

MR(36°Step)

Miniature Rotary Switches

RoHS Compliant



■ Features

1. Diallyl phthalate resin (UL94V-0) which has excellent resistance to arc and heat, and superb insulation quality is employed.
2. The terminals are molded in to ensure the permanent seal structure that completely prevents flux entry through the terminals.
3. Adoption of the wiping mechanism for the contacting area to ensure contacting stability and reliability.
4. The variable stopper is provided to allow free selection of the desired number of positions (excluding MR4-2 type).

■ Specifications

Contact plating		Silver plated	Gold plated
Rating	Max.	500 mA 125 VAC	
	Min.	10 mA 5 VAC/DC	5 mA 6 VDC
Initial contact resistance		10 mΩ max. (1A 2~4VDC)	20 mΩ max. (1.5 mA 200μVAC)
Dielectric strength		1,000 VAC 1minute	
Insulation resistance		100 MΩ min.	(500 VDC)
Electrical life		10,000 cycles	
Operating force		9.8 N·cm max.	
Stopper strength		19.6 N·cm	
Operating temperature range		-20~+85°C	
Storage temperature range		-40~+85°C	

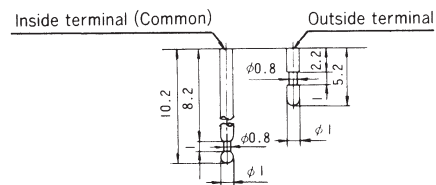
■ Part Numbering

MR 1 - 10 G - Z

Series code Number of poles Number of position Contact plating

1	1pole	10	10positions	None	Silver plated
2	2pole	5	5positions	G	Gold plated
4	4pole	2	2positions		

■ Terminal Styles



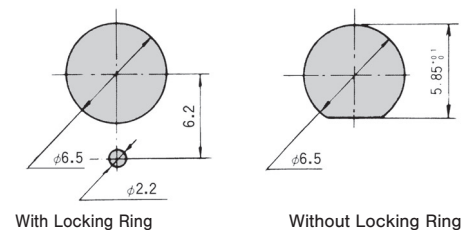
■ Standard Accessories

《Supplied with switch》

Part name	Hex Nut	Lockwasher	Locking Ring	Stopper
Part No.	140008010241	140008030051	140008020066	140000600357
Dimensions				
Plating	Nickel plated	Zinc plated	Zinc plated	

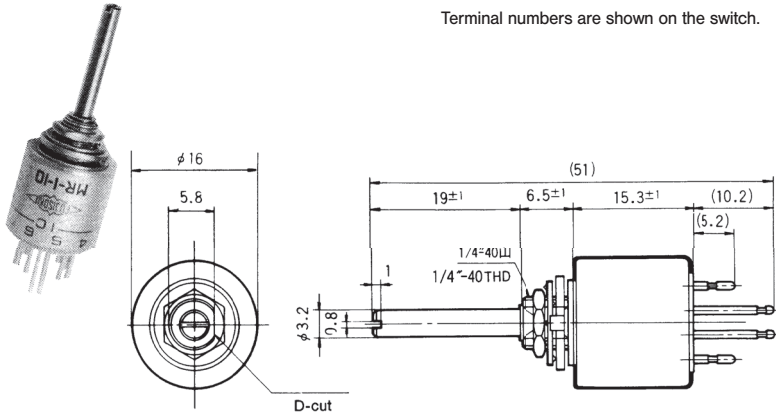
■ Panel Cut-Out Dimensions

Panel thickness : 2 mm max.



MR1-10-Z 1-pole 10-positions

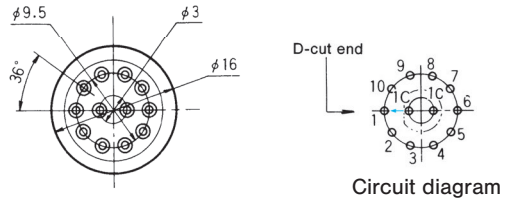
Terminal numbers are shown on the switch.



※Two Common terminals (1C) are internally short-circuited. Select either one depending on wiring arrangements.

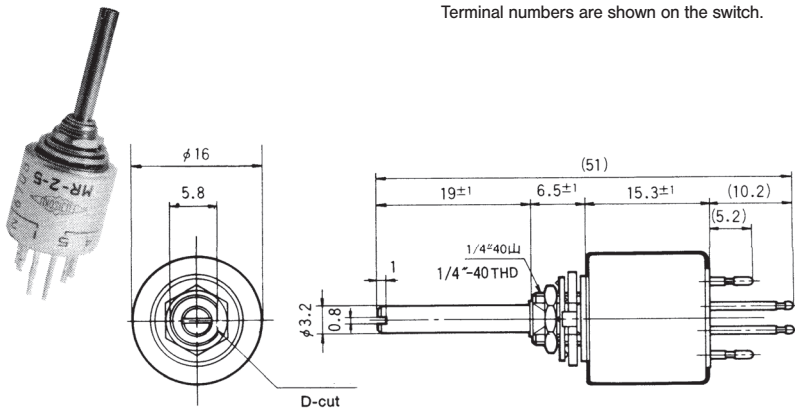
Part No.	Number of steps	Step angle
☆MR1-10-Z	9 Repetition of from 1 to 10	36°
★MR1-10G-Z		

From 2 to 9-position can be selected by variable stopper.



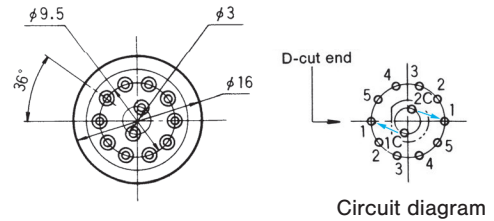
MR2-5-Z 2-poles 5-positions

Terminal numbers are shown on the switch.



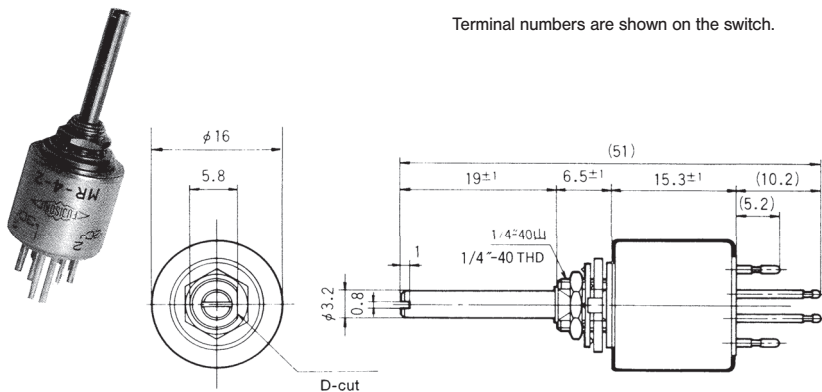
Part No.	Number of steps	Step angle
☆MR2-5-Z	4 Repetition of from 1 to 5	36°
★MR2-5G-Z		

From 2 to 4-position can be selected by variable stopper.



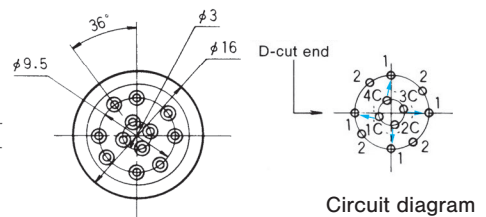
MR4-2-Z 4-poles 2-positions

Terminal numbers are shown on the switch.



Part No.	Number of steps	Step angle
★MR4-2-Z	1 Repetition of from 1 to 2	36°
★MR4-2G-Z		

No variable stopper is used.

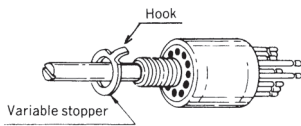


●The circuit diagrams show the switches as viewed from the terminal side with the shaft fully turned in the counter-clockwise direction.

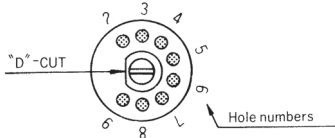
★ : Made to order products.

☆ : Semi-standard products.

How to Use Variable Stopper



1. The required number of positions can be obtained by fully turning the shaft in the counter-clockwise direction and inserting the stopper hook into the select hole of the desired contact number.



[Example]

- Select Hole No. 5 to set 5 positions with MR1-10-Z.
- Select Hole No. 3 to set 3 positions with MR2-5-Z.

2. Do not use the variable stopper when all contacts are used.

Optional Accessories

《Sold separately》

Part Name	Knob				
	FB type		FN type		
Dimensions					
Part No.	140000050598	140000051012	140000050956	140000050601	
Color	Body	Silver	Black	Silver	Black
	Indicator Line	Black	White	Black	White
Body Material	Aluminium		Aluminium		

● For the hexagon wrench for **FB/FN** types, choose the M4 wrench (2mm) available on the market.

Handling Precautions

1. Soldering Specifications

- (1) Manual Soldering
 - Device : Soldering iron
 - 360°C, Max.; 3 seconds, Max.
- (2) Auto Soldering
 - Device: Jet wave type or dip type
 - 275°C , Max.; 6 seconds, Max.
 - Pre-heating should be done at temperatures from 80 to 120°C and within 120 seconds
- (3) When soldering two or more terminals to the common land, use the solder resist to solder them independently.

2. Flux Cleaning

- (1) For the solvent, use the fluorine-based or alcohol-based solvent.
 - Solvent: Fluorine or Alcohol type
- (2) Do not use the ultrasonic cleaning system.