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## Ledning av tillförlitlighet – Del 1: Ledning av tillförlitlighetsprogram

*Dependability management –  
Part 1: Dependability management systems*

Som svensk standard gäller europastandarden EN 60300-1:2003. Den svenska standarden innehåller den officiella engelska språkversionen av EN 60300-1:2003.

### Nationellt förord

Europastandarden EN 60300-1:2003<sup>\*)</sup>

består av:

- **europastandardens ikraftsättningsdokument**, utarbetat inom CENELEC
- **IEC 60300-1, Second edition, 2003 - Dependability management - Part 1: Dependability management systems**

utarbetad inom International Electrotechnical Commission, IEC.

Tidigare fastställd svensk standard SS-EN 60300-1, utgåva 1,1994, gäller ej fr o m 2006-09-01.

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<sup>\*)</sup> EN 60300-1:2003 ikraftsattes 2003-11-17 som SS-EN 60300-1 genom offentliggörande, d v s utan utgivning av något svenskt dokument.

### *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.

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

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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.

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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

**EN 60300-1**

NORME EUROPÉENNE

EUROPÄISCHE NORM

September 2003

ICS 03.100.40; 03.120.01; 21.020

Supersedes EN 60300-1:1993

English version

**Dependability management**  
**Part 1: Dependability management systems**  
(IEC 60300-1:2003)

Gestion de la sûreté de fonctionnement  
Partie 1: Gestion du programme  
de sûreté de fonctionnement  
(CEI 60300-1:2003)

Zuverlässigkeitsmanagement  
Teil 1: Zuverlässigkeits-  
managementsysteme  
(IEC 60300-1:2003)

This European Standard was approved by CENELEC on 2003-09-01. 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 Central Secretariat 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 Central Secretariat has the same status as the official versions.

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

**CENELEC**

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

**Central Secretariat: rue de Stassart 35, B - 1050 Brussels**

## Foreword

The text of document 56/856/FDIS, future edition 2 of IEC 60300-1, prepared by IEC TC 56, Dependability, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60300-1 on 2003-09-01.

This European Standard supersedes EN 60300-1:1993.

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) 2004-06-01
- latest date by which the national standards conflicting  
with the EN have to be withdrawn (dow) 2006-09-01

The main changes with respect to EN 60300-1:1993 are listed below:

- Dependability management system seen as part of the organization's overall management system.
- Structural and terminological alignment with EN ISO 9000:2000 standards.
- Focus on systems.

Annexes designated "normative" are part of the body of the standard.

Annexes designated "informative" are given for information only.

In this standard, annex ZA is normative and annexes A and B are informative.

Annex ZA has been added by CENELEC.

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## Endorsement notice

The text of the International Standard IEC 60300-1:2003 was approved by CENELEC as a European Standard without any modification.

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## Annex ZA (normative)

### Normative references to international publications with their corresponding European publications

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies (including amendments).

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60300-2	- <sup>1)</sup>	Dependability management Part 2: Guidance for dependability management	EN 60300-2	- <sup>1)</sup>
ISO 9000	2000	Quality management systems Fundamentals and vocabulary	EN ISO 9000	2000
ISO 9001	2000	Quality management systems - Requirements	EN ISO 9001	2000
ISO 9004	2000	Quality management systems Guidelines for performance improvements	EN ISO 9004	2000

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<sup>1)</sup> At draft stage.

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## INTRODUCTION

Dependability is a key decision factor in today's global business environment. Dependability affects product costs and processes. It is an inherent product design property influencing product performance. A dependable product is achieved through the implementation of dependability disciplines in the early concept and design phases of the product life cycle to provide cost-effective product operations. Like other technical and engineering disciplines, dependability needs to be managed in order to deliver high-value products to customers. In the broadest sense, dependability reflects user confidence in fitness for use by attaining satisfaction in product performance capability, delivering service availability upon demand, and minimizing the costs associated with the acquisition and ownership throughout the life cycle.

Dependability is the collective term describing the availability performance of any simple to complex product. The factors influencing the availability performance of a product are the reliability and maintainability design characteristics and the maintenance support performance. Annex A provides the dependability relationships. In many products, reliability, maintainability, and availability rank amongst the dominant performance characteristics of importance to the customers seeking cost-effective operation. Reliability and maintainability are performance characteristics inherent in the product design. Maintenance support is external to the product, and will affect its dependability. Maintenance support performance reflects the ability of the maintenance organization to provide the necessary resources to sustain a level of maintenance support effort to achieve system availability performance objectives.

This part of IEC 60300 provides general guidelines in establishing a dependability management system to meet most organization or project needs. The structure of the referenced dependability standards follows a "tool-box" concept. The recommendations are non-prescriptive to facilitate tailoring and effective implementation of dependability disciplines in management. The top-level dependability management standard IEC 60300-1 is supported by IEC 60300-2 providing references to application guidelines and methods. This "tool-box" concept helps standards users locate specific dependability application guidelines and relevant methods to accomplish their respective project objectives.

This standard encourages innovation and flexibility in management and design for product optimization with known constraints and technology limitations. It is aligned with ISO 9001:2000 and ISO 9004:2000 Quality Management Systems (QMS) structure to facilitate incorporation of dependability activities in the overall management system. Dependability activities complement QMS processes to achieve the desired levels of reliability, maintainability, and maintenance support performance of products. The alignment of IEC 60300-1 to ISO 9001:2000 and ISO 9004:2000 is necessary to link specific dependability recommendations to relevant QMS processes. The major clauses in IEC 60300-1 are cross-referencing ISO 9001:2000 and ISO 9004:2000 although some clause headings may not be exactly the same. They address similar quality topics from a dependability perspective.

## DEPENDABILITY MANAGEMENT –

### Part 1: Dependability management systems

#### 1 Scope and object

This part of IEC 60300 describes the concepts and principles of dependability management systems. It identifies the generic processes in dependability for planning, resource allocation, control, and tailoring necessary to meet dependability objectives.

This standard deals with the dependability performance issues in the product life-cycle phases concerning planning, design, measurements, analysis and improvement. Dependability includes availability performance and its influencing factors: reliability performance, maintainability performance, and maintenance support performance.

The object of this standard is to facilitate co-operation by all parties concerned (supplier, organization and customer) and foster understanding of the dependability needs and value to achieve the overall dependability objectives.

#### 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 60300-2, *Dependability management – Part 2: Guidelines for dependability programme management*<sup>1</sup>

ISO 9000:2000, *Quality management systems – Fundamentals and vocabulary*

ISO 9001:2000, *Quality management systems – Requirements*

ISO 9004:2000, *Quality management systems – Guidelines for performance improvements*

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<sup>1</sup> Second edition to be published.