

Kodu- ja hooneelektroonikasüsteemid ja hooneautomaatika- ja hoonejuhtimissüsteemid. Osa 5-2: Elektromagnetilise ühilduvuse nõuded kodu- ja hooneelektroonikasüsteemidele ja hooneautomaatika- ja hoonejuhtimissüsteemidele, mida kasutatakse olme-, kaubandus- ja väiketööstuskeskkondades

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

EESTI STANDARDI EESSÕNA**NATIONAL FOREWORD**

Käesolev Eesti standard EVS-EN 50491-5-2:2010 sisaldab Euroopa standardi EN 50491-5-2:2010 ingliskeelset teksti.	This Estonian standard EVS-EN 50491-5-2:2010 consists of the English text of the European standard EN 50491-5-2:2010.
Standard on kinnitatud Eesti Standardikeskuse 31.05.2010 käskkirjaga ja jõustub sellekohase teate avaldamisel EVS Teatajas.	This standard is ratified with the order of Estonian Centre for Standardisation dated 31.05.2010 and is endorsed with the notification published in the official bulletin of the Estonian national standardisation organisation.
Euroopa standardimisorganisatsioonide poolt rahvuslikele liikmetele Euroopa standardi teksti kättesaadavaks tegemise kuupäev on 23.04.2010.	Date of Availability of the European standard text 23.04.2010.
Standard on kättesaadav Eesti standardiorganisatsioonist.	The standard is available from Estonian standardisation organisation.

ICS 97.120

Standardite reprodutseerimis- ja levitamiseõigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonilisse süsteemi või edastamine ükskõik millises vormis või millisel teel on keelatud ilma Eesti Standardikeskuse poolt antud kirjaliku loata.

Kui Teil on küsimusi standardite autorikaitse kohta, palun võtke ühendust Eesti Standardikeskusega:
Aru 10 Tallinn 10317 Eesti; www.evs.ee; Telefon: 605 5050; E-post: info@evs.ee

Right to reproduce and distribute belongs to the Estonian Centre for Standardisation

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

If you have any questions about standards copyright, please contact Estonian Centre for Standardisation:
Aru str 10 Tallinn 10317 Estonia; www.evs.ee; Phone: 605 5050; E-mail: info@evs.ee

**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**

Exigences générales relatives
aux systèmes électroniques pour
les foyers domestiques et les bâtiments
(HBES) et aux Systèmes de Gestion
Technique du Bâtiment (SGTB) -
Partie 5-2: Exigences CEM relatives
aux HBES/SGTB destinés à être utilisés
en environnement de locaux résidentiels
commerciaux et de petites industries

Allgemeine Anforderungen
an die Elektrische Systemtechnik für Heim
und Gebäude (ESHG) und an Systeme
der Gebäudeautomation (GA) -
Teil 5-2: EMV-Anforderungen
an ESHG/GA für den Gebrauch
in Wohnbereichen, Geschäfts- und
Gewerbebereichen sowie
in Kleinbetrieben

This European Standard was approved by CENELEC on 2010-04-01. 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 Central Secretariat 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 Central Secretariat 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, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

CENELEC

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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

This European Standard was prepared by a joint working group of CLC/TC 205, Home and Building Electronic Systems (HBES) and CEN/TC 247, Building Automation, Controls and Building Management (BACS). It was submitted to the formal vote and was approved by CENELEC as EN 50491-5-2 on 2010-04-01.

This standard supersedes the relevant parts of EN 50090-2-2:1996¹⁾; it is referenced by CEN/TC 247 and CLC/TC 205.

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

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2011-04-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2013-04-01

As a result of the discussions at the CLC/TC 205 meeting on 2004-10-5/6 concerning the structuring of their standards in general parts and open system parts (see CLC/TC 205/Sec0413/INF) the following new parts of EN 50491 under the generic title *“General requirements for Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS)”* under the task of the JWG CEN/TC 247–CLC/TC 205 are proposed:

- Part 2 Environmental conditions;
- Part 3 Electrical safety requirements;
- Part 4-1²⁾ Functional safety requirements (for non safety related systems);
- Part 4-2²⁾ Functional safety requirements (for safety related systems);
- 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.

This European Standard has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association and covers essential requirements of EC Directive EMC Directive 2004/108/EC. See Annex ZZ.

¹⁾ EN 50090-2-2:1996 + Corr. Mar 1997 + A1:2002 + A2:2007, *Home and Building Electronic Systems (HBES) – Part 2-2: System overview – General technical requirements*

²⁾ Under consideration.

Contents

Introduction	4
1 Scope	5
2 Normative references	5
3 Terms, definitions and abbreviations	5
4 General requirements	6
5 Performance criteria	6
6 Standard test conditions	6
7 EMC requirements	7
7.1 Immunity requirements	7
7.2 Emission requirements	11
Annex ZZ (informative) Coverage of Essential Requirements of EC Directives	12
Bibliography	13

Tables

Table 1 – EMC immunity requirements for enclosure	7
Table 2 – EMC immunity requirements for HBES/BACS network port	8
Table 3 – EMC immunity requirements for signal port	9
Table 4 – EMC immunity requirements for DC power ports.....	10
Table 5 – EMC immunity requirements for AC power ports.....	11

Introduction

EN 50491 series deals with developing and testing Home and Building Electronic Systems (HBES) and Building Automation and Control System (BACS).

The expression HBES/BACS covers any combination of HBES and/or BACS products including their separate connected/detachable devices linked together via one or more networks.

Part 5 of this series applies to HBES/BACS devices to ensure a common level of EMC requirements.

This document is a preview generated by EVS

1 Scope

The scope of EN 50491-5-1:2010 applies, with the following modification:

Replace the 3rd paragraph by the following ones:

This is the specific part of EN 50491-5 for HBES/BACS used in residential, commercial and light industry environment.

The environments covered by this standard are residential, commercial and light-industrial locations, according to the definition in EN 61000-6-1.

2 Normative references

The following referenced documents are indispensable for the application 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 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 61000-4-2	Electromagnetic compatibility (EMC) – Part 4-2: Testing and measurement techniques – Electrostatic discharge immunity test (IEC 61000-4-2)
EN 61000-4-3	Electromagnetic compatibility (EMC) – Part 4-3: Testing and measurement techniques – Radiated, radio-frequency, electromagnetic field immunity test (IEC 61000-4-3)
EN 61000-4-4	Electromagnetic compatibility (EMC) – Part 4-4: Testing and measurement techniques – Electrical fast transient/burst immunity test (IEC 61000-4-4)
EN 61000-4-5	Electromagnetic compatibility (EMC) – Part 4-5: Testing and measurement techniques – Surge immunity test (IEC 61000-4-5)
EN 61000-4-6	Electromagnetic compatibility (EMC) – Part 4-6: Testing and measurement techniques – Immunity to conducted disturbances, induced by radio-frequency fields (IEC 61000-4-6)
EN 61000-4-8	Electromagnetic compatibility (EMC) – Part 4-8: Testing and measurement techniques – Power frequency magnetic field immunity test (IEC 61000-4-8)
EN 61000-4-11	Electromagnetic compatibility (EMC) – Part 4-11: Testing and measurement techniques – Voltage dips, short interruptions and voltage variations immunity tests (IEC 61000-4-11)
EN 61000-6-1	Electromagnetic compatibility (EMC) – Part 6-1: Generic standards – Immunity for residential, commercial and light-industrial environments (IEC 61000-6-1)
EN 61000-6-3	Electromagnetic compatibility (EMC) – Part 6-3: Generic standards – Emission standard for residential, commercial and light-industrial environments (IEC 61000-6-3)

3 Terms, definitions and abbreviations

For the purposes of this document, the terms, definitions and abbreviations given in EN 50491-5-1:2010 apply.