



UL 61496-1

STANDARD FOR SAFETY

Safety of Machinery – Electro-Sensitive Protective Equipment – Part 1: General Requirements and Tests

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UL Standard for Safety of Machinery – Electro-Sensitive Protective Equipment – Part 1: General Requirements and Tests, UL 61496-1

Third Edition, Dated February 9, 2021

Summary of Topics

This new edition of ANSI/UL 61496-1 is an adoption of IEC 61496-1, Safety of Machinery – Electro-Sensitive Protective Equipment – Part 1: General Requirements and Tests (third edition issued April 2012) as an IEC-based UL standard, with US National Differences.

The new requirements are substantially in accordance with Proposal(s) on this subject dated July 3, 2020.

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UL 61496-1

Standard for Safety of Machinery – Electro-Sensitive Protective Equipment –

Part 1: General Requirements and Tests

First Edition – January, 2002

Third Edition

February 9, 2021

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

The most recent designation of ANSI/UL 61496-1 as an American National Standard (ANSI) occurred on February 9, 2021. ANSI approval for a standard does not include the Cover Page, Transmittal Pages, Title Page, or Preface. 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 UL at any time. Proposals should be submitted via a Proposal Request in UL's On-Line Collaborative Standards Development System (CSDS) at <https://csds.ul.com>.

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Preface (UL)

This UL standard is based on IEC Publication 61496-1: Third Edition, Safety of Machinery – Electro-Sensitive Protective Equipment – Part 1: General Requirements and Tests. IEC Publication 61496-1 is copyrighted by the IEC.

Efforts have been made to synchronize the UL edition number with that of the corresponding IEC standard with which this standard is harmonized. As a result, one or more UL edition numbers have been skipped to match that of the IEC edition number.

This is the UL Standard for Safety for Electro-Sensitive Protective Equipment – Part 1: General Requirements and Tests. This UL Part 1 is to be used in conjunction with the appropriate UL Part 2, which contains clauses to supplement or modify the corresponding clauses in Part 1, to provide relevant requirements for each type of product.

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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 61496-1, Safety of machinery – Electro-sensitive protective equipment – Part 1: General requirements and tests, copyright 2012 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:

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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 OF MACHINERY – ELECTRO-SENSITIVE PROTECTIVE EQUIPMENT – Part 1: General requirements and tests

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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International Standard IEC 61496-1 has been prepared by IEC technical committee 44: Safety of machinery – Electrotechnical aspects.

This third edition cancels and replaces the second edition published in 2004 and its amendment 1 (2007). The document 44/615/CDV, circulated to the National Committees as amendment 2, led to the publication of this new edition.

The main changes with respect to the previous edition are as follows: The design, test and verification requirements have been updated to make them consistent with the latest standards for functional safety and EMC.

The text of this standard is based on the following documents: