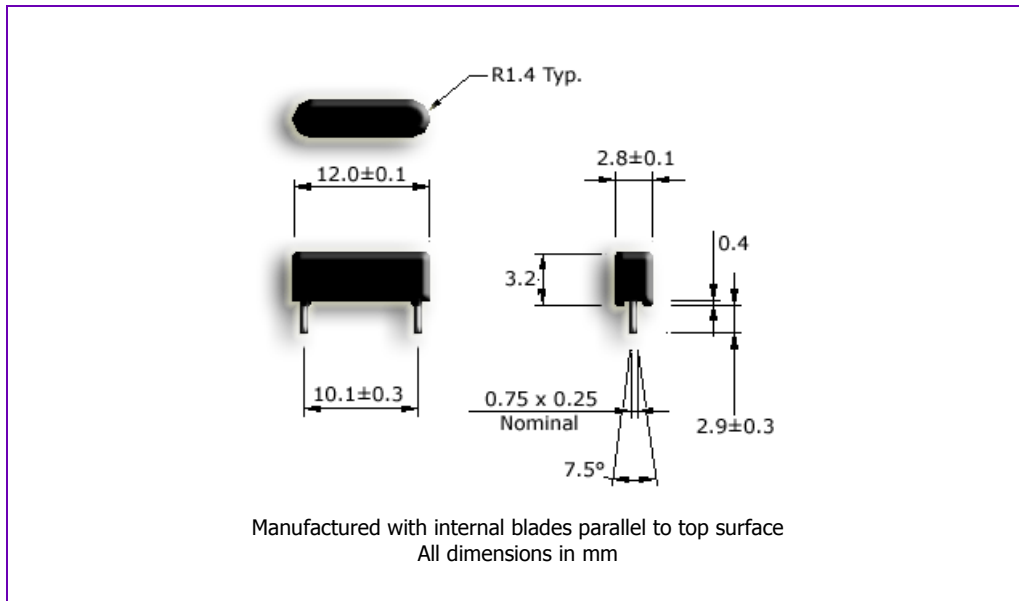


## MS-104 Ultra-miniature Reed Sensor

10.16 mm PCB mounting pitch



- ◆ Does not require power for operation
- ◆ Normally open (NO) form A contact
- ◆ Omni-polar device; actuates with either pole of magnet
- ◆ Lead (Pb) free and RoHS compliant

### Applications

This reed sensor is suitable for use in the following applications and many others: telephone hook switches, detergent level sensing in washing machines, electric tooth brushes, sewing machine pedals, fluid tank cap sensing, two wheeler side stand, fluid level sensing, automobiles with electronic keys, survival rafts and ELTs, hands free kits, fuel pumps, pedometers...

### Specification

Contact Form		A
Contact Rating (max)	W / VA	10.0
Switching Current (max)	A	0.5
Carry Current (max)	A	0.5
Switching Voltage (max)	V <sub>DC</sub>	100
Breakdown Voltage (min)	V <sub>DC</sub>	150
Initial Contact Resistance (max)	mΩ	200
Operating Temperature	°C	-40 to +100
Shock Resistance (½Sin wave for 11ms)	g	30
Vibration Resistance (10-2000Hz)	g	20

### Ordering Code

MS-104-(Operate AT Code)

OAT Code	
1	10 - 15
2	15 - 20
3	20 - 25

Cropping the leads will increase OAT and RAT

### Example

MS-104-3 denotes 20-25 operate AT.

Due to continual improvement, specifications are subject to change without notice

[www.reed-sensor.com](http://www.reed-sensor.com)

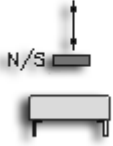
25 December 2006

## MS-104 Ultra-miniature Reed Sensor

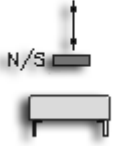
### Actuation Distances

Operate and release distances for the MS-104 reed sensor in the three standard AT bands when actuated (as shown in the sketches) with NdFeB standard magnets is shown below. All distances given are in mm with tolerances of  $\pm 0.5$ mm. Distances given will vary if the reed sensor leads are cropped after soldering. Although some of the AT band / magnet combinations will produce similar actuating distances, selecting the right AT band and magnet for an application is important and can be done by going through our AT band FAQ and our magnet selection guide.

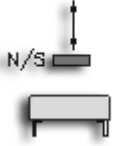
#### MS-104-1 (10-15 AT)

Actuation Sketch	Magnet	Dimensions	Operate Distance	Release Distance
	NDR-T	4.0 x 1.5 x 1.5	2.0 - 3.0	2.5 - 3.5
	NDC-T	Ø2.0 x 4.0	3.0 - 3.5	3.5 - 4.0
	NDR-S	6.0 x 2.5 x 2.5	6.0 - 7.0	6.5 - 7.5
	NDC-S	Ø3.0 x 7.0	7.5 - 8.5	8.0 - 9.0
	NDR-M	8.0 x 3.0 x 3.0	8.5 - 10.0	9.5 - 11.0
	NDC-M	Ø4.0 x 10.0	10.0 - 12.0	11.5 - 13.0
	NDR-L	19.0 x 4.0 x 4.0	15.0 - 17.5	16.5 - 19.0
	NDC-L	Ø8.0 x 15.0	24.5 - 27.0	26.5 - 29.0

#### MS-104-2 (15-20 AT)

Actuation Sketch	Magnet	Dimensions	Operate Distance	Release Distance
	NDR-T	4.0 x 1.5 x 1.5	1.5 - 2.0	2.0 - 2.5
	NDC-T	Ø2.0 x 4.0	2.0 - 3.0	2.5 - 3.5
	NDR-S	6.0 x 2.5 x 2.5	5.0 - 6.0	5.5 - 6.5
	NDC-S	Ø3.0 x 7.0	6.0 - 7.5	6.5 - 8.0
	NDR-M	8.0 x 3.0 x 3.0	7.0 - 8.5	8.0 - 9.5
	NDC-M	Ø4.0 x 10.0	9.0 - 10.0	10.0 - 11.5
	NDR-L	19.0 x 4.0 x 4.0	13.0 - 15.0	14.5 - 16.5
	NDC-L	Ø8.0 x 15.0	21.0 - 24.5	23.0 - 26.5

#### MS-104-3 (20-25 AT)

Actuation Sketch	Magnet	Dimensions	Operate Distance	Release Distance
	NDR-T	4.0 x 1.5 x 1.5	1.0 - 1.5	1.5 - 2.0
	NDC-T	Ø2.0 x 4.0	1.5 - 2.0	2.0 - 2.5
	NDR-S	6.0 x 2.5 x 2.5	4.5 - 5.0	5.0 - 5.5
	NDC-S	Ø3.0 x 7.0	5.0 - 6.0	6.0 - 6.5
	NDR-M	8.0 x 3.0 x 3.0	6.0 - 7.0	7.0 - 8.0
	NDC-M	Ø4.0 x 10.0	7.0 - 8.5	8.0 - 9.5
	NDR-L	19.0 x 4.0 x 4.0	12.0 - 13.0	13.5 - 14.5
	NDC-L	Ø8.0 x 15.0	20.0 - 21.0	22.0 - 23.0

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30 September 2006