INTERPRETATION IC 135-2016-12 OF
ANSI/ASHRAE STANDARD 135-2016 BACnet® -
A Data Communication Protocol for Building
Automation and Control Networks

Approval Date: July 11, 2018

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Reference: This request for interpretation refers to the requirements presented in ANSI/ASHRAE Standard 135-2016, Clause 12.3.12, regarding Present_Value property.

Background: Multiple objects have optional properties to indicate range restrictions: e.g. Min_Pres_Value, Max_Pres_Value. This applies for example to Analog Input, Analog Output and Analog Value objects.

The standard is vague regarding expected behavior when attempts were made to write values that lie outside this range.

e.g. from Analog-Output in Clause 12.3.12

12.3.12 Min_Pres_Value
This property, of type REAL, indicates the lowest number in engineering units that can be reliably used for the Present_Value property of this object.

Interpretation: The behavior if attempting to write to Present_Value with a value outside of the range defined by Min_Pres_Value and Max_Pres_Value is a local matter.

Therefore servers are free to either:
- reject such an attempt with an error
- truncate the value to the valid range
- accept the value and set RELIABILITY to any UNRELIABLE-CODE they feel is appropriate
- not checking the range at all
- ...
and clients should not rely on any behavior when attempting to do so.

Question: Is this Interpretation correct?

Answer: No

Comments: The standard does not make any mandates and is ambiguous on how the server should behave on writing a value to Present_Value that is outside the range defined by Min_Pres_Value and Max_Pres_Value.