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**Home and building electronic systems (HBES) and building automation and control systems (BACS) –
Part 6: Requirements for planning and installation**

**Systèmes électroniques pour les foyers domestiques et les bâtiments (HBES) et systèmes de gestion technique du bâtiment (SGTB) –
Partie 6: Exigences de planification et d'installation**



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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**HOME AND BUILDING ELECTRONIC SYSTEMS (HBES) AND
BUILDING AUTOMATION AND CONTROL SYSTEMS (BACS) –****Part 6: Requirements for planning and installation**

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The text of this International Standard is based on the following documents:

FDIS	Report on voting
23/972/FDIS	23/974/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications.

A list of all parts in the IEC 63044 series, published under the general title *Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS)*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

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INTRODUCTION

A HBES/BACS network is part of the home/building network, which includes cabling for information and communication technology (ICT) and broadcast communication technology (BCT) applications. ISO/IEC 14763-2 is the specific standard for ICT and BCT cabling installation and planning.

This document covers installation and planning requirements specific to a HBES/BACS network in addition to safety requirements for electrical installations included in the IEC 60364 series.

Installation and planning specific requirements include:

- infrastructures for cabling,
- coexistence with electric wiring,
- hints for sensors.

Wireless systems are also considered. Planning the cabled backbone for wireless systems is less complex compared to a full cabled network pathway, power supply cabling. Additional provisions are provided to guarantee coverage and reliability.

HOME AND BUILDING ELECTRONIC SYSTEMS (HBES) AND BUILDING AUTOMATION AND CONTROL SYSTEMS (BACS) –

Part 6: Requirements for planning and installation

1 Scope

This document specifies the requirements for planning and installation of HBES/BACS and the supporting infrastructure.

Radio frequency (RF) HBES/BACS are also considered.

Safety requirements are covered by IEC 60364 (all parts).

Information and communication technology (ICT) and broadcasting and communication technology (BCT) network installations are typically interfaced with HBES/BACS.

The requirements for ICT and BCT network installations are covered by ISO/IEC 14763-2.

This document does not cover HBES/BACS implementation with:

- optical fibre,
- power lines,
- power over Ethernet (PoE).

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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.

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

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

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

IEC 63044-1, *Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) – Part 1: General requirements*

IEC 63044-3, *Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) – Part 3: Electrical safety requirements*

IEC 63044-4, *Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) – Part 4: General functional safety requirements for products intended to be integrated in HBES and BACS*