



# SLOVENSKI STANDARD

## SIST EN 60300-2:2002

01-september-2002

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### Dependability management - Part 2: Dependability programme elements and tasks (IEC 60300-2:1995)

Dependability management -- Part 2: Dependability programme elements and tasks

Zuverlässigkeitsmanagement -- Teil 2: Zuverlässigkeitsprogrammelemente und -aufgaben

**iTeh STANDARD PREVIEW**

Gestion de la sûreté de fonctionnement -- Partie 2: Éléments et tâches du programme de sûreté de fonctionnement

[SIST EN 60300-2:2002](https://standards.iteh.ai/catalog/standards/sist/36b5cd8f-1566-4e0d-99b1-c376ab4539db/sist-en-60300-2-2002)

Ta slovenski standard je istoveten z: **EN 60300-2:1996**

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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 60300-2:2002**

**en**

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EUROPEAN STANDARD

EN 60300-2

NORME EUROPÉENNE

EUROPÄISCHE NORM

January 1996

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ICS 03.120.10; 29.020

Descriptors: Dependability programme, life cycle, contract, user, product, software, project

English version

**Dependability management**  
**Part 2: Dependability programme elements and tasks**  
 (IEC 300-2:1995)

Gestion de la sûreté de fonctionnement  
 Partie 2: Eléments et tâches du  
 programme de sûreté de  
 fonctionnement  
 (CEI 300-2:1995)

Zuverlässigkeits-Management  
 Teil 2: Zuverlässigkeits-  
 Programmelemente und -aufgaben  
 (IEC 300-2:1995)

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This European Standard was approved by CENELEC on 1995-11-28. 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, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, 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 56/437/FDIS, future edition 1 of IEC 300-2, prepared by IEC TC 56, Dependability, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60300-2 on 1995-11-28.

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) 1996-09-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 1996-09-01

Annexes designated "normative" are part of the body of the standard.  
Annexes designated "informative" are given for information only.  
In this standard, annexes A and ZA are normative and annexes B, C and D are informative.  
Annex ZA has been added by CENELEC.

### Endorsement notice

The text of the International Standard IEC 300-2:1995 was approved by CENELEC as a European Standard without any modification.

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

- <https://standards.iteh.ai/catalog/standards/sist/36b5cd8f-1566-4e0d-99b1-e376a64539db/sist-en-60300-2-2002>
- IEC 812 NOTE: Harmonized as HD 485 S1:1987 (not modified).
- IEC 1025 NOTE: Harmonized as HD 617 S1:1992 (not modified).
- IEC 1078 NOTE: Harmonized as EN 61078:1993 (not modified).



## 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 50(191)	1990	International Electrotechnical Vocabulary (IEV) Chapter 191: Dependability and quality of service	-	-
IEC 300-1/ ISO 9000-4	1993	Dependability management Part 1: Dependability programme management	EN 60300-1	1993
ISO 8402	1994	Quality management and quality assurance Vocabulary <a href="https://standards.iteh.ai/catalog/standards/sist/36b5cd8f-1566-4e0d-99b1-e376e64539db/sist-en-60300-2-2002">SIST EN 60300-2:2002</a>	-	-
ISO 9001	1994	Quality systems Model for quality assurance in design development, production, installation and servicing	EN ISO 9001	1994
ISO 9004-1	1994	Quality management and quality system elements Part 1: Guidelines	EN ISO 9004-1	1994

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**NORME  
INTERNATIONALE  
INTERNATIONAL  
STANDARD**

**CEI  
IEC  
300-2**

Première édition  
First edition  
1995-12

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**Gestion de la sûreté de fonctionnement –**

**Partie 2:**

**Eléments et tâches du programme de sûreté  
de fonctionnement**

**iTeh STANDARD PREVIEW**

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**Dependability management –**

SIST EN 60300-2:2002

<https://standards.iteh.ai/standards/sist/36b5cd8f-1566-4e0d-99b1-e76c64539d14/SIST-60300-2-2002>

**Part 2:**

**Dependability programme elements and tas**

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Commission Electrotechnique Internationale  
International Electrotechnical Commission  
Международная Электротехническая Комиссия

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PRICE CODE

**W**

Pour prix, voir catalogue en vigueur  
For price, see current catalogue

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## DEPENDABILITY MANAGEMENT –

## Part 2: Dependability programme elements and tasks

## FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international cooperation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. 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. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of the IEC on technical matters, express as nearly as possible an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested National Committees.
- 3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical reports or guides and they are accepted by the National Committees in that sense.
- 4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.
- 5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.
- 6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 300 has been prepared by IEC technical committee 56: Dependability.

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

DIS	Report on voting
56/437/FDIS	56/488/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 international Standard is one of the several Parts:

- IEC 300-1: Dependability programme management
- IEC 300-2: Dependability programme elements and tasks
- IEC 300-3: (Application guides series)

Annex A forms an integral part of this standard.

Annexes B, C and D are for information only.

## INTRODUCTION

Three factors are of fundamental importance to those responsible for developing a new product and to those who will be responsible for using or operating the product; they are:

### *Performance*

Will the performance (including dependability) of the product meet the expectations and needs of the end user?

### *Cost*

What will be the cost, not only of developing and producing the product, but also of operating and maintaining and eventually disposing of it, i.e. what will be its life-cycle cost?

### *Timescale*

Will the product be available when required and appear on the market at the appropriate time?

The customer's satisfaction with a product, and the reputation of the product and of its supplier, depends to a considerable degree on how well these factors are managed and harmonized during the various phases of the product life cycle.

The term dependability embraces reliability, maintainability, availability and maintenance support. Reliability, availability and maintainability are themselves fundamental product performance characteristics and are frequently specified as key product requirements.

Maintenance support is the ability to provide the resources required to maintain the item.

The dependability characteristics of a product have a major influence on the overall ability of the product to satisfy the requirements of the user and may well be fundamental and dominating aspects of quality. Dependability also has a major effect on the cost of operating and maintaining the product in use and on the achievement of acceptable life-cycle cost.

The initial or purchase cost of a product is often the major factor influencing the user's selection but it is important to recognize that the purchase cost is only a part of the total cost of ownership of a product. The costs of operation and maintenance can be greatly reduced if the product is designed to be reliable and maintainable. Improving and developing a product in this way usually adds to the purchase cost, but the greater additional cost is often compensated by greatly reduced operating and maintenance costs. It is important to perform studies to trade off the cost of improving reliability and maintainability against the expected reduction in cost achieved over the whole life of the product.

It is important that both supplier and customer should recognize that dependability characteristics may have a major impact on product performance, cost and time scale as described above.

Dependability requirements are often complex and in order to achieve them it is necessary to allocate appropriate resources, carefully planned and coordinated, into a dependability programme. The object of such programmes is to ensure that all reliability, maintainability, availability and maintenance support requirements are met. A supplier will typically need to implement dependability programmes to ensure that product reliability and maintainability requirements are met; a user will need to implement a dependability programme designed to ensure that maintainability support requirements are satisfied.

The various dependability programmes (for example the reliability management programme and the maintainability management programme) should be fully integrated into the overall product programme and into the product quality programme.

The specified dependability requirements are often a major feature of the design of the product and of its maintenance support and the specification should therefore be prepared before the design work is started.

This standard provides general guidance on the establishment of dependability programmes and is applicable to hardware products and systems containing software. The elements selected to provide the programme for a specific product should be tailored according to the individual requirements, circumstances and conditions that apply.

The selection of individual elements, the emphasis to be given to each element and the scale of the overall dependability programme should take account of the conditions of the market, the requirements and expectations of users, the contractual situation and the overall requirements for the product and its support. Individual programme elements also need to be adjusted to the phase of the life cycle in which they are implemented.

[SIST EN 60300-2:2002](https://standards.iteh.ai/catalog/standards/sist/36b5cd8f-1566-4e0d-99b1-e376a64539db/sist-en-60300-2-2002)

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## DEPENDABILITY MANAGEMENT –

### Part 2: Dependability programme elements and tasks

#### 1 Scope

This Part of IEC 300 describes the elements of a dependability programme and gives guidance on the selection of tasks necessary to achieve specified dependability of products. This standard cross-references and complements ISO 9004-1. It is applicable to hardware and systems containing software products.

Descriptions of individual programme elements are provided. Detailed procedures to be employed when implementing the tasks are not included but reference is made to related application guides contained in IEC 300-3 and to other IEC International Standards on dependability management.

The format of this part of IEC 300 primarily addresses the case of a two party relationship, between a "supplier" who provides products or maintenance services and a "customer". Parts of the product may be purchased from other sources by the supplier (by subcontracting). Where it is necessary to clarify such a situation, the terms "first level supplier" (with direct relation to the customer) and "second level supplier" ("subcontractor", with direct relation to the first level supplier) are used. The actual users (end users) of the product may be the customers themselves or a third body.

#### 2 Normative references

SIST EN 60300-2:2002

[https://standards.iteh.ai/catalog/standards/sist/36b5cd8f-1566-4e0d-99b1-](https://standards.iteh.ai/catalog/standards/sist/36b5cd8f-1566-4e0d-99b1-e376a64539db/sist-en-60300-2-2002)

[e376a64539db/sist-en-60300-2-2002](https://standards.iteh.ai/catalog/standards/sist/36b5cd8f-1566-4e0d-99b1-e376a64539db/sist-en-60300-2-2002)

The following normative documents contain provisions which, through reference in this text constitute provisions of this part of IEC 300. At the time of publication, the editions indicated were valid. All normative documents are subject to revision, and parties to agreements based on this part of IEC 300 are encouraged to investigate the possibility of applying the most recent editions of the standards listed below. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 50(191): 1990, *International Electrotechnical Vocabulary (IEV) – Chapter 191: Dependability and quality of service*

IEC 300-1/ISO 9000-4: 1993, *Dependability management – Part 1: Dependability programme management*

ISO 8402: 1994, *Quality management and quality assurance – Vocabulary*

ISO 9001: 1994, *Quality systems – Model for quality assurance in design, development, production, installation and servicing*

ISO 9004-1: 1994, *Quality management and quality system elements – Part 1: Guidelines*