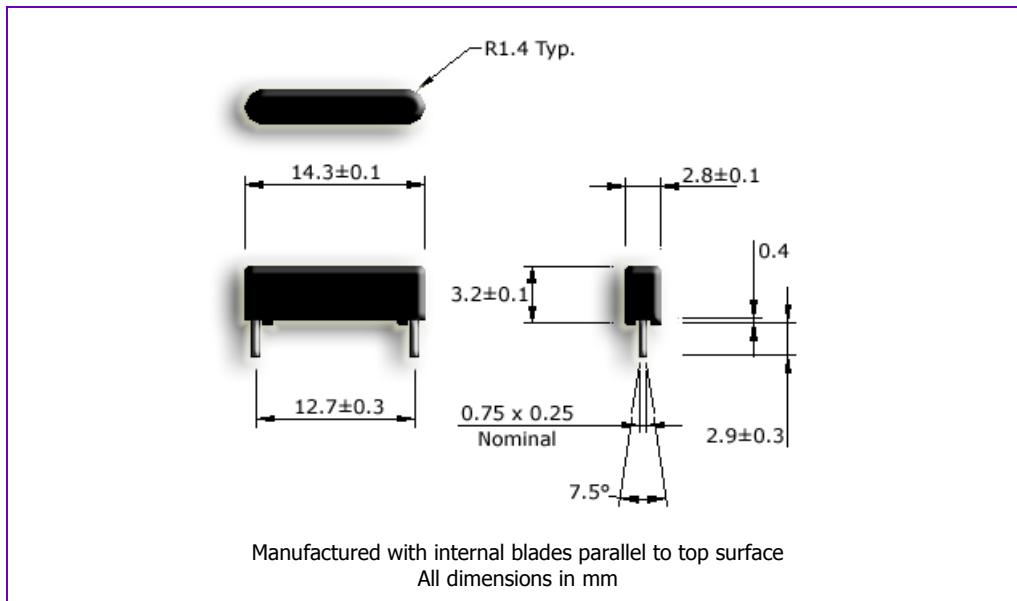


MS-105 Micro-miniature Reed Sensor

12.7 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 | 0.75 |
| Switching Voltage (max) | V_{DC} | 100 |
| Breakdown Voltage (min) | V_{DC} | 150 |
| Initial Contact Resistance (max) | $m\Omega$ | 150 |
| Operating Temperature | $^{\circ}C$ | -40 to +100 |
| Shock Resistance ($\frac{1}{2}$ Sin wave for 11ms) | g | 30 |
| Vibration Resistance (10-2000Hz) | g | 20 |

Ordering Code

MS-105-(Operate AT Code)

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

Cropping the leads will increase OAT and RAT

Example

MS-105-2 denotes 15-20 operate AT.

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

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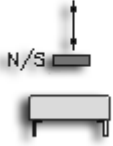
25 December 2006

MS-105 Micro-miniature Reed Sensor

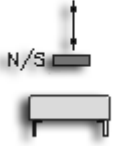
Actuation Distances

Operate and release distances for the MS-105 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 ± 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.

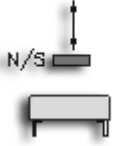
MS-105-1 (10-15 AT)

| Actuation Sketch | Magnet | Dimensions | Operate Distance | Release Distance |
|---|--------|------------------|------------------|------------------|
|  | NDR-T | 4.0 x 1.5 x 1.5 | 1.5 - 2.5 | 2.5 - 3.5 |
| | NDC-T | Ø2.0 x 4.0 | 2.0 - 3.5 | 3.0 - 4.5 |
| | NDR-S | 6.0 x 2.5 x 2.5 | 6.5 - 8.0 | 7.5 - 8.5 |
| | NDC-S | Ø3.0 x 7.0 | 8.0 - 9.5 | 8.5 - 10.0 |
| | NDR-M | 8.0 x 3.0 x 3.0 | 8.0 - 11.0 | 10.0 - 12.5 |
| | NDC-M | Ø4.0 x 10.0 | 9.5 - 13.0 | 11.5 - 14.5 |
| | NDR-L | 19.0 x 4.0 x 4.0 | 15.5 - 19.5 | 17.0 - 22.0 |
| | NDC-L | Ø8.0 x 15.0 | 24.5 - 30.0 | 27.0 - 33.0 |

MS-105-2 (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 | 2.5 - 3.0 |
| | NDC-T | Ø2.0 x 4.0 | 2.0 - 3.0 | 3.0 - 3.5 |
| | NDR-S | 6.0 x 2.5 x 2.5 | 6.0 - 6.5 | 7.0 - 7.5 |
| | NDC-S | Ø3.0 x 7.0 | 7.0 - 8.0 | 8.5 - 9.0 |
| | NDR-M | 8.0 x 3.0 x 3.0 | 8.0 - 9.0 | 9.5 - 10.0 |
| | NDC-M | Ø4.0 x 10.0 | 9.0 - 10.5 | 11.0 - 11.5 |
| | NDR-L | 19.0 x 4.0 x 4.0 | 14.5 - 15.5 | 17.0 - 19.0 |
| | NDC-L | Ø8.0 x 15.0 | 22.5 - 25.0 | 27.0 - 29.0 |

MS-105-3 (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 | 2.0 - 2.5 |
| | NDC-T | Ø2.0 x 4.0 | 1.5 - 2.5 | 2.5 - 3.5 |
| | NDR-S | 6.0 x 2.5 x 2.5 | 5.0 - 6.0 | 6.5 - 7.0 |
| | NDC-S | Ø3.0 x 7.0 | 6.0 - 6.5 | 7.5 - 8.5 |
| | NDR-M | 8.0 x 3.0 x 3.0 | 7.0 - 8.0 | 9.0 - 10.0 |
| | NDC-M | Ø4.0 x 10.0 | 8.0 - 9.0 | 10.5 - 11.5 |
| | NDR-L | 19.0 x 4.0 x 4.0 | 12.5 - 14.5 | 16.0 - 18.0 |
| | NDC-L | Ø8.0 x 15.0 | 20.5 - 23.0 | 25.0 - 27.5 |

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

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30 September 2006