



SLOVENSKI STANDARD

SIST EN 60300-3-2:2007

01-januar-2007

Upravljanje zagotovitljivosti - 3-2. del: Vodilo za uporabo - Zbiranje podatkov o zagotovitljivosti s terena (IEC 60300-3-2:2004)

Dependability management -- Part 3-2: Application guide - Collection of dependability data from the field

Zuverlässigkeitsmanagement -- Teil 3-2: Anwendungsleitfaden - Erfassung von Zuverlässigkeitsdaten im Betrieb

Gestion de la sûreté de fonctionnement -- Partie 3-2: Guide d'application - Recueil de données de sûreté de fonctionnement dans des conditions d'exploitation

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Ta slovenski standard je istoveten z: **EN 60300-3-2:2005**

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

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en

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EUROPEAN STANDARD

EN 60300-3-2

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2005

ICS 03.100.40; 03.120.01

English version

**Dependability management
Part 3-2: Application guide –
Collection of dependability data from the field
(IEC 60300-3-2:2004)**

Gestion de la sûreté de fonctionnement
Partie 3-2: Guide d'application –
Recueil de données de sûreté
de fonctionnement dans des conditions
d'exploitation
(CEI 60300-3-2:2004)

Zuverlässigkeitsmanagement
Teil 3-2: Anwendungsleitfaden -
Erfassung von Zuverlässigkeitsdaten
im Betrieb
(IEC 60300-3-2:2004)

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This European Standard was approved by CENELEC on 2005-02-01. 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, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, 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 56/992/FDIS, future edition 2 of IEC 60300-3-2, prepared by IEC TC 56, Dependability, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60300-3-2 on 2005-02-01.

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) 2005-11-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2008-02-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 60300-3-2:2004 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 60300-3-1	NOTE	Harmonized as EN 60300-3-1:2004 (not modified). https://standards.iteh.ai/catalog/standards/sist/e63aa3ec-abf3-488c-9c2b-0a591975752c/en-60300-3-1:2004
IEC 60300-3-3	NOTE	Harmonized as EN 60300-3-3:2004 (not modified).
IEC 60812	NOTE	Harmonized as HD 485 S1:1987 (not modified).
IEC 61014	NOTE	Harmonized as EN 61014:2003 (not modified).
IEC 61025	NOTE	Harmonized as HD 617 S1:1992 (not modified).
IEC 61078	NOTE	Harmonized as EN 61078:1993 (not modified).
IEC 61164	NOTE	Harmonized as EN 61164:2004 (not modified).
IEC 61703	NOTE	Harmonized as EN 61703:2002 (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 Where 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	- 1)	International Electrotechnical Vocabulary (IEV) Chapter 191: Dependability and quality of service	-	-

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1) Undated reference.

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**NORME
INTERNATIONALE
INTERNATIONAL
STANDARD**

**CEI
IEC**

60300-3-2

Deuxième édition
Second edition
2004-11

Gestion de la sûreté de fonctionnement –

Partie 3-2:

Guide d'application –

**Recueil de données de sûreté de fonctionnement
dans des conditions d'exploitation**

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Dependability management –

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Part 3-2:

Application guide –

**Collection of dependability data
from the field**

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Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

CODE PRIX
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W

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For price, see current catalogue*

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

DEPENDABILITY MANAGEMENT –

**Part 3-2: Application guide –
Collection of dependability data from the field**

FOREWORD

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International Standard IEC 60300-3-2 has been prepared by IEC technical committee 56: Dependability.

This second edition cancels and replaces the first edition, published in 1993, and constitutes a technical revision.

The standard has been totally rewritten to provide more generic, and less component specific, data collection guidance. The new standard addresses the issues of the underlying data collection philosophy, such as sampling, censoring, and window data. The standard also gives guidance on accuracy and precision, automated data collection techniques and data stewardship. In order to support the toolbox concept, the standard identifies the data requirements of a number of other IEC standards.

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

FDIS	Report on voting
56/992/FDIS	56/1007/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.

IEC 60300 consists of the following parts, under the general title *Dependability management*:

Part 1: Dependability management systems

Part 2: Guidelines for dependability management

Part 3: Application guide

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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INTRODUCTION

The collection and analysis of failure and usage data from the field plays an important role in dependability analysis. It enables:

- a) maintenance planning;
- b) justification of modifications;
- c) calculation of future resource and spares requirements;
- d) confirmation of contractual satisfaction;
- e) assessment of likelihood of achieving a successful mission;
- f) feedback to design and manufacturing;
- g) estimation of cost of warranty period;
- h) improve dependability requirements;
- i) collection of basic data for possible liability cases;
- j) collection of usage data to determine field customer requirements which provide the basis for supplier dependability test specifications and demonstration programs.

Data collection for dependability-related purposes is often a long-term activity. Data covering a lot of item operation and/or many items may be required before appropriate analysis can be completed. Data collection should be undertaken as a planned activity, and executed with appropriate goals in mind.

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In the shorter term, data collection objectives for dependability-related purposes include:

- 1) identification of new product design shortfalls;
- 2) adjustment of logistic support; [SIST EN 60300-3-2:2007](https://standards.iteh.ai/catalog/standards/sist/e63aa3ec-abf3-488c-9c2b-d4a699109437/sist-en-60300-3-2-2007)
- 3) identification of customer problems for correction; <https://standards.iteh.ai/catalog/standards/sist/e63aa3ec-abf3-488c-9c2b-d4a699109437/sist-en-60300-3-2-2007>
- 4) root cause failure analysis to eliminate predominant failure modes in the next design.

Analysis of dependability data requires clear understanding of the item, its operation, its environment and its physical properties. Analysis also needs good understanding of the general subject of dependability and its manifestation in the specific application.

Before starting a data collection process, it is important to realize that data collection cannot usually be performed without co-operation of all the parties involved. This may include item manufacturers, suppliers, repair authorities, users and customers.

DEPENDABILITY MANAGEMENT –

Part 3-2: Application guide – Collection of dependability data from the field

1 Scope

This part of IEC 60300 provides guidelines for the collection of data relating to reliability, maintainability, availability and maintenance support performance of items operating in the field. It deals in general terms with the practical aspects of data collection and presentation and briefly explores the related topics of data analysis and presentation of results. Emphasis is made on the need to incorporate the return of experience from the field in the dependability process as a main activity.

This standard can be applied during monitoring of a population sample or, more widely, of whole populations. It is applicable, without restriction to diverse items, from components to systems and networks, including hardware, software and man/machine interactions. The items considered may have been designed, manufactured, installed, operated and maintained by one or more organizations. This standard applies to all possible relationships between suppliers and users. It applies to situations where some items may be repaired on site while others may only be replaced on site and repaired at centralized facilities.

No recommendations are made, however, of how to organize maintenance support.

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2 Normative references

SIST EN 60300-3-2:2007

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 60050-191, *International Electrotechnical Vocabulary (IEV) – Part 191: Dependability and quality of service*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60050-191 and the following apply.

3.1 environment

continuous or intermittent stress that may cause an event to occur (e.g. failure, a replacement, etc.) for an item

3.2 events

things that happen to items

NOTE Events include such things as removals, insertions, and upgrades. Additionally, how many occurrences, actuations, operating states, conditions, etc. are events that relate to product usage that can be evaluated from a damage perspective, where damage equivalence can be obtained with a higher frequency of the damaging event coupled with contributing damage factors from the application such as load, pressure, vibration, etc. Qualification of a product or system relates to understanding the distribution of damaging events per the significant sources of stress.