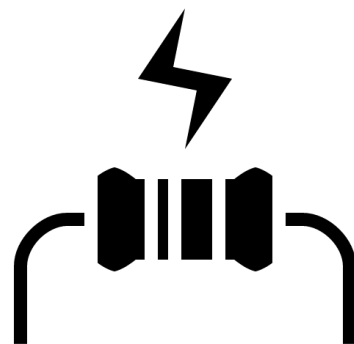




# Fundamentals of **Industrial Measurement** Technology

## Resistance Measurement



ProDSP Post Series Nr.9.



## How many wires are you using for the measurement?

- For resistances **above ~100 Ohms**, a **two-wire** measurement provides adequate results.
- For resistances **below ~100 Ohms** or in precision applications, a **four-wire** measurement is recommended.



# Are you multiplexing the signal?

- Make sure to multiplex **all four wires** in the case of a four-wire measurement.



# Are you measuring a stable signal?

- After multiplexing, it's a good idea to **wait for** the measured values to **stabilize**.

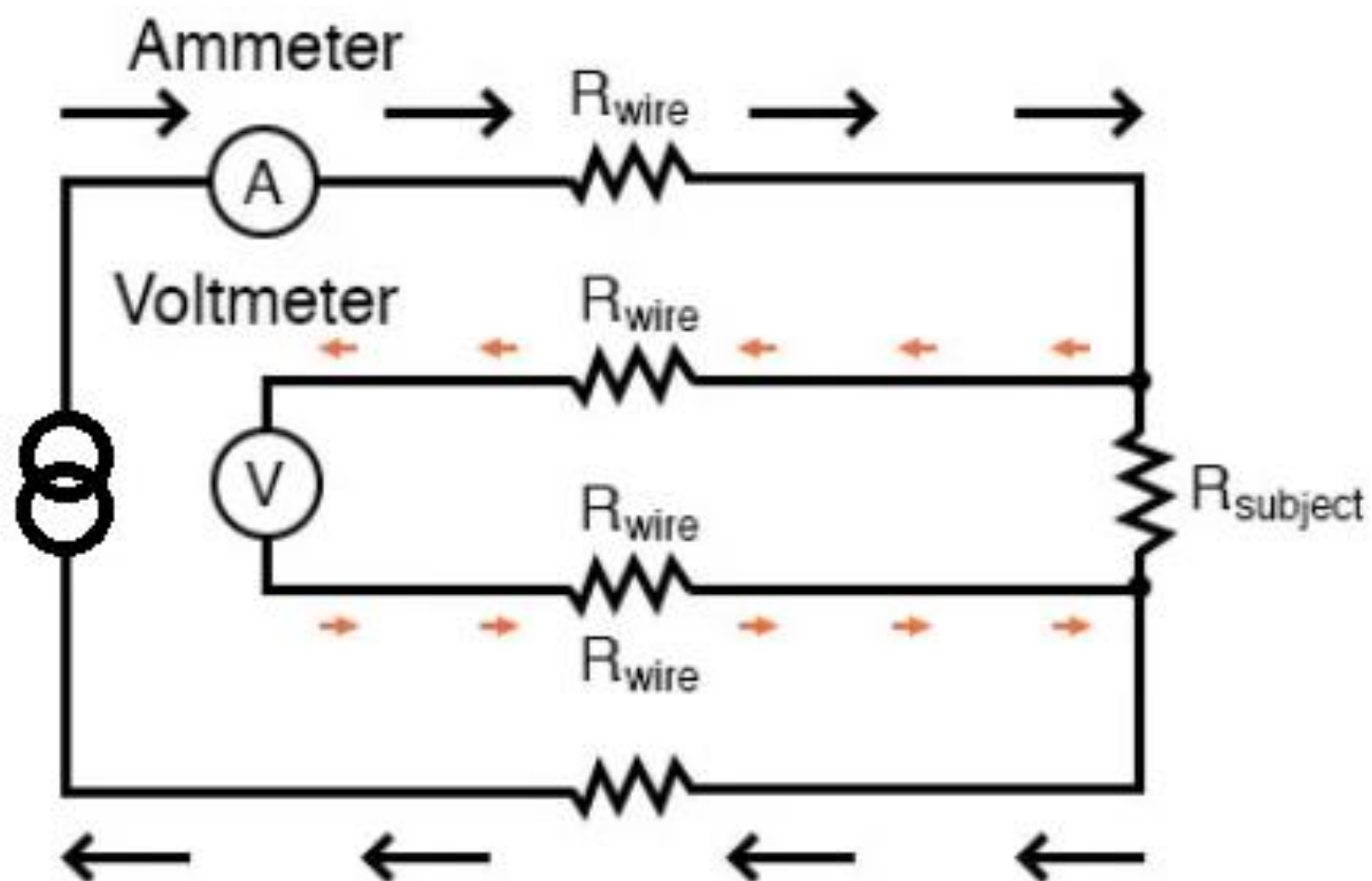


## Have you accounted for contact resistance?

- Every contact **adds** a series resistance of **10–100 mOhms**, which cumulatively **degrades** the measurement.



# Four-wire measurement





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