Pressure Transmitter Fault Finding Guide

Vendor neutral fault finding guide for field technicians

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Before you start

- Permit, isolation and control room informed.
- Put the loop in manual or inhibit trips as authorised.
- Use certified test equipment in hazardous areas.
- Record as found readings before changing anything.

Quick checks

- Loop current matches DCS reading?
- Transmitter display matches process (test gauge)?
- Root valves open, manifold correct?
- Recent work, weather or process change?

Symptoms, causes and fixes

Symptom	Likely causes	Checks and fixes
No output (0 mA)	No loop power, open wire, blown fuse, reversed polarity	Measure supply and terminal voltage; check fuses and polarity
Reads high or low constantly	Zero shift, wrong range, head from mounting, blocked tap	Compare with test gauge; check LRV and URV; zero trim at known pressure
Reading frozen	Root valve closed, plugged impulse line, fixed current mode	Open and blow down tap; check loop test mode off
Noisy reading	Pulsation, gas in liquid line, grounding, low damping	Add damping or snubber; vent lines; check shield grounding
Slow response	Long or partly blocked impulse line, high damping, frozen line	Check damping; clear line; check heat tracing
Drifts with weather	Blocked vent on gauge sensor, sealed sensor, sun on seal	Clean vent; shade seals; check sensor type
Reads after overpressure	Sensor damage beyond overpressure limit	Check zero; replace if outside spec

NAMUR NE107 status

Status	Meaning	Action
F Failure	Output invalid	Repair or replace; check loop goes to safe state
C Function check	Simulation, calibration or maintenance active	Finish the work, return to normal mode
S Out of specification	Operating outside limits or uncertain	Check process conditions and sensor
M Maintenance required	Still valid but degrading	Plan maintenance before failure