SLOVENSKI STANDARD
SIST EN 61078:2007

01-januar-2007

Nadomešča:

SIST EN 61078:2002

Analizne tehnike za zagotovljivost – Zanesljivost, blokovni diagram in Boolove metode (IEC 61078:2006)

Analysis techniques for dependability - Reliability block diagram and boolean methods

Techniken für die Analyse der Zuverlässigkeit - Verfahren mit dem Zuverlässigkeitsblockdiagramm und Boole'sche Verfahren

Techniques d'analyse pour la sûreté de fonctionnement - Bloc-diagramme de fiabilité et méthodes booléennes

Ta slovenski standard je istoveten z: **EN 61078:2006**

ICS:

21.020	Značilnosti in načrtovanje strojev, aparatov, opreme	Characteristics and design of machines, apparatus, equipment

SIST EN 61078:2007 **en**

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 61078

May 2006

ICS 03.120.01; 03.120.99

Supersedes EN 61078:1993

English version

Analysis techniques for dependability - Reliability block diagram and boolean methods
(IEC 61078:2006)

Techniques d'analyse
pour la sûreté de fonctionnement -
Bloc-diagramme de fiabilité
et méthodes booléennes
(CEI 61078:2006)

Techniken für die Analyse
der Zuverlässigkeit -
Verfahren mit dem
Zuverlässigkeitsblockdiagramm
und Boole'sche Verfahren
(IEC 61078:2006)

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This European Standard was approved by CENELEC on 2006-03-01. 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, 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

Ref. No. EN 61078:2006 E

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Foreword

The text of document 56/1071/FDIS, future edition 2 of IEC 61078, prepared by IEC TC 56, Dependability, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61078 on 2006-03-01.

This European Standard supersedes EN 61078:1993.

The major change with respect to EN 61078:1993 is that an additional clause on Boolean disjointing methods (Annex B) has been added.

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)   2006-12-01

– latest date by which the national standards conflicting
  with the EN have to be withdrawn   (dow)   2009-03-01

Annex ZA has been added by CENELEC.

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Endorsement notice

The text of the International Standard IEC 61078:2006 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated:

IEC 60812   NOTE   Harmonized as EN 60812:2006 (not modified).

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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.

Publication	Year	Title	EN/HD	Year
IEC 60050-191	1990	International Electrotechnical Vocabulary (IEV) Chapter 191: Dependability and quality of service	-	-
IEC 61025	-[1]	Fault tree analysis (FTA)	HD 617 S1	1992 [2]
ISO 3534-1	1993	Statistics - Vocabulary and symbols Part 1: Probability and general statistical terms	-	-

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[1] Undated reference.

[2] Valid edition at date of issue.

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NORME
INTERNATIONALE

INTERNATIONAL
STANDARD

**CEI
IEC
61078**

Deuxième édition
Second edition
2006-01

Techniques d'analyse pour la sûreté
de fonctionnement –
Bloc-diagramme de fiabilité et
méthodes booléennes

iTeh STANDARD PREVIEW
Analysis techniques for dependability –
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Reliability block diagram and
boolean methods

Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

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INTERNATIONAL ELECTROTECHNICAL COMMISSION
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ANALYSIS TECHNIQUES FOR DEPENDABILITY – RELIABILITY BLOCK DIAGRAM AND BOOLEAN METHODS

FOREWORD

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International Standard IEC 61078 has been prepared by IEC technical committee 56: Dependability.

This second edition cancels and replaces the first edition, published in 1991, and constitutes a full technical revision. The major change with respect to the previous edition is that an additional clause on Boolean disjointing methods (Annex B) has been added.

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

FDIS	Report on voting
56/1071/FDIS	56/1089/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.

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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

Different analytical methods of dependability analysis are available, of which the reliability block diagram (RBD) is one. The purpose of each method and their individual or combined applicability in evaluating the reliability and availability of a given system or component should be examined by the analyst prior to starting work on the RBD. Consideration should also be given to the results obtainable from each method, data required to perform the analysis, complexity of analysis and other factors identified in this standard.

A reliability block diagram (RBD) is a pictorial representation of a system's reliability perform-ance. It shows the logical connection of (functioning) components needed for successful operation of the system (hereafter referred to as "system success").

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ANALYSIS TECHNIQUES FOR DEPENDABILITY –
RELIABILITY BLOCK DIAGRAM AND BOOLEAN METHODS

1 Scope

This International Standard describes procedures for modelling the dependability of a system and for using the model in order to calculate reliability and availability measures.

The RBD modelling technique is intended to be applied primarily to systems without repair and where the order in which failures occur does not matter. For systems where the order of failures is to be taken into account or where repairs are to be carried out, other modelling techniques, such as Markov analysis, are more suitable.

It should be noted that although the word "repair" is frequently used in this standard, the word "restore" is equally applicable. Note also that the words "item" and "block" are used extensively throughout this standard: in most instances interchangeably.

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 60050-191:1990, *International Electrotechnical Vocabulary (IEV) – Chapter 191: Dependability and quality of service*

IEC 61025, *Fault tree analysis (FTA)*

ISO 3534-1:1993, *Statistics – Vocabulary and symbols – Part 1: Probability and general statistical terms*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60050-191 and ISO 3534-1 apply.