SVENSK STANDARD SS-EN IEC 62368-3

Fastställd	Utgåva	Sida	Ansvarig kommitté
2020-05-13	1	1 (1+27)	SEK TK 108

IT- och multimedia-utrustning – Del 3: Säkerhetsaspekter på likströmsöverföring genom kommunikationskablar och kommunikationsportar

Audio/video, information and communication technology equipment – Part 3: Safety aspects for DC power transfer through communication cables and ports

Som svensk standard gäller europastandarden EN IEC 62368-3:2020. Den svenska standarden innehåller den officiella engelska språkversionen av EN IEC 62368-3:2020.

Nationellt förord

Europastandarden EN IEC 62368-3:2020

består av:

– **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC
– **IEC 62368-3, First edition, 2017 - Audio/video, information and communication technology equipment - Part 3: Safety aspects for DC power transfer through communication cables and ports**

utarbetad inom International Electrotechnical Commission, IEC.

Standarden ska användas tillsammans med SS-EN 62368-1.

Tidigare fastställd svensk standard SS-EN 60950-21, utgåva 1, 2003, gäller ej fr o m 2020-12-20.

ICS 33.160.01; 35.020.00

Denna standard är fastställd av SEK Svensk Elstandard,
som också kan lämna upplysningar om **sakinnehållet** i standarden.
Postadress: Box 1284, 164 29 KISTA
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Standarder underlättar utvecklingen och höjer elsäkerheten

Det finns många fördelar med att ha gemensamma tekniska regler för bl a mätning, säkerhet och provning och för utförande, skötsel och dokumentation av elprodukter och elanläggningar.

Genom att utforma sådana standarder blir säkerhetsfordringar 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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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 62368-3

March 2020

ICS 33.160.01; 35.020

Supersedes EN 60950-21:2003 and all of its amendments and corrigenda (if any)

English Version

Audio/video, information and communication technology equipment - Part 3: Safety aspects for DC power transfer through communication cables and ports (IEC 62368-3:2017)

Équipements des technologies de l'audio/vidéo, de l'information et de la communication - Partie 3: Aspects liés à la sécurité relatifs au transfert de puissance en courant continu au moyen de câbles et d'accès de communication (IEC 62368-3:2017)

Einrichtungen für Audio/Video, Informations- und Kommunikationstechnik - Sicherheit - Teil 3: Gleichstrom-Leistungsübertragung über Kommunikationskabel der Informationstechnik (IEC 62368-3:2017)

This European Standard was approved by CENELEC on 2018-01-11. 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, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Ref. No. EN IEC 62368-3:2020 E

SEK Svensk Elstandard SS-EN IEC 62368-3, utg 1:2020

European foreword

The text of document 108/695/FDIS, future edition 1 of IEC 62368-3, prepared by IEC/TC 108 "Safety of electronic equipment within the field of audio/video, information technology and communication technology" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 62368-3:2020.

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) 2020-09-27
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2020-12-20

This document supersedes EN 60950-21:2003 and all of its amendments and corrigenda (if any).

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

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 62368-3:2017 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated:

IEC 62949:2017 NOTE Harmonized as EN 62949:2017 (not modified)

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

Publication	Year	Title	EN/HD	Year
IEC 62368-1 (mod)	2014	Audio/video, information and communication technology equipment - Part 1: Safety requirements	EN 62368-1	2014
-	-		+ AC	2015
-	-		+ A11	2017
-	-		EN 62368-1:2014/ AC:2017-03	
IEC Guide 104	-	The preparation of safety publications and the use of basic safety publications and group safety publications	-	-
ISO/IEC Guide 51	-	Safety aspects - Guidelines for their inclusion in standards	-	-

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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AUDIO/VIDEO, INFORMATION AND COMMUNICATION TECHNOLOGY EQUIPMENT –

Part 3: Safety aspects for DC power transfer through communication cables and ports

FOREWORD

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 62368-3 has been prepared by IEC technical committee 108: Safety of electronic equipment within the field of audio/video, information technology and communication technology.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
108/695/FDIS	108/696/RVD

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

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

This International Standard is to be used in conjunction with IEC 62368-1:2014.

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

The subclauses of IEC 62368-1 apply as far as reasonable. Where safety aspects are similar to those of IEC 62368-1, the relevant clause or subclause of IEC 62368-1 is given for reference in a note in the relevant subclause. Where a requirement in IEC 62368-3 refers to a requirement or criterion of IEC 62368-1, a specific reference to IEC 62368-1 is made.

In this standard, the following print types are used:

– requirements proper and normative annexes: in roman type;
– *compliance statements and test specifications: in italic type;*
– notes and other informative matter: in smaller roman type;
– normative conditions within tables: in smaller roman type;
– terms that are defined in Clause 3 and in IEC 62368-1:2014: in **bold type**.

The following differing practices of a less permanent nature exist in the countries indicated below.

– 6.1: other requirements apply regarding power transfer using RFT (US);
– 6.3.3.1: regarding separation from other circuits and parts, see note in 4.1.15 of IEC 62368-1:2014 (Norway);
– A.1: RFT-V systems and requirements (North America).

A list of all parts in the IEC 62368 series, published under the general title *Audio/video, information and communication technology equipment,* can be found on the IEC website.

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

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

AUDIO/VIDEO, INFORMATION AND COMMUNICATION TECHNOLOGY EQUIPMENT –

Part 3: Safety aspects for DC power transfer through communication cables and ports

1 Scope

This part of IEC 62368 applies to equipment intended to supply and receive operating power through communication cables or ports**.** It covers particular requirements for circuits that are designed to transfer DC power from a **power sourcing equipment (PSE)** to a **powered device (PD)**.

The power transfer uses voltages at ES1 or ES2 or in very specific cases voltage levels at ES3.

NOTE 1 ES1 can generally be assumed to have similar limits as non-hazardous voltage definitions used in other standards (for example, SELV, PELV).

NOTE 2 ES2 can generally be assumed to have similar limits for **single fault conditions** as non-hazardous voltage definitions used in other standards.

NOTE 3 PS2 circuits are generally expected to provide less than 100 W to an undefined load under both **normal operating conditions** and **single fault conditions**.

EXAMPLES

- For power transfer using voltages at ES1: USB, PoE, ISDN S0, etc.
- For power transfer using voltages at ES2: analogue telephone during ringing, ISDN U, etc.
- For power transfer using voltages at ES3: power feeding used by communications service providers and utilities communication circuits (for example, RFT circuits, such as line powered HDSLx, SHDSLx, VDSLx and G.fast).

NOTE 4 Any cable provided with a connector defined by an industry standard that permits DC power transfer between equipment is considered a communication cable even if communication does not take place. For example, a USB cable can be used just to recharge a portable device **battery**.

This group safety publication is primarily intended to be used as a product safety standard for the products mentioned in the scope, but shall also be used by technical committees in the preparation of standards for products similar to those mentioned in the scope of this standard, in accordance with the principles laid down in IEC Guide 104 and ISO/IEC Guide 51.

One of the responsibilities of a technical committee is, wherever applicable, to make use of basic safety publications and/or group safety publications in the preparation of its publications.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 62368-1:2014, *Audio/video, information and communication technology equipment – Part 1: Safety requirements*

IEC Guide 104, *The preparation of safety publications and the use of basic safety publications and group safety publications*

ISO/IEC Guide 51, *Safety aspects – Guidelines for their inclusion in standards*