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1. Document Introduction

This document contains the Protocol Implementation Conformance Statement (PICS) and BACnet® Interoperability Building Blocks (BIBBs) for the Siemens Room Condition Monitor as required by the American National Standards Institute/ American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ANSI/ASHRAE) Standard 135-2012, BACnet protocol-revision 13. BACnet interoperability Building Blocks are collections of one or more BACnet services. This document includes a listing of the BIBBs currently supported by the Monitor.

The Siemens Room Condition Monitor is a native BACnet Application Specific Controller with MS/TP and BACnet/IP capabilities.

2. Product Description

The Siemens Room Condition Monitor provides a complete solution for monitoring critical room parameters like pressure, temperature, and humidity in healthcare and laboratory facilities.

The Siemens Room Condition Monitor conforms to the BACnet Application Specific Controller (B-ASC) device profile.

3. BACnet Requirements

3.1 BACnet Interoperability Building Blocks (BIBBs) (Annex K)

Application Specific Controller (B-ASC)	Designation
Data Sharing – Read Property – B	DS-RP-B
Data Sharing – Write Property – B	DS-WP-B
Data Sharing – Change of Value – B	DS-COV-B
Device Management – Dynamic Device Binding – B	DM-DDB-B
Device Management – Dynamic Object Binding – B	DM-DOB-B
Device Management – Device Communication Control – B	DM-DCC-B
Data Sharing – Write Property Multiple – B	DS-WPM-B
Data Sharing – Read Property Multiple – B	DS-RPM-B
Device Management – Reinitialize Device – B	DM-RD-B
Device Management – Time Synchronization – B	DM-TS-B
Device Management – UTC Time Synchronization – B	DM-UTC-B
Device Management – Dynamic Device Binding – A	DM-DDB-A
Data Sharing – Read Property – A	DS-RP-A

3.2 Standard Object Types Supported

3.2.1 Analog Input

Dynamically Creatable: YES NO

Dynamically Deletable: YES NO

Property Identifier	Writable	Conformance Code		Range restrictions
		Required	Optional	
Object_Identifier	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Object_Name	Yes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Object_Type	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Present_Value	Yes*	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Description	Yes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Device_Type	No	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Status_Flags	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Event_State	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Out_Of_Service	Yes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Units	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Min_Pres_Value	No	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Max_Pres_Value	No	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Resolution	No	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

*writable only when Out_Of_Service is true

3.2.2 Analog Output

Dynamically Creatable: YES NO

Dynamically Deletable: YES NO

Property Identifier	Writable	Conformance Code		Range restrictions
		Required	Optional	
Object_Identifier	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Object_Name	Yes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Object_Type	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Present_Value	Yes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Description	Yes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Status_Flags	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Event_State	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Out_Of_Service	Yes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Units	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
COV_Increment	Yes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Max_Pres_Value	Yes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Min_Pres_Value	Yes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Resolution	Yes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Priority_Array	No	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Relinquish_Default	Yes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

3.2.3 Analog Value

Dynamically Creatable: YES NO

Dynamically Deletable: YES NO

Property Identifier	Writable	Conformance Code		Range restrictions
		Required	Optional	
Object Identifier	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Object Name	Yes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Object Type	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Present Value	Yes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Description	Yes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Status Flags	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Event State	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Out Of Service	Yes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Units	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

3.2.4 Binary Input

Dynamically Creatable: YES NO

Dynamically Deletable: YES NO

Property Identifier	Writable	Conformance Code		Range restrictions
		Required	Optional	
Object Identifier	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Object Name	Yes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Object Type	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Present Value*	Yes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Description	Yes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Device Type	No	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Status Flags	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Event State	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Out Of Service	Yes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Polarity	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Inactive Text	Yes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Active Text	Yes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

*writable only when Out_Of_Service is true

3.2.5 Binary Output

Dynamically Creatable: YES NO
 Dynamically Deletable: YES NO

Property Identifier	Writable	Conformance Code		Range restrictions
		Required	Optional	
Object_Identifier	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Object_Name	Yes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Object_Type	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Present_Value	Yes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Description	Yes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Device_Type	No	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Status_Flags	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Event_State	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Out_Of_Service	Yes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Polarity	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Inactive_Text	Yes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Active_Text	Yes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Priority_Array	No	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Relinquish_Default	Yes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

3.2.6 Binary Value

Dynamically Creatable: YES NO
 Dynamically Deletable: YES NO

Property Identifier	Writable	Conformance Code		Range restrictions
		Required	Optional	
Object_Identifier	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Object_Name	Yes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Object_Type	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Present_Value	Yes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Description	Yes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Status_Flags	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Event_State	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Out_Of_Service	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Inactive_Text	Yes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Active_Text	Yes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

3.2.7 Device

Dynamically Creatable: YES NO
 Dynamically Deletable: YES NO

Property Identifier	Writable	Conformance Code		Range restrictions
		Required	Optional	
Object_Identifier	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Object_Name	Yes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Object_Type	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
System_Status	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Vendor_Name	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Vendor_Identifier	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Model_Name	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Firmware_Revision	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Application_Software_Version	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Location	Yes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Description	Yes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Protocol_Version	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Protocol_Revision	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Protocol_Services_Supported	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Protocol_Object_Types_Supported	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Object_List	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Max_APDU_Length_Accepted	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Segmentation_Supported	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Local_Time	No	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Local_Date	No	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
APDU_Timeout	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Number_Of_APDU_Retries	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Max_Master	No	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Max_Info_Frames	No	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Device_Address_Binding	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Database_Revision	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Daylight_Savings_Status	Yes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
UTC_Offset	Yes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Active_COV_Subscriptions	Yes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Max_Segments_Accepted	No	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

3.2.8 Multi-State Input

Dynamically Creatable: YES NO
 Dynamically Deletable: YES NO

Property Identifier	Writable	Conformance Code		Range restrictions
		Required	Optional	
Object_Identifier	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Object_Name	Yes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Object_Type	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Present_Value*	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Description	Yes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Status_Flags	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Event_State	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Out_Of_Service	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Number_Of_States	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
State_Text	No	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

*writable only when Out_Of_Service is true

3.2.9 Multi-State Value

Dynamically Creatable: YES NO
 Dynamically Deletable: YES NO

Property Identifier	Writable	Conformance Code		Range restrictions
		Required	Optional	
Object_Identifier	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Object_Name	Yes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Object_Type	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Present_Value	Yes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Description	Yes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Status_Flags	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Event_State	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Out_Of_Service	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Number_Of_States	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
State_Text	No	<input type="checkbox"/>	<input checked="" type="checkbox"/>	

3.2.10 Character String Value Object

Dynamically Creatable: YES NO
 Dynamically Deletable: YES NO

Property Identifier	Writable	Conformance Code		Range restrictions
		Required	Optional	
Object_Identifier	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Object_Name	Yes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Description	Yes	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
Object_Type	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Present_Value	Yes	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Status_Flags	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

3.3 Data Link Layer Option

- BACnet IP, (Annex J)
- MS/TP Master (Supported baud rates: 9600, 19200, 38400, 76800)

3.4 Segmentation Capability

- Segmented responses supported : Window Size: 1

3.5 Device Address Binding

Is static device binding supported? (Required for two-way communication between MS/TP slaves and other devices)

YES NO

3.6 Character Sets Supported

- ISO 10646 (UTF-8)
- ISO 10646 (UCS-2)

3.7 Supported Services

Application Service	Initiates Requests	Executes Requests
ReadProperty Service	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
ReadPropertyMultiple Service	<input type="checkbox"/>	<input checked="" type="checkbox"/>
WriteProperty Service	<input type="checkbox"/>	<input checked="" type="checkbox"/>
WritePropertyMultiple Service	<input type="checkbox"/>	<input checked="" type="checkbox"/>
SubscribeCOV	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ConfirmedCOVNotification	<input checked="" type="checkbox"/>	<input type="checkbox"/>
UnconfirmedCOVNotification	<input checked="" type="checkbox"/>	<input type="checkbox"/>
DeviceCommunicationControl Service	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ReinitializeDevice Service	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Timesynchronization Service	<input type="checkbox"/>	<input checked="" type="checkbox"/>
UTCTimesynchronization Service	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Who-Is	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Who-Has	<input type="checkbox"/>	<input checked="" type="checkbox"/>
I-Am	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
I-Have	<input checked="" type="checkbox"/>	<input type="checkbox"/>