

# INSPECTION OF VOLTAGE DROP IN CONDUCTORS

## Voltage drop

Conductor allows the flow of electrical energy to move in one and other directions. The pressure or electrical force that helps the current to flow in a conductor is voltage. Sometimes the pressure of voltage fails to provide the desired flow of current due to impedance. This situation **causes voltage** drop.

It is not affected by the equal number of electrons before or after entering the conductors. The fluctuation in the speed too, does not hurt it. It is only affected by the pressure or release of energy in the conductors. Voltage drop usually lasts for few seconds.



## Causes

Resistance in the conductor causes voltage drop. There are many factors responsible for the change in the resistance. The use of aluminum in wires causes voltage drop. It is less powerful and does not have much ability to bear the high pressure of electrical force. The use of small wire sizes (diameters) cause voltage drop as well.

It is important to inspect the flow of current. The rate of voltage drop increases with the increase in the flow of current. It is also caused by the loose and intermittent connections in the circuit. If the wire fails to meet the code standards, voltage drop is occurred.

Poor splices in the conductor and insufficient seating of wire in the slot cause voltage problem too. Sluggish and lazy electrical devices, high computer voltages, repeated cable failures and hard starts bring about voltage drops as well.

## Consequences of voltage drop

Excess voltage drop proves dangerous. It can result into harmful consequences.

- Low voltage causes no operation in **the equipment**. **The equipment** in turn stops working. Sometimes the fault can be repaired, at times the device becomes completely useless.
- Energy is wasted. It greatly affects the efficiency of the equipment.
- Low voltage and high resistance may result in fire. Fire causes destruction which may prove fatal.
- It can cause lights to flicker dimly. This condition forces the device to work harder with less voltage.
- The houses with bad and old wiring face voltage drop very often.
- If the transformer is far away from the wiring system, the resistance increases and voltage drop occurs.

The above mentioned consequences must be carefully observed. If the voltage drop occurs very much, adequate measures must be taken immediately to avoid the unwanted situation.



Source : <http://engineering.electrical-equipment.org/safety/inspection-of-voltage-drop-in-conductors.html>