

**INTERPRETATION IC 135-2020-32 OF
ANSI/ASHRAE STANDARD 135-2020 BACnet® -
A Data Communication Protocol for Building
Automation and Control Networks**

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Reference: This request for interpretation refers to ANSI/ASHRAE Standard 135-2020 and pertains to the default values of the value source properties.

Background:

Clause 19.5.1.2 states:

...
For non-commandable Present_Value properties, the Value_Source is either the value that is set when the Present_Value was last written, or is the value provided by the source device after the Present_Value was last written.

...

...
For commandable Present_Value properties, the value of the property is taken from the entry of the Value_Source_Array which is related to the Priority_Array entry which provided the current Present_Value. For example, if the Present_Value is from index 8 of the Priority_Array, then the Value_Source property shall have the value from index 8 of the Value_Source_Array.

If there is no active value source, i.e. the Present_Value has taken on the value of Relinquish_Default, then the Value_Source property shall have the value 'None'.

...

Problem 1: For a non-commandable object, the default value of the Value_Source property is not specified but must contain a DeviceObjectReference, or a BACnet Address.

Problem 2: For a commandable object if the default value of the Priority_Array property contains a non-NULL value, the Value_Source and Value_Source_Array must contain a DeviceObjectReference, or a BACnet Address. The Last_Command_Time and Command_Time_Array properties must also contain values.

Possible default values of the Value_Source for an object.

- The object type and instance of the object itself
- The Device instance of the device itself
- The object type and instance of the internal object that created the object
- The Device instance of the client if the object was created
- The BACnetAddress of the client if the object was created

Interpretation #1: The initial value of the Value_Source property of a non-commandable object is a local matter but shall be valid and not 'None'.

Question #1: Is this Interpretation correct?

Answer #1: No.

Comment #1: If the Present_Value of a non-commandable object has never been written, the initial value of the Value_Source property shall be valid and may be 'None'.

Interpretation #2: For a commandable object, if the initial value of the Priority_Array property contains non-NULL values, the corresponding entry in the Value_Source_Array is a local matter but shall be valid and not 'None' and the corresponding entry in the Command_Time_Array shall contain a valid BACnetTimeStamp. The Last_Command_Time shall contain a valid BACnetTimeStamp.

Question #2: Is this Interpretation correct?

Answer #2: Yes.

Comment #2: Clause 19.2.1 states: " This prioritization approach shall be applied to local actions that change the value of commandable properties as well as to write operations via BACnet services." Based on this, any non-null initial values that exist within a Priority_Array are treated the same and would result in the Value_Source_Array property containing valid values that are not 'None'. The value of the Value_Source property follows the rules specified in Clause 19.5.1.2.