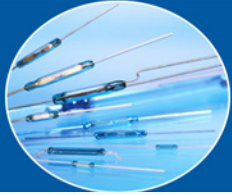


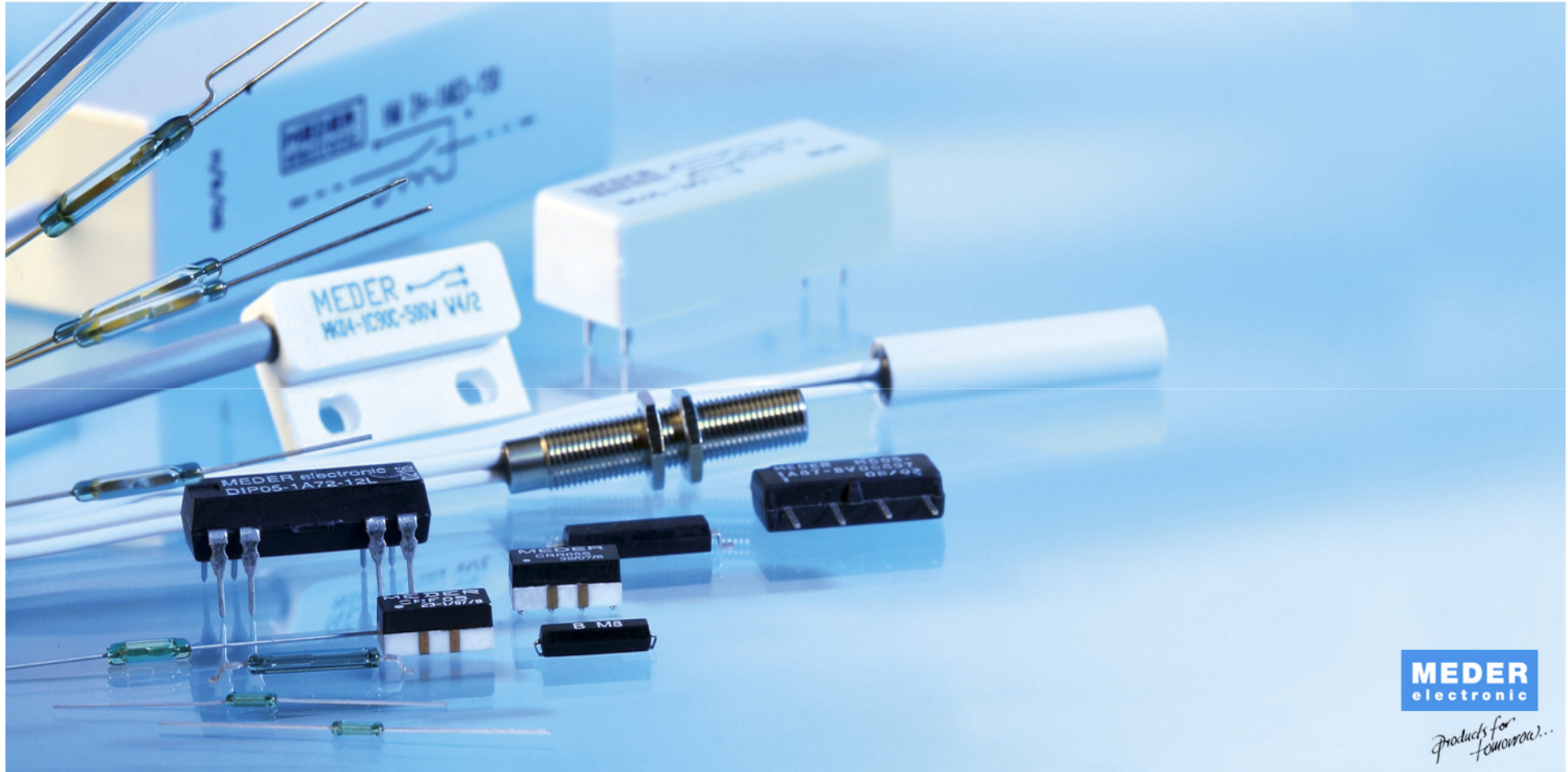
REED SWITCHES

REED SENSORS

REED RELAYS



MEDER electronic group



MEDER
electronic

*Products for
Tomorrow...*

Reed Switch Basics part IV

Copy right: John Beigel,
MEDER electronic group
<http://www.meder.com>

01/04/2010

REED SWITCHES

REED SENSORS

REED RELAYS

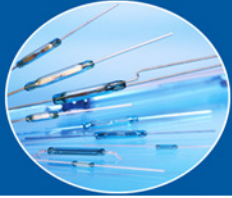


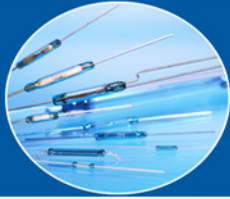
Table of contents

- How a Reed Switch Sensing Application works
- How a Reed Switch is used with a Permanent Magnet

REED SWITCHES

REED SENSORS

REED RELAYS



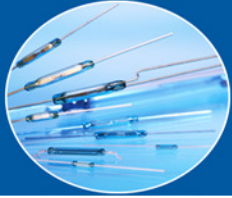
Reed Switch Sensing Application

- The magnetic sensitivity of a Reed Switch is measured in AT (ampere turns) and is used to define it's Pull-In (open) and Drop-Out (closure) points.
- The Reed Switch sensitivity produces a distinct pattern known as it's field of magnetic sensitivity.
- The field of magnetic sensitivity will vary depending on the orientation and direction of the permanent magnet which is critical to the sensing application.

REED SWITCHES

REED SENSORS

REED RELAYS

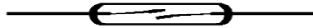


Pull-in / Drop out

Magnet



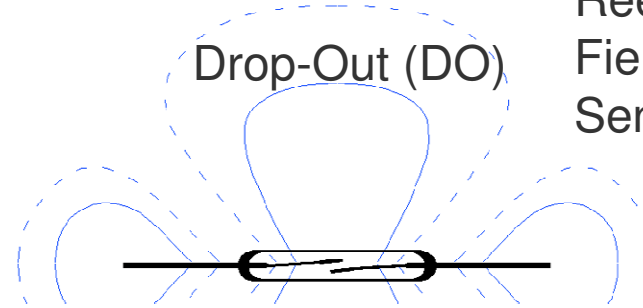
Reed Switch



Pull-In (PI)

Drop-Out (DO)

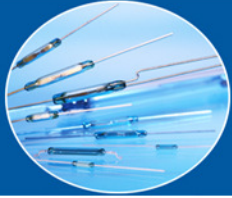
Reed Switch
Field of Magnetic
Sensitivity



REED SWITCHES

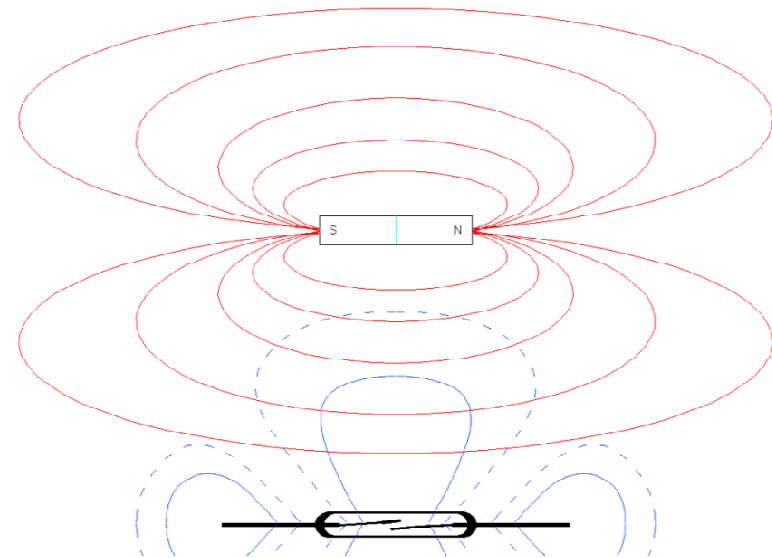
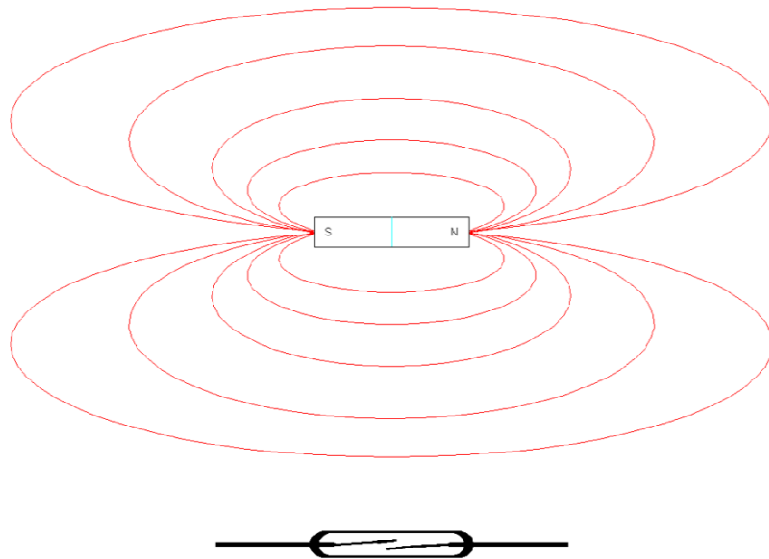
REED SENSORS

REED RELAYS



Pull-in / Drop out

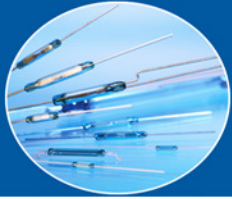
Lines of Magnetic Flux



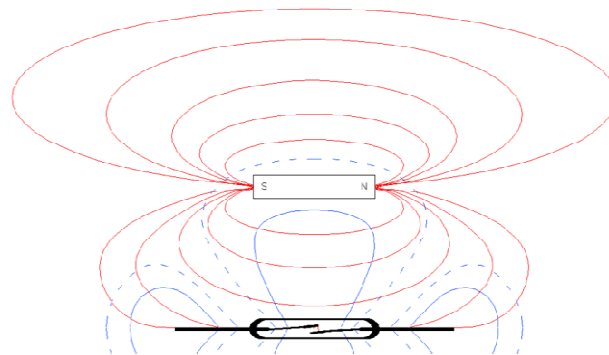
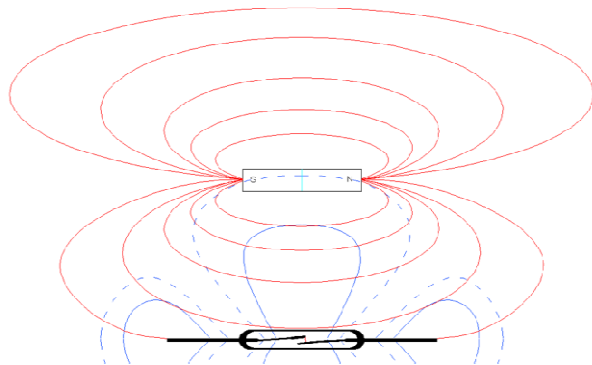
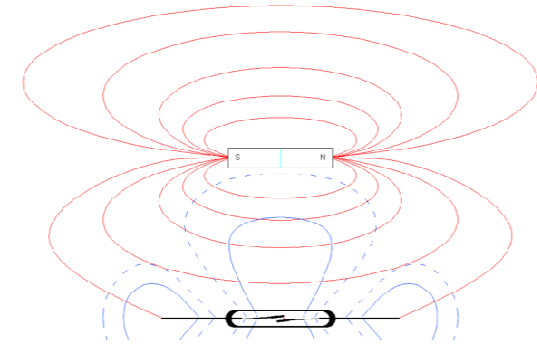
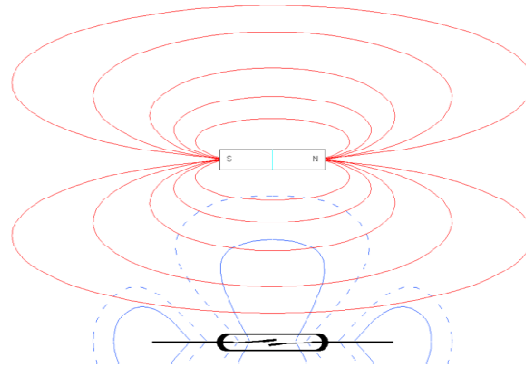
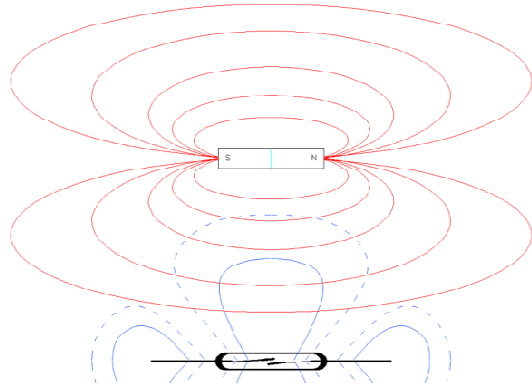
REED SWITCHES

REED SENSORS

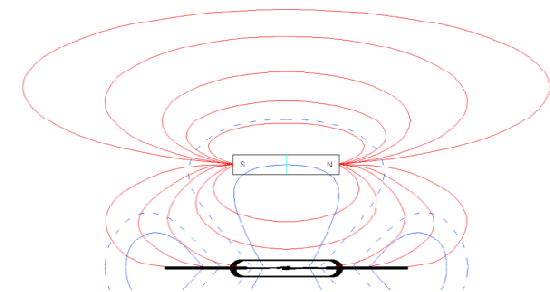
REED RELAYS



Pull-in / Drop out



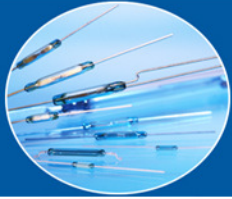
Pull-In Point (switch closure)



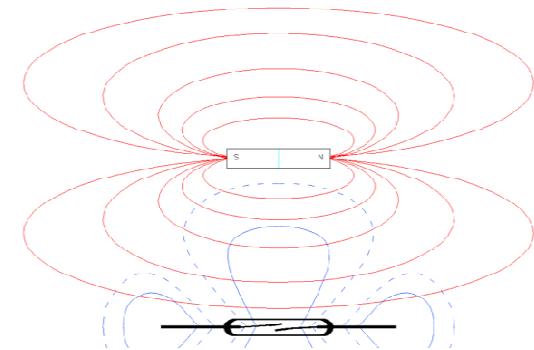
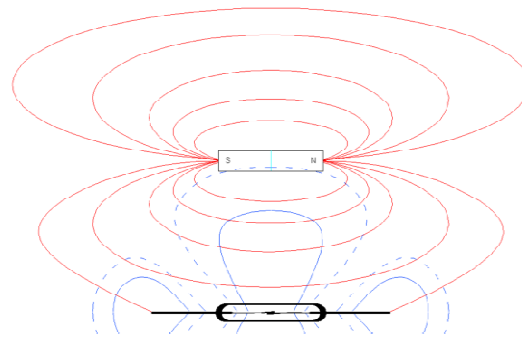
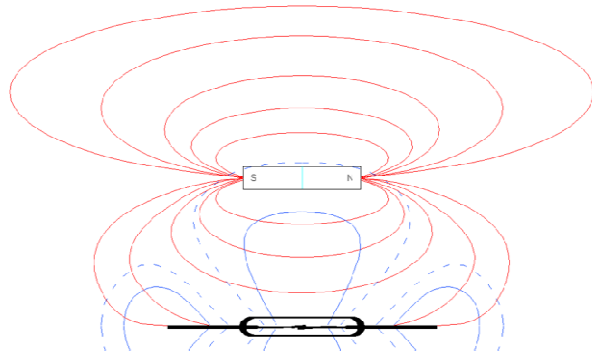
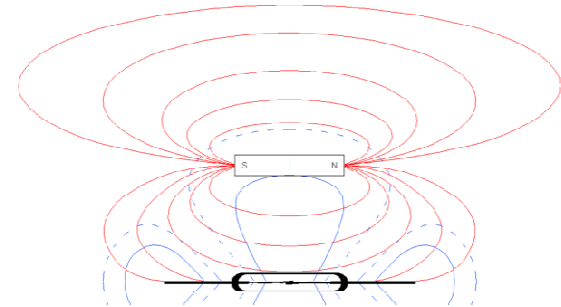
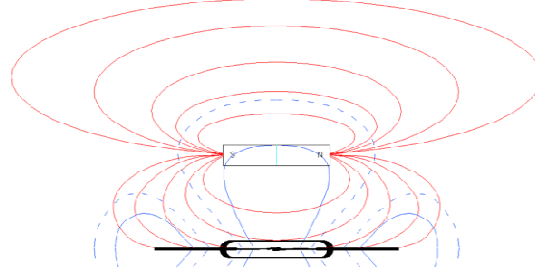
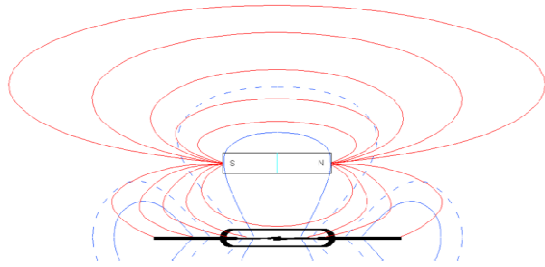
REED SWITCHES

REED SENSORS

REED RELAYS



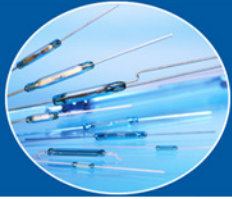
Pull-in / Drop out



REED SWITCHES

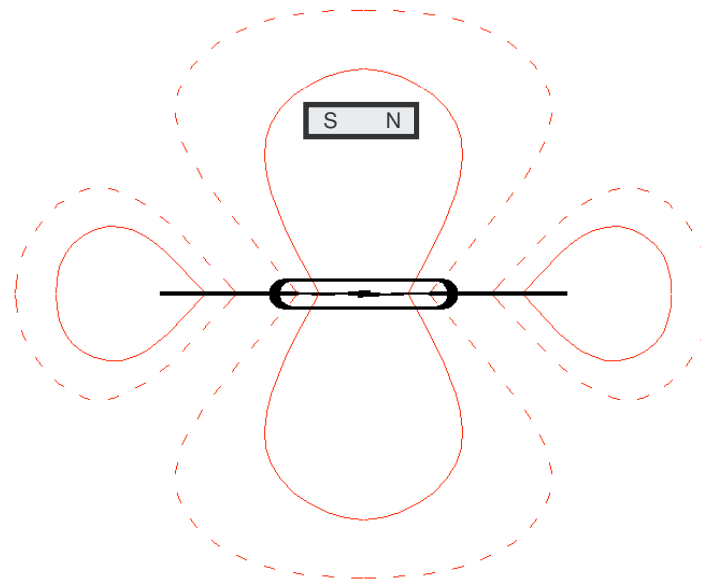
REED SENSORS

REED RELAYS



How a Reed Switch is used with a Permanent Magnet

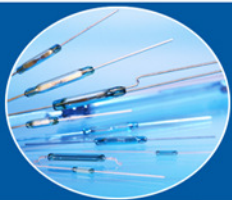
Areas of Pull-In and Drop-Out with Parallel Magnet Orientation



REED SWITCHES

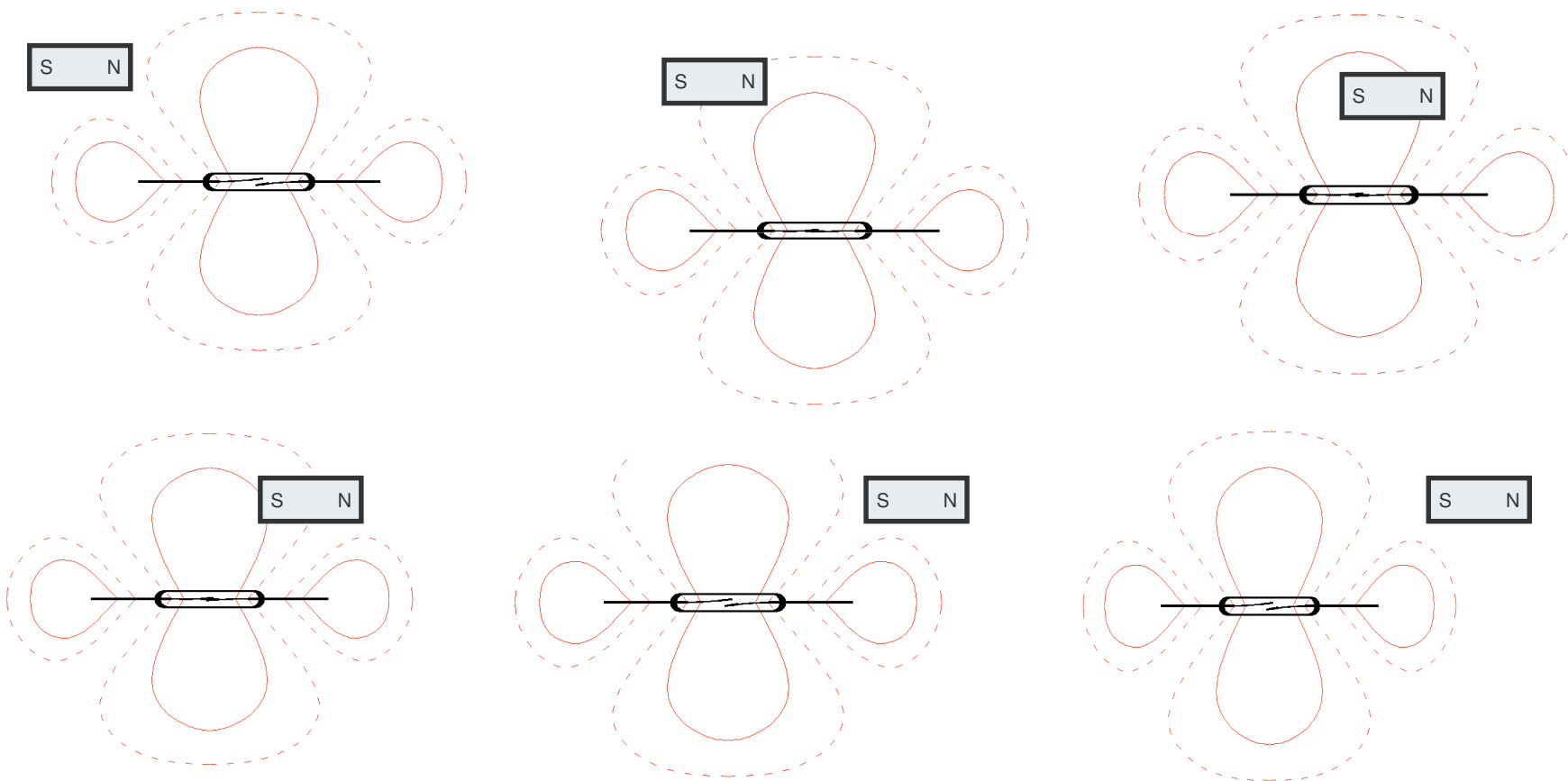
REED SENSORS

REED RELAYS



How a Reed Switch is used with a Permanent Magnet

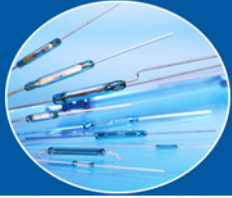
Pull-In and Drop-Out with Parallel Movement For one open and closure



REED SWITCHES

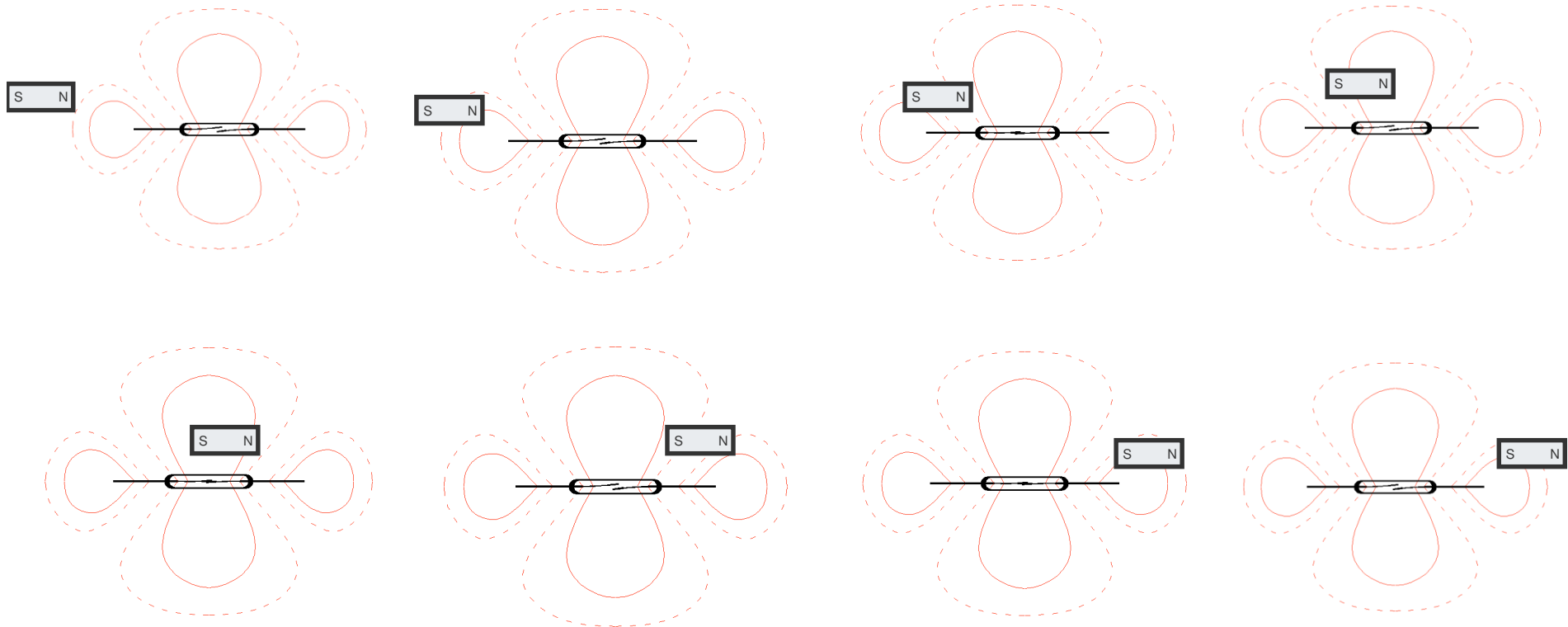
REED SENSORS

REED RELAYS



How a Reed Switch is used with a Permanent Magnet

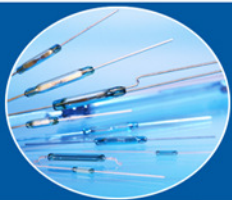
Pull-In and Drop-Out with Parallel Movement For multiple openings and closures



REED SWITCHES

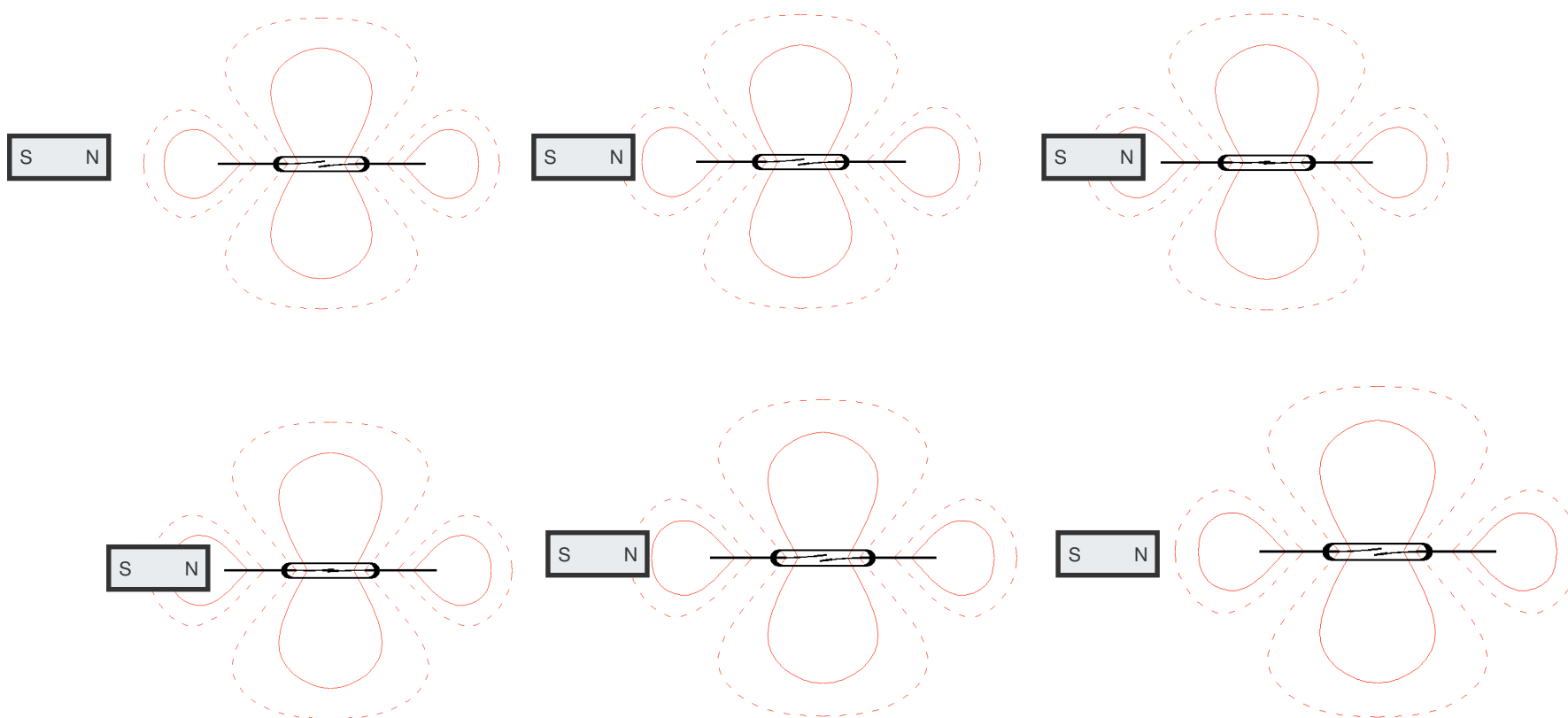
REED SENSORS

REED RELAYS



How a Reed Switch is used with a Permanent Magnet

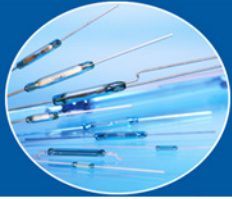
Pull-In and Drop-Out with Parallel Movement In line with the switch lead



REED SWITCHES

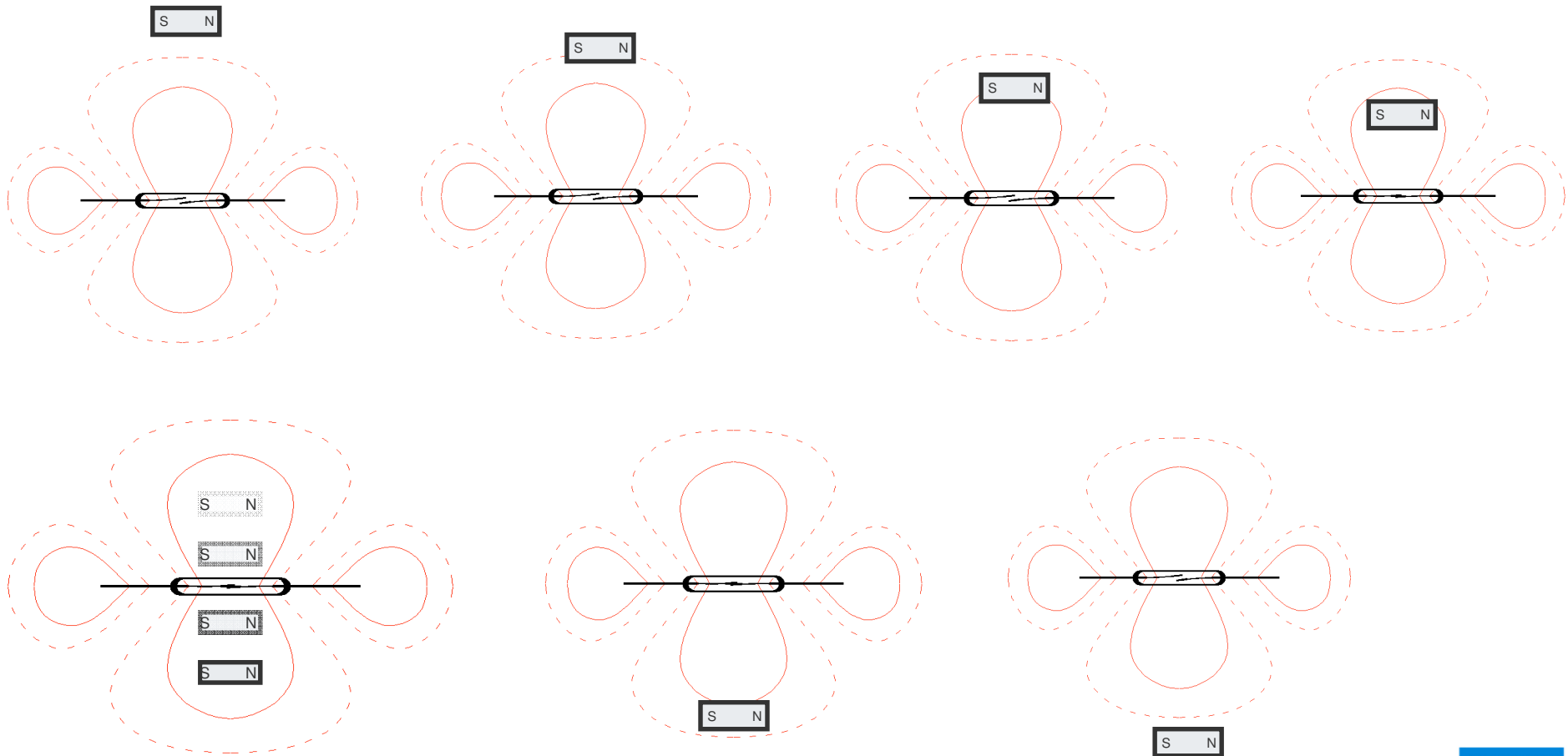
REED SENSORS

REED RELAYS



How a Reed Switch is used with a Permanent Magnet

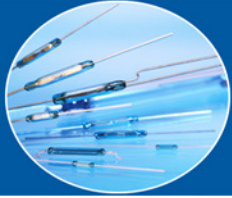
Pull-In and Drop-Out with Perpendicular Movement at the center of the switch



REED SWITCHES

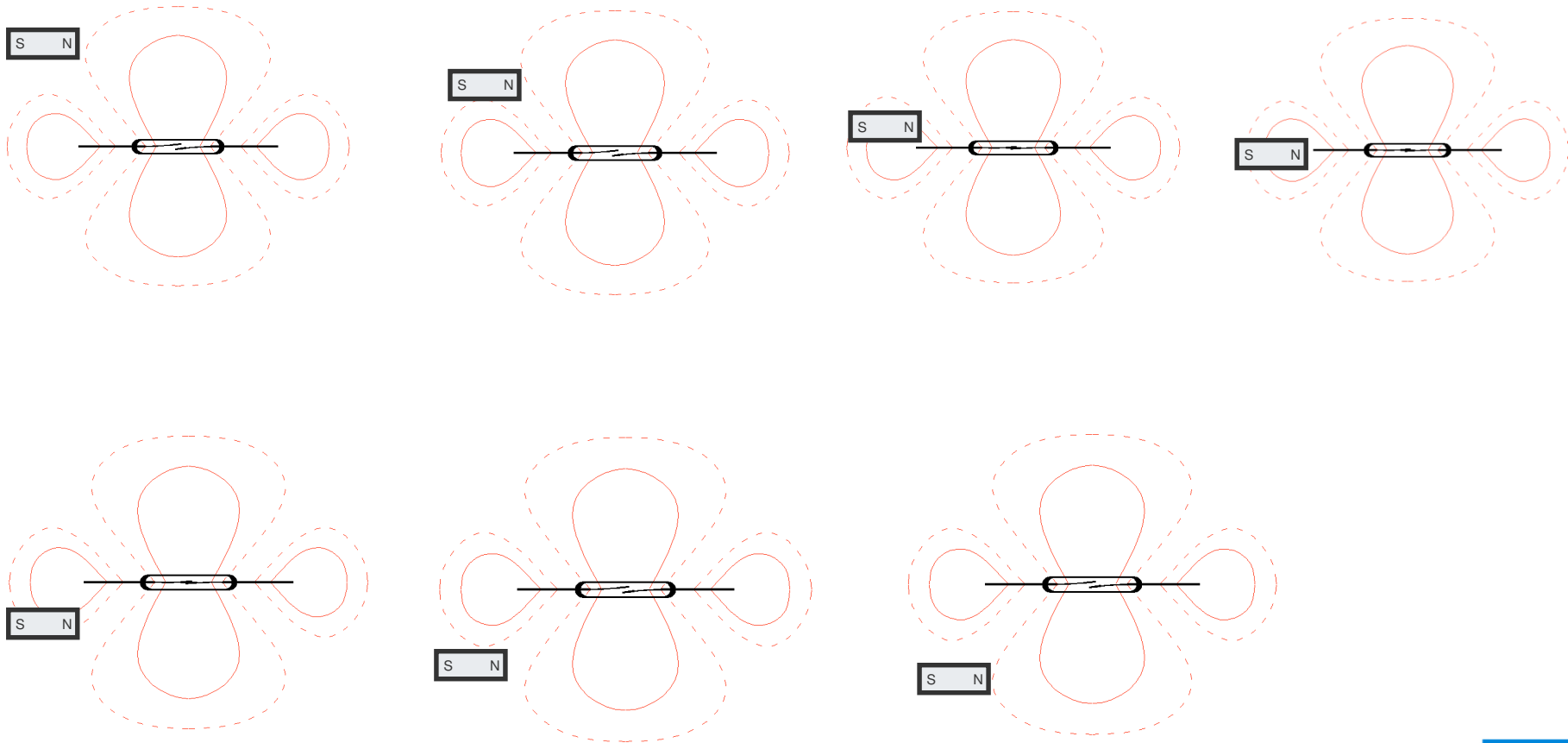
REED SENSORS

REED RELAYS



How a Reed Switch is used with a Permanent Magnet

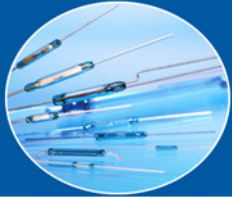
Pull-In and Drop-Out with Perpendicular Movement at end of the switch



REED SWITCHES

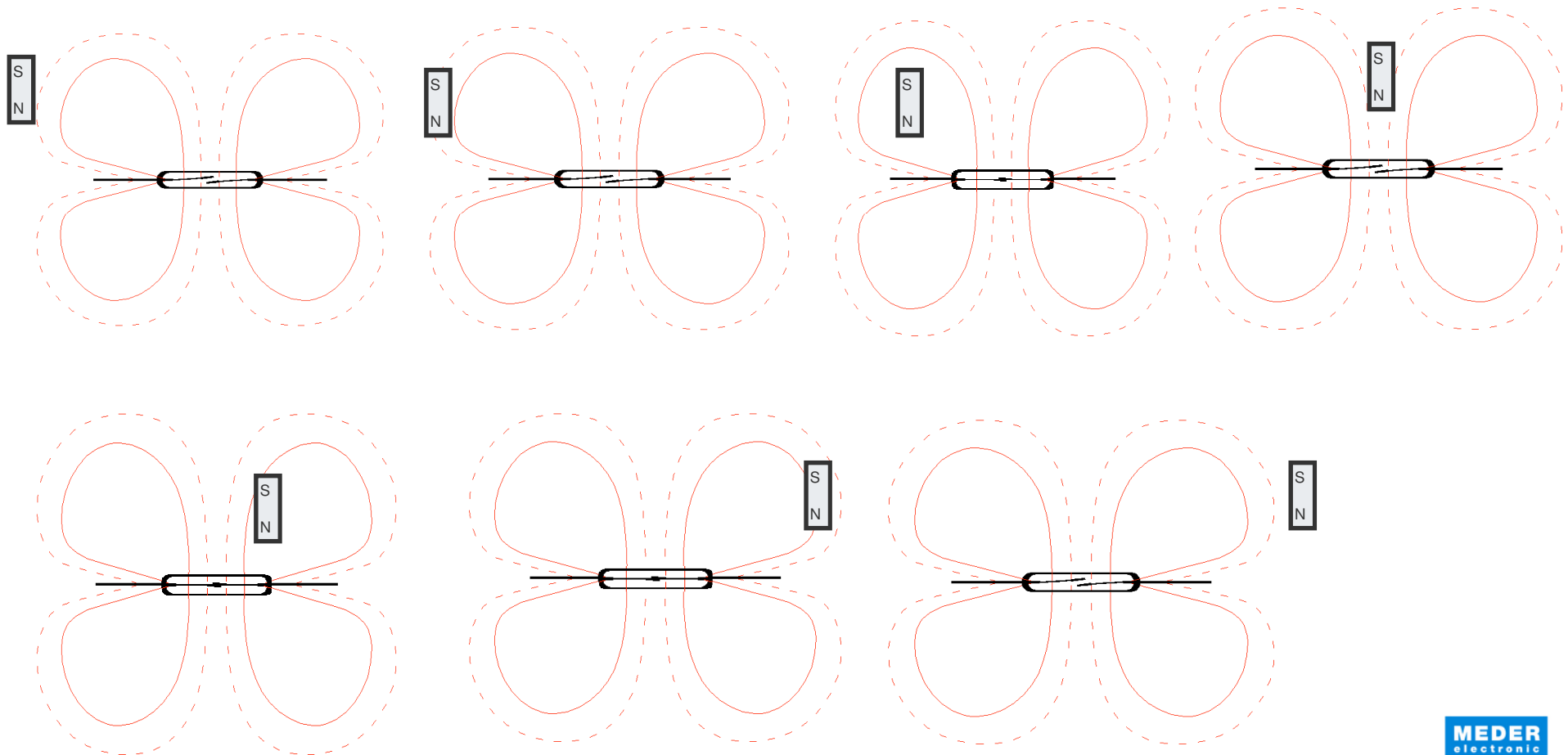
REED SENSORS

REED RELAYS



How a Reed Switch is used with a Permanent Magnet

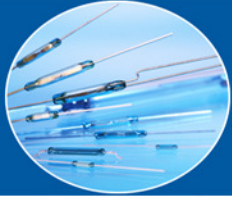
Pull-In and Drop-Out with Parallel Movement for multiple openings and closures



REED SWITCHES

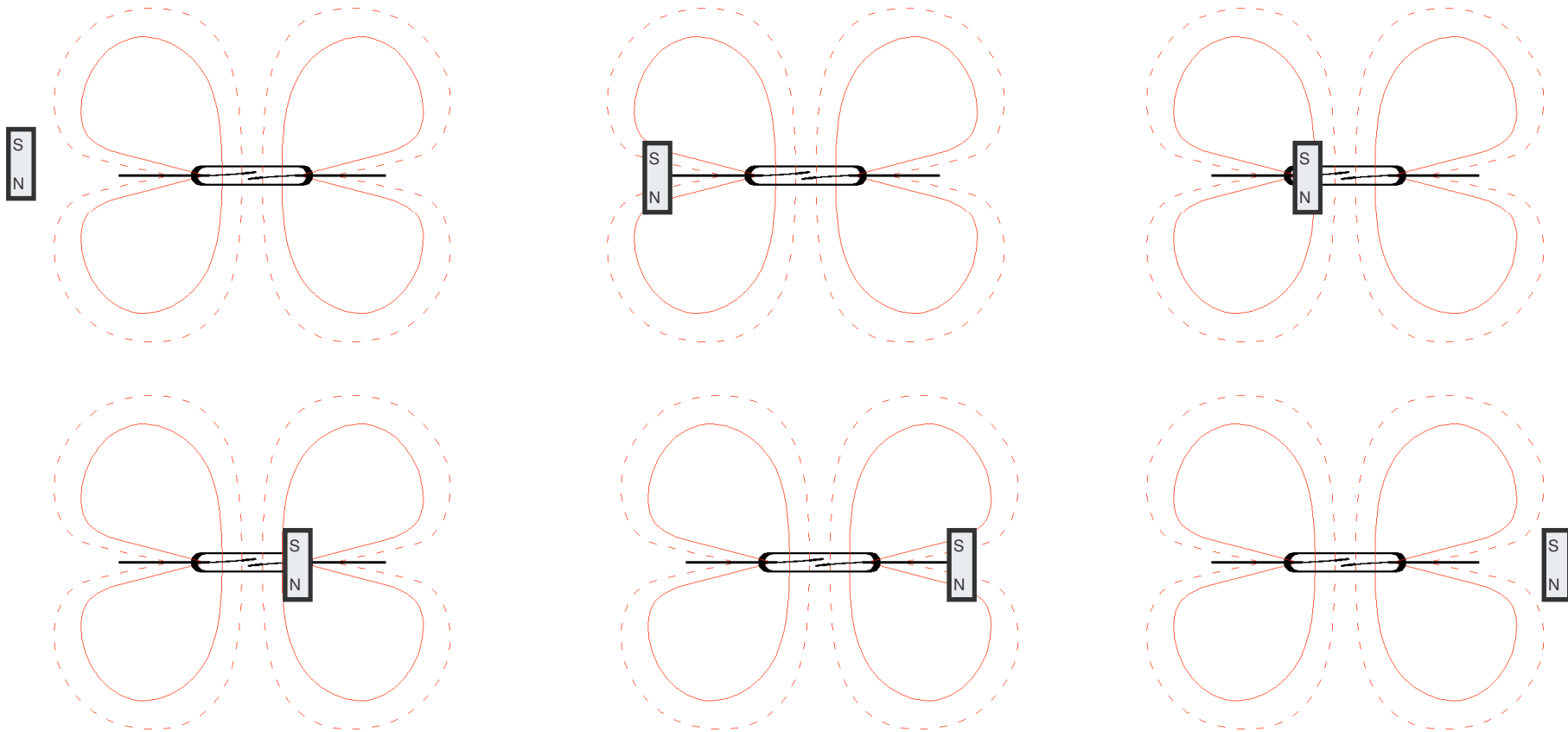
REED SENSORS

REED RELAYS



How a Reed Switch is used with a Permanent Magnet

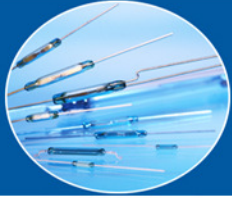
Pull-In and Drop-Out with Parallel Movement for no closure



REED SWITCHES

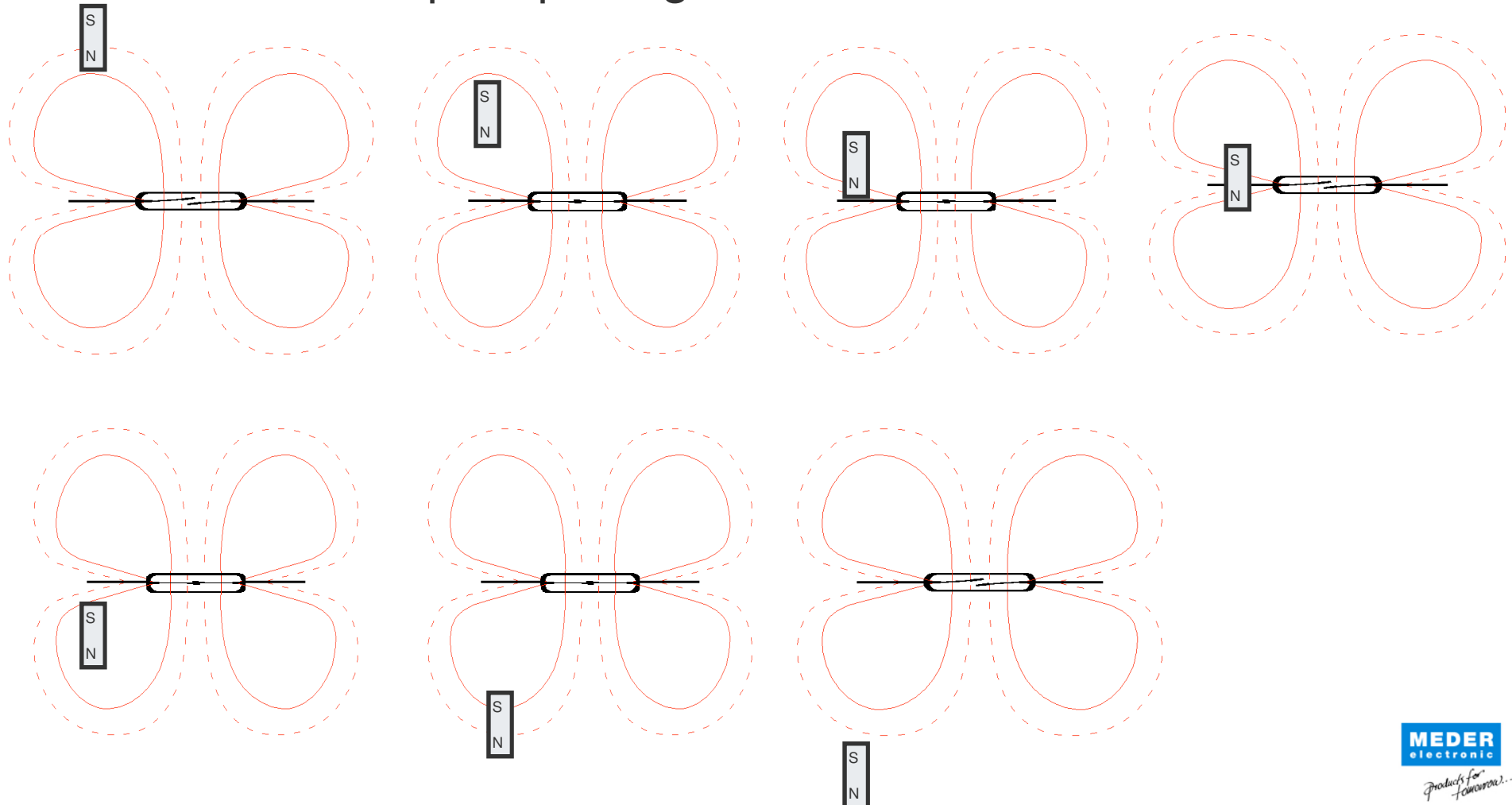
REED SENSORS

REED RELAYS



How a Reed Switch is used with a Permanent Magnet

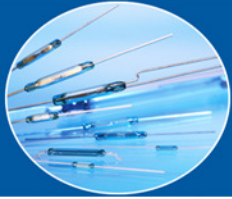
Pull-In and Drop-Out with Perpendicular Movement for multiple openings and closures



REED SWITCHES

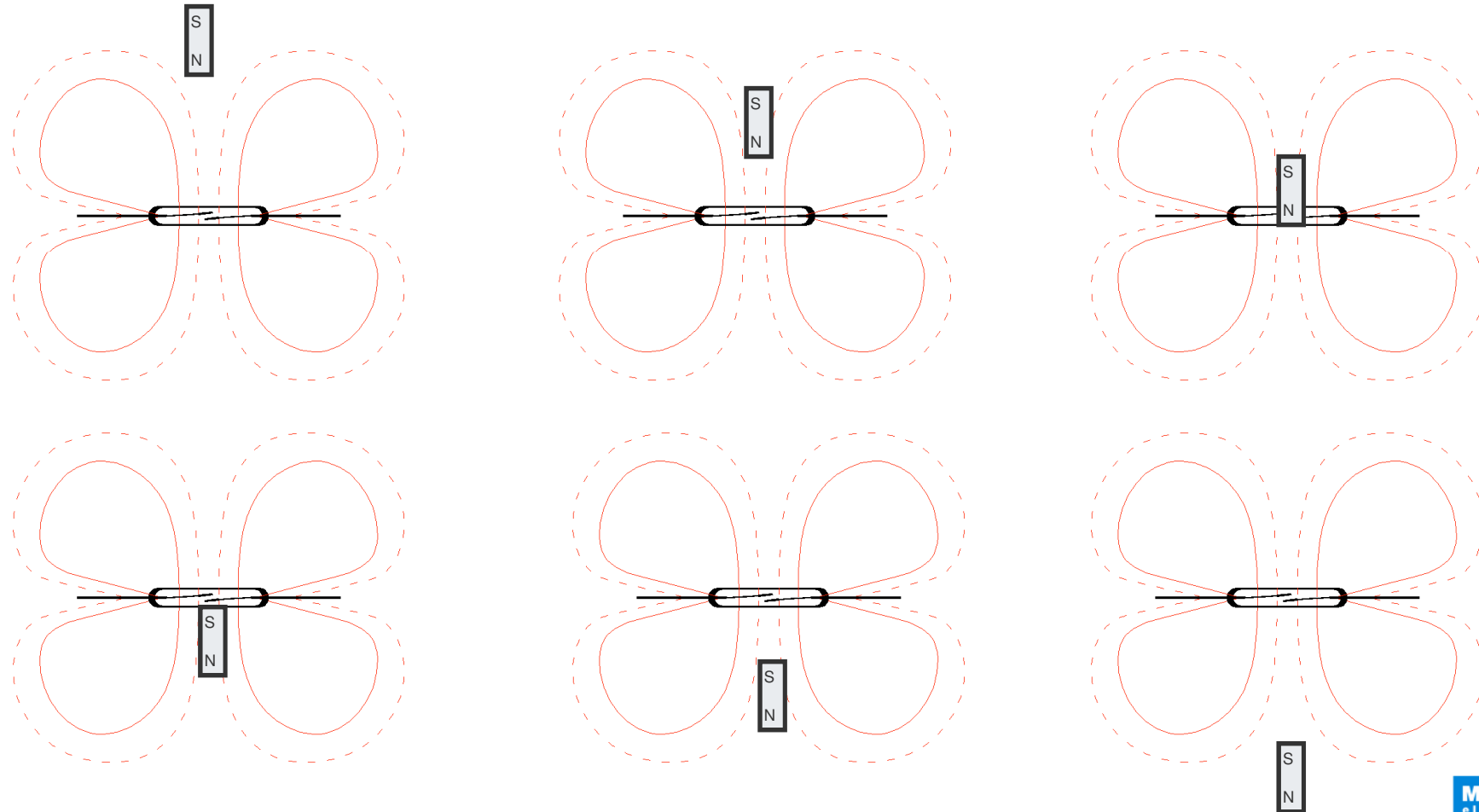
REED SENSORS

REED RELAYS



How a Reed Switch is used with a Permanent Magnet

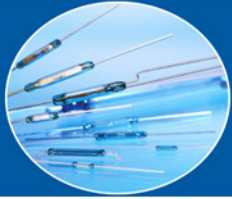
Pull-In and Drop-Out with Perpendicular Movement for NO closure



REED SWITCHES

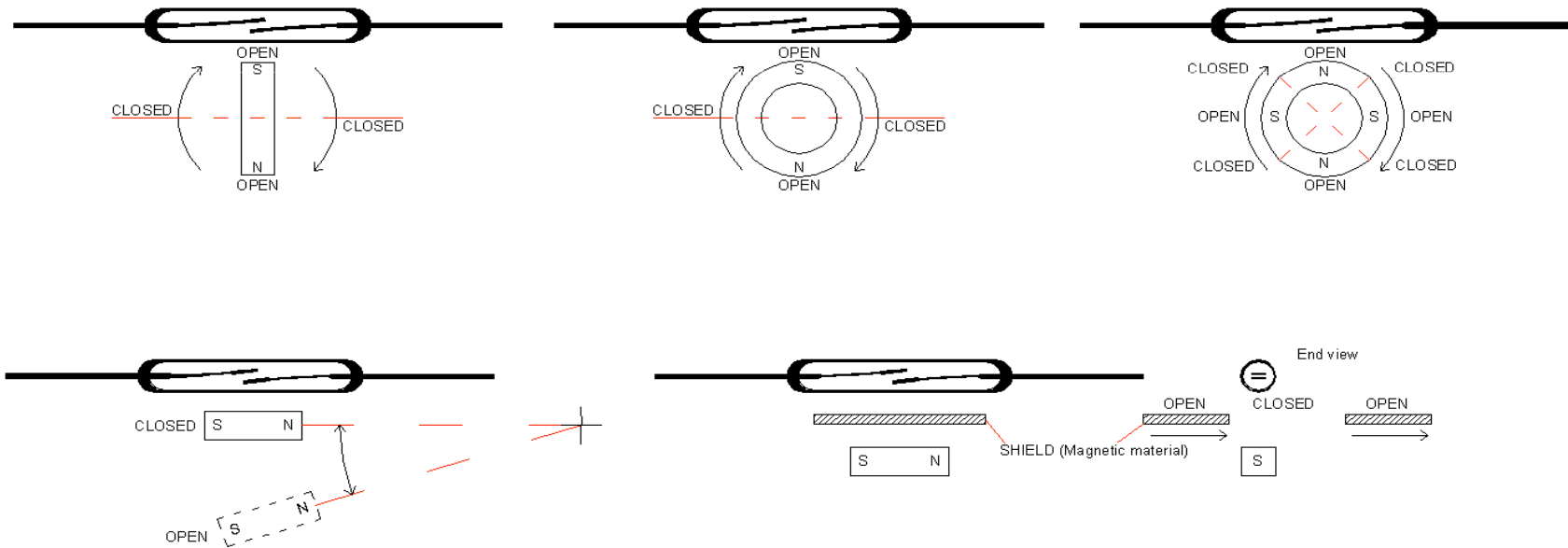
REED SENSORS

REED RELAYS



Reed Switches & Permanent Magnets

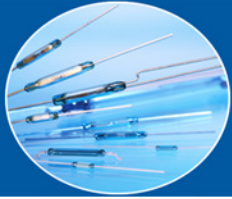
Various means of activation



REED SWITCHES

REED SENSORS

REED RELAYS



Reed Switch Basics

- **End of part IV**

Content of Reed Relays for RF Applications part I:

- The signal level of RF applications
- RF parameters which need to be considered
 - Rise time
 - Slew rate
 - Characteristic Impedance
 - Insertion loss