NSAI
Standards

Irish Standard
I.S. EN 50090-5-1:2020

Home and Building Electronic Systems (HBES) - Part 5-1: Media and media dependent layers - Power line for HBES Class 1

I.S. EN 50090-5-1:2020

Incorporating amendments/corrigenda/National Annexes issued since publication:

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National Foreword

I.S. EN 50090-5-1:2020 is the adopted Irish version of the European Document EN 50090-5-1:2020, Home and Building Electronic Systems (HBES) - Part 5-1: Media and media dependent layers - Power line for HBES Class 1

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 50090-5-1

April 2020

ICS 35.100.10; 35.100.20; 97.120

Supersedes EN 50090-5-1:2005 and all of its amendments and corrigenda (if any)

English Version

Home and Building Electronic Systems (HBES) - Part 5-1: Media and media dependent layers - Power line for HBES Class 1

Systèmes électroniques pour les foyers domestiques et les bâtiments (HBES) - Partie 5-1: Medias et couches dépendantes des medias - Courants porteurs pour HBES Classe 1

Elektrische Systemtechnik für Heim und Gebäude (ESHG) - Teil 5-1: Medien und medienabhängige Schichten - Signalübertragung auf elektrischen Niederspannungsnetzen für ESHG Klasse 1

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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

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European foreword

This document (EN 50090-5-1:2020*)* has been prepared by CLC/TC 205, “Home and Building Electronic Systems (HBES)”[1]

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)	2020-10-24
• latest date by which the national standards conflicting with this document have to be withdrawn	(dow)	2023-04-24

This document will supersede EN 50090-5-1 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 50090-5-1 is part of the EN 50090 series of European Standards, which comprises the following parts:

— Part 1: Standardization structure

— Part 3: Aspects of application

— Part 4: Media independent layers

— Part 5: Media and media dependent layers

— Part 6: Interfaces

— Part 7: System management

NOTE Part 2 has been withdrawn.

[1] This document was prepared with the help of CENELEC co-operation partner KNX Association, De Kleetlaan 5, B-1831 Diegem.

1 Scope

This document defines the mandatory and optional requirements for the medium specific physical and data link layer of power line Class 1 PL110.

Data link layer interface and general definitions, which are medium independent, are given in EN 50090-4-1.

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 50090-1, *Home and Building Electronic Systems (HBES) - Part 1: Standardization structure*

EN 50090-4-2, *Home and Building Electronic Systems (HBES) - Part 4-2: Media independent layers - Transport layer, network layer and general parts of data link layer for HBES Class 1*

EN 50090-5-2, *Home and Building Electronic Systems (HBES) - Part 5-2: Media and media dependent layers - Network based on HBES Class 1, Twisted Pair*

EN 50065-1, *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*

EN 50065-7, *Signalling on low-voltage electrical installations in the frequency range 3 kHz to 148,5 kHz - Part 7: Equipment impedance*

EN 50160, *Voltage characteristics of electricity supplied by public electricity networks*

EN 55016-1-2, *Specification for radio disturbance and immunity measuring apparatus and methods - Part 1-2: Radio disturbance and immunity measuring apparatus - Coupling devices for conducted disturbance measurements (CISPR-16-1-2)*

EN 61643-11, *Low-voltage surge protective devices - Part 11: Surge protective devices connected to low-voltage power systems - Requirements and test methods (IEC 61643-11)*

3 Terms, definitions and symbols

3.1 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 50090-1 and the following apply.

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

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

3.1.1
differential mode
PL signals that are injected between phase and neutral

3.1.2
router
connects one sub-network with another sub-network