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Mathematical expressions for reliability, availability, maintainability and maintenance support terms (IEC 61703:2016)

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21.020 Značilnosti in načrtovanje Characteristics and design of

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Mathematical expressions for reliability, availability, maintainability and maintenance support terms (IEC 61703:2016)

Expressions mathématiques pour les termes de fiabilité, de disponibilité, de maintenabilité et de logistique de maintenance (IEC 61703:2016)

Mathematische Ausdrücke für Begriffe der Zuverlässigkeit, Verfügbarkeit, Instandhaltbarkeit und Instandhaltungsbereitschaft (IEC 61703:2016)

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

European foreword

The text of document 56/1682/FDIS, future edition 2 of IEC 61703, prepared by IEC/TC 56 "Dependability" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61703:2016.

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)	2017-06-16
•	latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2019-09-16

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IEC 61508 Series	NOTE	Harmonized as EN 61508 Series.
IEC 61511 Series	NOTE	Harmonized as EN 61511 Series.
IEC 61025	NOTE	Harmonized as EN 61025.
IEC 61078	NOTE	Harmonized as EN 61078.
IEC 61165	NOTE	Harmonized as EN 61165.

Annex ZA

(normative)

Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 When 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

<u>Publication</u>	<u>Year</u>	<u>Title</u>	EN/HD	<u>Year</u>
IEC 60050-192	2015	International electrotechnical vocabulary - Part 192: Dependability	-	-
ISO 3534-1	2006	Statistics - Vocabulary and symbols - Part -1: General statistical terms and term used in probability	s	-



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INTERNATIONAL STANDARD

NORME INTERNATIONALE

Mathematical expressions for reliability, availability, maintainability and maintenance support terms

Expressions mathématiques pour les termes de fiabilité, de disponibilité, de maintenabilité et de logistique de maintenance

INTERNATIONAL ELECTROTECHNICAL COMMISSION

COMMISSION ELECTROTECHNIQUE INTERNATIONALE

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

MATHEMATICAL EXPRESSIONS FOR RELIABILITY, AVAILABILITY, MAINTAINABILITY AND MAINTENANCE SUPPORT TERMS

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International Standard IEC 61703 has been prepared by IEC technical committee 56: Dependability.

This second edition cancels and replaces the first edition published in 2001. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) standard made as self containing as possible;
- b) item split between individual items and systems;
- c) generalization of the dependability concepts for systems made of several components;
 - introduction of the conditional failure intensity (Vesely failure rate);
 - introduction of the state-transition and the Markovian models;

- generalization of the availability to production availability;
- d) introduction of curves to illustrate the various concepts.

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

FDIS	Report on voting
56/1682/FDIS	56/1693/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.

This International Standard is to be used in conjunction with IEC 60050-192:2015.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC website 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.