

AAM50

4 to 20 mA current output module

one isolated 4 to 20 mA DC process output

PRODUCT SNAPSHOT

BRAND

Yokogawa

FAMILY

Yokogawa process I/O module-nest system

PART

AAM50

PRODUCT TYPE

4 to 20 mA current output module

APTER POWER SALES TEAM

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PRODUCT OVERVIEW

one isolated 4 to 20 mA DC process output

1

Provides a 4–20 mA DC output

2

Drives loads up to 750 ohms

3

Updates output data every 20 ms

4

Insulates the output signal from the system

SYSTEM COMPONENTS

Yokogawa AMN11 or AMN12 analog I/O nest

M4 terminal field wiring

configured current-loop receiver

system software R2.07 or later

TECHNICAL NOTE

Verify nest position, loop polarity, receiver load, configured output range and software revision; test the loop at controlled values before enabling automatic control.

TECHNICAL DATA

PARAMETER	VALUE
Model	AAM50
Output signal	4 to 20 mA DC
Output resistance	500 kOhm or more
Allowable load	0 to 750 Ohm
Output range	1.0 to 21.5 mA DC
Output voltage limit	25.5 V DC or less
Open-output detection	0.65 mA or less
Accuracy	+/-48 microampere

PARAMETER	VALUE
Temperature effect	+/-32 microampere per 10 degC change
Load-change effect	+/-16 microampere for 0 to 75 Ohm change
Data update	20 ms
Step response	100 ms
Current consumption	250 mA or less at 5 V DC
Isolation withstand	1500 V AC for one minute
Installation	Analog I/O module nest; M4 terminal wiring
Software requirement	System software R2.07 or later

ENGINEERING NOTE

Verify nest position, loop polarity, receiver load, configured output range and software revision; test the loop at controlled values before enabling automatic control.

RELATED PRODUCTS ON APTER POWER

MODEL	SYSTEM ROLE	APTER POWER PAGE
Emerson VCCM8551G410MO	Related industrial automation product	View Emerson VCCM8551G410MO page
Emerson VCCM8551G309MO	Related industrial automation product	View Emerson VCCM8551G309MO page
Siemens 6SL3300 1AH32 5BA0	Related industrial automation product	View Siemens 6SL3300 1AH32 5BA0 page
Siemens 6SE7041 8GK85 0LA0	Related industrial automation product	View Siemens 6SE7041 8GK85 0LA0 page
Siemens 6SE7041 8EK85 1MA0	Related industrial automation product	View Siemens 6SE7041 8EK85 1MA0 page
Siemens 6SE7037 0EJ84 1JC2	Related industrial automation product	View Siemens 6SE7037 0EJ84 1JC2 page
Siemens 6SE7036 1EE85 1HA0	Related industrial automation product	View Siemens 6SE7036 1EE85 1HA0 page
Siemens C98043 A1682 L1	Related industrial automation product	View Siemens C98043 A1682 L1 page

APPLICATIONS & PRECAUTIONS

COMMON APPLICATIONS

Valve-position current command

Provides a 4–20 mA DC output

DCS analog setpoint output

Drives loads up to 750 ohms

Recorder or indicator current loop

Updates output data every 20 ms

AAM50 module replacement

Insulates the output signal from the system

PRODUCT PRECAUTIONS

- 1 Verify the complete AAM50 marking and its assigned Yokogawa process I/O module-nest system position before work.
- 2 Place the connected valve-position current command process in the approved maintenance state.
- 3 Isolate applicable power and one isolated 4 to 20 ma dc process output field energy before disconnection.
- 4 Record every connector, conductor, address, firmware and software identity before removal.
- 5 Use ESD controls and protect keyed interfaces, exposed contacts and electronic assemblies.
- 6 Confirm the installed Yokogawa AMN11 or AMN12 analog I/O nest and M4 terminal field wiring against the approved project.
- 7 Restore power in a controlled sequence and review device, network and host diagnostics.
- 8 Prove the intended dcs analog setpoint output function and retain the final test result.

ENGINEER FAQ

Q1 What current signal does an AAM50 generate?

It provides a 4 to 20 mA DC process output with a documented usable output range of 1.0 to 21.5 mA.

Q2 For AAM50, which receiver load is permitted on the current loop?

The allowable load is 0 to 750 ohms, with an output-voltage limit of 25.5 VDC or less; verify the complete loop burden before connection.

Q3 For AAM50, how does the module indicate an open output circuit?

The documented open-output detection level is 0.65 mA or less, so an open loop must be investigated before the point is accepted.

Q4 For AAM50, what response timing should be expected during a loop test?

Output data is updated every 20 ms and the documented step response is 100 ms; allow for these values when evaluating a commanded change.

Q5 For AAM50, which accuracy effects should be considered during calibration?

The specification lists accuracy of +/-48 microampere, temperature effect of +/-32 microampere per 10 degC and load-change effect of +/-16 microampere for a 0 to 75 ohm change.

Q6 For AAM50, what isolation check is documented for the analog output?

The output insulation withstand is 1500 VAC for one minute; preserve the intended isolation boundary between the field loop and the system.

Q7 Which nest, terminals and software revision support AAM50?

Install it in an AMN11 or AMN12 analog I/O module nest with M4 terminal wiring and system software R2.07 or later.

Q8 For AAM50, how should the current-output point be commissioned?

Verify nest position, loop polarity and receiver load, then command controlled values across the range, confirm open-loop diagnostics and prove the final control or indication response.

SOURCE Yokogawa Process I/O Module Nest General Specifications | GS 33G06K40-01E, 17th Edition

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