

Answer on Question #45708, Physics, Electromagnetism

Which of the following does NOT affect resistance of a wire?

diameter

type of material

length

voltage

Resistance of wire defined by equation:

$$R = \frac{\rho l}{s}$$

where ρ - electrical resistivity (depend on material)

s – cross-section area of the wire (depend on diameter)

l – length of wire.

The only item not listed here is **voltage**. Voltage value is not affect resistance (if we will not take into account any temperature changes).