

**Signalling on low voltage electrical installations in the frequency range 3 kHz to 148,5 kHz - Part 4-4: Low voltage decoupling filter - Impedance filter**

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## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 50065-4-4:2003 sisaldab Euroopa standardi EN 50065-4-4:2003 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 08.05.2003 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 50065-4-4:2003 consists of the English text of the European standard EN 50065-4-4:2003.</p> <p>This document is endorsed on 08.05.2003 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 standard applies to impedance filters in a mains communication system for phase to neutral voltage not exceeding 250 V a.c. and a nominal current not exceeding 125 A, intended for household and similar fixed installation including residential, commercial and light industrial buildings. This standard also applies to "plug-in filters"</p>	<p><b>Scope:</b></p> <p>This standard applies to impedance filters in a mains communication system for phase to neutral voltage not exceeding 250 V a.c. and a nominal current not exceeding 125 A, intended for household and similar fixed installation including residential, commercial and light industrial buildings. This standard also applies to "plug-in filters"</p>
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**ICS** 31.160, 33.040.30, 97.120

**Võtmesõnad:** band of frequencies, decoupling, electrical engineering, filters, frequencies, frequency ranges, impedance, low voltage, low voltage mains, output signals, radio disturbances, signal transmission, specification (approval), specifications, voltage

**Signalling on low-voltage electrical installations in the frequency  
range 3 kHz to 148,5 kHz  
Part 4-4: Low voltage decoupling filter -  
Impedance filter**

Transmission de signaux sur les réseaux  
électriques basse tension dans la bande  
de fréquences de 3 kHz à 148,5 kHz  
Partie 4-4: Filtres basse tension  
de découplage -  
Filtre d'impédance

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

This European Standard was approved by CENELEC on 2002-04-01. 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).

The text of the draft was submitted to the Unique Acceptance Procedure and was approved by CENELEC as EN 50065-4-4 on 2002-04-01.

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) 2003-08-01
- latest date by which the national standards conflicting  
with the EN have to be withdrawn (dow) 2005-04-01

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 standard applies to impedance filters in a mains communication system for phase to neutral voltage not exceeding 250 V a.c. and a nominal current not exceeding 125 A, intended for household and similar fixed installation including residential, commercial and light industrial buildings. This standard also applies to "plug-in filters".

These filters (see Figure 1) are used to set a suitable impedance, in the nominal frequency range of the mains signalling system, at any point of the low voltage mains network where a low impedance equipment is connected, in order to allow reliable operation of mains signalling system.

These impedance filters can be used either in utility or consumer networks. They may also be used in conjunction with incoming filters and segmentation filters.

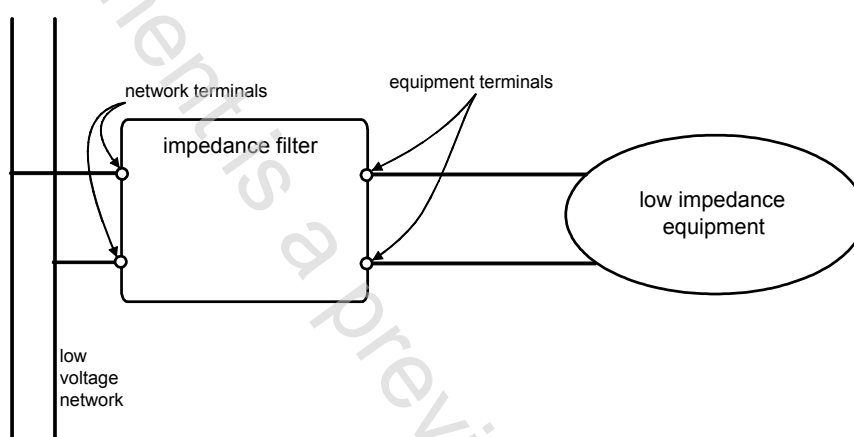


Figure 1 - The application of impedance filters

## 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 (including amendments).

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|--------------|---|
| EN 50065-2-1 | Signalling on low-voltage electrical installations in the frequency range 3 kHz to 148,5 kHz – 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 |
| EN 50065-2-2 | Signalling on low-voltage electrical installations in the frequency range 3 kHz to 148,5 kHz – 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                                   |
| EN 50065-2-3 | Signalling on low-voltage electrical installations in the frequency range 3 kHz to 148,5 kHz – 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                        |