Yokogawa AIP502

Installation & Commissioning Guide

Yokogawa AIP502 is a V-Net coupler module used with duplexed processor configurations in legacy CENTUM field control units.

PRODUCT ROLE AND VERIFIED FEATURES

Feature 1

Couples duplexed processor communication to V-Net.

Feature 2

Provides signal isolation and level conversion at the network boundary.

Feature 3

Presents separate connections for V-Net bus 1 and bus 2.

Feature 4

Indicates receive and processor-side transmit activity at the front panel.

VERIFIED DATA SNAPSHOT

Network role	V-Net coupler
Processor arrangement	Duplexed field control unit
Bus connection	V-Net bus 1 and bus 2
Signal function	Isolation and signal-level conversion
Receive indication	RCV status lamp
Transmit indication	Left and right processor transmit status

SYSTEM RELATIONSHIP

Field device → **Product interface** → **System channel** → **Verified response**

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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

Network role	**Processor arrangement**
V-Net coupler	Duplexed field control unit
Bus connection	**Signal function**
V-Net bus 1 and bus 2	Isolation and signal-level conversion
Receive indication	**Transmit indication**
RCV status lamp	Left and right processor transmit status

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

CONFIGURATION AND WORK CONTROLS

Configuration identity	Yokogawa AIP502
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 AIP502 and the installed style before removal.
02	Record upper and lower V-Net cable positions.
03	Label left- and right-processor connections independently.
04	Isolate the station according to the approved maintenance procedure.
05	Protect coaxial connectors and network terminators from contamination.
06	Seat the coupler fully without changing adjacent processor cards.
07	Verify RCV and both processor transmit indications after startup.
08	Confirm controller redundancy and V-Net communication 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.

Field device → **Product interface** → **System channel** → **Verified response**

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

Duplexed field control units

Connects both processor sides to the redundant V-Net path.

Legacy CENTUM network maintenance

Restores the documented control-network coupler position.

V-Net fault diagnosis

Uses receive and transmit indications to localize a communication break.

Controller retrofit preparation

Preserves bus routing and processor-side connections during planned work.

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

What network boundary is served by Yokogawa AIP502?	AIP502 couples the field control unit processor side to the V-Net control network.
Why is Yokogawa AIP502 associated with a duplexed processor station?	The documented configuration uses AIP502 with duplexed processor cards so both processor sides can reach V-Net.
How are the two V-Net paths presented on Yokogawa AIP502?	The coupler provides separate upper and lower network connections for bus 1 and bus 2.
What does the RCV indication on Yokogawa AIP502 show?	RCV illuminates when the coupler receives a V-Net communication carrier.

Release record and technical references

CLOSEOUT QUESTIONS

Which processor activity can Yokogawa AIP502 display?	Separate transmit indications identify communication from the left and right processor sides.
What electrical task does Yokogawa AIP502 perform between the processor and V-Net?	It provides signal isolation and converts signal levels at the control-network interface.
Why are two coupler positions checked in a Yokogawa AIP502 installation?	The duplexed field control unit uses the paired network paths to maintain the documented redundant architecture.
Which observations complete commissioning of Yokogawa AIP502?	Normal receive and transmit indications, healthy processor redundancy and stable V-Net communication complete the check.

RELATED MODELS FOR INSTALLATION PLANNING

Yokogawa NFCP501-W15 S2	Installation-planning reference. Review the complete ordering string before selection.
Yokogawa CP451-10 S2	Installation-planning reference. Compare the required interface and system position.
Yokogawa EB401-50 S1	Installation-planning reference. Confirm the execution independently for the intended task.

CONFIGURATION AND FINAL CONTROL

Configuration identity	Yokogawa AIP502
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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