

General requirements for Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) - Part 1: General requirements

EESTI STANDARDI EESSÕNA

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ICS 97.120

English Version

**General requirements for Home and Building Electronic Systems
(HBES) and Building Automation and Control Systems (BACS) -
Part 1: General requirements**

Exigences générales pour systèmes électroniques pour les
foyers domestiques et les bâtiments (HBES) et pour
systèmes de gestion technique du bâtiment (SGTB) - Partie
1: Exigences générales

Allgemeine Anforderungen an die Elektrische
Systemtechnik für Heim und Gebäude (ESHG) sowie an
Systeme der Gebäudeautomation (GA) -Teil 1: Allgemeine
Anforderungen

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

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Foreword

This document (EN 50491-1:2014) has been prepared by CLC/TC 205 "Home and Building Electronic Systems (HBES)".

The following dates are fixed:

- latest date by which this document has to be (dop) 2015-03-10
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an identical national standard or by
endorsement
- latest date by which the national standards (dow) 2017-03-10
conflicting with this document have to
be withdrawn

EN 50491-1 is part of the EN 50491 series, which comprises the following parts under the generic title *General requirements for Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS)*:

- *Part 1: General requirements;*
- *Part 2: Environmental conditions;*
- *Part 3: Electrical safety requirements;*
- *Part 4-1: General functional safety requirements for products intended to be integrated in Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS);*
- *Part 5-1: EMC requirements, conditions and test set-up;*
- *Part 5-2: EMC requirements for HBES/BACS used in residential, commercial and light industry environment;*
- *Part 5-3: EMC requirements for HBES/BACS used in industry environment;*
- *Part 6-3: HBES installations — Assessment and definition of levels [Technical Report];*
- *Part 11: Smart Metering — Application Specifications — Simple External Consumer Display; (under development);*
- *Part 12: Smart grid — Application specification — Interface and framework for customer (under development).*

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1 Scope

This European Standard applies to all Home and Building Electronic Systems (HBES) and Building Automation Control Systems (BACS) and specifies the general requirements for these systems and products covering the following functionalities:

- HBES class 1: simple control and command;
- HBES class 2: simple voice and stable video transmission including class 1;
- HBES class 3: video transfers including class 2.

This European Standard provides an overview of this series of European Standards.

To enable integration of a wide spectrum of applications, EN 50491 series covers:

- electrical safety,
- functional safety,
- environmental conditions,
- EMC requirements,
- installation and cabling rules and topologies,
- Smart Metering – Application specification (under development),
- Smartgrid — Application specification — Interface and framework (under development).

EN 50491 series is a product family standard.

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 50174-2, *Information technology — Cabling installation — Part 2: Installation planning and practices inside buildings*

EN 50491-2, *General requirements for Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) — Part 2: Environmental conditions*

EN 50491-3, *General requirements for Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) - Part 3: Electrical safety requirements*

EN 50491-4-1, *General requirements for Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) — Part 4-1: General functional safety requirements for products intended to be integrated in Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS)*

EN 50491-5-1, *General requirements for Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) — Part 5-1: EMC requirements, conditions and test set-up*

EN 50491-5-2, *General requirements for Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) — Part 5-2: EMC requirements for HBES/BACS used in residential, commercial and light industry environment*

EN 50491-5-3, *General requirements for Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) — Part 5-3: EMC requirements for HBES/BACS used in industry environment*

CLC/TR 50491-6-3, *General requirements for Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) — Part 6-3: HBES installations — Assessment and definition of levels*

prEN 50491-11, *General requirements for Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) — Part 11: Smart Metering — Application Specifications — Simple External Consumer Display*

prEN 50491-12, *General requirements for Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) — Part 12: Smart grid — Application specification — Interface and framework for customer*

3 Terms, definitions and abbreviations

3.1 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1.1

HBES/BACS network

interconnection between HBES/BACS products, carrying digital data, analogue signals or both. A HBES/BACS system is a combination of HBES/BACS products including their separate connected/detachable devices linked together via one or more HBES/BACS networks

Note 1 to entry: Commonly used names to describe HBES/BACS are “home control network”, “home control systems”, “home and building electronic systems”, “building systems”, “building automation system”, “home automation system” etc.

3.1.2

interface

shared boundary between two implementations of functions belonging to one or more functional groupings

3.1.3

interoperability

ability of devices to exchange commands via the higher layers resulting in meaningful actions, including aspects of the application domain, which by definitions is beyond the OSI domain

3.1.4

service

benefit provided by an interapplication binding, or a local controller or remotely by a Service Provider to a consumer, and using entities and functions of applications that are available to it

3.1.5

cluster

group of applications using the same type of HBES for approximately the same type of information to be exchange driven by the same industrial and market sector