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Standardspänningar för överföring och distribution av elenergi

CENELEC standard voltages

Som svensk standard gäller europastandarden EN 60038:2011. Den svenska standarden innehåller den officiella engelska språkversionen av EN 60038:2011.

Nationellt förord

Europastandarden EN 60038:2011

består av:

- **europastandardens ikraftsättningsdokument**, utarbetat inom CENELEC
- **IEC 60038, Seventh edition, 2009 - IEC standard voltages**

utarbetad inom International Electrotechnical Commission, IEC.

Där texten i europastandarden avviker från texten i motsvarande avsnitt i IEC 60038 har detta markerats med ett lodrätt streck i marginalen.

Tidigare fastställd svensk standard SS 421 05 01, utgåva 3, 2002, gäller ej fr o m 2014-09-05.

Standarder underlättar utvecklingen och höjer elsäkerheten

Det finns många fördelar med att ha gemensamma tekniska regler för bl a säkerhet, prestanda, dokumentation, utförande och skötsel av elprodukter, elanläggningar och metoder. Genom att utforma sådana standarder blir säkerhetskraven tydliga och utvecklingskostnaderna rimliga samtidigt som marknadens acceptans för produkten eller tjänsten ökar.

Många standarder inom elområdet beskriver tekniska lösningar och metoder som åstadkommer den elsäkerhet som föreskrivs av svenska myndigheter och av EU.

SEK är Sveriges röst i standardiseringsarbetet inom elområdet

SEK Svensk Elstandard svarar för standardiseringen inom elområdet i Sverige och samordnar svensk medverkan i internationell och europeisk standardisering. SEK är en ideell organisation med frivilligt deltagande från svenska myndigheter, företag och organisationer som vill medverka till och påverka utformningen av tekniska regler inom elektrotekniken.

SEK samordnar svenska intressenters medverkan i SEKs tekniska kommittéer och stödjer svenska experters medverkan i internationella och europeiska projekt.

Stora delar av arbetet sker internationellt

Utformningen av standarder sker i allt väsentligt i internationellt och europeiskt samarbete. SEK är svensk nationalkommitté av International Electrotechnical Commission (IEC) och Comité Européen de Normalisation Electrotechnique (CENELEC).

Standardiseringsarbetet inom SEK är organiserat i referensgrupper bestående av ett antal tekniska kommittéer som speglar hur arbetet inom IEC och CENELEC är organiserat.

Arbetet i de tekniska kommittéerna är öppet för alla svenska organisationer, företag, institutioner, myndigheter och statliga verk. Den årliga avgiften för deltagandet och intäkter från försäljning finansierar SEKs standardiseringsverksamhet och medlemsavgift till IEC och CENELEC.

Var med och påverka!

Den som deltar i SEKs tekniska kommittéarbete har möjlighet att påverka framtida standarder och får tidig tillgång till information och dokumentation om utvecklingen inom sitt teknikområde. Arbetet och kontakterna med kollegor, kunder och konkurrenter kan gynnsamt påverka enskilda företags affärsutveckling och bidrar till deltagarnas egen kompetensutveckling.

Du som vill dra nytta av dessa möjligheter är välkommen att kontakta SEKs kansli för mer information.

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English version

CENELEC standard voltages
(IEC 60038:2009, modified)

Tensions normales du CENELEC
(CEI 60038:2009, modifiée)

CENELEC-Normspannungen
(IEC 60038:2009, modifiziert)

This European Standard was approved by CENELEC on 2011-09-05. 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.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

CENELEC

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

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Foreword

This document (EN 60038:2011) consists of the text of IEC 60038:2009 prepared by IEC/TC 8, "Systems aspects for electrical energy supply", together with the common modifications prepared by CLC Technical Body 8X, "System aspects of electrical energy supply".

The following dates are 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) 2012-09-05
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2014-09-05

This European Standard supersedes HD 472 S1:1989 + corrigendum February 2002 + A1:1995.

In this standard, the common modifications to the International Standard are indicated by a vertical line in the left margin of the text.

The main common modifications to IEC 60038:2009 are the following.

- All references to 60 Hz are removed in the European Standard (reason: 60 Hz is not used in Europe for a.c. electric systems).
- The "in some countries" notes related to non-CENELEC countries are removed.
- The value of 100 kV as highest voltage for equipment corresponding to the value of 90 kV as nominal system voltage is added to Table 4 (reason: this value already exists in EN 62271-1 and is widely used in French transmission systems).
- Sentences containing recommendations are generally put in notes.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN and CENELEC shall not be held responsible for identifying any or all such patent rights.

CENELEC STANDARD VOLTAGES

1 Scope

This publication applies to

- a.c. transmission, distribution and utilization systems and equipment for use in such systems with a standard frequency of 50 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 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.

NOTE Z1 Only standard frequency 50 Hz is used in Europe for public a.c. transmission and distribution systems. For systems and equipment at 60 Hz, see IEC 60038.

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.

HD 60364-5-52, Low voltage *electrical installations – Part 5-52: Selection and erection of electrical equipment – Wiring systems* (IEC 60364-5-52)