Opto 22 SNAP-AIMA-4

01 Map transmitter excitation

01

Externally powered loops

Retain the original configuration before disturbing hardware.

Map transmitter excitation — field actions

Record each transmitter type, supply and common connection with the configured input range. Identify standard and self-sourcing devices before changing wiring. Control the affected process loops and retain the existing engineering-unit mapping.

Configuration identified

The four loop circuits have compatible excitation and reference arrangements.

Can independent floating-loop assumptions be used for this installation

No. All inputs share a reference. Assess common wiring before connecting otherwise separate transmitters.

Configuration record	Hardware identities and original settings retained
Following activity	Install the SNAP module

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02 Install the SNAP module

02

Shared-reference inputs

Protect the physical and electrical installation boundary.

Install the SNAP module — field actions

With relevant power controlled, inspect rack seating and terminal condition. Use the module-specific hold-down and connector torque limits and the permitted wire size. Keep conductor preparation and support consistent so terminal work does not disturb other common connections.

Mounting / circuit accepted

The module is secure and conductors are properly terminated without excessive torque.

Does this installation provide the current needed to excite a two-wire transmitter

No. Provide the appropriate external loop supply and verify its path through the transmitter and input.

Installation record	Inspected interfaces and resolved defects retained
Following activity	Verify common and polarity

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03 Verify common and polarity

03

Current conversion

Resolve connection and configuration differences before energization.

Verify common and polarity — field actions

Compare the positive- or negative-common wiring with the expected current sign. Establish external excitation and review the 200 Ω burden in each loop. Do not use a software offset to disguise a common-reference conflict or reversed interpretation.

Connections reconciled

Each transmitter has a valid current path and the expected signal sign.

Why might this installation report a negative current for a healthy transmitter

The positive/negative common arrangement determines sign. Compare wiring topology and configured interpretation before changing scaling.

Connection record	Final wiring and configuration assignments retained
Following activity	Inject known current values

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04 Inject known current values

04

Controller scaling

Evaluate actual response under controlled conditions.

Inject known current values — field actions

Apply approved reference signals across the useful range of every channel. Compare raw current and engineering values and inspect all channels after common wiring changes. Include acquisition freshness and filtering when assessing changing signals.

Functional response accepted

All four channels convert known currents consistently within the intended response requirements.

Can standard and self-sourcing transmitters share this installation indiscriminately

No. Separate them onto appropriate modules or supplies as required by the wiring arrangement; common-reference conflicts must be avoided.

Response record	Test conditions, observed response and deviations retained
Following activity	Release process acquisition

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05 Release process acquisition

05

Acquisition versus application timing

Return control only after reviewing the complete test outcome.

Release process acquisition — field actions

Restore transmitter connections, compare process values with retained references and check application alarms. Record the accepted power/common topology and range settings. Remove maintenance substitutions only after the real field loops have been validated.

Return-to-service evidence

Actual transmitter signals and application interpretation are accepted together.

Separate related-equipment review

Foxboro FBM4/39/44

Foxboro FBM201 P0916AA

Foxboro FBM204 P0914SY

Assess each related item independently; these references do not establish replacement compatibility.