


SAFETY, ENVIRONMENTAL, AND REGULATORY INFORMATION

PXIe-4309 and TB-4309 (ST)/TB-4309 (MT)/CAL-4309

32 Ch (8 ADC), 2 MS/s, 18 - 28 bit, Flexible Resolution PXI Analog Input Module


 **Note** The guidelines in this document are specific to the PXIe-4309 module and TB-4309 (ST), TB-4309 (MT), and CAL-4309 terminal blocks.


Electromagnetic Compatibility Guidelines

This product was tested and complies with the regulatory requirements and limits for electromagnetic compatibility (EMC) stated in the product specifications. These requirements and limits provide reasonable protection against harmful interference when the product is operated in the intended operational electromagnetic environment.

This product is intended for use in industrial locations. However, harmful interference may occur in some installations, when the product is connected to a peripheral device or test object, or if the product is used in residential or commercial areas. To minimize interference with radio and television reception and prevent unacceptable performance degradation, install and use this product in strict accordance with the instructions in the product documentation.

Furthermore, any modifications to the product not expressly approved by National Instruments could void your authority to operate it under your local regulatory rules.

 **Caution** To ensure the specified EMC performance, operate this product only with shielded cables and shielded accessories. Use only twisted, shielded pair cables for channel connections. Refer to the *PXIe-4309 User Manual* for specific guidance on terminating cable shields.

 **Caution** To ensure the specified EMC performance, the length of all I/O cables must be no longer than 3 m (10 ft).

Environmental Specifications

Operating Environment

Ambient temperature range 0 °C to 55 °C
(Tested in accordance with IEC 60068-2-1 and IEC 60068-2-2. Meets MIL-PRF-28800F Class 3 low temperature limit and MIL-PRF-28800F Class 2 high temperature limit.)

Relative humidity range 10% to 90%, noncondensing
(Tested in accordance with IEC 60068-2-56.)

Maximum altitude 2,000 m (800 mbar)

Pollution Degree 2

Indoor use only.

Storage Environment

Ambient temperature range -40 °C to 71 °C
(Tested in accordance with IEC 60068-2-1 and IEC 60068-2-2. Meets MIL-PRF-28800F Class 3 limits.)

Relative humidity range 5% to 95%, noncondensing
(Tested in accordance with IEC 60068-2-56.)


Electrical


Input range ± 0.1 V, ± 1.0 V, ± 10 V, ± 15 V

Maximum working voltage (signal + common mode) ± 15.5 V of GND

Safety

Measurement Category¹ 0


 **Caution** Do *not* connect the TB-4309 (ST)/TB-4309 (MT) to signals or use for measurements within Measurement Categories II, III, or IV.

 **Caution** The protection provided by the TB-4309 (ST)/TB-4309 (MT) can be impaired if it is used in a manner not described in this document.

Safety Standards

This product meets the requirements of the following standards of safety for electrical equipment for measurement, control, and laboratory use:

- IEC 61010-1, EN 61010-1
- UL 61010-1, CSA C22.2 No. 61010-1

 **Note** For UL and other safety certifications, refer to the product label or the [Online Product Certification](#) section.

¹ Measurement Categories CAT I and CAT O are equivalent. These test and measurement circuits are not intended for direct connection to the MAINS building installations of Measurement Categories CAT II, CAT III, or CAT IV.

Electromagnetic Compatibility

This product meets the requirements of the following EMC standards for electrical equipment for measurement, control, and laboratory use:

- EN 61326-1 (IEC 61326-1): Class A emissions; Basic immunity
- EN 55011 (CISPR 11): Group 1, Class A emissions
- EN 55022 (CISPR 22): Class A emissions
- EN 55024 (CISPR 24): Immunity
- AS/NZS CISPR 11: Group 1, Class A emissions
- AS/NZS CISPR 22: Class A emissions
- FCC 47 CFR Part 15B: Class A emissions
- ICES-001: Class A emissions



Note In the United States (per FCC 47 CFR), Class A equipment is intended for use in commercial, light-industrial, and heavy-industrial locations. In Europe, Canada, Australia and New Zealand (per CISPR 11) Class A equipment is intended for use only in heavy-industrial locations.



Note Group 1 equipment (per CISPR 11) is any industrial, scientific, or medical equipment that does not intentionally generate radio frequency energy for the treatment of material or inspection/analysis purposes.



Note For the standards applied to assess the EMC of this product, refer to the [Online Product Certification](#) section.

CE Compliance

This product meets the essential requirements of applicable European Directives as follows:

- 2014/35/EU; Low-Voltage Directive (safety)
- 2014/30/EU; Electromagnetic Compatibility Directive (EMC)

Where to Go Next

The following documents contain information that you may find helpful as you use the PXIe-4309 data acquisition module and accessories:

- The *PXIe-4309 Specifications* lists specifications for the PXIe-4309 data acquisition module.
- The *PXIe-4309 and TB-4309 (ST)/TB-4309 (MT) Getting Started Guide* explains how to install, configure, and set up the PXIe-4309 module with the TB-4309 (ST) screw terminal and TB-4309 (MT) mass termination terminal blocks.
- The *PXIe-4309 User Manual* describes connection diagrams and operation modes of the PXIe-4309 data acquisition module.

Online Product Certification

Refer to the product Declaration of Conformity (DoC) for additional regulatory compliance information. To obtain product certifications and the DoC for this product, visit ni.com/certification, search by model number or product line, and click the appropriate link in the Certification column.

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