SLOVENSKI STANDARD
oSIST prEN 50065-4-5:2021

01-julij-2021

Signalizacija po nizkonapetostnih električnih napeljavah v frekvenčnem območju od 3 kHz do 148,5 kHz - 4-5. del: Nizkonapetostni ločilni filtri - Razčlenjeni filter

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

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

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

Ta slovenski standard je istoveten z: **prEN 50065-4-5**

ICS:

31.160	Električni filtri	Electric filters
33.040.30	Komutacijski in signalizacijski sistem	Switching and signalling systems

oSIST prEN 50065-4-5:2021 **en,fr**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

DRAFT
prEN 50065-4-5

April 2021

ICS

Will supersede EN 50065-4-5:2003 and all of its amendments and corrigenda (if any)

English Version

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

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

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

This draft European Standard is submitted to CENELEC members for enquiry.
Deadline for CENELEC: 2021-07-16.

It has been drawn up by CLC/TC 219.

If this draft becomes a European Standard, 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.

This draft European Standard was established by CENELEC 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, Turkey and the United Kingdom.

Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

Warning : This document is not a European Standard. It is distributed for review and comments. It is subject to change without notice and shall not be referred to as a European Standard.

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

European foreword

This document (prEN 50065-4-5:2021) has been prepared by WG 12 “Filters” of CLC/TC 205A “Mains communicating systems”.

This document is currently submitted to the Enquiry.

The following dates are proposed:

• latest date by which the existence of this document has to be announced at national level	(doa)	dor + 6 months
• latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	dor + 12 months
• latest date by which the national standards conflicting with this document have to be withdrawn	(dow)	dor + 36 months (to be confirmed or modified when voting)

This document will supersede EN 50065-4-5:2003 and all of its amendments and corrigenda (if any).

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

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

1 Scope

This document applies to segmentation 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 control the coupling of signals between two areas of a mains communication system, as illustrated in Figure 1.

This document defines in the relevant frequency range:

— the minimum impedance at both ports of the filter,

— the minimum attenuation of signals transmitted between the ports of the filter.

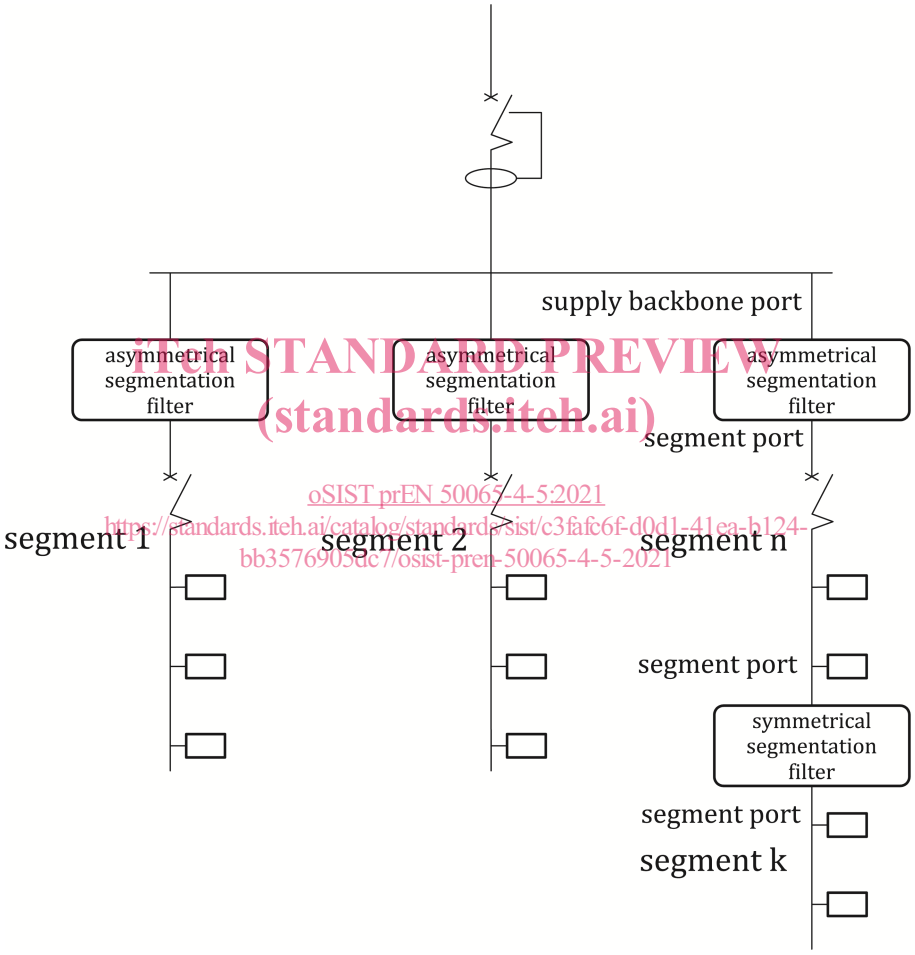

Figure 1 — Application of segmentation filters

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*

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 http://www.electropedia.org/

4 Classification

4.1 Type 1: Asymmetrical filter

This filter has one “supply backbone port” and one “segment port”. The “supply backbone port” and the “segment port” have different impedance characteristics in the operating frequency band and shall not be inverted. Communication may not be possible on the “supply backbone port”.

4.2 Type 2: Symmetrical filter

This filter has two “segment ports”. Both “segment ports” have the same impedance characteristics at the operating frequency band and may be inverted. Usually the ports of a symmetrical segmentation filter are connected to different segments of one mains communication system.

5 Segmentation 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:

— EN 50065-2-1 for segmentation filters in residential, commercial and light industrial environments,

— EN 50065-2-2 for segmentation filters in industrial environments,

— EN 50065-2-3 for segmentation filters in the utility networks.