Yokogawa EA1*A

Engineering Installation, Diagnostic and Acceptance Guide

Yokogawa EA1*A is a two-wire transmitter input signal conditioner card. Its exact marking, installed interfaces and companion equipment must be verified before replacement or commissioning.

01 Work package

Complete model	EA1*A
Product type	two-wire transmitter input signal conditioner card
Manufacturer	Yokogawa
Supply condition	New, original product
Technical source	Yokogawa GS 33J60H80-01EN Signal Conditioners

Field decisions

1 Establish identity

Capture the full marking, installed companion components and baseline before disconnection.

2 Inspect interfaces

Verify mounting, cable, connector, armor, approval and environmental boundaries.

3 Fit the exact chain

Preserve the documented probe-cable-Proximitor or sensor-monitor relationship.

4 Prove response

Use the approved stopped-machine and operating acceptance procedure.

5 Record as left

Save markings, configuration, test values and operating observations.

02 Interface and configuration map

Card function	Two-wire transmitter input
Style code	*A as supplied
Input signal	4 to 20 mA DC
Input resistance	250 Ω
Allowable input current	40 mA DC
Transmitter supply	25 to 28 V DC
Transmitter current limit	25 to 35 mA

Output signal	1 to 5 V DC, two outputs
Output resistance	1 Ω maximum
Minimum output load	2 kΩ
Power supply	24 V DC ±10 %
Maximum current consumption	80 mA
Accuracy	Within ±0.1 % of span
Isolation resistance	100 MΩ at 500 V DC
Withstand voltage	1500 V AC input-to-output/power for 1 minute
Ambient range	0 to 50 °C; 5 to 90 % RH non-condensing

03 Installation workflow

Calculate voltage margin

Include transmitter minimum voltage, cable drop and the 250 Ω card input.

Verify terminal polarity

Confirm the A/B/C terminal arrangement from the applicable Yokogawa drawing.

Check 24 V supply

Measure card supply inside the ±10 % range before calibrating the loop.

Prove both outputs

Measure both 1 to 5 V outputs at several input currents.

Inspect nest connector

Check backboard and special-cable contacts for damage or contamination.

Record zero and span

Document low, mid and high input/output results before release.

Application checks

Two-wire transmitter interface

Power and acquire a 4 to 20 mA field transmitter.

Signal duplication

Provide two 1 to 5 V outputs from one isolated transmitter input.

Legacy signal conditioning

Maintain an approved CENTUM signal-conditioner nest arrangement.

Loop diagnostics

Separate transmitter, cable, card supply and output-channel faults with measured values.

04 Diagnostic decision table

How is transmitter voltage margin calculated for EA1*A?	Subtract cable drop and the 5 V drop across the 250 Ω input at 20 mA from the available transmitter supply, then compare the remainder with the transmitter minimum voltage.
How should both outputs of EA1*A be calibrated?	Inject traceable 4, 12 and 20 mA values and measure both 1 to 5 V outputs independently, recording any deviation.

What indicates a field-loop open circuit on EA1*A?	Check transmitter supply, input current, terminal voltage and both outputs; separate an open field circuit from a card or backboard supply problem.
How should polarity be verified on EA1*A?	Use the Yokogawa terminal drawing for the exact nest and trace field positive/negative conductors before energizing the transmitter.

Release review

Installation relationship	Use the exact model marking and manufacturer wiring or installation information for the delivered hardware.
System boundary	Verify host equipment, companion interfaces, field wiring and configuration before energizing.
Technical reference	Yokogawa GS 33J60H80-01EN Signal Conditioners.

Engineering questions

How is transmitter voltage margin calculated for EA1*A?	Subtract cable drop and the 5 V drop across the 250 Ω input at 20 mA from the available transmitter supply, then compare the remainder with the transmitter minimum voltage.
How should both outputs of EA1*A be calibrated?	Inject traceable 4, 12 and 20 mA values and measure both 1 to 5 V outputs independently, recording any deviation.
What indicates a field-loop open circuit on EA1*A?	Check transmitter supply, input current, terminal voltage and both outputs; separate an open field circuit from a card or backboard supply problem.
How should polarity be verified on EA1*A?	Use the Yokogawa terminal drawing for the exact nest and trace field positive/negative conductors before energizing the transmitter.
What insulation test is appropriate for EA1*A?	Remove or isolate connected electronics and use only the manufacturer- and site-approved test voltage; do not megger through live cards or transmitters.
How can output disagreement on EA1*A be diagnosed?	Apply one stable input current and compare both outputs at the card and receiving devices to distinguish card error from downstream load or wiring.
What should be recorded before replacing EA1*A?	Capture style marking, nest position, field terminals, special-cable identity, 24 V supply and low/mid/high loop values.
What acceptance result closes work on EA1*A?	Both outputs must track the verified input within the approved accuracy, the transmitter must retain voltage margin and the control indications must return to the recorded state.

Acceptance and support

Retain the full marking, installed-chain identities, test readings and approved machine configuration. Confirm the exact offered item and included scope in the written quotation.

Discuss the exact marking and installed application with Apter Power.
sales13@apterpower.com | +86 18030235313

Verified related product references

Related product	ADV159-P00
Related product	SDV144-S33
Related product	CP461-10
Related product	S9400UK

Commissioning record template

Installed asset	Machine, bearing, channel or cabinet reference
Companion identities	Probe, cable, sensor, interface or monitor markings
Mechanical datum	Mounting reference, reach, alignment or sealing condition
Electrical datum	Chain length, connector, shield, supply or input assignment
Before-work baseline	Gap, bias, vibration, continuity or channel observation
As-left result	Final measured value and functional proof
Approval basis	Applicable drawing, control requirement or site procedure
Handover	Technician, date, revision and maintenance-record location

Handover note

A replacement is complete only after the installed identity, physical interfaces, measured response and configuration record agree. Escalate any mismatch before the channel returns to protection or monitoring service.

Release checklist

Identity accepted	Complete marking agrees with the order, photographs and installed asset record.
Interfaces accepted	Mechanical fit, connector, wiring and companion components match the approved design.
Environment accepted	Temperature, contamination, vibration and route protection remain inside documented limits.