

Lei de Ohm

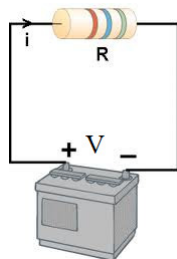
Potência

Lei de Ohm

$$i = \frac{dq}{dt} \Leftrightarrow q = \int i dt$$

$$i = \text{constante}: i = \frac{q}{\Delta t} \Leftrightarrow q = i \Delta t$$

$$\text{Lei de Ohm: } \Delta V = R i$$



Resistência de um fio condutor:

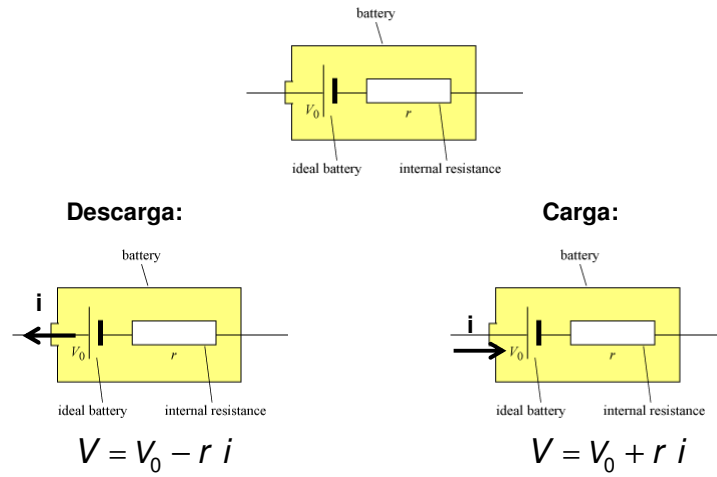
A diagram of a cylindrical conductor with length L and cross-sectional area A . The resistance R is given by the formula:

$$R = \rho \frac{L}{A}$$

Resistividade:

$$\rho = \rho_0 + \alpha \rho_0 (T - T_0)$$

Carga e descarga de baterias



Potência

$$P = \frac{dU}{dt} \Leftrightarrow U = \int P dt$$

$$P = \text{constante: } P = \frac{\Delta U}{\Delta t} \Leftrightarrow U = P \Delta t$$

$$P = \frac{\Delta U}{\Delta t} \Leftrightarrow P = \frac{q \Delta V}{\Delta t} \Leftrightarrow P = \Delta V i$$

$$P = V i = R i^2 = \frac{V^2}{R}$$