



NI-9223 Getting Started



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NI-9223 Getting Started ± 10 V, 1 MS/s, 16-Bit, Simultaneous Input, 4-Channel C Series Voltage Input Module

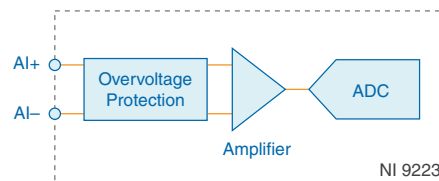
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Connector Types

The NI-9223 has more than one connector type: NI-9223 with screw terminal , NI-9223 with snap in terminal, and NI-9223 with BNC. Unless the connector type is specified, NI-9223 refers to all connector types.

NI-9223 Block Diagram



- Input signals on each channel are buffered, conditioned, and then sampled by an ADC.
- Each AI channel provides an independent signal path and ADC, enabling you to sample all channels simultaneously.

NI-9223 Pinout

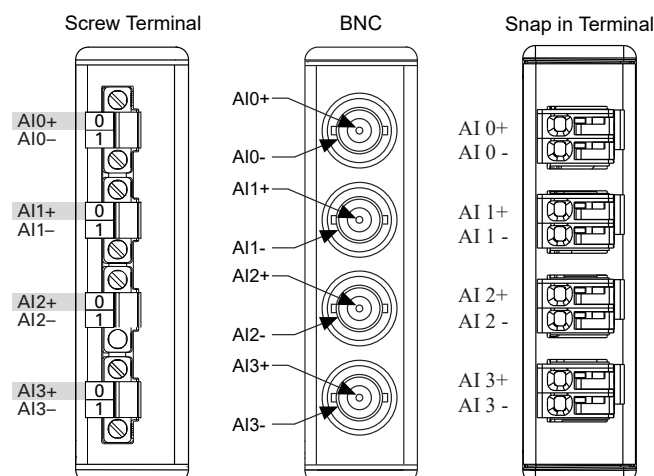


Table 1 : Signal Descriptions

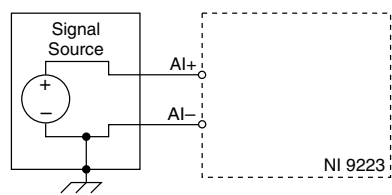
Signal	Description
AI+	Positive analog input signal connection



Table 1 : Signal Descriptions (Continued)

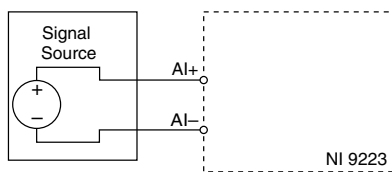
Signal	Description
AI-	Negative analog input signal connection

Grounded Connections



Make sure the voltage on the AI+ and AI- connections are in the channel-to-earth safety voltage range to ensure proper operation.

Floating Connections



NI-9223 Connection Guidelines

- Make sure that devices you connect to the NI-9223 are compatible with the module specifications.
- You must use 2-wire ferrules to create a secure connection when connecting more than one wire to a single terminal on the NI-9223 with screw terminal and NI-9223 with snap in terminal.

Wiring for High-Vibration Applications

If your application is subject to high vibration, NI recommends that you use the NI 9971 backshell kit to protect connections to the NI-9223 with screw terminals or NI 9990 backshell kit to protect connections to the NI-9223 with snap in terminals.

You must follow these guidelines to meet the shock and vibration performance specifications stated in the device datasheet on ni.com/manuals.

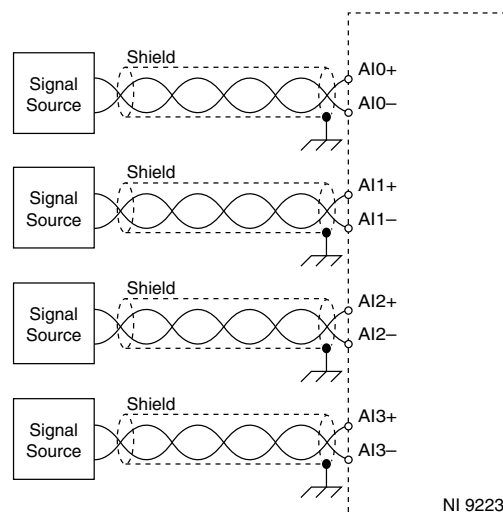
- Panel mount the system.
- Provide strain relief for the module by securing the cabling to a supporting fixture no more than 8 cm (3 in.) away from the opening of the connector backshell.
- Ensure that the supporting fixture for strain relief is stiff and rigidly coupled to the chassis mounting surface.
- Use ferrules to terminate wires to the detachable connector.

Cable Requirements for EMC Compliance

Select and install cables for the NI-9223 with screw terminal and NI-9223 with snap in terminal in accordance with the following requirements:

- Connect the cable shield to the chassis ground (grounding screw of the chassis) using the shortest length of wire possible.
- Use shielded, twisted-pair cables (Belden 9451 or equivalent).

Figure 1 : Cable Connections for NI-9223 with screw terminal and NI-9223 with snap in terminal for EMC Compliance





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