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Irish Standard
I.S. EN 13321-1:2012

Open data communication in building automation, controls and building management - Home and building electronic system - Part 1: Product and system requirements

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I.S. EN 13321-1:2012

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 13321-1

October 2012

ICS 35.240.99; 97.120

Supersedes EN 13321-1:2006

English Version

Open data communication in building automation, controls and building management - Home and building electronic system - Part 1: Product and system requirements

Réseau ouvert de communication de données pour l'automatisation, la régulation et la gestion technique du bâtiment - Systèmes électroniques pour la maison et le bâtiment - Partie 1: Spécification des produits et des systèmes

Offene Datenkommunikation für die Gebäudeautomation und Gebäudemanagement - Elektrische Systemtechnik für Heim und Gebäude - Teil 1: Produkt- und Systemanforderungen

This European Standard was approved by CEN on 17 August 2012.

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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 CEN 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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Foreword

This document (EN 13321-1:2012) has been prepared by Technical Committee CEN/TC 247 “Building Automation, Controls and Building Management”, the secretariat of which is held by SNV.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by April 2013, and conflicting national standards shall be withdrawn at the latest by April 2013.

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

This document supersedes EN 13321-1:2006.

Compared to the previous version (EN 13321–1:2006), the following changes have been made:

a) Clause 2 "Normative references" has been added;

b) references to the EN 50090 series have been updated;

c) the new EN 50491 series has been added to the references;

d) EN 50090-6 has been deleted from Clause 3 "Requirements";

e) the references to EN 50090 series and EN 50491 series in Annex A and Annex C have been updated;

f) reference to EN 50090-1 was deleted in Annex D, it is now included in Annex C.

CEN/TC 247, "Building Automation, Controls and Building Management", in collaboration with CENELEC/TC 205 "Home and Building Electronic Systems (HBES)" and its co-operation partner KNX Association, has prepared this document to reference the relevant parts of EN 50090 series. Furthermore, it is also a CEN/TC 247 specification and intended to extend their area of application to Building, Automation and Control Systems (BACS). The patent rights concern mainly series EN 50090. Each part of EN 50090 concerned has patent right information in its Foreword, and for each part concerned, CCMC has received patent right declarations by KNX Association.

EN 13321, *Open data communication in building automation, controls and building management — Home and building electronic system* consists of the following parts:

— *Part 1: Product and system requirements* (the present document);

— *Part 2: KNXnet/IP communication*.

According to the CEN/CENELEC Internal Regulations, the national standards organisations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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Introduction

The permanent objective of CENELEC/TC 205 is to prepare standards for all aspects of Home and Building Electronic Systems (HBES) in relation to the Information Society. Such HBES standards ensure the integration of a wide spectrum of control applications and the control and management aspects of other applications in and around homes and buildings, including the gateways to different transmission media and public networks. Moreover, they take all matters of EMC and electrical and functional safety into account. Hence, they are the pre-condition that conforming products interwork and are installer friendly to facilitate the system designers' and installers' task of providing the necessary networks according to their costumers service needs.

Extending these standardised Home and Building Electronic Systems (HBES) requirements to Building Automation and Control System Application and Building Management (BACS) generates important synergies in functionality and further enhances the economy of scale in this growing, open multivendor market of interoperable BACS products.

This European Standard is intended for use by all involved in design, manufacture, engineering, installation and commissioning activities.

Moreover, and in line with the EU's co-regulatory view of European standardization, this European Standard supports the European objectives and helps users comply with important EU Directives such as the Construction Products Directive and the Energy Performance of Buildings Directive.

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1 Scope

This European Standard specifies, as for Home or Building Electronic Systems (HBES) for the domain of Building Automation and Control System Application and Building Management (BACS), common rules for a class of multi-application bus systems where the functions are decentralised and linked through a common communication process. This European Standard sets the basic requirements for products and systems. The requirements may also apply to the distributed functions of any equipment connected in a home or building control system if no specific standard exists for this equipment or system.

Due to its reference to the EN 50090 series, this European Standard sets requirements for the BACS area in relation to Architecture and Hardware and Application and Communication of systems based on HBES amongst other areas, and specifies the basic requirements for interoperability (between products and systems).

Aspects such as environmental conditions/external influences, electrical safety, EMC, etc. also used to be covered by EN 50090-2-2, which will be superseded by the now available EN 50491 series. The latter European Standards series was jointly developed by CENELEC/TC 205 and CEN/TC 247 and will in the future also include aspects like functional safety in normal use (now contained in the EN 50090-2-3). The EN 50491 series applies, together with the relevant product standard for devices, if applicable.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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 50090-2-2, *Home and Building Electronic Systems (HBES) — Part 2-2: System overview — General technical requirements*

EN 50090-2-3, *Home and Building Electronic Systems (HBES) — Part 2-3: System overview — General functional safety requirements for products intended to be integrated in HBES*

EN 50090-3-1, *Home and Building Electronic Systems (HBES) — Part 3-1: Aspects of application — Introduction to the application structure*

EN 50090-3-2, *Home and Building Electronic Systems (HBES) — Part 3-2: Aspects of application — User process for HBES Class 1*

EN 50090-3-3, *Home and Building Electronic Systems (HBES) — Part 3-3: Aspects of application — HBES Interworking model and common HBES data types*

EN 50090-4-1, *Home and Building Electronic Systems (HBES) — Part 4-1: Media independent layers — Application layer for HBES Class 1*

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 50090-4-3, *Home and Building Electronic Systems (HBES) — Part 4-3: Media independent layers — Communication over IP*

EN 50090-5-1, *Home and Building Electronic Systems (HBES) — Part 5-1: Media and media dependent layers — Power line for HBES Class 1*

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