

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

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 50491-2:2010 sisaldab Euroopa standardi EN 50491-2:2010 ingliskeelset teksti.

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

Exigences générales pour systèmes
électroniques pour les foyers domestiques
et les bâtiments (HBES) et pour systèmes
de gestion technique du bâtiment (SGTB) -
Partie 2: Exigences d'environnement

Allgemeine Anforderungen an die
Elektrische Systemtechnik für Heim
und Gebäude (ESHG) und an Systeme
der Gebäudeautomation (GA) -
Teil 2: Umgebungsbedingungen

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CENELEC

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

Central Secretariat: 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).

The text of the draft was submitted to the Unique Acceptance Procedure and was approved by CENELEC as EN 50491-2 on 2010-03-01.

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) | 2011-03-01 |
| – latest date by which the national standards conflicting with the EN have to be withdrawn | (dow) | 2013-03-01 |

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 ¹⁾ | Functional safety requirements (for non safety related systems); |
| Part 4-2 ¹⁾ | Functional safety requirements (for safety related systems); |
| Part 5-1 ²⁾ | EMC requirements, conditions and test set-up; |
| Part 5-2 ²⁾ | EMC requirements for HBES/BACS used in residential, commercial and light industry environment; |
| Part 5-3 ²⁾ | EMC requirements for HBES/BACS used in industry environment. |

¹⁾ Under consideration.

²⁾ To be ratified.

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Introduction

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

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

Part 2 of this series applies to HBES/BACS devices and defines the environmental conditions for these devices.

1 Scope

This European Standard provides the environmental conditions for all devices connected to HBES/BACS.

This European Standard is applicable (but not limited) to

- operator stations and other human system interface devices,
- devices for management functions,
- control devices, automation stations and application specific controllers,
- field devices and their interfaces,
- cabling and interconnection of devices,
- dedicated devices for engineering and commissioning tools for HBES/BACS.

The standard defines the general requirements for devices operating in weather protected and non-weather protected locations, ship environments, portable use and also for storage and transport.

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 60068-2-1	Environmental testing - Part 2-1: Tests - Test A: Cold (IEC 60068-2-1)
EN 60068-2-6	Environmental testing - Part 2-6: Tests - Test Fc: Vibration (sinusoidal) (IEC 60068-2-6:1995 + corrigendum March 1995)
EN 60068-2-10	Environmental testing - Part 2-10: Tests - Test J and guidance: Mould growth (IEC 60068-2-10)
EN 60068-2-11	Environmental testing - Part 2: Tests - Test Ka: Salt mist (IEC 60068-2-11)
EN 60068-2-14:1999	Environmental testing - Part 2: Tests - Test N: Change of temperature (IEC 60068-2-14:1984 + A1:1986)
EN 60068-2-27	Environmental testing - Part 2-27: Tests - Test Ea and guidance: Shock (IEC 60068-2-27)
EN 60068-2-30	Environmental testing - Part 2-30: Tests - Test Db: Damp heat, cyclic (12 h + 12 h cycle) (IEC 60068-2-30)
EN 60068-2-32	Basic environmental testing procedures - Part 2: Tests - Test Ed: Free fall (IEC 60068-2-32)

EN 60068-2-43	Environmental testing - Part 2-43: Tests - Test Kd: Hydrogen sulphide test for contacts and connections (IEC 60068-2-43)
EN 60068-2-64	Environmental testing - Part 2-64: Tests - Test Fh: Vibration, broadband random and guidance (IEC 60068-2-64)
EN 60529:1991+ A1:2000	Degrees of protection provided by enclosures (IP Code) (IEC 60529)
EN 60721-3-1	Classification of environmental conditions - Part 3: Classification of groups of environmental parameters and their severities - Section 1: Storage (IEC 60721-3-1)
EN 60721-3-2	Classification of environmental conditions - Part 3: Classification of groups of environmental parameters and their severities - Section 2: Transportation (IEC 60721-3-2)
EN 60721-3-3	Classification of environmental conditions - Part 3: Classification of groups of environmental parameters and their severities - Section 3: Stationary use at weatherprotected locations (IEC 60721-3-3)
EN 60721-3-4	Classification of environmental conditions - Part 3: Classification of groups of environmental parameters and their severities - Section 4: Stationary use at non-weatherprotected locations (IEC 60721-3-4)
EN 60721-3-6	Classification of environmental conditions - Part 3: Classification of groups of environmental parameters and their severities - Section 6: Ship environment (IEC 60721-3-6)
EN 60721-3-7	Classification of environmental conditions - Part 3: Classification of groups of environmental parameters and their severities - Section 7: Portable and non-stationary use (IEC 60721-3-7)

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 60721 series and EN 60068 series and the following apply.

3.1

product documentation

set of documents that may contain any of the following:

- the manufacturer's installation and operations literature which accompanies the product;
- the product information contained in the manufacturer's catalogue and other product marketing material-information;
- the description, definitions, product literature and usage as presented in electronic format on the manufacturer's (or supplier's) website on the World Wide Web/Internet

3.2

weather protected locations: controlled conditions

locations that are enclosed, and where direct weather influences are totally excluded. In addition, temperature is controlled by heating or cooling to maintain the required conditions, especially where these are very different from those of the open-air climate. Humidity is not controlled. Vibration and shock are insignificant.

These locations may be in rural and some urban areas with low industrial activities and moderate traffic. There is no particular risk of biological attack due to mould growth, animals, etc.

EXAMPLES:

- normal living or working areas, for example living rooms, and rooms for general use such as theatres, restaurants, offices, shops, workshops for electronic assembly and products;