NI-9202 Getting Started

2025-03-21

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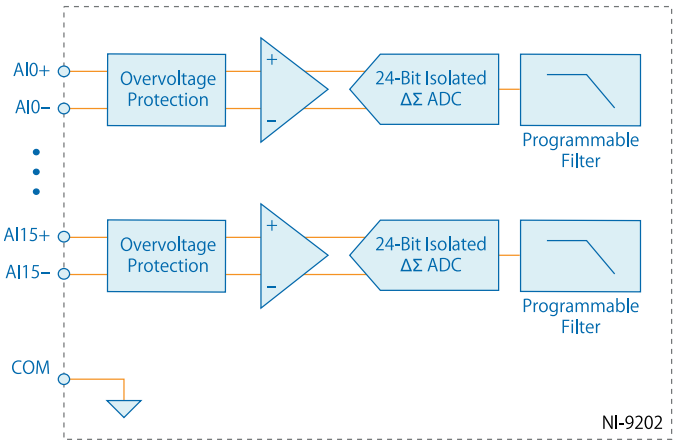
NI-9202 Nomenclature

In this article, the NI-9202 with spring terminal and NI-9202 with DSUB are referred to inclusively as the NI-9202.

NI-9202 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-9202 Pinout

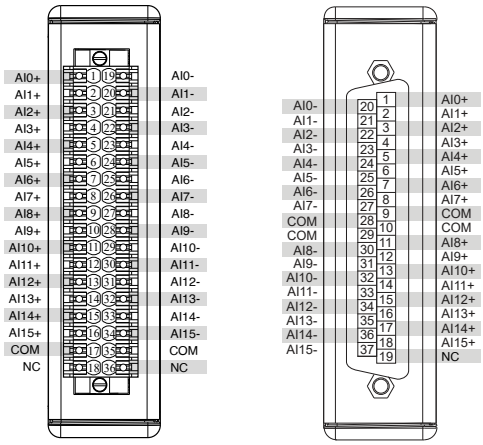
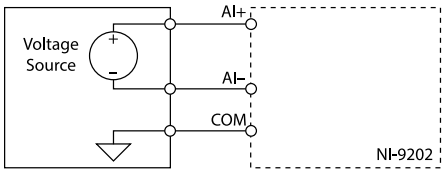


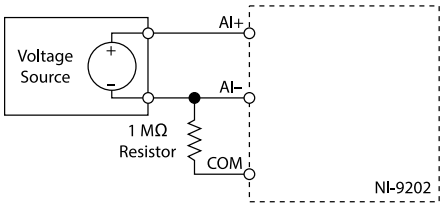
Table 1. Signal Descriptions

Signal	Description
AI+	Positive analog input signal connection
AI-	Negative analog input signal connection
COM	Common reference connection to isolated ground
NC	No connection

NI-9202 Grounded Differential Connections

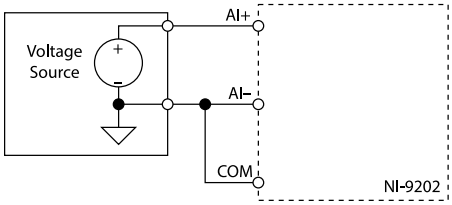


NI-9202 Floating Differential Connections



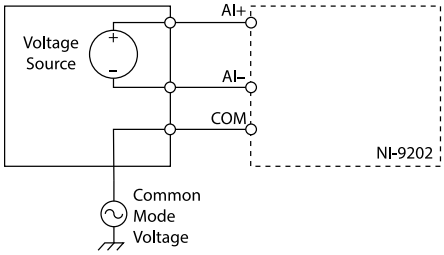
Connect the negative lead to COM through a 1 MΩ resistor to keep the signal source within the common-mode voltage range. The NI-9202 does not read data accurately if the signal source is outside of the common-mode voltage range.

NI-9202 Single-Ended Connections



Connect the ground signal to COM to keep the signal source within the common-mode voltage range.

NI-9202 Differential Connections with Common Mode Voltage



NI-9202 Connection Guidelines

- Make sure that devices you connect to the NI-9202 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-9202 with spring terminal.
- For the NI-9202 with spring terminal, push the wire into the terminal when using a solid wire or a stranded wire with a ferrule.
- For the NI-9202 with spring terminal, open the terminal by pressing the push button when using stranded wire without a ferrule.

High-Vibration Application Connections

If your application is subject to high vibration, NI recommends that you use the cRIO-9940 backshell kit to protect connections to the NI-9202 with spring terminal.

Conformal Coating

The NI-9202 is available with conformal coating for additional protection in corrosive and condensing environments, including environments with molds and dust.

In addition to the environmental specifications listed in the ***NI-9202 Safety, Environmental, and Regulatory Information***, the NI-9202 with conformal coating meets the following specification for the device temperature range. To meet this specification, you must follow the appropriate setup requirements for condensing environments. Refer to ***Conformal Coating and NI RIO Products*** for more information about conformal coating and the setup requirements for condensing environments.

Operating humidity (IEC 60068-2-30 Test Db)	80 to 100% RH, condensing

Related information:

- Conformal Coating and NI RIO Products