

# Compact-sized Snap Action Switches

## MQS-54/-54A Series

### Features

- ◇ Flux-resistant construction with integrally molded terminals.
- ◇ 4 variations with low operating force (0.25N) to high operating force (1.47N).
- ◇ Lead wire terminal, PC board terminal, #110 Quick-connect terminal, PC board terminal Right/Left angle are available.
- ◇ UL, CSA (C-UL) approved. File No. : E90211



Actual size

### Applications

- ◇ Communication equipment (Telephone, Fax etc.)
- ◇ Home appliances (Air-conditioner, Washing machine, Cleaner etc.)

### Products Number system

MQS-54 [ ]-[ ] [ ] [ ]-[ ]

— Contact form

Blank : Transfer type                      A : COM-NO type

COM NO NC

COM NO Dummy

— Operating force (Pin plunger type)

1: MAX0.25N(25gf)	5: MAX0.98N(100gf)
3: MAX0.49N(50gf)	7: MAX1.47N(150gf)

— Actuator

Blank : Pin plunger type			
L1 : Hinge short lever L=5mm			
L : Hinge lever L=7.15mm			
L2 : Hinge long lever L=13.1mm			
L3 : Hinge long lever L=26.1mm			
D : Hinge R2.5 lever L=6.3mm			
D3 : Hinge R1.3 lever L=6.3mm			
D2 : Hinge roller lever L=5mm			
C : Pin plunger type			
C1 : Hinge short tever L=5mm			
C2 : Hinge R2 lever L=1.1mm			

Notes. C, C1, C2 is the type with inside lever hook.  
Please see dimensions for details.

— Contact

Blank : Silver alloy                      AU : Gold clad triple layer

U2 : Gold clad twin layer

— Terminal

Blank : Lead wire terminal			PR : PC board terminal right angle		
P : PC board terminal			PL : PC board terminal left angle		
F : #110 Quick-connect terminal					

## UL, CSA(C-UL) Ratings

Contacts	Operating force code	UL,CSA(C-UL) Ratings
Silver alloy contact type	3, 5, 7 type	3A 250V AC / 3A 30V DC
Gold clad triple layer contact type	1, 3, 5, 7 type	0.1A 125V AC / 0.1A 30V DC

Please see the approved standard list.

## Typical Specifications

Item	Specifications							
Contact	Silver alloy contact type				Gold clad twin / triple layer contact type			
Operating force (Pin plunger type)	MAX 0.25N (25gf)	MAX 0.49N (50gf)	MAX 0.98N (100gf)	MAX 1.47N (150gf)	MAX 0.25N (25gf)	MAX 0.49N (50gf)	MAX 0.98N (100gf)	MAX 1.47N (150gf)
Ratings (Resistive load)	0.1A 125V AC 0.1A 30V DC	3A 125V AC 3A 30V DC			0.1A 125V AC 0.1A 30V DC			
Mechanical life	1,000,000 cycles							
Electrical life	200,000 cycles	50,000 cycles			200,000 cycles			
Contact resistance (Initial)	MAX 500 milliohm	MAX 30 milliohm			MAX 500 milliohm	MAX 100 milliohm		
Insulation Resistance	MIN 100 megohm 500V DC							
Withstanding voltage	Between open contacts : 1000V AC 1min				Between each terminal and non live metal part : 1500V AC 1min			
					Between each terminal and each : 1500V AC 1min			
Resistibility to vibration (Pin plunger type)	double amplitude : 1.5mm , frequency : 10 to 55Hz Each direction Open contact shall be less than 1 ms at the above.							
Resistibility to shock (Pin plunger type)	MIN 5G	MIN 15G	MIN 30G		MIN 5G	MIN 15G	MIN 30G	
	Open contact shall be less than 1 ms at the above conditions.							
Allowable operating speed (at no load)	1 to 500 mm/sec.							
Max. operating cycle rate (at no load)	120 times/min.							
Operating temperature range	-20 to +70 degree Celsius							
Ambient humidity	MAX 85%RH							

## Range of current

Contacts specification	Range of current				Operating force (MAX) (Pin plunger type)			
	1mA	10mA	100mA	3A	0.25N(25gf)	0.49N(50gf)	0.98N(100gf)	1.47N(150gf)
Silver alloy			↔		●			
				↔		●	●	●
Gold clad triple layer	↔	↔			●	●	●	●
Gold clad twin layer	↔	↔			●	●	●	●

□ Products line

◇ Silver alloy contact type

Transfer type : MQS-54[ ]-\_-\_- ([ ] is blank)

COM-NO type : MQS-54[A]-\_-\_- (A in [ ])

The type with inside lever hook (actuator code C,C1,C2) is transfer type only.

Actuator	No	Operating force (MAX)	*Approved standard	Lead wire terminal	PC board terminal	#110 Quick-connect terminal	PC board terminal right angle	PC board terminal left angle
			C-UL	Products No.	Products No.	Products No.	Products No.	Products No.
Pin plunger type (Blank)	1	0.25N	-	MQS-54[ ]-1	MQS-54[ ]-1-P	MQS-54[ ]-1-F	MQS-54[ ]-1-PR	MQS-54[ ]-1-PL
		0.49N	2	MQS-54[ ]-3	MQS-54[ ]-3-P	MQS-54[ ]-3-F	MQS-54[ ]-3-PR	MQS-54[ ]-3-PL
		0.98N	2	MQS-54[ ]-5	MQS-54[ ]-5-P	MQS-54[ ]-5-F	MQS-54[ ]-5-PR	MQS-54[ ]-5-PL
		1.47N	2	MQS-54[ ]-7	MQS-54[ ]-7-P	MQS-54[ ]-7-F	MQS-54[ ]-7-PR	MQS-54[ ]-7-PL
Hinge short lever (L1)	2	0.10N	-	MQS-54[ ]-1L1	MQS-54[ ]-1L1-P	MQS-54[ ]-1L1-F	MQS-54[ ]-1L1-PR	MQS-54[ ]-1L1-PL
		0.20N	2	MQS-54[ ]-3L1	MQS-54[ ]-3L1-P	MQS-54[ ]-3L1-F	MQS-54[ ]-3L1-PR	MQS-54[ ]-3L1-PL
		0.39N	2	MQS-54[ ]-5L1	MQS-54[ ]-5L1-P	MQS-54[ ]-5L1-F	MQS-54[ ]-5L1-PR	MQS-54[ ]-5L1-PL
		0.59N	2	MQS-54[ ]-7L1	MQS-54[ ]-7L1-P	MQS-54[ ]-7L1-F	MQS-54[ ]-7L1-PR	MQS-54[ ]-7L1-PL
Hinge lever (L)	3	0.08N	-	MQS-54[ ]-1L	MQS-54[ ]-1L-P	MQS-54[ ]-1L-F	MQS-54[ ]-1L-PR	MQS-54[ ]-1L-PL
		0.16N	2	MQS-54[ ]-3L	MQS-54[ ]-3L-P	MQS-54[ ]-3L-F	MQS-54[ ]-3L-PR	MQS-54[ ]-3L-PL
		0.34N	2	MQS-54[ ]-5L	MQS-54[ ]-5L-P	MQS-54[ ]-5L-F	MQS-54[ ]-5L-PR	MQS-54[ ]-5L-PL
		0.54N	2	MQS-54[ ]-7L	MQS-54[ ]-7L-P	MQS-54[ ]-7L-F	MQS-54[ ]-7L-PR	MQS-54[ ]-7L-PL
Hinge long lever (L2)	4	0.12N	2	MQS-54[ ]-3L2	MQS-54[ ]-3L2-P	MQS-54[ ]-3L2-F	MQS-54[ ]-3L2-PR	MQS-54[ ]-3L2-PL
		0.25N	2	MQS-54[ ]-5L2	MQS-54[ ]-5L2-P	MQS-54[ ]-5L2-F	MQS-54[ ]-5L2-PR	MQS-54[ ]-5L2-PL
		0.44N	2	MQS-54[ ]-7L2	MQS-54[ ]-7L2-P	MQS-54[ ]-7L2-F	MQS-54[ ]-7L2-PR	MQS-54[ ]-7L2-PL
Hinge long lever (L3)	5	0.10N	2	MQS-54[ ]-3L3	MQS-54[ ]-3L3-P	MQS-54[ ]-3L3-F	MQS-54[ ]-3L3-PR	MQS-54[ ]-3L3-PL
		0.20N	2	MQS-54[ ]-5L3	MQS-54[ ]-5L3-P	MQS-54[ ]-5L3-F	MQS-54[ ]-5L3-PR	MQS-54[ ]-5L3-PL
		0.34N	2	MQS-54[ ]-7L3	MQS-54[ ]-7L3-P	MQS-54[ ]-7L3-F	MQS-54[ ]-7L3-PR	MQS-54[ ]-7L3-PL
Hinge R2.5 lever (D)	6	0.08N	-	MQS-54[ ]-1D	MQS-54[ ]-1D-P	MQS-54[ ]-1D-F	MQS-54[ ]-1D-PR	MQS-54[ ]-1D-PL
		0.16N	2	MQS-54[ ]-3D	MQS-54[ ]-3D-P	MQS-54[ ]-3D-F	MQS-54[ ]-3D-PR	MQS-54[ ]-3D-PL
		0.34N	2	MQS-54[ ]-5D	MQS-54[ ]-5D-P	MQS-54[ ]-5D-F	MQS-54[ ]-5D-PR	MQS-54[ ]-5D-PL
		0.54N	2	MQS-54[ ]-7D	MQS-54[ ]-7D-P	MQS-54[ ]-7D-F	MQS-54[ ]-7D-PR	MQS-54[ ]-7D-PL
Hinge R1.3 lever (D3)	7	0.08N	-	MQS-54[ ]-1D3	MQS-54[ ]-1D3-P	MQS-54[ ]-1D3-F	MQS-54[ ]-1D3-PR	MQS-54[ ]-1D3-PL
		0.16N	2	MQS-54[ ]-3D3	MQS-54[ ]-3D3-P	MQS-54[ ]-3D3-F	MQS-54[ ]-3D3-PR	MQS-54[ ]-3D3-PL
		0.34N	2	MQS-54[ ]-5D3	MQS-54[ ]-5D3-P	MQS-54[ ]-5D3-F	MQS-54[ ]-5D3-PR	MQS-54[ ]-5D3-PL
		0.54N	2	MQS-54[ ]-7D3	MQS-54[ ]-7D3-P	MQS-54[ ]-7D3-F	MQS-54[ ]-7D3-PR	MQS-54[ ]-7D3-PL
Hinge roller lever (D2)	8	0.10N	-	MQS-54[ ]-1D2	MQS-54[ ]-1D2-P	MQS-54[ ]-1D2-F	MQS-54[ ]-1D2-PR	MQS-54[ ]-1D2-PL
		0.20N	2	MQS-54[ ]-3D2	MQS-54[ ]-3D2-P	MQS-54[ ]-3D2-F	MQS-54[ ]-3D2-PR	MQS-54[ ]-3D2-PL
		0.39N	2	MQS-54[ ]-5D2	MQS-54[ ]-5D2-P	MQS-54[ ]-5D2-F	MQS-54[ ]-5D2-PR	MQS-54[ ]-5D2-PL
		0.59N	2	MQS-54[ ]-7D2	MQS-54[ ]-7D2-P	MQS-54[ ]-7D2-F	MQS-54[ ]-7D2-PR	MQS-54[ ]-7D2-PL
Pin plunger type (C)	9	0.25N	-	MQS-54-1C	MQS-54-1C-P	MQS-54-1C-F	MQS-54-1C-PR	MQS-54-1C-PL
		0.49N	2	MQS-54-3C	MQS-54-3C-P	MQS-54-3C-F	MQS-54-3C-PR	MQS-54-3C-PL
		0.98N	2	MQS-54-5C	MQS-54-5C-P	MQS-54-5C-F	MQS-54-5C-PR	MQS-54-5C-PL
		1.47N	2	MQS-54-7C	MQS-54-7C-P	MQS-54-7C-F	MQS-54-7C-PR	MQS-54-7C-PL
Hinge short lever (C1)	10	0.10N	-	MQS-54-1C1	MQS-54-1C1-P	MQS-54-1C1-F	MQS-54-1C1-PR	MQS-54-1C1-PL
		0.20N	2	MQS-54-3C1	MQS-54-3C1-P	MQS-54-3C1-F	MQS-54-3C1-PR	MQS-54-3C1-PL
		0.39N	2	MQS-54-5C1	MQS-54-5C1-P	MQS-54-5C1-F	MQS-54-5C1-PR	MQS-54-5C1-PL
		0.59N	2	MQS-54-7C1	MQS-54-7C1-P	MQS-54-7C1-F	MQS-54-7C1-PR	MQS-54-7C1-PL
Hinge R2 lever (C2)	11	0.15N	-	MQS-54-1C2	MQS-54-1C2-P	MQS-54-1C2-F	MQS-54-1C2-PR	MQS-54-1C2-PL
		0.29N	2	MQS-54-3C2	MQS-54-3C2-P	MQS-54-3C2-F	MQS-54-3C2-PR	MQS-54-3C2-PL
		0.59N	2	MQS-54-5C2	MQS-54-5C2-P	MQS-54-5C2-F	MQS-54-5C2-PR	MQS-54-5C2-PL
		0.88N	2	MQS-54-7C2	MQS-54-7C2-P	MQS-54-7C2-F	MQS-54-7C2-PR	MQS-54-7C2-PL

\* The number represents ratings. 1 : 0.1A 125V AC / 0.1A 30V DC  
2 : 3A 250V AC / 3A 30V DC

◇ Gold clad triple layer contact type

Transfer type : MQS-54[ ]- \_AU- ( [ ] is blank )

COM-NO type : MQS-54[A]- \_AU- ( A in [ ] )

The type with inside lever hook (actuator code C,C1,C2) is transfer type only.

Actuator	No	Operating force (MAX)	*Approved standard	Lead wire terminal	PC board terminal	#110 Quick-connect terminal	PC board terminal right angle	PC board terminal left angle
			C-UL	Products No.	Products No.	Products No.	Products No.	Products No.
Pin plunger type (Blank)	1	0.25N	1	MQS-54[ ]-1AU	MQS-54[ ]-1AU-P	MQS-54[ ]-1AU-F	MQS-54[ ]-1AU-PR	MQS-54[ ]-1AU-PL
		0.49N	1	MQS-54[ ]-3AU	MQS-54[ ]-3AU-P	MQS-54[ ]-3AU-F	MQS-54[ ]-3AU-PR	MQS-54[ ]-3AU-PL
		0.98N	1	MQS-54[ ]-5AU	MQS-54[ ]-5AU-P	MQS-54[ ]-5AU-F	MQS-54[ ]-5AU-PR	MQS-54[ ]-5AU-PL
		1.47N	1	MQS-54[ ]-7AU	MQS-54[ ]-7AU-P	MQS-54[ ]-7AU-F	MQS-54[ ]-7AU-PR	MQS-54[ ]-7AU-PL
Hinge short lever (L1)	2	0.10N	1	MQS-54[ ]-1L1AU	MQS-54[ ]-1L1AU-P	MQS-54[ ]-1L1AU-F	MQS-54[ ]-1L1AU-PR	MQS-54[ ]-1L1AU-PL
		0.20N	1	MQS-54[ ]-3L1AU	MQS-54[ ]-3L1AU-P	MQS-54[ ]-3L1AU-F	MQS-54[ ]-3L1AU-PR	MQS-54[ ]-3L1AU-PL
		0.39N	1	MQS-54[ ]-5L1AU	MQS-54[ ]-5L1AU-P	MQS-54[ ]-5L1AU-F	MQS-54[ ]-5L1AU-PR	MQS-54[ ]-5L1AU-PL
		0.59N	1	MQS-54[ ]-7L1AU	MQS-54[ ]-7L1AU-P	MQS-54[ ]-7L1AU-F	MQS-54[ ]-7L1AU-PR	MQS-54[ ]-7L1AU-PL
Hinge lever (L)	3	0.08N	1	MQS-54[ ]-1LAU	MQS-54[ ]-1LAU-P	MQS-54[ ]-1LAU-F	MQS-54[ ]-1LAU-PR	MQS-54[ ]-1LAU-PL
		0.16N	1	MQS-54[ ]-3LAU	MQS-54[ ]-3LAU-P	MQS-54[ ]-3LAU-F	MQS-54[ ]-3LAU-PR	MQS-54[ ]-3LAU-PL
		0.34N	1	MQS-54[ ]-5LAU	MQS-54[ ]-5LAU-P	MQS-54[ ]-5LAU-F	MQS-54[ ]-5LAU-PR	MQS-54[ ]-5LAU-PL
		0.54N	1	MQS-54[ ]-7LAU	MQS-54[ ]-7LAU-P	MQS-54[ ]-7LAU-F	MQS-54[ ]-7LAU-PR	MQS-54[ ]-7LAU-PL
Hinge long lever (L2)	4	0.12N	1	MQS-54[ ]-3L2AU	MQS-54[ ]-3L2AU-P	MQS-54[ ]-3L2AU-F	MQS-54[ ]-3L2AU-PR	MQS-54[ ]-3L2AU-PL
		0.25N	1	MQS-54[ ]-5L2AU	MQS-54[ ]-5L2AU-P	MQS-54[ ]-5L2AU-F	MQS-54[ ]-5L2AU-PR	MQS-54[ ]-5L2AU-PL
		0.44N	1	MQS-54[ ]-7L2AU	MQS-54[ ]-7L2AU-P	MQS-54[ ]-7L2AU-F	MQS-54[ ]-7L2AU-PR	MQS-54[ ]-7L2AU-PL
Hinge long lever (L3)	5	0.10N	1	MQS-54[ ]-3L3AU	MQS-54[ ]-3L3AU-P	MQS-54[ ]-3L3AU-F	MQS-54[ ]-3L3AU-PR	MQS-54[ ]-3L3AU-PL
		0.20N	1	MQS-54[ ]-5L3AU	MQS-54[ ]-5L3AU-P	MQS-54[ ]-5L3AU-F	MQS-54[ ]-5L3AU-PR	MQS-54[ ]-5L3AU-PL
		0.34N	1	MQS-54[ ]-7L3AU	MQS-54[ ]-7L3AU-P	MQS-54[ ]-7L3AU-F	MQS-54[ ]-7L3AU-PR	MQS-54[ ]-7L3AU-PL
Hinge R2.5 lever (D)	6	0.08N	1	MQS-54[ ]-1DAU	MQS-54[ ]-1DAU-P	MQS-54[ ]-1DAU-F	MQS-54[ ]-1DAU-PR	MQS-54[ ]-1DAU-PL
		0.16N	1	MQS-54[ ]-3DAU	MQS-54[ ]-3DAU-P	MQS-54[ ]-3DAU-F	MQS-54[ ]-3DAU-PR	MQS-54[ ]-3DAU-PL
		0.34N	1	MQS-54[ ]-5DAU	MQS-54[ ]-5DAU-P	MQS-54[ ]-5DAU-F	MQS-54[ ]-5DAU-PR	MQS-54[ ]-5DAU-PL
		0.54N	1	MQS-54[ ]-7DAU	MQS-54[ ]-7DAU-P	MQS-54[ ]-7DAU-F	MQS-54[ ]-7DAU-PR	MQS-54[ ]-7DAU-PL
Hinge R1.3 lever (D3)	7	0.08N	1	MQS-54[ ]-1D3AU	MQS-54[ ]-1D3AU-P	MQS-54[ ]-1D3AU-F	MQS-54[ ]-1D3AU-PR	MQS-54[ ]-1D3AU-PL
		0.16N	1	MQS-54[ ]-3D3AU	MQS-54[ ]-3D3AU-P	MQS-54[ ]-3D3AU-F	MQS-54[ ]-3D3AU-PR	MQS-54[ ]-3D3AU-PL
		0.34N	1	MQS-54[ ]-5D3AU	MQS-54[ ]-5D3AU-P	MQS-54[ ]-5D3AU-F	MQS-54[ ]-5D3AU-PR	MQS-54[ ]-5D3AU-PL
		0.54N	1	MQS-54[ ]-7D3AU	MQS-54[ ]-7D3AU-P	MQS-54[ ]-7D3AU-F	MQS-54[ ]-7D3AU-PR	MQS-54[ ]-7D3AU-PL
Hinge roller lever (D2)	8	0.10N	1	MQS-54[ ]-1D2AU	MQS-54[ ]-1D2AU-P	MQS-54[ ]-1D2AU-F	MQS-54[ ]-1D2AU-PR	MQS-54[ ]-1D2AU-PL
		0.20N	1	MQS-54[ ]-3D2AU	MQS-54[ ]-3D2AU-P	MQS-54[ ]-3D2AU-F	MQS-54[ ]-3D2AU-PR	MQS-54[ ]-3D2AU-PL
		0.39N	1	MQS-54[ ]-5D2AU	MQS-54[ ]-5D2AU-P	MQS-54[ ]-5D2AU-F	MQS-54[ ]-5D2AU-PR	MQS-54[ ]-5D2AU-PL
		0.59N	1	MQS-54[ ]-7D2AU	MQS-54[ ]-7D2AU-P	MQS-54[ ]-7D2AU-F	MQS-54[ ]-7D2AU-PR	MQS-54[ ]-7D2AU-PL
Pin plunger type (C)	9	0.25N	1	MQS-54-1CAU	MQS-54-1CAU-P	MQS-54-1CAU-F	MQS-54-1CAU-PR	MQS-54-1CAU-PL
		0.49N	1	MQS-54-3CAU	MQS-54-3CAU-P	MQS-54-3CAU-F	MQS-54-3CAU-PR	MQS-54-3CAU-PL
		0.98N	1	MQS-54-5CAU	MQS-54-5CAU-P	MQS-54-5CAU-F	MQS-54-5CAU-PR	MQS-54-5CAU-PL
		1.47N	1	MQS-54-7CAU	MQS-54-7CAU-P	MQS-54-7CAU-F	MQS-54-7CAU-PR	MQS-54-7CAU-PL
Hinge short lever (C1)	10	0.10N	1	MQS-54-1C1AU	MQS-54-1C1AU-P	MQS-54-1C1AU-F	MQS-54-1C1AU-PR	MQS-54-1C1AU-PL
		0.20N	1	MQS-54-3C1AU	MQS-54-3C1AU-P	MQS-54-3C1AU-F	MQS-54-3C1AU-PR	MQS-54-3C1AU-PL
		0.39N	1	MQS-54-5C1AU	MQS-54-5C1AU-P	MQS-54-5C1AU-F	MQS-54-5C1AU-PR	MQS-54-5C1AU-PL
		0.59N	1	MQS-54-7C1AU	MQS-54-7C1AU-P	MQS-54-7C1AU-F	MQS-54-7C1AU-PR	MQS-54-7C1AU-PL
Hinge R2 lever (C2)	11	0.15N	1	MQS-54-1C2AU	MQS-54-1C2AU-P	MQS-54-1C2AU-F	MQS-54-1C2AU-PR	MQS-54-1C2AU-PL
		0.29N	1	MQS-54-3C2AU	MQS-54-3C2AU-P	MQS-54-3C2AU-F	MQS-54-3C2AU-PR	MQS-54-3C2AU-PL
		0.59N	1	MQS-54-5C2AU	MQS-54-5C2AU-P	MQS-54-5C2AU-F	MQS-54-5C2AU-PR	MQS-54-5C2AU-PL
		0.88N	1	MQS-54-7C2AU	MQS-54-7C2AU-P	MQS-54-7C2AU-F	MQS-54-7C2AU-PR	MQS-54-7C2AU-PL

\* The number represents ratings. 1 : 0.1A 125V AC / 0.1A 30V DC  
2 : 3A 250V AC / 3A 30V DC

◇ Gold clad twin layer contact type

Transfer type : MQS-54[ ]- \_ U2- ( [ ] is blank )

COM-NO type : MQS-54[A]- \_ U2- ( A in [ ] )

The type with inside lever hook (actuator code C,C1,C2) is transfer type only.

Actuator	No	Operating force (MAX)	*Approved standard	Lead wire terminal	PC board terminal	#110 Quick-connect terminal	PC board terminal right angle	PC board terminal left angle
			C-UL	Products No.	Products No.	Products No.	Products No.	Products No.
Pin plunger type (Blank)	1	0.25N	-	MQS-54[ ]-1U2	MQS-54[ ]-1U2-P	MQS-54[ ]-1U2-F	MQS-54[ ]-1U2-PR	MQS-54[ ]-1U2-PL
		0.49N	-	MQS-54[ ]-3U2	MQS-54[ ]-3U2-P	MQS-54[ ]-3U2-F	MQS-54[ ]-3U2-PR	MQS-54[ ]-3U2-PL
		0.98N	-	MQS-54[ ]-5U2	MQS-54[ ]-5U2-P	MQS-54[ ]-5U2-F	MQS-54[ ]-5U2-PR	MQS-54[ ]-5U2-PL
		1.47N	-	MQS-54[ ]-7U2	MQS-54[ ]-7U2-P	MQS-54[ ]-7U2-F	MQS-54[ ]-7U2-PR	MQS-54[ ]-7U2-PL
Hinge short lever (L1)	2	0.10N	-	MQS-54[ ]-1L1U2	MQS-54[ ]-1L1U2-P	MQS-54[ ]-1L1U2-F	MQS-54[ ]-1L1U2-PR	MQS-54[ ]-1L1U2-PL
		0.20N	-	MQS-54[ ]-3L1U2	MQS-54[ ]-3L1U2-P	MQS-54[ ]-3L1U2-F	MQS-54[ ]-3L1U2-PR	MQS-54[ ]-3L1U2-PL
		0.39N	-	MQS-54[ ]-5L1U2	MQS-54[ ]-5L1U2-P	MQS-54[ ]-5L1U2-F	MQS-54[ ]-5L1U2-PR	MQS-54[ ]-5L1U2-PL
		0.59N	-	MQS-54[ ]-7L1U2	MQS-54[ ]-7L1U2-P	MQS-54[ ]-7L1U2-F	MQS-54[ ]-7L1U2-PR	MQS-54[ ]-7L1U2-PL
Hinge lever (L)	3	0.08N	-	MQS-54[ ]-1LU2	MQS-54[ ]-1LU2-P	MQS-54[ ]-1LU2-F	MQS-54[ ]-1LU2-PR	MQS-54[ ]-1LU2-PL
		0.16N	-	MQS-54[ ]-3LU2	MQS-54[ ]-3LU2-P	MQS-54[ ]-3LU2-F	MQS-54[ ]-3LU2-PR	MQS-54[ ]-3LU2-PL
		0.34N	-	MQS-54[ ]-5LU2	MQS-54[ ]-5LU2-P	MQS-54[ ]-5LU2-F	MQS-54[ ]-5LU2-PR	MQS-54[ ]-5LU2-PL
		0.54N	-	MQS-54[ ]-7LU2	MQS-54[ ]-7LU2-P	MQS-54[ ]-7LU2-F	MQS-54[ ]-7LU2-PR	MQS-54[ ]-7LU2-PL
Hinge long lever (L2)	4	0.12N	-	MQS-54[ ]-3L2U2	MQS-54[ ]-3L2U2-P	MQS-54[ ]-3L2U2-F	MQS-54[ ]-3L2U2-PR	MQS-54[ ]-3L2U2-PL
		0.25N	-	MQS-54[ ]-5L2U2	MQS-54[ ]-5L2U2-P	MQS-54[ ]-5L2U2-F	MQS-54[ ]-5L2U2-PR	MQS-54[ ]-5L2U2-PL
		0.44N	-	MQS-54[ ]-7L2U2	MQS-54[ ]-7L2U2-P	MQS-54[ ]-7L2U2-F	MQS-54[ ]-7L2U2-PR	MQS-54[ ]-7L2U2-PL
Hinge long lever (L3)	5	0.10N	-	MQS-54[ ]-3L3U2	MQS-54[ ]-3L3U2-P	MQS-54[ ]-3L3U2-F	MQS-54[ ]-3L3U2-PR	MQS-54[ ]-3L3U2-PL
		0.20N	-	MQS-54[ ]-5L3U2	MQS-54[ ]-5L3U2-P	MQS-54[ ]-5L3U2-F	MQS-54[ ]-5L3U2-PR	MQS-54[ ]-5L3U2-PL
		0.34N	-	MQS-54[ ]-7L3U2	MQS-54[ ]-7L3U2-P	MQS-54[ ]-7L3U2-F	MQS-54[ ]-7L3U2-PR	MQS-54[ ]-7L3U2-PL
Hinge R2.5 lever (D)	6	0.08N	-	MQS-54[ ]-1DU2	MQS-54[ ]-1DU2-P	MQS-54[ ]-1DU2-F	MQS-54[ ]-1DU2-PR	MQS-54[ ]-1DU2-PL
		0.16N	-	MQS-54[ ]-3DU2	MQS-54[ ]-3DU2-P	MQS-54[ ]-3DU2-F	MQS-54[ ]-3DU2-PR	MQS-54[ ]-3DU2-PL
		0.34N	-	MQS-54[ ]-5DU2	MQS-54[ ]-5DU2-P	MQS-54[ ]-5DU2-F	MQS-54[ ]-5DU2-PR	MQS-54[ ]-5DU2-PL
		0.54N	-	MQS-54[ ]-7DU2	MQS-54[ ]-7DU2-P	MQS-54[ ]-7DU2-F	MQS-54[ ]-7DU2-PR	MQS-54[ ]-7DU2-PL
Hinge R1.3 lever (D3)	7	0.08N	-	MQS-54[ ]-1D3U2	MQS-54[ ]-1D3U2-P	MQS-54[ ]-1D3U2-F	MQS-54[ ]-1D3U2-PR	MQS-54[ ]-1D3U2-PL
		0.16N	-	MQS-54[ ]-3D3U2	MQS-54[ ]-3D3U2-P	MQS-54[ ]-3D3U2-F	MQS-54[ ]-3D3U2-PR	MQS-54[ ]-3D3U2-PL
		0.34N	-	MQS-54[ ]-5D3U2	MQS-54[ ]-5D3U2-P	MQS-54[ ]-5D3U2-F	MQS-54[ ]-5D3U2-PR	MQS-54[ ]-5D3U2-PL
		0.54N	-	MQS-54[ ]-7D3U2	MQS-54[ ]-7D3U2-P	MQS-54[ ]-7D3U2-F	MQS-54[ ]-7D3U2-PR	MQS-54[ ]-7D3U2-PL
Hinge roller lever (D2)	8	0.10N	-	MQS-54[ ]-1D2U2	MQS-54[ ]-1D2U2-P	MQS-54[ ]-1D2U2-F	MQS-54[ ]-1D2U2-PR	MQS-54[ ]-1D2U2-PL
		0.20N	-	MQS-54[ ]-3D2U2	MQS-54[ ]-3D2U2-P	MQS-54[ ]-3D2U2-F	MQS-54[ ]-3D2U2-PR	MQS-54[ ]-3D2U2-PL
		0.39N	-	MQS-54[ ]-5D2U2	MQS-54[ ]-5D2U2-P	MQS-54[ ]-5D2U2-F	MQS-54[ ]-5D2U2-PR	MQS-54[ ]-5D2U2-PL
		0.59N	-	MQS-54[ ]-7D2U2	MQS-54[ ]-7D2U2-P	MQS-54[ ]-7D2U2-F	MQS-54[ ]-7D2U2-PR	MQS-54[ ]-7D2U2-PL
Pin plunger type (C)	9	0.25N	-	MQS-54-1CU2	MQS-54-1CU2-P	MQS-54-1CU2-F	MQS-54-1CU2-PR	MQS-54-1CU2-PL
		0.49N	-	MQS-54-3CU2	MQS-54-3CU2-P	MQS-54-3CU2-F	MQS-54-3CU2-PR	MQS-54-3CU2-PL
		0.98N	-	MQS-54-5CU2	MQS-54-5CU2-P	MQS-54-5CU2-F	MQS-54-5CU2-PR	MQS-54-5CU2-PL
		1.47N	-	MQS-54-7CU2	MQS-54-7CU2-P	MQS-54-7CU2-F	MQS-54-7CU2-PR	MQS-54-7CU2-PL
Hinge short lever (C1)	10	0.10N	-	MQS-54-1C1U2	MQS-54-1C1U2-P	MQS-54-1C1U2-F	MQS-54-1C1U2-PR	MQS-54-1C1U2-PL
		0.20N	-	MQS-54-3C1U2	MQS-54-3C1U2-P	MQS-54-3C1U2-F	MQS-54-3C1U2-PR	MQS-54-3C1U2-PL
		0.39N	-	MQS-54-5C1U2	MQS-54-5C1U2-P	MQS-54-5C1U2-F	MQS-54-5C1U2-PR	MQS-54-5C1U2-PL
		0.59N	-	MQS-54-7C1U2	MQS-54-7C1U2-P	MQS-54-7C1U2-F	MQS-54-7C1U2-PR	MQS-54-7C1U2-PL
Hinge R2 lever (C2)	11	0.15N	-	MQS-54-1C2U2	MQS-54-1C2U2-P	MQS-54-1C2U2-F	MQS-54-1C2U2-PR	MQS-54-1C2U2-PL
		0.29N	-	MQS-54-3C2U2	MQS-54-3C2U2-P	MQS-54-3C2U2-F	MQS-54-3C2U2-PR	MQS-54-3C2U2-PL
		0.59N	-	MQS-54-5C2U2	MQS-54-5C2U2-P	MQS-54-5C2U2-F	MQS-54-5C2U2-PR	MQS-54-5C2U2-PL
		0.88N	-	MQS-54-7C2U2	MQS-54-7C2U2-P	MQS-54-7C2U2-F	MQS-54-7C2U2-PR	MQS-54-7C2U2-PL

\* The number represents ratings. 1 : 0.1A 125V AC / 0.1A 30V DC  
2 : 3A 250V AC / 3A 30V DC

□ Operating characteristic

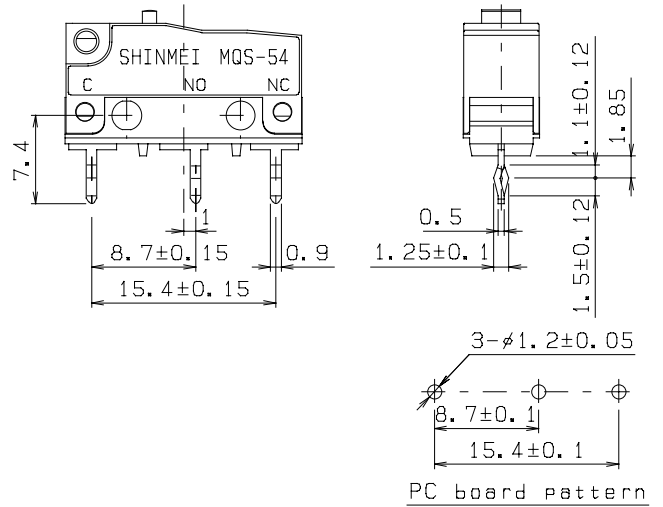
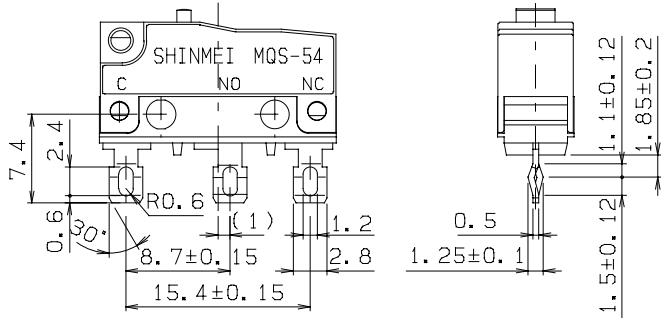
Actuator	Operating force code	O.F. MAX.	R.F. MIN	P.T. MAX	M.D. MAX	O.T. MIN	O.P.
Pin plunger type (Blank)	1	0.25N(25gf)	0.020N(2gf)	0.6mm	0.1mm	0.4mm	8.4 plus or minus 0.3mm
	3	0.49N(50gf)	0.074N(7.5gf)				
	5	0.98N(100gf)	0.150N(15gf)				
	7	1.47N(150gf)	0.200N(20gf)				
Hinge short lever (L1)	1	0.10N(10gf)	0.004N(0.4gf)	2.5mm	0.5mm	0.8mm	8.8 plus or minus 0.8mm
	3	0.20N(20gf)	0.017N(1.7gf)				
	5	0.39N(40gf)	0.034N(3.5gf)				
	7	0.59N(60gf)	0.039N(4gf)				
Hinge lever (L)	1	0.08N(8gf)	0.003N(0.35gf)	2.8mm	0.8mm	1.2mm	8.8 plus or minus 0.8mm
	3	0.16N(16gf)	0.015N(1.5gf)				
	5	0.34N(35gf)	0.029N(3gf)				
	7	0.54N(55gf)	0.034N(3.5gf)				
Hinge long lever (L2)	3	0.12N(12gf)	0.012N(1.2gf)	3.5mm	1.0mm	1.6mm	8.8 plus or minus 1.2mm
	5	0.25N(25gf)	0.025N(2.5gf)				
	7	0.44N(45gf)	0.029N(3gf)				
Hinge long lever (L3)	3	0.10N(10gf)	0.004N(0.4gf)	6.0mm	1.8mm	1.7mm	8.8 plus or minus 3.0mm
	5	0.20N(20gf)	0.017N(1.7gf)				
	7	0.34N(35gf)	0.029N(3gf)				
Hinge R2.5 lever (D)	1	0.08N(8gf)	0.003N(0.35gf)	2.8mm	0.8mm	1.2mm	11.65 plus or minus 0.8mm
	3	0.16N(16gf)	0.015N(1.5gf)				
	5	0.34N(35gf)	0.029N(3gf)				
	7	0.54N(55gf)	0.034N(3.5gf)				
Hinge R1.3 lever (D3)	1	0.08N(8gf)	0.003N(0.35gf)	2.8mm	0.8mm	1.2mm	10.7 plus or minus 0.8mm
	3	0.16N(16gf)	0.015N(1.5gf)				
	5	0.34N(35gf)	0.029N(3gf)				
	7	0.54N(55gf)	0.034N(3.5gf)				
Hinge roller lever (D2)	1	0.10N(10gf)	0.004N(0.4gf)	2.5mm	0.5mm	0.8mm	14.5 plus or minus 0.8mm
	3	0.20N(20gf)	0.017N(1.7gf)				
	5	0.39N(40gf)	0.034N(3.5gf)				
	7	0.59N(60gf)	0.039N(4gf)				
Pin plunger type (C)	1	0.25N(25gf)	0.020N(2gf)	0.6mm	0.1mm	0.4mm	8.4 plus or minus 0.3mm
	3	0.49N(50gf)	0.074N(7.5gf)				
	5	0.98N(100gf)	0.150N(15gf)				
	7	1.47N(150gf)	0.200N(20gf)				
Hinge short lever (C1)	1	0.10N(10gf)	0.004N(0.4gf)	2.5mm	0.5mm	0.8mm	8.8 plus or minus 0.8mm
	3	0.20N(20gf)	0.017N(1.7gf)				
	5	0.39N(40gf)	0.034N(3.5gf)				
	7	0.59N(60gf)	0.039N(4gf)				
Hinge R2 lever (C2)	1	0.15N(15gf)	0.015N(1.5gf)	3.0mm	0.8mm	0.4mm	12.0 plus or minus 1.0mm
	3	0.29N(30gf)	0.025N(2.5gf)				
	5	0.59N(60gf)	0.039N(4gf)				
	7	0.88N(90gf)	0.050N(5gf)				

Terminal dimensions

Unit : mm

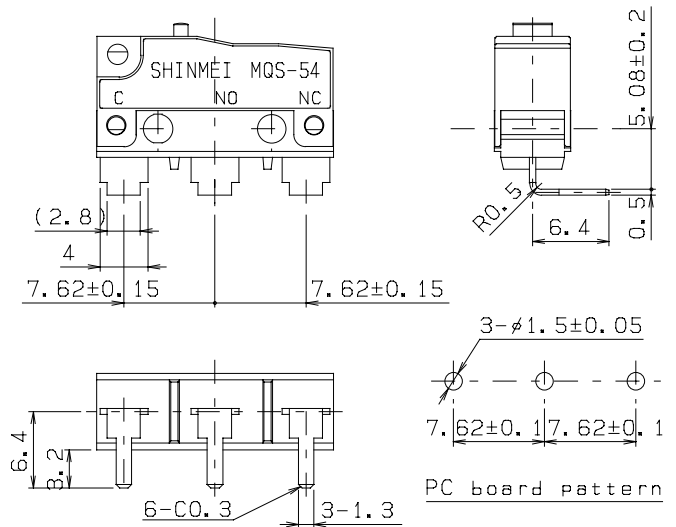
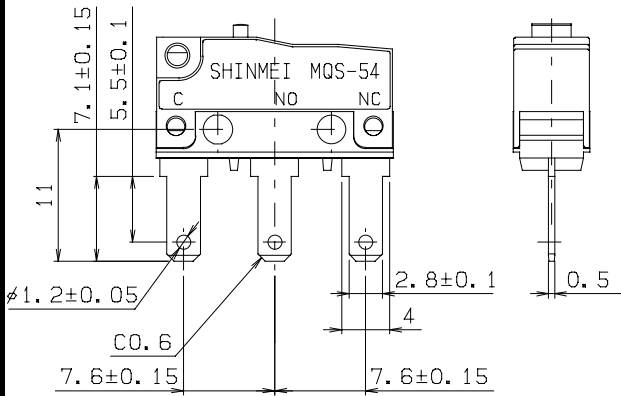
Lead wire terminal

PC board terminal



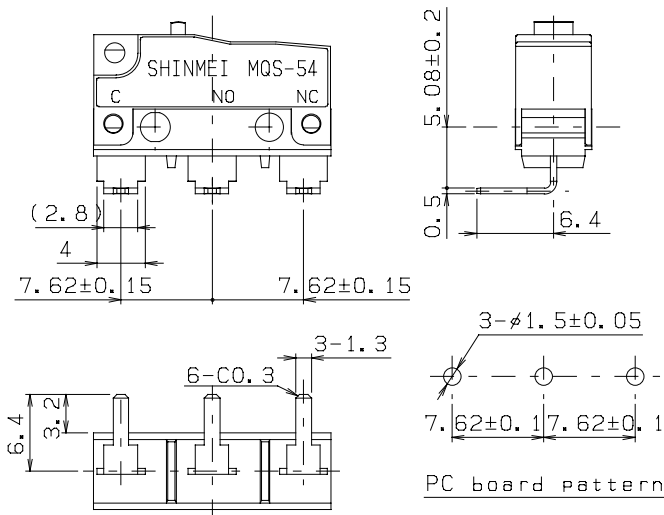
#110 quick-connect terminal

PC board terminal right angle



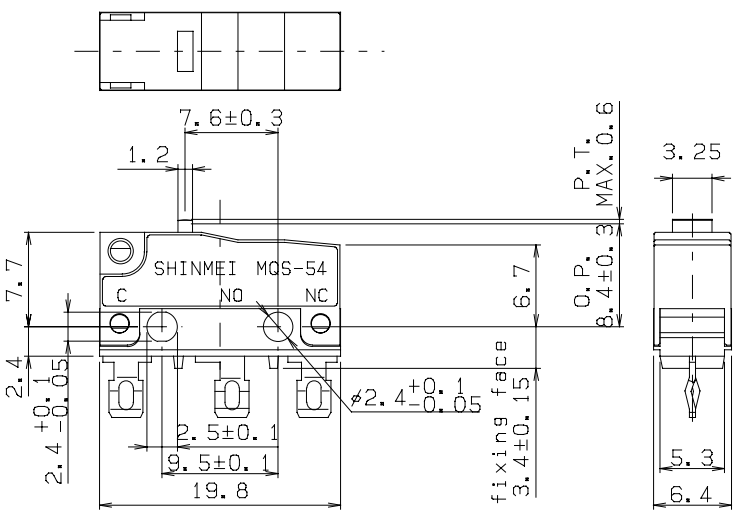
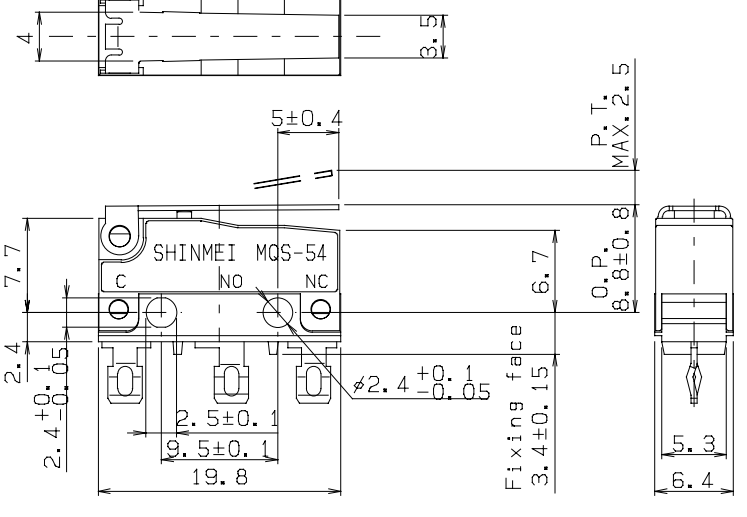
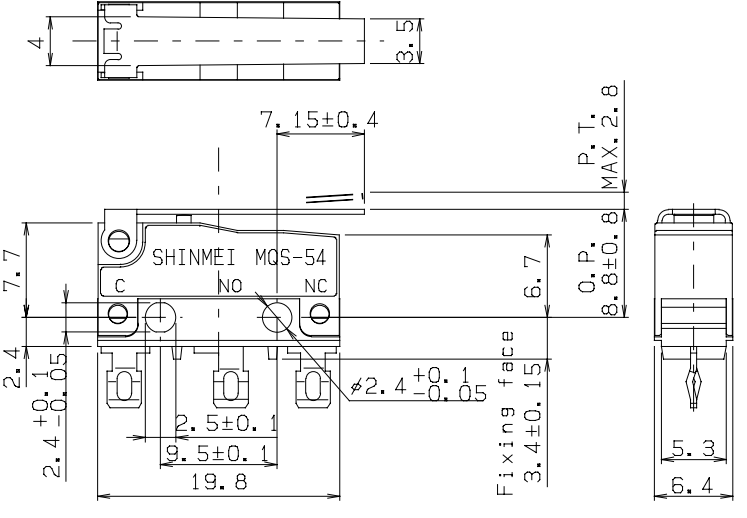
Notes. COM-NO type is with NC terminal cut

PC board terminal left angle



Dimensions

Unit : mm

No	Style	Operating characteristics	
1	<p>Pin plunger type</p> 	P.T. MAX	0.6mm
		M.D. MAX	0.1mm
		O.T. MIN	0.4mm
		O.P. From fixing hole	8.4 plus or minus 0.3mm
		O.P. From fixing face	11.8 plus or minus 0.4mm
2	<p>Hinge short lever L=5mm</p> 	P.T. MAX	2.5mm
		M.D. MAX	0.5mm
		O.T. MIN	0.8mm
		O.P. From fixing hole	8.8 plus or minus 0.8mm
		O.P. From fixing face	12.2 plus or minus 0.9mm
3	<p>Hinge lever L=7.15mm</p> 	P.T. MAX	2.8mm
		M.D. MAX	0.8mm
		O.T. MIN	1.2mm
		O.P. From fixing hole	8.8 plus or minus 0.8mm
		O.P. From fixing face	12.2 plus or minus 0.9mm



Dimensions

Unit : mm

No	Style	Operating characteristic	
4	<p>Hinge long lever L=13.1mm</p>	P.T. MAX	3.5mm
		M.D. MAX	1.0mm
		O.T. MIN	1.6mm
		O.P. From fixing hole	8.8 plus or minus 1.2mm
		O.P. From fixing face	12.2 plus or minus 1.3mm
5	<p>Hinge long lever L=26.1mm</p>	P.T. MAX	6.0mm
		M.D. MAX	1.8mm
		O.T. MIN	1.7mm
		O.P. From fixing hole	8.8 plus or minus 3.0mm
		O.P. From fixing face	12.2 plus or minus 3.1mm
6	<p>Hinge R2.5 lever L=6.3mm</p>	P.T. MAX	2.8mm
		M.D. MAX	0.8mm
		O.T. MIN	1.2mm
		O.P. From fixing hole	11.65 plus or minus 0.8mm
		O.P. From fixing face	15.05 plus or minus 0.9mm

Dimension

Unit : mm

No	Style	Operating characteristic	
7	<p>Hinge R1.3 lever L=6.3mm</p>	P.T. MAX	2.8mm
		M.D. MAX	0.8mm
		O.T. MIN	1.2mm
		O.P. From fixing hole	10.7 plus or minus 0.8mm
		O.P. From fixing face	14.1 plus or minus 0.9mm
8	<p>Hinge roller lever L=5mm</p>	P.T. MAX	2.5mm
		M.D. MAX	0.5mm
		O.T. MIN	0.8mm
		O.P. From fixing hole	14.5 plus or minus 0.8mm
		O.P. From fixing face	17.9 plus or minus 0.9mm
9	<p>Pin plunger type(Inside lever hook type)</p>	P.T. MAX	0.6mm
		M.D. MAX	0.1mm
		O.T. MIN	0.4mm
		O.P. From fixing hole	8.4 plus or minus 0.3mm
		O.P. From fixing face	11.8 plus or minus 0.4mm

Dimension

Unit : mm

No	Style	Operating characteristic	
10	Hinge short lever L=5mm(Inside lever hook type) 	P.T. MAX	2.5mm
		M.D. MAX	0.5mm
		O.T. MIN	0.8mm
		O.P. From fixing hole	8.8 plus or minus 0.8mm
		O.P. From fixing face	12.2 plus or minus 0.4mm
11	Hinge R2 lever L=1.1mm(Inside lever hook type) 	P.T. MAX	3.0mm
		M.D. MAX	0.8mm
		O.T. MIN	0.4mm
		O.P. From fixing hole	12.0plus or minus 1.0mm
		O.P. From fixing face	15.4plus or minus 1.1mm

Notes

- The appearance and specifications of the product may be modified without prior notice to improve its performance.
- This catalog shows only outline specifications. When using the product, please obtain formal specifications.
- Please see appendix [Cautions in Using Switches].
- Fix the switch by M2.3 screw with torque less than 29.4 N-cm(3 kg-cm)  
Fixing with spring washers and adhesive are recommended to avoid the loose of the screw.
- Operating force applied to push button or actuator should be zero at free position and the force shall not be applied vertically to push button during the operation.
- O.T. (Over travel) shall be set between 80% and 100% of O.T. specifications.
- In connecting lead wires, care should be taken not to apply tension to terminal.
- In case of manual-soldering, soldering should be finished within 3 seconds by soldering iron of 30 W or with maximum tip temperature of 350 degree Celsius. Please do not apply pressure for 1 minute after soldering.
- Please design usage of switch in proper operation even if any standard value of operational characteristics changes by plus or minus 20 % .
- No dust, high humidity and organic gas should be found in the storage location.
- Please confirm the performance on actual operation by simulation with actual environment environments for high reliability.

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