ICS 97.120 SLOVENSKÁ TECHNICKÁ NORMA August 2014

| STN | **Všeobecné požiadavky na bytové a domové elektronické systémy (HBES) a domové automatizačné a riadiace systémy (BACS). Časť 6-1: Inštalácie HBES. Inštalácia a plánovanie.** | **STN EN 50491-6-1**<br><br>36 8055 |
|---|---|---|

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Obsahuje: EN 50491-6-1:2014

**119216**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

# EN 50491-6-1

January 2014

ICS 97.120

English version

# General requirements for Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) - Part 6-1: HBES installations - Installation and planning

Exigences générales pour systèmes électroniques pour les foyers domestiques et les bâtiments (HBES) et pour systèmes de gestion technique du bâtiment (SGTB) - Partie 6-1 : Installations des HBES - Planification et installation

Allgemeine Anforderungen an die Elektrische Systemtechnik für Heim und Gebäude (ESHG) und an Systeme der Gebäudeautomation (GA) - Teil 6-1: ESHG-Installationen - Installation und Planung

This European Standard was approved by CENELEC on 2013-11-25. 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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre 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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

CENELEC

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

**CEN-CENELEC Management Centre: Avenue Marnix 17, B - 1000 Brussels**



Ref. No. EN 50491-6-1:2014 E

# Contents

**Figures**



**Tables**

# Foreword

This document (EN 50491-6-1:2014) 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 implemented at national level by publication of an identical national standard or by endorsement | (dop) | 2014-11-25 |
| • latest date by which the national standards conflicting with this document have to be withdrawn | (dow) | 2016-11-25 |

This European Standard covers the Principle Elements of the Safety Objectives for Electrical Equipment Designed for Use within Certain Voltage Limits (LVD - 2006/95/EC).

This European Standard is complementary to EN 50174-2, “Information technology – Cabling installation – Part 2: Installation planning and practices inside buildings” – Clause 10 “Homes”. The couple of standards constitute the reference for the installation requirements of the home network which includes the telecommunications service distribution and the HBES.

This European Standard specifies the specific HBES installation requirements. EN 50174-2 gives the specific ICT and BCT cabling installation and planning requirements.

_____

# 1 Scope

This European Standard specifies the additional specific HBES requirements for the common rules for the planning and the installation of HBES home cabling systems. The structure is in accordance with EN 50174-2.

This European Standard focuses on requirements for HBES cabling systems in homes. Requirements for backbones cabling in buildings are also considered.

HBES radio frequency (RF) systems are considered as extensions or as alternative to cabled systems.

RF connections may have an impact on the infrastructure. Different infrastructure models are presented for the use of RF connections instead of wired ones (e.g. fewer installation spaces IS6).

Optical fibre HBES installation guidelines may be considered in future.

Power line systems are outside the scope of this European 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 50090 (all parts), *Home and Building Electronic Systems (HBES)*

EN 50090-5-3, *Home and Building Electronic Systems (HBES) – Part 5-3: Media and media dependent layers – Radio frequency*

CLC/TR 50090-9-2, *Home and Building Electronic Systems (HBES) – Part 9-2: Installation requirements – Inspection and testing of HBES installation*

EN 50131-5-3 *Alarm systems – Intrusion systems – Part 5-3: Requirements for interconnections equipment using radio frequency techniques*

EN 50173-4, *Information technology – Generic cabling systems – Part 4: Homes*

EN 50174 (all parts), *Information technology – Cabling installation*

EN 50174-2:2009, *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*

EN 60670 series, *Boxes and enclosures for electrical accessories for household and similar fixed electrical installations* (IEC 60670 series)

ETSI EN 300 220, *Electromagnetic compatibility and Radio spectrum Matters (ERM); Short Range Devices (SRD); Radio equipment to be used in the 25 MHz to 1 000 MHz frequency range with power levels ranging up to 500 mW*

ETSI EN 301 489, *Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services*

ETSI EN 302 208-1, *Electromagnetic compatibility and Radio spectrum Matters (ERM); Radio Frequency Identification Equipment operating in the band 865 MHz to 868 MHz with power levels up to 2 W; Part 1: Technical requirements and methods of measurement*

ETSI EN 302 208-2, *Electromagnetic compatibility and Radio spectrum Matters (ERM); Radio Frequency Identification Equipment operating in the band 865 MHz to 868 MHz with power levels up to 2 W; Part 2: Harmonized EN covering essential requirements of article 3.2 of the R&TTE Directive*

HD 60364 (all parts), *Low-voltage electrical installations* (IEC 60364)

HD 60364-4-41, *Low-voltage electrical installations – Part 4-41: Protection for safety – Protection against electric shock* (IEC 60364-4-41)

HD 60364-4-444 *Low-voltage electrical installations – Part 4-444: Protection for safety – Protection against voltage disturbances and electromagnetic disturbances* (IEC 60364-4-44)

HD 60364-5-52, *Low-voltage electrical installations – Part 5-52: Selection and erection of electrical equipment – Wiring systems* (IEC 60364-5-52)

HD 60364-5-54, *Low-voltage electrical installations – Part 5-54: Selection and erection of electrical equipment – Earthing arrangements, protective conductors* (IEC 60364-5-54)

IEEE 802.15.4, *IEEE Standard for Information technology – Telecommunications and information exchange between systems-Local and metropolitan area networks – Specific requirements – Part 15.4: Wireless Medium Access Control (MAC) and Physical Layer (PHY) Specifications for Low-Rate Wireless Personal Area Networks (WPANs)*

IEEE 802.11, *IEEE Standard for Information Technology – Telecommunications and information exchange between systems-Local and Metropolitan networks – Specific requirements – Part II: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) specifications*