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**Upravljanje zagotovljivosti - 3-4. del: Vodilo za uporabo - Vodilo za specifikacijo  
zahtev za zagotovljivost (IEC 60300-3-4:2007)**

Dependability management -- Part 3-4: Application guide - Guide to the specification of  
dependability requirements

Zuverlässigkeitsmanagement -- Teil 3-4: Anwendungsleitfaden - Anleitung zum  
Festlegen von Zuverlässigkeitsforderungen

Gestion de la sûreté de fonctionnement -- Partie 3-4: Guide d'application - Spécification  
d'exigences de sûreté de fonctionnement

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67dce313d504/sist-en-60300-3-4-2008](https://standards.iteh.ai/catalog/standards/sist/cad3b77b-efb4-41b7-80ed-67dce313d504/sist-en-60300-3-4-2008)

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**ICS:**

03.120.01	Kakovost na splošno	Quality in general
21.020	Značilnosti in načrtovanje strojev, aparatov, opreme	Characteristics and design of machines, apparatus, equipment

**SIST EN 60300-3-4:2008****en,fr**

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EUROPEAN STANDARD

**EN 60300-3-4**

NORME EUROPÉENNE

EUROPÄISCHE NORM

January 2008

ICS 03.100.40; 03.120.01

English version

**Dependability management -  
Part 3-4: Application guide -  
Guide to the specification of dependability requirements  
(IEC 60300-3-4:2007)**

Gestion de la sûreté de fonctionnement -  
Partie 3-4: Guide d'application -  
Spécification d'exigences de sûreté  
de fonctionnement  
(CEI 60300-3-4:2007)

Zuverlässigkeitsmanagement -  
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Anleitung zum Festlegen von  
Zuverlässigkeitsforderungen  
(IEC 60300-3-4:2007)

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This European Standard was approved by CENELEC on 2007-12-01. 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.

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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, Bulgaria, 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

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

## Foreword

The text of document 56/1212/FDIS, future edition 2 of IEC 60300-3-4, prepared by IEC TC 56, Dependability, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60300-3-4 on 2007-12-01.

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) 2008-09-01
- latest date by which the national standards conflicting  
with the EN have to be withdrawn (dow) 2010-12-01

Annex ZA has been added by CENELEC.

## Endorsement notice

The text of the International Standard IEC 60300-3-4:2007 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:

IEC 60812	NOTE	Harmonized as EN 60812:2006 (not modified).
IEC 61165	NOTE	Harmonized as EN 61165:2006 (not modified).
IEC 61508-1	NOTE	Harmonized as EN 61508-1:2001 (not modified).
IEC 61508-2	NOTE	Harmonized as EN 61508-2:2001 (not modified).
IEC 61508-3	NOTE	Harmonized as EN 61508-3:2001 (not modified).
IEC 61508-4	NOTE	Harmonized as EN 61508-4:2001 (not modified).
IEC 61508-5	NOTE	Harmonized as EN 61508-5:2001 (not modified).
IEC 61508-6	NOTE	Harmonized as EN 61508-6:2001 (not modified).
IEC 61508-7	NOTE	Harmonized as EN 61508-7:2001 (not modified).
IEC 61709	NOTE	Harmonized as EN 61709:1998 (not modified).

## Annex ZA (normative)

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

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.

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 60050-191	– <sup>1)</sup>	International Electrotechnical Vocabulary (IEV) - Chapter 191: Dependability and quality of service	–	–
IEC 60300-1	– <sup>1)</sup>	Dependability management - Part 1: Dependability management systems	EN 60300-1	2003 <sup>2)</sup>
IEC 60300-2	– <sup>1)</sup>	Dependability management - Part 2: Guidelines for dependability management	EN 60300-2	2004 <sup>2)</sup>
IEC 60300-3-1	– <sup>1)</sup>	Dependability management - Part 3-1: Application guide - Analysis techniques for dependability - Guide on methodology	EN 60300-3-1	2004 <sup>2)</sup>
IEC 60300-3-2	– <sup>1)</sup>	Dependability management - Part 3-2: Application guide - Collection of dependability data from the field	EN 60300-3-2	2005 <sup>2)</sup>
IEC 60300-3-3	– <sup>1)</sup>	Dependability management - Part 3-3: Application guide - Life cycle costing	EN 60300-3-3	2004 <sup>2)</sup>
IEC 60300-3-5	– <sup>1)</sup>	Dependability management - Part 3-5: Application guide - Reliability test conditions and statistical test principles	–	–
IEC 60300-3-10	– <sup>1)</sup>	Dependability management - Part 3-10: Application guide - Maintainability	–	–
IEC 60300-3-12	– <sup>1)</sup>	Dependability management - Part 3-12: Application guide - Integrated logistic support	EN 60300-3-12	2004 <sup>2)</sup>
IEC 60300-3-14	– <sup>1)</sup>	Dependability management - Part 3-14: Application guide - Maintenance and maintenance support	EN 60300-3-14	2004 <sup>2)</sup>

<sup>1)</sup> Undated reference.

<sup>2)</sup> Valid edition at date of issue.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60605-4	— <sup>1)</sup>	Equipment reliability testing - Part 4: Statistical procedures for exponential distribution - Point estimates, confidence intervals, prediction intervals and tolerance intervals	—	—
IEC 60605-6	— <sup>1)</sup>	Equipment reliability testing - Part 6: Tests for the validity and estimation of the constant failure rate and constant failure intensity	—	—
IEC 60706-2	— <sup>1)</sup>	Maintainability of equipment - Part 2: Maintainability requirements and studies during the design and development phase	EN 60706-2	2006 <sup>2)</sup>
IEC 60706-3	— <sup>1)</sup>	Maintainability of equipment - Part 3: Verification and collection, analysis and presentation of data	EN 60706-3	2006 <sup>2)</sup>
IEC 60706-5	— <sup>1)</sup>	Maintainability of equipment - Part 5: Testability and diagnostic testing	EN 60706-5	2007 <sup>2)</sup>
IEC 61014	— <sup>1)</sup>	Programmes for reliability growth	EN 61014	2003 <sup>2)</sup>
IEC 61025	— <sup>1)</sup>	Fault Tree Analysis (FTA)	EN 61025	2007 <sup>2)</sup>
IEC 61070	— <sup>1)</sup>	Compliance test procedures for steady-state availability	—	—
IEC 61078	— <sup>1)</sup>	Analysis techniques for dependability - Reliability block diagram and Boolean methods	EN 61078	2006 <sup>2)</sup>
IEC 61123	— <sup>1)</sup>	Reliability testing - Compliance test plans for success ratio	—	—
IEC 61124	— <sup>1)</sup>	Reliability testing - Compliance tests for constant failure rate and constant failure intensity	EN 61124	2006 <sup>2)</sup>
IEC 61160	— <sup>1)</sup>	Design review	EN 61160	2005 <sup>2)</sup>
IEC 61164	— <sup>1)</sup>	Reliability growth - Statistical test and estimation methods	EN 61164	2004 <sup>2)</sup>
IEC 61508	Series	Functional safety of electrical/electronic/programmable electronic safety-related systems	EN 61508	Series
IEC 61649	— <sup>1)</sup>	Goodness-of-fit tests, confidence intervals and lower confidence limits for Weibull distributed data	—	—
IEC 61703	— <sup>1)</sup>	Mathematical expressions for reliability, availability, maintainability and maintenance support terms	EN 61703	2002 <sup>2)</sup>
IEC 61710	— <sup>1)</sup>	Power law model - Goodness-of-fit tests and estimation methods	—	—
IEC 61713	— <sup>1)</sup>	Software dependability through the software life-cycle processes - Application guide	—	—

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 62198	– <sup>1)</sup>	Project risk management - Application guidelines	–	–
IEC 62308	– <sup>1)</sup>	Equipment reliability - Reliability assessment methods	EN 62308	2006 <sup>2)</sup>
IEC 62347	– <sup>1)</sup>	Guidance on system dependability specifications	EN 62347	2007 <sup>2)</sup>

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IEC 60300-3-4

Edition 2.0 2007-09

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE

**Dependability management –**  
**Part 3-4: Application guide – Guide to the specification of dependability**  
**requirements**

**Gestion de la sûreté de fonctionnement –**  
**Partie 3-4: Guide d'application – Spécification d'exigences de sûreté de**  
**fonctionnement**

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## DEPENDABILITY MANAGEMENT –

**Part 3-4: Application guide –  
Guide to the specification of dependability requirements**

## 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 60300-3-4 has been prepared by IEC technical committee 56: Dependability.

This second edition cancels and replaces the first edition published in 1996 and constitutes a technical revision.

The main changes from the previous edition are as follows:

- the concept of systems has been included and the need to specify the dependability of the system and not just the physical equipment has been stressed;
- the need for verification and validation of the requirement has been included;
- differentiation has been made between requirements, that can be measured and verified and validated, and goals, which cannot;
- the content on availability, maintainability and maintenance support has been updated and expanded to similar level of detail to reliability.

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

FDIS	Report on voting
56/1212/FDIS	56/1233/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.

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

A list of all parts of the IEC 60300 series, under the general title *Dependability management* can be found on the IEC website.

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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