Madalpingepaigaldistes kasutatavad jõuliinidesse ühendatavad sideaparaadid ja -süsteemid sagedusele 1,6 MHz kuni 30 MHz. Osa 2-1: Olme-, kaubandus- ja tööstuskeskkond. Häiringukindlusnõuded

Power line communication apparatus and systems used in low-voltage installations in the frequency range 1,6 MHz to 30 MHz Part 2-1: Residential, commercial and industrial environment – Immunity requirements

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 50412-2-1:2005 sisaldab Euroopa standardi EN 50412-2-1:2005 ingliskeelset teksti.	This Estonian standard EVS-EN 50412-2-1:2005 consists of the English text of the European standard EN 50412-2-1:2005.
Standard on kinnitatud Eesti Standardikeskuse 28.10.2005 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.	This standard is ratified with the order of Estonian Centre for Standardisation dated 28.10.2005 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.
Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 29.09.2005.	Date of Availability of the European standard text 29.09.2005.
Standard on kättesaadav Eesti standardiorganisatsioonist.	The standard is available from Estonian standardisation organisation.

ICS 33.120.20, 97.120

Võtmesõnad:

EUROPEAN STANDARD **EN 50412-2-1**

NORME EUROPÉENNE

EUROPÄISCHE NORM September 2005

ICS 33.120.20; 97.120

English version

Power line communication apparatus and systems used in low-voltage installations in the frequency range 1,6 MHz to 30 MHz Part 2-1: Residential, commercial and industrial environment – Immunity requirements

Equipements et systèmes de communication par courants porteurs utilisés dans les installations à basse tension dans la gamme de fréquences de 1,6 MHz à 20 MHz Partie 2-1: Environnement résidentiel, commercial et de l'industrie légère – Exigences d'immunité

Kommunikationsgeräte und -systeme auf elektrischen Niederspannungsnetzen im Frequenzbereich 1,6 MHz bis 30 MHz Teil 2-1: Für den Gebrauch in Wohnbereichen, Geschäfts- und Gewerbebereichen sowie in Kleinbetrieben und in industriellen Räumlichkeiten – Störfestigkeitsanforderungen

This European Standard was approved by CENELEC on 2005-04-12. 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, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, 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 50412-2-1:2005 E

Contents

Foreword

This European Standard was prepared by SC 205A, Mains communicating systems, of Technical Committee CENELEC TC 205, Home and Building Electronic Systems (HBES).

The text of the draft was submitted to the Unique Acceptance Procedure and was approved by CENELEC as EN 50412-2-1 on 2005-04-12.

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)	2006-04-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2008-04-01

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 Directive 89/336/EEC. See Annex ZZ.

1 Scope

This standard applies to electrical equipment using signals in the frequency range 1,6 MHz to 30 MHz to transmit information on low voltage electrical systems, either on the public supply system or within installations in consumers' premises.

It does not specify the signal modulation methods nor the coding methods nor functional features. Environmental requirements and tests are not included.

The immunity requirements have been selected so as to ensure an adequate level of immunity for apparatus at residential, commercial and light industrial premises (Class 1 environment), and industrial premises supplied from a dedicated HV/MV or MV/LV transformers (Class 2 environment).

The severity levels required by this standard may not cover extreme cases which may occur in any location but with a low probability of occurrence. In special cases situations will arise where the level of disturbances may exceed the levels specified in this standard (e.g. where a hand-held transmitter is used in proximity to an apparatus). In these instances special mitigation measures may be required.

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.

When the international publication has been modified by CENELEC common modifications indicated by (mod), the relevant EN/HD applies.

IEC Publication	Title	EN/HD
IEC 60050-161	International Electrotechnical Vocabulary – Chapter 161: Electromagnetic compatibility	-
IEC 61000-4-2	Electromagnetic compatibility – Part 4-2: Testing and measurement techniques – Section 2: Electrostatic discharge immunity test	EN 61000-4-2
IEC 61000-4-3	Electromagnetic compatibility (EMC) – Part 4-3: Testing and measurement techniques – Radiated, radio-frequency electromagnetic field, immunity test	EN 61000-4-3
IEC 61000-4-4	Electromagnetic compatibility (EMC) – Part 4-4: Testing and measurement techniques – Electrical fast/transient burst immunity test	EN 61000-4-4
IEC 61000-4-5	Electromagnetic compatibility (EMC) – Part 4-5: Testing and measurement techniques – Surge immunity test	EN 61000-4-5
IEC 61000-4-6	Electromagnetic compatibility (EMC) – Part 4-6: Testing and measurement techniques – Conducted disturbances induced by radio-frequency fields – Immunity test	EN 61000-4-6

IEC 61000-4-8	Electromagnetic compatibility (EMC) – Part 4-8: Testing and measurement techniques – Power-frequency magnetic field immunity test	EN 61000-4-8
IEC 61000-4-11	Electromagnetic compatibility (EMC) – Part 4-11: Testing and measurement techniques – Voltage dips, short interruptions and voltage variations immunity test	EN 61000-4-11
IEC 61000-6-1	Electromagnetic compatibility (EMC) – Part 6-1: Generic standards – Immunity for residential, commercial and light-industrial environments	EN 61000-6-1
IEC 61000-6-2	Electromagnetic compatibility (EMC) – Part 6-2: Generic standards – Immunity for industrial environments	EN 61000-6-2

3 Definitions and abbreviations

3.1 Definitions

Definitions related to EMC and to relevant phenomena may be found in the EC Council Directives, in chapter 161 of the IEV (IEC 60050) and in IEC and CISPR publications. The definitions stated in EC Council Directive 89/336/EEC on the approximation of the laws of the Member States relating to Electromagnetic Compatibility take precedence. The following particular definitions are used in this standard.

3.1.1
port
particular interface of the specified apparatus with the external electromagnetic environment (see Figure 1)

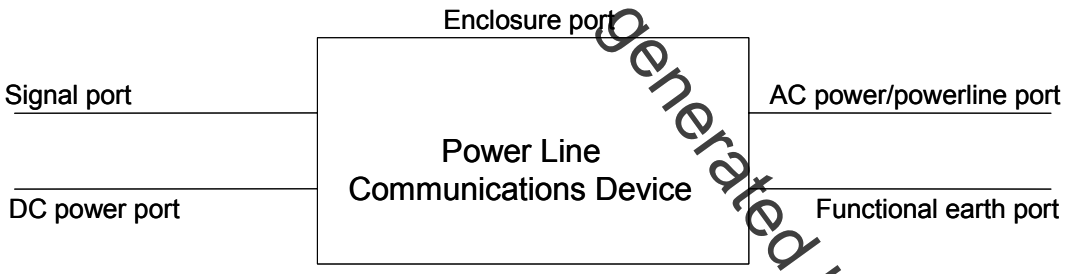

Figure 1 - Description of ports

3.1.2
degradation
the unwanted change in operational performance of a EUT due to electromagnetic disturbances. This does not necessarily mean malfunction or catastrophic failure

3.1.3
enclosure port
the physical boundary of the equipment through which electromagnetic fields may radiate or impinge. For plug in units, the physical boundary will by the host unit.

3.1.4
cable port
a point at which a conductor or a cable is connected to the equipment