Yokogawa AAI835-H03 S1

Installation, Diagnostics and Acceptance

Work scope

Confirm G3/temperature execution, node qualification and output compliance as separate parts of the finished installation. The /B3A00 ATB3A-00 and /K4A00 ATK4A-00 terminations must retain the four-plus-four allocation. HART in a remote node also depends on the documented EB401 Rev 2-or-later path.

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

01 Before You Order

Evidence to provide	Exact-model selection decision
Qualified hot-service installation	For AAI835-H03 S1, supply node/enclosure qualification and whether the remote output bank operates in the 60–70°C condition.
Each output receiver branch	Record individual receiver-plus-wire resistance; include any temporary test shunt when comparing with the qualified 200–750 Ω load window.
Temperature and direction of test	Provide ambient and separate input/output readings so the different temperature influences can be applied to the correct signal path.
Isolation and termination	Capture the H03 S1 label, ATB3A/ATK4A marking and the four-plus-four isolated reference arrangement.

02 H03 mixed-I/O environmental decisions

Qualify the complete assembly

The H03 module selection has G3/extended-temperature scope with the qualified node. Review the installed node and enclosure before applying the outer ambient limit.

Retain four-by-four isolation

Record four input and four output circuits separately, including each isolated reference. A combined connector does not turn them into interchangeable signal directions.

Assess the high-temperature receiver load

For the eligible remote installation at 60–70 °C, the output-load condition is 200–750 ohms. A near-zero load that works at lower ambient is not the qualifying hot-installation case.

Recheck supply capacity

Budget the module 5 V/24 V demands with the full node load. Do not use the output-load allowance as evidence of node power margin.

03 Hot-condition commissioning sequence

Observed condition / stage	Action and acceptance interpretation
Input-side voltage margin	At the intended current, include the module protective drop plus external losses in the transmitter compliance calculation. Preserve measured loop supply conditions.
Output-side acceptance load	Measure or establish the effective receiving resistance for the actual ambient/node case before commanding current. Document the hot-condition minimum where it applies.
Measure delivered current	Compare commanded, measured and receiver-indicated values at useful operating points. Keep output error separate from input conversion error and receiver scaling.
Review remote communications	When HART is required, confirm the applicable node/revision route and field interface. Analog success alone does not establish the communication path.

04 Temperature and direction-specific diagnosis

Observed condition / stage	Action and acceptance interpretation
Outputs fail only when hot	Review ambient qualification and the minimum-load condition first. Preserve the test load and actual cabinet temperature with the symptom.
An input fails while outputs operate	Trace that transmitter circuit and its available voltage independently of the working outputs. Avoid using mixed-module success as a substitute for individual-loop proof.
Open-circuit alarm	Check the physical receiver path and actual current against the documented open-detection condition. Distinguish an intentionally disconnected circuit from a defective current source.
Release boundary	Retain H03 S1 identity, qualified node environment, four input proofs and four output/load proofs. State any ambient condition not reproduced during testing.

05 Quantitative field checkpoints

Check	Verified condition	Practical evidence
Hot remote load	200–750 Ω at 60–70°C in the qualified arrangement	Check each actual receiving branch; a 100 Ω bench load does not reproduce this duty.

05 Quantitative field checkpoints — continued

Check	Verified condition	Practical evidence
Direction-specific drift	Input ±16 µA; output ±48 µA per 10°C	Retain direction, temperature change and test-source uncertainty with each result.
Open-output condition	Below 0.65 mA detection condition	Trace the receiver path before interpreting an open indication as current-source failure.

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-H03 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-H03 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 ANB10D-427/CU2t	CENTUM system reference: retain its own host and configuration boundary.
Yokogawa ANB10D-427/CU2N	CENTUM system reference: retain its own host and configuration boundary.
Yokogawa EC402-51	Node communication reference: qualify the host and interface revision.

Engineering contact

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