SVENSK STANDARD SS-EN IEC 62853

Fastställd	Utgåva	Sida	Ansvarig kommitté
2018-11-14	1	1 (1+73)	SEK TK 56

Tillförlitlighet i öppna system

Open systems dependability

Som svensk standard gäller europastandarden EN IEC 62853:2018. Den svenska standarden innehåller den officiella engelska språkversionen av EN IEC 62853:2018.

Nationellt förord

Europastandarden EN IEC 62853:2018

består av:

– **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC
– **IEC 62853, First edition, 2018 - Open systems dependability**

utarbetad inom International Electrotechnical Commission, IEC.

EN från CENELEC som är identiska med motsvarande IEC-standarder och som görs tillgängliga för nationalkommittéerna efter den 1 januari 2018 får en beteckning som inleds med EN IEC istället för som tidigare bara EN.

ICS 03.100.40; 03.120.01; 21.020.00

Denna standard är fastställd av SEK Svensk Elstandard,
som också kan lämna upplysningar om **sakinnehållet** i standarden.
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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 62853

October 2018

ICS 03.100.40; 03.120.01; 21.020

English Version

Open systems dependability
(IEC 62853:2018)

Sûreté de fonctionnement des systèmes ouverts
(IEC 62853:2018)

Zuverlässigkeit offener Systeme
(IEC 62853:2018)

This European Standard was approved by CENELEC on 2018-07-18. 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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, 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 62853:2018 E

SEK Svensk Elstandard SS-EN IEC 62853, utg 1:2018

European foreword

The text of document 56/1772/FDIS, future edition 1 of IEC 62853, prepared by IEC/TC 56 "Dependability" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 62853:2018.

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)	2019-04-18
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2021-07-18

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.

Endorsement notice

The text of the International Standard IEC 62853:2018 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

ISO 22301:2012	NOTE Harmonized as EN ISO 22301:2014 (not modified)
ISO 9000:2015	NOTE Harmonized as EN ISO 9000:2015 (not modified)
IEC 62741	NOTE Harmonized as EN 62741

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 60050-192	-	International electrotechnical vocabulary Part 192: Dependability	--	-
IEC 60300-1	-	Dependability management - Part 1: Guidance for management and application	EN 60300-1	-
ISO/IEC/IEEE 15288	2015	Systems and software engineering –- System life cycle processes	--	-

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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OPEN SYSTEMS DEPENDABILITY

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 62853 has been prepared by IEC technical committee 56: Dependability.

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

FDIS	Report on voting
56/1772/FDIS	56/1776/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.

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.

IMPORTANT – The ‘colour inside’ logo on the cover page of this publication indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

INTRODUCTION

Open systems are systems whose boundaries, functions and structure change over time and which are recognized and described differently from various points of view. The dependability of open systems is a key attribute for the life cycle of a system that operates for an extended period of time in a real-world environment. Open systems dependability is the ability of open systems to accommodate changes in purpose, objectives, environment and actual performance and to continuously maintain accountability from stakeholders, in order to provide expected services as and when required. The attributes of dependability, including availability, reliability, maintainability and supportability, are the same for open systems as conventional systems but they have to be considered in the context that no single stakeholder has a full understanding of the system or its risks.

For open systems, security is especially important since the systems are much exposed to attack by malware. Since an open system changes continuously through its life, the design process, e.g. modelled by the spiral product development model, will to some extent continue during the whole lifetime of the system.

This document elaborates on IEC 60300-1 by providing additional guidance for dependability management of open systems.

This document provides guidance on open systems dependability by using the four process views, each of which selects and combines system life cycle processes, activities and tasks of ISO/IEC/IEEE 15288: 2015.

- Change Accommodation process view;
- Accountability Achievement process view;
- Failure Response process view;
- Consensus Building process view.

A dependability case that assures these process views is crucial for stakeholders to understand and agree on the boundaries of their responsibilities, to assign accountability for implementation and to duly manage changes in achieving open systems dependability.

The intended audience for this document ranges from users, owners and customers to organizations involved in and responsible for ensuring that open systems dependability requirements are being met. Organizations include all types and sizes of corporations, public and private institutions such as government agencies, business enterprises and non-profit associations.

OPEN SYSTEMS DEPENDABILITY

1 Scope

This document provides guidance in relation to a set of requirements placed upon system life cycles in order for an open system to achieve open systems dependability.

This document elaborates on IEC 60300-1 by providing details of the changes needed to accommodate the characteristics of open systems. It defines process views based on ISO/IEC/IEEE 15288:2015, which identifies the set of system life cycle processes.

This document is applicable to life cycles of products, systems, processes or services involving hardware, software and human aspects or any integrated combinations of these elements.

For open systems, security is especially important since the systems are particularly exposed to attack.

This document can be used to improve the dependability of open systems and to provide assurance that the process views specific to open systems achieve their expected outcomes. It helps an organization define the activities and tasks that need to be undertaken to achieve dependability objectives in an open system, including dependability related communication, dependability assessment and evaluation of dependability throughout system life cycles.

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 60050-192, *International Electrotechnical Vocabulary – Part 192: Dependability* (available at http://www.electropedia.org/)

IEC 60300-1, *Dependability management – Part 1: Guidance for management and application*

ISO/IEC/IEEE 15288:2015, *Systems and software engineering – System life cycle processes*