
**Building automation and control systems
(BACS) —**

**Part 5:
Data communication protocol**

*Systèmes d'automatisation et de gestion technique du bâtiment —
Partie 5: Protocole de communication de données*

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2. www.iso.org/directives

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The committee responsible for this document is ISO/TC 205, *Building environment design*.

This fifth edition cancels and replaces the fourth edition (ISO 16484-5:2012), of which it forms the subject of a minor revision.

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

- *Part 1: Project specification and implementation*
- *Part 2: Hardware*
- *Part 3: Functions*
- *Part 5: Data communication protocol*
- *Part 6: Data communication conformance testing*

Applications and project implementation are to form the subjects of future Parts 4 and 7.

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Building automation and control systems (BACS) — Part 5: Data communication protocol

1 Scope

This part of ISO 16484 defines data communication services and protocols for computer equipment used for monitoring and control of heating, ventilation, air-conditioning and refrigeration (HVAC&R) and other building systems. It defines, in addition, an abstract, object-oriented representation of information communicated between such equipment, thereby facilitating the application and use of digital control technology in buildings. The scope and field of application are furthermore detailed in Clause 2 of the enclosed ANSI/ASHRAE publication.

2 Requirements

Requirements are the technical recommendations made in the following publication (reproduced on the following pages), which is adopted as an International Standard:

ANSI/ASHRAE 135-2012, *A Data Communication Protocol for Building Automation and Control Networks*

The text on the back of the title page of the ANSI/ASHRAE standard and the policy statement on the last page are not relevant for the purposes of international standardization.

The following International Standards are cited in the text:

ISO/IEC 7498 (all parts), *Information technology — Open Systems Interconnection — Basic Reference Model*

ISO/TR 8509, *Information processing systems — Open Systems Interconnection — Service conventions*

ISO/IEC 8649, *Information technology — Open Systems Interconnection — Service definition for the Association Control Service Element*

ISO/IEC 8802-2, *Information technology — Telecommunications and information exchange between systems — Local and metropolitan area networks — Specific requirements — Part 2: Logical link control*

ISO/IEC 8802-3, *Information technology — Telecommunications and information exchange between systems — Local and metropolitan area networks — Specific requirements — Part 3: Carrier sense multiple access with collision detection (CSMA/CD) access method and physical layer specifications*

ISO/IEC 8822, *Information technology — Open Systems Interconnection — Presentation service definition*

ISO/IEC 8824 (all parts), *Information technology — Abstract Syntax Notation One (ASN.1)*

ISO/IEC 8825 (all parts), *Information technology — ASN.1 encoding rules*

ISO/IEC 8859-1, *Information technology — 8-bit single-byte coded graphic character sets — Part 1: Latin alphabet No. 1*

ISO/IEC 9545, *Information technology — Open Systems Interconnection — Application Layer structure*

ISO/IEC 10646, *Information technology — Universal Multiple-Octet Coded Character Set (UCS)*

3 Revision of ANSI/ASHRAE 135

It has been agreed with the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) that Technical Committee ISO/TC 205 will be consulted in the event of any revision or amendment of ANSI/ASHRAE 135. To this end, ANSI will act as a liaison body between ASHRAE and ISO.

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STANDARD

ANSI/ASHRAE Standard 135-2012
(Supersedes ANSI/ASHRAE Standard 135-2010)



A Data Communication Protocol for Building Automation and Control Networks

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See the History of Revisions at the end of this standard for approval dates by the ASHRAE Standards Committee, the ASHRAE Board of Directors, and the American National Standards Institute.

This standard is under continuous maintenance by a Standing Standard Project Committee (SSPC) for which the Standards Committee has established a documented program for regular publication of addenda or revisions, including procedures for timely, documented, consensus action on requests for change to any part of the standard. The change submittal form, instructions, and deadlines may be obtained in electronic form from the ASHRAE website (www.ashrae.org) or in paper form from the Manager of Standards. The latest edition of an ASHRAE Standard may be purchased from the ASHRAE website (www.ashrae.org) or from ASHRAE Customer Service, 1791 Tullie Circle, NE, Atlanta, GA 30329-2305. E-mail: orders@ashrae.org. Fax: 404-321-5478. Telephone: 404-636-8400 (worldwide), or toll free 1-800-527-4723 (for orders in US and Canada). For reprint permission, go to www.ashrae.org/permissions.

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