Yokogawa AAI141-S00

Installation & Commissioning Guide

Yokogawa AAI141-S00 is a standard 16-channel non-isolated analog input module for 4 to 20 mA field signals.

PRODUCT ROLE AND VERIFIED FEATURES

Feature 1

Acquires sixteen 4 to 20 mA process signals.

Feature 2

Updates the module data every 10 ms.

Feature 3

Accepts both two-wire and four-wire transmitter arrangements.

Feature 4

Uses a non-isolated channel architecture for the documented FIO application.

VERIFIED DATA SNAPSHOT

Input channels	16
Input signal	4 to 20 mA DC
Channel isolation	Non-isolated
Input update period	10 ms
Step response	100 ms
Allowable input	27 mA
Transmitter wiring	2-wire and 4-wire
External connection	Pressure clamp terminal, MIL cable or KS cable

SYSTEM RELATIONSHIP

Field signal → **Termination** → **Input module** → **Control database**

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Pre-installation readiness

READINESS GATE

Identity

Compare the complete marking with the approved work order and installed record.

System match

Confirm the receiving channel, mating components and controlled configuration.

Physical condition

Inspect mounting surfaces, connectors, terminals, cable and support hardware.

Work controls

Apply authorized isolation, bypass, access and restoration procedures.

TECHNICAL PROFILE FOR THE WORK

Input channels 16	**Input signal** 4 to 20 mA DC
Channel isolation Non-isolated	**Input update period** 10 ms
Step response 100 ms	**Allowable input** 27 mA
Transmitter wiring 2-wire and 4-wire	**External connection** Pressure clamp terminal, MIL cable or KS cable

IMPORTANT NOTICE	Resolve every unmatched interface, configuration or receiving-system condition before removal or installation.

CONFIGURATION AND WORK CONTROLS

Configuration identity	Yokogawa AAI141-S00
Technical boundary	Apply only the functions and interfaces shown for this product or its identified system family.
Selection control	Match the complete ordering string and installed interfaces before purchase or installation.

Installation sequence

CONTROLLED WORK STEPS

01	Confirm the AAI141-S00 marking and assigned node slot.
02	Record all sixteen loop tags and terminal numbers.
03	Place affected process loops in the approved maintenance state.
04	Remove field power before changing pressure-clamp or cable connections.
05	Keep channel commons and shields in their documented positions.
06	Do not copy HART settings to this standard non-HART execution.
07	Inject controlled current points and compare every used channel.
08	Review open-loop diagnostics and controller quality before release.

CONNECTION RECORD

As found	Photograph and label every connection and installed orientation before removal.
Mechanical	Record mounting position, support, clearance and connector engagement.
Electrical	Record polarity, common, shield, channel assignment and cable route.
Configuration	Preserve approved settings, scaling, alarm logic and acceptance limits.
As left	Record the final physical condition and any controlled deviation.

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WORK HOLD POINTS

Before removal	Identity, position, wiring, orientation and controlled settings recorded.
Before connection	Mating interfaces, condition and routing reviewed.
Before power-up	Mechanical work, wiring, shielding and configuration independently checked.
Before release	Static value, dynamic response and protection behavior accepted.

Commissioning and functional proof

COMMISSIONING SEQUENCE

Initial state

Observe status at power-up and check for unexpected fault or alarm indication.

Static value

Verify the expected bias, gap, loop, contact or channel value for the application.

Dynamic response

Apply the approved machine or test stimulus and confirm response and scaling.

Protection path

Verify the configured alarm, relay, data or receiving-system behavior.

APPLICATION-SPECIFIC EVIDENCE

Process transmitter inputs

Collects flow, pressure, level and temperature current signals.

FIO node modernization

Maintains a sixteen-loop analog input position in the documented node.

Two-wire loop integration

Connects powered transmitters through the approved terminal hardware.

Four-wire instrument inputs

Accepts independently powered 4 to 20 mA sources.

ACCEPTANCE RECORD

Identity	Complete marking and final installed position recorded.
Physical inspection	Mounting, connectors, terminals and routing checked.
Channel status	Expected status and configured measurement confirmed.
Functional test	Required output or protection response demonstrated.
Restoration	Bypasses removed and operating state approved.

COMMISSIONING QUESTIONS

How many current loops does Yokogawa AAI141-S00 acquire?	AAI141-S00 provides sixteen analog input channels.
Which field signal is assigned to Yokogawa AAI141-S00?	The module accepts 4 to 20 mA DC current inputs.
Are the channels of Yokogawa AAI141-S00 individually isolated?	No. The AAI141 channel architecture is non-isolated.
How quickly does Yokogawa AAI141-S00 refresh its input data?	Its documented input update period is 10 ms.

Release record and technical references

CLOSEOUT QUESTIONS

What response time should be expected from Yokogawa AAI141-S00?	The documented step response is 100 ms.
What maximum current may reach Yokogawa AAI141-S00 during checking?	The allowable input is 27 mA; test equipment should remain within the documented limit.
Can Yokogawa AAI141-S00 accept both two-wire and four-wire transmitters?	Yes. The documented wiring arrangements include two-wire and four-wire transmitters.
Which termination choices are documented for Yokogawa AAI141-S00?	Pressure-clamp terminal blocks, MIL connector cabling and the dedicated KS cable arrangement are supported.

RELATED MODELS FOR INSTALLATION PLANNING

Yokogawa SDV161-P50 S2	Installation-planning reference. Review the complete ordering string before selection.
Yokogawa ADV859-P00 S1	Installation-planning reference. Compare the required interface and system position.
Yokogawa ADV869-P00 S1	Installation-planning reference. Confirm the execution independently for the intended task.

CONFIGURATION AND FINAL CONTROL

Configuration identity	Yokogawa AAI141-S00
Technical boundary	Apply only the functions and interfaces shown for this product or its identified system family.
Selection control	Match the complete ordering string and installed interfaces before purchase or installation.

IMPORTANT NOTICE	Release the equipment only after the responsible site authority accepts the recorded result.

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