

# MR(36° Step)

## Miniature Rotary Switches

RoHS Compliant



### Features

1. Diallyl phthalate resin (**UL94V-O**) 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.	500mA 125VAC	
	Min.	10mA 5VAC/DC	5mA 6VDC
Initial contact resistance		10mΩ max. (1A 2~4VDC)	20mΩ max. (1.5mA 200μ VAC)
Dielectric strength		1,000VAC 1minute	
Insulation resistance		100MΩ min. (500VDC)	
Electrical life		10,000 cycles	
Operating force		9.8N·cm max.	
Stopper strength		19.6N·cm	
Operating temperature range		-20~+85°C	
Storage temperature range		-40~+85°C	

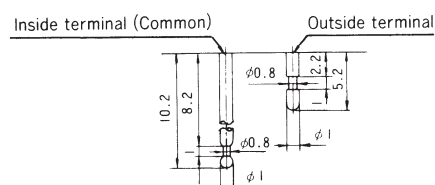
### Part Numbering

**MR 1 — 10 G — Z**

Series code    Number of poles    Number of position    Contact plating

<b>1</b>	1pole	<b>10</b>	10position	None	Silver plated
<b>2</b>	2poles	<b>5</b>	5position	<b>G</b>	Gold plated
<b>3</b>	3poles	<b>3</b>	3position		
<b>4</b>	4poles	<b>2</b>	2position		

### Terminal Styles



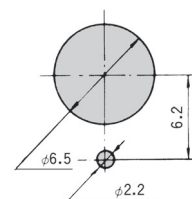
### Standard Accessories

《Supplied with switch》

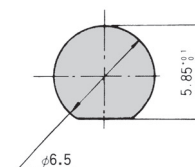
Part name	Hex Nut	Lockwasher	Locking Ring	stopper
Part No.	<b>140008010241</b>	<b>140008030051</b>	<b>140008020066</b>	<b>140000600357</b>
Dimensions				
Plating	Nickel plated	Zinc plated	Zinc plated	

### Panel Cut-Out Dimensions

Panel thickness : 2 mm max.



With Locking Ring



Without Locking Ring

● A wide variety of **optional accessories** are available. Specify the part number from **Optional Accessories** Table on page 542.

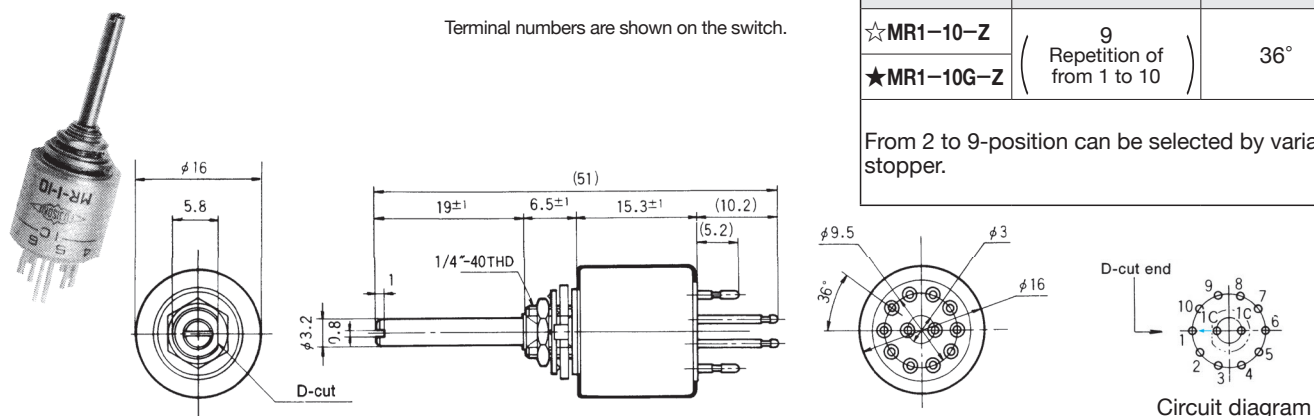
● For **Soldering Specifications** and **Flux Cleaning**, see page 547.

**MR1-10-Z****1-pole 10-position**

Terminal numbers are shown on the switch.

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.



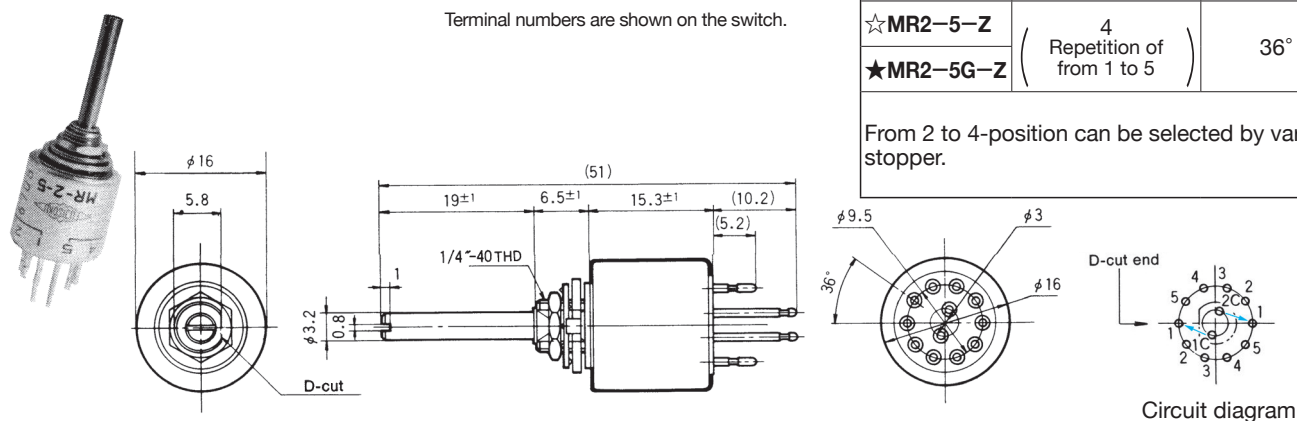
※Two Common terminals (1C) are internally short-circuited. Select either one depending on wiring arrangements.

**MR2-5-Z****2-pole 5-position**

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		

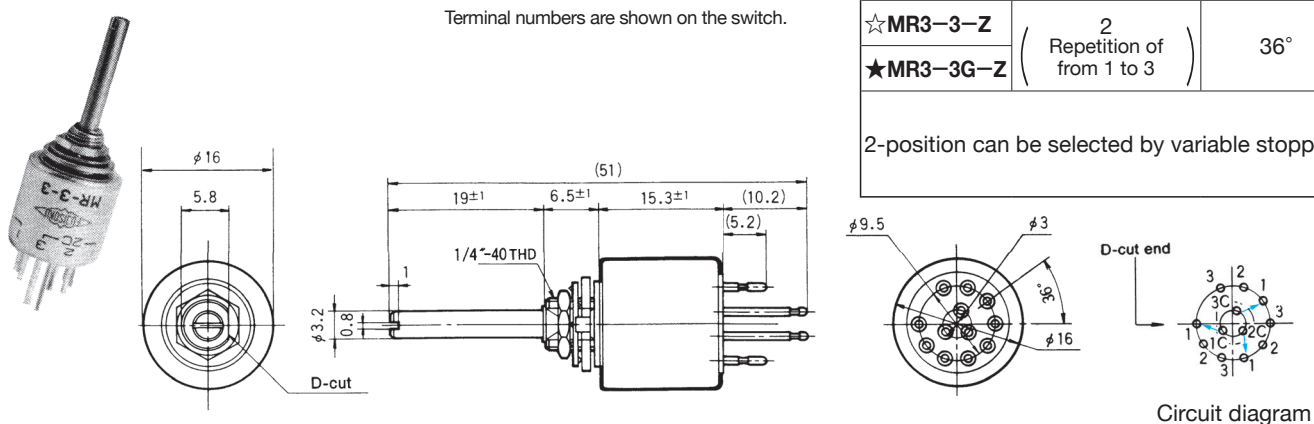
From 2 to 4-position can be selected by variable stopper.

**MR3-3-Z****3-pole 3-position**

Terminal numbers are shown on the switch.

Part No.	Number of steps	Step angle
☆MR3-3-Z	2 Repetition of from 1 to 3	36°
★MR3-3G-Z		

2-position can be selected by variable stopper.

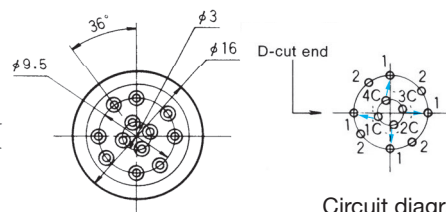
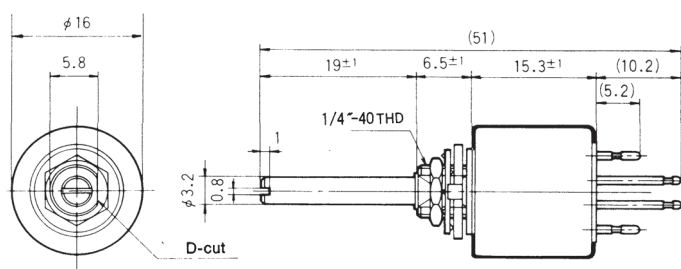


## MR(36° step)

### MR4-2-Z

### 4-pole 2-position

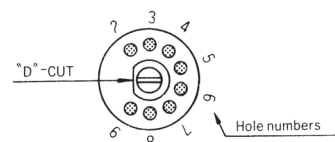
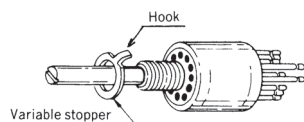
Terminal numbers are shown on the switch.



Part No.	Number of steps	Step angle
★MR4-2-Z	$\left( \begin{array}{c} 1 \\ \text{Repetition of} \\ \text{from 1 to 2} \end{array} \right)$	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.

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

[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.  
Select Hole No. 2 to set 2 positions with MR3-3-Z.

## Optional Accessories (MR、MRE series)

《Sold separately》

Part Name		ツマミ/Knob			
		FB形		FN形	
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.

★ : Made to order products.

:Optional Accessories.