
**Building automation and control
systems —**

**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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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

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.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 16484-5 was prepared by the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) (as ANSI/ASHRAE 135-2008) and was adopted without modifications by Technical Committee ISO/TC 205, *Building environment design*.

This third edition cancels and replaces the second edition (ISO 16484-5:2007), which has been technically revised, as detailed in the enclosed ANSI/ASHRAE publication, pages 682 to 687. It also incorporates the Amendment ISO 16484-5:2007/Amd1:2009.

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

- *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 —

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 135-2008, *A Data Communication Protocol for Building Automation and Control Networks*
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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 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*

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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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(Including ANSI/ASHRAE addenda listed in the History of Revisions)



ASHRAE STANDARD



A Data Communication Protocol for Building Automation and Control Networks

iTeh STANDARD PREVIEW

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 Web site, <http://www.ashrae.org>, or in paper form from the Manager of Standards. The latest edition of an ASHRAE Standard may be purchased 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).

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