Yokogawa AAI835-H00 S1

Installation, Diagnostics and Acceptance

Work scope

Allocate measurement and command terminals separately, retaining the documented output-load conditions. For the isolated mixed-I/O termination, recover both the input transmitter-power settings and output receiver allocation. AAI841 doubles the input/output count but uses non-isolated circuits, so it changes more than terminal density.

4 isolated current inputs → **FIO mixed-I/O conversion** → **4 isolated current outputs**

01 Before You Order

Evidence to provide	Exact-model selection decision
Direction-labeled module evidence	Request AAI835-H00 S1 and a drawing that distinguishes four isolated inputs from four isolated outputs.
Mixed-I/O terminal selection	Photograph the ATB3A or ATK4A adapter and identify which terminals lead to transmitters and which lead to receiving devices.
Separate field budgets	Supply transmitter compliance on the input side and total receiver resistance on the output side; the two quantities serve different circuit decisions.
Control-loop acceptance scope	Identify whether the job proves only the module or also the transmitter, controller calculation and final receiver, so input and output tolerances are not conflated.

02 Four-input/four-output circuit partition

Identify direction at each terminal

Separate the four isolated current-input loops from the four isolated current-output loops. The same nominal 4–20 mA range does not mean the two sides accept the same test source.

Recover the terminal option

Match the installed ATB3A/ATK4A or applicable terminal arrangement to the channel drawing. Label direction and field tag, not only channel number.

Prepare input-side compliance checks

Include current-dependent input burden when calculating available transmitter voltage. The protective drop is part of the field circuit.

Prepare output-side load checks

Determine the receiving load and total loop resistance before commanding output current. Preserve the applicable 0–750 ohm load condition and installation scope.

03 Independent direction-by-direction proof

Observed condition / stage	Action and acceptance interpretation
Input test	Use a controlled current source for an input loop, compare the indicated engineering value and retain the transmitter-powering arrangement in the test record.
Output test	Command a known output value into the intended receiver and compare actual current with its engineering interpretation. A controller command alone does not demonstrate delivered field current.
Open output interpretation	The specified open-output detection threshold is a diagnostic condition. Confirm receiver wiring and loop continuity before interpreting a detected open as a failed converter.
Isolation discipline	Avoid joining isolated channel returns through a common test instrument. Document any external circuit intentionally sharing a reference.

04 Mixed-I/O fault separation

Observed condition / stage	Action and acceptance interpretation
Input normal, output unavailable	Investigate the output load/receiver path independently. Success on the input side proves neither the output current source nor its field circuit.
Output current correct, receiver wrong	Compare receiver scaling and polarity against the measured current. Restore engineering-unit agreement before changing the module configuration.
Paired process loop discrepancy	Trace transmitter input, control calculation and actuator output as three distinct stages. Preserve their simultaneous readings rather than assigning the entire error to the mixed-I/O module.
Acceptance package	Keep eight direction-labeled circuit assignments, input indication results, measured output currents, load conditions and isolation connections together.

05 Quantitative field checkpoints

Check	Verified condition	Practical evidence
Input comparison	±16 µA reference accuracy	Measure the injected current and indicated value for the input direction only.

05 Quantitative field checkpoints — continued

Check	Verified condition	Practical evidence
Output comparison	±48 µA reference accuracy	Measure delivered current at the receiver; do not substitute the input conversion tolerance.
Receiver load	0–750 Ω normally; 200–750 Ω in qualified hot remote case	Record load and node/ambient applicability before using a bench result for service.

06 Terminal and field-circuit selection map

Order option / circuit	Applicable legacy selection
/B3A00	ATB3A-00 pressure-clamp adapter
/K4A00	ATK4A-00 MIL adapter
Input power	≥15.0 V at 20 mA; ≤29.3 V at zero current, before field-wire loss
Isolation scope	500 V AC, one-minute module test; complete MIL cable limited by its own rating

Bare-module supply boundary

The offered AAI835-H00 S1 identity has no terminal-adapter option appended. Recover the installed terminal identity from its own label before assigning one of these selections to the replacement job.

Technical applicability

Legacy AAI835-H00/H03 electrical and suffix specifications apply to the offered AAI835-H00 S1. S1 is retained as the offered style marking; it does not establish compatibility with later H50/H53 styles.

Technical basis

Yokogawa Analog I/O Modules (for FIO), GS 33M50F30-40E, 5th Edition

Related product navigation

Compare the separate system, revision and interface requirements on each linked product page. These portfolio references do not establish interchangeability.

Yokogawa ADV869-P00 S1	Discrete I/O portfolio: use its own signal and channel specification.
Yokogawa CP451-10 S2	CENTUM system reference: retain its own host and configuration boundary.
Yokogawa EB401-50-S1	Node communication reference: qualify the host and interface revision.
Yokogawa ALF111-S50-S1	CENTUM system reference: retain its own host and configuration boundary.

Engineering contact

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