

# MHS



## Hyper-miniature Slide Switches

RoHS Compliant

# PICOTOP

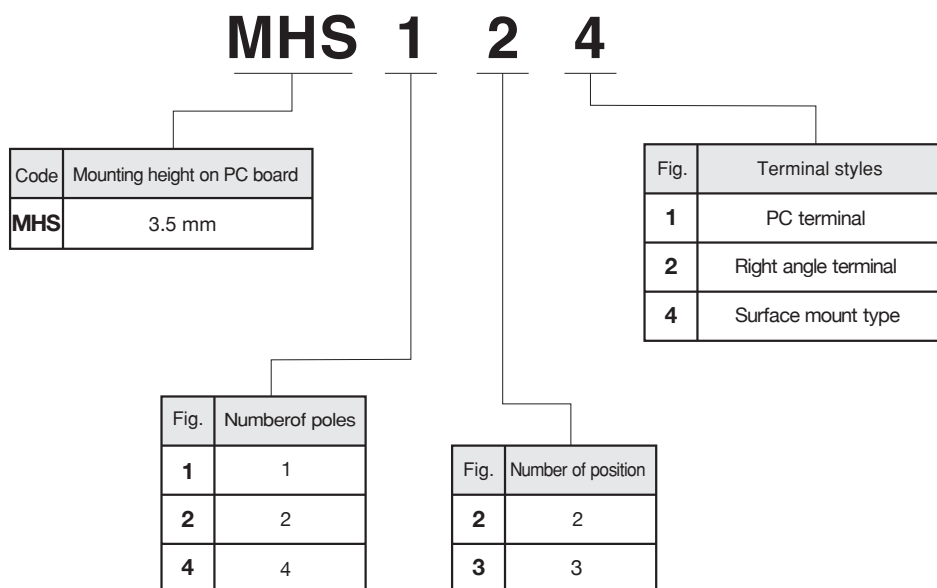
### ■ Features

1. Extremely small and low-profile slide switch.
2. Available in a wide variety of circuits.
3. Surface mount type also available.

### ■ Specifications

Rating	Max.	0.2A 12VDC	(Resistive load)
	Min.	10mA 5VDC	(Resistive load)
Initial contact resistance	500Ω max. (1.5mA 200μVAC)		
Dielectric strength	500VAC 1 minute		
Insulation resistance	100MΩ min. (500VDC)		
Electrical life	5,000 cycles		
Operating temperature range	-10~+70°C		
Storage temperature range	-20~+80°C		

### ■ Part Numbering





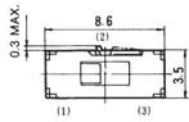
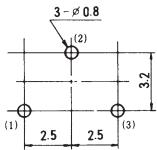
# MHS

**MHS121** Non-shorting

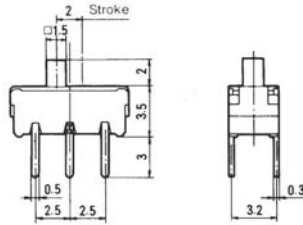


PC

**PC Hole Layouts**  
(Top view)



A ↑



Terminal numbers are not shown on the switch.

Switching function (Viewed from A)		Circuit diagram	No. of terminals
ON	ON		
2-1	2-3		

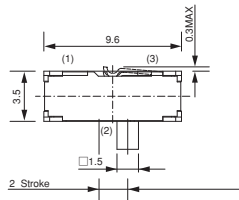
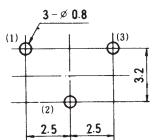
●Operating force : 0.49~3.92 N [50~400 gf]

**MHS122** Non-shorting

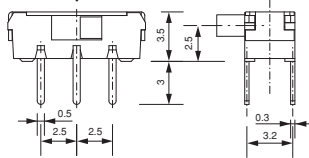


R/A

**PC Hole Layouts**  
(Top view)



A ↓

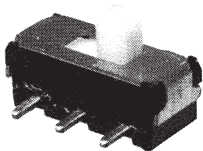


Terminal numbers are not shown on the switch.

Switching function (Viewed from A)		Circuit diagram	No. of terminals
ON	ON		
2-3	2-1		

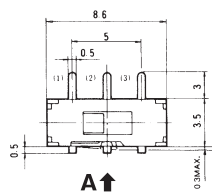
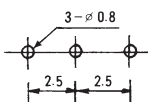
●Operating force : 0.49~3.92 N [50~400 gf]

**MHS122 -1** Non-shorting

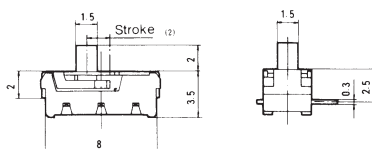


R/A

**PC Hole Layouts**  
(Top view)



A ↑



Terminal numbers are not shown on the switch.

Switching function (Viewed from A)		Circuit diagram	No. of terminals
ON	ON		
2-1	2-3		

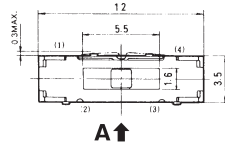
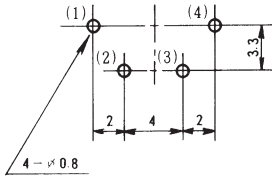
●Operating force : 0.49~3.92 N [50~400 gf]

**MHS131** Non-shorting

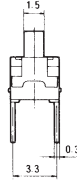
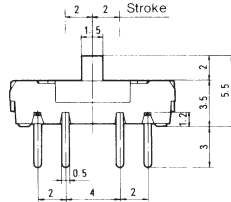


PC

**PC Hole Layouts**  
(Top view)



A ↑

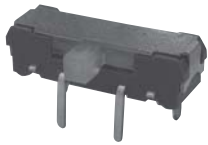


Terminal numbers are not shown on the switch.

Switching function (Viewed from A)			Circuit diagram	No. of terminals
ON	ON	ON		4
3-1	3-2	3-4		

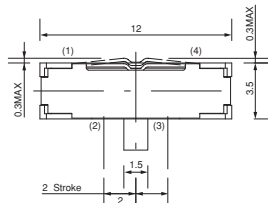
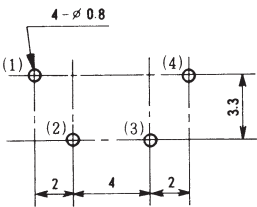
● Operating force : 0.49~3.92 N [50~400 gf]

**MHS132** Non-shorting

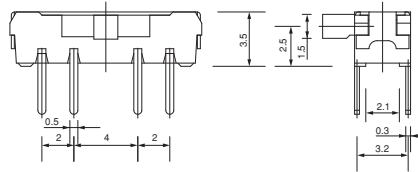


R/A

**PC Hole Layouts**  
(Top view)



A ↓

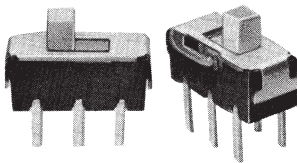


Terminal numbers are not shown on the switch.

Switching function (Viewed from A)			Circuit diagram	No. of terminals
ON	ON	ON		4
3-4	3-2	3-1		

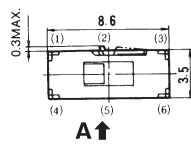
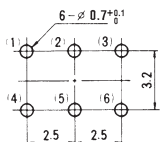
● Operating force : 0.49~3.92 N [50~400 gf]

**MHS221** Non-shorting

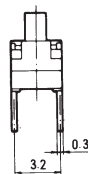
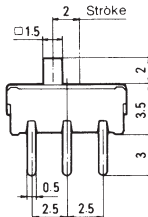


PC

**PC Hole Layouts**  
(Top view)



A ↑



Terminal numbers are not shown on the switch.

Switching function (Viewed from A)		Circuit diagram	No. of terminals
ON	ON		6
2-1 5-4	2-3 5-6		

● Operating force : 0.49~3.92 N [50~400 gf]

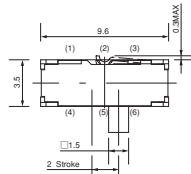
★ : Made to order products.

# MHS

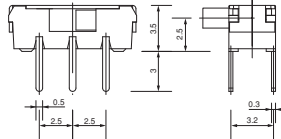
**MHS222** Non-shorting



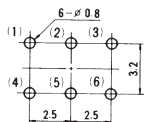
R/A



↓ A



## PC Hole Layouts (Top view)



Terminal numbers are not shown on the switch.

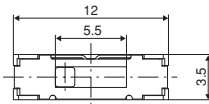
Switching function (Viewed from A)		Circuit diagram	No. of terminals
ON	ON		
2-3 5-6	2-1 5-4		

● Operating force : 0.49~3.92 N [50~400 gf]

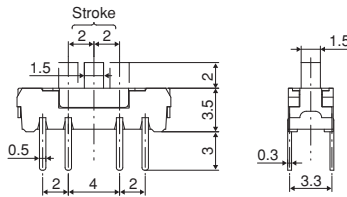
**MHS231** Non-shorting



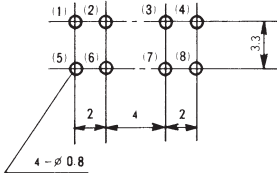
PC



↑ A



## PC Hole Layouts (Top view)

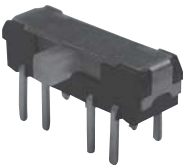


Terminal numbers are not shown on the switch.

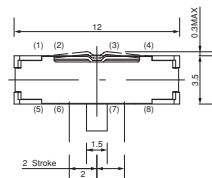
Switching function (Viewed from A)			Circuit diagram	No. of terminals
ON	ON	ON		
3-1 7-5	3-2 7-6	3-4 7-8		

● Operating force : 0.49~3.92 N [50~400 gf]

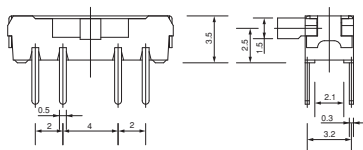
★ **MHS232** Non-shorting



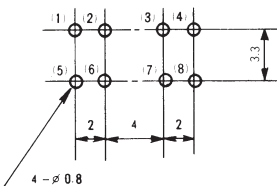
R/A



↓ A



## PC Hole Layouts (Top view)



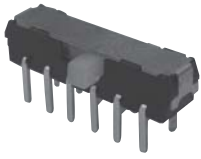
Terminal numbers are not shown on the switch.

Switching function (Viewed from A)			Circuit diagram	No. of terminals
ON	ON	ON		
3-4 7-8	3-2 7-6	3-1 7-5		

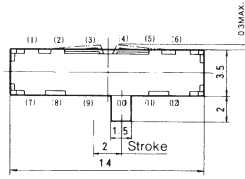
● Operating force : 0.49~3.92 N [50~400 gf]

★ : Made to order products.

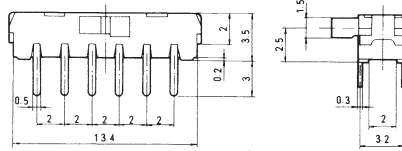
MHS422 Non-shorting



R/A

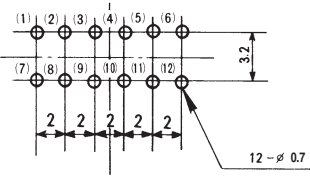


↓A



PC Hole Layouts

(Top view)



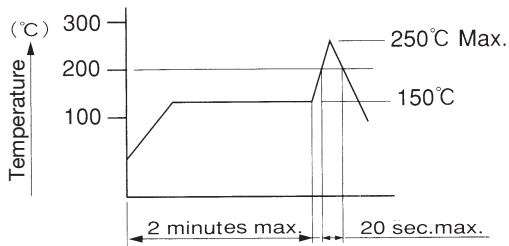
Terminal numbers are not shown on the switch.

Switching function (Viewed from A)		Circuit diagram	No. of terminals
			12
ON	ON		
2-3	2-1		
5-6	5-4		
8-9	8-7		
11-12	11-10		

●/Operating force : 1.47~3.92N {150~400 gf}

Soldering Specifications

- (1)Manual Soldering (MTS/MHS Series)
  - Device : Soldering iron
  - ① 380°C, Max.; 3 seconds, Max.
- (2)Auto Soldering (MHS121/MSH131/MHS221/MHS231 only)
  - Device : Jet wave type or dip type
  - ① 275°C, Max.; 6 seconds, Max.
- Pre-heating should be done at temperatures ranging from 80°C to 120°C and within 120 seconds
- (3)Reflow soldering (MTS Series)
  - Device : Heat-blow or infrared



- Apply reflow soldering only once.
- (4)When soldering two or more terminals to the common land, use solder resist to solder them independently.

Flux Cleaning

- (1)Solvent : Fluorine or Alcohol type.
- (2)Since the MTS-MHS series are not process sealed, if the PC board is to be cleaned, clean the soldering surface of substrate with a brush so that the switch is not exposed to the cleaning solution.

Frequency of switch use

If the switch is not likely to be operated frequently (e.g. two or three operations a year) in the dry circuit area, a sulfide film is likely to be formed on the contacts, resulting in contact failure. If this is the case, gold-plated products are recommended. Please contact your local Nidec Copal Electronics sales representative.

Packaging Specifications

