

Toggle

FX
Series

250V/125VAC
6A

Solder Lug
PCB Terminal

SP 2P
3P 4P

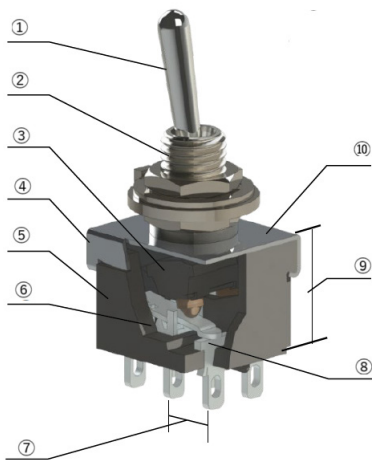
Outline of the Series

These compact, high-reliability switches are rated for 6A and designed for easy panel or PCB mounting. The lineup includes toggle, splash-proof toggle, rocker, and push-button switches.

Features of the Series

- 1 Six types of actuators are available to suit different panel designs and applications, including lock-lever types to prevent accidental operation and high-strength large bushing types (M12).
- 2 A built-in stopper mechanism prevents the knob from sinking.
- 3 Independent springs are used for each switching mechanism type to ensure contact stability.
- 4 Metal parts in the frame are minimized to maintain high insulation and safety.
- 5 UL94 V-0 flame-retardant resin with excellent heat resistance, electrical insulation, and mechanical strength is used.
- 6 A support mechanism ensures secure contact between the movable contact and the common terminal (fixed contact), reducing bounce.
- 7 The terminal pitch is 5 mm, suitable for both standard inch-pitch and metric-pitch PCBs.
- 8 Silver alloy is used for the contacts, offering high contact reliability and excellent arc resistance.
- 9 Switch height is standardized across all models from single-pole to 4-pole, optimized for PCB mounting.
- 10 The frame is made from stainless steel for superior corrosion resistance.

(All models comply with Directive 2011/65/EU of the European Parliament and of the Council (RoHS) regarding the restriction of the use of certain hazardous substances.)



Common Specifications

■ Ratings

Silver Alloy Contact	Gold Plating Contact	Load	Notes
AC125/250V 6A	0.4VA AC • DC20V MAX	Resistive Load	Load only with Resistive, Power Factor=1
DC30V 3A			

* A resistive load refers to a load consisting solely of resistance. In actual circuits, however, there may be inductive, capacitive, or motor loads, each of which can generate inrush current. Therefore, when selecting a switch, be sure to choose a rating with sufficient margin above the steady-state current.

For more details, please refer to "Useful Advices and Precautions on Usage of Operational Switches."



Packaging Quantity	
SP • DP • 3P	100 pcs
4P	50 pcs

Contact Resistance	10 mΩ Max. (DC2V 1A) (Initial value)
Withstanding Voltage	AC1,000V 1 Minute
Insulating Resistance	1,000MΩ Min. (DC500V)
Electrical Life	25,000 times (Functions <ON>-OFF-<ON> (G, S) Types are 5,000 times.)
Operating Temperature Range	-20°C ~ +70°C
Storage Temperature Range	-20°C ~ +70°C
Hand-soldering Conditions	350 ± 3°C within 3 sec.

* For products other than those listed above or for custom items, please contact us.

Product Designations

Series Name	Poles	Operational-part Type	Switch Functions	Current Capacity	Type of Terminals	Contact Materials
F	X		T	D	0	1

Poles	Symbol
1	(none)
2	(none)
3	3
4	4

Operational-part	Symbol
Toggle	T
Toggle for PCB Mount	H
Splash-proof Toggle	W

Contact Materials	Symbol
Silver Alloy	(none)
Gold Plating	G

* For use with micro-currents, please select gold-plated contacts. Silver contacts may result in unstable performance at low currents, as oxidation or sulfide films on the surface are not removed by arcing.

SwitchFunctions			Symbol	
The Opposite Side	Center	Key Thread Side	SP 3P	DP 4P
ON	-	ON	D	N
ON	OFF	ON	E	P
ON	-	<ON>	F	R
<ON>	OFF	<ON>	G	S
ON	OFF	<ON>	H	T
ON	ON	ON		PA

< > = Momentary

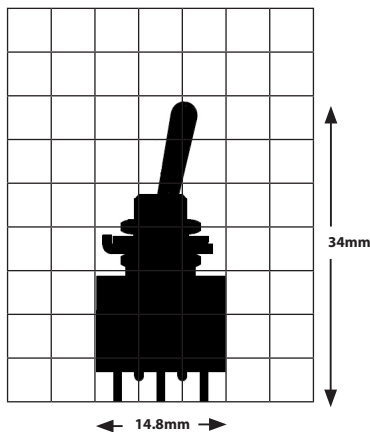
Type of Terminals	Symbol
Solder Lug	1
PCB Terminal	3

* PCB Terminal is available only for Toggle for PCB Mount (H).

Shape of Operational-part	Symbol
Standard Toggle	0
Large Toggle	1
Short Toggle	2
Long Toggle	3
Flat-lever Toggle	4
Lock-lever Toggle	5

* For Toggle for PCB Mount, only Type 0 is available.

Silhouette (FXTD01)



■ Dimensions of Terminals

F X ☐ ☐ ☐ ☐ ☒ ☐

1	3
Solder Lug	PCB Terminal

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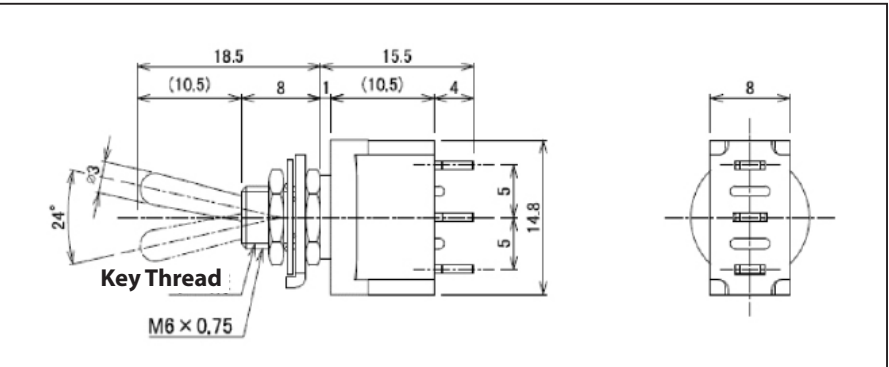
Solder Lug
PCB Terminal

SP 2 P
3 P 4 P

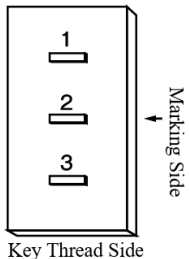
Switch Names, Functions, Terminal Diagram

Standard Toggle SP Solder Lug F X T 0 1 Shape of Operational-part

Product Name (SP)	Circuit	Functions <> = Momentary		
				
FXTD01	SPDT	ON 2-3	—	ON 2-1
FXTE01	SPDT	ON 2-3	OFF	ON 2-1
FXTF01	SPDT	ON 2-3	—	<ON> 2-1
FXTG01	SPDT	<ON> 2-3	OFF	<ON> 2-1
FXTH01	SPDT	ON 2-3	OFF	<ON> 2-1



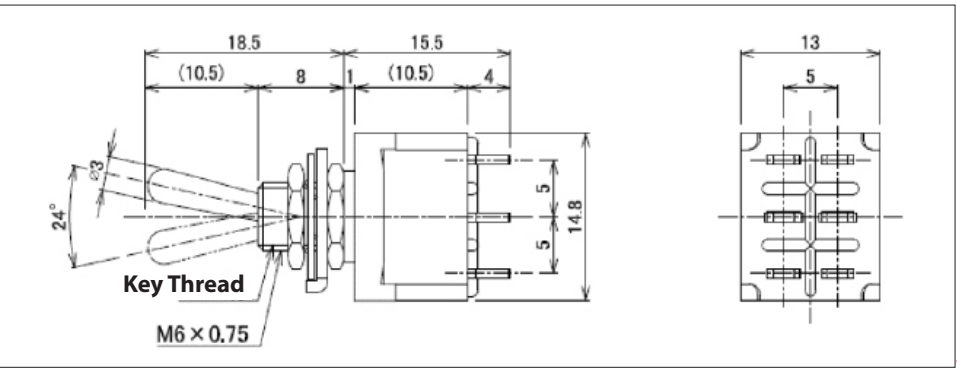
Terminal Diagram



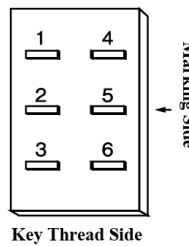
* Terminal Numbers are not indicated on the case.

Standard Toggle DP Solder Lug F X T 0 1 Shape of Operational-part

Product Name (DP)	Circuit	Functions <> はMomentary		
				
FXTN01	DPDT	ON 2-3 5-6	—	ON 2-1 5-4
FXTN01	DPDT	ON 2-3 5-6	OFF	ON 2-1 5-4
FXTN01	DPDT	ON 2-3 5-6	—	<ON> 2-1 5-4
FXTS01	DPDT	<ON> 2-3 5-6	OFF	<ON> 2-1 5-4
FXTT01	DPDT	ON 2-3 5-6	OFF	<ON> 2-1 5-4
FXTN01	SP3T	ON 2-3 5-6	ON 2-3 4-5	ON 2-1 5-4



Terminal Diagram



* Terminal Numbers are not indicated on the case.

Toggle

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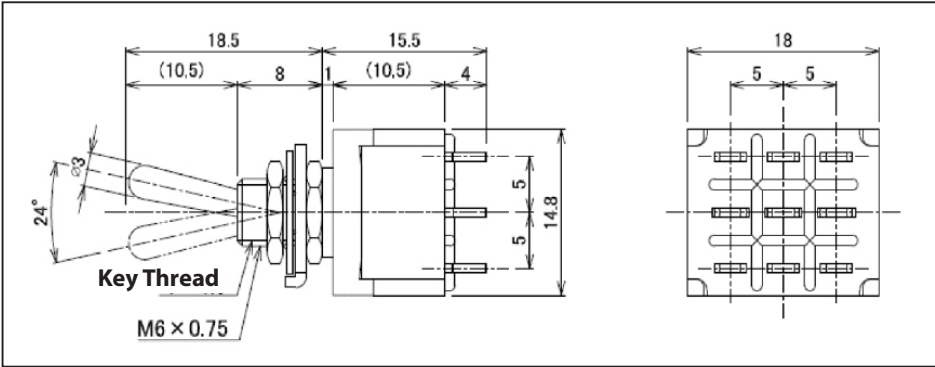
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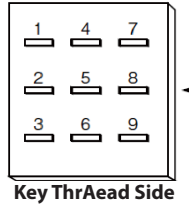
SP 2 P
3 P 4 P

Standard Toggle 3 P Solder Lug F X 3 T 0 1 Shape of Operational-part

Product Name (3P)	Circuit	Functions <> はMomentary		
				
FX3TD01	3PDT	ON 2-3 5-6 8-9	—	ON 2-1 5-4 8-7
FX3TE01	3PDT	ON 2-3 5-6 8-9	OFF	ON 2-1 5-4 8-7
FX3TF01	3PDT	ON 2-3 5-6 8-9	—	<ON> 2-1 5-4 8-7
FX3TG01	3PDT	<ON> 2-3 5-6 8-9	OFF	<ON> 2-1 5-4 8-7
FX3TH01	3PDT	ON 2-3 5-6 8-9	OFF	<ON> 2-1 5-4 8-7



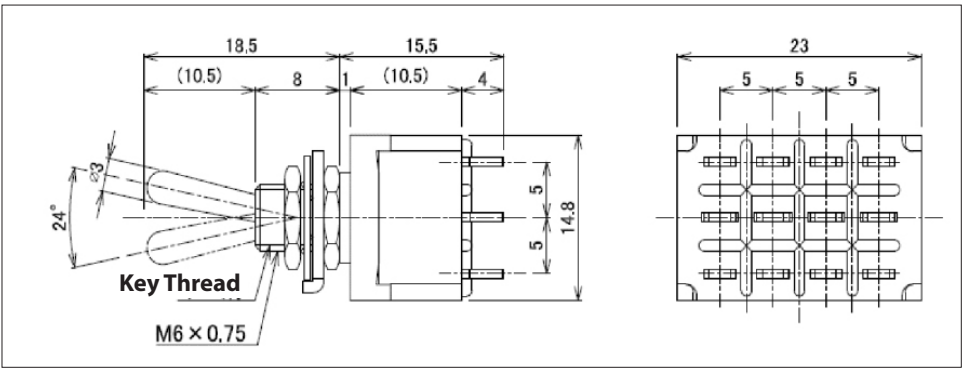
Terminal Diagram



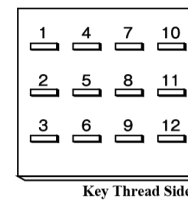
* Terminal Numbers are not indicated on the case.

Standard Toggle 4 P Solder Lug F X 4 T 0 1 Shape of Operational-part

Product Name (4P)	Circuit	Functions <> はMomentary		
				
FX4TN01	4PDT	ON 2-3 5-6 8-9 11-12	—	ON 2-1 5-4 8-7 11-10
FX4TP01	4PDT	ON 2-3 5-6 8-9 11-12	OFF	ON 2-1 5-4 8-7 11-10
FX4TR01	4PDT	ON 2-3 5-6 8-9 11-12	—	<ON> 2-1 5-4 8-7 11-10
FX4TS01	4PDT	<ON> 2-3 5-6 8-9 11-12	OFF	<ON> 2-1 5-4 8-7 11-10
FX4TT01	4PDT	ON 2-3 5-6 8-9 11-12	OFF	<ON> 2-1 5-4 8-7 11-10
FX4TPA01	DP3T	ON 2-3 5-6 8-9 11-12	ON 1-2 5-6 8-9 11-10	ON 2-1 5-4 8-7 11-10



Terminal Diagram



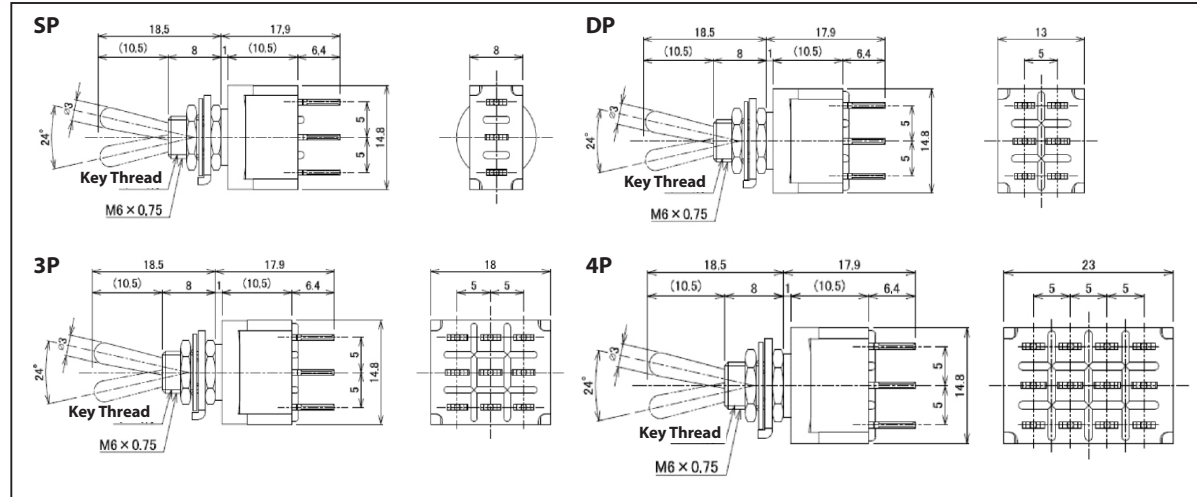
* Terminal Numbers are not indicated on the case.

* For products other than those listed above or for custom items, please contact us.

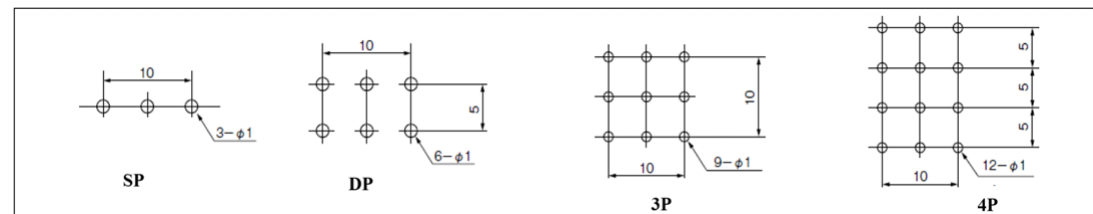
* For products other than those listed above or for custom items, please contact us.

Standard Toggle PCB Terminal

F	X		T		0	3	
---	---	--	---	--	---	---	--

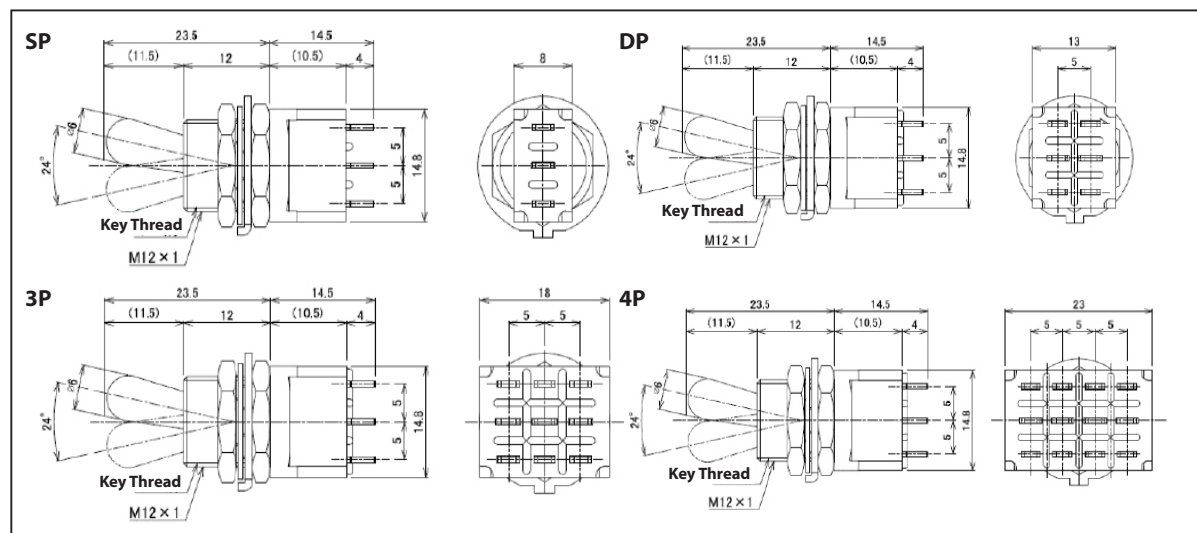


■ Dimensions of Mounting Holes for PCB



Large Toggle Solder Lug/ PCB Terminal (The below charts are for Solder Lug only.)

F	X		T		1		
---	---	--	---	--	---	--	--



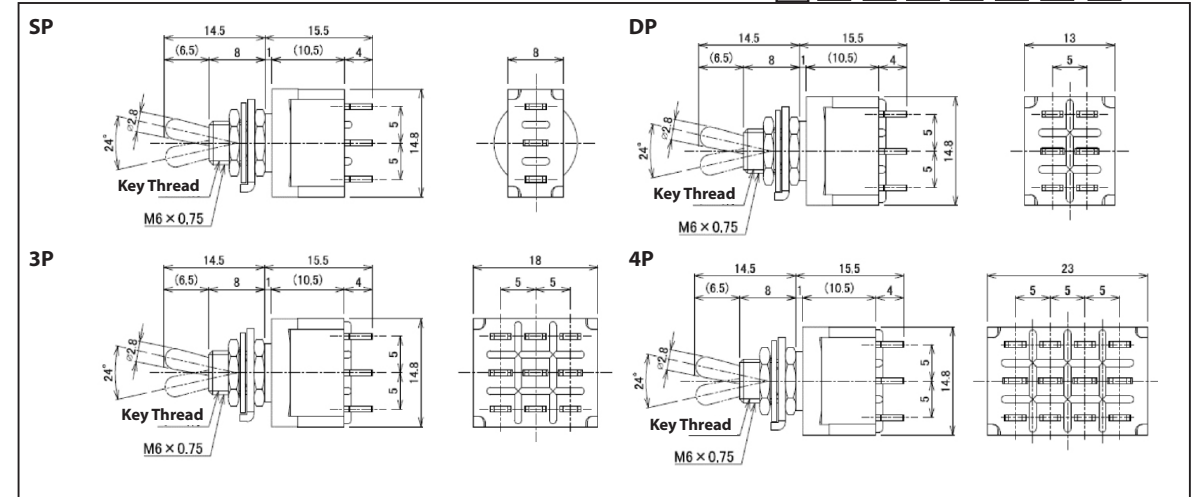
■ Shape of Operational-part



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Short Toggle Solder Lug/ PCB Terminal (The below charts are for Solder Lug only.)

F	X		T		2		
---	---	--	---	--	---	--	--

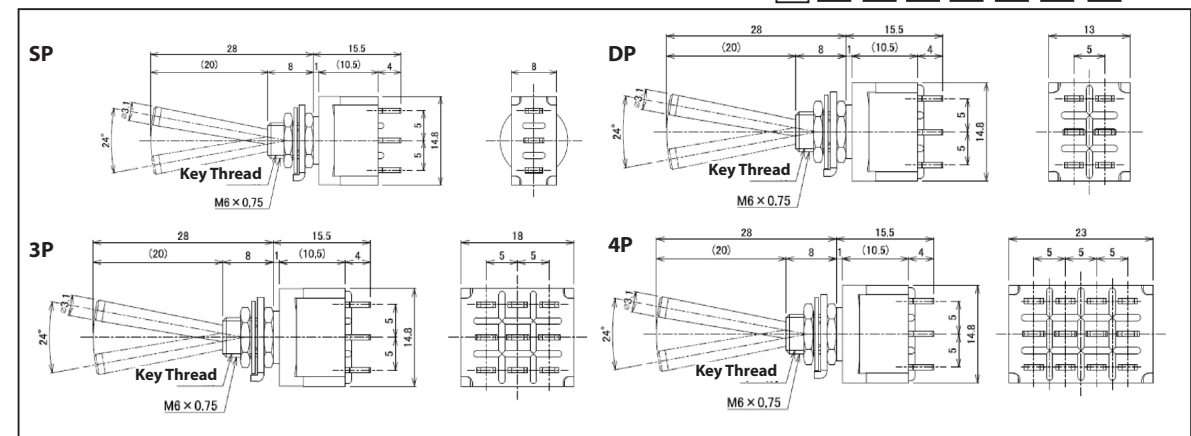


■ Shape of Operational-part



Long Toggle Solder Lug/ PCB Terminal (The below charts are for Solder Lug only.)

F	X		T		3		
---	---	--	---	--	---	--	--



■ Shape of Operational-part



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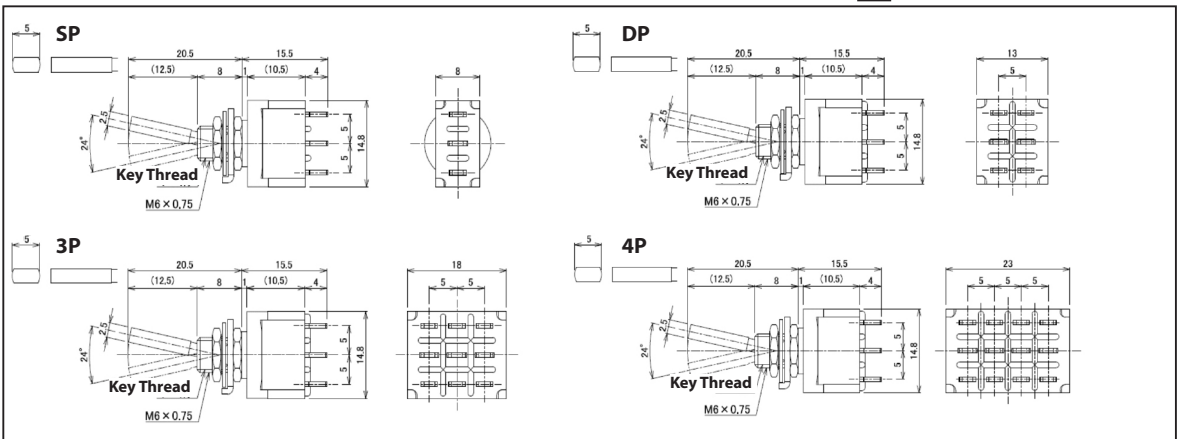
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Flat-lever Toggle Solder Lug/ PCB Terminal (The below charts are for Solder Lug only.)

F X T 4

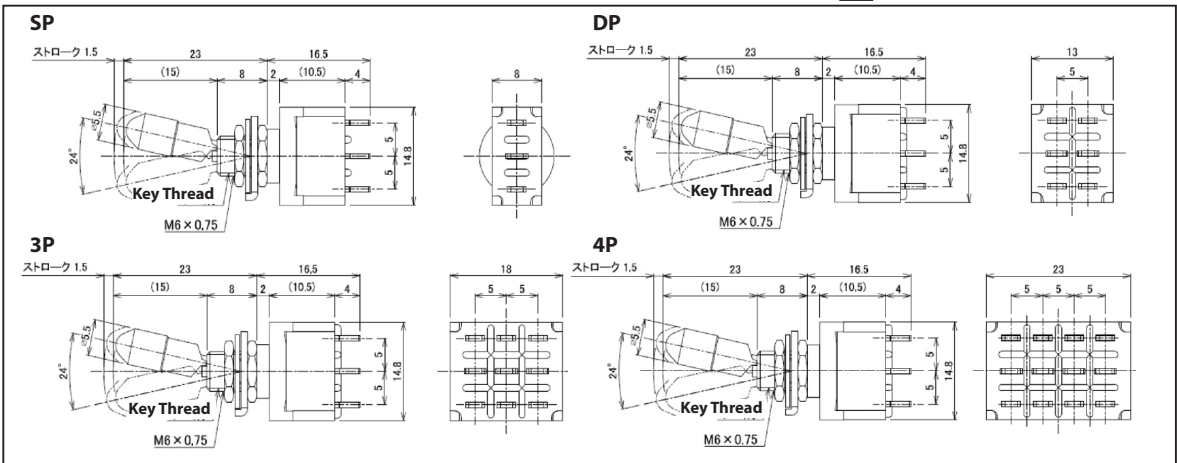


■ Shape of Operational-part



Lock-lever Toggle Solder Lug/ PCB Terminal (The below charts are for Solder Lug only.)

F X T 5



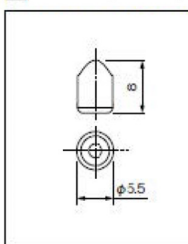
■ Shape of Operational-part

■ Characteristics

The lock-lever switch is designed so that the lever cap must be pulled upward before the switch can be operated. This mechanism helps prevent unintentional operation or malfunction of the switch. It is ideal for use in devices where accidental operation could lead to serious consequences, such as medical equipment, communication devices, NC (numerical control) systems, and computer peripherals.

The figures of lever caps and lock mechanisms per each switch function.

■ The Shape of cap

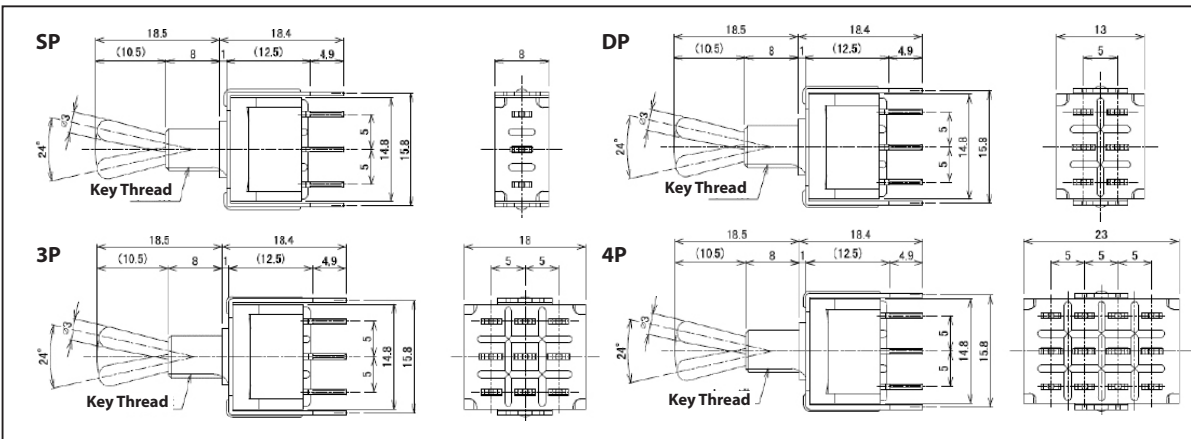


● The standard type is made of Nickel/ Chrome.

Types	Shapes
D.N	Key Thread
E.P	Key Thread
F.R	Key Thread
G.S	Key Thread
H.T	Key Thread

PCB Mount Toggle PCB Terminal

F X H 0 3

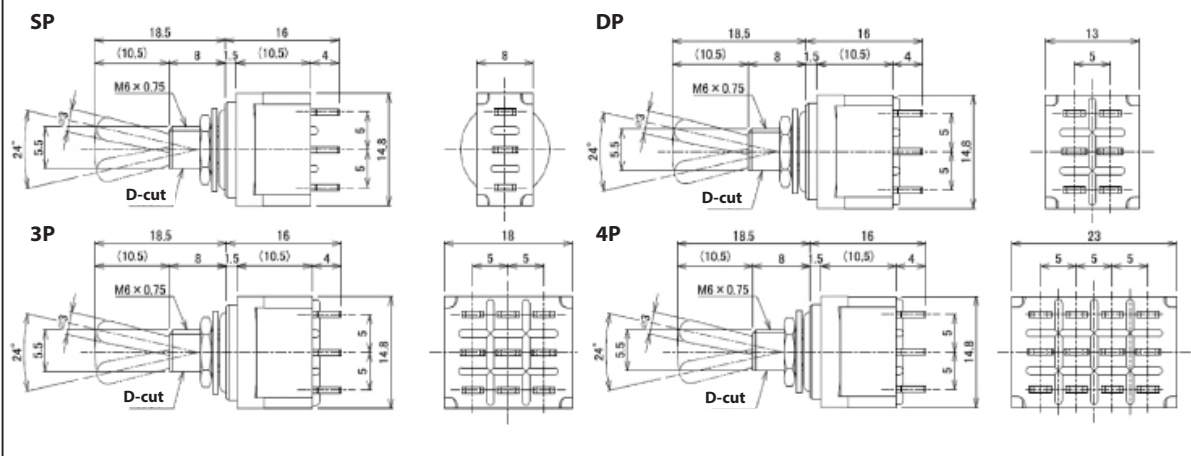


■ Shape of Operational-part



Splash-proof Toggle Solder Lug/ PCB Terminal (The below charts are for Solder Lug only.)

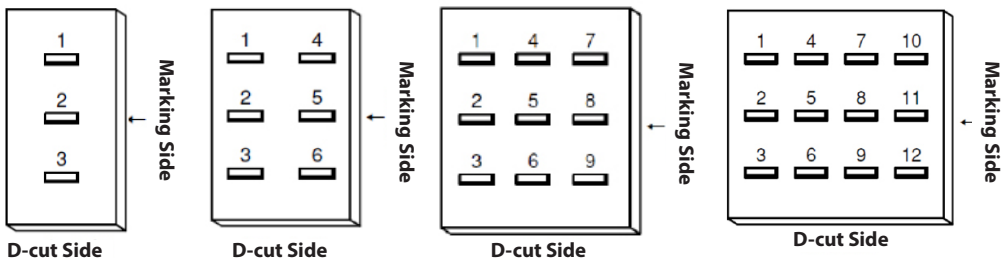
F X W 0 1



■ Shape of Operational-part

■ Terminal Diagram

* Terminal Numbers are not indicated on the case.



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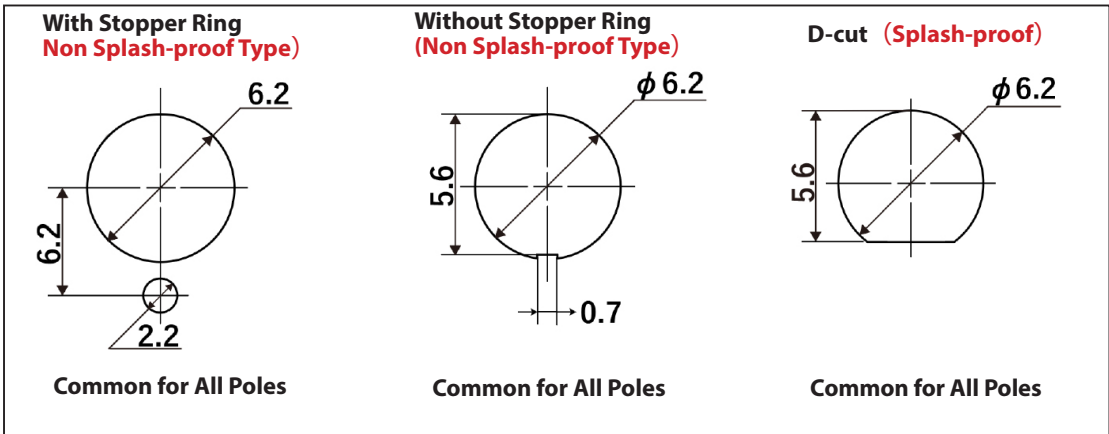
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Solder Lug
PCB Terminal

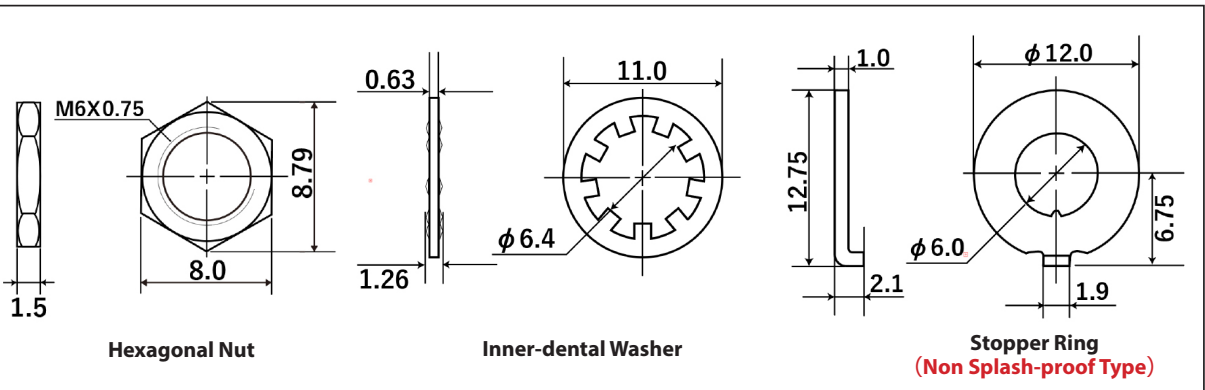
SP 2 P
3 P 4 P

Mounting Hole Dimensions, Mounting Parts Dimensions

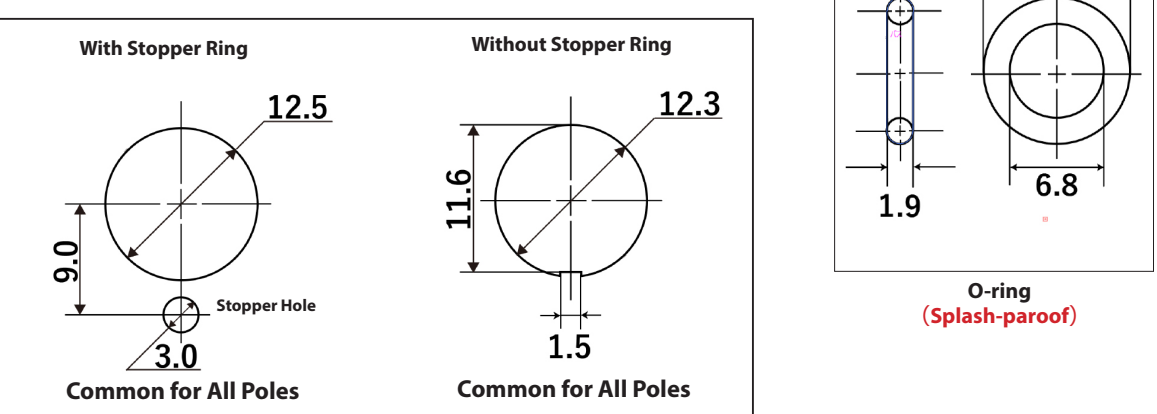
Mounting Hole Dimensions (Bushing Type)



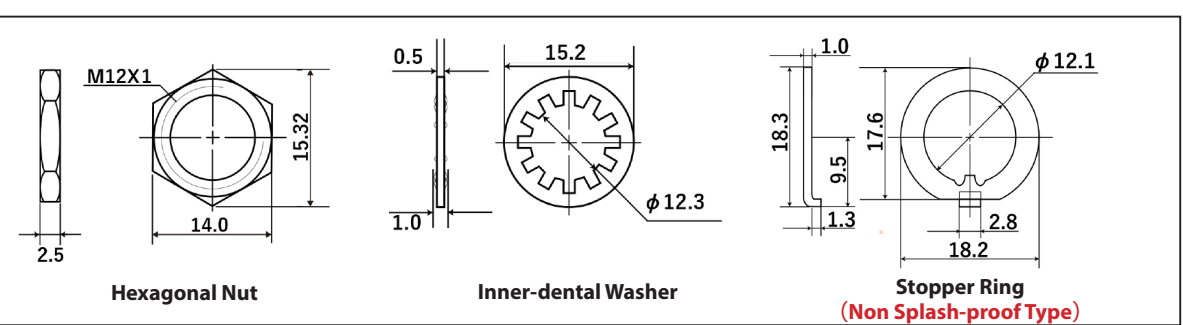
Mounting Parts Dimensions/ Mounting Method



Mounting Hole Dimensions (Large Toggle)



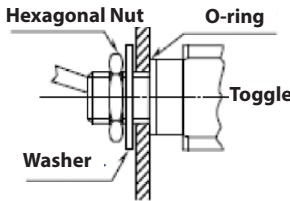
Mounting Parts Dimensions (Large Toggle)



* For non-splash-proof models, only the lower nut is pre-installed on the main unit; other accessories are included separately. For splash-proof models, all accessories are pre-installed upon delivery.

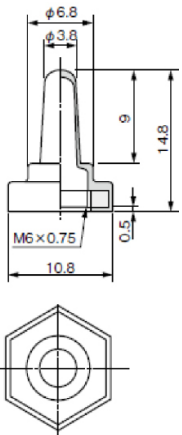
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Mounting Method
(Splash-proof)



Splash-proof Cap, Other Parts

Hexagonal Splash-proof Cap



Materials	Color	Part Number
Chloroprene Rubber	Black	6547-0750

Note: Wiring Diagrams for ON-ON-ON circuit (PA, SP3T, DP3T)

Regarding RA type switch, please connect the wire at the part of

SP3T

Switch Operation			
Wiring Diagram			
Symbol	Switch Properties		
	ON	ON	ON
Connected Terminals	5 - 6	5 - 3	5 - 1

Terminal numbers are not indicated on the case.

DP3T

Switch Operation			
Wiring Diagram			
Symbol	Switch Properties		
	ON	ON	ON
Connected Terminals	5 - 3 11 - 12	5 - 1 11 - 9	5 - 4 11 - 7

* The above numbers from 1 through 12 are not indicated on the case.

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