# MR(30 ${ }^{\circ}$ Step) <br> <br> Miniature Rotary Switches 

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RoHS compliant

## Features

1. A high-density switch featuring 12 contacts with the same outside diameter as MR 10-contact type.
2. For the terminals, the crimping type is employed and the epoxy sealing is applied to prevent flux entry.
3. Adoption of the wiping mechanism for the contacting area to ensure contacting stability and reliability.

Specifications

| Contact plating. |  | Silver plated | Gold plated |
| :---: | :---: | :---: | :---: |
| Rating | Max. | 150mA 125VAC |  |
|  | Min. | 10mA 5V AC/DC |  |
| Initial contact resistance |  | $30 \mathrm{~m} \Omega$ max. (1A 2~4VDC) | $30 \mathrm{~m} \Omega \mathrm{max} .(1.5 \mathrm{~mA} 200 \mu \mathrm{VAC})$ |
| Dielectric strength |  | 500VAC 1 minute |  |
| Insulation resistance |  | $100 \mathrm{M} \Omega \mathrm{min}$. | (500VDC) |
| Electrical life |  | 10,000 cycles |  |
| Operating force |  | $14.7 \mathrm{~N} \cdot \mathrm{~cm}$ max. |  |
| Stopper strength |  | $49 \mathrm{~N} \cdot \mathrm{~cm}$ |  |
| Operating temperature range |  | $-10 \sim+65^{\circ} \mathrm{C}$ |  |
| Storage temperature range |  | $-20 \sim+85^{\circ} \mathrm{C}$ |  |



Terminal Style $\qquad$



## Panel Cut-Out Dimensions

Panel thickness : 2.5 mm max.


A wide variety of optional accessories are available. Specify the part number from Optional Accessories Table on page 567.
-For Soldering Specifications and Flux Cleaning, see page 566.

## MR1-12-Z 1-pole 12-position



MR2-6-Z 2-pole 6-position


MR3-4-Z

## 3-pole 4-position


$\left.\begin{array}{|c|c|c|}\hline \text { Part No. } & \text { Number of steps } & \text { Step angle } \\ \hline \text { ڤMR3-4-Z } & \begin{array}{c}3 \\ \text { Repetition of } \\ \text { from 1 to 4 }\end{array}\end{array}\right)$



Circuit diagram

MR4-3-Z


## 4-pole 3-position




Circuit diagram

The circuit diagrams show the switches as viewed from the terminal side with the shaft fully turned in the counter-clockwise direction. Note that the MR1-12 is of an endless type, check the connecting terminals with a circuit tester.

## 1. Soldering Specifications

Manual Soldering
Device: Soldering iron
$380^{\circ} \mathrm{C}$, Max.; 3 seconds, Max.

## 3. Ambient Conditions

Do not use the switches under the environment where the silver plating is subjected to contact failures by sulfuric gas, ammonia gas or other corrosive gases.
Under the environment where dust and dirt exist, use waterproof type switches.

Packaging Specifications


## 2. Mounting of Accessories

Mounting of accessories should be done after soldering and flux cleaning.

