


SAFETY, ENVIRONMENTAL, AND REGULATORY INFORMATION


SHC68-4MDR26-AI32 Cable

DAQ High Density AI Cable, 1 m


Read this document and the documents listed in the additional resources section about installation, configuration, and operation of this equipment before you install, configure, operate, or maintain this product. Users are required to familiarize themselves with installation and wiring instructions in addition to requirements of all applicable codes, laws, and standards.


Icons

 **Notice**—Take precautions to avoid data loss, loss of signal integrity, degradation of performance, or damage to the model.

 **Caution**—Take precautions to avoid injury. Consult the model documentation for cautionary statements when you see this icon printed on the model. Cautionary statements are localized into French for compliance with Canadian requirements.

Safety


 **Caution** Observe all instructions and cautions in the user documentation. Using the model in a manner not specified can damage the model and compromise the built-in safety protection. Return damaged models to NI for repair.


 **Attention** Suivez toutes les instructions et respectez toutes les mises en garde de la documentation utilisateur. L'utilisation d'un modèle de toute autre façon que celle spécifiée risque de l'endommager et de compromettre la protection de sécurité intégrée. Renvoyez les modèles endommagés à NI pour réparation.


Maximum Working Voltage


Maximum working voltage refers to the signal voltage plus the common-mode voltage.

| | |
|--------------------|---|
| Channel-to-channel | 30 V _{dc} , Measurement Category O |
| Channel-to-earth | 30 V _{dc} , Measurement Category O |


 **Caution** Do not supply hazardous voltages ($>30 V_{RMS} / 42 V_{peak} / 60 V_{dc}$) to the SHC68-4MDR26-AI32 Cable.

 **Attention** Ne pas alimenter le SHC68-4MDR26-AI32 Cable avec des tensions dangereuses ($> 30 V_{eff} / 42 V_{pic} / 60 V_{cc}$).

 **Caution** Do not connect the SHC68-4MDR26-AI32 Cable to signals or use for measurements within Measurement Categories II, III, or IV.

 **Attention** Ne connectez pas le SHC68-4MDR26-AI32 Cable à des signaux et ne l'utilisez pas pour effectuer des mesures dans les catégories de mesure II, III ou IV.


Measurement Category I is for measurements performed on circuits not directly connected to the electrical distribution system referred to as *MAINS* voltage. MAINS is a hazardous live electrical supply system that powers equipment. This category is for measurements of voltages from specially protected secondary circuits. Such voltage measurements include signal levels, special equipment, limited-energy parts of equipment, circuits powered by regulated low-voltage sources, and electronics.

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

Safety Compliance Standards

This product is designed to meet the requirements of the following electrical equipment safety standards 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 [Product Certifications and Declarations](#) section.

EMC 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 changes or modifications to the product not expressly approved by NI could void your authority to operate it under your local regulatory rules.

Electromagnetic Compatibility Standards

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
- AS/NZS CISPR 11: Group 1, Class A emissions
- FCC 47 CFR Part 15B: Class A emissions
- ICES-001: Class A emissions
- EN 61326-2-1 (IEC 61326-2-1): Class A emissions; Industrial immunity

 **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** 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.


Physical Characteristics

| | |
|------------|--|
| Length | 1 m |
| Weight | 459 g (16.2 oz) |
| Connectors | 1x male 68-pin VHDCI, 4x male 26-pin MDR |

Environmental Characteristics

| | |
|-----------------------------------|---------------------------------------|
| Temperature and Humidity | |
| Operating temperature | 0 °C to 40 °C |
| Storage temperature range | -40 °C to 85 °C |
| Operating relative humidity range | 10% to 90%, noncondensing |
| Storage relative humidity range | 5% to 95%, noncondensing |
| Pollution Degree | 2 |
| Maximum altitude | 2,000 m (800 mbar) (at 25 °C ambient) |


Environmental Guidelines

 **Notice** This model is intended for use in indoor applications only.

Environmental Standards

This product meets the requirements of the following environmental standards for electrical equipment.

- IEC 60068-2-1 Cold
- IEC 60068-2-2 Dry heat
- IEC 60068-2-78 Damp heat (steady state)

 **Note** To verify marine approval certification for a product, refer to the product label or visit ni.com/certification and search for the certificate.

CE Compliance

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

- 2014/30/EU; Electromagnetic Compatibility Directive (EMC)
- 2011/65/EU; Restriction of Hazardous Substances (RoHS)

Export Compliance

This model is subject to control under the U.S. Export Administration Regulations (15 CFR Part 730 et. seq.) administered by the U.S. Department of Commerce's Bureau of Industry and Security (BIS) (www.bis.doc.gov) and other applicable U.S. export control laws and sanctions regulations. This model may also be subject to additional license requirements of other countries' regulations.

Additionally, this model may also require export licensing before being returned to NI. The issuance of a Return Material Authorization (RMA) by NI does not constitute export authorization. The user must comply with all applicable export laws prior to exporting or re-exporting this model. See ni.com/legal/export-compliance for more information and to request relevant import classification codes (e.g. HTS), export classification codes (e.g. ECCN), and other import/export data.

Product Certifications and Declarations

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

Additional Resources

Visit ni.com/manuals and refer to the *SLSC-12251 and SLSC-12252 User Manual* for more information about your model, including pinouts and instructions for connecting, installing, and configuring your system.

Worldwide Support and Services

The NI website is your complete resource for technical support. At ni.com/support, you have access to everything from troubleshooting and application development self-help resources to email and phone assistance from NI Application Engineers.

Visit ni.com/services for information about the services NI offers.

Visit ni.com/register to register your NI product. Product registration facilitates technical support and ensures that you receive important information updates from NI.

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