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.

■ 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 mnute		
Insulation resistance	100MΩ min.		(500VDC)
Electrical life	5,000 cycles		
Operating temperature range	−10～+70℃		
Storage temperature range	−20～+80℃		

■Part Numbering

MHS 1 2 4

Code	Mounting height on PC board
MHS	3.5 mm

Fig.	Numberof poles
1	1
2	2
4	4

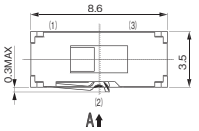
Fig.	Number of position
2	2
3	3

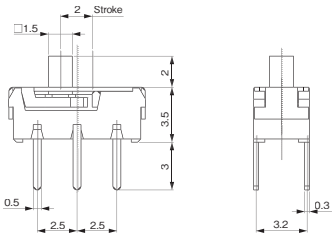
Fig.	Terminal styles
1	PC terminal
2	Right angle terminal
4	Surface mount type

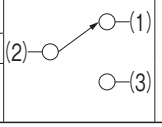
MHS121

Non-shorting

PC



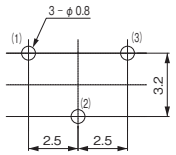


Switching function (Viewed from **A**)		Circuit diagram	No. of terminals
			3
ON	ON		
2−1	2−3		

●Operating force : 0.49〜3.92 N {50〜400 gf}

■PC Hole Layouts

(Top view)

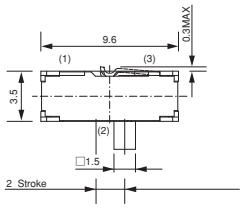


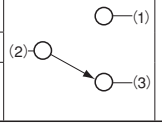
Terminal numbers are not shown on the switch.

MHS122

Non-shorting

R/A

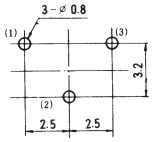


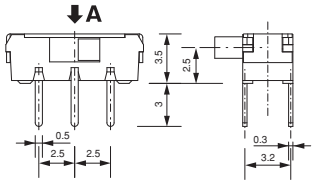
Switching function (Viewed from **A**)		Circuit diagram	No. of terminals
			3
ON	ON		
2−3	2−1		

●Operating force : 0.49〜3.92 N {50〜400 gf}

■PC Hole Layouts

(Top view)

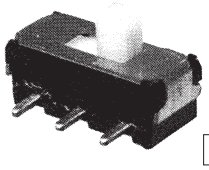




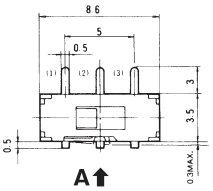
Terminal numbers are not shown on the switch.

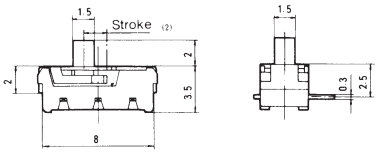
MHS122 −1

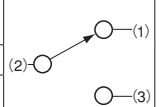
Non-shorting



R/A



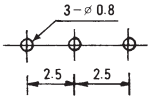


Switching function (Viewed from **A**)		Circuit diagram	No. of terminals
			3
ON	ON		
2−1	2−3		

●Operating force : 0.49〜3.92 N {50〜400 gf}

■PC Hole Layouts

(Top view)



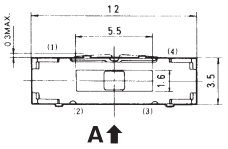
Terminal numbers are not shown on the switch.

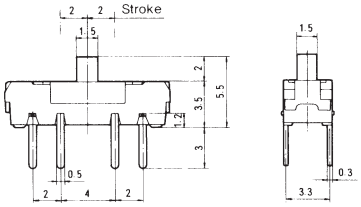
PICOTOP

MHS131

Non-shorting

PC



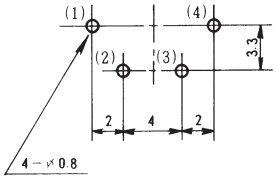


Switching function (Viewed from **A**)			Circuit diagram	No. of terminals
			(1) (2) (3) (4)	4
ON	ON	ON		
3−1	3−2	3−4		

●Operating force : 0.49～3.92N {50～400 gf}

■PC Hole Layouts

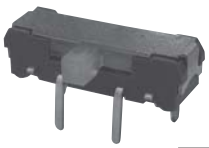
(Top view)



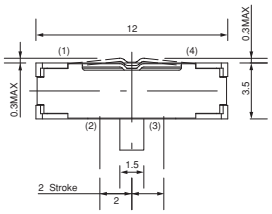
Terminal numbers are not shown on the switch.

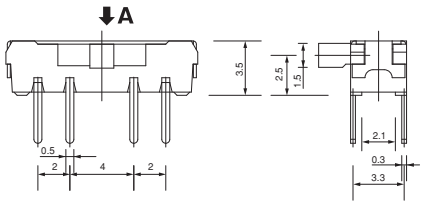
★MHS132

Non-shorting



R/A



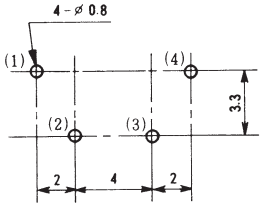


Switching function (Viewed from **A**)			Circuit diagram	No. of terminals
			(1) (2) (3) (4)	4
ON	ON	ON		
3−4	3−2	3−1		

●Operating force : 0.49～3.92 N {50～400 gf}

■PC Hole Layouts

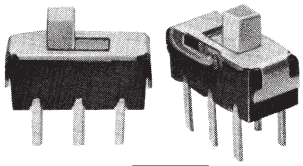
(Top view)



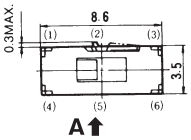
Terminal numbers are not shown on the switch.

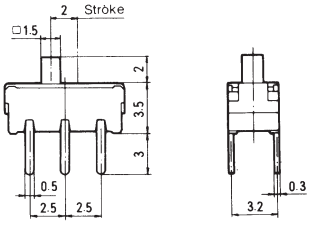
MHS221

Non-shorting



PC



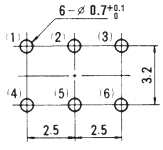


Switching function (Viewed from **A**)		Circuit diagram	No. of terminals
		(1) (2) (3) (4) (5) (6)	6
ON	ON		
2−1 5−4	2−3 5−6		

●Operating force : 0.49～3.92 N {50～400 gf}

■PC Hole Layouts

(Top view)



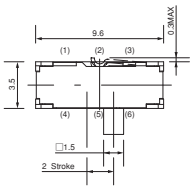
Terminal numbers are not shown on the switch.

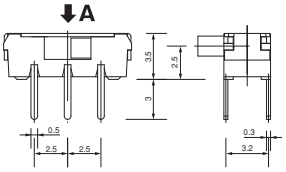
★ : Made to order products.

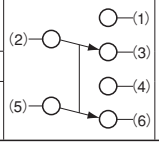
MHS222

Non-shorting

R/A



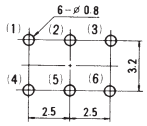


Switching function (Viewed from **A**)		Circuit diagram	No. of terminals
			6
ON	ON		
2−3 5−6	2−1 5−4		

●Operating force : 0.49～3.92 N {50～400 gf}

■PC Hole Layouts

(Top view)

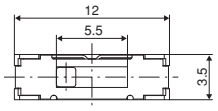


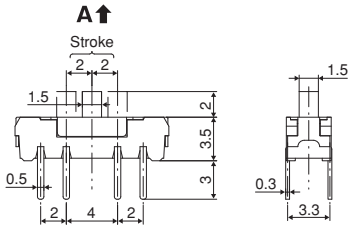
Terminal numbers are not shown on the switch.

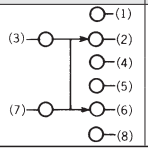
MHS231

Non-shorting

PC



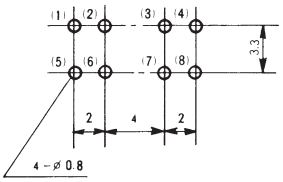


Switching function (Viewed from **A**)			Circuit diagram	No. of terminals
				8
ON	ON	ON		
3−1 7−5	3−2 7−6	3−4 7−8		

●Operating force : 0.49～3.92 N {50～400 gf}

■PC Hole Layouts

(Top view)

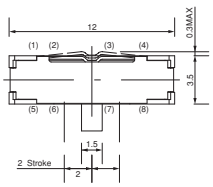


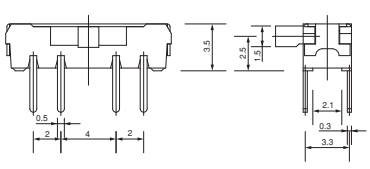
Terminal numbers are not shown on the switch.

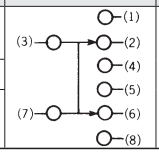
★MHS232

Non-shorting

R/A



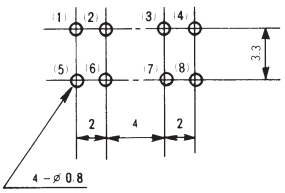


Switching function (Viewed from **A**)			Circuit diagram	No. of terminals
				8
ON	ON	ON		
3−4 7−8	3−2 7−6	3−1 7−5		

●Operating force : 0.49～3.92 N {50～400 gf}

■PC Hole Layouts

(Top view)



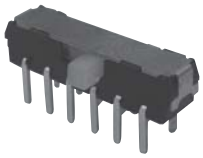
Terminal numbers are not shown on the switch.

★ : Made to order products.

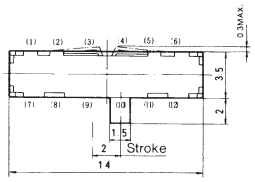
PICOTOP

MHS422

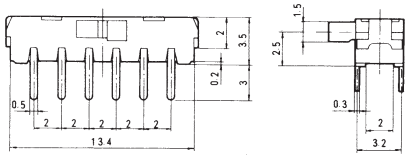
Non-shorting

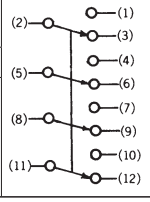


R/A



⬇A

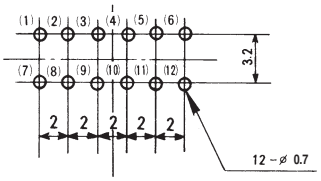


Switching function (Viewed from **A**)		Circuit diagram	No. of terminals
			12
ON	ON		
2−3 5−6 8−9 11−12	2−1 5−4 8−7 11−10		

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

■PC Hole Layouts

(Top view)



Terminal numbers are not shown on the switch.

■Soldering Specifications

(1)Manual Soldering
Device ： Soldering iron
① 380℃, Max.; 3 seconds, Max.

(2)Auto Soldering (**MHS121/MSH131/MHS221/MHS231** only)
Device ： Jet wave type or dip type
① 275℃, Max.; 6 seconds, Max.

●Pre-heating should be done at temperatures ranging from 80℃ to 120℃ and within 120 seconds

(3)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)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

Plastic Bag 200 pcs/pack