.0	238.5	251.0	263.5	
	X	32.5	45.0	57.5	70.0	82.5	95.0	107.5	120.0	132.5	145.0	157.5	170.0	182.5	195.0	207.5	220.0	232.5	245.5	257.5	
3(15.0)	W	41.0	56.0	71.0	86.0	101.0	116.0	131.0	146.0	161.0	176.0	191.0	206.0	221.0	236.0	251.0	266.0	281.0	296.0	311.0	
	X	35.0	50.0	65.0	80.0	95.0	110.0	125.0	140.0	155.0	170.0	185.0	200.0	215.0	230.0	245.0	260.0	275.0	290.0	305.0	
4(17.5)	W	43.8	61.0	78.5	96.0	113.5	131.0	148.5	166.0	183.5	201.0	218.5	236.0	253.0	271.0	288.5	306.0	323.5	341.0	358.5	
	X	37.5	55.0	72.5	90.0	107.5	125.0	142.5	160.0	177.5	195.0	212.5	230.0	247.5	265.0	282.5	300.0	317.5	335.0	352.5	
5(20.0)	W	46.0	66.0	86.0	106.0	126.0	146.0	166.0	186.0	206.0	226.0	246.0	266.0	286.0	306.0	326.0	346.0	366.0	386.0	406.0	
	X	40.0	60.0	80.0	100.0	120.0	140.0	160.0	180.0	200.0	220.0	240.0	260.0	280.0	300.0	320.0	340.0	360.0	380.0	400.0	



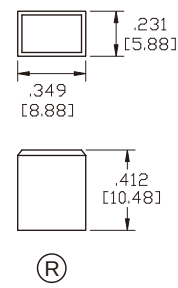
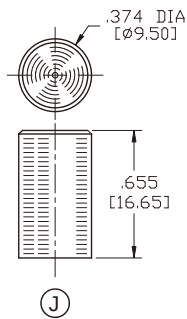
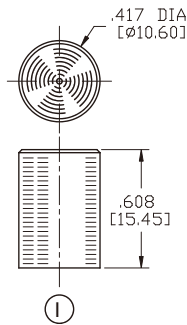
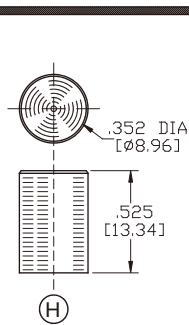
KNOB OPTIONS

PLASTIC CAP



Code	Cap Color
1	White
2	Black
3	Red
4	Chrome
7	Gray

ALUMINUM CAP



Code	Cap Color
2	Black
4	Chrome
8	Gold

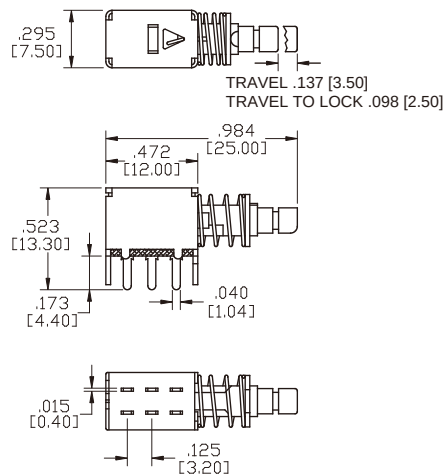
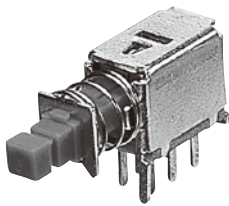
HOW TO ORDER

Model No.	Pole	Pitch Code	Switch Number	Termination	Plating	Material	Knob	Knob Color
	02 08 04 10 06 16	1 3 5	A I U	A I F	Q=Silver R=Gold	P=Std. V=Valox		

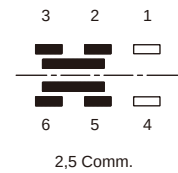
SPECIFICATIONS:

CONTACT RATING: 200mA @30 VAC or VDC max.
ELECTRICAL LIFE: 30,000 make-and-break cycle at full load.
CONTACT RESISTANCE: 20m-ohms max. @ 2-4 VDC, 100mA for both silver and gold plated contacts.
INSULATION RESISTANCE: 100M-ohms min.
DIELECTRIC STRENGTH: 500VAC for 1 minute.
OPERATING TEMPERATURE: -10°C to +60°C.

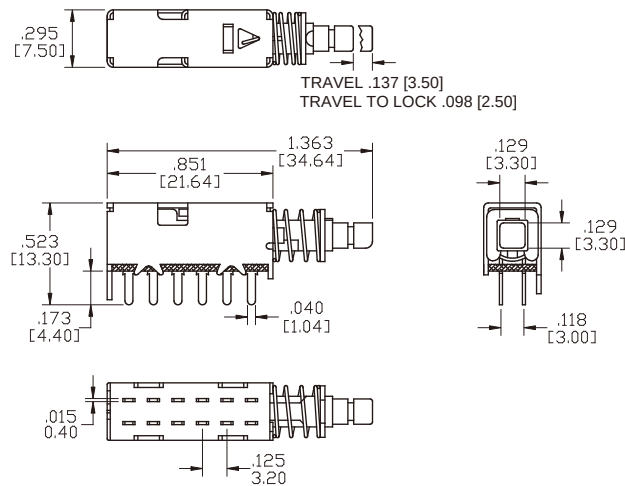
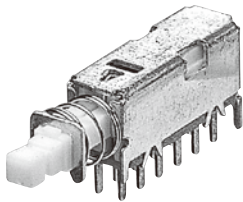
Specifications and Dimensions subject to change



Schematic



Model No.	Type
WP-6	Momentary
WP-7	Latching

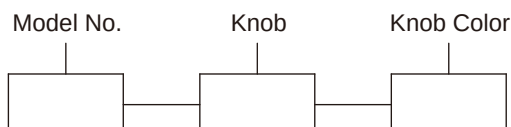


Schematic



Model No.	Type
WP-8	Momentary
WP-9	Latching

HOW TO ORDER



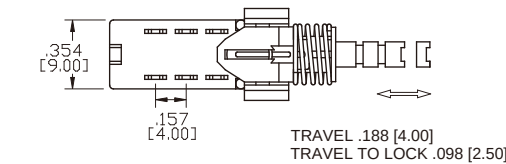
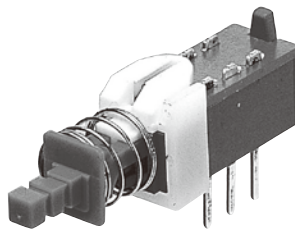
SPECIFICATIONS:

RATING: AC 100V @ 0.5A, AC 250V @ 0.2A, DC 25V @ 1A.
CONTACT RESISTANCE: 50m-ohms min.
INSULATION RESISTANCE: 100M-ohms min at 500VDC.
DIELECTRIC STRENGTH: 1,000VAC for 1minute.
NO. OF KEY: Any key (2-13keys).
KEY PITCH: 10mm, 12.5mm, 15mm, 17.55mm, 20mm.
OPERATING TEMPERATURE: -20°C ~ +70°C.
LIFE CYCLE: Contact resistance less than 50m-ohms after 20,000 cycles of operation.
BLOCK COMBINATION: Whichever of self-locking, inter-locking or non-locking.
TERMINAL: PC. board terminal, wiring terminal.
TIMING: Non shorting-shortening.
TYPICAL APPLICATION: Dry circuit switching.

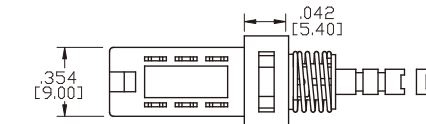
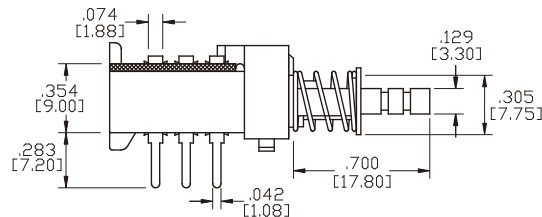
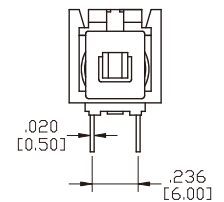
MATERIALS:

CONTACT FINISH: Silver plated.
TERMINAL: Brass or copper.
TERMINAL FINISH: Silver plated.

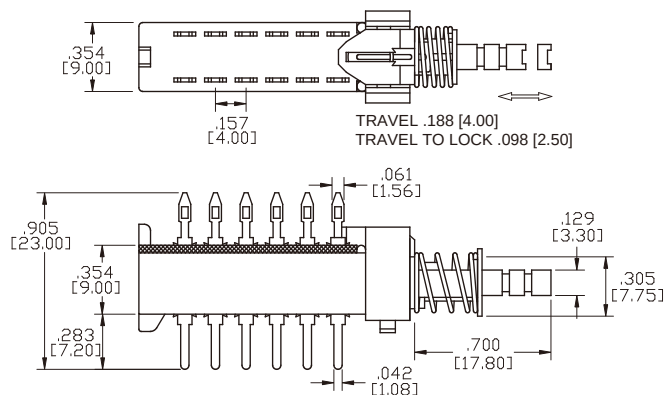
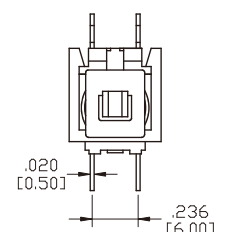
Specifications and Dimensions subject to change



2 POLE

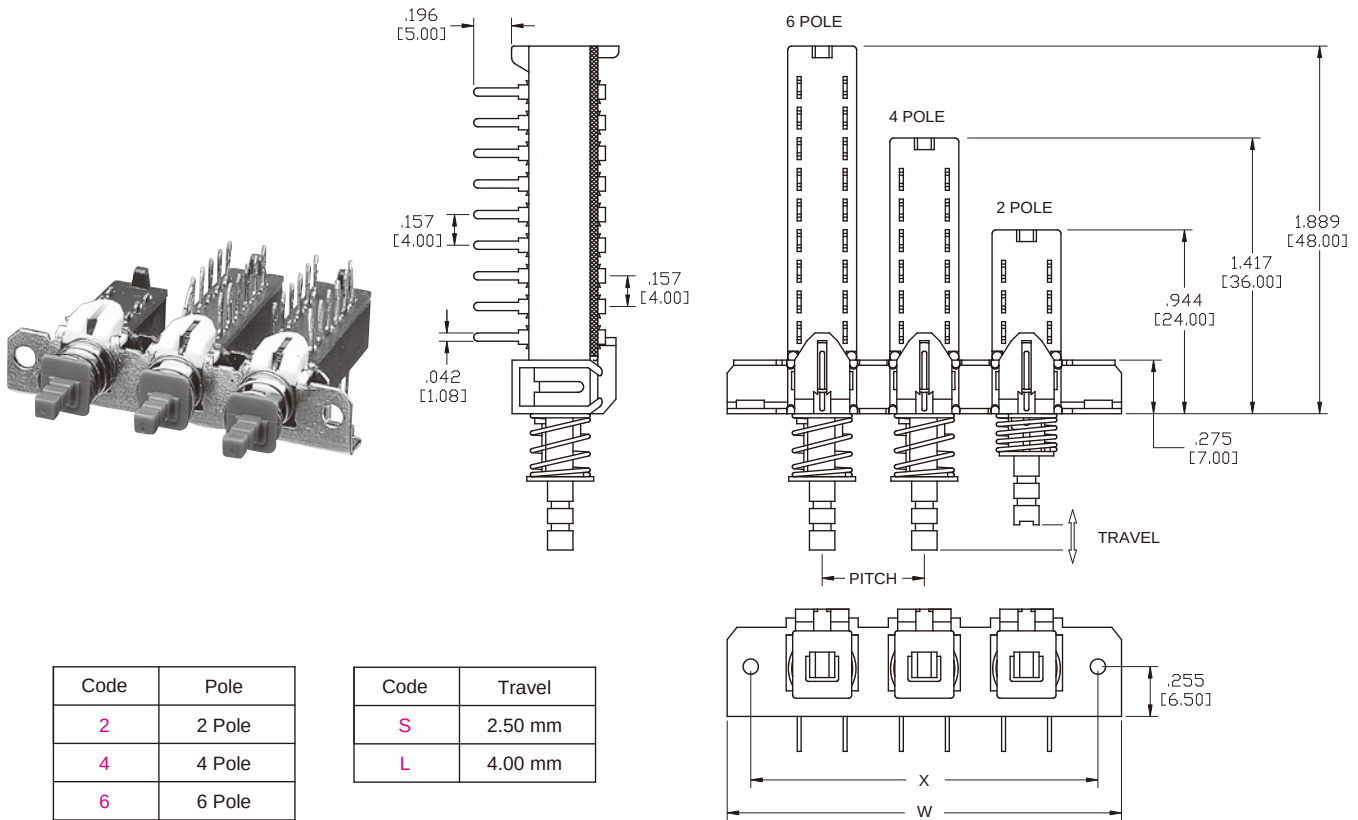


4 POLE



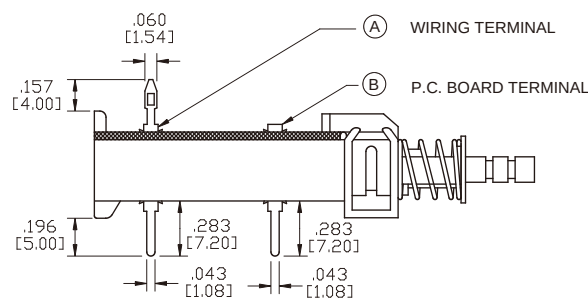
Model No.	Type
WPA-1	Momentary
WPA-2	Latching
WPA-3	Interlocking

POLE & TRAVEL OPTIONS



For Pitch, X & W please refer to page 165.

TERMINATION OPTIONS



HOW TO ORDER

Model No.	Pole	Pitch Code	Switch Number	Travel (mm.)	Termination	Knob	Knob Color
	(2, 4, 6)			S = 2.5 L = 4.0	A or B		

SPECIFICATIONS:

CONTACT RATING: 5A 250VAC max.

ELECTRICAL LIFE: 5A 250VAC 50,000 cycles.

4A 250VAC 60,000 cycles.

2A 250VAC 200,000 cycles.

1A 250VAC 400,000 cycles.

CONTACT RESISTANCE: 50m-ohms max. initial.

INSULATION RESISTANCE: 500VDC 10M-ohms min.

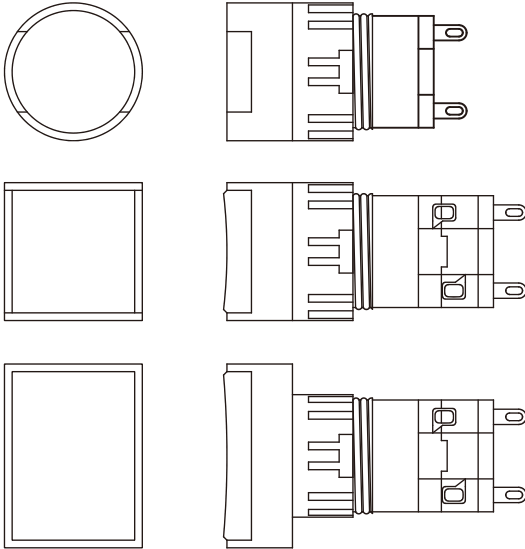
DIELECTRIC STRENGTH: 2500VAC, 50Hz for 1 minute.

CONTACT MATERIAL: Silver plated gold flash.

CASE MATERIAL: High performance plastic with resistance to high temperature and oily environment.

OPERATING TEMPERATURE: -25°C to +55°C.

SOLDERING TEMPERATURE: 300°C for 5sec.



FEATURES:

- Apparent shapes with rectangle 18x24mm, square 18x18mm and round diameter 18mm.
- High bezel that prevents accidental touching.
- Illuminated by midget grooved T 1 3/4 lamp or multi-LED.
- Snap-action which accelerates on-off switching.
- Normally closed and normally open contacts in each switch block.
- Available with IP65 protection class. (Series 180A)

Specifications and Dimensions subject to change

MOMENTARY ACTIONS

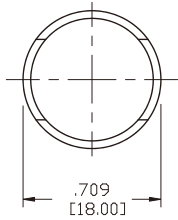
Model No.	Type		Contact block diagram (button not depressed)	Mounting Length (A)	Case Colour
SP-11	Illuminated	SPST		29 mm	black red
SP-01	Non-illuminated				
DP-11	Illuminated	DPST		36.5 mm	black red
DP-01	Non-illuminated				

ALTERNATE ACTIONS

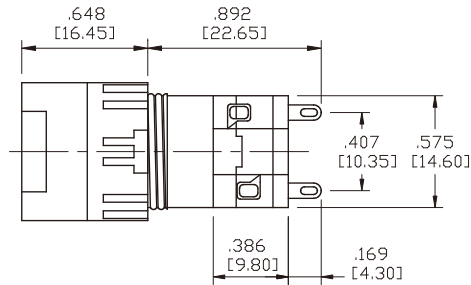
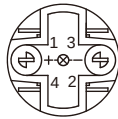
Model No.	Type		Contact block diagram (button not depressed)	Mounting Length (A)	Case Colour
SP-22	Illuminated	SPST		29 mm	black red
SP-02	Non-illuminated				
DP-22	Illuminated	DPST		36.5 mm	black red
DP-02	Non-illuminated				

SHAPE & TERMINATION

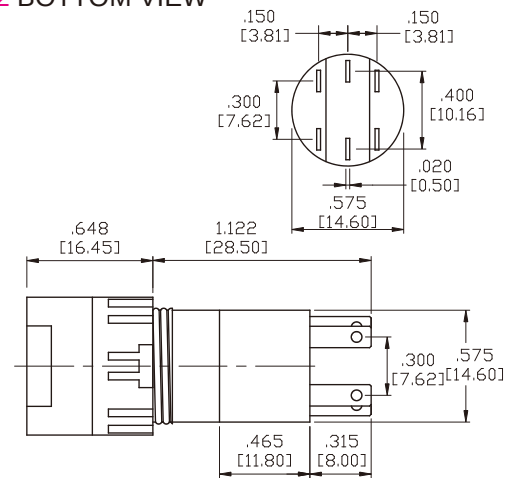
ROUND



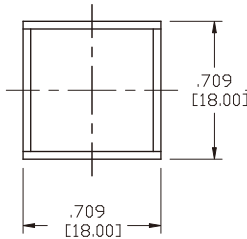
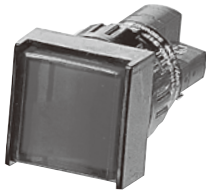
A1 BOTTOM VIEW



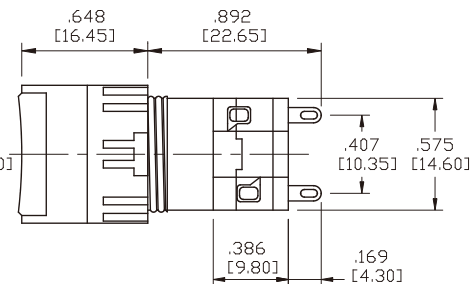
A2 BOTTOM VIEW



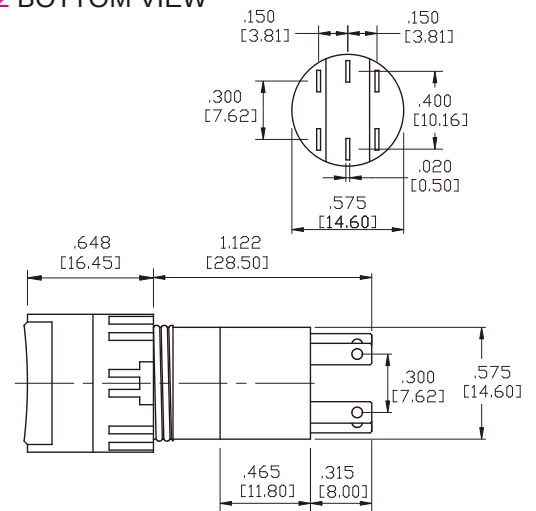
SQUARE



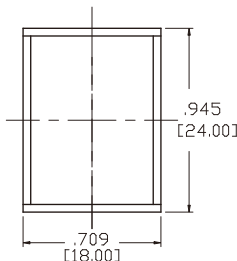
B1 BOTTOM VIEW



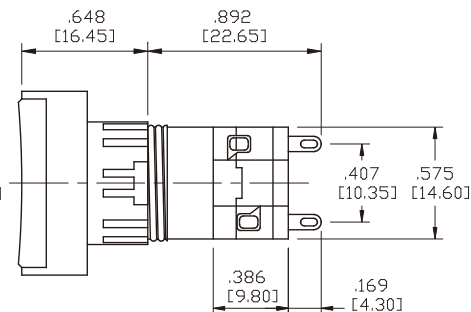
B2 BOTTOM VIEW



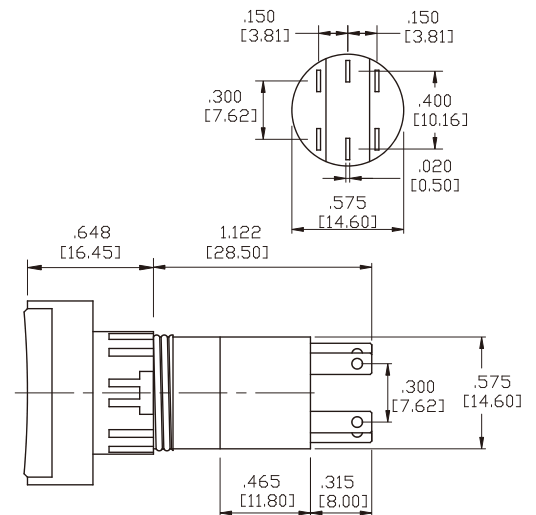
RECTANGULAR



C1 BOTTOM VIEW

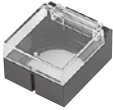


C2 BOTTOM VIEW

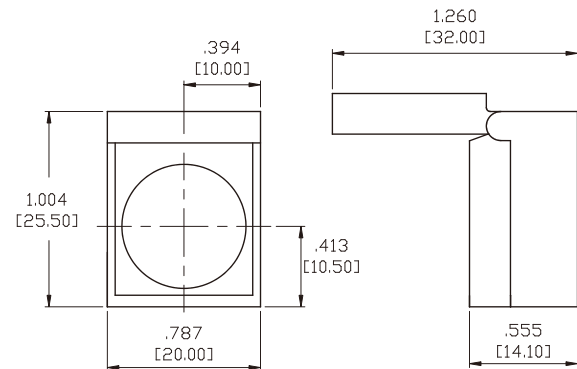


ACCESSORIES

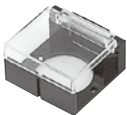
01P-200S



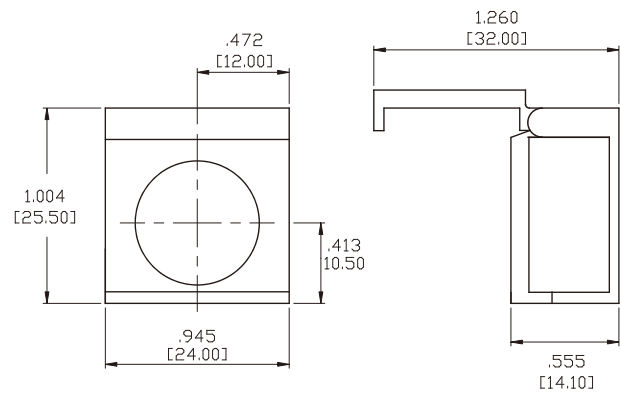
Category	Description
Protection Cap	For square head (90°C)



01P-200R



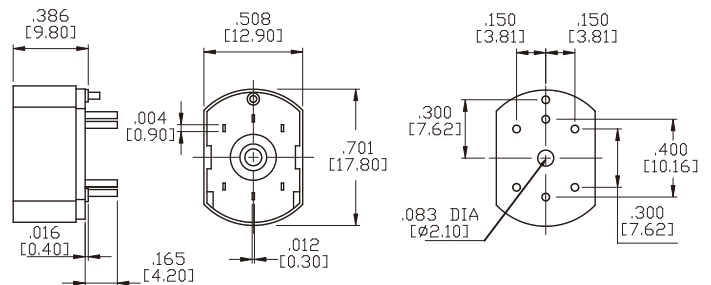
Category	Description
Protection Cap	For rectangular head (90°C)



01P-300



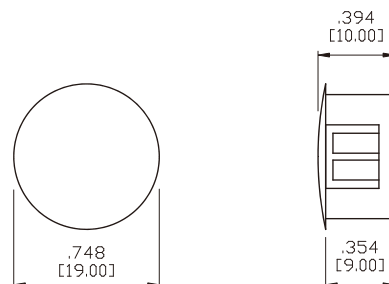
Category	Description
PCB Mounting Socket	Socket insert into PCB board is available for socket type push button switch installation



01P-400



Category	Description
Blanking Plate Block	PVC stopper to stuff the superfluous hole of the panel board only for 16mm hole



ACCESSORIES

01P-500



Category	Description
Connector	Insulation Socket 2.8 x 0.5mm

010-100



Category	Description
Washer	Anti twisting Ring

01P-T01



Category	Description
Mounting Wrench	Use this for tightening the switch in the mounting hole

01P-T02



Category	Description
Lens Removing Tool	Use this for replacing the fitted color lens

01P-T03



Category	Description
Lamp Extractor	Lamp removing tool

Toggle

Rocker

Slide

Pushbutton

AV

Rotary

Tact

Touch Key

Miscellaneous

BUTTON COLOR OPTIONS

R = Red

Y = Yellow

G = Green

LAMP & LED OPTIONS

LAMP

A = 110V

B = 220V

C = 6V

D = 12V

E = 24V

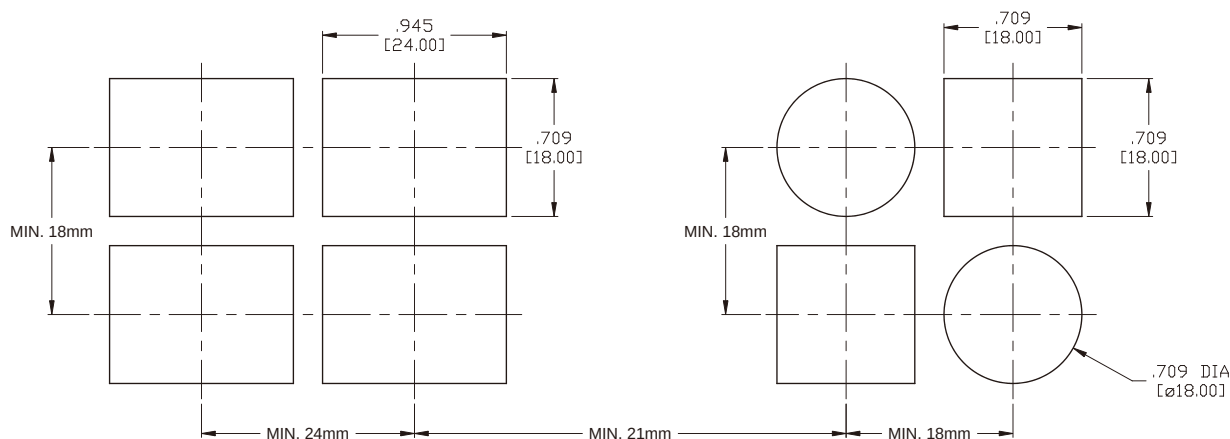
LED

F = 12V

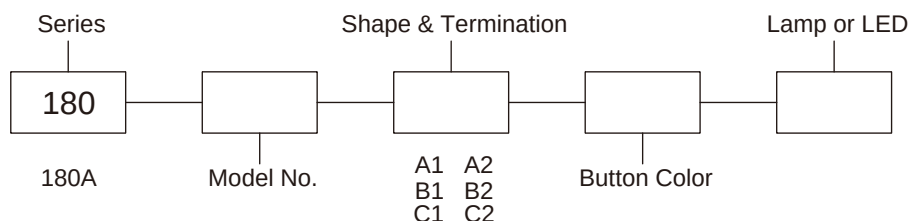
G = 24V

PANEL MOUNTINGS

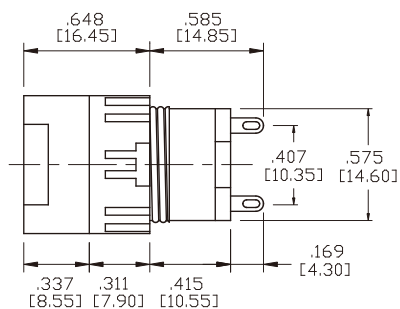
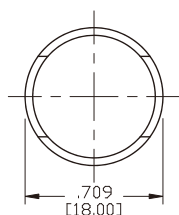
For multi-switches mounting layout



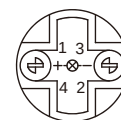
HOW TO ORDER



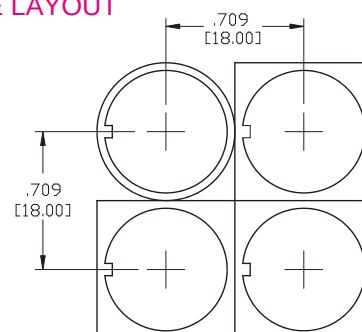
ROUND



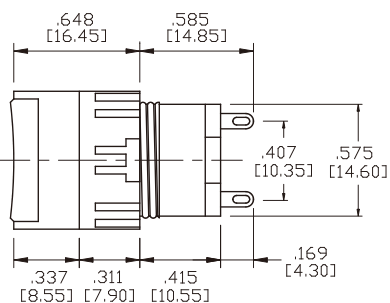
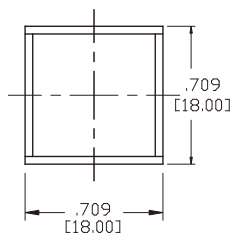
BOTTOM VIEW



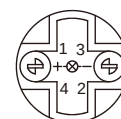
HOLE LAYOUT



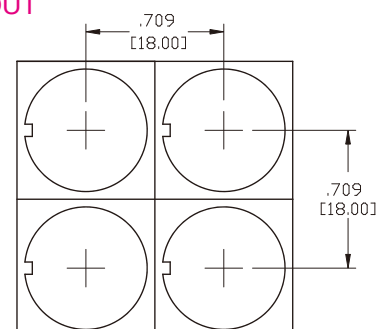
SQUARE



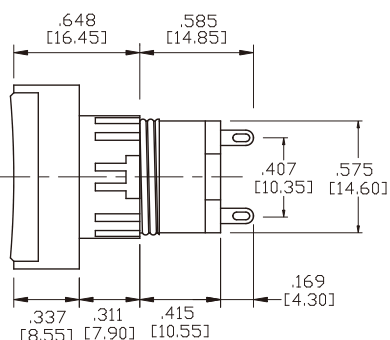
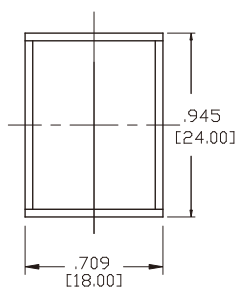
BOTTOM VIEW



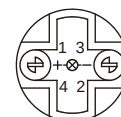
HOLE LAYOUT



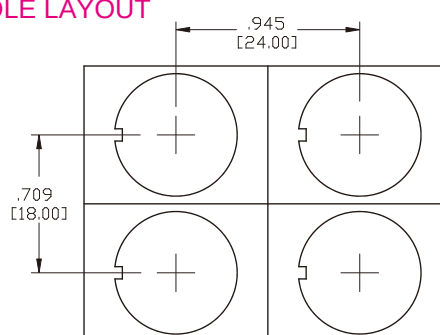
RECTANGULAR



BOTTOM VIEW



HOLE LAYOUT



BUTTON COLOR OPTIONS

R = Red

Y = Yellow

G = Green

LAMP & LED OPTIONS

LAMP

A = 110V

B = 220V

C = 6V

D = 12V

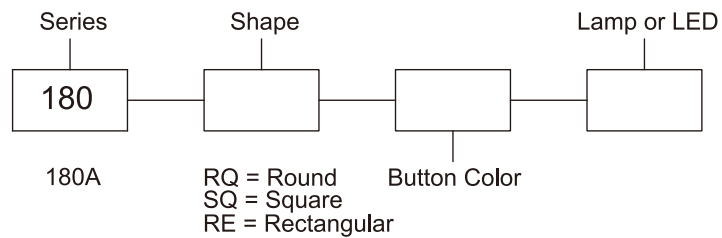
E = 24V

LED

F = 12V

G = 24V

HOW TO ORDER



SPECIFICATIONS:

BUSHING: $\varnothing$ 22mm.

CONTACT RATING: 2A @ 48VDC or 125VAC.

ELECTRICAL LIFE: 10,000cycles at full load.

CONTACT RESISTANCE: 10m-ohms max. initial @2-4VDC.

INSULATION RESISTANCE: 1,000M-ohms min. @ 500VDC.

DIELECTRIC STRENGTH: 3,000VAC for 1 minute.

OPERATING TEMPERATURE: -20°C ~ +55°C.

MATERIALS:

BUSHING & BUTTON: See Bushing & Button Option.

CONTACT: Silver alloy.

BODY & BASE: Glass filled nylon 6/6 (UL 94V-0)

TERMINAL: Nickel plated brass.

NUT: Nickel plated brass.

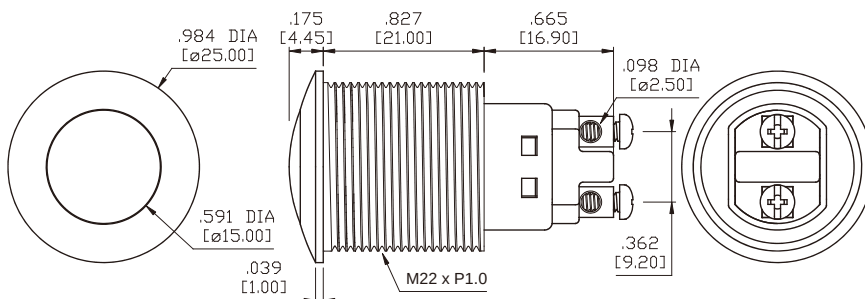
Specifications and Dimensions subject to change

SPST



Model No.	Type	
02	OFF	MOM

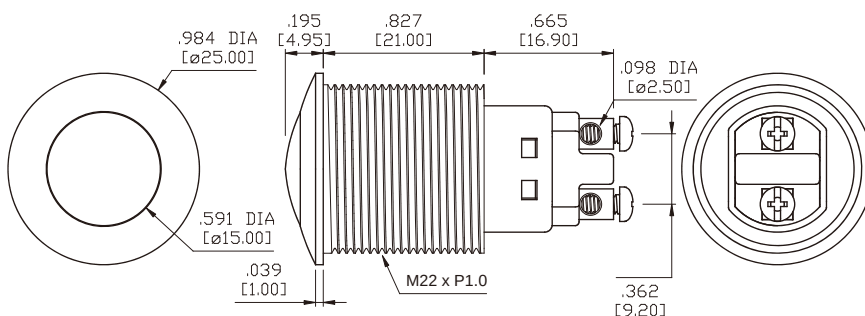
Schematic



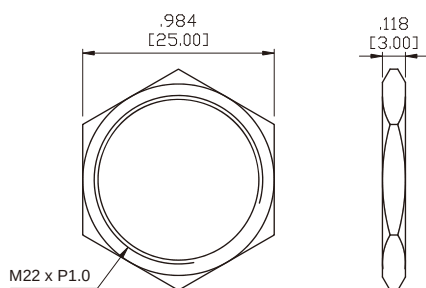
SPST IP65 Front panel protection

Model No.	Type	
02	OFF	MOM

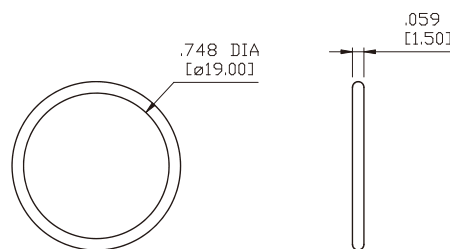
Schematic



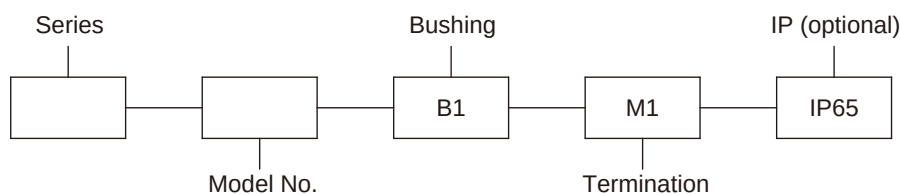
NUT



O-RING



HOW TO ORDER



SPECIFICATIONS:

BUSHING: $\varnothing$ 19mm, $\varnothing$ 16mm, $\varnothing$ 12mm

CONTACT RATING: 2A @ 36VDC.

ELECTRICAL LIFE: 200,000cycles at full load.

CONTACT RESISTANCE: 50m-ohms max. initial @2-4VDC.

INSULATION RESISTANCE: 1,000M-ohms min. @ 500VDC.

DIELECTRIC STRENGTH: 2,000V RMS 50~60Hz.

IP CLASS: IP65 protection.

TORQUE: 5~14Nm max. applied to nut.

OPERATING FORCE: 5.5N max.

OPERATING TEMPERATURE: -20°C~+55°C.

MATERIALS:

BUSHING: See Bushing Option.

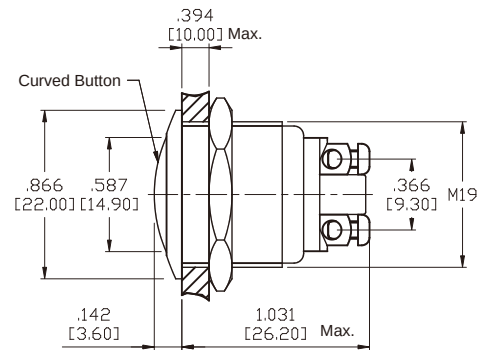
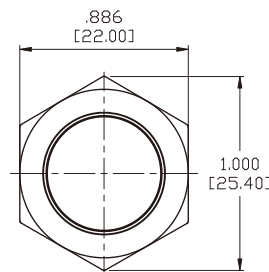
CONTACT: Silver alloy.

BASE: PBT.

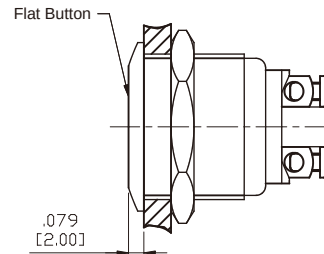
NUT: Nickel plated brass.

Specifications and Dimensions subject to change

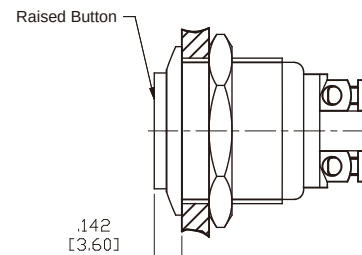
SPST $\varnothing$ 19mm, Solder Lug



Ex. P/N: AV01-B2-M1



Ex. P/N: AV01-B2-M1-F



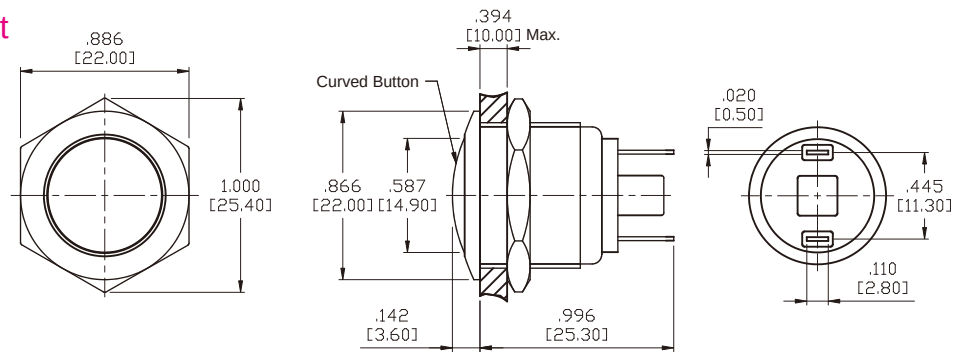
Ex. P/N: AV01-B2-M1-R

Model No.	SPST Type	
01	OFF	MOM

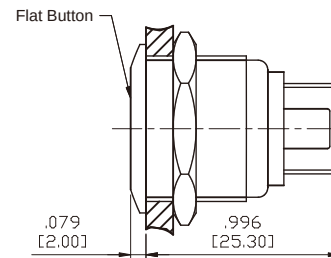
Schematic



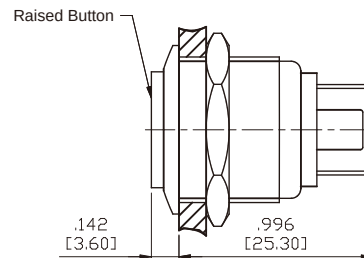
SPST $\varnothing$ 19mm, Quick Connect



Ex. P/N: AV01-B2-M3



Ex. P/N: AV01-B2-M3-F



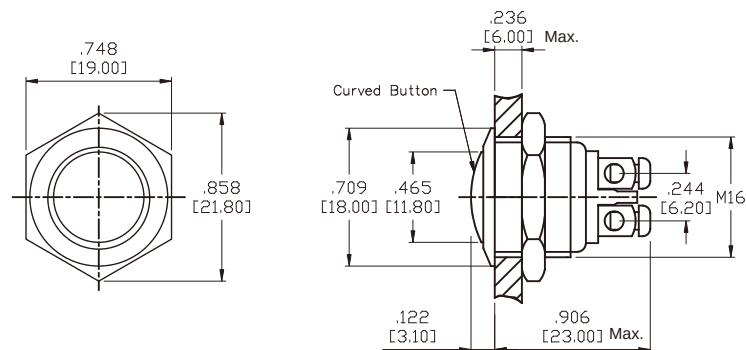
Ex. P/N: AV01-B2-M3-R

Model No.	SPST Type	
01	OFF	MOM

Schematic

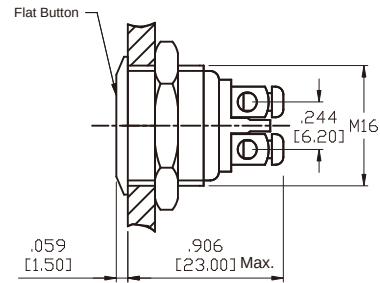
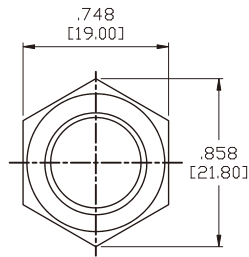


SPST $\varnothing$ 16mm, Solder Lug



Ex. P/N: AV01-B3-M1

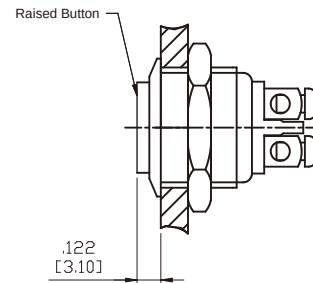
SPST $\varnothing$ 16mm, Solder Lug



Ex. P/N: AV01-B3-M1-F

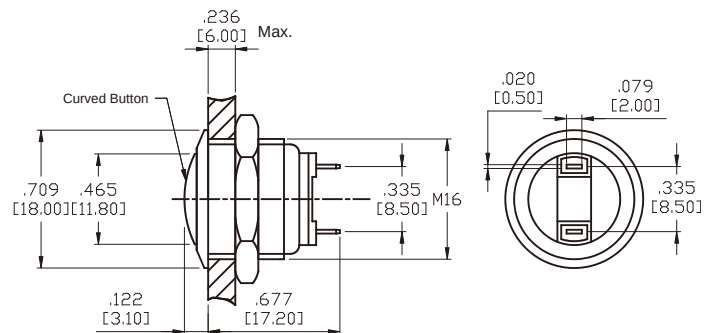
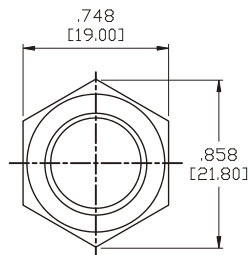
Model No.	SPST Type	
01	OFF	MOM

Schematic



Ex. P/N: AV01-B3-M1-R

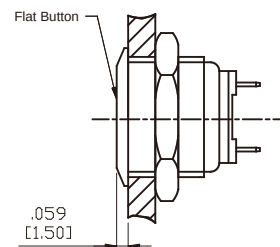
SPST $\varnothing$ 16mm, Quick Connect



Ex. P/N: AV01-B3-M3

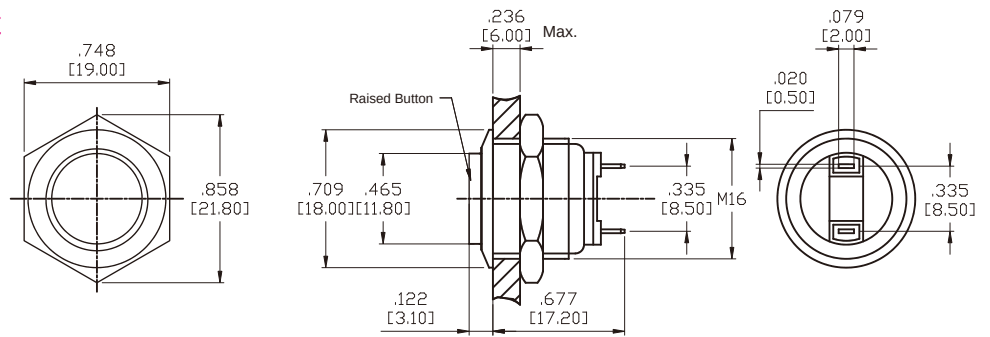
Model No.	SPST Type	
01	OFF	MOM

Schematic



Ex. P/N: AV01-B3-M3-F

SPST ø16mm, Quick Connect



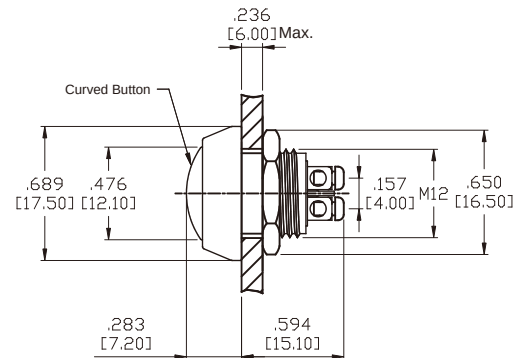
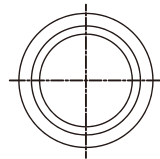
Ex. P/N: AV01-B3-M3-R

Model No.	SPST Type	
01	OFF	MOM

Schematic



SPST ø12mm, Solder Lug



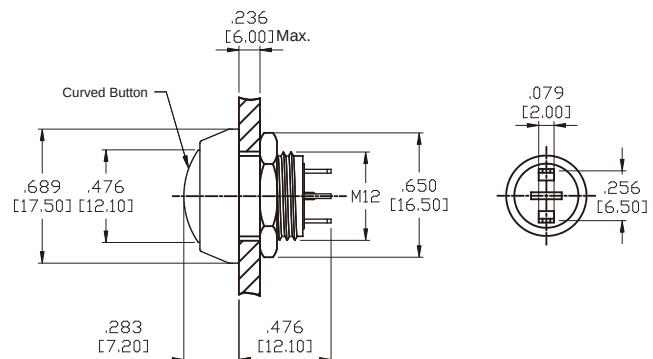
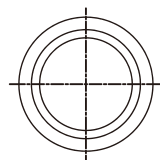
Ex. P/N: AV01-B4-M1

Model No.	SPST Type	
01	OFF	MOM

Schematic



SPST ø12mm, Quick Connect



Ex. P/N: AV01-B4-M3

Model No.	SPST Type	
01	OFF	MOM

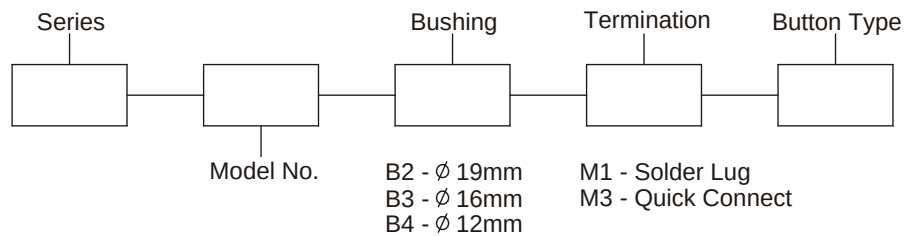
Schematic



BUSHING & BUTTON MATERIAL OPTIONS

Code	Bushing Size	Bushing & Button Material	MOQ
B2,B3,B4	Ø 19,16,12mm	Nickel plated brass with varnished polished	100 PCS
B21,B31,B41	Ø 19,16,12mm	Gold plated brass with varnished polished	500 PCS
B22,B32,B42	Ø 19,16,12mm	Stainless steel with varnished polished	100 PCS
B23,B33,B43	Ø 19,16,12mm	Zinc alloy with black nickel plated	500 PCS

HOW TO ORDER



SPECIFICATIONS:

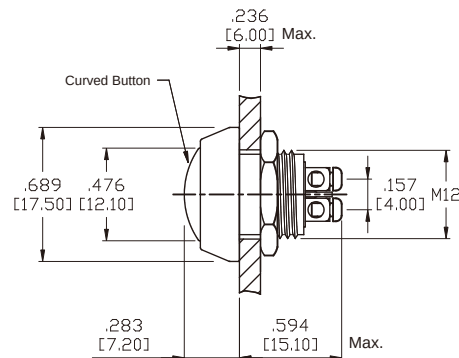
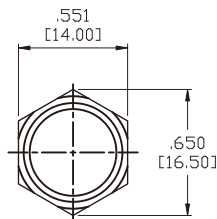
BUSHING: $\varnothing$ 12mm.
CONTACT RATING: 2A @ 36VDC.
ELECTRICAL LIFE: 200,000cycles at full load.
CONTACT RESISTANCE: 50m-ohms max. initial @2-4VDC.
INSULATION RESISTANCE: 1,000M-ohms min. @ 500VDC.
DIELECTRIC STRENGTH: 2,000V RMS 50~60Hz.
IP CLASS: IP65 protection.
TORQUE: 5~14Nm max. applied to nut.
OPERATING FORCE: 5.5N max.
OPERATING TEMPERATURE: -20°C~+55°C.

MATERIALS:

BUSHING: Zinc alloy, black nickel plated.
CONTACT: Silver alloy.
BUTTON & BASE: PBT.
NUT: Nickel plated brass.

Specifications and Dimensions subject to change

SPST $\varnothing$ 12mm, Solder Lug



Ex. P/N: AV01P-B4-M1-x

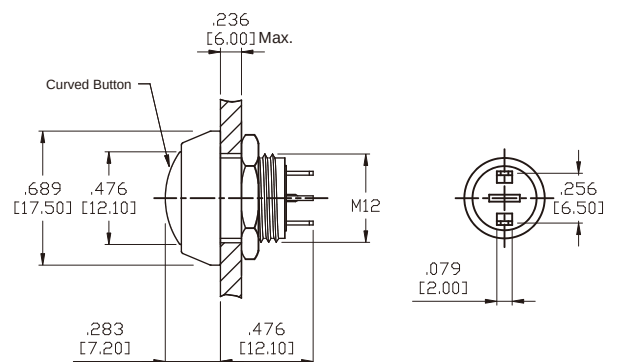
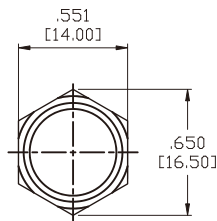
Replace "x" with button color

Model No.	SPST Type	
01	OFF	MOM

Schematic



SPST $\varnothing$ 12mm, Quick Connect



Ex. P/N: AV01P-B4-M3-x

Replace "x" with button color

Model No.	SPST Type	
01	OFF	MOM

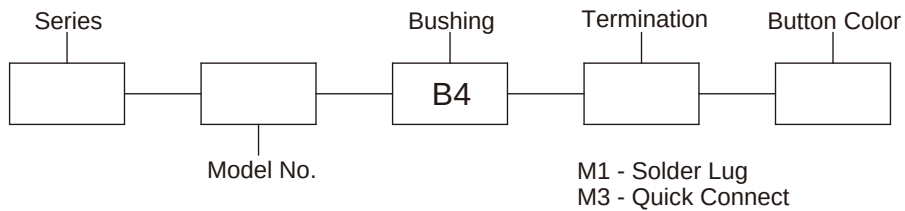
Schematic



BUTTON COLOR OPTIONS

Code	Button Color
R	Red
G	Green
Y	Yellow
O	Orange
B	Blue
W	White
K	Black

HOW TO ORDER



SPECIFICATIONS:

BUSHING: $\varnothing$ 19mm, $\varnothing$ 16mm.

CONTACT RATING: $\varnothing$ 19,22,25mm 5A @ 250VAC,
 $\varnothing$ 16mm 3A @ 250VAC.

ELECTRICAL LIFE: 50,000cycles at full load.

CONTACT RESISTANCE: 50m-ohms max. initial @2-4VDC.

INSULATION RESISTANCE: 1,000M-ohms min. @ 500VDC.

DIELECTRIC STRENGTH: 2,000V RMS 50~60Hz.

IP CLASS: IP65 or IP67 front panel protection.

TORQUE: 5~14Nm max. applied to nut.

OPERATING FORCE: $\varnothing$ 25mm-7N max. $\varnothing$ 22mm-5.5N max. $\varnothing$ 19mm-5N max. $\varnothing$ 16mm-4N max.

OPERATING TEMPERATURE: -20°C~+55°C.

MATERIALS:

BUSHING: See Bushing Option.

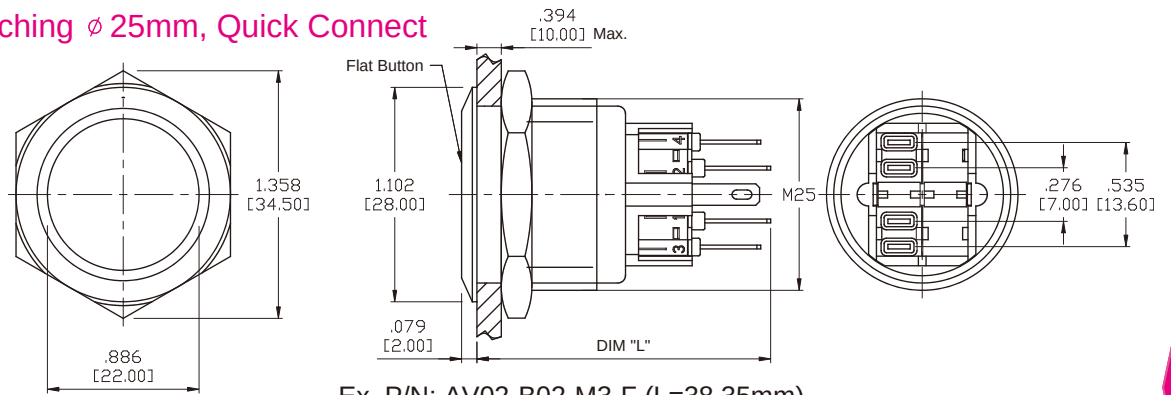
CONTACT: Silver alloy.

BASE: PBT or PA.

NUT: Nickel plated brass.

Specifications and Dimensions subject to change

Non-latching & Latching $\varnothing$ 25mm, Quick Connect



Ex. P/N: AV02-B02-M3-F (L=38.35mm)
AV03-B02-M3-F (L=41.35mm)

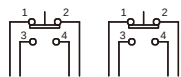
Model No.	SPDT Type	
02	ON	MOM
03	ON	ON

Schematic

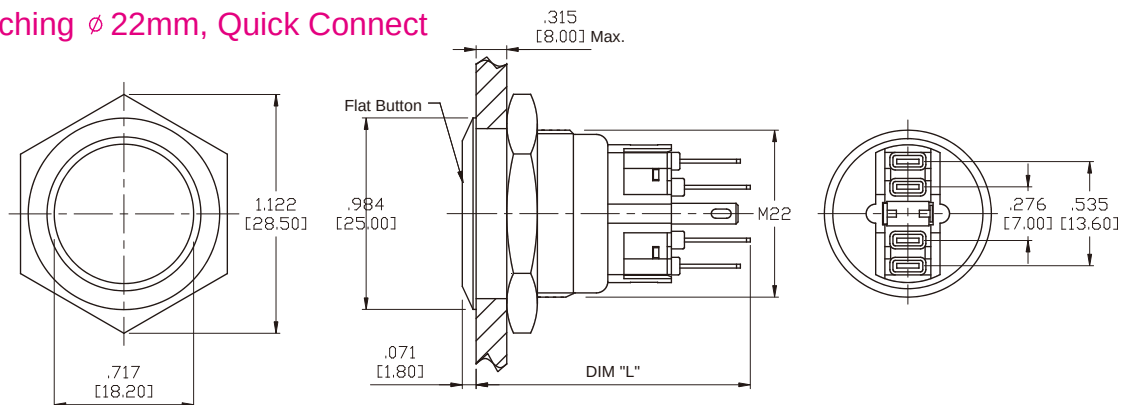


Model No.	DPDT Type	
12	ON	MOM
13	ON	ON

Schematic



Non-latching & Latching $\varnothing$ 22mm, Quick Connect



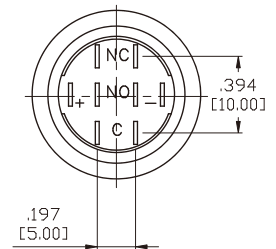
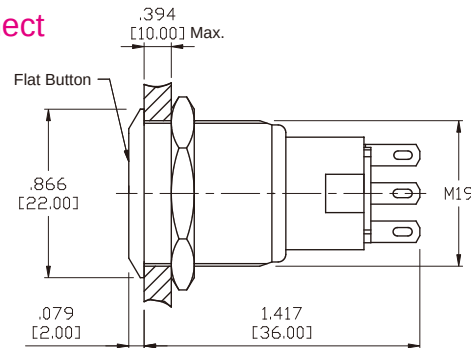
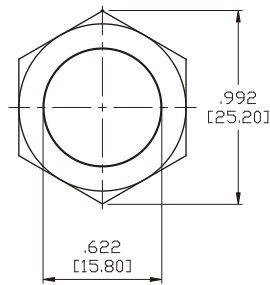
Ex. P/N: AV02-B12-M3-F (L=35.8mm)
AV03-B12-M3-F (L=40.8mm)

Model No.	SPDT Type	
02	ON	MOM
03	ON	ON

Schematic



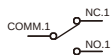
Non-latching & Latching ϕ 19mm, Quick Connect



Ex. P/N: AV02-B22-M3-F
AV03-B22-M3-F

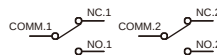
Model No.	SPDT Type	
02	ON	MOM
03	ON	ON

Schematic

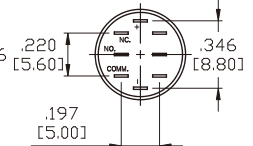
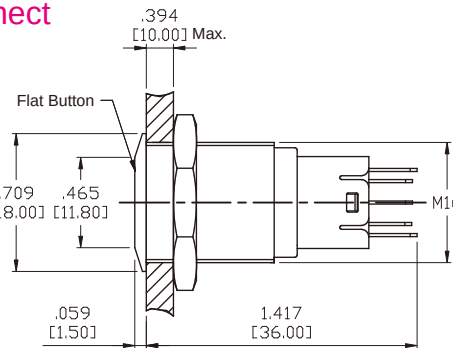
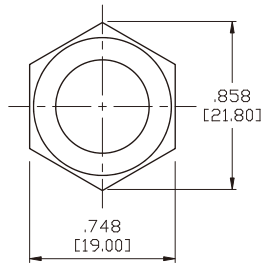


Model No.	DPDT Type	
12	ON	MOM
13	ON	ON

Schematic



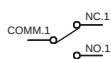
Non-latching & Latching ϕ 16mm, Quick Connect



Ex. P/N: AV02-B3-M3-F & AV03-B3-M3-F

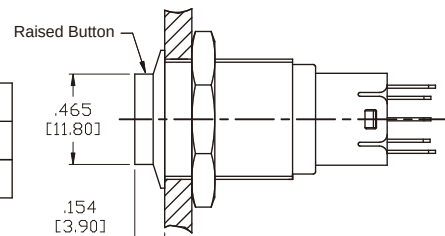
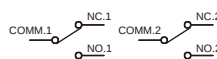
Model No.	SPDT Type	
02	ON	MOM
03	ON	ON

Schematic



Model No.	DPDT Type	
12	ON	MOM
13	ON	ON

Schematic



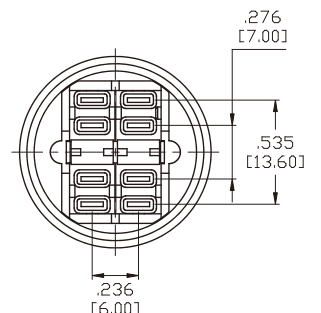
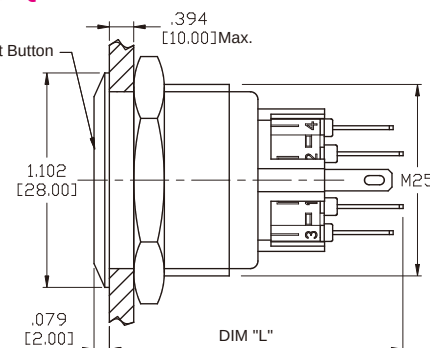
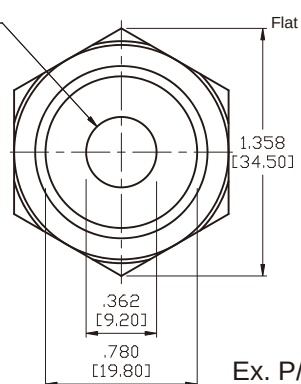
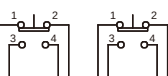
Ex. P/N: AV02-B3-M3-R & AV03-B3-M3-R

Illuminated Non-Latching & Latching ϕ 25mm, Quick Connect

Model No.	SPDT Type	
02L	ON	MOM
03L	ON	ON

Model No.	DPDT Type	
12L	ON	MOM
13L	ON	ON

Schematic



Ex. P/N: AV02L-B02-M3-FD-x (L=38.35)
AV03L-B02-M3-FD-x (L=41.35)

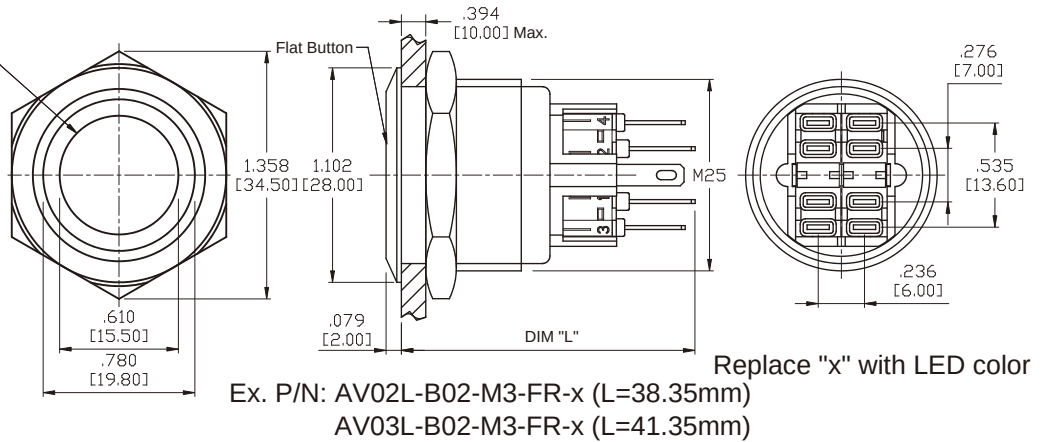
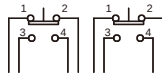
Replace "x" with LED color

Illuminated Non-Latching & Latching ϕ 25mm, Quick Connect

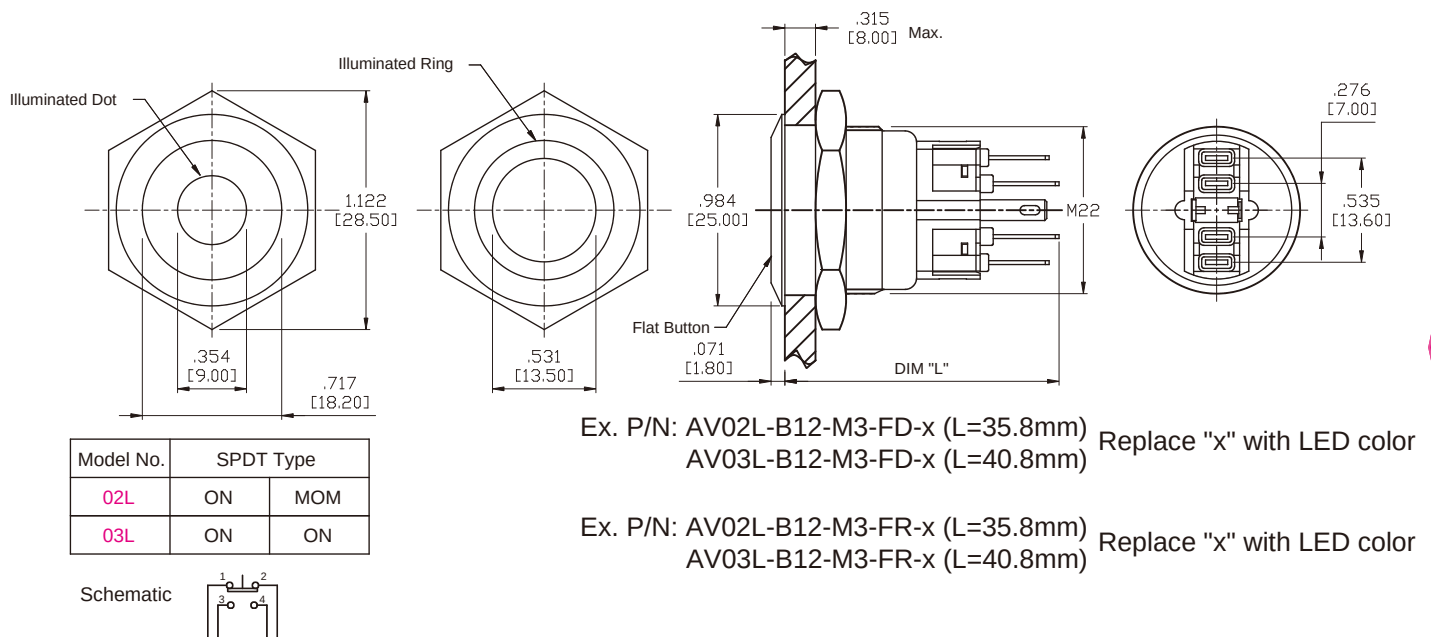
Model No.	SPDT Type	
02L	ON	MOM
03L	ON	ON

Model No.	DPDT Type	
12L	ON	MOM
13L	ON	ON

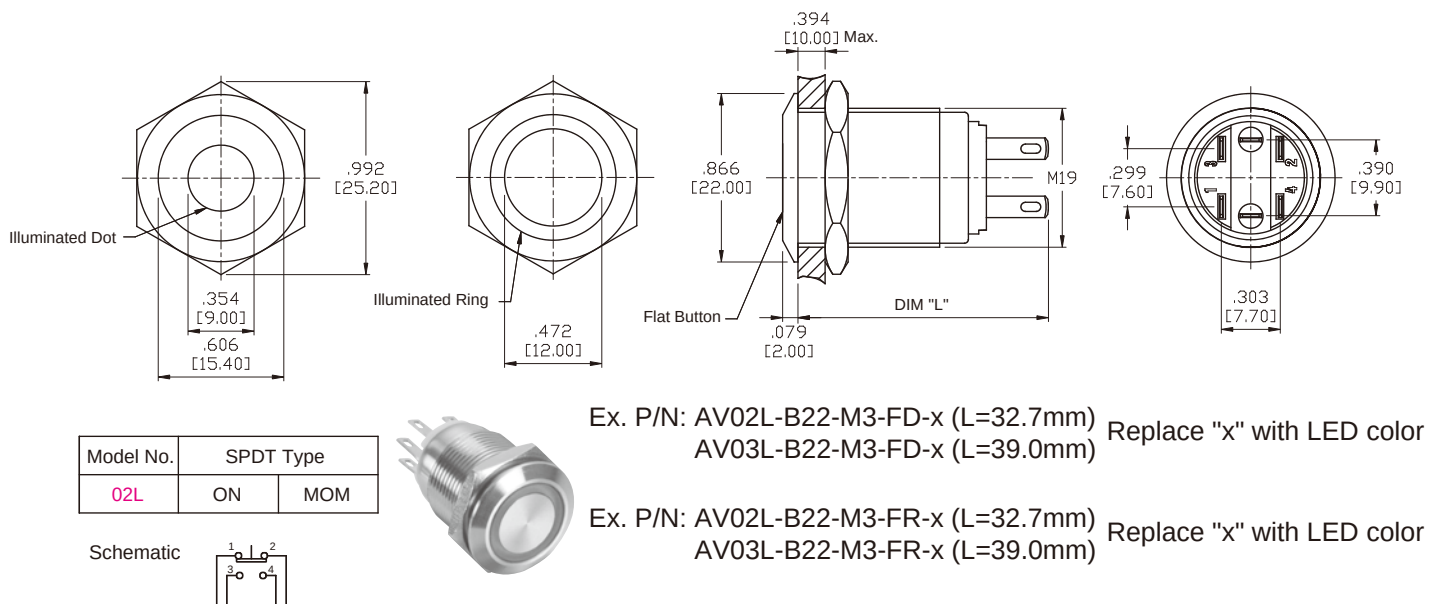
Schematic



Illuminated Non-Latching & Latching ϕ 22mm, Quick Connect



Illuminated Non-Latching & Latching ϕ 19mm, Quick Connect

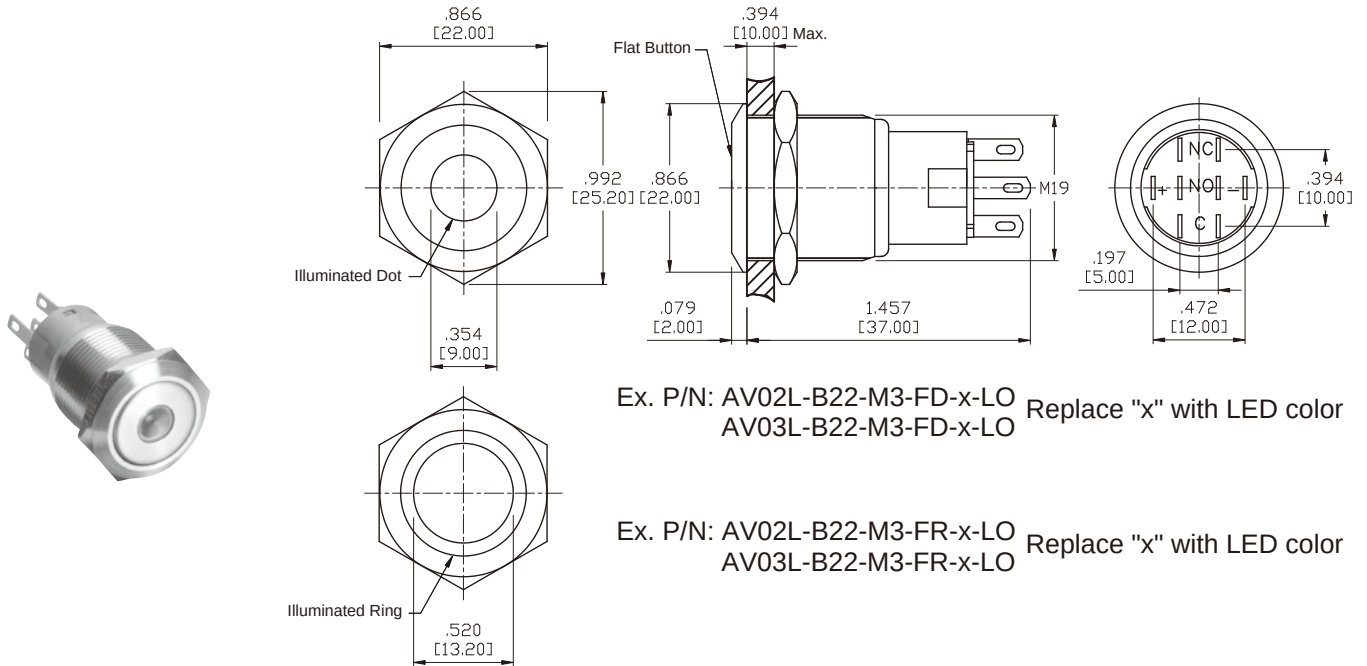


Model No.	SPDT Type	
02L	ON	MOM

Schematic



Illuminated Non-Latching & Latching ϕ 19mm, Quick Connect, Long Case



Model No.	SPDT Type	
02L	ON	MOM
03L	ON	ON

Schematic

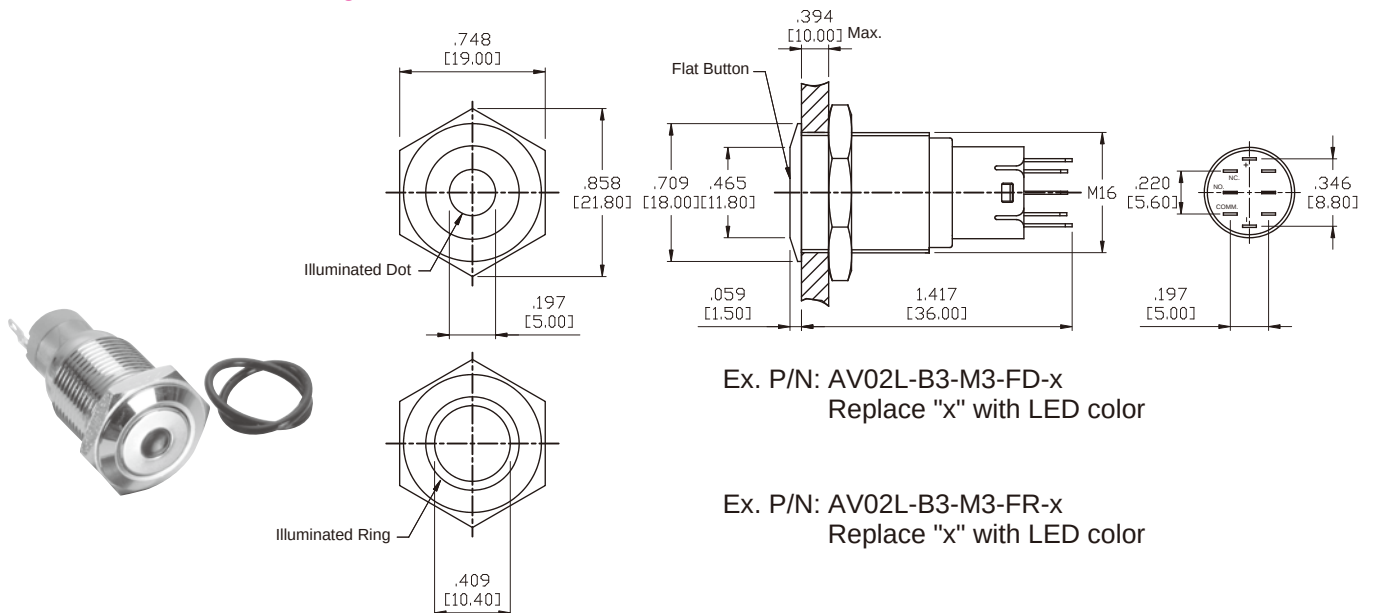


Model No.	DPDT Type	
12L	ON	MOM
13L	ON	ON

Schematic

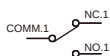


Illuminated Non-Latching ϕ 16mm, Quick Connect



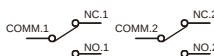
Model No.	SPDT Type	
02L	ON	MOM

Schematic

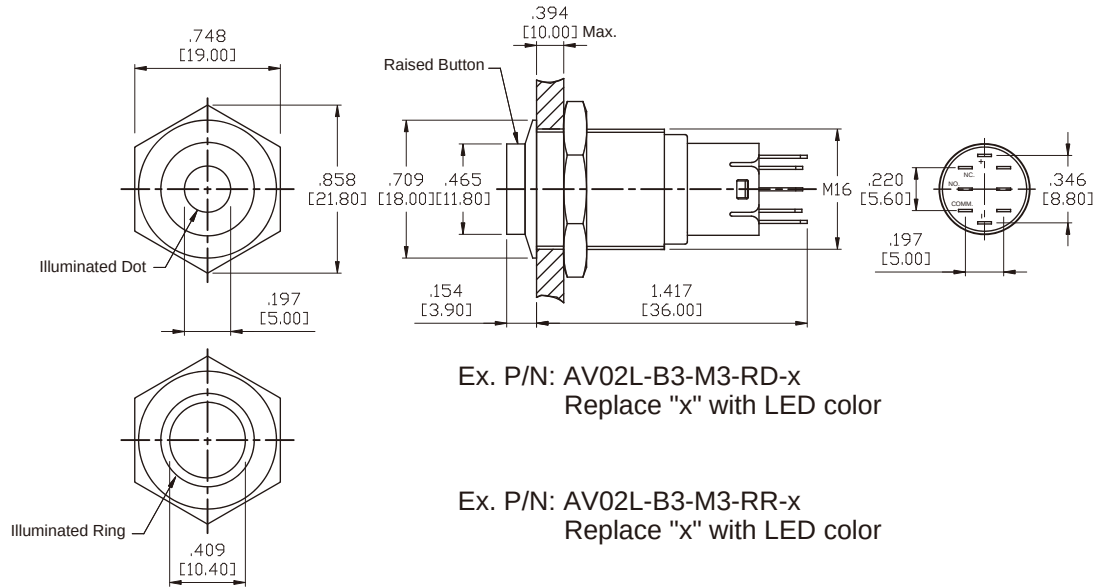


Model No.	DPDT Type	
12L	ON	MOM

Schematic



Illuminated Non-Latching $\phi 16$ mm, Quick Connect



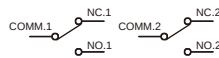
Model No.	SPDT Type	
02L	ON	MOM

Schematic

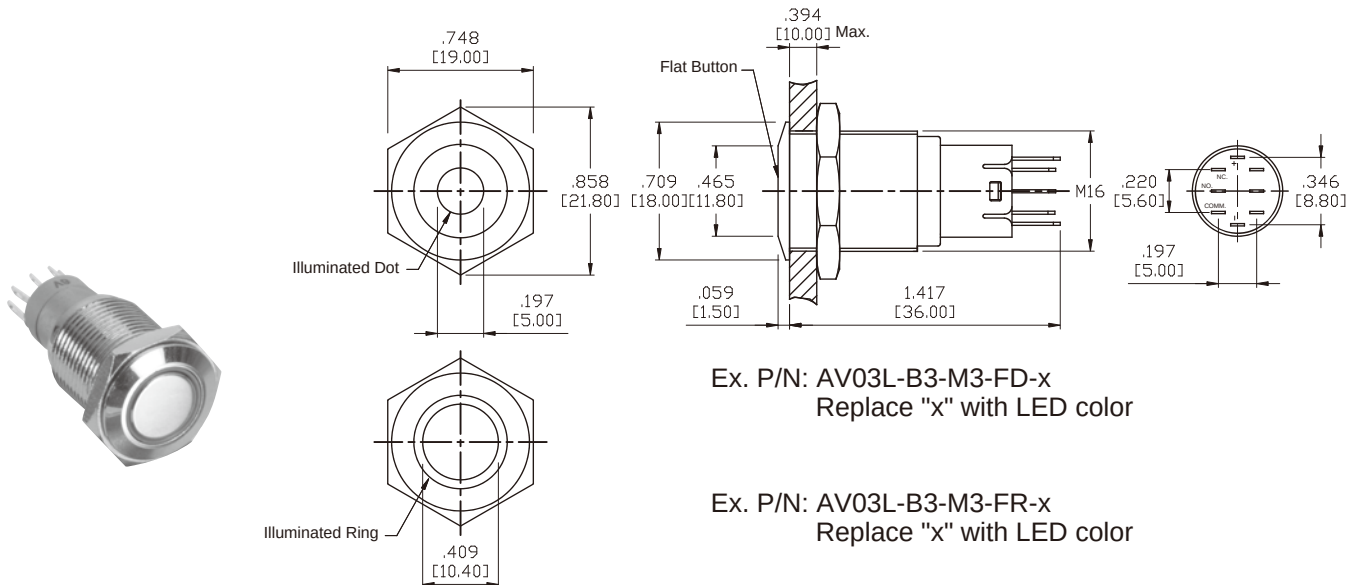


Model No.	DPDT Type	
12L	ON	MOM

Schematic

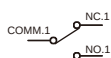


Illuminated Latching $\phi 16$ mm, Quick Connect



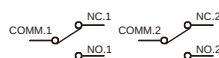
Model No.	SPDT Type	
03L	ON	ON

Schematic

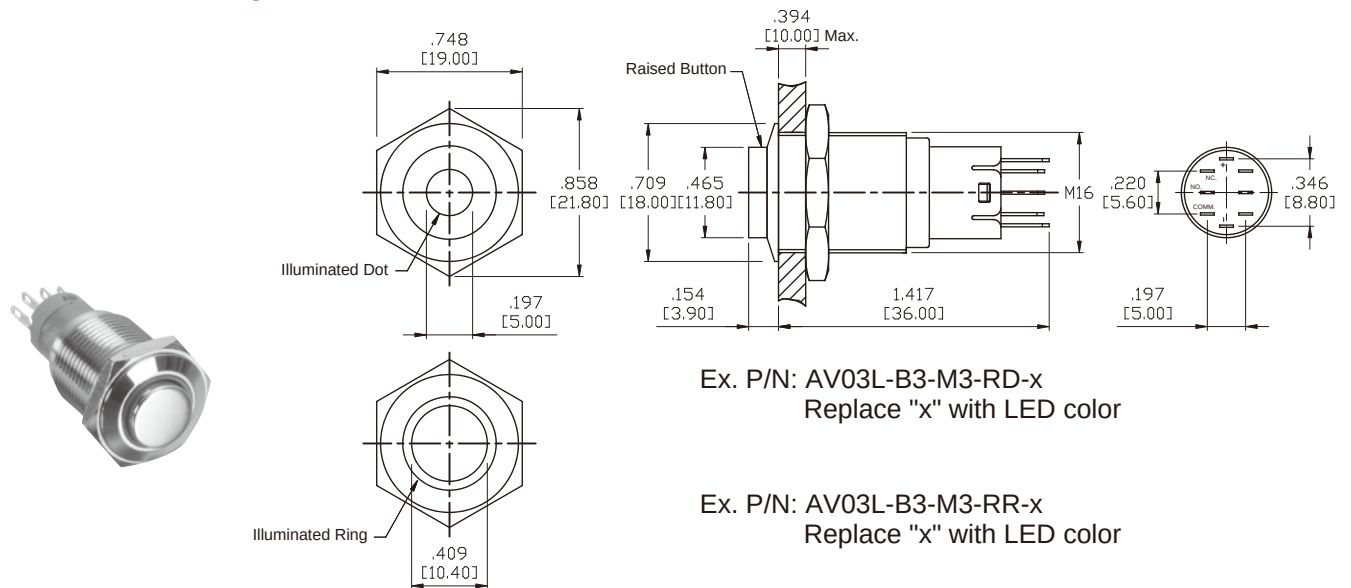


Model No.	DPDT Type	
13L	ON	ON

Schematic



Illuminated Latching $\phi 16$ mm, Quick Connect



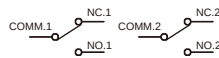
Model No.	SPDT Type	
03L	ON	ON

Schematic



Model No.	DPDT Type	
13L	ON	ON

Schematic



BUSHING & BUTTON MATERIAL OPTIONS

Code	Bushing Size	Bushing & Button Material	MOQ
B3	$\phi 16$ mm	Nickel plated brass with varnished polished	100 PCS
B31	$\phi 16$ mm	Gold plated brass with varnished polished	2,000 PCS
B02,B12,B22,B32	$\phi 25,22,19,16$ mm	Stainless steel with varnished polished	100 PCS
B23,B33	$\phi 16$ mm	Zinc alloy with black nickel plated	2,000 PCS

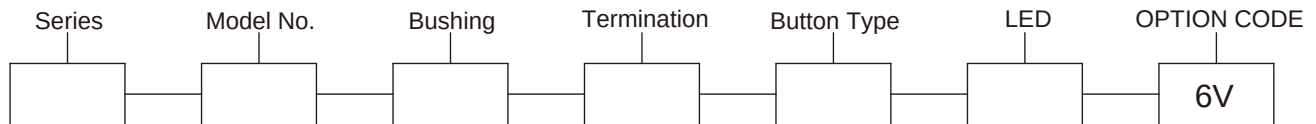
LED COLOR OPTIONS

Code	Button Color
R	Red
G	Green
Y	Yellow
O	Orange
B	Blue
W	White

OPTION CODE

Code	LED Voltage and Consumption
6V	6V (AC/DC Compatible) 15mA
12V	12V (AC/DC Compatible) 15mA
24V	24V (AC/DC Compatible) 15mA
36V	36V (AC/DC Compatible) 15mA
110V	110V (AC/DC Compatible) 5mA
220V	220V (AC/DC Compatible) 5mA

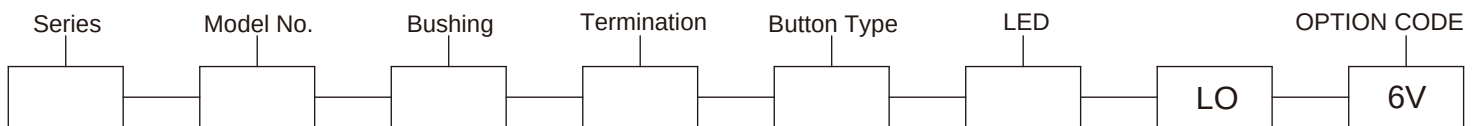
HOW TO ORDER



B0 - Ø 25mm
 B1 - Ø 22mm
 B2 - Ø 19mm
 B3 - Ø 16mm

F - Flat
 R - Raised
 FD - Flat Dot (illuminated)
 FR - Flat Ring (illuminated)
 RD - Raised Dot (illuminated)
 RR - Raised Ring (illuminated)

LED Voltage



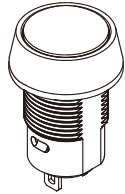
B2 - Ø 19mm

FD - Flat Dot (illuminated)
 FR - Flat Ring (illuminated)

Only required for Long Case model

LED Voltage

NEW !
IP67 Front Panel
Protection



SPECIFICATIONS:

CONTACT RATING: Refer to "Contact Material Options" for more info.
ELECTRICAL LIFE: 200,000 cycles @ 100mA 24VDC.
CONTACT RESISTANCE: 50m-ohms max. initial @2-4VDC
100mA for gold over silver plated contacts.
INSULATION RESISTANCE: 1G-ohms min.
DIELECTRIC STRENGTH: 1,000VAC for 1 minute.
OPERATING TEMPERATURE: -30°C to +85°C.

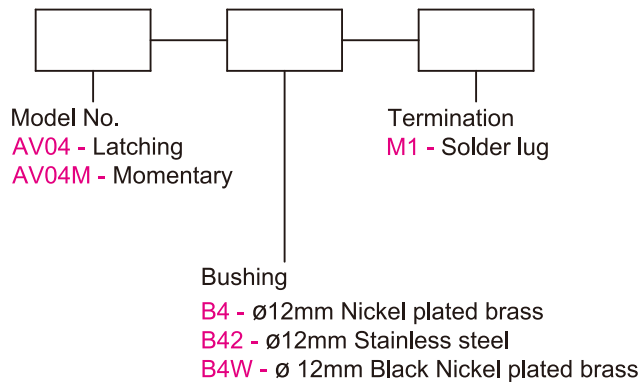
MATERIALS:

BUTTON: Stainless steel or brass.
BODY: Stainless steel or brass with threaded bushing.
BASE: NYLON 6/6 (UL 94V-0).
TERMINAL & CONTACT: Gold over silver plated.
TERMINAL SEAL: Epoxy.

Specifications and Dimensions subject to change

If your preferred product configuration is not shown, please contact our sales representative for custom design.

HOW TO ORDER SYSTEM



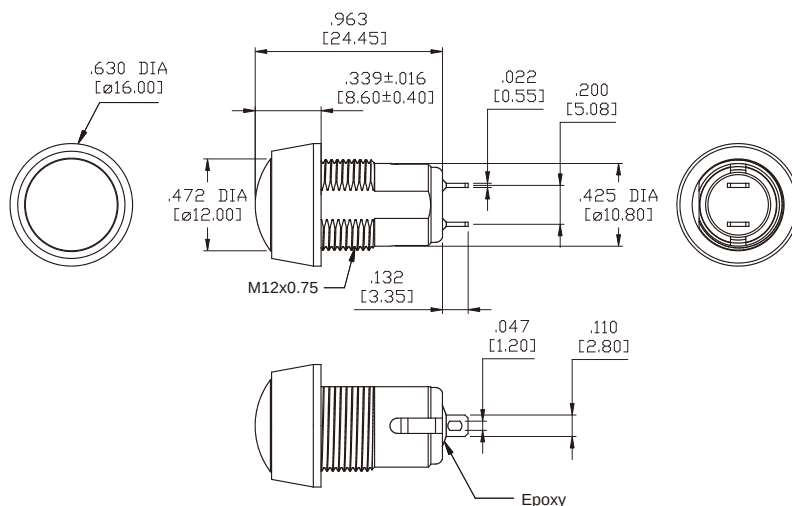
SPST



Schematic

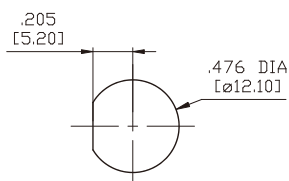


Model No.	Switching Position		
AV04	OFF	NONE	ON
AV04M	OFF	NONE	MOM
Term. Comm.	OPEN	OPEN	1-3



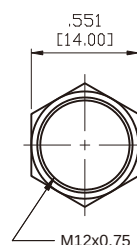
PANEL MOUNTING

M12 x 0.75 FLAT-CUT THD. BUSHING

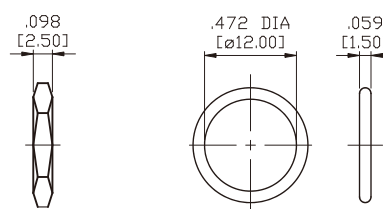


HARDWARE

NUT



O-RING



CONTACT MATERIAL OPTIONS

Coding	Contact Material	Terminal Plating	Rating	Agency Approvals
G	Gold over silver ¹	Gold over silver ¹	100mA 24VDC 2A 125VAC	

1. Movable Contact / Terminals: Copper alloy, silver plated with outer layer in gold plating

Toggle

Rocker

Slide

Pushbutton

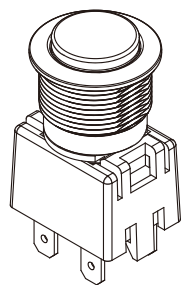
AV

Rotary

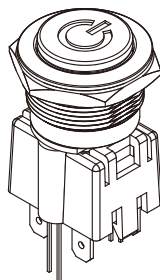
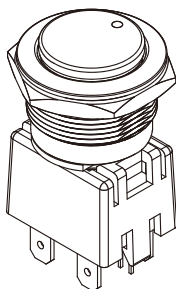
Tact

Touch Key

Miscellaneous



NEW !
IP66 Front Panel
Protection



SPECIFICATIONS:

CONTACT RATING: 16A 125/250VAC.
ELECTRICAL LIFE: 10,000 cycles min. at full load.
CONTACT RESISTANCE: 50m-ohms max. initial @2-4VDC
100mA for silver plated contacts.
INSULATION RESISTANCE: 500VDC 100M-ohms min.
DIELECTRIC STRENGTH: 1,500VAC for 1 minute.
OPERATING TEMPERATURE: -30°C to +85°C.

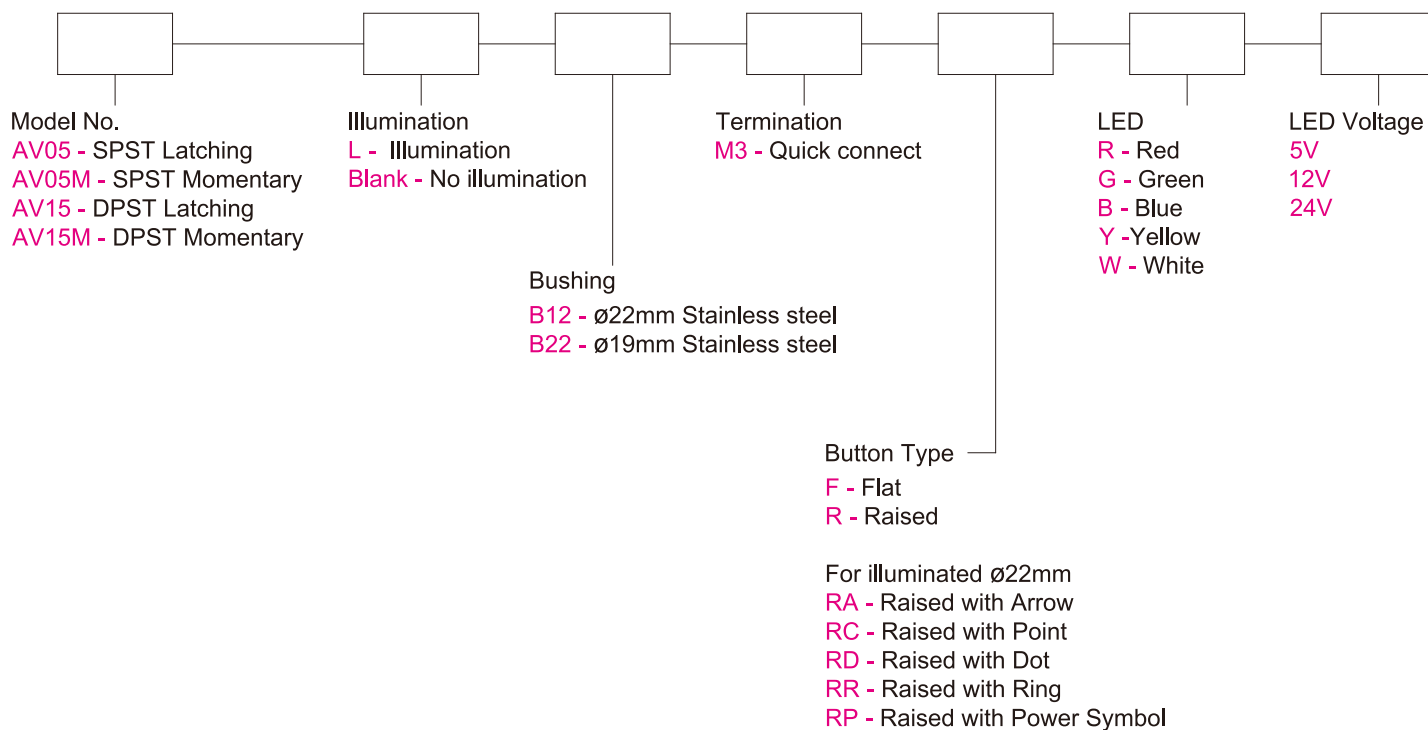
MATERIALS:

BUTTON: Stainless steel.
BUSHING: Stainless steel with threaded bushing.
BODY: NYLON 6/6 (UL 94V-0).
CONTACT: Silver alloy.
TERMINAL: Brass silver plated.

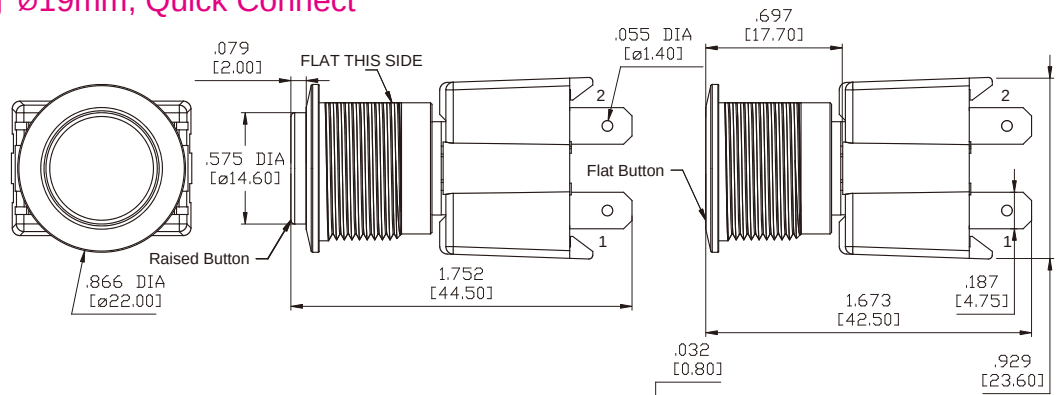
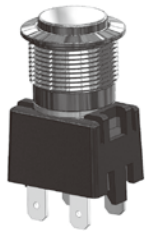
Specifications and Dimensions subject to change

If your preferred product configuration is not shown, please contact our sales representative for custom design.

HOW TO ORDER SYSTEM

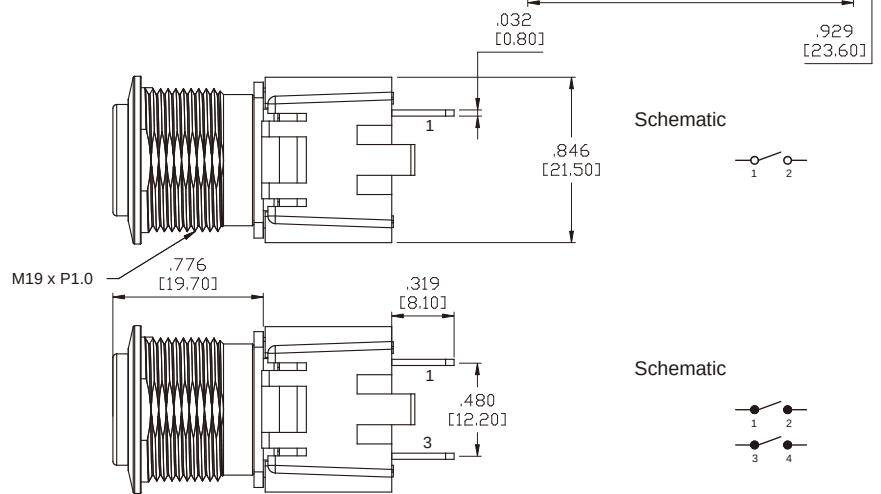


Non-latching & Latching Ø19mm, Quick Connect



Model No.	SPST Switching Position		
AV05	OFF	NONE	ON
AV05M	OFF	NONE	MOM
Term. Comm.	OPEN	OPEN	1-2

Model No.	DPST Switching Position		
AV15	OFF	NONE	ON
AV15M	OFF	NONE	MOM
Term. Comm.	OPEN	OPEN	1-2, 3-4



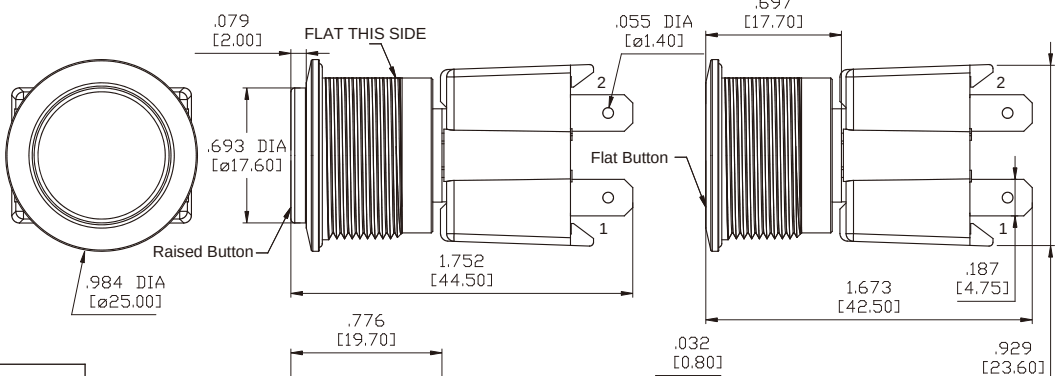
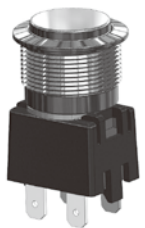
Schematic



Schematic

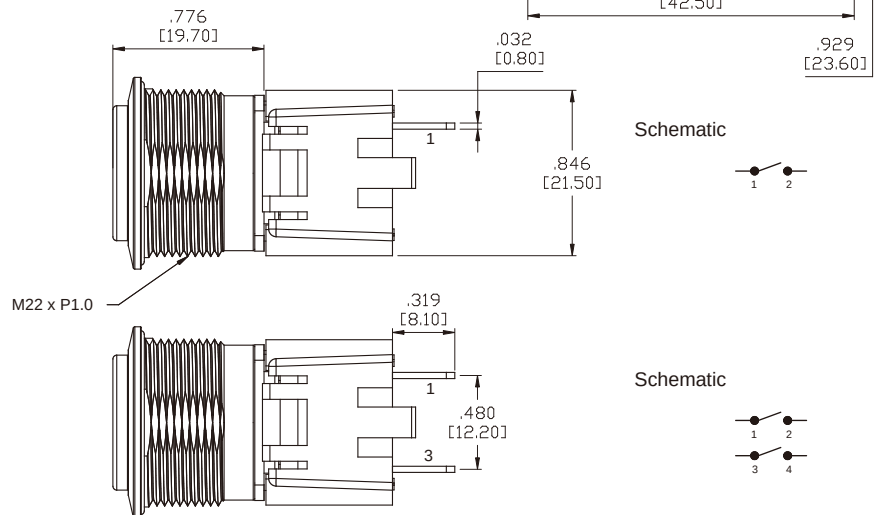


Non-latching & Latching Ø22mm, Quick Connect



Model No.	SPST Switching Position		
AV05	OFF	NONE	ON
AV05M	OFF	NONE	MOM
Term. Comm.	OPEN	OPEN	1-2

Model No.	DPST Switching Position		
AV15	OFF	NONE	ON
AV15M	OFF	NONE	MOM
Term. Comm.	OPEN	OPEN	1-2, 3-4



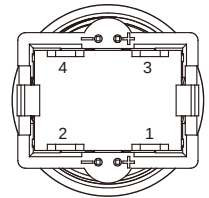
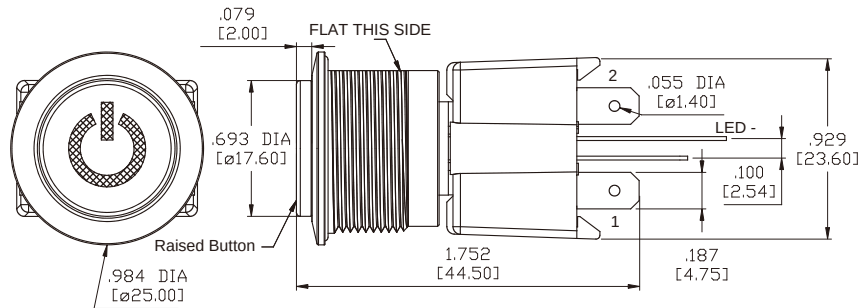
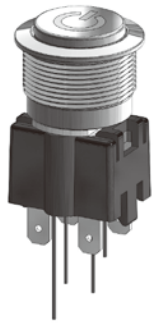
Schematic



Schematic

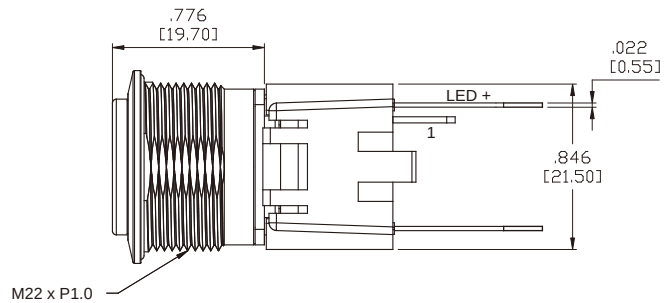


Illuminated Non-latching & Latching $\varnothing 22\text{mm}$, Quick Connect

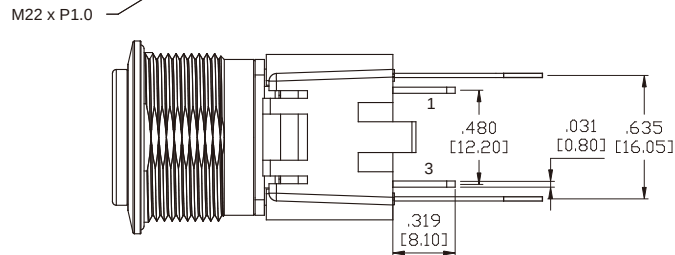
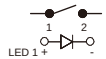


Model No.	SPST Switching Position		
AV05	OFF	NONE	ON
AV05M	OFF	NONE	MOM
Term. Comm.	OPEN	OPEN	1-2

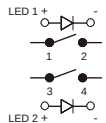
Model No.	DPST Switching Position		
AV15	OFF	NONE	ON
AV15M	OFF	NONE	MOM
Term. Comm.	OPEN	OPEN	1-2, 3-4



Schematic



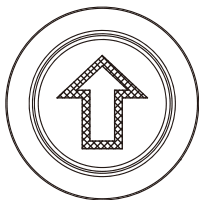
Schematic



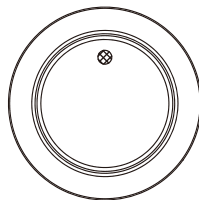
BUTTON TYPE

For illuminated $\varnothing 22\text{mm}$ raised button

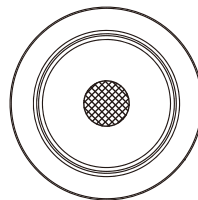
RA



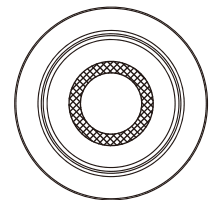
RC



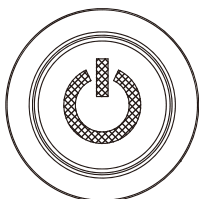
RD



RR

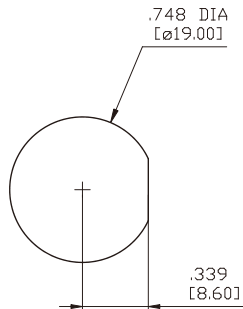


RP

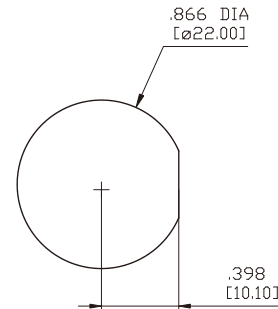


PANEL MOUNTING

M19 x 1.0 FLAT-CUT THD. BUSHING



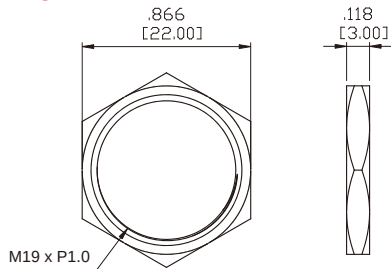
M22 x 1.0 FLAT-CUT THD. BUSHING



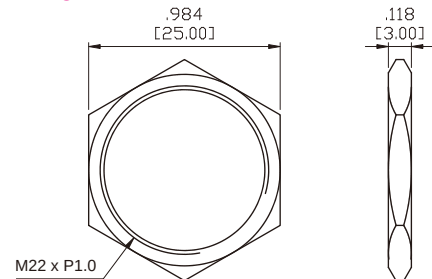
HARDWARE

NUT

M19 bushing

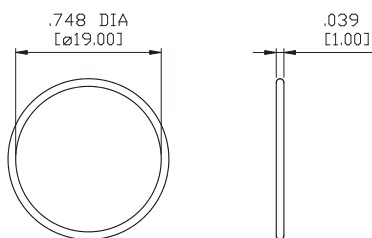


M22 bushing

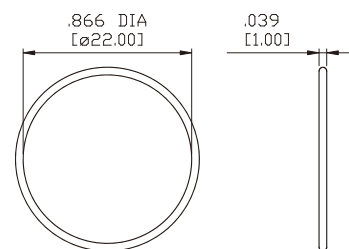


O-RING

M19 bushing



M22 bushing



SPECIFICATIONS:

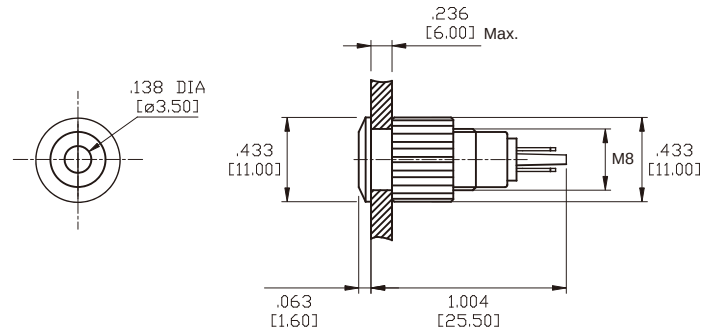
VOLTAGE RANGE: Max. 36V.
RATED CURRENT: 15mA.
DIELECTRIC STRENGTH: 1,100V RMS 50~60Hz.
OPERATING TEMPERATURE: -20°C to +55°C
IP CLASS: IP67 front panel protection.
TORQUE: 5~14Nm max. applied to nut.

MATERIALS:

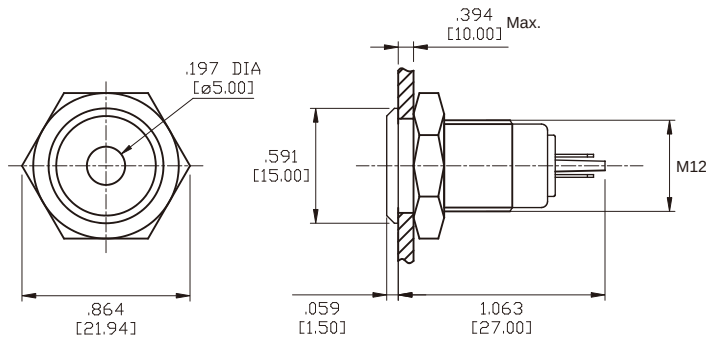
LED COVER: PC.
BODY: Brass nickel plated (N).
BASE: PBT.
ILLUMINANT: LED.

Specifications and Dimensions subject to change

NI-04 Indicator



NI-05 Indicator



LED & VOLTAGE OPTIONS

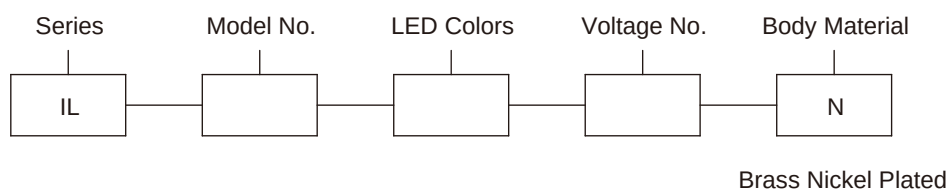
LED Colors

Code	Color
R	Red
G	Green
Y	Yellow
O	Orange
B	Blue
W	White

Voltage

Code	Voltage
2	6V
3	12V
4	24V

HOW TO ORDER



SPECIFICATIONS:

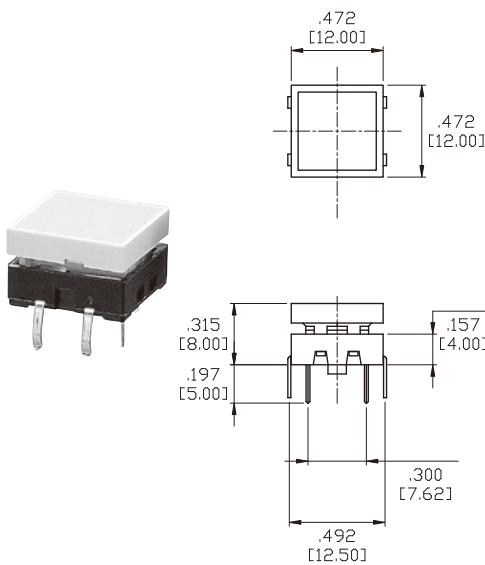
OPERATING TEMPERATURE: -25°C ~ +60°C.
AMBIENT HUMIDITY: 85%RH max.
CONTACT ARRANGEMENT: SPST
CURRENT RATING: 50mA 12VDC.
LED RATING: 20mA 6V max.
CONTACT RESISTANCE: 100m-ohms max (initial).
INSULATION RESISTANCE: 100M-ohms min.
OPERATING FORCE: 300±50gf max.
TOTAL TRAVEL: 0.30mm±0.10mm.
OPERATING LIFE: 5,000,000 cycles min.
SOLDERING: 260°C @ 3 seconds.

MATERIALS:

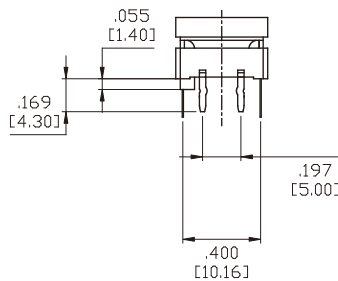
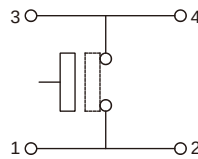
CAP: PC.
COVER: PC.
BASE: PA.
HOUSING: PC.
LAMP TERMINAL: PBS with Au plated.
ACT DOME: PBS with Au plated.
TERMINAL: Brass with Au plated.
LED: Surface mount chip LED.

Specifications and Dimensions subject to change

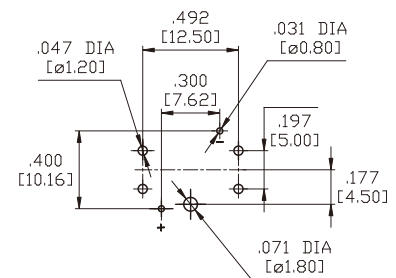
LP-12



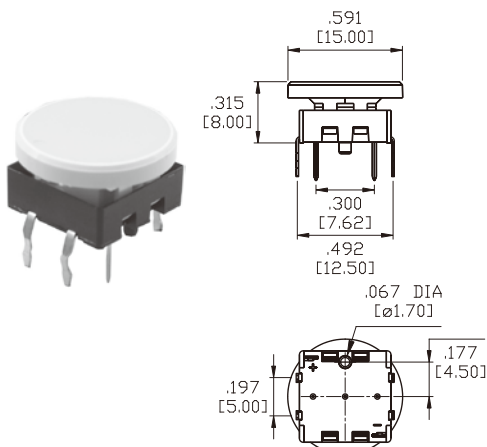
Contact Configuration



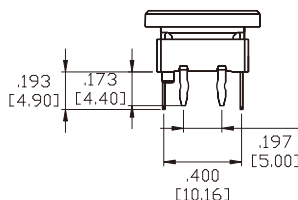
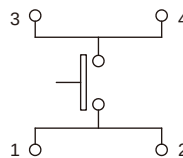
P.C.MOUNTING



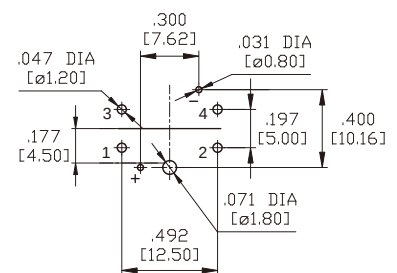
LP-12R



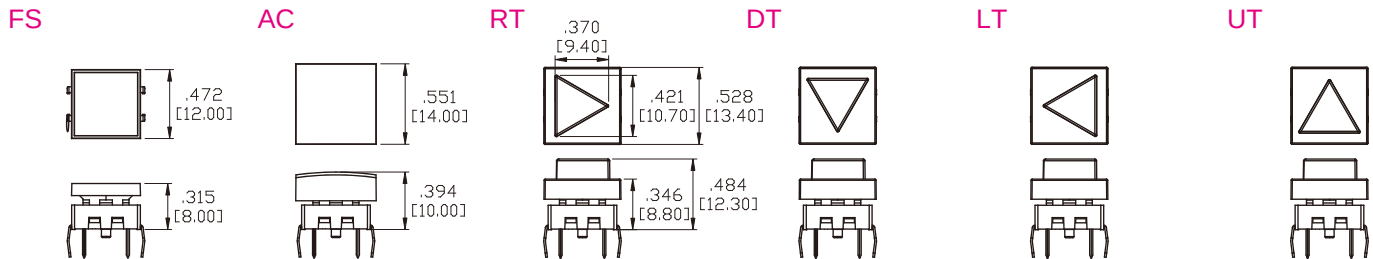
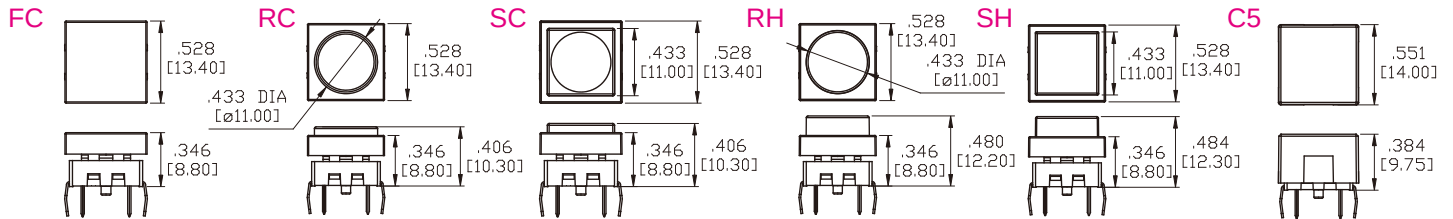
Contact Configuration



P.C.MOUNTING



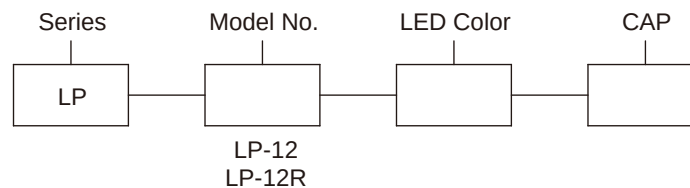
CAP OPTIONS



LED COLORS

Code	LED Color
R	Red
G	Green
Y	Yellow
B	Blue
W	White

HOW TO ORDER



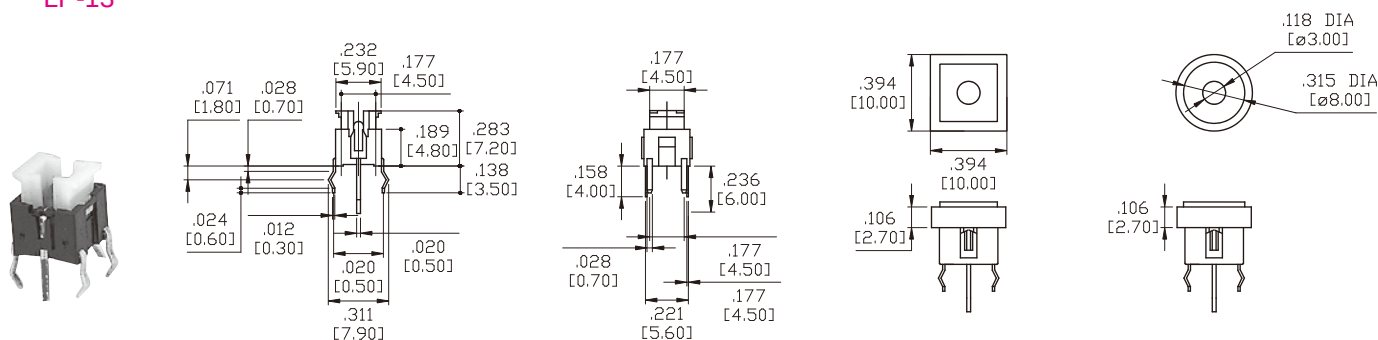
SPECIFICATIONS:

OPERATING TEMPERATURE: -20°C ~ +70°C.
 AMBIENT HUMIDITY: 85%RH max.
 CONTACT ARRANGEMENT: SPST
 RATED VOLTAGE AND CURRENT: 12VDC 50mA.
 LED RATING: 20mA 4V.
 CONTACT RESISTANCE: 100m-ohms max (initial).
 INSULATION RESISTANCE: 100M-ohms min.
 DIELECTRIC STRENGTH: 250VAC for 1 min.
 OPERATING FORCE: 200±50gf max.
 TOTAL TRAVEL: 0.25±0.10mm.
 OPERATING LIFE: 100,000 cycles min.
 MALFUNCTION DURABILITY: 10 to 55 Hz 0.75mm,
 double amplitude during 2 hrs.

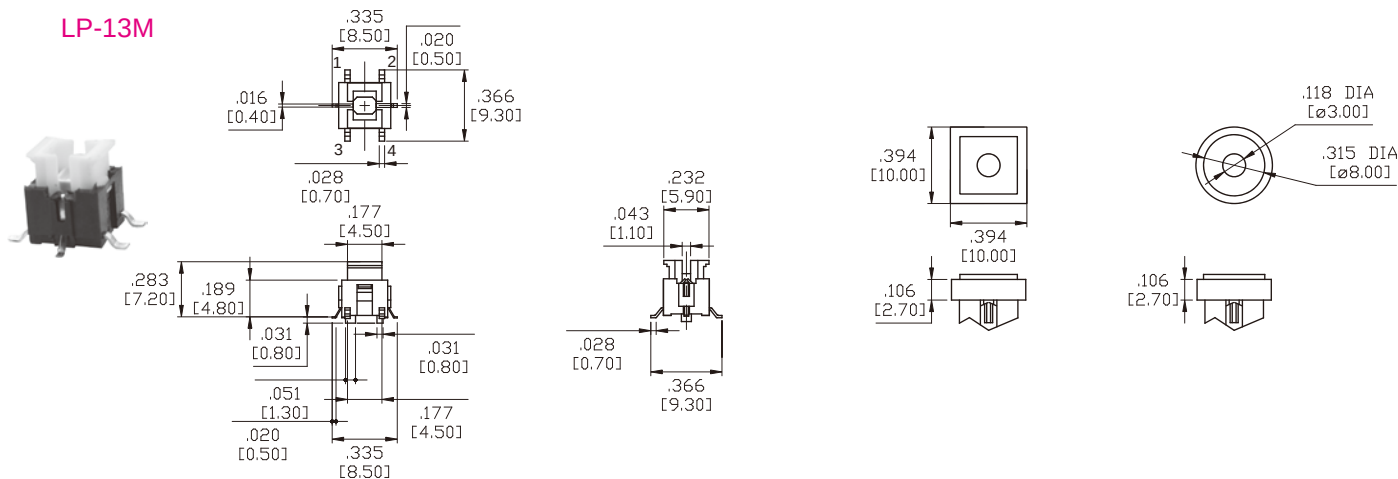
MATERIALS:

CAP: ABS.
 HOUSING: Nylon66+15%gf.
 BASE: PBT.
 MOVABLE BLADE: SUS S01 + AG.
 TERMINAL: Brass + AG.

LP-13



LP-13M



HOUSING & COLOR OPTIONS



Code

Housing Model

A



B



E

Without Housing

Code

Color

5

Gray

6

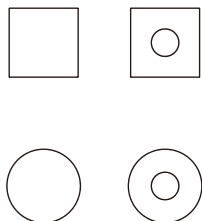
Black

0

Without Housing



CAP & COLOR OPTIONS



Code	CAP Model
A	 Without LED
B	 With LED
C	 Without LED
D	 With LED
E	Without LED

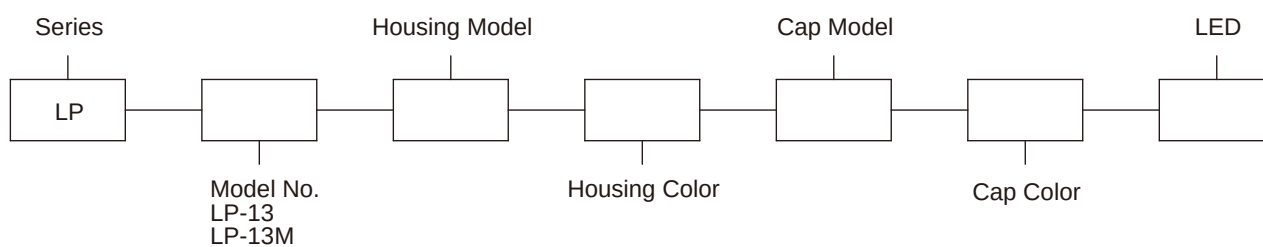
Code	Color
1	Red
2	Green
3	Orange
4	Ivory
5	Gray
6	Black
7	Blue
0	Without CAP

LED COLORS

Code	LED Color
1	Red
2	Green
3	Orange
0	Without LED

Code	LED Color
7	Blue
8	White

HOW TO ORDER



SPECIFICATIONS:

CONTACT RATING: 100mA 30VDC (LPA-M/A).
50mA 12VDC (LPA-T).
ELECTRICAL LIFE: 10,000 cycles (LPA-M/A).
800,000 cycles (LPA-T).
CONTACT RESISTANCE: 100m-ohms max (initial).
INSULATION RESISTANCE: 500VDC 100M-ohms min.
OPERATING TEMPERATURE: 10°C ~ +60°C.
OPERATING FORCE: 200±80gf max. (LPA-M/A).
180±50gf max. (LPA-T).
TOTAL TRAVEL: 2.50mm max. lock 1.50mm (LPA-M/A).
0.30mm±0.20mm (LPA-T).
CIRCUIT: DPDT (LPA-M/A), SPST (LPA-T).

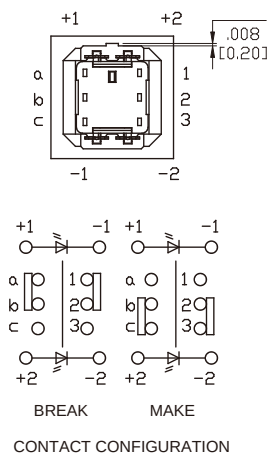
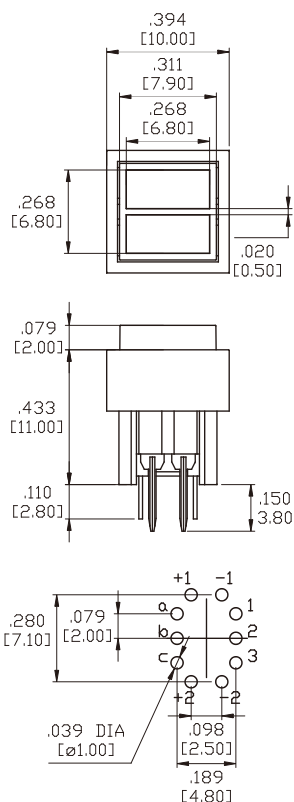
MATERIALS:

CAP: PC or ABS.
CAP LENS: PC.
HOUSING: PA.
CONTACT: PBS Ag plated (LPA-M/A).
ACT DOME: SUS with Ag plating (LPA-T).
LED TERMINAL: PBS with Au plated.
TERMINAL: Brass Ag plated.

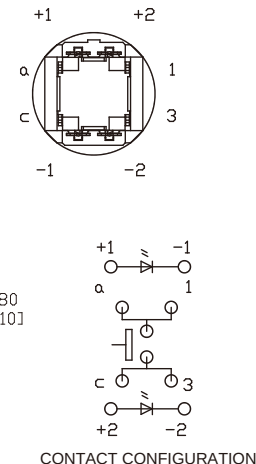
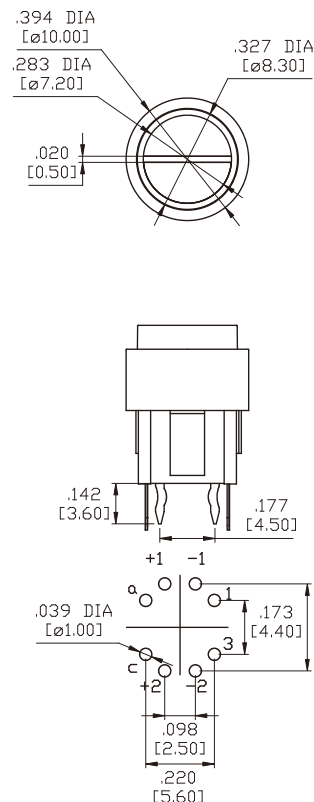
Specifications and Dimensions subject to change

LPA-M MOMENTARY

LPA-A ALTERNATE



LPA-T TACTILE



Drawing Scale: 2 / 1

HOUSING & COLOR OPTIONS

Code	Housing Model
A	Square
B	Round

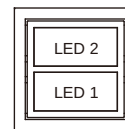
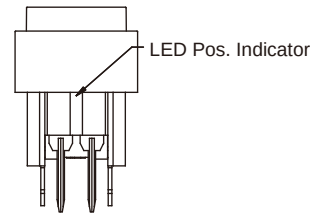
CAP & COLOR OPTIONS

Code	CAP Model	
F		With LED
G		With LED

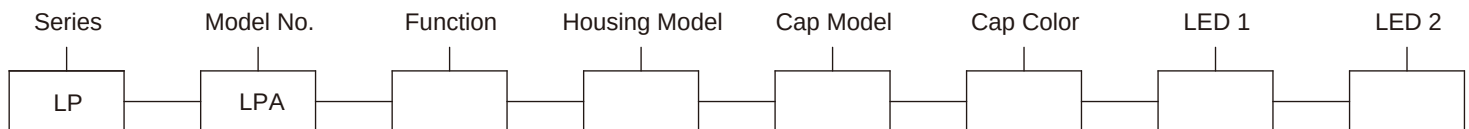
LED COLORS

Code	LED Color
R	Red
G	Green
Y	Yellow
B	Blue
W	White

Code	LED Color
0	Without LED



HOW TO ORDER



T - Tactile
 M - Momentary
 A - Alternate

SPECIFICATIONS:

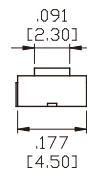
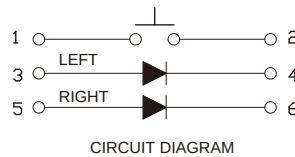
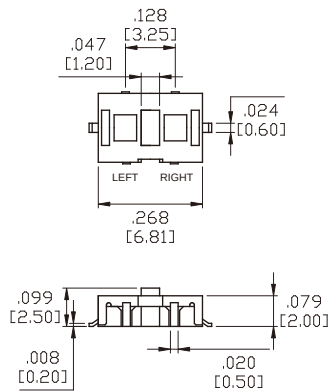
CONTACT RATING: 12VDC, 50mA max. 1VDC, 10uA min.
ELECTRICAL LIFE: 30,000 cycles.
CONTACT RESISTANCE: 500m-ohms max.
INSULATION RESISTANCE: 100VDC 100M-ohms min.
OPERATING FORCE: 160+75/-30 gf.
OPERATING TEMPERATURE: -20°C ~ +70°C.
FUNCTION: Momentary action.
CONTACT ARRANGEMENT: SPST, N.O.
IR SOLDERING: 240°C for 3sec. max.
PACKAGING: 2,900pcs per tape reel.

MATERIALS:

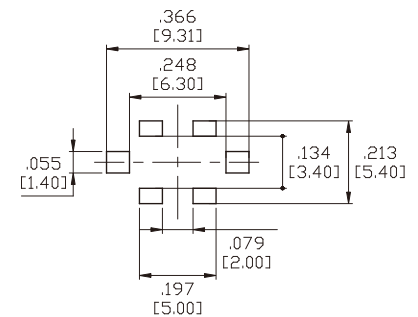
COVER: PA9T + GF.
ACTUATOR: LCP + GF.
BASE FRAME: LCP + GF.
TERMINAL: Silver plating.

Specifications and Dimensions subject to change

LP14



SURFACE MOUNTING

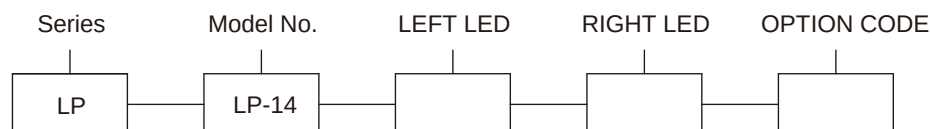


LED COLORS

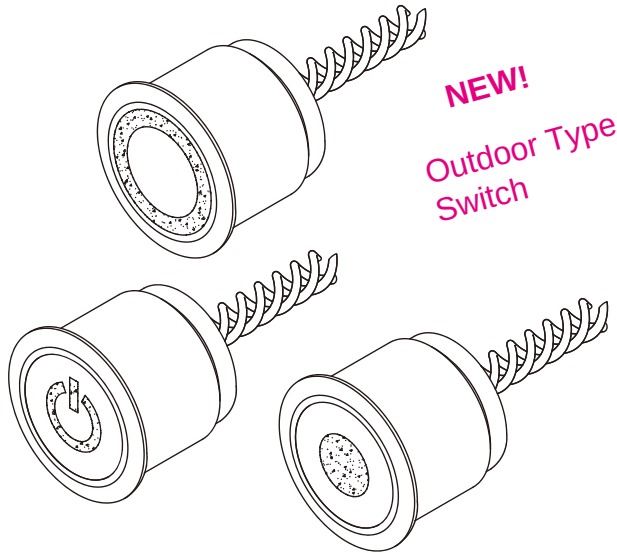
Code	LED Color
R	Red
G	Green
Y	Yellow
B	Blue
W	White

Code	LED Color
0	Without LED

HOW TO ORDER



U - Ultra LED Brightness



SPECIFICATIONS:

CONTACT RATING: 200mA 5/12/24VDC.
ELECTRICAL LIFE: 1 million cycles at full load.
CONTACT RESISTANCE: 20m-ohms max.
INSULATION RESISTANCE: 600VDC 10M-ohms min.
ESD RESISTANCE: $\pm 2KV$ (25 contact) / $\pm 8KV$ (25 air discharge)
OPERATING TEMPERATURE: $-40^{\circ}C$ to $+125^{\circ}C$.
IMPACT RESISTANCE PROTECTION: IK 02
WATER-PROOF PROTECTION: IP68
UV RESISTANCE: UVA / UVB

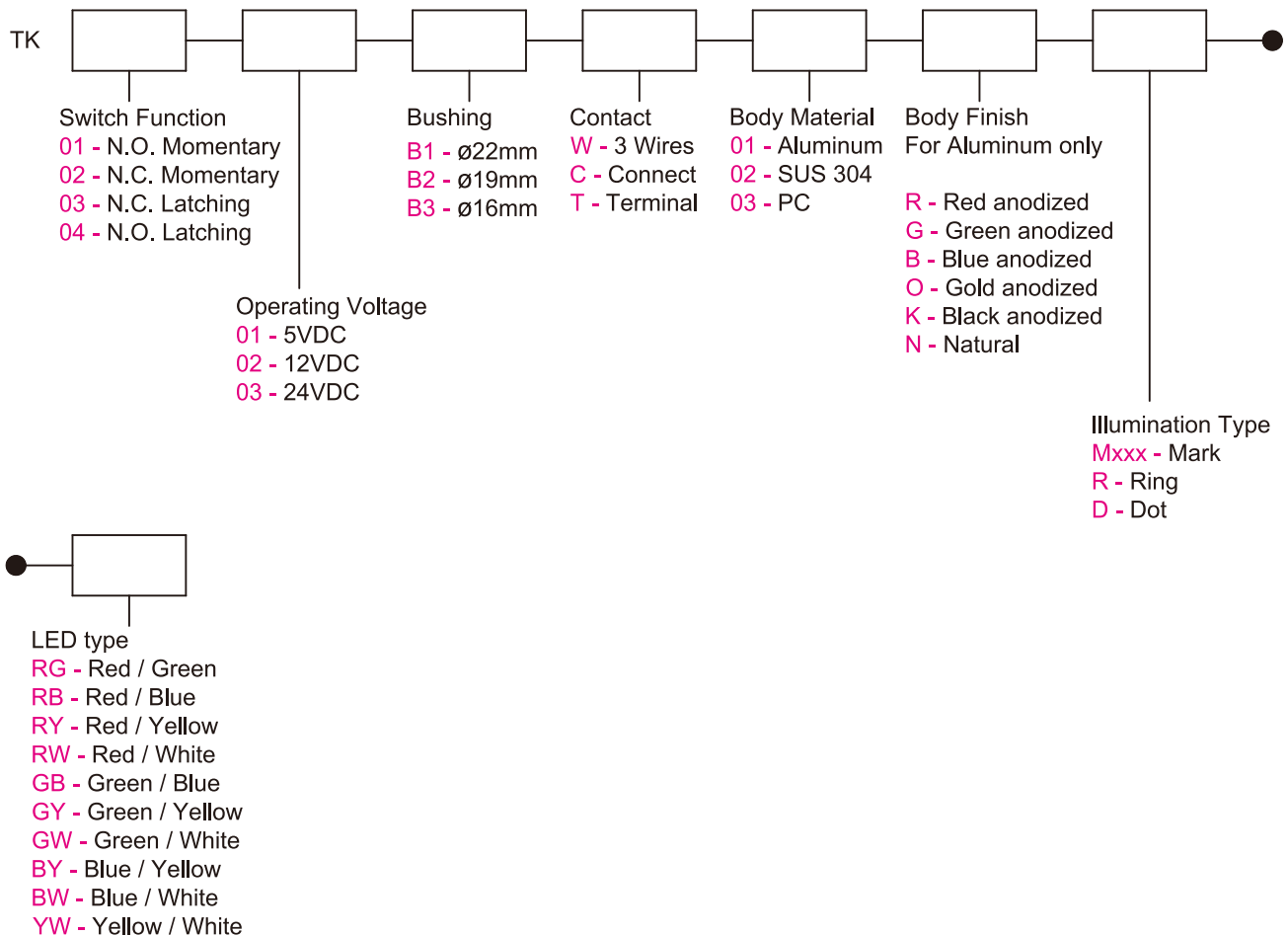
MATERIALS:

KEY: Stainless steel / PC.
LENS: PC (UL 94V-0).
BODY: Stainless steel / Aluminum / PC
CABLE: UL1095 24AWG.
TERMINAL: Brass silver plated.

Specifications and Dimensions subject to change

If your preferred product configuration is not shown, please contact our sales representative for custom design.

HOW TO ORDER SYSTEM



SWITCH FUNCTIONS

	Non-Illuminated	1 LED	2 LED
NC - MOM			
NO - MOM			
NC - NO Latching			
NO - NC Latching			

Toggle

Rocker

Slide

Pushbutton

AV

Rotary

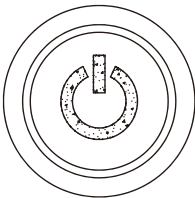
Tact

Touch Key

Miscellaneous

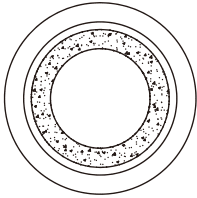
ILLUMINATION TYPES

Mark

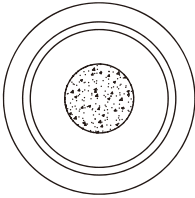


Mark options									
Ordering Code									
1	2	3	4	5	6	7	8	9	10
001	002	003	004	005	006	007	008	009	010
					OK	POWER	STOP	ON	OFF
011	012	013	014	015	016	017	018	019	020
021	022	023	024	025	026	027	028	029	030

Ring

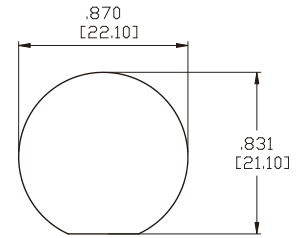
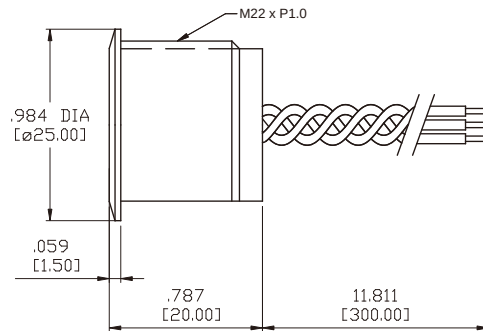
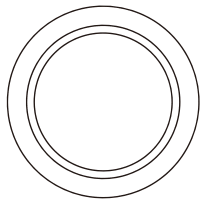


Circle



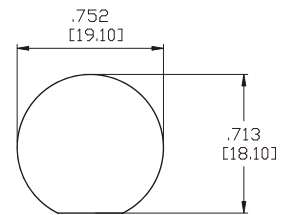
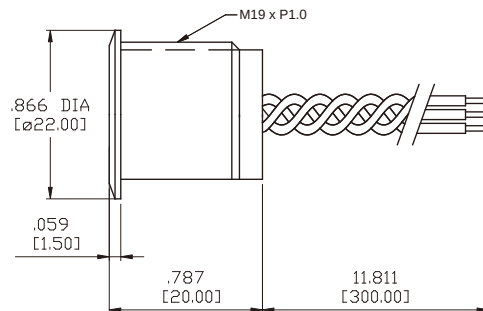
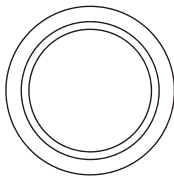
* Please consult factory for a customized illumination option.

Ø22mm Mounting



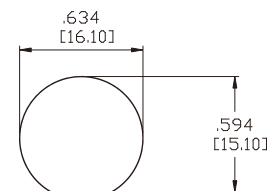
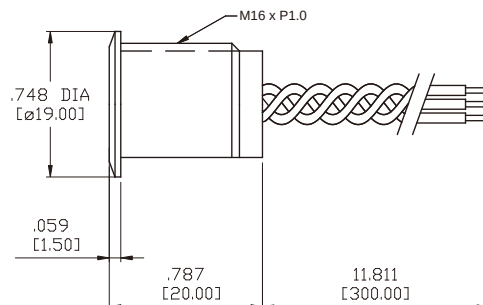
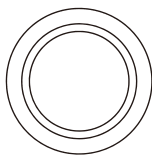
Panel Cutout

Ø19mm Mounting



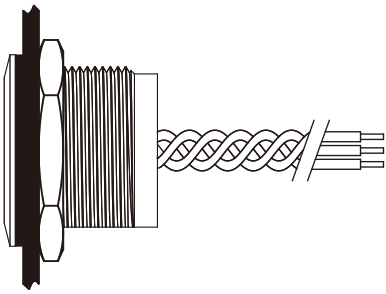
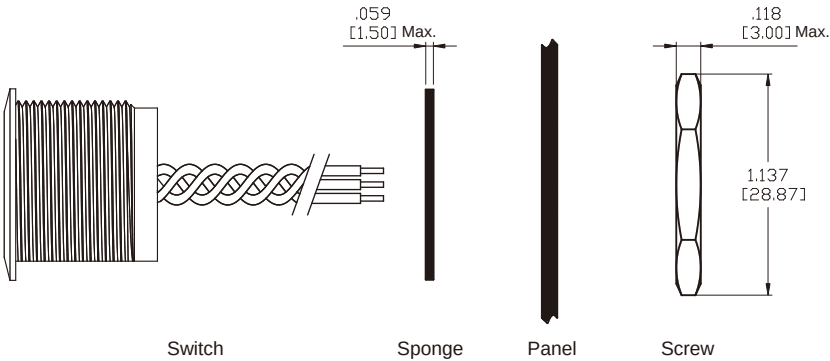
Panel Cutout

Ø16mm Mounting



Panel Cutout

Assembly Drawing



Panel Thickness (mm)	0.7~10.0t
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Cable Position		
INPUT	OUTPUT	GND
Red	White	Green



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