



**Irish Standard**  
**I.S. EN 50065-4-4:2023**

**Version 2.00**

**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**

## I.S. EN 50065-4-4:2023 V2.00

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NSAI  
1 Swift Square  
Northwood, Santry  
Dublin 9  
D09 A0E4  
+353 1 807 3800  
standards@nsai.ie  
[NSAI.ie](https://www.nsa.ie)

Sales  
+353 1 857 6730  
[Standards.ie](https://www.nsa.ie)

Údarás um Chaighdeán Náisiúnta na hÉireann

## **National Foreword**

I.S. EN 50065-4-4:2023 V2.00 is the version of the NSAI adopted European document EN 50065-4-4:2023, *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*, including any Corrections, Amendments etc. to EN 50065-4-4:2023.

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EUROPEAN STANDARD

**EN 50065-4-4**

NORME EUROPÉENNE

EUROPÄISCHE NORM

March 2023

ICS 31.160; 33.040.30; 97.120

Supersedes EN 50065-4-4:2003

English Version

**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 de découplage basse tension - Filtre d'impédance

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

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Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

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European Committee for Electrotechnical Standardization  
Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

**EN 50065-4-4:2023 (E)**

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## European foreword

This document (EN 50065-4-4:2023) has been prepared by WG 12 “Filters” of CLC/TC 219 “Mains communicating systems”.

The following dates are fixed:

- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2023-09-24
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2026-03-24

This document supersedes EN 50065-4-4:2003 and all of its amendments and corrigenda (if any).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC shall not be held responsible for identifying any or all such patent rights.

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 4-7: Portable low voltage decoupling filters – Safety requirements

Part 7: Equipment impedance

This document has been prepared under a Standardization Request given to CENELEC by the European Commission and the European Free Trade Association.

Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website.

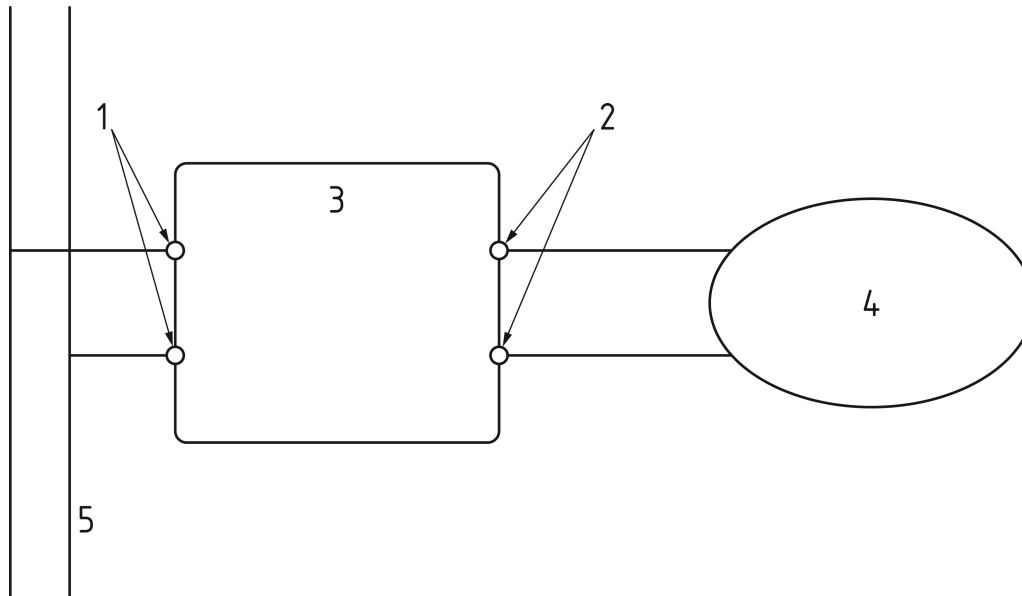
## EN 50065-4-4:2023 (E)

## 1 Scope

This document applies to impedance filters in a mains communication system, intended for utility networks or household and similar fixed installation including residential, commercial and light industrial buildings.

These filters 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, as shown in Figure 1, in order to allow reliable operation of the mains signalling system.

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

**Key**

- |   |                         |
|---|-------------------------|
| 1 | network terminals       |
| 2 | equipment terminals     |
| 3 | impedance filter        |
| 4 | low impedance equipment |
| 5 | low voltage network     |

**Figure 1 — The application of impedance filters**

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

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*



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