SPECIFICATIONS

SH96-96-1 Cable

Français Deutsch 日本語 한국어 简体中文

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When this symbol is marked on a product, it denotes a warning advising you to take precautions to avoid electrical shock.

This icon denotes a caution, which advises you of precautions to take to avoid injury, data loss, or a system crash. When this symbol is marked on a product, refer to the *Read Me First: Safety and Electromagnetic Compatibility* document for information about precautions to take.

This document lists specifications for the SH96-96-1 shielded cable. These specifications are typical for the range of 0 °C to 55 °C unless otherwise stated. The system must be allowed to warm up for 15 minutes to achieve the rated accuracy. All specifications are subject to change without notice. Visit `ni.com/manuals` for the most current specifications and product documentation.

Note Verify the accessory safety voltage to which you connect the cable by consulting the accessory specification document. If the accessory safety voltage is lower than the cable rating, use the accessory safety voltage rather than the cable rating.

Electrical

Max working voltage

- Any pin to any pin ..... 60 VDC

Max current capacity

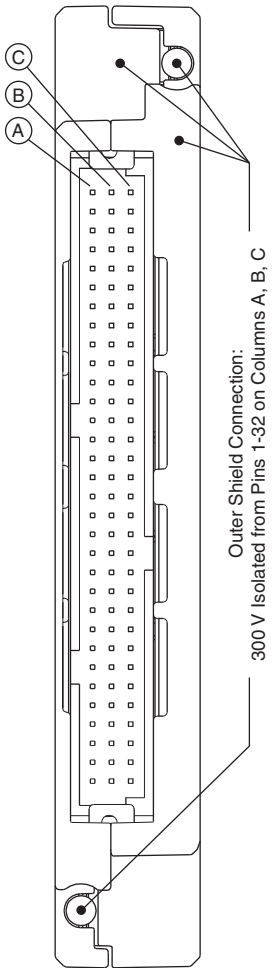
- PWR and ISO_GND ..... 250 mA
  - Wire gauge ..... 0.326 mm^2 (7/0.255 mm stranded), [22 AWG (7/30 stranded)]
- All other I/O pins ..... 50 mA
  - Wire gauge ..... 0.081 mm^2 (7/0.127 mm stranded), [28 AWG (7/36 stranded)]

Connect only voltages that are within the following limits.

- NI PXIe-4353
  - Between any TC+ and TC- ..... ±80 mV
  - Between any TC terminal and COM ..... ±10 V
  - Between CJC+ and CJC- ..... ±1.024 V

NATIONAL INSTRUMENTS

Table 1. Generic Pinout of SH96-96-1 Cable[1]

Male Connector Diagram	Column A	Column B	Column C
	A32	B32	C32
	A31	B31	C31
	A30	B30	C30
	A29	B29	C29
	A28	B28	C28
	A27	B27	C27
	A26	B26	C26
	A25	B25	C25
	A24	B24	C24
	A23	B23	C23
	A22	B22	C22
	A21	B21	C21
	A20	B20	C20
	A19	B19	C19
	A18	B18	C18
	A17	B17	C17
	A16	B16	C16
	A15	B15	C15
	A14	B14	C14
	A13	B13	C13
	A12	B12	C12
	A11	B11	C11
	A10	B10	C10
	A9	B9	C9
	A8	B8	C8
	A7	B7	C7
	A6	B6	C6
	A5	B5	C5
Note: The outer shield is connected to earth ground.	A4	B4	C4
RSVD—reserved	A3	B3	C3
	A2 [RSVD]	B2 [ISO_GND]	C2 [RSVD]
	A1 [RSVD]	B1 [PWR]	C1 [RSVD]

[1] Refer to your NI PXIe module documentation for specific pinout details.

Physical Requirements

Dimensions (available lengths) ..... 1 m (3.3 ft)
3 m (9.8 ft)
5 m (16.4 ft)

Weights

- 1 meter ..... 1187 g (42.2 oz)
- 3 meter ..... 2040 g (72.6 oz)
- 5 meter ..... 2894 g (102.1 oz)

I/O connector

- Male ..... 96-pin Type R DIN 41612/IEC 60603-2
- Female ..... 96-pin Type C DIN 41612/IEC 60603-2

Environmental Specifications

Maximum altitude..... 2,000 m (800 mbar)

Pollution Degree 2

Indoor use only

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.)

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.)

Shock and Vibration

Operating shock ..... 30 g peak, half-sine, 11 ms pulse
(Tested in accordance with IEC-60068-2-27.
Meets MIL-PRF-28800F Class 2 limits.)

Random vibration

- Operating ..... 5 Hz to 500 Hz, 0.3 g_{rms}
- Non-operating ..... 5 Hz to 500 Hz, 2.4 g_{rms}
  (Tested in accordance with IEC-60068-2-64.
  Nonoperating test profile exceeds the
  requirements of MIL-PRF-28800F, Class 3.)

Safety Voltages

Isolation

- Channel-to-channel ..... None
- Channel-to-earth ground
  - Continuous ..... 300 V_{rms}, Measurement Category II
  - Withstand ..... 3,000 V_{rms}, verified by a 5 s dielectric withstand test

Measurement Category II is for measurements performed on circuits directly connected to the electrical distribution system.

This category refers to local-level electrical distribution, such as that provided by a standard wall outlet, for example, 115 V for U.S. or 230 V for Europe.

Caution Do *not* connect the SH96-96-1 to signals or use for measurements within Measurement Categories III or IV.

Caution The protection provided by the SH96-96-1 can be impaired if it is used in a manner not described in this document.

Safety

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 61010-1

Note For UL and other safety certifications, refer to the product label.

CE Compliance CE

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

- 2006/95/EC; Low-Voltage Directive (safety)

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.

Environmental Management

NI is committed to designing and manufacturing products in an environmentally responsible manner. NI recognizes that eliminating certain hazardous substances from our products is beneficial to the environment and to NI customers.

For additional environmental information, refer to the *Minimize Our Environmental Impact* web page at `ni.com/environment`. This page contains the environmental regulations and directives with which NI complies, as well as other environmental information not included in this document.

Waste Electrical and Electronic Equipment (WEEE)

EU Customers At the end of the product life cycle, all products *must* be sent to a WEEE recycling center. For more information about WEEE recycling centers, National Instruments WEEE initiatives, and compliance with WEEE Directive 2002/96/EC on Waste and Electronic Equipment, visit `ni.com/environment/weee`.

电子信息产品污染控制管理办法 （中国 RoHS）

中国客户 National Instruments 符合中国电子信息产品中限制使用某些有害物质指令 (RoHS)。关于 National Instruments 中国 RoHS 合规性信息，请登录 `ni.com/environment/rohs_china`。(For information about China RoHS compliance, go to `ni.com/environment/rohs_china`.)

Where to Go for Support

The National Instruments Web site 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.

National Instruments corporate headquarters is located at 11500 North Mopac Expressway, Austin, Texas, 78759-3504. National Instruments also has offices located around the world to help address your support needs. For telephone support in the United States, create your service request at `ni.com/support` and follow the calling instructions or dial 512 795 8248. For telephone support outside the United States, visit the Worldwide Offices section of `ni.com/niglobal` to access the branch office Web sites, which provide up-to-date contact information, support phone numbers, email addresses, and current events.

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