INTERPRETATION IC 135-2012-8 OF ANSI/ASHRAE STANDARD 135-2012 BACnet® - A Data Communication Protocol for Building Automation and Control Networks

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Reference: This request for interpretation refers to the requirements presented in ANSI/ASHRAE 135-2012, Clauses 12.18.10 and 13.4.5, relating to the correct value of reliability when OutOfService.

Background:

Clause 12.18.10 states:

12.18.10 Out_Of_Service

The Out_Of_Service property, of type BOOLEAN, is an indication whether (TRUE) or not (FALSE) the inputs the object represents are not in service. This means that the Present_Value property is decoupled from the input and will not track changes to the input 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 from the input when Out_Of_Service is TRUE. While the Out_Of_Service property is TRUE, the Present_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 or Reliability properties shall respond to changes made to these properties while Out_Of_Service is TRUE, as if those changes had occurred in the input.

If OutOfService for a MultiStateInput object is TRUE PresentValue and Reliability are supposed to be writable. Other depending functions are supposed to respond to changes of these properties. The problem is, that when PresentValue thus becomes equal or not equal to one of the FaultValues Reliability is supposed to change value accordingly. This behaviour may be the point of setting OutOfService. On the other hand Reliability is now supposed to be decoupled “from the input” and writeable. If it is written to some value it might seem surprising if it does not stay at the written value. It seems impossible to follow both rules!

The same kind of problem applies to MultiStateValue, CharacterString Value and may be other objects.

Interpretation: Clause 12.18.10 does not rule on the value for Reliability when OutOfService is TRUE. It is a local matter how a device handles the competing requirements for Reliability when OutOfService.

Question: Is this interpretation correct?

Answer: Yes

Comments: The committee will be preparing an addendum to clarify how devices shall behave in this situation.