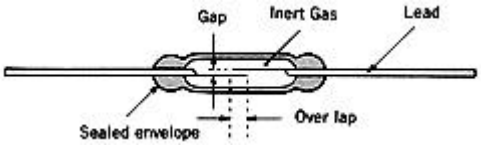
ALEPH® Reed Switch

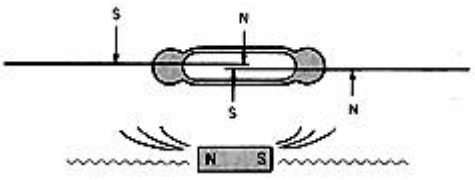
Features

Compact and Light	**The reed switch can be mounted in a very limited space; it is ideal for use in miniaturized equipment.**
Hermetically Sealed	**The switching elements of the reed switch are hermetically sealed in an inert gas atmosphere, so that they are never exposed to the external environment.**
Long Life	**The reed switch employs no sliding parts, so that there is no fatigue related degradation in the quality of the materials used, ensuring a virtually unlimited mechanical life.**
High Speed Operation	**Every movable element has a very low mass resulting in a high speed of operation. This enables the reed switch to be used as an interface to a transistor or integrated circuit.**

Construction



The reed switch consists of a pair of flexible reeds made of a magnetic material, and sealed in a glass tube filled with inert gas. The reeds are overlapped but separated by a small gap. The contact area of each reed is plated with a noble metal, such as Rhodium or Ruthenium, to provide the switch with stable characteristics and long life.

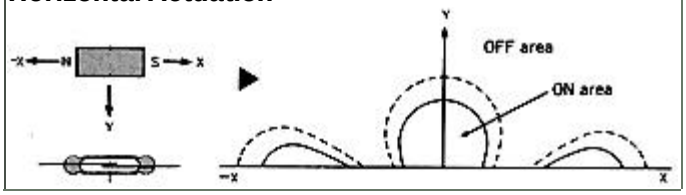


Application of a magnetic field, generated by a permanent magnet or a coil, to the reed switch causes both reeds to be magnetized. This produces an N-pole at the contact area of one reed, and an S-pole at that of the other reed, in a manner shown on the drawing (left). If the magnetic attracting force overcomes the resistive force caused by elasticity of the reed, the reeds come in contact (Pull-In) i.e., the circuit is closed. Once the magnetic field is removed, the reeds are separated again by the effect of elasticity of the reed (Drop-Out) i.e., the circuit is opened.

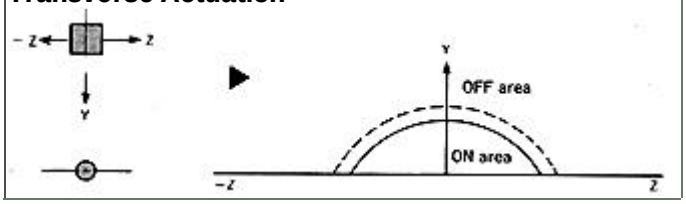
Magnet Actuation Patterns

The most often used way of the actuating a reed switch is with a magnet; the typical patterns of actuation are as shown on the drawings below.

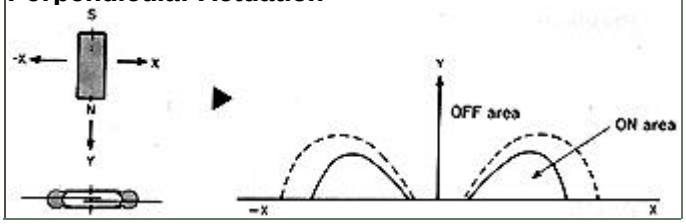
Horizontal Actuation



Transverse Actuation



Perpendicular Actuation



Rotational Activation