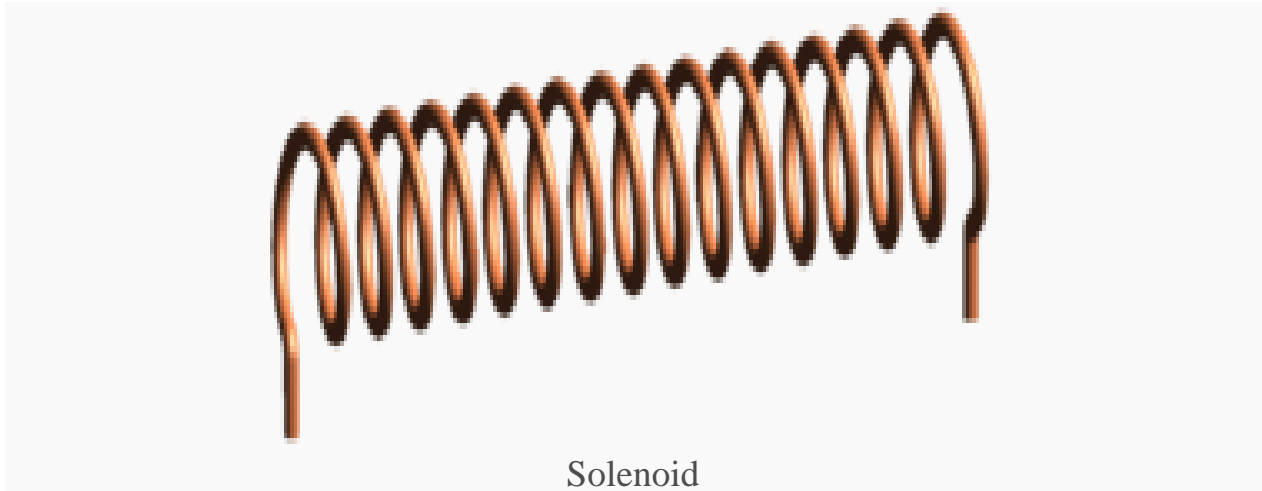


# SOLENOID



A solenoid[nb 1] is a coil wound into a tightly packed helix. In physics, the term solenoid refers to a long, thin loop of wire, often wrapped around a metallic core, which produces a magnetic field when an electric current is passed through it. Solenoids are important because they can create controlled magnetic fields and can be used as electromagnets. The term solenoid refers specifically to a magnet designed to produce a uniform magnetic field in a volume of space (where some experiment might be carried out).

In engineering, the term solenoid may also refer to a variety of transducer devices that convert energy into linear motion. The term is also often used to refer to a solenoid valve, which is an integrated device containing an electromechanical solenoid which actuates either a pneumatic or hydraulic valve, or a solenoid switch, which is a specific type of relay that internally uses an electromechanical solenoid to operate an electrical switch; for example, an automobile starter solenoid, or a linear solenoid, which is an electromechanical solenoid.

Source: <http://web.ua.es/docivis/magnet/solenoid.html>