

**Answer on Question #46397, Physics, Electric Circuits**

*For a metallic conductor, Ohm's law holds provided*

*potential difference varies*

*current remains constant*

***temperature remains constant***

*potential difference remains constant*

Ohm's law states that the current through a conductor at a constant temperature and in a zero magnetic field between two points is directly proportional to the potential difference across the two points. So, Ohm's law assume that temperature remains constant.