

MRK・MRKC

Key Switches



RoHS Compliant

■Features

1. For PCB Mounting

Direct mounting to PC board. The terminal pin layout is in inch pitch.

2. High Contact Reliability

Gold-plated contact with self-cleaning, twin contact mechanism provides high contact reliability.

3. Smooth Operation

Steel ball adopted to click mechanism for smooth operation.

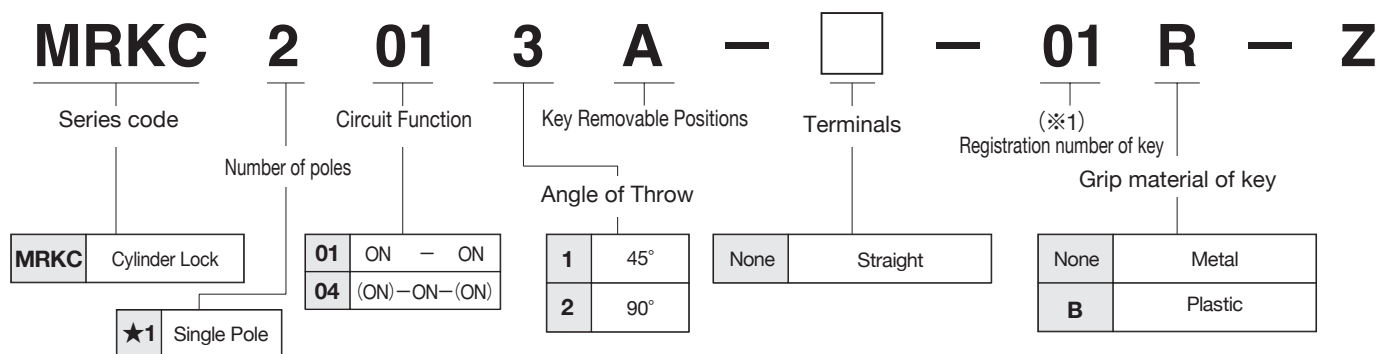
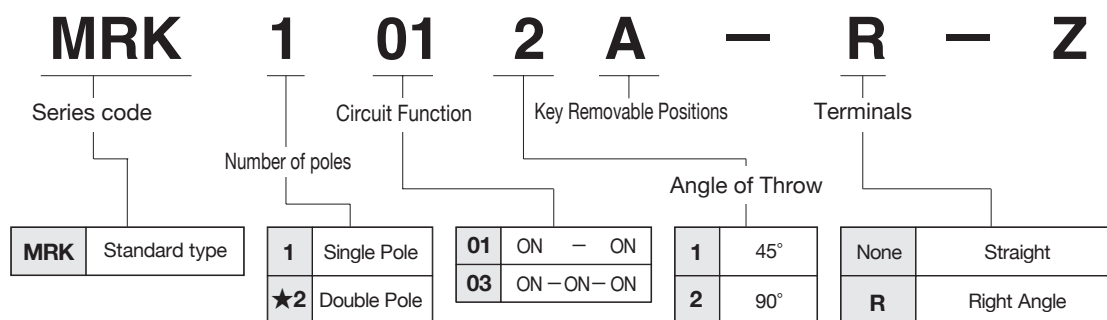
4. Improved Resistance to Soldering Heat

The resistance to soldering heat of contacts is improved by blocking heat from terminals by using the printed circuit board.

5. Cylinder Lock Type (MRKC)

Cylinder lock mechanism is adopted, enabling choice of various types of key.

■Part Numbering



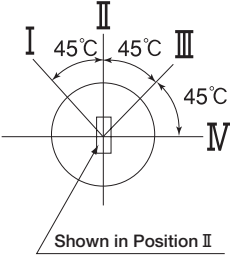
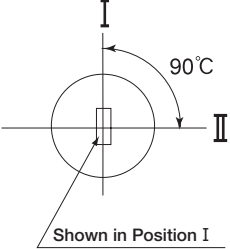
(※1) For **MRKC** series, 6 types of keys are available.
(01~03, 01B~03B)

MRK•MRKC

Specifications

Rating	0.4VA max. (20VDC max.)	
Initial contact resistance	200mΩ max.	(0.5mA 200μVAC)
Dielectric strength	250VAC 1 minute	
Insulation resistance	100MΩ min.	(100VDC)
Electrical life	10,000 cycles	
Operating force	MRK	2.94±0.98N•cm
	MRKC	2.94±1.47N•cm
Operating temperature range	−20℃~+70℃	
Storage temperature range	−40℃~+80℃	

Angle of Throw

45° step	90° step
	

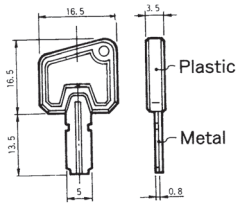
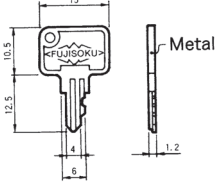
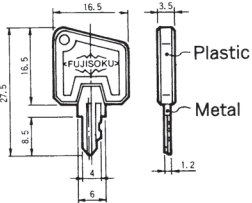
Key Removable Position

Code	Key position			
	I	II	III	IV
A	○	○	—	—
B	○	×	—	—
D	○	○	○	○
G	○	○	×	—
L	×	○	×	—

○ :Removable
× :Not removable

Standard Accessories

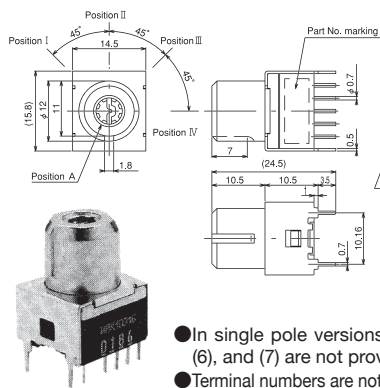
《Supplied with switch》

Part name	Key		
	MRK	MRKC	
Series			
Part No.	140007050010	140009002602	140009003061
Dimensions		 Key type "01"	 Key type "01B"
Grip material	Plastic	Metal	Plastic

● Each switch comes with two keys.

PC type Straight

Single Pole, Double Pole



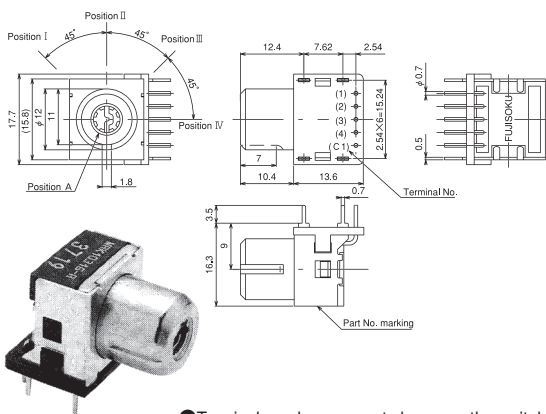
- In single pole versions, terminals (C2), (5), (6), and (7) are not provided.
- Terminal numbers are not shown on the switch.
- In switches with switching function D, G, and L, terminals (4) and (8) are not provided.

Part No.	Key removable position				A portion	Circuit function				Circuit diagram
						Connecting position				
	I position	II position	III position	IV position		I position	II position	III position	IV position	
★MRK1031D-Z ★MRK2031D-Z ★MRK1031D-R-Z	○	○	○	—						
★MRK1031G-Z	○	○		—		ON	ON	ON		
★MRK1031L-Z		○		—						
Connecting terminals					Single Pole	C1-1	C1-2	C1-3	C1-4	
					Double Pole	C1-1 C2-5	C1-2 C2-6	C1-3 C2-7	C1-4 C2-8	

(*) : C2 is not available in single pole versions.

Right Angle

Single Pole

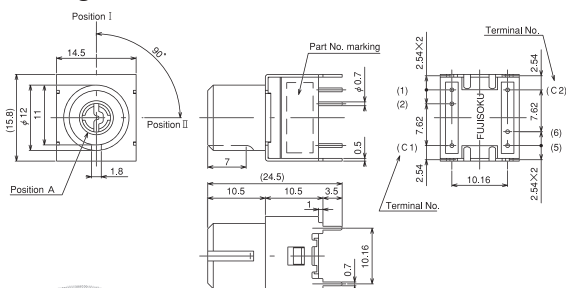


- Terminal numbers are not shown on the switch.


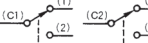

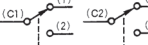
MRK (90° step 2—position)

●PC type Straight

Single Pole



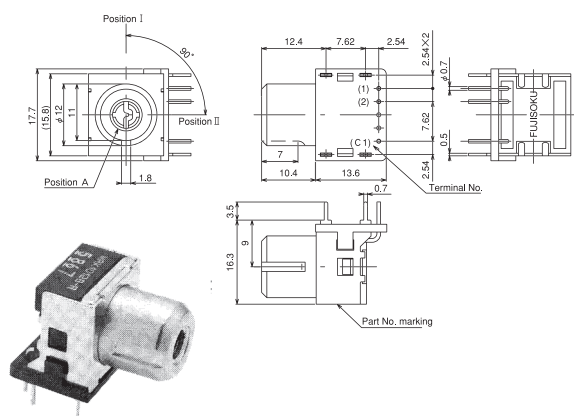
- In single pole versions, terminals (C2), (5), and (6) are not provided.
- Terminal numbers are not shown on the switch.

Part No.	Key removable position		A portion	Circuit function		
	I position	II position		Connecting position		Circuit diagram
				I position	II position	
☆MRK1012A—Z	○	○		ON	ON	
☆MRK1012B—Z	○					
Connecting terminals		Single Pole	C1—1	C1—2		


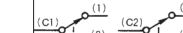

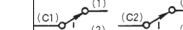
(*) : C2 is not available in single pole versions.
(ON) : Momentary

●Right Angle

Single Pole



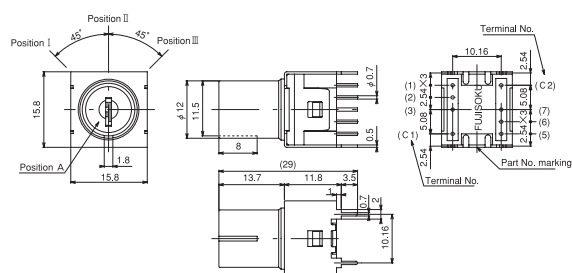
- Terminal numbers are not shown on the switch.

Part No.	Key removable position		A portion	Circuit function		
	I position	II position		Connecting position		Circuit diagram
				I position	II position	
★MRK1012A-R-Z	○	○		ON	ON	
☆MRK1012B-R-Z	○					
Connecting terminals		Single Pole		C1-1	C1-2	

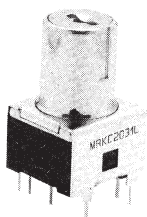
(*) : C2 is not available in single pole versions.
(ON) : Momentary



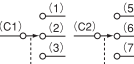
●PC type
Straight

Single Pole, Double Pole



- In single pole versions, terminals (C2), (5), (6), and (7) are not provided.
- Terminal numbers are not shown on the switch.



Part No.	Key removable position			A portion	Circuit function			
					Connecting position			(*) Circuit diagram
	I位置 I position	II位置 II position	III位置 III position		I position	II position	III position	
★MRKC1041L-01-Z ★MRKC1041L-01B-Z					(ON)	ON	(ON)	
Connecting terminals		Single Pole			C1-1	C1-2	C1-3	

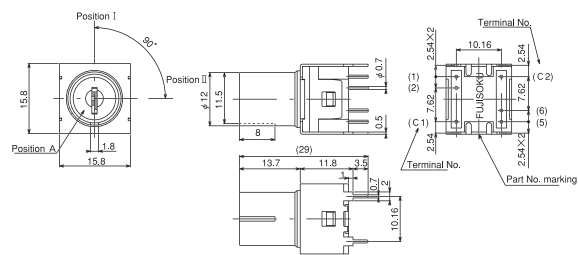
(*): C2 is not available in single pole versions.





(ON):Momentary

MRKC(90° step 2—position)

●PC type
Straight

Single Pole



Part No.	Key removable position		A portion	Circuit function		
	I position	II position		Connecting position		(*) Circuit diagram
				I position	II position	
★MRKC1012A-01-Z				ON	ON	
Connecting terminals		Single Pole		C1—1	C1—2	

(*) : C2 is not available in single pole versions.
(ON) :Momentary



- In single pole versions, terminals (C2), (5), (6), and (7) are not provided.
- Terminal numbers are not shown on the switch.

PC Hole Layouts

(Top View)

	Steps	Terminals	
		2-step (90°)	3-step (45°)
Single pole	PC type Straight		
	Right angle		
Double poles	PC type Straight		

For stand-off pins

For terminal pins

Key Mounting Dimensions

Series	MRK	MRKC	
Grip Material	Plastic	Metal	Plastic
Dimensions			

Precautions

1. Soldering

(1) Manual Soldering

Device : Solder iron.
360°C Max. 3 sec. Max.

(2) Auto Soldering

Method : Jet wave or dip type
275°C Max. 6 sec. Max

● Preheat should be within 80-120°C, 120sec.

2. Flux Cleaning

(1) Solvent : Alcohol type.

(2) **MRK** and **MRKC** series are not washable. To wash the PC board, clean the soldering surface of the PC board with a brush so that the switch is not exposed to the cleaning solution.