

Counter vs Tachometer vs Totaliser

A 1-page selection guide for industrial measurement and panel display/controllers

Start with the question:

Counter: "How many?" (pieces, cycles, strokes, batches)

Tachometer / Rate: "How fast?" (RPM, speed, rate per minute)

Totaliser / Integrator: "How much over time?" (total flow, consumption, accumulated usage)

Quick comparison

Type	Best for	Typical input	Common pitfalls
Counter	Unit counting, cycles, batching	Digital events / pulses	Double triggers; missed pulses (too fast); poor alignment
Tachometer	RPM / speed / rate monitoring	Encoder / speed sensor pulses	Wrong input type (TTL/HTL); noise; DI too slow (needs HSC)
Totaliser	Flow totals, consumption tracking	Analogue 4-20mA / 0-10V (or pulse)	Bad scaling; wrong units; unstable signal/ground loops

Signal & wiring reminders (avoid integration surprises)

Digital (events / pulses)

- Confirm PNP vs NPN matches PLC input type (sourcing vs sinking).
- Fast counting may need HSC input - standard DI can miss pulses.
- Route sensor cables away from VFD/motor power to reduce noise.

Analogue (measurement)

- Match 4-20mA vs 0-10V to the PLC channel configuration.
- Set correct scaling in PLC/HMI (range, units, decimals).
- Check grounding to avoid drift/unstable readings.

Suggested products to explore

- [Industrial display/controllers](#)
- [JR-D \(6-Digits\) counter / tachometer](#)
- [Kappa-M Dual Input controller](#)
- [Rotary encoders](#)
- [Speed sensors](#)
- [Optical \(photoelectric\) sensors](#)

Need help choosing the right device?

Share your application + input signal type (pulse / 4-20mA / 0-10V) and we will recommend the best fit.