

## MICRO SWITCH ESW SERIES

### ■ FEATURES

- Sealed construction by epoxy resin and rubber cap for use in adverse environment such as dust or wet areas.
- 2-piece spring mechanism design offering durable acute operation and long life.
- Small compact size suitable for electric equipment.

### ■ APPLICATIONS

- Communication equipment
- OA/FA machines
- Air purifier
- Ice-making equipment



### ■ SPECIFICATIONS

● Ratings	AC 125V 5A / 250V 3A DC 30V 3A
● Circuit arrangement	Single pole Double throw (1c) Single pole single throw (1a)(1b)
● Protective construction classification of IEC	Dust protected type IP50 Immersion protected type IP67

#### 1.ELECTRICAL PERFORMANCE

● Insulation resistance	100M $\Omega$ Min. at 500VDC
● Dielectric strength	Between non-continuous terminals: AC 1000Vrms Between each terminal and other exposed metal parts: AC 1500Vrms Between each terminal and ground: AC 1500Vrms
● Initial contact resistance	50m $\Omega$ Max.

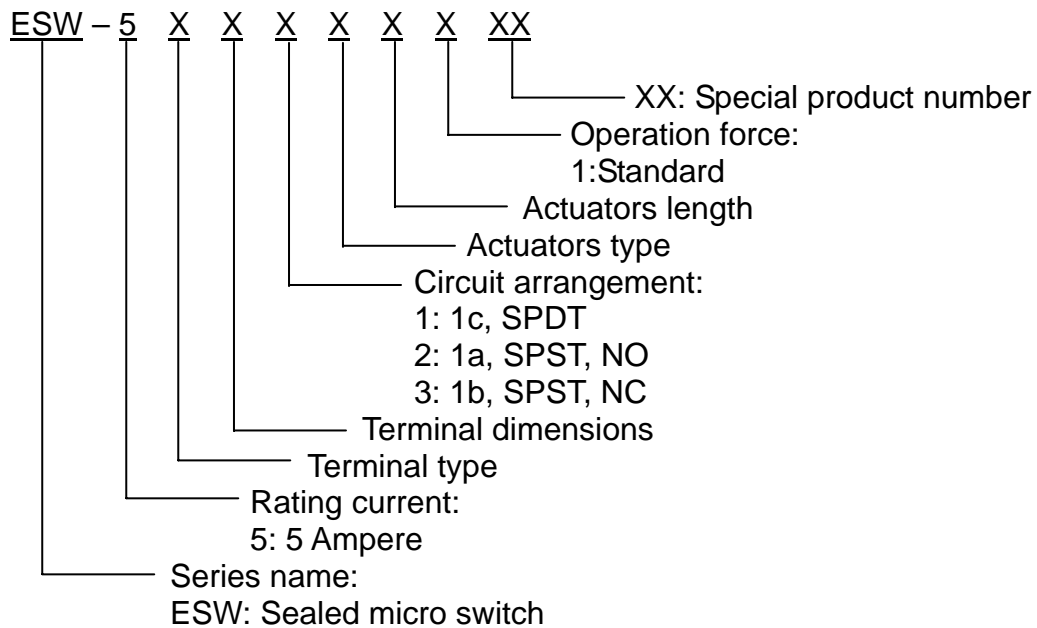
#### 2.DURABILITY

● Mechanical Life	5,000,000 cycles Operations
● Electrical Life	100,000 cycles Operations

#### 3.ENVIRONMENTAL

● Ambient Temperature	-40 $^{\circ}$ C to +85 $^{\circ}$ C (without dew condensation)
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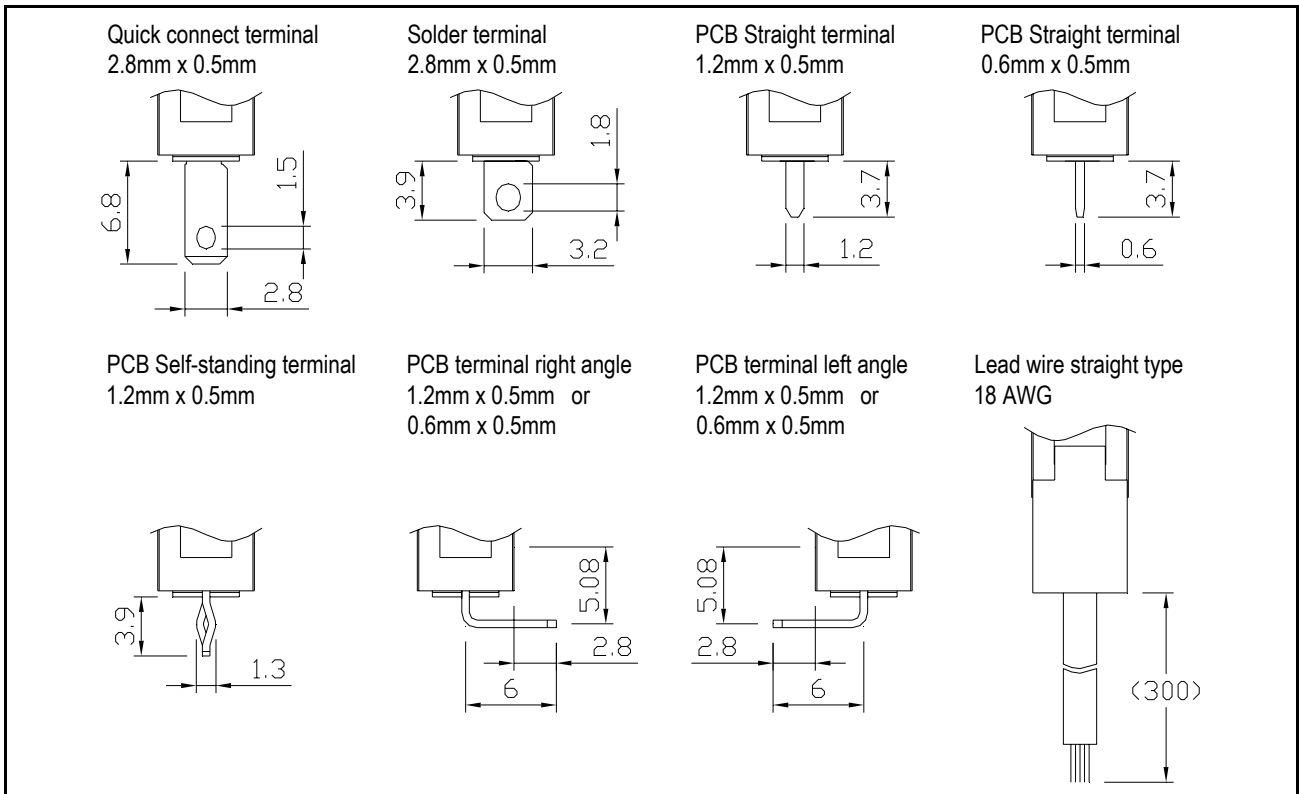
## ■ PART NUMBERING SYSTEM



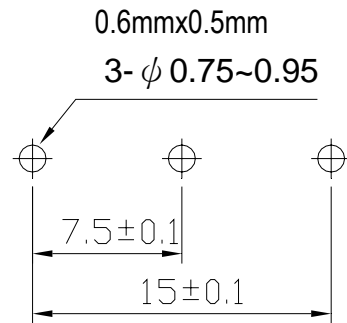
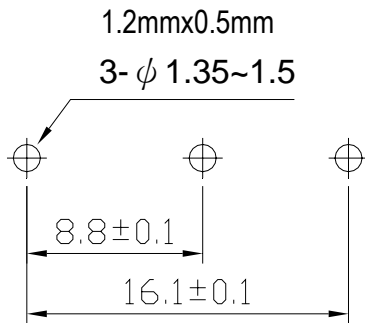
Code	Actuators type	Actuators length	
		Code A	Code B
00	Without lever	---	---
1	Straight lever	14.5mm	16.5mm
2	Simulated roller lever	15.8mm	---
3	Roller lever	14.5mm	---

Code	Terminal type	Terminal dimensions	
		Code A	Code B
1	#110 Quick connect terminal	2.8mmx0.5mm	---
2	PCB Self-standing terminal	1.2mmx0.5mm	---
3	PCB Straight terminal	1.2mmx0.5mm	0.6mmx0.5mm
4	PCB Terminal right Angle	1.2mmx0.5mm	0.6mmx0.5mm
5	PCB Terminal left Angle	1.2mmx0.5mm	0.6mmx0.5mm
6	Solder terminal	3.2mmx0.5mm	---
7	Lead wire straight type	18 AWG	---

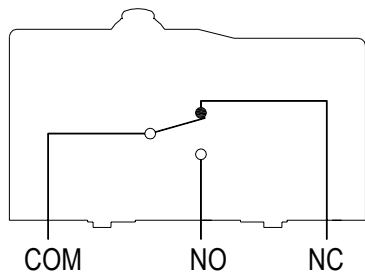
**■ TERMINAL OPTIONS UNIT:mm**



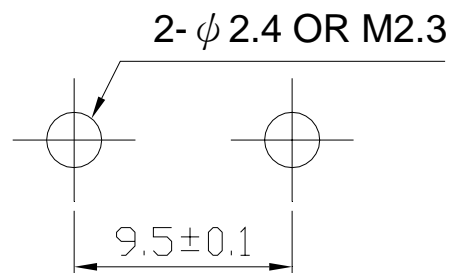
**■ PC BOARD PATTERN**



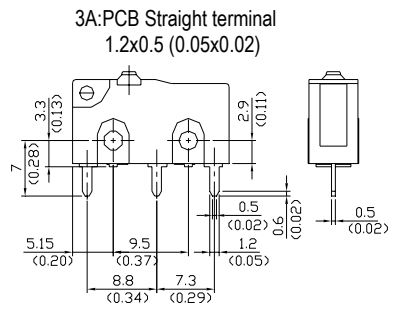
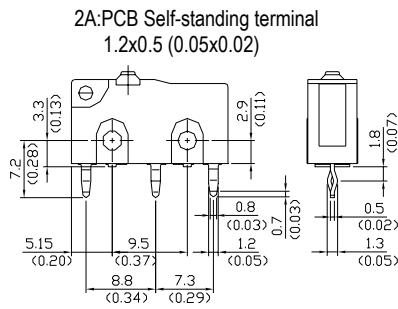
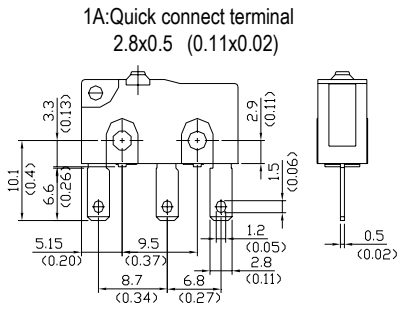
**■ CIRCUIT DIMENSIONS**



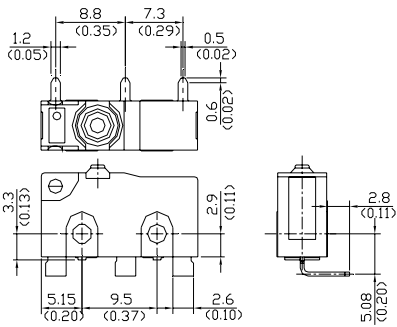
**■ MOUNTING HOLE LAYOUT**



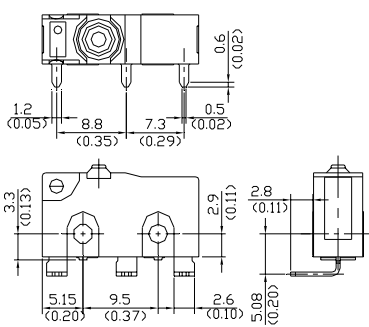
**■ TERMINAL TYPE UNIT:mm(inch)**



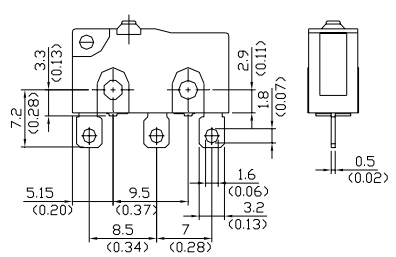
**4A:PCB Right angle terminal**  
1.2x0.5 (0.05x0.02)



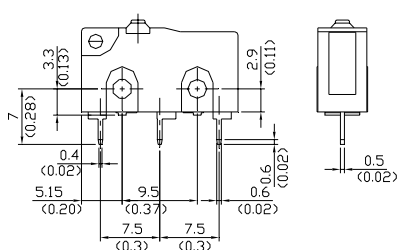
**5A:PCB Left angle terminal**  
1.2x0.5 (0.05x0.02)



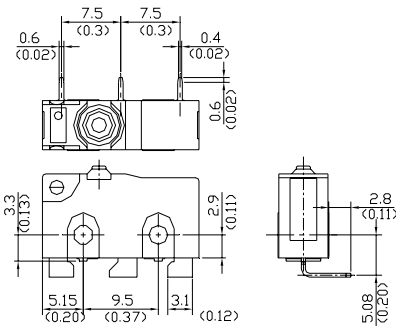
**6A:Solder terminal**  
3.2x0.5 (0.13x0.02)



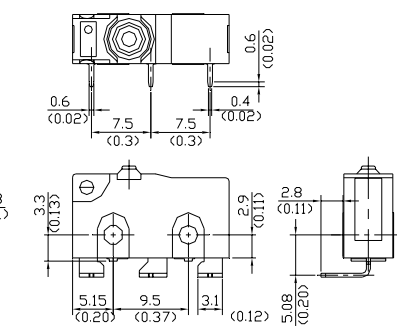
**3B:PCB Straight terminal**  
0.6x0.5 (0.02x0.02)



**4B:PCB Right angle terminal**  
0.6x0.5 (0.02x0.02)

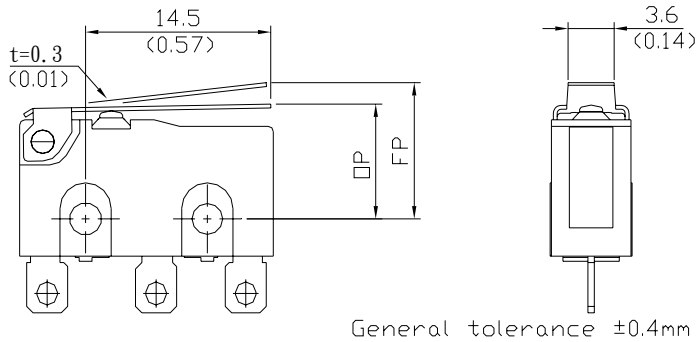


**5B:PCB Left angle terminal**  
0.6x0.5 (0.02x0.02)



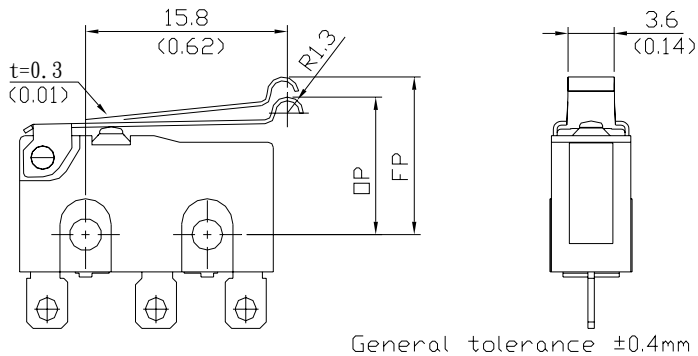


**ESW-5□□11A1**  
Straight lever



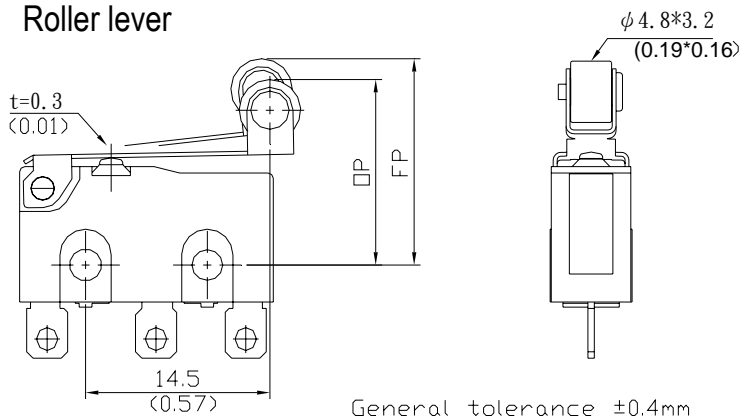
1	Operating Force (OF)	60gf (0.59N) Max.
2	Release Force (RF)	6gf (0.06N) Min.
3	Pre-travel (PT)	
4	Overtravel (OT)	1.0mm Min.
5	Movement Differential (MD)	0.8mm Max.
6	Operating Position (OP)	8.8 $\pm$ 0.8mm
7	Free Position (FP)	13.6mm Max.

**ESW-5□□12A1**  
Simulated lever



1	Operating Force (OF)	60gf (0.59N) Max.
2	Release Force (RF)	6gf (0.06N) Min.
3	Pre-travel (PT)	
4	Overtravel (OT)	1.0mm Min.
5	Movement Differential (MD)	0.8mm Max.
6	Operating Position (OP)	10.7 $\pm$ 0.8mm
7	Free Position (FP)	15.5mm Max.

**ESW-5□□13A1**  
Roller lever



1	Operating Force (OF)	60gf (0.59N) Max.
2	Release Force (RF)	6gf (0.06N) Min.
3	Pre-travel (PT)	
4	Overtravel (OT)	1.0mm Min.
5	Movement Differential (MD)	0.8mm Max.
6	Operating Position (OP)	14.5 $\pm$ 0.8mm
7	Free Position (FP)	19.3mm Max.