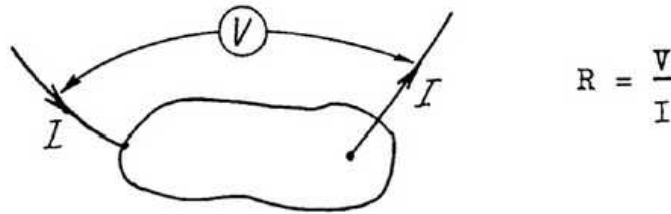


A.1)

INTRODUCTION

The electrical resistance R of an object is defined as the ratio between the voltage V that causes the current I to flow through the object, and the current I itself:

Figure 1:

$$R = \frac{V}{I}$$

Two-point measurement.

So, the direct way to measuring resistance, is to measure these two magnitudes: Voltage and current.

When the resistivity ρ of a sample ¹⁾ is wanted, the geometrical dimensions of the sample must also be known. The resistivity is given by:

$$\rho = G \frac{V}{I} \quad (1)$$

where: I is the current passed through the sample,
 V is a measured voltage,
 G is a correction factor dependent on sample shape and dimensions, and the arrangement of electrical contacts.

When performing direct current or low frequency resistance measurements, one has to make electrical contacts to the sample. By making two contacts, two-point resistivity measurements can be performed (figure 1).

 1) Only homogeneous samples are considered.