SNAP-AIMA-I

01 / Installed system and risk controls

Opto 22 SNAP-AIMA-I is a two-channel isolated analog current input module for a compatible SNAP PAC I/O rack. Its channels independently measure bipolar current signals; the installed rack and I/O processor complete the acquisition system.

Rack and field boundary

The module receives current from two separately wired field circuits while a compatible SNAP PAC brain or rack controller reads the module.

Before reconnecting the field circuits

Isolate the field circuits

Remove rack and loop power under the site isolation procedure before wiring the pluggable connector.

Supply the transmitter separately

SNAP-AIMA-I does not source excitation; verify the external loop supply and return path before diagnosing a zero reading.

Observe input limits

Keep normal current within the selected range and avoid exceeding the stated 36 mA or 9 VDC survivability limit.

Preserve isolation

Do not bridge the two channel returns or defeat the designed field grounding solely to simplify wiring.

Record the two loop paths

Baseline

Record the two instrument tags, loop supplies, polarities and source grounds separately before removal.

Supply and point map

Include the 200 mA 5 V rack draw and confirm the controller strategy has the correct two-channel mapping.

Connector and isolation

Maintain channel isolation, inspect the pluggable connector and avoid bridging signal returns.

SNAP-AIMA-I

02 / Commission and hand over

Why might SNAP-AIMA-I show zero for a healthy two-wire transmitter?

The module does not furnish loop excitation. Check the external supply, loop continuity, polarity and transmitter demand, then read the channel value and fault state through the rack processor.

How should the two SNAP-AIMA-I channels be grounded?

Treat the channels as separately isolated measurement paths. Follow each instrument loop drawing and rack grounding design; do not add a common bridge between channel returns simply because the signals share one module.

Can SNAP-AIMA-I be exchanged for the SNAP-AIMA-iSRC sourcing model without a wiring review?

No. The iSRC has a separate 24 V loop-source arrangement, whereas SNAP-AIMA-I measures current only. Verify the field supply and connector wiring before selecting a replacement variant.

What test points help verify SNAP-AIMA-I scaling?

Use a calibrated current source at representative negative, zero and positive values within −20 to +20 mA. Compare raw channel values and engineering units in the controller strategy and record as-left results.

What rack conditions should be checked before fitting SNAP-AIMA-I?

Confirm the rack and I/O processor are compatible and the 5 V supply budget includes 200 mA for this module. Align the keyed connector and secure the retention hardware without forcing the pins.

How can a noisy SNAP-AIMA-I reading be traced?

Compare both channels separately, inspect shield routing and field grounding, and inject a stable current at the terminal connector. The isolated inputs reduce ground-loop coupling but do not correct an unstable source or bad wiring.

Close-out evidence

Prove both current paths with known test values, retain the as-left controller point map and identify any field fault that remains unresolved.

Technical basis: Opto 22 SNAP Isolated Analog Input Modules, Form 1182-240326, pp. 1 and 4.

Technical enquiry

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