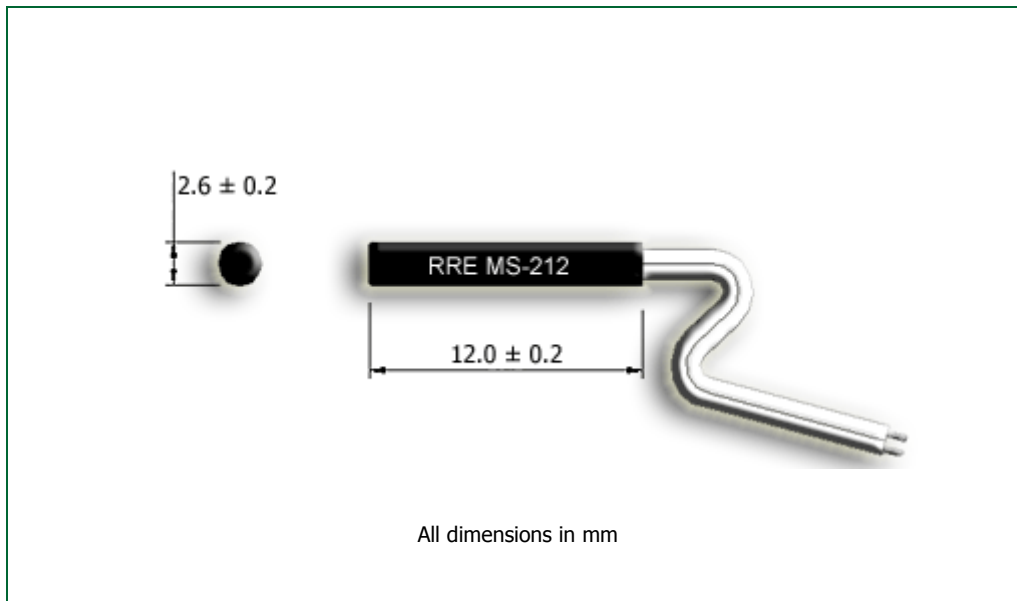


## MS-212 Cylindrical Magnet Sensor

Ultra-miniature, 2.5 mm Diameter x 12.0 mm, 10 W



- ◆ Does not require power for operation
- ◆ Omni-polar device; actuates with either pole of magnet
- ◆ Normally open (NO) contact
- ◆ Three magnetic sensitivity bands
- ◆ Various types of leads and connectors available
- ◆ Lead (Pb) free and RoHS compliant

### Applications

This magnet sensor is suitable for use in the following applications and many others: dentist drills, model airplanes, implantable devices, musical greeting cards...

### 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 +70
Shock Resistance (½Sin wave for 11ms)	g	30
Vibration Resistance (10-2000Hz)	g	20

### Ordering Code

MS-212-(Operate AT Code)-(Cable length in mm)-(Lead Code)

OAT Code		Lead Code	
1	10 – 15	S	Stripped to 5mm
2	15 – 20	T	Stripped to 5mm and Tinned
		M	Molex Connector

### Example

MS-212-1-500-M denotes 10-15 Operate AT, with 500 mm cable length and Molex connectors.

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

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


20 January 2009

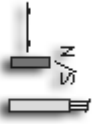
## MS-212 Cylindrical Magnet Sensor

### Actuation Distances


Operate and release distances for the MS-212 ultra-miniature cylindrical sensor, in two 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. 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-212-1 (10-15 AT)

Actuation Sketch	Magnet	Dimensions	Operate Distance	Release Distance
	NDR-T	4.0 x 1.5 x 1.5	0.5 - 2.0	1.0 - 2.5
	NDC-T	$\varnothing 2.0 \times 4.0$	1.0 - 2.5	1.5 - 3.0
	NDR-S	6.0 x 2.5 x 2.5	3.5 - 6.5	4.0 - 6.5
	NDC-S	$\varnothing 3.0 \times 7.0$	4.5 - 7.0	5.0 - 7.5
	NDR-M	8.0 x 3.0 x 3.0	6.0 - 8.5	6.5 - 9.0
	NDC-M	$\varnothing 4.0 \times 10.0$	8.0 - 11.5	9.5 - 12.0
	NDR-L	19.0 x 4.0 x 4.0	11.5 - 15.0	12.5 - 15.5
	NDC-L	$\varnothing 8.0 \times 15.0$	21.0 - 27.0	23.0 - 27.5

Actuation Sketch	Magnet	Dimensions	Operate Distance	Release Distance
	NDR-T	4.0 x 1.5 x 1.5	2.0 - 3.5	2.5 - 4.0
	NDC-T	$\varnothing 2.0 \times 4.0$	2.5 - 4.0	3.0 - 4.5
	NDR-S	6.0 x 2.5 x 2.5	5.5 - 7.5	6.0 - 8.0
	NDC-S	$\varnothing 3.0 \times 7.0$	6.0 - 8.5	6.5 - 9.0
	NDR-M	8.0 x 3.0 x 3.0	8.0 - 10.0	8.5 - 10.5
	NDC-M	$\varnothing 4.0 \times 10.0$	10.0 - 12.5	10.5 - 13.0
	NDR-L	19.0 x 4.0 x 4.0	13.0 - 17.0	14.0 - 17.5
	NDC-L	$\varnothing 8.0 \times 15.0$	20.0 - 25.0	21.5 - 26.0

#### MS-212-2 (15-20 AT)

Actuation Sketch	Magnet	Dimensions	Operate Distance	Release Distance
	NDR-T	4.0 x 1.5 x 1.5	0.5 - 1.0	1.0 - 1.5
	NDC-T	$\varnothing 2.0 \times 4.0$	1.0 - 2.0	1.5 - 2.5
	NDR-S	6.0 x 2.5 x 2.5	3.0 - 5.0	3.5 - 5.5
	NDC-S	$\varnothing 3.0 \times 7.0$	4.0 - 5.5	4.5 - 6.5
	NDR-M	8.0 x 3.0 x 3.0	5.5 - 7.5	6.0 - 8.0
	NDC-M	$\varnothing 4.0 \times 10.0$	7.5 - 9.5	8.5 - 10.5
	NDR-L	19.0 x 4.0 x 4.0	10.0 - 12.0	11.0 - 13.5
	NDC-L	$\varnothing 8.0 \times 15.0$	19.0 - 22.5	20.5 - 25.0

Actuation Sketch	Magnet	Dimensions	Operate Distance	Release Distance
	NDR-T	4.0 x 1.5 x 1.5	2.0 - 2.5	2.5 - 3.0
	NDC-T	$\varnothing 2.0 \times 4.0$	2.5 - 3.5	3.0 - 4.0
	NDR-S	6.0 x 2.5 x 2.5	5.0 - 5.5	6.0 - 6.5
	NDC-S	$\varnothing 3.0 \times 7.0$	6.0 - 7.0	6.5 - 8.0
	NDR-M	8.0 x 3.0 x 3.0	7.0 - 8.0	8.0 - 9.0
	NDC-M	$\varnothing 4.0 \times 10.0$	9.0 - 10.5	10.0 - 11.0
	NDR-L	19.0 x 4.0 x 4.0	11.5 - 13.0	12.5 - 15.5
	NDC-L	$\varnothing 8.0 \times 15.0$	19.0 - 21.0	20.5 - 23.0

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

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

20 January 2009