SVENSK STANDARD SS-EN 61140

Fastställd	Utgåva	Sida	Ansvarig kommitté
2003-06-26	2	1 (1+44)	SEK TK 64

Skydd mot elchock – Grundläggande principer för elinstallationer och elmateriel

Protection against electric shock – Common aspects for installation and equipment

Som svensk standard gäller europastandarden EN 61140:2002. Den svenska standarden innehåller den officiella engelska språkversionen av EN 61140:2002.

Nationellt förord

Europastandarden EN 61140:2002*)

består av:

– **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC
– **IEC 61140, Third edition, 2001 - Protection against electric shock - Common aspects for installation and equipment**

utarbetad inom International Electrotechnical Commission, IEC.

Tidigare fastställd svensk standard SS-EN 61140, utgåva 1, 2001, gäller ej fr o m 2004-12-01.

*) EN 61140:2002 ikraftsattes 2003-06-26 som SS-EN 61140 genom offentliggörande, d v s utan utgivning av något svenskt dokument.

ICS 13.260; 29.020; 91.140.50

Denna standard är fastställd av SEK Svensk Elstandard,
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Standarder underlättar utvecklingen och höjer elsäkerheten

Det finns många fördelar med att ha gemensamma tekniska regler för bl a säkerhet, prestanda, dokumentation, utförande och skötsel av elprodukter, elanläggningar och metoder. Genom att utforma sådana standarder blir säkerhetskraven tydliga och utvecklingskostnaderna rimliga samtidigt som marknadens acceptans för produkten eller tjänsten ökar.

Många standarder inom elområdet beskriver tekniska lösningar och metoder som åstadkommer den elsäkerhet som föreskrivs av svenska myndigheter och av EU.

SEK är Sveriges röst i standardiseringsarbetet inom elområdet

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Stora delar av arbetet sker internationellt

Utformningen av standarder sker i allt väsentligt i internationellt och europeiskt samarbete. SEK är svensk nationalkommitté av International Electrotechnical Commission (IEC) och Comité Européen de Normalisation Electrotechnique (CENELEC).

Standardiseringsarbetet inom SEK är organiserat i referensgrupper bestående av ett antal tekniska kommittéer som speglar hur arbetet inom IEC och CENELEC är organiserat.

Arbetet i de tekniska kommittéerna är öppet för alla svenska organisationer, företag, institutioner, myndigheter och statliga verk. Den årliga avgiften för deltagandet och intäkter från försäljning finansierar SEKs standardiseringsverksamhet och medlemsavgift till IEC och CENELEC.

Var med och påverka!

Den som deltar i SEKs tekniska kommittéarbete har möjlighet att påverka framtida standarder och får tidig tillgång till information och dokumentation om utvecklingen inom sitt teknikområde. Arbetet och kontakterna med kollegor, kunder och konkurrenter kan gynnsamt påverka enskilda företags affärsutveckling och bidrar till deltagarnas egen kompetensutveckling.

Du som vill dra nytta av dessa möjligheter är välkommen att kontakta SEKs kansli för mer information.

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EUROPEAN STANDARD **EN 61140**

NORME EUROPÉENNE

EUROPÄISCHE NORM March 2002

ICS 13.260;29.020;91.140.50 Supersedes EN 61140:2001

English version

Protection against electric shock – Common aspects for installation and equipment
(IEC 61140:2001)

Protection contre les chocs électriques - Aspects communs aux installations et aux matériels
(CEI 61140:2001)

Schutz gegen elektrischen Schlag - Gemeinsame Anforderungen für Anlagen und Betriebsmittel
(IEC 61140:2001)

This European Standard was approved by CENELEC on 2001-12-04. 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, Malta, 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 61140:2002 E

SEK Svensk Elstandard

Foreword

The text of document 64/1191/FDIS, future edition 3 of IEC 61140, prepared by IEC TC 64, Electrical installations and protection against electric shock, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61140 on 2001-12-04.

This European Standard supersedes EN 61140:2001.

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) 2003-08-01

– latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2004-12-01

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 annexes A, B, C and ZB are informative.
Annexes ZA and ZB have been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61140:2001 was approved by CENELEC as a European Standard without any modification.

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 60050-131	- [1)]	International Electrotechnical Vocabulary (IEV) Chapter 131: Electric and magnetic circuits	-	-
IEC 60050-195	1998	Chapter 195: Earthing and protection against electric shock	-	-
A1	2001		-	-
IEC 60050-351	1998	Part 351: Automatic control	-	-
IEC 60050-826	1982	Chapter 826: Electrical installations of buildings	-	-
A2	1995		HD 384.2 S2	2001 [2)]
IEC 60071-1	1993	Insulation co-ordination Part 1: Definitions, principles and rules	EN 60071-1	1995
IEC 60071-2	1996	Part 2: Application guide	EN 60071-2	1997
IEC 60364-4-41 (mod)	- [1)]	Electrical installations of buildings Part 4: Protection for safety - Chapter 41: Protection against electric shock	HD 384.4.41 S2	1996 [3)]
IEC 60364-4-443 (mod)	1995	Part 4: Protection for safety - Chapter 44: Protection against overvoltages - Section 443: Protection against overvoltages of atmospheric origin or due to switching	HD 384.4.443 S1	2000

1) Undated reference.

2) HD 384.2 S2 includes A1:1990 + A2:1995 + A3:1999 to IEC 60050-826.

3) Valid edition at date of issue.

Publication	Year	Title	EN/HD	Year
IEC 60364-5-54 (mod)	1980	Part 5: Selection and erection of electrical equipment - Chapter 54: Earthing arrangements and protective conductors	HD 384.5.54 S1	1988
IEC 60364-6-61 (mod)	1986	Part 6: Verification - Chapter 61: Initial verification	HD 384.6.61 S1	1992
IEC 60417-2	- [1)]	Graphical symbols for use on equipment Part 2: Symbol originals	EN 60417-2	1999 [3)]
IEC 60446	1999	Basic and safety principles for man-machine interface, marking and identification - Identification of conductors by colours or numerals	EN 60446	1999
IEC 60479-1	1994	Effects of current on human beings and livestock Part 1: General aspects	-	-
IEC 60529	1989	Degrees of protection provided by enclosures (IP Code)	EN 60529 + corr. May	1991 1993
IEC 60601	Series	Medical electrical equipment	EN 60601	Series
IEC 60601-1	1988	Medical electrical equipment Part 1: General requirements for safety	EN 60601-1 + corr. July	1990 1994
IEC 60664-1 (mod)	1992	Insulation coordination for equipment within low-voltage systems Part 1: Principles, requirements and tests	HD 625.1 S1 + corr. November	1996 1996
IEC 60721	Series	Classification of environmental conditions	EN 60721	Series
IEC 60990	1999	Methods of measurement of touch current and protective conductor current	EN 60990	1999
IEC 61201	1992	Extra-low-voltage (ELV) - Limit values	-	-
ISO/IEC Guide 51	1999	Safety aspects - Guidelines for their inclusion in standards	-	-
IEC Guide 104	1997	The preparation of safety publications and the use of basic safety publications and group safety publications	-	-

CONTENTS

INTRODUCTION

This International Standard is a Basic Safety Publication intended for use by technical committees in the preparation of standards in accordance with the principles of IEC Guide 104 and ISO/IEC Guide 51.

PROTECTION AGAINST ELECTRIC SHOCK – COMMON ASPECTS FOR INSTALLATION AND EQUIPMENT

1 Scope

This International Standard applies to the protection of persons and animals against electric shock. It is intended to give fundamental principles and requirements which are common to electrical installations, systems and equipment or necessary for their co-ordination.

This standard has been prepared for installations, systems and equipment without a voltage limit.

NOTE There are some clauses in this standard which refer to low-voltage and high-voltage systems, installations and equipment. For the purpose of this standard, low -voltage is any rated voltage up to and including 1 000 V a.c. or 1 500 V d.c. High voltage is any rated voltage exceeding 1 000 V a.c. or 1 500 V d.c.

The requirements of this standard apply only if they are incorporated, or are referred to, in the relevant standards. It is not intended to be used as a stand-alone standard.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 60050(131): *International Electrotechnical Vocabulary (IEV) – Chapter 131: Electric and magnetic circuits*

IEC 60050(195): 1998, *International Electrotechnical Vocabulary (IEV) – Part 195: Earthing and protection against electric shock*
Amendment 1 (2001)

IEC 60050(351):1998, *International Electrotechnical Vocabulary – Part 351: Automatic control*

IEC 60050(826):1982, *International Electrotechnical Vocabulary – Chapter 826: Electrical installations of buildings*
Amendment 2 (1995)

IEC 60071-1:1993, *Insulation co-ordination – Part 1: Definitions, principles and rules*

IEC 60071-2:1996, *Insulation co-ordination – Part 2: Application guide*

IEC 60364-4-41, *Electrical installations of buildings – Part 4: Protection for safety – Chapter 41: Protection against electric shock*

IEC 60364-4-443:1995, *Electrical installations of buildings – Part 4: Protection for safety – Chapter 44: Protection against overvoltages – Section 443: Protection against overvoltages of atmospheric origin or due to switching*

IEC 60364-5-54:1980, *Electrical installations of buildings – Part 5: Selection and erection of electrical equipment – Chapter 54: Earthing arrangements and protective conductors*

IEC 60364-6-61:1986, *Electrical installations of buildings – Part 6: Verification – Chapter 61: Initial verification*

IEC 60417-2, *Graphical symbols for use on equipment – Part 2: Symbol originals*

IEC 60446:1999, *Basic and safety principles for man-machine interface, marking and identification – Identification of conductors by colours or numerals*

IEC 60479-1:1994, *Effects of current on human beings and livestock – Part 1: General aspects*

IEC 60529:1989, *Degrees of protection provided by enclosures (IP Code)*

IEC 60601 (all parts), *Medical electrical equipment*

IEC 60601-1:1988, *Medical electrical equipment – Part 1: General requirements for safety*

IEC 60664-1:1992, *Insulation co-ordination for equipment within low-voltage systems – Part 1: Principles, requirements and tests*

IEC 60721 (all parts), *Classification of environmental conditions*

IEC 60990:1999, *Methods of measurement of touch current and protective conductor current*

IEC 61201:1992, *Extra-low-voltage (ELV) – Limit values*

ISO/IEC Guide 51:1999, *Safety aspects – Guidelines for their inclusion in standards*

IEC Guide 104:1997, *The preparation of safety publications and the use of basic safety publications and group safety publications*