International

ISO 16484-1

# Building automation and control systems (BACS) —

## Part 1: Project specification and implementation

*Systèmes de gestion technique du bâtiment (SGTB) —*
*Partie 1: Spécifications et mise en œuvre d'un projet*

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This second edition cancels and replaces the first edition (ISO 16484-1:2010), which has been technically revised.

The main changes are as follows:

— updating of normative references;

— updating of terms and definitions;

— mention of cyber security measures and wireless communication.

A list of all parts in the ISO 16484 series can be found on the ISO website.

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

The ISO 16484 series 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. The ISO 16484 series 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 their 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 the ISO 16484 series 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 the ISO 16484 series 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.

The ISO 16484 series 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 guideline 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 the ISO 16484 series;

— 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.