



**Fundamentals of Industrial Measurement
Technology**

**Position &
Speed Measurement**

ProDSP Post Series Nr.14.



How to measure position and speed in an industrial environment?

- In industrial applications, position is most commonly measured using encoders.





What is homing?

- To obtain absolute position data, the system must be homed: **the mechanics are moved to a known reference point**, and from there the controller calculates relative displacement.





Incremental encoder signal forms

- Processed using **PC-based** counter cards.
- Proper **noise protection** is crucial
- Even a single false edge can lead to accumulated position errors





Speed measurement

- The rate of **change in position**
- The **same encoder signal** is often used for it
- **Minimum measurable speed:** limited by resolution
- **Maximum measurable speed:** limited by sampling rate and processing speed





Follow us for more!

