

## IEC STANDARDPAGED

IEC standard voltages

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-IEC 60038:2010 "IEC standardpinged" sisaldab rahvusvahelise standardi IEC 60038:2009 "IEC standard voltages" identset ingliskeelset teksti.</p>	<p>This Estonian Standard EVS-IEC 60038:2010 consists of the identical English text of the International Standard IEC 60038:2009 "IEC standard voltages".</p>
<p>Standard EVS-IEC 60038:2010 on kinnitatud Eesti Standardikeskuse 17.12.2010 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.</p>	<p>This standard is ratified with the order of Estonian Centre for Standardisation dated 17.12.2010 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.</p>
<p>Standard on kättesaadav Eesti Standardikeskusest.</p>	<p>The standard is available from Estonian Centre for Standardisation.</p>

## Käsitlusala

Käesolev standard kehtib:

- vahelduvvoolu edastus-, jaotus- ja tarbijavõrkudele ning nendes võrkudes kasutamiseks mõeldud elektriseadmetele standardsagedustel 50 Hz ja 60 Hz nimipingega üle 100 V;
- vahelduv- ja alalisvoolu-elekterveovõrkudele;
- vahelduv- ja alalisvooluseadmetele nimi-vahelduvpingega alla 120 V või nimi-alalispingega alla 750 V, kusjuures vahelduvpinge on ette nähtud rakendamiseks eeskätt sagedustel 50 Hz ja 60 Hz. Selliste seadmete hulka kuuluvad galvaanielementide ja akumulaatorite patareid, muud vahelduv- või alalisvoolu toiteallikad, elektriseadmed (kaasa arvatud tööstus- ja sideseadmed) ja elektritarvitid.

See standard ei kehti signaale või mõõteväärtusi esitavatele või neid edastavatele pingetele.

See standard ei kehti elektriseadmete sees või elektriseadmetiku üksikelementides kasutatavate komponentide ja üksikosade standardpingetele.

See standard määratleb nende standardpingete väärtused, mis on ette nähtud

- elektrivarustussüsteemide nimipingete eelisväärtusteks ja
- seadmetiku ja võrgu projekteerimise normväärtusteks.

MÄRKUS 1 Kaks peamist põhjust, mis peavad juhtima selles standardis määratletud väärtusteni, on:

Selles standardis määratletud nimipingete (või seadme suurimate kestevpingete) väärtused põhinevad peamiselt elektrivarustussüsteemide ajaloolisel arengul kogu maailmas, kuna need väärtused on osutunud enimlevinuteks ja on leidnud ülemaailmse tunnustuse;

Selles standardis mainitud pingepiirkonnad on leidnud tunnustamist kõige sobivama alusena elektriseadmete ja -süsteemide projekteerimisel.

MÄRKUS 2 Sellele vaatamata jääb sobivate katseväärtuste, katsetingimuste ja heakskiidu kriteeriumite määramine süsteemi ja tootestandardite ülesandeks.

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**ICS 29.020** Elektrotehnika üldküsimused

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## IEC STANDARD VOLTAGES

## FOREWORD

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International Standard IEC 60038 has been prepared by IEC technical committee 8: System aspects for electrical energy supply.

This seventh edition supersedes the sixth edition (1993), its Amendment 1 (1994) and its Amendment 2 (1997). It constitutes a technical revision. The significant technical changes are:

- a clarification of the scope;
- the addition of the values of 230 V (50 Hz) and 230/400 V (60 Hz) to Table 1;
- the update of Table 1 to take into account the end of the transition period for the values of 230/400 V and 400/690 V;
- the replacement of the utilization voltage range at LV by a reference to the relevant standard and an informative annex;
- the addition of the value of 30 kV to Table 3;
- the replacement of the value of 1 050 kV by 1 100 kV in Table 5.

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

FDIS	Report on voting
8/1260/FDIS	8/1264/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.

It has the status of a horizontal standard in accordance with IEC Guide 108.

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 the maintenance result date indicated on the IEC web site 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.

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## IEC STANDARD VOLTAGES

### 1 Scope

This publication applies to

- a.c. transmission, distribution and utilization systems and equipment for use in such systems with standard frequencies 50 Hz and 60 Hz having a nominal voltage above 100 V;
- a.c. and d.c. traction systems;
- a.c. and d.c. equipment having nominal voltages below 120 V a.c. or below 750 V d.c., the a.c. voltages being intended (but not exclusively) for 50 Hz and 60 Hz applications; such equipment covers batteries (from primary or secondary cells), other power supply devices (a.c. or d.c.), electrical equipment (including industrial and communication), and appliances.

This publication does not apply to voltages representing or transmitting signals or measured values.

This publication does not apply to standard voltages of components and parts used within electrical devices or items of equipment.

This publication specifies standard voltage values which are intended to serve

- as preferential values for the nominal voltage of electrical supply systems, and
- as reference values for equipment and system design.

NOTE 1 Two main reasons have led to the values specified in this standard:

The values of nominal voltage (or highest voltage for equipment) specified in this standard are mainly based on the historical development of electrical supply systems throughout the world, since these values turned out to be the most common ones, and have achieved worldwide recognition;

The voltage ranges mentioned in this standard have been recognized to be the most appropriate ones as a basis for design and testing of electrical equipment and systems.

NOTE 2 It is nevertheless the task of system and product standards to define appropriate testing values, testing conditions and acceptance criteria.

### 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 60364-5-52: *Electrical installations of buildings – Part 5-52: Selection and erection of electrical equipment – Wiring systems*

### 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

For alternating voltages, the voltages stated below are r.m.s. values.