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Irish Standard
I.S. EN ISO 16484-1:2010

Building automation and control systems (BACS) - Part 1: Project specification and implementation (ISO 16484-1:2010)

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 16484-1

November 2010

ICS 91.040.01

English Version

Building automation and control systems (BACS) - Part 1: Project specification and implementation (ISO 16484-1:2010)

Systèmes d'automatisation et de gestion technique du bâtiment - Partie 1: Spécification et mise en oeuvre d'un projet (ISO 16484-1:2010)

Systeme der Gebäudeautomation (GA) - Teil 1: Projektplanung und -ausführung (ISO 16484-1:2010)

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Foreword

This document (EN ISO 16484-1:2010) has been prepared by Technical Committee CEN/TC 247 “Building Automation, Controls and Building Management”, the secretariat of which is held by SNV, in collaboration with Technical Committee ISO/TC 205 "Building environment design".

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by May 2011, and conflicting national standards shall be withdrawn at the latest by May 2011.

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INTERNATIONAL STANDARD

ISO 16484-1

First edition
2010-11-01

Building automation and control systems (BACS) —

Part 1: Project specification and implementation

Systèmes d'automatisation et de gestion technique du bâtiment —

Partie 1: Spécification et mise en œuvre d'un projet

Reference number
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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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ISO 16484-1 was prepared by the European Committee for Standardization (CEN) Technical Committee CEN/TC 247, *Building automation*, *controls and building management*, in collaboration with ISO Technical Committee ISO/TC 205, *Building environment design*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

ISO 16484 consists of the following parts, under the general title *Building automation and control systems (BACS)*:

— *Part 1: Project specification and implementation*

— *Part 2: Hardware*

— *Part 3: Functions*

— *Part 5: Data communication protocol*

— *Part 6: Data communication conformance testing*

The following part is under preparation:

— *Part 4: Applications*

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Introduction

ISO 16484 (all parts) is aimed at the design of new buildings and the retrofitting of existing buildings for an acceptable indoor environment, practical energy conservation, and efficiency.

ISO 16484 (all parts) is applicable to building automation and control systems (BACS), as follows:

— The environmental design for all building types requires complex methods of automation and control. The functional integration of services other than heating, ventilating and air conditioning (HVAC) is a general task for all parties employed to develop an integrated multi-application system. The integration comprises, for example, lighting and electric power distribution control, security control, transportation, maintenance management or facilities management. This system integration allows the user to take advantage of synergies between the different applications. ISO 16484 (all parts) gives guidance to architects, consultants and contractors as well as guidance to users on how to share such resources.

— The innovation cycles between devices, systems and networks vary. In order to make it possible to add and to change existing devices and extend the building automation and control network, several interfaces, both proprietary and standardized, are defined between the BACS network and the other systems. A manufacturer can design a product, both to meet his specific marketing objectives and to give the option to integrate that special device into a multi-application BACS. Interfaces are also defined in appropriate parts of ISO 16484 along with the necessary communications protocol and conformance test required to support the interworking of devices.

— A manufacturer, a systems house, or an electrical or mechanical contractor can assemble the implementation of a building automation and control system.

— The application of ISO 16484 (all parts) is not to standardize the hardware and software design or the architecture of a system, but to define the process for the creation of project specifications, where the functionality and the quality of the solution are clearly defined.

ISO 16484 (all parts) is intended for use by those involved in the design, manufacture, engineering, installation, commissioning, operational maintenance and training of BACS when contracted, i.e.:

— as a guide to the terminology of the building automation and control trade. Unambiguous terminology is required for a complete and accurate conveyance of the intent and details of ISO 16484 (all parts);

— in product development, to avoid unnecessary duplication of function or terminology, but not necessarily placing a restraint on the evolution of new products, systems or applications;

— as a basis for interfacing products and systems. In order to interoperate, the elements of a BACS require a unified data communication protocol and information model;

— as a basis for drawing up a project specification for procurement;

— as a code of practice for expert commissioning;

— by educational establishments wishing to train people in the field of BACS.

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Building automation and control systems (BACS) —

Part 1: Project specification and implementation

1 Scope

This International Standard specifies guiding principles for project design and implementation and for the integration of other systems into the building automation and control systems (BACS).

This International Standard specifies the phases required for the BACS project, including:

— design (determination of project requirements and production of design documents including technical specifications),

— engineering (detailed function and hardware design),

— installation (installing and commissioning of the BACS), and

— completion (handover, acceptance and project finalization).

This International Standard also specifies the requirements for as-built documentation and training.

This International Standard is not applicable to operation and maintenance, nor is it applicable to retro or continuous commissioning, including a commissioning authority.

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.

ISO 16484-2:2004, *Building automation and control systems (BACS) — Part 2: Hardware*

ISO 16484-3, *Building automation and control systems (BACS) — Part 3: Functions*

ISO 16484-5, *Building automation and control systems — Part 5: Data communication protocol*

ISO 16484-6, *Building automation and control systems (BACS) — Part 6: Data communication conformance testing*

IEC 62305-4, *Protection against lightning — Part 4: Electrical and electronic systems within structures*

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