UL 61010-2-034

STANDARD FOR SAFETY

Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use – Part 2-034: Particular Requirements for Measurement Equipment for Insulation Resistance and Test Equipment for Electric Strength

UL Standard for Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use – Part 2-034: Particular Requirements for Measurement Equipment for Insulation Resistance and Test Equipment for Electric Strength, UL 61010-2-034

Second Edition, Dated October 17, 2024

Summary of Topics

This Second Edition of ANSI/UL 61010-2-034 dated October 17, 2024 is an Adoption of IEC 61010-2-034, Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use – Part 2-034: Particular Requirements for Measurement Equipment for Insulation Resistance and Test Equipment for Electric Strength (second edition issued July 2023) as a new IEC-based UL standard, UL 61010-2-034, with US National Differences.

The requirements are substantially in accordance with Proposal(s) on this subject dated August 6, 2024.

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OCTOBER 17, 2024

ANSI/UL 61010-2-034-2024

UL 61010-2-034

Standard for Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use – Part 2-034: Particular Requirements for Measurement Equipment for Insulation Resistance and Test Equipment for Electric Strength

First Edition – January, 2020

Second Edition

October 17, 2024

This ANSI/UL Standard for Safety consists of the Second Edition.

The most recent designation of ANSI/UL 61010-2-034 as an American National Standard (ANSI) occurred on October 17, 2024. ANSI approval for a standard does not include the Cover Page, Transmittal Pages, and Title Page. The National Difference Page and IEC Foreword are also excluded from the ANSI approval of IEC-based standards.

Comments or proposals for revisions on any part of the Standard may be submitted to ULSE at any time. Proposals should be submitted via a Proposal Request in the Collaborative Standards Development System (CSDS) at https://csds.ul.com.

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Preface (UL)

This UL Standard is based on IEC Publication 61010-2-034: second edition, Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 2-034: Particular requirements for measurement equipment for insulation resistance and test equipment for electric strength. IEC publication 61010-2-034 is copyrighted by the IEC.

This edition has been issued to satisfy ULSE Standards policy.

This UL Standard 61010-2-034 Standard for Safety for Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use – Part 2-034: Particular Requirements for Measurement Equipment for Insulation Resistance and Test Equipment for Electric Strength, is to be used in conjunction with the lastest edition of UL 61010-1. The requirements for measurement equipment for insulation resistance and test equipment for electric strength are contained in this Part 2 Standard and UL 61010-1.

Requirements of this Part 2 Standard, where stated, amend the requirements of UL 61010-1.

Where a particular subclause of UL 61010-1 is not mentioned in UL 61010-2-034, the UL 61010-1 subclause applies.

Note – Although the intended primary application of this Standard is stated in its Scope, it is important to note that it remains the responsibility of the users of the Standard to judge its suitability for their particular purpose.

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NATIONAL DIFFERENCES

National Differences from the text of International Electrotechnical Commission (IEC) Publication 61010-2-034, Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use – Part 2-034: Particular Requirements for Measurement Equipment for Insulation Resistance and Test Equipment for Electric Strength, copyright 2023, are indicated by notations (differences) and are presented in bold text.

There are five types of National Differences as noted below. The difference type is noted on the first line of the National Difference in the standard. The standard may not include all types of these National Differences.

DR – These are National Differences based on the **national regulatory requirements**.

D1 – These are National Differences which are based on **basic safety principles and requirements**, elimination of which would compromise safety for consumers and users of products.

D2 – These are National Differences from IEC requirements based on existing **safety practices**. These requirements reflect national safety practices, where empirical substantiation (for the IEC or national requirement) is not available or the text has not been included in the IEC standard.

DC – These are National Differences based on the **component standards** and will not be deleted until a particular component standard is harmonized with the IEC component standard.

DE – These are National Differences based on **editorial comments or corrections**.

Each national difference contains a description of what the national difference entails. Typically one of the following words is used to explain how the text of the national difference is to be applied to the base IEC text:

Addition / Add - An addition entails adding a complete new numbered clause, subclause, table, figure, or annex. Addition is not meant to include adding select words to the base IEC text.

Modification / Modify - A modification is an altering of the existing base IEC text such as the addition, replacement or deletion of certain words or the replacement of an entire clause, subclause, table, figure, or annex of the base IEC text.

Deletion / Delete - A deletion entails complete deletion of an entire numbered clause, subclause, table, figure, or annex without any replacement text.

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FOREWORD

INTERNATIONAL ELECTROTECHNICAL COMMISSION

SAFETY REQUIREMENTS FOR ELECTRICAL EQUIPMENT FOR MEASUREMENT, CONTROL, AND LABORATORY USE – Part 2-034: Particular requirements for measurement equipment for insulation resistance and test equipment for electric strength

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.

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IEC 61010-2-034 has been prepared by IEC technical committee 66: Safety of measuring, control and laboratory equipment. It is an International Standard.

It has the status of a group safety publication in accordance with IEC Guide 104.

This second edition cancels and replaces the first edition published in 2017. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition: