



ASHRAE STANDARD

BACnet[®]—A Data Communication Protocol for Building Automation and Control Networks

Approved by the ASHRAE Standards Committee on October 3, 2004; by the ASHRAE Board of Directors on February 10, 2005; and by the American National Standards Institute on February 10, 2005.

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ASHRAE obtains consensus through participation of its national and international members, associated societies, and public review.

ASHRAE Standards are prepared by a Project Committee appointed specifically for the purpose of writing the Standard. The Project Committee Chair and Vice-Chair must be members of ASHRAE; while other committee members may or may not be ASHRAE members, all must be technically qualified in the subject area of the Standard. Every effort is made to balance the concerned interests on all Project Committees.

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- b. participation in the next review of the Standard,
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In referring to this Standard or Guideline and in marking of equipment and in advertising, no claim shall be made, either stated or implied, that the product has been approved by ASHRAE.

(This foreword is not part of this standard. It is merely informative and does not contain requirements necessary for conformance to the standard.)

FOREWORD

The purpose of this addendum is to add a number of independent substantive changes to the BACnet standard. These modifications are the result of change proposals made pursuant to the continuous maintenance procedures contained in the *Manual for Processing ASHRAE Standards* and *PC Guidance* and of deliberations within Standing Standard Project Committee 135. The changes are summarized below.

135a-1. Revise Life Safety Point and Life Safety Zone object types to modify their behavior when placed out of service, p. 1.

In the following document, language to be added to existing clauses of ANSI/ASHRAE 135-2004 and Addenda is indicated through the use of *italics*, while deletions are indicated by ~~strike through~~. Where entirely new subclauses are proposed to be added, plain type is used throughout.

135-2004a-1. Revise Life Safety Point and Life Safety Zone object types for out-of-service operation.

Addendum 135-2004a-1

[Change **Table 12-18**, p. 194]

Table 12-18. Properties of the Life Safety Point Object Type

Property Identifier	Property Datatype	Conformance Code
...
Present_Value	BACnetLifeSafetyState	\mathbb{R}^+R
Tracking_Value	BACnetLifeSafetyState	$\Theta R'$
...

[Change **12.15.4**, p. 195]

12.15.4 Present_Value

This property, of type BACnetLifeSafetyState, reflects the state of the Life Safety Point object. The means of deriving the Present_Value shall be a local matter. Present_Value may latch non-NORMAL state values until reset. ~~The Present_Value property shall be writable when Out_Of_Service is TRUE.~~

[Change **12.15.5**, p. 195]

12.15.5 Tracking_Value

This ~~optional~~ property, of type BACnetLifeSafetyState, reflects the non-latched state of the Life Safety Point object. The means of deriving the state shall be a local matter. Unlike Present_Value, which may latch non-NORMAL state values until reset, Tracking_Value shall continuously track changes in the state. *The Tracking_Value property shall be writable when Out_Of_Service is TRUE.*

[Change **12.15.11**, p. 196]

12.15.11 Out_Of_Service

The Out_Of_Service property, of type BOOLEAN, is an indication whether (TRUE) or not (FALSE) the input(s) or process the object represents is not in service. This means that changes to the ~~Present_Value Tracking_Value~~ property are decoupled from the input(s) or process when the value of Out_Of_Service is TRUE. In addition, the Reliability property and the corresponding state of the FAULT flag of the Status_Flags property shall be decoupled when Out_Of_Service is TRUE. While the Out_Of_Service property is TRUE, the ~~Present_Value Tracking_Value~~ and Reliability properties may be changed to any value as a means of simulating specific fixed conditions or for testing purposes. Other functions that depend on the state of the ~~Present_Value Tracking_Value~~ or Reliability properties shall respond to changes made to these properties while Out_Of_Service is TRUE, as if those changes had occurred to the input(s) or process.

[Change **Table 12-19**, p. 200]

Table 12-19. Properties of the Life Safety Zone Object Type

Property Identifier	Property Datatype	Conformance Code
...
Present_Value	BACnetLifeSafetyState	\mathbb{R}^+R
Tracking_Value	BACnetLifeSafetyState	$\Theta R'$
...

[Change 12.16.4, p. 201]

12.16.4 Present_Value

This property, of type BACnetLifeSafetyState, reflects the state of the Life Safety Zone object. The means of deriving the Present_Value shall be a local matter. Present_Value may latch non-NORMAL state values until reset. ~~The Present_Value property shall be writable when Out_Of_Service is TRUE.~~

[Change 12.16.5, p. 201]

12.16.5 Tracking_Value

This ~~optional~~ property, of type BACnetLifeSafetyState, reflects the non-latched state of the Life Safety Zone object. The means of deriving the state shall be a local matter. Unlike Present_Value, which may latch non-NORMAL state values until reset, Tracking_Value shall continuously track changes in the state. *The Tracking_Value property shall be writable when Out_Of_Service is TRUE.*

[Change 12.16.11, p. 202]

12.16.11 Out_Of_Service

The Out_Of_Service property, of type BOOLEAN, is an indication whether (TRUE) or not (FALSE) the input(s) or process the object represents is not in service. This means that changes to the ~~Present_Value~~ Tracking_Value property are decoupled from the input(s) or process when the value of Out_Of_Service is TRUE. In addition, the Reliability property and the corresponding state of the FAULT flag of the Status_Flags property shall be decoupled when Out_Of_Service is TRUE. While the Out_Of_Service property is TRUE, the ~~Present_Value~~ Tracking_Value and Reliability properties may be changed to any value as a means of simulating specific fixed conditions or for testing purposes. Other functions that depend on the state of the ~~Present_Value~~ Tracking_Value or Reliability properties shall respond to changes made to these properties while Out_Of_Service is TRUE, as if those changes had occurred to the input(s) or process.

[Change Annex C, p.459]

```

LIFE-SAFETY-POINT ::= SEQUENCE {
    ...
    present-value          [85]   BACnetLifeSafetyState,
    tracking-value         [164]  BACnetLifeSafetyState OPTIONAL,
    description            [28]   CharacterString OPTIONAL,
    ...
}

```

[Change Annex C, p.460]

```

LIFE-SAFETY-ZONE ::= SEQUENCE {
    ...
    present-value          [85]   BACnetLifeSafetyState,
    tracking-value         [164]  BACnetLifeSafetyState OPTIONAL,
    description            [28]   CharacterString OPTIONAL,
    ...
}

```

[Add a new entry to **History of Revisions**, p.598]

(This History of Revisions is not part of this standard. It is merely informative and does not contain requirements necessary for conformance to the standard)

HISTORY OF REVISIONS

<i>Protocol</i>		<i>Summary of Changes to the Standard</i>
<i>Version</i>	<i>Revision</i>	
...
1	5	Addendum a to ANSI/ASHRAE 135-2004 Approved by the ASHRAE Standards Committee October 3, 2004; by the ASHRAE Board of Directors February 10, 2005; and by the American National Standards Institute February 10, 2005. 1. Revise Life Safety Point and Life Safety Zone object types to modify their behavior when placed out of service.

POLICY STATEMENT DEFINING ASHRAE'S CONCERN FOR THE ENVIRONMENTAL IMPACT OF ITS ACTIVITIES

ASHRAE is concerned with the impact of its members' activities on both the indoor and outdoor environment. ASHRAE's members will strive to minimize any possible deleterious effect on the indoor and outdoor environment of the systems and components in their responsibility while maximizing the beneficial effects these systems provide, consistent with accepted standards and the practical state of the art.

ASHRAE's short-range goal is to ensure that the systems and components within its scope do not impact the indoor and outdoor environment to a greater extent than specified by the standards and guidelines as established by itself and other responsible bodies.

As an ongoing goal, ASHRAE will, through its Standards Committee and extensive technical committee structure, continue to generate up-to-date standards and guidelines where appropriate and adopt, recommend, and promote those new and revised standards developed by other responsible organizations.

Through its *Handbook*, appropriate chapters will contain up-to-date standards and design considerations as the material is systematically revised.

ASHRAE will take the lead with respect to dissemination of environmental information of its primary interest and will seek out and disseminate information from other responsible organizations that is pertinent, as guides to updating standards and guidelines.

The effects of the design and selection of equipment and systems will be considered within the scope of the system's intended use and expected misuse. The disposal of hazardous materials, if any, will also be considered.

ASHRAE's primary concern for environmental impact will be at the site where equipment within ASHRAE's scope operates. However, energy source selection and the possible environmental impact due to the energy source and energy transportation will be considered where possible. Recommendations concerning energy source selection should be made by its members.