

# MRS03 Series - Molded Dry Reed Switch

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## 1. Features

- Small single-contact switch
- High insulation resistance, up to  $10^9 \Omega$
- Suitable for low power operation
- Suitable for tape or reel packaging
- Custom design available
- Conforming to RoHS directive

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## 2. Performance Data

Parameter	Value
Rated Power (max.)	10 W
Switching Voltage (Max DC/Peak AC)	170 V
Switching Current (Max DC/Peak AC)	0.5 A
Carry Current (max.)	0.5 A
Contact Resistance (@0.5V & 50mA)	200 m $\Omega$
Breakdown Voltage	210 VDC
Insulation Resistance	$10^9 \Omega$
Operating Time (max.)	0.6 ms
Release Time (max.)	0.1 ms
Capacitance (typ.)	0.4 pF
Vibration Resistance	20 G
Shock Resistance	30 G
Operating Temperature	-40 +130 °C
Storage Temperature	-50 +130 °C

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### 3. Example of Order Marking

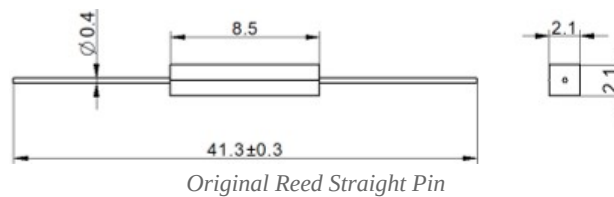
MRS03 - □ - □ (XXX)

Position	Description	Options
①	Product model	MRS03
②	Magnetic sensitivity (AT)	A: 05-10; B: 10-15; C: 15-20; D: 20-25; E: 25-30; F: 30-35; G: 35-40
③	PIN mode	0: Original reed straight pin; 1: Flat straight pin; 2: SMD pins; 3: J-pin
④	Special code	Customer special requirement

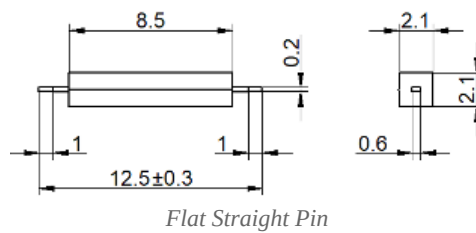
### 4. Outline Drawing

#### Pin Configurations

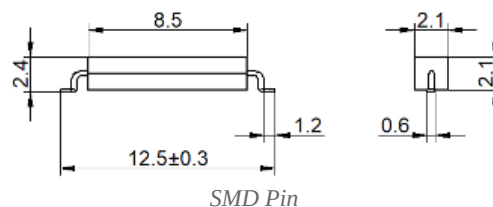
##### 1) Original Reed Straight Pin



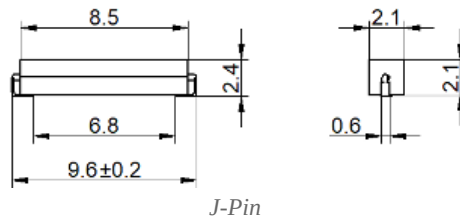
##### 2) Flat Straight Pin



##### 3) SMD Pin



##### 4) J-Pin



J-Pin

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## 5. Layout



PCB Layout

Standard PCB footprint layout for MRS03 series switches.

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## 6. Precautions for Use

1. **Environment:** Avoid installation in areas directly exposed to rain, strong magnetic fields, or near objects with thermal radiation.
2. **Density:** Avoid excessive bulk density in use, which may affect the electrical characteristics of the switch.
3. **Mechanical Shock:** Excessive mechanical shock strength may change its magnetic sensitivity or even damage the switch.
4. **Soldering:** Use appropriate pin tightening or heat dissipation to prevent mechanical or thermal stress during welding.
5. **Welding Parameters:** The maximum welding temperature is 260°C and the time is less than 5 seconds.

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## Technical Support

For specific parameters and performance details, please refer to the specifications and samples provided by SHR AUTOSENSOR TECH LIMITED.

Performance parameters vary from application area to application area. Customers should choose the appropriate product according to the specific conditions of use.

### Contact Information:

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## **Disclaimer**

This document is for customer reference only. Specifications and parameters may be changed due to product improvement without further notice.

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