

**INTERPRETATION IC 135-2020-24 OF
ANSI/ASHRAE STANDARD 135-2020 BACnet® -
A Data Communication Protocol for Building
Automation and Control Networks**

Approval Date: October 31, 2023

Request from: David Fisher, PolarSoft Inc., 115 Washington St., Swissvale, PA 15218.

Reference: This request for interpretation refers to the requirements presented in ANSI/ASHRAE Standard 135-2020, Addendum ca, Clauses 12.X.6, 12.X.10, 12.Y.6, 12.Y.10 and Tables 12-X2, 12-Y2, regarding Default_Fade_Time, [fade-time] parameter.

Background: The Color and Color Temperature objects both include required properties called Default_Fade_Time. The Color_Command property may be written with various commands that specify an [optional] parameter called [fade-time]. However neither object's Color_Command clause 12.X.6 or 12.Y.6 are clear with respect to what should happen if [fade-time] is not included and that in such cases, Default_Fade_Time shall be used. Also, the Default_Fade_Time property is unclear that the entire range of 100 to 86400000 ms MUST be accepted and supported by the device in either the Default_Fade_Time or the [fade-time] parameter when provided.

Interpretation No.1: In the case of Color objects when writing a Color_Command operation of FADE_TO_COLOR, or in Color Temperature objects when writing a Color_Command operation of FADE_TO_CCT, if the optional [fade-time] parameter is NOT provided, then the device shall use the value of the Default_Fade_Time property.

Question No.1: Is this Interpretation correct?

Answer No.1: Yes

Comments No.1: See 12.X.10 Default_Fade_Time and 12.Y.10 Default_Fade_Time.

Interpretation No.2: In the case of Color objects when writing a Color_Command operation of FADE_TO_COLOR, or in Color Temperature objects when writing a Color_Command operation of FADE_TO_CCT, if the [fade-time] parameter is provided, the device shall accept the entire range of possible values 100 to 86400000 ms.

Question No.2: Is this Interpretation correct?

Answer No.2: Yes

Comments No.2:

Interpretation No.3: In the case of Color or Color Temperature objects, the Default_Fade_Time property shall accept any value between 100 and 86400000 ms inclusively and devices shall not restrict the actual fade time to a subset of this range.

Question No.3: Is this Interpretation correct?

Answer No.3: Yes

Comments No.3: The Default_Fade_Time property, when writable via BACnet services, shall accept any value between 100ms and 86400000ms inclusively.

Interpretation No.4: In the case of Color or Color Temperature objects, if the Default_Fade_Time is not writable using BACnet services, then it shall be configurable by local means.

Question No.4: Is this Interpretation correct?

Answer No.4: No

Comments No.4: There is no requirement in the standard for configuration of the Default_Fade_Time.

Interpretation No.5: Since Color_Command operations do not include a GOTO_COLOR or GOTO_CCT, the allowed range for Default_Fade_Time and [fade-time] should actually be 0 to 86400000 ms.

Question No.5: Is this Interpretation correct?

Answer No.5: No

Comments No.5: Neither the Default_Fade_Time property nor the Color_Command fade-time parameter accommodate the value of 0. Writing directly to the Present_Value accomplishes a GOTO_COLOR or GOTO_CCT without a fade time.