

**INTERPRETATION IC 135-2004-6 OF  
ANSI/ASHRAE STANDARD 135-2004 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 Standard 135-2004, Section 12.24.8, Exception\_Schedule.

**Background:** The standard defines BACnetDateRange as a sequence of StartDate and endDate, both of which have type Date. A Date consists of the fields year, month, day-of-month and day-of-week, any of which may be unspecified (wildcard).

An Exception\_Schedule (Section 12.24.8) may include a BACnetDateRange in a BACnetCalendarEntry, in which context the meaning is specified for a Date that is totally unspecified. However no indication is given regarding the validity or meaning of other wildcard combinations. A Schedule's Effective\_Period (Section 12.24.6) is also a BACnetDateRange, but the standard is silent on the issue of wildcard values.

**Interpretation:** The BACnet standard [ANSI/ASHRAE Standard 135-2004] is open to multiple interpretations regarding the meaning of wildcards in dates, especially when used to specify date ranges. The following describes how wildcards are interpreted by the Andover Controls B-AAC controllers, especially in the context of the Schedule properties Exception\_Schedule and Effective\_Period, and the Calend property Date\_List.

For purposes of comparing dates, the day-of-week fields are not used. That is, they are totally redundant. When comparing dates, a wildcard field is considered equal to the corresponding field in the date being compared. A date falls within the range if it is not before the StartDate and not after the endDate.

Because the day-of-week field is redundant, its value must be either unspecified or consistent with the other fields. Because it can be consistent with those fields only if they are specified, the controllers allow the day-of-week to be specified only if the other three fields are specified as well.

Accordingly, the following conditions in a date range are treated as errors and will prevent a WriteProperty from completing:

1. A day-of-week is specified but two or fewer of the other fields in the Date are specified.
2. A day-of-week is specified, but is inconsistent with the Date specified by the other fields.
3. A year field is specified, which is outside the range limit of 1989 – 2105.
4. The endDate is earlier than the StartDate.
5. Any of the specified fields are out of range (e.g., 31st day of February).

This interpretation has been implemented and was accepted by the BACnet Testing Laboratory. It is included in the PIC Statement for certified B-AAC devices. It needs to be formally accepted as the correct interpretation.

**Question:** Is this interpretation correct?

**Answer:** Yes.

**Comments:** The committee agrees that the standard is ambiguous with respect to wildcards in BACnetDate values in numerous places in the standard. This is one of many possible interpretations (excluding the incorrect year range specified in 3).

The committee is working on developing a comprehensive proposal to address all areas of BACnetDate value ambiguity in the standard.