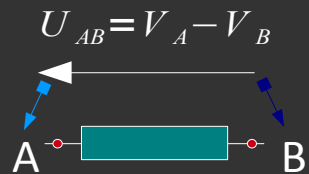




Recap :

Voltage :



The arrow points always the highest potential.

The base of the arrow is the reference of the voltage U_{AB} .

The current goes always in the direction of decreasing potentials if we respect the conventions.

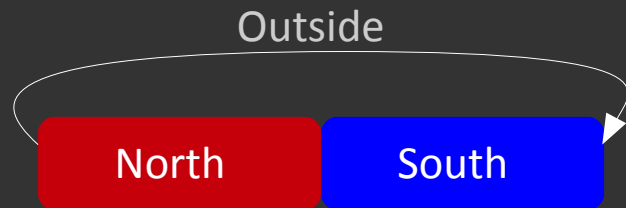
Conventions :

Receptor	Generator
<p>A diagram showing a green rectangular resistor connected between two points, A and B. A white arrow above the resistor points from B to A, labeled U_{AB}. A blue arrow points from A to B, indicating the direction of current flow.</p>	<p>A diagram showing a green rectangular resistor connected between two points, A and B. A white arrow above the resistor points from B to A, labeled U_{AB}. A blue arrow points from B to A, indicating the direction of current flow.</p>

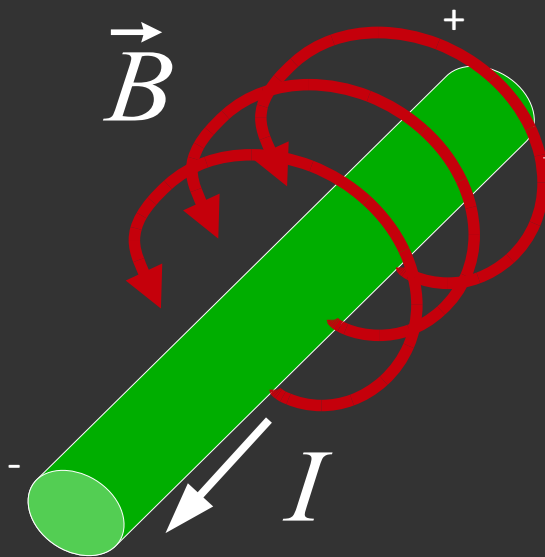
Magnetic Field



Magnetism :



The magnetic field goes from the **North** to the **South** pole outside the magnet.



Relation between the sens of the magnetic field and the current.

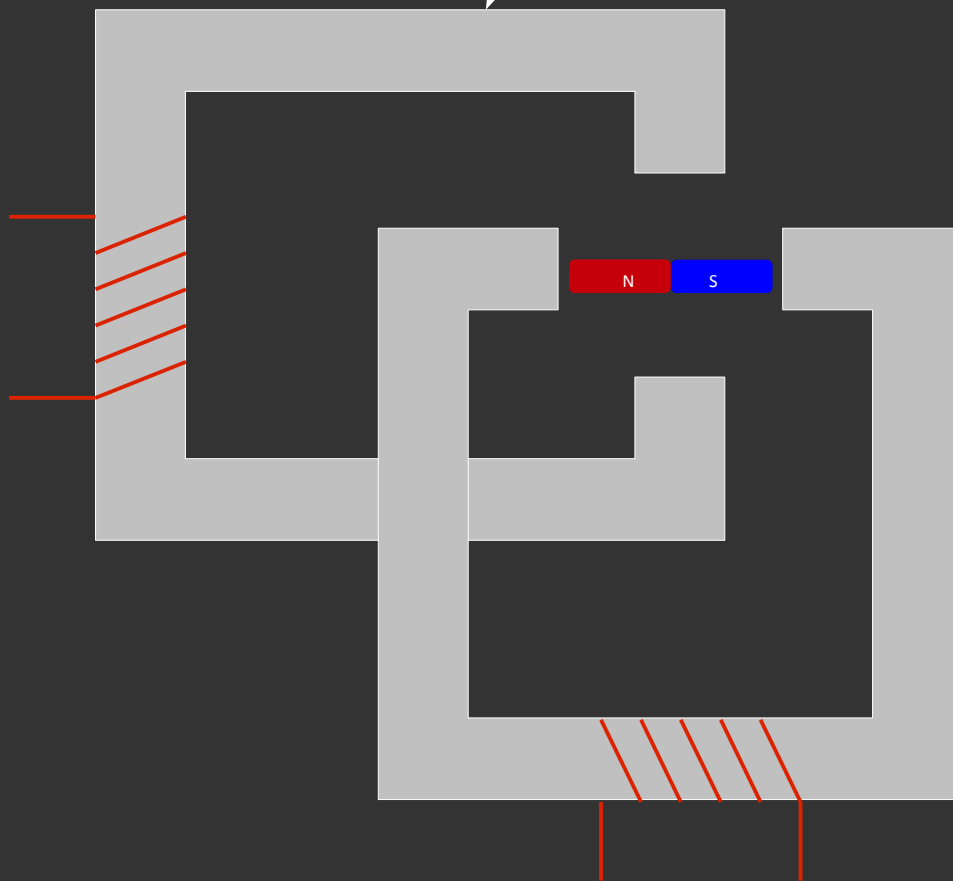
Stepper motors



Stepper motors :

Schematics

Reflexion



- ✓ A motor uses power → receptor convention with 2 coils
- ✓ The positive voltage imposes the current and \leftrightarrow
- ✓ The current imposes the magnetic field sens
- ✓ The magnetic field imposes the magnetic field
- ✓ The magnetic poles of the stator imposes the magnet orientation

Step control main idea

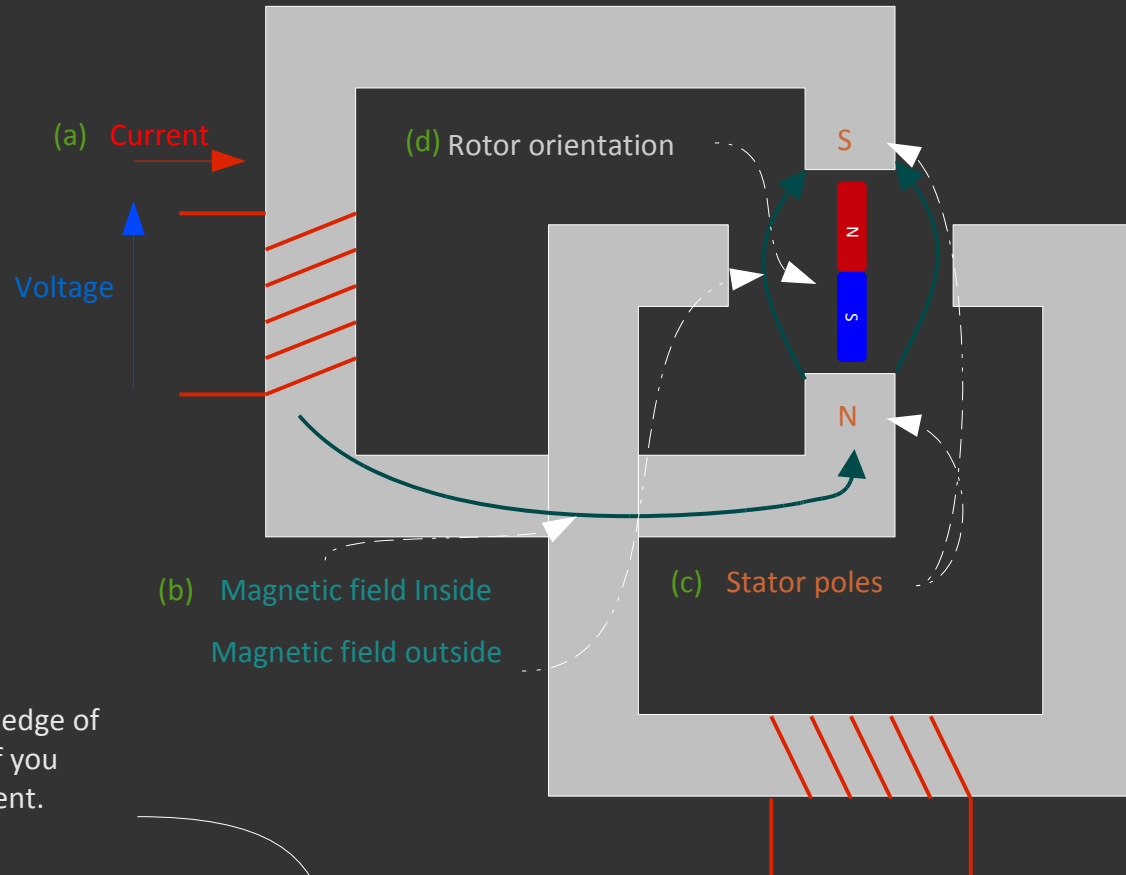


Step control main idea

Reasoning

- (a) Impose either a current or a positive voltage at the edge of each coil (look at the first page for the conventions). If you impose a positive voltage, deduce the sens of the current.
- (b) Deduce then the sens of the magnetic field.
- (c) Deduce the pole of the stator.
- (d) Deduce the orientation of the rotor.

Bipolar motors





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