

AMPERES

CURRENT ELECTRICITY

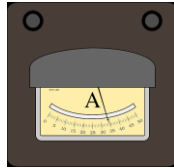


Electric current is the flow of _____.

Measures how many **electrons** pass a point in a conductor in 1 second.

The _____ the current, the _____ the electrons move.

Current is measured in _____ (amps) or milliamps by a device called an



_____.

1 ampere = 1 coulomb of charge per second

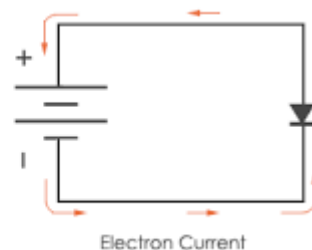
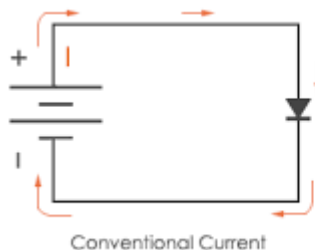
coulomb = 6.24×10^{18} electrons (named after Charles Coulomb)



* 1 Amp (A) = 1000 milliamps (mA)

ELECTRIC CURRENT

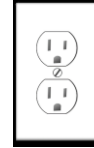
- Originally people thought that electricity was caused by the flow of fluid from the “+” to the “-” terminals. This direction is called _____.
- We now know that electricity is caused by the flow of electrons from the “-” to the “+” terminals. This direction is called _____.



- **Direct current (DC)** – current flows in _____
ie. from a cell



- **Alternating current (AC)** – electrons _____ direction.
ie. through an electric outlet



In North American the current reverses directions 60 times a second (60 Hertz, with 120 V)

- China - 220 V, 50 Hz
- United Kingdom -230, 50 Hz
- Taiwan - 110 V, 60Hz

CONDUCTIVITY:

Electric Current also requires **CONDUCTANCE = the ability of a material to allow electrons to flow through it**

The _____ depends on how **easily** electrons can flow through a material.

(a) CONDUCTORS

(electrons move easily)

(b) INSULATORS

(electrons cannot move easily)

SCHEMATIC DIAGRAMS:

OBJECT	SYMBOL	NOTES
Ammeter		