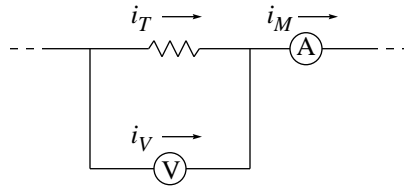


Resistance measurement



From Kirchoff's junction rule:

$$\begin{aligned}i_M &= i_T + i_V \\ \frac{i_M}{\Delta V} &= \frac{i_T}{\Delta V} + \frac{i_V}{\Delta V} \\ \frac{1}{R_M} &= \frac{1}{R_T} + \frac{1}{R_V} \\ \text{so } \frac{1}{R_T} &= \frac{1}{R_M} - \frac{1}{R_V}.\end{aligned}$$

When R_V grows much greater than R_M , R_M (the measured resistance) approaches R_T (the true resistance). This is obviously a desirable state of affairs!