

**Signalisatsioon madalpinge-  
elektripaigaldistekaudu sagedusalal 3  
kHz kuni 148,5 kHz. Osa 4-2:  
Madalpingelised lahtisidestusfiltrid.  
Ohutusnõuded**

Signalling on low voltage electrical installations in  
the frequency range 3 kHz to 148,5 kHz - Part 4-2:  
Low-voltage decoupling filters; Safety requirements

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 50065-4-2:2002 sisaldab Euroopa standardi EN 50065-4-2:2001 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 18.12.2002 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 50065-4-2:2002 consists of the English text of the European standard EN 50065-4-2:2001.</p> <p>This document is endorsed on 18.12.2002 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p><b>Käsitlusala:</b></p> <p>This product safety standard applies to electrical equipment, such as decoupling filters and phase couplers in a mains communication system for a phase to neutral voltage not exceeding AC 250 V and a nominal current not exceeding 125 A, intended for household and similar fixed-electrical installations including residential, commercial and light industrial buildings</p>	<p><b>Scope:</b></p> <p>This product safety standard applies to electrical equipment, such as decoupling filters and phase couplers in a mains communication system for a phase to neutral voltage not exceeding AC 250 V and a nominal current not exceeding 125 A, intended for household and similar fixed-electrical installations including residential, commercial and light industrial buildings</p>
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**Võtmesõnad:** definition, definitions, electrical installations, low voltage installati, low voltage mains, low-voltage installations, safety requirements, signal transmission, specification, specification (approval), specifications

**Signalling on low voltage electrical installations  
in the frequency range 3 kHz to 148,5 kHz  
Part 4-2: Low voltage decoupling filters -  
Safety requirements**

Transmission de signaux sur les réseaux  
électriques basse tension dans la bande  
de fréquences de 3 kHz à 148,5 kHz  
Partie 4-2: Filtres basse tension de  
découplage -  
Exigences de sécurité

Signalübertragung auf elektrischen  
Niederspannungsnetzen im  
Frequenzbereich 3 kHz bis 148,5 kHz  
Teil 4-2: Niederspannungs-  
Entkopplungsfilter -  
Sicherheitsanforderungen

This European Standard was approved by CENELEC on 2000-11-01. 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.

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## 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**

## Foreword

This European Standard was prepared by SC 205A, Mains communicating systems, of 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 Low Voltage Directive 73/23/EEC.

The text of the draft was submitted to the Unique Acceptance Procedure and was approved by CENELEC as EN 50065-4-2 on 2000-11-01.

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) 2002-02-01
- latest date by which the national standards conflicting  
with the EN have to be withdrawn (dow) 2003-11-01

EN 50065 consists of the following parts, under the general title: Signalling on low voltage electrical installations in the frequency range 3 kHz to 148,5 kHz

Part 1	General requirements, frequency bands and electromagnetic disturbances
Part 2-1	Immunity requirements for mains communications equipment and systems operating in the range of frequencies 95 kHz to 148,5 kHz and intended for use in residential, commercial and light industrial environments
Part 2-2	Immunity requirements for mains communications equipment and systems operating in the range of frequencies 95 kHz to 148,5 kHz and intended for use in industrial environments
Part 2-3	Immunity requirements for mains communications equipment and systems operating in the range of frequencies 3 kHz to 95 kHz and intended for use by electricity suppliers and distributors
Part 4-1	Low voltage decoupling filters – Generic specification
Part 4-2	Low voltage decoupling filters – Safety requirements
Part 4-3	Low voltage decoupling filters – Incoming filter
Part 4-4	Low voltage decoupling filters – Impedance filter
Part 4-5	Low voltage decoupling filters – Segmentation filter
Part 4-6	Low voltage decoupling filters – Phase coupler
Part 7	Equipment impedance

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## 1 Scope

This product safety standard applies to electrical equipment, such as decoupling filters and phase couplers in a mains communication system for a phase to neutral voltage not exceeding AC 250 V and a nominal current not exceeding 125 A, intended for household and similar fixed-electrical installations including residential, commercial and light industrial buildings

## 2 Normative references

This European Standard incorporated 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 updated references the latest edition of the publication referred to applies.

EN 60065		Audio, video and similar electronic apparatus – Safety requirements (IEC 60065)
EN 60068-2-75	1997	Environmental testing – Part 2-75: Tests – Test Eh Hammer tests (IEC 60068-2-75:1997)
EN 60127	series	Miniature fuses (IEC 60127 series)
EN 60417	series	Graphical symbols for use on equipment (IEC 60417 series)
EN 60529		Degrees of protection provided by enclosures (IP code) (IEC 60529)
EN 60669-1	1999	Switches for household and similar fixed electrical installations – Part 1: General requirements (IEC 60669-1:1998, mod.)
EN 60695-2-1/X	1996	Fire hazard testing- Part 2: Test methods (IEC 60695-2-1/X:1994)
EN 60721-3-3	1995	Classification of environmental conditions – Part 3: Classification of groups of environmental parameters and their severities – Section 3: Stationary use at weather protected locations (IEC 60721-3-3:1994)
EN 60999-1	2000	Connecting devices – Safety requirements for screw-type and screwless-type clamping units for electrical copper conductors – Part 1: General requirements and particular requirements for conductors from 0,5 mm <sup>2</sup> up to 35 mm <sup>2</sup> (included) (IEC 60999-1:1999)
EN 132400	1994	Sectional Specification: Fixed capacitors for electromagnetic interference suppression and connection to the supply mains (Assessment level D)
HD 214 S2	1980	Method of determining the comparative and the proof tracking indices of solid insulating materials under moist conditions (IEC 60112:1979)
HD 384.4.442 S1	1997	Electrical installations of buildings – Part 4: Protection for safety – Chapter 44 Protection against overvoltages - Section 442: Protection of low-voltage installations against faults between high-voltage systems and earth (related to IEC 60364-4-442:1993 + A1:1995)
HD 625.1 S1	1996	Insulation coordination for equipment within low-voltage systems – Part 1: Principles, requirements and tests (IEC 60664-1:1992, mod.)
IEC 60695-10-2	1995	Fire hazard testing – Part 10: Guidance and test methods for the minimisation of the effects of abnormal heat on electrotechnical products involved in fires – Section 2 Method for testing products made from non-metallic materials for resistance to heat using the ball pressure test

IEC 60999-2      1995      Connecting devices – Safety requirements for screw-type and screw-less clamping units for electrical copper conductors – Part 2: Particular requirements for conductors from 35 mm<sup>2</sup> up to 300 mm<sup>2</sup>

### 3 Definitions

Where the term's voltage and current are used, they imply r.m.s. values, unless otherwise specified.

For the purpose of this standard, the following definitions apply:

#### 3.1

##### **decoupling filter**

a device which attenuates incoming or outgoing signals within a specified frequency range

#### 3.2

##### **phase coupler**

a device which transmits a signal within a specified frequency range from one phase to another in a multi-phase installation

#### 3.3

##### **fault conditions**

abnormal conditions which may occur during normal operation

#### 3.4

##### **enclosed equipment**

equipment which is mounted and/or applied without an additional enclosure

#### 3.5

##### **unenclosed equipment**

equipment intended to be built into an enclosure which completely covers the equipment

#### 3.6

##### **partly enclosed equipment**

equipment intended to be built into an appropriate enclosure which only covers the unenclosed part of the equipment

NOTE Flush-mounted equipment intended to be located in a box is an example of such equipment.

#### 3.7

##### **terminal**

the conductive part of one pole, composed of one or more clamping unit(s) and insulation if necessary

#### 3.8

##### **screw-type terminal**

a clamping unit for the connection and subsequent disconnection of one conductor or the interconnection and subsequent disconnection of two or more conductors, the connection being made, directly or indirectly, by means of screws or nuts of any kind

#### 3.9

##### **screwless-type terminal**

a clamping unit for the connection and subsequent disconnection of one conductor or the interconnection and subsequent disconnection of two or more conductors, the connection being made, directly or indirectly, by means other than screws

#### 3.10

##### **nominal voltage**

the voltage assigned to the equipment by the manufacturer

#### 3.11

##### **nominal current**

the nominal maximum operating current assigned to the equipment by the manufacturer

#### 3.12

##### **conditional short-circuit current**

a value of the AC component of a prospective current, which the equipment protected by a suitable short-circuit protective device (hereafter referred to as SCPD) in series can withstand under specified conditions of use and behaviour.