01 / Job scope and readiness

OPTO 22

SNAP-AIV-8

Voltage Input Module

Work boundary

Plan the SNAP-AIV-8 installation against the actual SNAP PAC I/O arrangement. Qualified personnel must use the original manufacturer instructions and approved site isolation procedures. This guide supports planning and does not replace those procedures.

Identify
Complete unit and host

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Isolate
Affected field circuits

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Verify
Configuration and operation

Configuration to preserve

SNAP-AIV-8 has eight shared-reference voltage channels. SNAP PAC brain or rack-mounted controller compatibility is required; channel-to-channel isolation is not provided.

02 / Connection and configuration review

Select the correct range

Configure every channel for its actual ±10 VDC or ±5 VDC signal before checking readings. The over-range and survivable-input values do not extend the normal measurement range.

Review common returns

All eight channels share a reference, including even-numbered terminals on both connectors. Avoid connecting incompatible grounded sources to the same module.

Check processor compatibility

Use a SNAP PAC brain or rack-mounted controller. Do not assume compatibility with an older SNAP processor merely because the module fits a rack.

Check	Required relationship
Channel range	±10 VDC or ±5 VDC, individually selected
Over-range limits	±11 V / ±5.5 V for ±10 V / ±5 V ranges
Resolution	0.4 mV at ±10 V; 0.2 mV at ±5 V

Are SNAP-AIV-8 input channels isolated from each other?

No. All eight channels share a common reference. The 1500 V module isolation rating does not imply channel-to-channel isolation.

What resolution does SNAP-AIV-8 provide?

Resolution is 0.4 mV on the ±10 V range and 0.2 mV on the ±5 V range.

03 / Installation conditions and release

Plan rack power

Provide 5 VDC ±0.15 V and allow 170 mA for this module. Verify the total installed rack load before energizing the system.

Use the specified torque

Keep module hold-down torque at or below 0.11 N·m and tighten connector screws to 0.19 N·m. Support and identify field wiring before replacement.

Verify measurements before release

With the installation safe and complete, confirm channel assignments, ranges, polarity and representative readings. Operate within -20 to +70 °C and non-condensing humidity conditions.

Acceptance evidence

Record the complete installed identity, connection photographs, final settings and functional test results. Resolve any mismatch before releasing the affected system.

Operating limits and system context

SNAP-AIV-8 is used with SNAP PAC brains and rack-mounted controllers. The module requires 5 VDC ±0.15 V at 170 mA and supports operation from -20 to +70 °C, storage from -40 to +85 °C, and 5–95% non-condensing humidity. Accuracy is 0.05%, expressed as 5 mV at 10 VDC or 2.5 mV at 5 VDC. Apply the specified hold-down torque limit of 0.11 N·m and connector screw torque of 0.19 N·m when installing the module and field wiring.

04 / Functional acceptance planning

Application	Relationship to verify
Multi-channel voltage acquisition	Acquire eight voltage signals with individual ±10 VDC or ±5 VDC range selection. Match each configured range to its connected source.
SNAP PAC rack integration	Use the module with a SNAP PAC brain or rack-mounted controller and the appropriate SNAP rack. Include its 170 mA requirement in the 5 V supply budget.
Shared-reference instrumentation	Connect compatible signal returns to the common reference. Channels do not provide independent isolation, so source grounding must be reviewed as one electrical arrangement.
Process signal monitoring	Use the 64 Hz input filtering and 0.28-second maximum data freshness when evaluating measurement response. Confirm that these characteristics suit the control task.

Operating context

SNAP-AIV-8 provides eight analog voltage inputs, each configurable for -10 to +10 VDC or -5 to +5 VDC. The corresponding over-range limits are ±11 V and ±5.5 V, while resolution is 0.4 mV on the ±10 V range and 0.2 mV on the ±5 V range. Its -3 dB input-filter point is 64 Hz and maximum data freshness is 0.28 seconds. These characteristics describe voltage measurement performance, not a high-speed event capture function.

05 / Handover and supporting references

Technical review

The hold-down screws must not exceed 0.11 N·m. Connector screws are specified at 0.19 N·m.

Service planning

Preserve the full SNAP-AIV-8 identity and installed configuration. Obtain current manufacturer lifecycle and replacement guidance for that exact unit; Apter Power availability and dispatch are confirmed separately in the quotation.

Reference basis

Opto 22 SNAP Analog Input Modules Data Sheet, Form 1065-240702.

Apter Power technical summary; not a manufacturer-issued manual. Apply the original instructions for the actual installation.

Related industrial automation products

Navigation only; no substitution or compatibility claim.

Opto 22 SNAP-AIMA-4

Allen-Bradley 1756-IRT8I

Honeywell TC-IAH161

Discuss your installed configuration

Send the full unit marking and connection details.

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