EESTI STANDARD EVS-EN 50090-2-2:2001

Olme- ja hooneelektroonikasüsteemid. Osa 2-2: Süsteemi ülevaade. Üldtehnilised nõuded

Home and building electronic systems (HBES) - Part 2-2: System overview - General technical requirements

EESTI STANDARDIKESKUS

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 50090-2-2:2001 sisaldab Euroopa standardi EN 50090-2-2:1996+AC:1997 ingliskeelset teksti. Käesolev dokument on jõustatud 16.04.2001 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes. Standard on kättesaadav Eesti standardiorganisatsioonist.	This Estonian standard EVS-EN 50090-2-2:2001 consists of the English text of the European standard EN 50090-2-2:1996+AC:1997. This document is endorsed on 16.04.2001 with the notification being published in the official publication of the Estonian national standardisation organisation. The standard is available from Estonian standardisation organisation.

Käsitlusala: This standard defines the general technical requirements of a Home and Building Electronic System (HBES) based on SELV or PELV. It concerns cabling and topology, electrical and functional safety, environmental conditions and behaviour in case of failures as well as specific HBES installation rules. The HBES includes also the interfaces of devices and equipment providing connection to the HBES. Parts of devices and equipment not providing HBES functionality are not included. For such parts the relevant product standards apply.	**Scope:** This standard defines the general technical requirements of a Home and Building Electronic System (HBES) based on SELV or PELV. It concerns cabling and topology, electrical and functional safety, environmental conditions and behaviour in case of failures as well as specific HBES installation rules. The HBES includes also the interfaces of devices and equipment providing connection to the HBES. Parts of devices and equipment not providing HBES functionality are not included. For such parts the relevant product standards apply.

ICS 97.120

Võtmesõnad: home and building electronic systems (hbes), home electronic systems open systems interconnecti

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 50090-2-2

November 1996

ICS 97.120

Descriptors: Home and building electronic systems (HBES), home electronic systems, open system interconnection

English version

Home and building electronic systems (HBES)
Part 2-2: System overview - General technical requirements

Systèmes électroniques pour les foyers domestiques et les bâtiments (HBES)
Partie 2-2: Vue d'ensemble du système
Exigences techniques générales

Elektrische Systemtechnik für Heim und Gebäude (ESHG)
Teil 2-2: Systemübersicht
Allgemeine technische Anforderungen

This European Standard was approved by CENELEC on 1996-10-01. 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, 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 50090-2-2:1996 E

Foreword

This European Standard has been prepared by Technical Committee CENELEC TC 205, Home and Building Electronic Systems (HBES).

This European Standard has been prepared under a mandate given to CENELEC by the European Commission and covers the essential requirements of the following EC Directives.

- Low Voltage Directive 73/23/EEC;
- EMC Directive 89/336/EEC and its amendments 92/31/EEC and 93/68/EEC.

This European Standard should also be used as family standard; it is also addressed to product committees, which are free to adopt it for their needs.

The text of the draft was submitted to the formal vote and was approved by CENELEC as EN 50090-2-2 on 1996-10-01.

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) 1997-06-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) -

EN 50090-2-2 is part of the EN 50090 series of European Standards, which will comprise the following parts:

Part 1: Standardization structure

Part 2: System overview

Part 3: Aspects of application

Part 4: Transport layer and network layer

Part 5: Media and media dependent layers

Part 6: Interfaces

Part 7: System Management

Contents

1 Scope

This European standard defines the general technical requirements of a Home and Building Electronic System (HBES) based on SELV or PELV. It concerns cabling and topology, electrical and functional safety, environmental conditions and behaviour in case of failures as well as specific HBES installation rules.

The HBES includes also the interfaces of devices and equipment providing connection to the HBES. Parts of devices and equipment not providing HBES functionality are not included. For such parts the relevant product standards apply.

NOTE: Reference is made also to CENELEC Technical Report R205-002.

2 Normative references

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.

EN 29646-1	Information technology - Open Systems Interconnection - Conformance testing methodology and framework -- Part 1: General concepts (ISO/IEC 9646-1:1994)
EN 45001	General criteria for the operation of testing laboratories
EN 45011	General criteria for certification bodies operating product certification
EN 50081-1	Electromagnetic compatibility - Generic emission standard -- Part 1: Residential, commercial and light industry
EN 50082-1	Electromagnetic compatibility - Generic immunity standard -- Part 1: Residential, commercial and light industry
EN 50090-2-1	Home and Building Electronic Systems (HBES) -- Part 2-1: System overview - Architecture
EN 55022	Limits and methods of measurement of radio disturbance characteristics of information technology equipment (IEC/CISPR 22:1993)
EN 60068-2-1	Environmental testing -- Part 2: Tests - Tests A: Cold (IEC 68-2-1:1990)
EN 60068-2-2	Basic environmental testing procedures -- Part 2: Tests - Tests B: Dry heat (IEC 68-2-2:1974 + IEC 68-2-2A:1976)
EN 60068-2-6	Environmental testing -- Part 2: Tests - Test Fc: Vibration (sinusoidal) (IEC 68-2-6:1995 + corrigendum March 1995)
EN 60068-2-27	Basic environmental testing procedures -- Part 2: Tests - Test Ea and guidance: Shock (IEC 68-2-27:1987)
EN 60721-3-3	Classification of environmental conditions -- Part 3: Classification of groups of environmental parameters and their severities -- Section 3: Stationary use at weatherprotected locations (IEC 721-3-3:1994)
ENV 61000-2-2	Electromagnetic compatibility (EMC) -- Part 2: Environment -- Section 2: Compatibility levels for low-frequency conducted disturbances and signalling in public low-voltage power supply systems (IEC 1000-2-2:1990, modified)
EN 61000-3-2	Electromagnetic compatibility (EMC) -- Part 3: Limits -- Section 2: Limits for harmonic current emissions (equipment input current up to and including 16 A per phase) (IEC 1000-3-2:1995)
EN 61000-3-3	Section 3: Limitation of voltage fluctuations and flicker in low-voltage supply systems for equipment with rated current up to and including 16 A (IEC 1000-3-3:1994)

EN 61000-4-2	Electromagnetic compatibility (EMC) -- Part 4: Testing and measurement techniques -- Section 2: Electrostatic discharge immunity test (IEC 1000-4-2:1995)
EN 61000-4-3	Section 3: Radiated, radiofrequency, electromagnetic field immunity test (IEC 1000-4-3:1995, modified)
EN 61000-4-4	Section 4: Electrical fast transient/burst immunity test (IEC 1000-4-4:1995)
EN 61000-4-5	Section 5: Surge immunity test (IEC 1000-4-5:1995)
EN 61000-4-6	Section 6: Immunity to conducted disturbances, induced by radio- frequency fields (IEC 1000-4-6:1996)
EN 61000-4-11	Section 11: Voltage dips, short interruptions and voltage variations immunity tests (IEC 1000-4-11:1994)
HD 21.1 S2	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V Part 1: General requirements (IEC 227-1:1979, modified)
HD 21.2 S2	Polyvinyl chloride insulated cables of rated voltages up to and including 450/750 V Part 2: Test methods (IEC 227-2:1979, modified)
HD 323.2.3 S2	Basic environmental testing procedures -- Part 2: Tests - Test Ca: Damp heat, steady state (IEC 68-2-3:1969 + A1:1984)
HD 323.2.14 S2	Basic environmental testing procedures -- Part 2: Tests - Test N: Change of temperature (IEC 68-2-14:1984 + A1:1986)
HD 323.2.30 S3	Basic environmental testing procedures -- Part 2: Tests - Test Db and guidance: Damp heat, cyclic (12+12-hour cycle) (IEC 68-2-30:1980 + A1:1985)
HD 384.4.41 S2	Electrical installations of buildings -- Part 4: Protection for safety -- Chapter 41: Protection against electric shock (IEC 364-4-41:1996, modified)
HD 384.4.43 S1	Electrical installations of buildings -- Part 4: Protection for safety -- Chapter 43: Protection against overcurrent (IEC 364-4-43:1977)
HD 384.5.523 S1	Electrical installations of buildings -- Part 5: Selection and erection of electrical equipment -- Chapter 52: Wiring systems - Section 523: Current-carrying capacities (IEC 364-5-523:1983, modified)
R205-002	Home and Building Electronic Systems - Technical Report 2: Guidelines for the professional installation of twisted pair cables - Class 1
IEC 50(191)	International Eelectrotechnical Vocabulary -- Chapter 191: Dependability and quality of service
IEC 189-2	Low-frequency cables and wire with p.v.c. insulation and p.v.c sheath -- Part 2: Cables in pairs, triples, quads and quintuples for inside installations
IEC 536-2	Classification of electrical and electronic equipment with regard to protection against electric shock - Part 2: Guidelines to requirements for protection against electrical shock
IEC 664-1	Insulation coordination for equipment within low-voltage systems - Part 1: Principles, requirements and tests
IEC 1140	Protection against electric shock- Common aspects for installation and equipment
IEC 1196-1	Radio-frequency cables - Part 1: Generic specification - General definitions, requirements and testing methods
CCITT K.20	Resistibility of telecommunication switching equipment to overvoltages and overcurrents