SLOVENSKI STANDARD
SIST EN 61310-1:2008

01-junij-2008

Nadomeġļa:
SIST EN 61310-1:1999

Varnost strojev - Prikaz, oznaka in upravljanje - 1. del: Zahteve za vidne, zvoļne in otipljive signale (IEC 61310-1:2007)

Safety of machinery - Indication, marking and actuation - Part 1: Requirements for visual, acoustic and tactile signals

Sicherheit von Maschinen - Anzeigen, Kennzeichen und Bedienen - Teil 1: Anforderungen an sichtbare, hörbare und tastbare Signale

Sécurité des machines - Indication, marquage et manoeuvre - Partie 1: Exigences pour les signaux visuels, acoustiques et tactiles

Ta slovenski standard je istoveten z: **EN 61310-1:2008**

ICS:

01.080.20	Grafiļ ni simboli za posebno opremo	Graphical symbols for use on specific equipment
13.110	Varnost strojev	Safety of machinery

SIST EN 61310-1:2008 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 61310-1

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Supersedes EN 61310-1:1995

English version

Safety of machinery - Indication, marking and actuation - Part 1: Requirements for visual, acoustic and tactile signals

(IEC 61310-1:2007)

Sécurité des machines - Indication, marquage et manoeuvre - Partie 1: Exigences pour les signaux visuels, acoustiques et tactiles (CEI 61310-1:2007)

Sicherheit von Maschinen - Anzeigen, Kennzeichen und Bedienen - Teil 1: Anforderungen an sichtbare, hörbare und tastbare Signale (IEC 61310-1:2007)

This European Standard was approved by CENELEC on 2007-12-01. 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, Bulgaria, 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 61310-1:2008 E

Foreword

The text of document 44/540/FDIS, future edition 2 of IEC 61310-1, prepared by IEC TC 44, Safety of machinery - Electrotechnical aspects, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61310-1 on 2007-12-01.

This European Standard supersedes EN 61310-1:1995.

EN 61310-1:2007 includes the following significant technical changes with respect to EN 61310-1:1995:

– adapted to the basic standards EN 60073, IEC 60417, ISO 3864-1, ISO 7000 and ISO 7010.

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)	2008-09-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2010-12-01

This European Standard has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association and covers essential requirements of EC Directives MD (98/37/EC) and MD (2006/42/EC). See Annex ZZ.

Annexes ZA and ZZ have been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61310-1:2007 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 80416	NOTE	Harmonized in EN 80416 series (not modified).
IEC 61310-3	NOTE	Harmonized as EN 61310-3:2008 (not modified).
ISO 9241-3	NOTE	Harmonized as EN 29241-3:1993 (not modified).
ISO 12100-1	NOTE	Harmonized as EN ISO 12100-1:2003 (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 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 60073	2002	Basic and safety principles for man-machine interface, marking and identification - Coding principles for indicators and actuators	EN 60073	2002
IEC 60204-1 (mod)	2005	Safety of machinery - Electrical equipment of machines - Part 1: General requirements	EN 60204-1	2006
IEC 60417	Data base	Graphical symbols for use on equipment	–	–
ISO 3864-1	2002	Graphical symbols - Safety colours and safety signs - Part 1: Design principles for safety signs in workplaces and public areas	–	–
ISO 7000	2004	Graphical symbols for use on equipment - Index and synopsis	–	–
ISO 7010	2003	Graphical symbols - Safety colours and safety signs - Safety signs used in workplaces and public areas	–	–
ISO 7731	2003	Ergonomics - Danger signals for public and work areas - Auditory danger signals	EN ISO 7731	2005
ISO 13850	– [1)]	Safety of machinery - Emergency stop - Principles for design	EN ISO 13850	2006 [2)]

[1)] Undated reference.

[2)] Valid edition at date of issue.

Annex ZZ
(informative)

Coverage of Essential Requirements of EC Directives

Annex ZZA
(informative)

Coverage of Essential Requirements of Directive 98/37/EC

This European Standard has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association and within its scope the standard covers the following essential requirements out of those given in Annex I of the EC Directive 98/37/EC, amended by Directive 98/79/EC:

– ER 1.7.0;

– ER 1.7.1.

Compliance with this standard provides one means of conformity with the specified essential requirements of the Directive concerned.

WARNING: Other requirements and other EC Directives may be applicable to the products falling within the scope of this standard.

Annex ZZB
(informative)

Coverage of Essential Requirements of Directive 2006/42/EC

This European Standard has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association and within its scope the standard covers the following essential requirements out of those given in Annex I of the EC Directive 2006/42/EC:

– ER 1.7.1;

– ER 1.7.1.1;

– ER 1.7.1.2.

Compliance with this standard provides one means of conformity with the specified essential requirements of the Directive concerned.

WARNING: Other requirements and other EC Directives may be applicable to the products falling within the scope of this standard.

NORME INTERNATIONALE
INTERNATIONAL STANDARD

CEI
IEC
61310-1

Deuxième édition
Second edition
2007-02

Sécurité des machines – Indication, marquage, manœuvre

Partie 1: Exigences pour les signaux visuels, acoustiques et tactiles

Safety of machinery – Indication, marking and actuation –

Part 1: Requirements for visual, acoustic and tactile signals

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Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

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For price, see current catalogue

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

SAFETY OF MACHINERY – INDICATION, MARKING AND ACTUATION –

Part 1: Requirements for visual, acoustic and tactile signals

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of 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, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). 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. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.

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International Standard IEC 61310-1 has been prepared by IEC technical committee 44: Safety of machinery – Electrotechnical aspects.

This second edition cancels and replaces the first edition published in 1995 and constitutes a technical revision.

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

– Adapted to the basic standards IEC 60073, IEC 60417, ISO 3864-1, ISO 7000 and ISO 7010.

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

FDIS	Report on voting
44/540/FDIS	44/546/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.

A list of all parts of IEC 61310 series, under the general title *Safety of machinery – Indication, marking and actuation*, can be found on the IEC website.

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.

INTRODUCTION

This standard should be used by suppliers of machines for which no product family or dedicated product standard exists. The requirements of this standard should also be used, for example, as a reference standard by ISO and IEC technical committees which prepare product family or dedicated product standards for machines. Where a product family or dedicated product standard exists, its requirements take precedence.

At human-machine interfaces, warning and danger signals need to convey safety-related meanings for the safe use and monitoring of machinery for exposed persons and operators.

It is via the human-machine interface that the operator interacts with the machinery or process in an open-loop system (see Figure 1). This interface consists of actuators, by means of which the operator initiates actions, and indicating devices, through which the operator receives information. In many applications, the information is represented by a signal which is encoded by a distinct set of rules and the operator has then to interpret the signal according to these rules. Different types of coding such as colour, shape or time are used as appropriate to the demands of the task of the operator.

The reasons for using codes are:

– to permit the spatial separation of the machinery from centralized control stations;
– to increase the perceptible amount of information given by an indicating device, for example, per display area unit, per unit of time;
– to decrease the mental work-load of an operator and/or exposed persons.

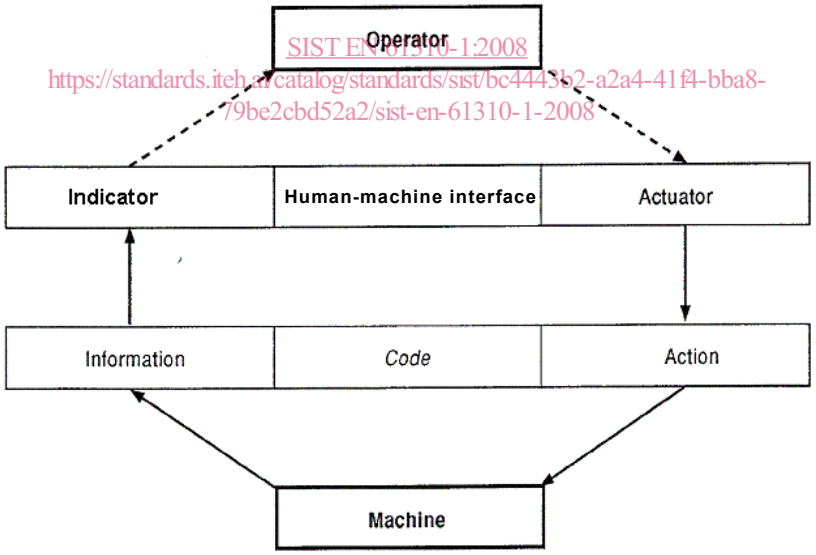

Figure 1 – Open-loop control, action and information systems