

ENGINEERING FIELD GUIDE

Write a data contract your automation and IT teams can both use

Define meaning, timing, quality and ownership so an industrial tag remains understandable outside its source system.

01 Start with the meaning of a value

For each important signal, write its physical meaning, unit, valid range and measurement boundary. Record whether it is an instantaneous reading, an interval total or a cumulative counter. A name such as `output_count` is ambiguous until the counting boundary and reset behavior are explicit. Include an example that a non-PLC engineer can interpret.

02 Keep source time and quality

Distinguish when a value was measured from when a gateway received it. Specify the time zone, clock source and acceptable age. Preserve quality information when a protocol provides it. A valid-looking number with bad quality should not silently replace a trusted reading; define how each downstream consumer should display or exclude it.

03 Define changes and error behavior

Name the owner of the schema and how consumers learn about changes. Treat a unit change as a contract change even if the field name remains the same. Describe missing values, duplicates, out-of-order events and resets with examples. Choose a versioning approach that lets old and new consumers coexist during an approved migration.

04 Test the contract at both ends

Ask the automation owner to verify the source examples and the application owner to verify interpretation. Include a normal reading, a bad-quality reading and a restart sequence. Store the examples with the schema. A contract is useful when both teams can detect a breaking change before an operator sees a misleading result.

TEAM WORKSHEET

From checks to a decision.

Work through this page together. Assign an owner and evidence to each check.

Site / line

Date / version

Owner / team

Pilot boundary

☐ Start with the meaning of a value

Evidence / open issue / owner:

☐ Keep source time and quality

Evidence / open issue / owner:

☐ Define changes and error behavior

Evidence / open issue / owner:

☐ Test the contract at both ends

Evidence / open issue / owner:

Acceptance decision and next step

[] Accept [] Revise [] Hold

Acceptance criterion / result

Next action / owner / due date

Rollback trigger / plan

Project-specific support: aspdijital.com