
ECUTS Circuit Card Assembly Safety, Environmental, and Regulatory Information

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ECUTS Circuit Card Assembly Safety, Environmental, and Regulatory Information High-Voltage CCAs for ECU Test Systems

Contents

1. ECUTS Circuit Card Assembly Safety, Environmental, and Regulatory Information	3
1.1 Icons	3
1.2 Safety Guidelines	3
1.2.1 Safety Guidelines for Hazardous Voltages	4
1.2.2 Safety Voltages	4
1.2.2.1 Measurement Category	5
1.2.3 Safety Compliance Standards	6
1.3 EMC Guidelines	6
1.3.1 EMC Notices	7
1.3.2 EMC Standards	7
1.4 Environmental Guidelines	7
1.5 Export Compliance	8
1.6 Environmental Management	8
1.6.1 EU and UK Customers	8
1.6.2 电子信息产品污染控制管理办法(中国 RoHS)	8
1.7 Product Certifications and Declarations	8
1.8 Additional Resources	9
1.9 NI Services	9

ECUTS Circuit Card Assembly Safety, Environmental, and Regulatory Information

Read this document 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. Visit ni.com/manuals for more information about your product, including specifications, pinouts, and instructions for connecting, installing, and configuring your system.

For installation information, refer to *Replacing Circuit Card Assemblies and Cables to the Mass Interconnect* in the *Repair* section of the [ECUTS-16000 User Manual](#) or [ECUTS-16001 User Manual](#) depending on your ECUTS model.



NOTICE

ECU Test System circuit card assemblies are only intended for use in the ECUTS-16000 and ECUTS-16001.

Icons

Refer to the following descriptions if one of these icons is marked on your product or used in this guide.

	Notice Take precautions to avoid data loss, loss of signal integrity, degradation of performance, or damage to the product.
	Caution Take precautions to avoid injury. Consult the product documentation for cautionary statements when you see this icon printed on the product. Cautionary statements are localized into French for compliance with Canadian requirements.
	Shock Warning Take precautions to avoid electrical shock.

Safety Guidelines



CAUTION

Observe all instructions and cautions in the user documentation. Using the product in a manner not specified can damage the product and compromise the built-in safety protection.

ATTENTION

Suivez toutes les instructions et respectez toutes les mises en garde de la documentation d'utilisation. L'utilisation du produit de toute autre façon que celle spécifiée risque de l'endommager et de compromettre la protection de sécurité intégrée.

Safety Guidelines for Hazardous Voltages

If hazardous voltages are connected to the product, take the following precautions. A hazardous voltage is a voltage greater than:

- 30 V RMS, 42.4 V peak, or 60 V DC in DRY LOCATIONS



CAUTION

Ensure that hazardous voltage wiring is performed only by qualified personnel adhering to local electrical standards.

ATTENTION

S'assurer que le câblage à tension dangereuse est effectué par du personnel qualifié respectant les normes électriques locales.



CAUTION

Do not mix hazardous voltage circuits and nonhazardous voltage circuits on the same product.

ATTENTION

Ne pas combiner des circuits à tension dangereuse et des circuits à tension non dangereuse sur le même produit.



CAUTION

When product terminals are hazardous voltage LIVE, you must ensure that devices and circuits connected to the product are properly insulated from human contact.

ATTENTION

Lorsqu'une haute tension dangereuse est appliquée aux bornes du produit, vous devez vous assurer que les appareils et les circuits auxquels il est connecté sont correctement isolés de tout contact humain.



CAUTION

All wiring must be insulated for the highest voltage used.

ATTENTION

Tout le câblage doit être isolé pour la plus haute tension utilisée.

Safety Voltages

Working Voltage	The highest RMS value of the AC or DC voltage across the insulation that can continuously occur when the equipment is supplied at rated voltage.
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Transient Overvoltage

An overvoltage condition of a relatively short duration, a few milliseconds or less, oscillatory or non-oscillatory, usually highly damped.

For information on the maximum working and transient voltages for this product, refer to *Table 6: High Voltage Cables and Assemblies* in the Hardware Components section of the *ECUTS-16000 Specifications* or *ECUTS-16001 Specifications* document depending on your ECUTS model.

Measurement Category

Measurement Category I

**CAUTION**

Do not connect the product to signals or use for measurements within Measurement Categories II, III, or IV.

ATTENTION

Ne pas connecter le produit à des signaux dans les catégories de mesure II, III ou IV et ne pas l'utiliser pour effectuer des mesures dans ces catégories.

**WARNING**

Do not connect the product to signals or use for measurements within Measurement Categories II, III, or IV, or for measurements on MAINS circuits or on circuits derived from Overvoltage Category II, III, or IV which may have transient overvoltages above what the product can withstand. The product must not be connected to circuits that have a maximum voltage above the continuous working voltage, relative to earth or to other channels, or this could damage and defeat the insulation. The product can only withstand transients up to the transient overvoltage rating without breakdown or damage to the insulation. An analysis of the working voltages, loop impedances, temporary overvoltages, and transient overvoltages in the system must be conducted prior to making measurements.

MISE EN GARDE

Ne pas connecter le produit à des signaux dans les catégories de mesure II, III ou IV et ne pas l'utiliser pour des mesures dans ces catégories, ou des mesures sur secteur ou sur des circuits dérivés de surtensions de catégorie II, III ou IV pouvant présenter des surtensions transitoires supérieures à ce que le produit peut supporter. Le produit ne doit pas être raccordé à des circuits ayant une tension maximale supérieure à la tension de fonctionnement continu, par rapport à la terre ou à d'autres voies, sous peine d'endommager et de compromettre l'isolation. Le produit peut tomber en panne et son isolation risque d'être endommagée si les tensions transitoires dépassent la surtension transitoire nominale. Une analyse des tensions de fonctionnement, des impédances de boucle, des surtensions temporaires et des surtensions transitoires dans le système doit être effectuée avant de procéder à des mesures.

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
- Conforms to UL Standard 61010-1 and UL Standard 61010-2-030

**NOTE**

For 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) as stated in the product specifications. These requirements and limits are designed to provide reasonable protection against harmful interference when the product is operated in its intended operational electromagnetic environment.

This product is only intended for use with the ECUTS-16000 and ECUTS-16001. 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 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.

EMC Notices

Refer to the following notices for cables, accessories, and prevention measures necessary to ensure the specified EMC performance.



NOTICE

For EMC declarations and certifications, and additional information, refer to the [Product Certifications and Declarations](#) section.



NOTICE

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



NOTICE

The performance of this product can be disrupted if subjected to Electrostatic Discharge (ESD) during operation. To prevent damage, industry-standard ESD prevention measures must be employed during installation, maintenance, and operation.

EMC 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
- ICES-001: Class A emissions



NOTE

Group 1 equipment 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 Europe, Australia, New Zealand, and Canada (per CISPR 11) Class A equipment is intended for use in non-residential locations.

Environmental Guidelines



NOTICE

This product is intended for use in indoor applications only.

Export Compliance

This product 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 product may also be subject to additional license requirements of other countries' regulations.

Additionally, this product 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 product. 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.

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 *Engineering a Healthy Planet* 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.

EU and UK Customers



Waste Electrical and Electronic Equipment (WEEE) —At the end of the product life cycle, all NI products must be disposed of according to local laws and regulations. For more information about how to recycle NI products in your region, visit ni.com/environment/weee.

电子信息产品污染控制管理办法(中国 RoHS)

 **中国 RoHS** — NI 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 NI 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.)

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/product-certifications, search by model number, and click the appropriate link.

Additional Resources

Visit ni.com/docs for more information about your product, including specifications, pinouts, and instructions for connecting, installing, and configuring your system.

NI Services

Visit ni.com/support to find support resources including documentation, downloads, and troubleshooting and application development self-help such as tutorials and examples.

Visit ni.com/services to learn about NI service offerings such as calibration options, repair, and replacement.

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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