



NSAI
Standards

Irish Standard
I.S. EN 50491-5-2:2010

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

I.S. EN 50491-5-2:2010

Incorporating amendments/corrigenda issued since publication:

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard – national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation - recommendation based on the consensus of an expert panel and subject to public consultation.

SWIFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

<i>This document replaces:</i>	<i>This document is based on:</i> EN 50491-5-2:2010	<i>Published:</i> 23 April, 2010
This document was published under the authority of the NSAI and comes into effect on: 6 May, 2010		ICS number: 97.120
NSAI 1 Swift Square, Northwood, Santry Dublin 9	T +353 1 807 3800 F +353 1 807 3838 E standards@nsai.ie W NSAI.ie	Sales: T +353 1 857 6730 F +353 1 857 6729 W standards.ie
Údarás um Chaighdeán Náisiúnta na hÉireann		

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 50491-5-2

April 2010

ICS 97.120

Supersedes EN 50090-2-2:1996 (partially) + corr. Mar.1997 (partially) + A1:2002 (partially)
+ A2:2007 (partially)

English version

**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 50090-2-2:1996 ¹⁾; 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 4-1 ²⁾ Functional safety requirements (for non safety related systems);
- Part 4-2 ²⁾ 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.

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.

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- Looking for additional Standards? Visit Intertek Inform Infostore
 - Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation
-