SLOVENSKI STANDARD
SIST EN 61069-7:2001

01-april-2001

Industrial-process measurement and control - Evaluation of system properties for the purpose of system assessment - Part 7: Assessment of system safety

Industrial-process measurement and control - Evaluation of system properties for the purpose of system assessment -- Part 7: Assessment of system safety

Leittechnik für industrielle Prozesse - Ermittlung der Systemeigenschaften zum Zweck der Eignungsbeurteilung eines Systems -- Teil 7: Eignungsbeurteilung und Systemsicherheit

Mesure et commande dans les processus industriels - Appréciation des propriétés d'un système en vue de son évaluation -- Partie 7: Evaluation de la sécurité d'un système

Ta slovenski standard je istoveten z: **EN 61069-7:1999**

ICS:

25.040.40	Merjenje in krmiljenje industrijskih postopkov	Industrial process measurement and control

SIST EN 61069-7:2001 **en**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 61069-7

August 1999

ICS 25.040.40

English version

Industrial-process measurement and control - Evaluation of system properties for the purpose of system assessment Part 7: Assessment of system safety (IEC 61069-7:1999)

Mesure et commande dans les processus industriels - Appréciation des propriétés d'un système en vue de son évaluation
Partie 7: Evaluation de la sécurité d'un système
(CEI 61069-7:1999)

Leittechnik für industrielle Prozesse
Ermittlung der Systemeigenschaften zum Zweck der Eignungsbeurteilung eines Systems
Teil 7: Eignungsbeurteilung und Systemsicherheit
(IEC 61069-7:1999)

This European Standard was approved by CENELEC on 1999-08-01. 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, Czech Republic, 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

Ref. No. EN 61069-7:1999 E

Foreword

The text of document 65A/280/FDIS, future edition 1 of IEC 61069-7, prepared by SC 65A, System aspects, of IEC TC 65, Industrial-process measurement and control, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61069-7 on 1999-08-01.

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) 2000-05-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2002-08-01

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

Endorsement notice

The text of the International Standard IEC 61069-7:1999 was approved by CENELEC as a European Standard without any modification.

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

IEC 60243-1	NOTE: Harmonized as HD 559.1 S1:1991 (modified), which is superseded by EN 60243-1:1998 (nicht modifiziert).
IEC 60529	NOTE: Harmonized as EN 60529:1991 (not modified).
IEC 60695-2	NOTE: Harmonized in the EN 60695-2 series.
IEC 60707	NOTE: Harmonized as HD 441 S1:1983 (not modified), which is superseded by EN 60707:1999 (not modified).
IEC 60825-1	NOTE: Harmonized as EN 60825-1:1994 (not modified).
CISPR 22	NOTE: Harmonized as EN 55022:1994 (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.

Publication	Year	Title	EN/HD	Year
IEC 61010-1 (mod)	1990	Safety requirements for electrical equipment for measurement, control and laboratory use Part 1: General requirements	EN 61010-1[1)]	1993
IEC 61069-1	1991	Industrial-process measurement and control Evaluation of system properties for the purpose of system assessment Part 1: General considerations and methodology	EN 61069-1 + corr. November	1993 1993
IEC 61069-2	1993	Part 2: Assessment methodology	EN 61069-2	1994
IEC 61069-5	1994	Part 5: Assessment of system dependability	EN 61069-5	1995
IEC 61508-1	1998	Functional safety of electrical/electronic/programmable electronic safety-related systems Part 1: General requirements	-	-
ISO/IEC Guide 51	1990	Guidelines for the inclusion of safety aspects in standards	-	-

1) IEC 61010-1 includes A1:1992 to IEC 61010-1.

NORME INTERNATIONALE

INTERNATIONAL STANDARD

CEI
IEC
61069-7

Première édition
First edition
1999-05

Mesure et commande dans les processus industriels – Appréciation des propriétés d'un système en vue de son évaluation –

Partie 7: Evaluation de la sécurité d'un système

Industrial-process measurement and control – Evaluation of system properties for the purpose of system assessment –

Part 7: Assessment of system safety

International Electrotechnical Commission
3, rue de Varembé Geneva, Switzerland
Telefax: +41 22 919 0300
e-mail: inmail@iec.ch
IEC web site http://www.iec.ch

Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

CODE PRIX
PRICE CODE R

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

CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

INDUSTRIAL-PROCESS MEASUREMENT AND CONTROL – EVALUATION OF SYSTEM PROPERTIES FOR THE PURPOSE OF SYSTEM ASSESSMENT –

Part 7: Assessment of system safety

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 co-operation 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. The IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 61069-7 has been prepared by subcommittee 65A: System aspects, of IEC technical committee 65: Industrial-process measurement and control.

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

FDIS	Report on voting
65A/280/FDIS	65A/283/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.

Annex A is for information only.

IEC 61069 consists of the following parts, under the general title: *Industrial-process measurement and control – Evaluation of system properties for the purpose of system assessment:*

Part 1: General considerations and methodology

Part 2: Assessment methodology

Part 3: Assessment of system functionality

Part 4: Assessment of system performance

Part 5: Assessment of system dependability

Part 6: Assessment of system operability

Part 7: Assessment of system safety

Part 8: Assessment of non-task-related system properties [1].

The relation of this part to the other parts of IEC 61069 and the relative place of this part within IEC 61069 is shown in figure 1.

Part 1 provides the overall guidance and, as such, is intended as a stand-alone publication.

Part 2 details the assessment methodology.

Parts 3 to 8 provide guidance on the assessment of specific groups of properties.

The division of properties in parts 3 to 8 has been chosen so as to group together related properties.

[1] To be published.

INTRODUCTION

This part of IEC 61069 deals with the method which should be used to assess the safety property of industrial-process measurement and control systems. **The treatment of safety in this standard is confined to hazards that can be present within the industrial-process measurement and control system itself.** If the system mission includes activities which could affect the safety of the process or equipment under control, the requirements of these activities are the subject of IEC 61508.

The assessment of a system is the judgement, based on evidence, of the system's suitability for a specific mission or class of missions.

To obtain total evidence, a complete evaluation (for example under all influencing conditions) of all the system properties relevant to the specific mission or class of missions would be required.

Since this is rarely practical, the rationale on which an assessment of a system should be based is

- identification of the criticality of each of the relevant system properties,
- planning for evaluation of the relevant system properties with a cost-effective dedication of effort to the various properties.

In conducting an assessment of a system, it is crucial to bear in mind the need to gain a maximum increase in confidence in the suitability of the system within practical cost and time constraints.

An assessment can only be carried out if a mission has been stated (or given) or if any mission can be hypothesized. In the absence of a mission, no assessment can be made; however, evaluations (as defined in IEC 61069-1) can still be specified and carried out for use in assessments performed by others.

In such cases, the standard can be used as a guide for planning an evaluation and it provides procedures for performing evaluations, since evaluations are an integral part of assessment.