BSR/ASHRAE Addendum *cv* to
ANSI/ASHRAE Standard 135-2024

Public Review Draft

Proposed Addendum *cv* to Standard 135-2024, BACnet® - A Data Communication Protocol for Building Automation and Control Networks

First Publication Public Review (February 2026)
(Draft shows Proposed Changes to Current Standard)

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[This foreword, the table of contents, the introduction, and the "rationales" on the following pages are not part of this standard. They are merely informative and do not contain requirements necessary for conformance to the standard.]

FOREWORD

The purpose of this addendum is to present a proposed change for public review. These modifications are the result of change proposals made pursuant to the ASHRAE continuous maintenance procedures and of deliberations within Standing Standard Project Committee 135. The proposed changes are summarized below.

135-2024*cv*-1 BACnet Data Link Protocol Bridge, p. 3

In the following document, language to be added to existing clauses of ANSI/ASHRAE 135-2024 is indicated through the use of *italics*, while deletions are indicated by ~~strikethrough~~. Where entirely new subclauses are proposed to be added, plain type is used throughout. Only this new and deleted text is open to comment at this time. All other material in this document is provided for context only and is not open for public review comment except as it relates to the proposed changes.

The use of placeholders like XX, YY, ZZ, X1, X2, NN, x, n, ? etc., should not be interpreted as literal values of the final published version. These placeholders will be assigned actual numbers/letters only after final publication approval of the addendum.

135-2024*cv*-1 BACnet Directory Services

Rationale

This change was created to support the common definition and operation of BACnet bridge devices that extend BACnet defined data link protocols without using network layer routing. The language should be informative to users about using this technology to extend their network.

[Add to Clause 3]

…

bridged node *- a node whose data link frames are conveyed to a network segment by a data link protocol bridge.*

…

[Add to **ANNEX H**]

H.X BACnet Data Link Protocol Bridge

A BACnet data link protocol bridge device connects network segments at the physical and data link layers and may perform message filtering based upon MAC addresses. A bridge does not add a BACnet network routing layer between the network segments, minimizing the extra network configuration and maintenance of a BACnet network router.

A data link protocol bridge, by definition, forwards data packets between datalink segments that comprise a BACnet internetwork. Forwarded packets are those that are retransmitted from one segment to another.

Whether the bridge uses data frame store and forward, or some other vendor or data link protocol specific bridging technique, the result on the local network segment shall conform to that specific data link protocol.

H.X.1 BACnet MS/TP Bridge

In contrast to BACnet MS/TP repeaters, defined in Clause 9.9, where all segments use the same bit rate, BACnet MS/TP bridges may be used to connect MS/TP network segments that may have different bit rates.

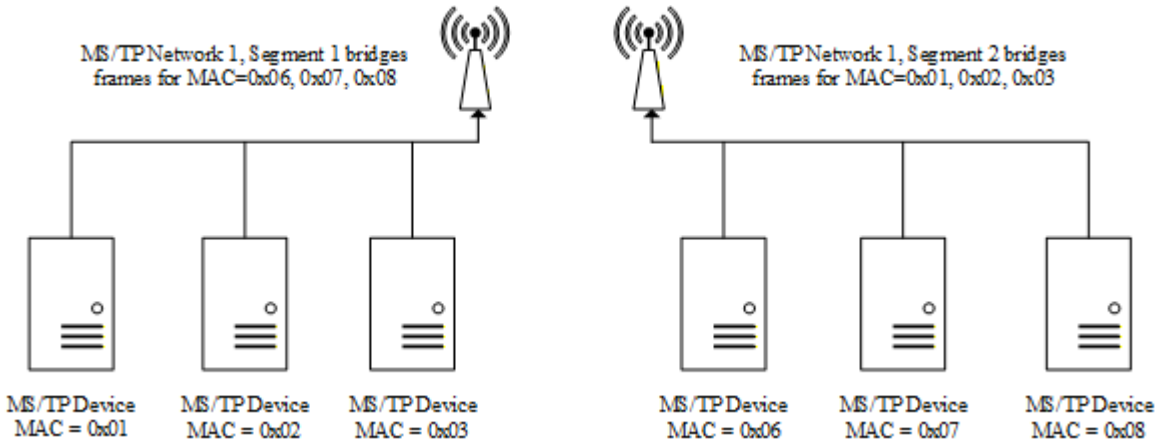

Figure H.Y.1: MS/TP Bridge Segments – Wireless

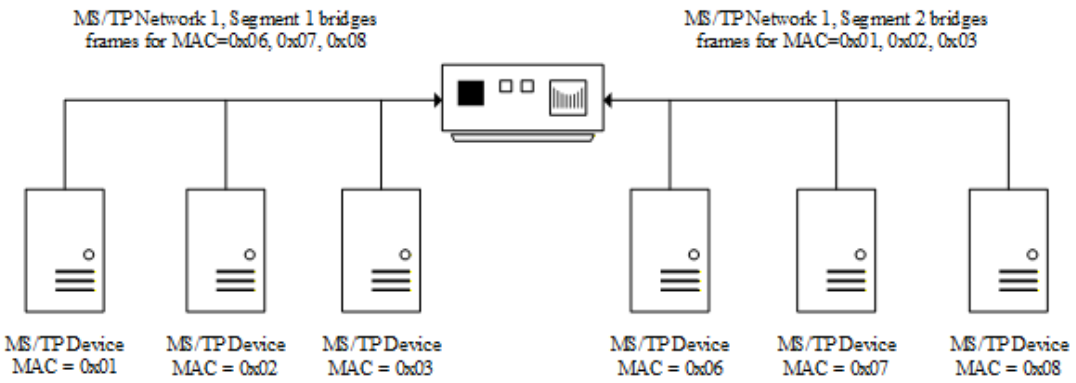

Figure H.Y.2: MS/TP Bridge Segments – Wired

The following rules for handling MS/TP frames shall be used at each bridge.

- Each bridge shall provide local MS/TP network synchronization using Token, Poll For Manager, and Reply To Poll For Manager frame types, according to Clause 9.5.6, for every MS/TP bridged node, and these frames shall not be forwarded to bridged segments.
- For MS/TP Manager node destinations, upon receipt of either a BACnet Data Expecting Reply or BACnet Extended Data Expecting Reply frame, the bridge shall transmit a Reply Postponed frame to the originating bridged node before forwarding the frame. This allows the bridged node to leave the ANSWER_DATA_REQUEST state and the sending node to leave the WAIT_FOR_REPLY state before the potentially lengthy process of forwarding has begun.
- Reply Postponed frames shall not be forwarded.
- For MS/TP Manager node destinations, upon receipt of a Test_Request frame, the bridge shall transmit a Test_Response frame, according to Clause 9.1.3 and Clause 9.3.5, and these frames shall not be forwarded.
- All other MS/TP frames shall be forwarded.
- Subordinate nodes are not required to be supported.

[**Note to reviewer:** Annex K BIBBs purposefully excluded here as there is no “interoperability building block” component of this functionality.]

[Insert New **Clause L.X** BACnet Accessories]

L.X BACnet Accessories

A BACnet accessory is a device whose main function does not fall under any other device profiles and is not required to contain an application layer. It is not required to be addressable on a BACnet internetwork, and its introduction is transparent to a BACnet internetwork.

L.X.1 BACnet MS/TP Bridge (B-MSTPBRG)

A B-MSTPBRG is a device that connects network segments at the physical and data link layers and may perform message filtering based upon MAC addresses, as defined in H.X.1.

Data Sharing
- No requirement

Alarm and Event Management
- No requirement

Scheduling
- No requirement

Trending
- No requirement

Device and Network Management
- Ability to connect two or more data link segments, each containing one or more devices

Other
- Supports BACnet Extended Frames

[Add a new entry to **History of Revisions**, p. 1364]

(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

. . .	. . .	**. . .**
1	X	**Addendum *cv* to ANSI/ASHRAE Standard 135-2024** Approved by ASHRAE on MONTH DAY, 20XX; and by the American National Standards Institute on MONTH DAY, 20XX. 1. Addition of BACnet Data Link Protocol Bridge

