

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

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 50065-4-3:2023 sisaldab Euroopa standardi EN 50065-4-3:2023 ingliskeelset teksti.	This Estonian standard EVS-EN 50065-4-3:2023 consists of the English text of the European standard EN 50065-4-3:2023.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation and Accreditation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 24.03.2023.	Date of Availability of the European standard is 24.03.2023.
Standard on kättesaadav Eesti Standardimis-ja Akrediteerimiskeskusest.	The standard is available from the Estonian Centre for Standardisation and Accreditation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 31.160, 33.040.30, 97.120

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardimis- ja Akrediteerimiskeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardimis-ja Akrediteerimiskeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardimis-ja Akrediteerimiskeskusega: Koduleht www.evs.ee; telefon 605 5050; e-post info@evs.ee

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation and Accreditation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation and Accreditation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation and Accreditation:

Homepage www.evs.ee; phone +372 605 5050; e-mail info@evs.ee

English Version

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

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

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

This European Standard was approved by CENELEC on 2022-10-03. 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 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.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.



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

Contents	Page
European foreword.....	3
1 Scope.....	4
2 Normative references.....	4
3 Terms and definitions	5
4 Classification	5
4.1 General.....	5
4.2 Type 1.....	5
4.3 Type 2.....	5
4.4 Type 3.....	5
5 Incoming filter electrical characteristics	5
5.1 General.....	5
5.2 Immunity for EMC	5
5.3 Operating frequency range.....	6
5.4 Impedance	6
5.5 Transfer function	6
6 Safety.....	6

European foreword

This document (EN 50065-4-3:2023) 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 50065-4-3:2003 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.

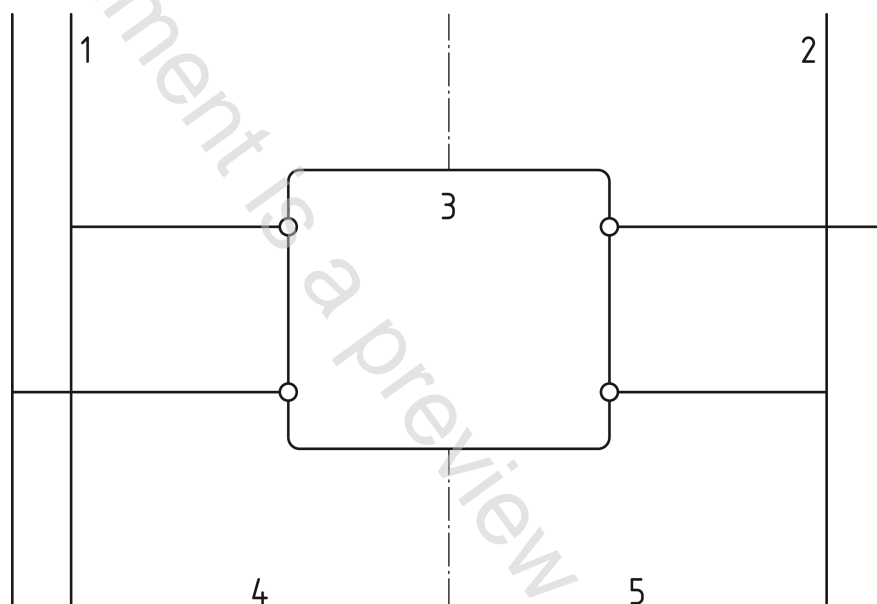
1 Scope

This document applies to incoming filters used to control the coupling of signals between the utility area and the consumer area, as illustrated in Figure 1.

This document defines:

- the minimum impedance in the relevant frequency band(s) at both utility port and consumer port,
- the minimum attenuation of unwanted signals transmitted from the utility side to the consumer side and vice versa.

This document applies to incoming filters designed for single or multiphase installations.



Key

- 1 utility network
- 2 consumer network
- 3 incoming filter
- 4 utility area
- 5 consumer area

Figure 1 — The application of incoming filter

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*

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*

EN 50065-4-1:2001, *Signalling on low-voltage electrical installations in the frequency range 3 kHz to 148,5 kHz - Part 4-1: Low voltage decoupling filters - Generic specification*

EN 50065-4-2, *Signalling on low-voltage electrical installations in the frequency range 3 kHz to 148,5 kHz and 1,6 MHz to 30 MHz - Part 4-2: Low voltage decoupling filters - Safety requirements*

EN 50065-4-7, *Signalling on low-voltage electrical installations in the frequency range 3 kHz to 148,5 kHz and 1,6 MHz to 30 MHz - Part 4-7: Portable low voltage decoupling filters - Safety requirements*

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

4 Classification

4.1 General

NOTE The selection of the filter are expected to be made according to the local regulations.

If there are no local regulations, Type 1 shall be used.

4.2 Type 1

Satisfies both the utility and the consumer impedance requirements.

4.3 Type 2

Satisfies only the utility impedance requirements.

4.4 Type 3

Satisfies only the consumer impedance requirements.

5 Incoming filter electrical characteristics

5.1 General

The filter shall meet the requirements given in EN 50065-4-1.

5.2 Immunity for EMC

The filter shall meet the immunity requirements specified in: