

# Compact-sized Snap Action Switches

## MQS-54/-54A Series

1/11

### 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



### Applications

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

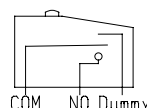
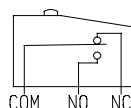
### Products Number system

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

#### Contact form

Blank : Transfer type

A : COM-NO type



#### 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

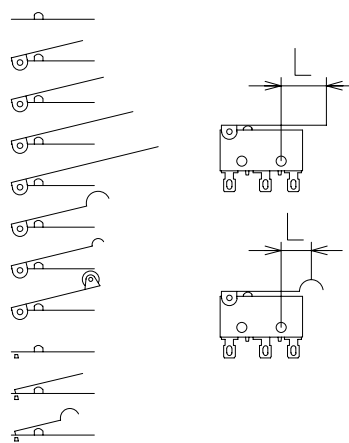
D3 : Hinge R1.3 lever L=6.3mm

D2 : Hinge roller lever L=5mm

C : Pin plunger type

C1 : Hinge short lever 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

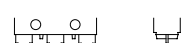
U2 : Gold clad twin layer

#### Terminal

Blank : Lead wire terminal



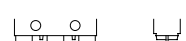
PR : PC board terminal right angle



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<br>(Pin plunger type)            | MAX 0.25N<br>(25gf)                                                                                                                                      | MAX 0.49N<br>(50gf)     | MAX 0.98N<br>(100gf) | MAX 1.47N<br>(150gf) | MAX 0.25N<br>(25gf)                        | MAX 0.49N<br>(50gf) | MAX 0.98N<br>(100gf) | MAX 1.47N<br>(150gf) |
| Ratings<br>(Resistive load)                      | 0.1A 125V AC<br>0.1A 30V DC                                                                                                                              | 3A 125V AC<br>3A 30V DC |                      |                      | 0.1A 125V AC<br>0.1A 30V DC                |                     |                      |                      |
| Mechanical life                                  | 1,000,000 cycles                                                                                                                                         |                         |                      |                      |                                            |                     |                      |                      |
| Electrical life                                  | 200,000 cycles                                                                                                                                           | 50,000 cycles           |                      |                      | 200,000 cycles                             |                     |                      |                      |
| Contact resistance<br>(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<br>Between each terminal and non live metal part : 1500V AC 1min<br>Between each terminal and each : 1500V AC 1min |                         |                      |                      |                                            |                     |                      |                      |
| Resistibility to vibration<br>(Pin plunger type) | double amplitude : 1.5mm , frequency : 10 to 55Hz    Each direction<br>Open contact shall be less than 1 ms at the above.                                |                         |                      |                      |                                            |                     |                      |                      |
| Resistibility to shock<br>(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

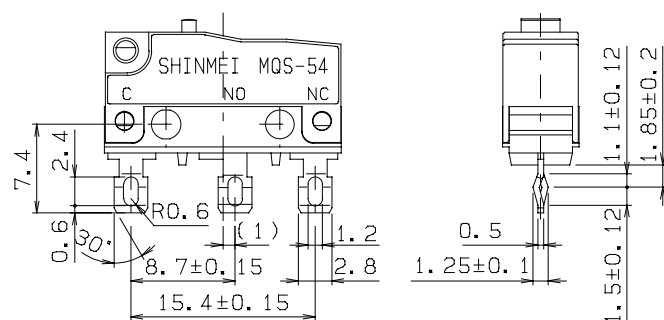
## Operating characteristic

| 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)    |          |          |          |                           |

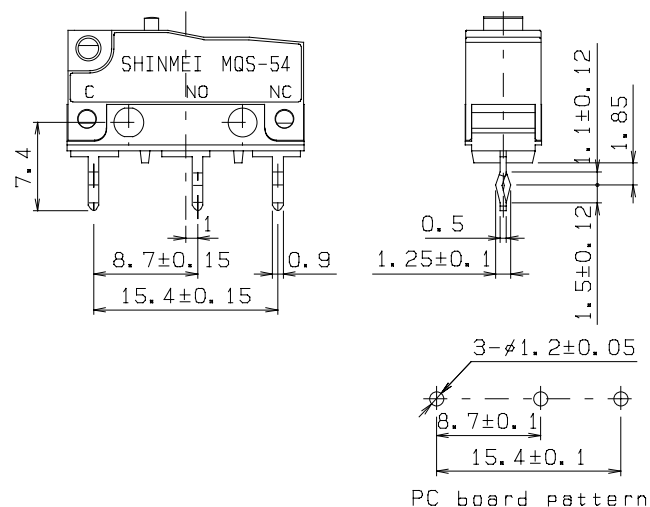
## Terminal dimensions

Unit : mm

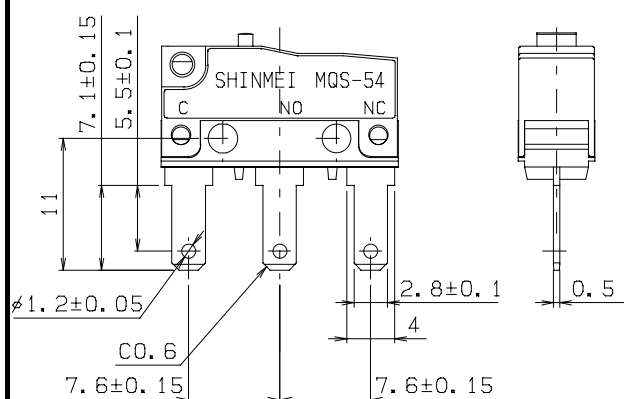
### Lead wire terminal



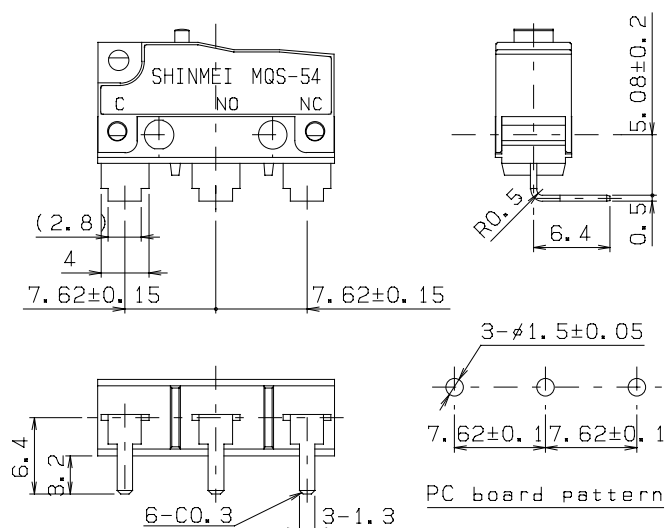
### PC board terminal



### #110 quick-connect terminal

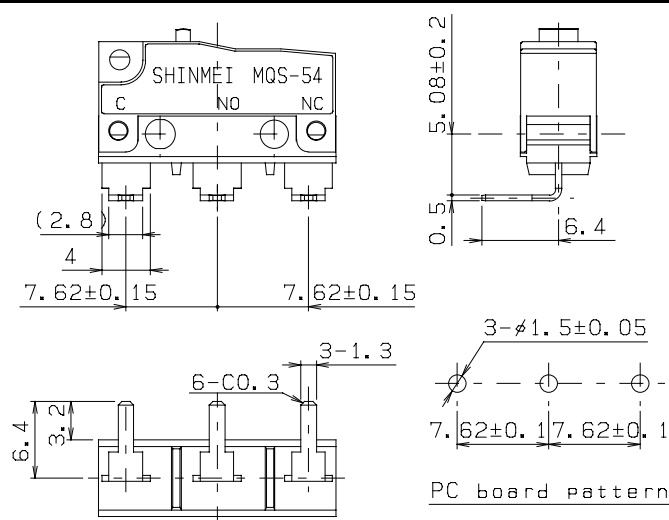


### PC board terminal right angle



Notes. COM-NO type is with NC terminal cut

### PC board terminal left angle





## ▮ Dimensions

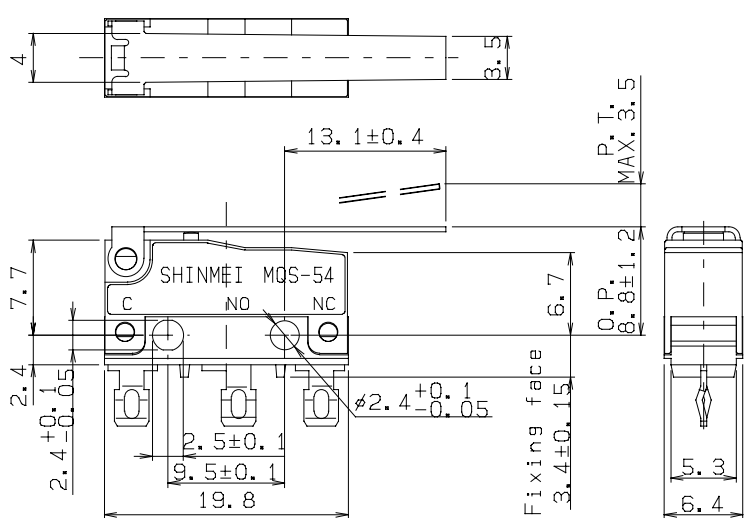
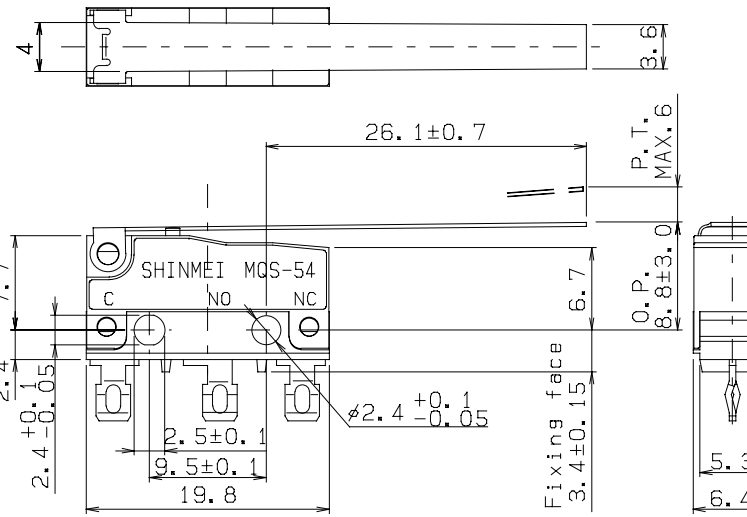
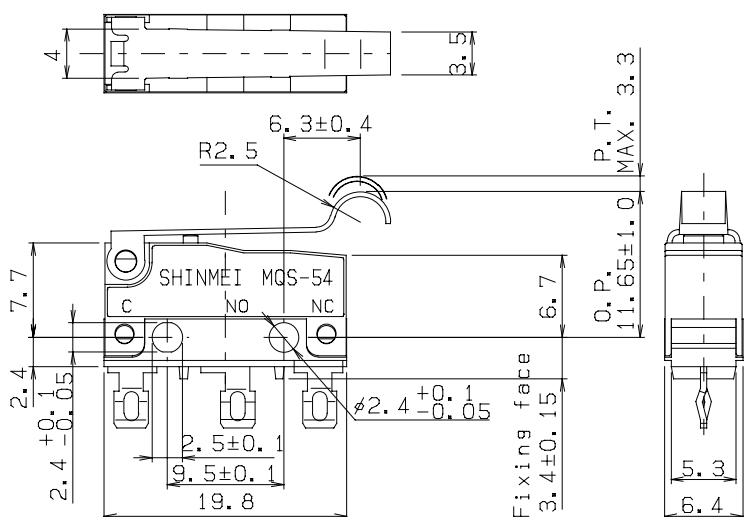
Unit : mm

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



## Dimensions

Unit : mm

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

## Dimension

Unit : mm

| No | Style                                        | Operating characteristic |                          |
|----|----------------------------------------------|--------------------------|--------------------------|
| 7  | Hinge R1.3 lever L=6.3mm<br>                 | P.T. MAX                 | 2.8mm                    |
|    |                                              | M.D. MAX                 | 0.8mm                    |
|    |                                              | O.T. MIN                 | 1.2mm                    |
|    |                                              | O.P.<br>From fixing hole | 10.7 plus or minus 0.8mm |
|    |                                              | O.P.<br>From fixing face | 14.1 plus or minus 0.9mm |
| 8  | Hinge roller lever L=5mm<br>                 | P.T. MAX                 | 2.5mm                    |
|    |                                              | M.D. MAX                 | 0.5mm                    |
|    |                                              | O.T. MIN                 | 0.8mm                    |
|    |                                              | O.P.<br>From fixing hole | 14.5 plus or minus 0.8mm |
|    |                                              | O.P.<br>From fixing face | 17.9 plus or minus 0.9mm |
| 9  | Pin plunger type(Inside lever hook type)<br> | P.T. MAX                 | 0.6mm                    |
|    |                                              | M.D. MAX                 | 0.1mm                    |
|    |                                              | O.T. MIN                 | 0.4mm                    |
|    |                                              | O.P.<br>From fixing hole | 8.4 plus or minus 0.3mm  |
|    |                                              | O.P.<br>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)<br> | P.T. MAX                 | 2.5mm                       |
|    |                                                     | M.D. MAX                 | 0.5mm                       |
|    |                                                     | O.T. MIN                 | 0.8mm                       |
|    |                                                     | O.P.<br>From fixing hole | 8.8 plus or minus<br>0.8mm  |
|    |                                                     | O.P.<br>From fixing face | 12.2 plus or minus<br>0.4mm |
| 11 | Hinge R2 lever L=1.1mm(Inside lever hook type)<br>  | P.T. MAX                 | 3.0mm                       |
|    |                                                     | M.D. MAX                 | 0.8mm                       |
|    |                                                     | O.T. MIN                 | 0.4mm                       |
|    |                                                     | O.P.<br>From fixing hole | 12.0plus or minus<br>1.0mm  |
|    |                                                     | O.P.<br>From fixing face | 15.4plus or minus<br>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.