

**ELEKTROMAGNETILINE ÜHILDUVUS (EMÜ). OSA 4-11:
KATSE- JA MÕÕTETEHNIKAD. PINGLOHKUDE,
LÜHIAJALISTE KATKESTUSTE JA PINGEMUUTUSTE
TALUVUSE KATSED**

**Electromagnetic compatibility (EMC) - Part 4-11:
Testing and measurement techniques - Voltage dips,
short interruptions and voltage variations immunity
tests
(IEC 61000-4-11:2004 + IEC 61000-4-
11:2004/A1:2017)**

EESTI STANDARDI EESSÕNA**NATIONAL FOREWORD**

See Eesti standard EVS-EN 61000-4-11:2004 +A1:2017 sisaldab Euroopa standardi EN 61000-4-11:2004 ingliskeelset teksti ja selle muudatuse A1:2017 ingliskeelset teksti.	This Estonian standard EVS-EN 61000-4-11:2004 +A1:2017 consists of the English text of the European standard EN 61000-4-11:2004 and its amendment A1:2017.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas. Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 03.08.2004, muudatus A1 04.08.2017.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation. Date of Availability of the European standard is 03.08.2004, for A1 04.08.2017.
Sellesse standardisse on muudatus A1 sisse viidud ja tehtud muudatused tähistatud topeltpüst-kriipsuga lehe välisveerisel. Selles standardis on rahvusvahelise standardi ühismuudatused tähistatud püstkriipsuga teksti välimisel veerisel. Standard on kättesaadav Eesti Standardikeskusest.	The amendment A1 has been incorporated into this standard and changes have been marked by a double vertical line on the outer row of the page. Common modifications has been incorporated into this international standard and changes have been marked by a vertical line on the outer row of the page. The standard is available from the Estonian Centre for Standardisation.

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ICS 33.100.20

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English Version

**Electromagnetic compatibility (EMC) - Part 4-11: Testing and
measurement techniques - Voltage dips, short interruptions and
voltage variations immunity tests
(IEC 61000-4-11:2004 + IEC 61000-4-11:2004/A1:2017)**

Compatibilité électromagnétique (CEM) - Partie 4-11:
Techniques d'essai et de mesure - Essais d'immunité aux
creux de tension, coupures brèves et variations de tension
(IEC 61000-4-11:2004 + IEC 61000-4-11:2004/A1:2017)

Elektromagnetische Verträglichkeit (EMV) - Teil 4-11: Prüf-
und Messverfahren - Prüfungen der Störfestigkeit gegen
Spannungseinbrüche, Kurzzeitunterbrechungen und
Spannungsschwankungen
(IEC 61000-4-11:2004 + IEC 61000-4-11:2004/A1:2017)

This European Standard was approved by CENELEC on 2004-06-01. Amendment A1 was approved by CENELEC on 2017-06-22. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Foreword

The text of document 77A/452/FDIS, future edition 2 of IEC 61000-4-11, prepared by SC 77A, Low frequency phenomena, of IEC TC 77, Electromagnetic compatibility, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61000-4-11 on 2004-06-01.

This European Standard replaces EN 61000-4-11:1994 + A1:2001.

It constitutes a technical revision in which

- 1) preferred test values and durations have been added for the different environment classes;
- 2) the tests for the three-phase systems have been specified.

The following dates were fixed:

- | | | |
|--|-------|------------|
| – latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement | (dop) | 2005-03-01 |
| – latest date by which the national standards conflicting with the EN have to be withdrawn | (dow) | 2007-06-01 |

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61000-4-11:2004 was approved by CENELEC as a European Standard without any modification.

EN 61000-4-11:2004/A1:2017 European foreword

The text of document 77A/951/FDIS, future IEC 61000-4-11:2004/A1, prepared by SC 77A, "EMC -Low-frequency phenomena", of IEC TC 77, "Electromagnetic compatibility" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61000-4-11:2004/A1:2017.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2018-03-22
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2020-06-22

This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association.

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Endorsement notice

The text of the International Standard IEC 61000-4-11:2004/A1:2017 was approved by CENELEC as a European Standard without any modification.

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

ELECTROMAGNETIC COMPATIBILITY (EMC) –

**Part 4-11: Testing and measurement techniques –
Voltage dips, short interruptions and
voltage variations immunity tests**

FOREWORD

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International Standard IEC 61000-4-11 has been prepared by subcommittee 77A: Low frequency phenomena, of IEC technical committee 77: Electromagnetic compatibility.

This second edition cancels and replaces the first edition published in 1994 and its amendment 1 (2000). This second edition constitutes a technical revision in which

- 1) preferred test values and durations have been added for the different environment classes;
- 2) the tests for the three-phase systems have been specified.

It forms part 4-11 of IEC 61000. It has the status of a Basic EMC Publication in accordance with IEC Guide 107.

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

FDIS	Report on voting
77A/452/FDIS	77A/455/RVD

Full information on the voting for the approval of this standard can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The committee has decided that the contents of this publication will remain unchanged until 2008. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

The contents of the interpretation sheet 1 of August 2010 have been included in this copy.

IEC 61000-4-11:2004/A1:2017 FOREWORD

This amendment has been prepared by subcommittee 77A: EMC – Low frequency phenomena, of IEC technical committee 77: Electromagnetic compatibility.

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

FDIS	Report on voting
77A/951/FDIS	77A/961/RVD

Full information on the voting for the approval of this amendment can be found in the report on voting indicated in the above table.

The committee has decided that the contents of this amendment and the base publication will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

INTRODUCTION

IEC 61000 is published in separate parts according to the following structure:

Part 1: General

General considerations (introduction, fundamental principles)

Definitions, terminology

Part 2: Environment

Description of the environment

Classification of the environment

Compatibility levels

Part 3: Limits

Emission limits

Immunity limits (in so far as they do not fall under the responsibility of the product committees)

Part 4: Testing and measurement techniques

Measurement techniques

Testing techniques

Part 5: Installation and mitigation guidelines

Installation guidelines

Mitigation methods and devices

Part 6: Generic standards

Part 9: Miscellaneous

Each part is further subdivided into several parts, published either as International Standards or as technical specifications or technical reports, some of which have already been published as sections. Others will be published with the part number followed by a dash and a second number identifying the subdivision (example: 61000-6-1).

ELECTROMAGNETIC COMPATIBILITY (EMC) –

Part 4-11: Testing and measurement techniques – Voltage dips, short interruptions and voltage variations immunity tests

1 Scope

This part of IEC 61000 defines the immunity test methods and range of preferred test levels for electrical and electronic equipment connected to low-voltage power supply networks for voltage dips, short interruptions, and voltage variations.

This standard applies to electrical and electronic equipment having a rated input current not exceeding 16 A per phase, for connection to 50 Hz or 60 Hz a.c. networks.

It does not apply to electrical and electronic equipment for connection to 400 Hz a.c. networks. Tests for these networks will be covered by future IEC standards.

The object of this standard is to establish a common reference for evaluating the immunity of electrical and electronic equipment when subjected to voltage dips, short interruptions and voltage variations.

NOTE Voltage fluctuation immunity tests are covered by IEC 61000-4-14.

The test method documented in this part of IEC 61000 describes a consistent method to assess the immunity of equipment or a system against a defined phenomenon. As described in IEC Guide 107, this is a basic EMC publication for use by product committees of the IEC. As also stated in Guide 107, the IEC product committees are responsible for determining whether this immunity test standard should be applied or not, and, if applied, they are responsible for defining the appropriate test levels. Technical committee 77 and its sub-committees are prepared to co-operate with product committees in the evaluation of the value of particular immunity tests for their products.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 61000-2-8, *Electromagnetic compatibility (EMC) – Part 2-8: Environment – Voltage dips and short interruptions on public electric power supply systems with statistical measurement results*

3 Terms and definitions

For the purpose of this document, the following terms and definitions apply: