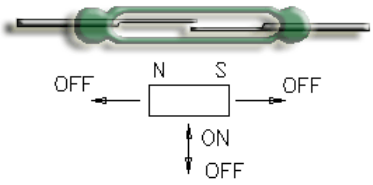
Magnet Approaches

In all systems, magnet and reed switch must be brought to within a specific proximity of each other. This distance will vary in accordance with the sensitivity of the reed switch and the strength of the magnet. When the magnet is close enough, the normally open contacts will close or operate. When the magnet is taken away, the contacts will open or release. The relative distance for an operate is always less than that for a release. Examples of proximity motion switching are shown below.

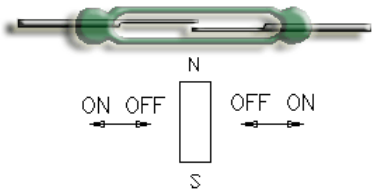
Perpendicular Motion

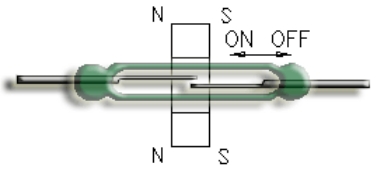
Provides only one closure with maximum magnet travel.



Parallel Motion

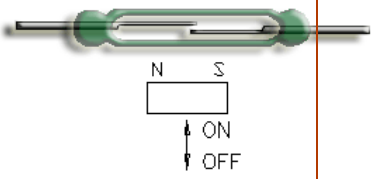
Provides as many as three closures with maximum magnet travel. Allows one closure with minimum magnet travel.





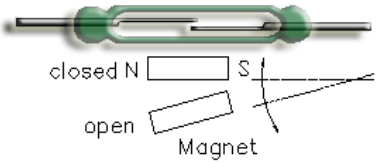
Front to back Motion

Somewhat similar to parallel motion, except magnet motion is at right angles to switch and provides only one closure with maximum magnet travel.



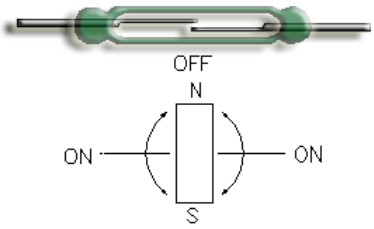
Pivoted Motion

Large angular magnet travel necessary to achieve one closure.



Rotation

Rotating the magnet or reed switch, normal to their axes, reverses magnetic polarity resulting in two closures per revolution. When these axes are parallel, the switch closes. When the axes are perpendicular, the switch opens. Although the poles reverse, they still induce the opposite poles that close the reed switch.



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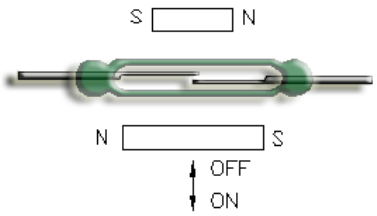
Magnet Approaches

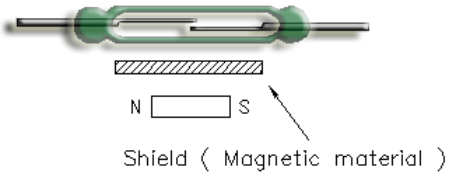
Biasing

A biasing effect is produced by placing a stationary magnet near the reed switch, to keep it normally closed. The approach of another magnet with reversed polarity cancels the magnetic lines of force, and the reed switch opens. Care should be taken not to bring the actuating magnet too close to the biased reed switch, as it could close again. Form A reed switches meant for this kind of application should be selected from an release AT group instead of from an operate AT group.



Shielding

In this type of actuation, magnet and reed switch are permanently fixed in such a position that the reed switch contacts are closed. A piece of ferromagnetic material is passed between the magnet and the reed switch, to cause drop out. The magnetic field is shunted, eliminating the attraction between the reeds. When the shield is removed, the reed switch closes.



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