



BACnet Protocol Implementation Conformance Statement (PICS)

750-830 BACnet/IP Controller

Version 1.1.2

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Every conceivable measure has been taken to ensure the accuracy and completeness of this documentation. However, as errors can never be fully excluded, we always appreciate any information or suggestions for improving the documentation.

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Table of Contents

- 1 BACnet Protocol Implementation Conformance Statement 4**
- 1.1 Product Description..... 4
- 1.2 List all BACnet Interoperability Building Blocks Supported (Annex K). 5
 - 1.2.1 Data-Sharing BIBBs 5
 - 1.2.2 Alarm and Event BIBBs 5
 - 1.2.3 Scheduling BIBBs 5
 - 1.2.4 Trending BIBBs..... 5
 - 1.2.5 Device Management BIBBs 6
- 1.3 Segmentation Capability 6
- 1.4 Standard Object Types Supported..... 7
 - 1.4.1 Accumulator 7
 - 1.4.2 Analog Input 9
 - 1.4.3 Analog Output 11
 - 1.4.4 Analog Value..... 12
 - 1.4.5 Averaging 13
 - 1.4.6 Binary Input..... 14
 - 1.4.7 Binary Output 16
 - 1.4.8 Binary Value..... 18
 - 1.4.9 Calendar..... 20
 - 1.4.10 Command 21
 - 1.4.11 Device..... 22
 - 1.4.12 Event-Enrollment 25
 - 1.4.13 File..... 26
 - 1.4.14 Group..... 27
 - 1.4.15 Life Safety Point..... 28
 - 1.4.16 Life Safety Zone 30
 - 1.4.17 Loop..... 32
 - 1.4.18 Multi State Value..... 34
 - 1.4.19 Notification Class 35
 - 1.4.20 Pulse Converter 36
 - 1.4.21 Schedule 38
 - 1.4.22 Trend Log 39
- 1.5 Data Link Layer Options..... 41
- 1.6 Networking Options 41
- 1.7 Character Sets Supported 41
- 1.8 Network Security Options..... 41
- List of Tables..... 42**

1 BACnet Protocol Implementation Conformance Statement

| | |
|--------------------------------|-----------------------------------|
| Date: | 03.06.2014 |
| Vendor Name: | WAGO Kontakttechnik GmbH & Co. KG |
| Product Name: | BACnet/IP Controller |
| Product Model Number: | 750-830 |
| Applications Software Version: | --- |
| Firmware Revision: | 04.03.15 (05) |
| BACnet Protocol Revision: | 1 Rev. 7 |

1.1 Product Description

The BACnet Controller provides access to BACnet-networks acting either as a BACnet-Client or as a BACnet-Server.

BACnet Standardized Device Profile (Annex L):

- BACnet Operator Workstation (B-OWS)
- BACnet Building Controller (B-BC)
- BACnet Advanced Application Controller (B-AAC)
- BACnet Application Specific Controller (B-ASC)
- BACnet Smart Sensor (B-SS)
- BACnet Smart Actuator (B-SA)

1.2 List all BACnet Interoperability Building Blocks Supported (Annex K)

1.2.1 Data-Sharing BIBBs

| | |
|--|-----------|
| Data Sharing Read-Property-A | DS-RP-A |
| Data Sharing Read-Property-B | DS-RP-B |
| Data Sharing Read-Property-Multiple-A | DS-RPM-A |
| Data Sharing Read-Property-Multiple-B | DS-RPM-B |
| Data Sharing Write-Property-A | DS-WP-A |
| Data Sharing Write-Property-B | DS-WP-B |
| Data Sharing Write-Property-Multiple-B | DS-WPM-B |
| Data Sharing COV-A | DS-COV-A |
| Data Sharing COV-B | DS-COV-B |
| Data Sharing COVP-B | DS-COVP-B |
| Data Sharing COV-Unsolicited-A | DS-COVU-A |
| Data Sharing COV-Unsolicited-B | DS-COVU-B |

1.2.2 Alarm and Event BIBBs

| | |
|---------------------------------------|-----------|
| Alarm and Event Notification-Internal | AE-N-I-B |
| Alarm and Event Acknowledge-B | AE-ACK-B |
| Alarm and Event Information-B | AE-INFO-B |
| Alarm and Event Alarm Summary-B | AE-ASUM-B |
| Alarm and Event Enrollment Summary-B | AE-ESUM-B |

1.2.3 Scheduling BIBBs

| | |
|-----------------------|-----------|
| Scheduling-Internal-B | SCHEM-I-B |
| Scheduling-External-B | SCHEM-E-B |

1.2.4 Trending BIBBs

| | |
|--|-----------|
| Trending Viewing and Modifying Trends Internal-B | T-VMT-I-B |
| Trending Viewing and Modifying Trends External-B | T-VMT-E-B |
| Trending Automated Trend Retrieval-B | T-ATR-B |

1.2.5 Device Management BIBBs

| | |
|--|----------|
| Device Management Dynamic Device Binding-A | DM-DDB-A |
| Device Management Dynamic Device Binding-B | DM-DDB-B |
| Device Management Dynamic Object Binding-B | DM-DOB-B |
| Device Management DeviceCommunicationControl-B | DM-DCC-B |
| Device Management TimeSynchronization-B | DM-TS-B |
| Device Management UTCTimeSynchronization-B | DM-UTC-B |
| Device Management ReinitializeDevice-B | DM-RD-B |
| Device Management Backup and Restore-B | DM-BR-B |
| Device Management List Manipulation-B | DM-LM-B |
| Device Management Object Creation and Deletion-B | DM-OCD-B |

1.3 Segmentation Capability

| | |
|---|----------------|
| <input checked="" type="checkbox"/> Segmented requests supported | Window Size 16 |
| <input checked="" type="checkbox"/> Segmented responses supported | Window Size 16 |

1.4 Standard Object Types Supported

1.4.1 Accumulator

Dynamically Creatable: No
 Dynamically Deletable: No
 Proprietary Properties: Message_Text (512)

Table 1: Accumulator

| Property Identifier | Property Datatype | Conformance Code | WAGO | Property Range Restrictions |
|---------------------------|-----------------------------------|------------------|------|--|
| Object_Identifier | BACnetObjectIdentifier | R | R | |
| Object_Name | CharacterString | R | R | |
| Object_Type | BACnetObjectType | R | R | |
| Present_Value | Unsigned | R ¹ | R | |
| Description | CharacterString | O | W | Depending on the UTF-8 characters between 25 and 101 characters. |
| Device_Type | CharacterString | O | W | Depending on the UTF-8 characters between 25 and 101 characters. |
| Status_Flags | BACnetStatusFlags | R | R | |
| Event_State | BACnetEventState | R | R | |
| Reliability | BACnetReliability | O | W | |
| Out_Of_Service | BOOLEAN | R | W | |
| Scale | BACnetScale | R | W | |
| Units | BACnetEngineeringUnits | R | W | |
| Prescale | BACnetPrescale | O | R | |
| Max_Pres_Value | Unsigned | R | R | |
| Value_Change_Time | BACnetDateTime | O ² | R | |
| Value_Before_Change | Unsigned | O ^{2,3} | R | |
| Value_Set | Unsigned | O ^{2,3} | W | |
| Logging_Record | BACnetAccumulatorRecord | Ø | - | |
| Logging_Object | BACnetObjectIdentifier | Ø | - | |
| Pulse_Rate | Unsigned | O ^{1,4} | R | |
| High_Limit | Unsigned | O ⁴ | W | |
| Low_Limit | Unsigned | O ⁴ | W | |
| Limit_Monitoring_Interval | Unsigned | O ⁴ | W | |
| Notification_Class | Unsigned | O ⁴ | W | |
| Time_Delay | Unsigned | O ⁴ | W | |
| Limit_Enable | BACnetLimitEnable | O ⁴ | W | |
| Event_Enable | BACnetEventTransitionBits | O ⁴ | W | |
| Acked_Transitions | BACnetEventTransitionBits | O ⁴ | R | |
| Notify_Type | BACnetNotifyType | O ⁴ | R | |
| Event_Time_Stamps | BACnetARRAY[3] of BACnetTimeStamp | O ⁴ | R | |
| Event_Message_Texts | BACnetARRAY[3] of CharacterString | Ø ⁵ | - | |

Table 1: Accumulator

| Property Identifier | Property Datatype | Conformance Code | WAGO | Property Range Restrictions |
|---------------------|-----------------------------------|------------------|------|--|
| Profile_Name | CharacterString | Ø | - | |
| Message_Text (512) | BACnetARRAY[3] of CharacterString | Proprietary | W | Depending on the UTF-8 characters between 25 and 101 characters. |

- 1 This property is required to be writable when Out_Of_Service is TRUE.
- 2 These properties are required if either Value_Before_Change or Value_Set is writable.
- 3 Either Value_Before_Change or Value_Set may be writable, but not both.
- 4 These properties are required if the object supports intrinsic reporting.
- 5 This property, if present, is required to read only.

1.4.2 Analog Input

Dynamically Creatable: No
 Dynamically Deletable: No
 Proprietary Properties: Message_Text (512)

Table 2: Analog Input

| Property Identifier | Property Datatype | Conformance Code | WAGO | Property Range Restrictions |
|---------------------|-----------------------------------|------------------|------|--|
| Object_Identifier | BACnetObjectIdentifier | R | R | |
| Object_Name | CharacterString | R | R | |
| Object_Type | BACnetObjectType | R | R | |
| Present_Value | REAL | R ¹ | R | |
| Description | CharacterString | O | W | Depending on the UTF-8 characters between 25 and 101 characters. |
| Device_Type | CharacterString | O | W | Depending on the UTF-8 characters between 25 and 101 characters. |
| Status_Flags | BACnetStatusFlags | R | R | |
| Event_State | BACnetEventState | R | R | |
| Reliability | BACnetReliability | O | R | W if OoS = true |
| Out_Of_Service | BOOLEAN | R | W | |
| Update_Interval | Unsigned | O | R | |
| Units | BACnetEngineeringUnits | R | W | |
| Min_Pres_Value | REAL | O | R | |
| Max_Pres_Value | REAL | O | R | |
| Resolution | REAL | O | R | |
| COV_Increment | REAL | O ² | W | |
| Time_Delay | Unsigned | O ³ | W | |
| Notification_Class | Unsigned | O ³ | W | |
| High_Limit | REAL | O ³ | W | |
| Low_Limit | REAL | O ³ | W | |
| Deadband | REAL | O ³ | W | |
| Limit_Enable | BACnetLimitEnable | O ³ | W | |
| Event_Enable | BACnetEventTransitionBits | O ³ | W | |
| Acked_Transitions | BACnetEventTransitionBits | O ³ | R | |
| Notify_Type | BACnetNotifyType | O ³ | W | |
| Event_Time_Stamps | BACnetARRAY[3] of BACnetTimeStamp | O ³ | R | |
| Event_Message_Texts | BACnetARRAY[3] of CharacterString | Ø ⁴ | - | |
| Profile_Name | CharacterString | Ø | - | |
| Message_Text (512) | BACnetARRAY[3] of CharacterString | Proprietary | W | Depending on the UTF-8 characters between 25 and 101 characters. |

- 1 This property is required to be writable when Out_Of_Service is TRUE.
- 2 This property is required if the object supports COV reporting.
- 3 These properties are required if the object supports intrinsic reporting.
- 4 This property, if present, is required to read only.

1.4.3 Analog Output

Dynamically Creatable: No
 Dynamically Deletable: No
 Proprietary Properties: Message_Text (512)

Table 3: Analog Output

| Property Identifier | Property Datatype | Conformance Code | WAGO | Property Range Restrictions |
|---------------------|-----------------------------------|------------------|------|--|
| Object_Identifier | BACnetObjectIdentifier | R | R | |
| Object_Name | CharacterString | R | R | |
| Object_Type | BACnetObjectType | R | R | |
| Present_Value | REAL | W | W | |
| Description | CharacterString | O | W | Depending on the UTF-8 characters between 25 and 101 characters. |
| Device_Type | CharacterString | O | W | Depending on the UTF-8 characters between 25 and 101 characters. |
| Status_Flags | BACnetStatusFlags | R | R | |
| Event_State | BACnetEventState | R | R | |
| Reliability | BACnetReliability | O | R | W if OoS = true |
| Out_Of_Service | BOOLEAN | R | W | |
| Units | BACnetEngineeringUnits | R | W | |
| Min_Pres_Value | REAL | O | R | |
| Max_Pres_Value | REAL | O | R | |
| Resolution | REAL | O | R | |
| Priority_Array | BACnetPriorityArray | R | R | |
| Relinquish_Default | REAL | R | W | |
| COV_Increment | REAL | O ¹ | W | |
| Time_Delay | Unsigned | O ² | W | |
| Notification_Class | Unsigned | O ² | W | |
| High_Limit | REAL | O ² | W | |
| Low_Limit | REAL | O ² | W | |
| Deadband | REAL | O ² | W | |
| Limit_Enable | BACnetLimitEnable | O ² | W | |
| Event_Enable | BACnetEventTransitionBits | O ² | W | |
| Acked_Transitions | BACnetEventTransitionBits | O ² | R | |
| Notify_Type | BACnetNotifyType | O ² | W | |
| Event_Time_Stamps | BACnetARRAY[3] of BACnetTimeStamp | O ² | R | |
| Event_Message_Texts | BACnetARRAY[3] of CharacterString | O ³ | - | |
| Profile_Name | CharacterString | O | - | |
| Message_Text (512) | BACnetARRAY[3] of CharacterString | Proprietary | W | Depending on the UTF-8 characters between 25 and 101 characters. |

1 This property is required if the object supports COV reporting.

2 These properties are required if the object supports intrinsic reporting.

3 This property, if present, is required to read only.

1.4.4 Analog Value

| | |
|-------------------------|--------------------|
| Dynamically Creatable: | No |
| Dynamically Deletable: | No |
| Proprietary Properties: | Message_Text (512) |

Table 4: Analog Value

| Property Identifier | Property Datatype | Conformance Code | WAGO | Property Range Restrictions |
|---------------------|-----------------------------------|------------------|------|--|
| Object_Identifier | BACnetObjectIdentifier | R | R | |
| Object_Name | CharacterString | R | R | |
| Object_Type | BACnetObjectType | R | R | |
| Present_Value | REAL | R ⁴ | W | |
| Description | CharacterString | O | W | Depending on the UTF-8 characters between 25 and 101 characters. |
| Status_Flags | BACnetStatusFlags | R | R | |
| Event_State | BACnetEventState | R | R | |
| Reliability | BACnetReliability | O | W | |
| Out_Of_Service | BOOLEAN | R | W | |
| Units | BACnetEngineeringUnits | R | W | |
| Priority_Array | BACnetPriorityArray | O ¹ | R | |
| Relinquish_Default | REAL | O ¹ | W | |
| COV_Increment | REAL | O ² | W | |
| Time_Delay | Unsigned | O ³ | W | |
| Notification_Class | Unsigned | O ³ | W | |
| High_Limit | REAL | O ³ | W | |
| Low_Limit | REAL | O ³ | W | |
| Deadband | REAL | O ³ | W | |
| Limit_Enable | BACnetLimitEnable | O ³ | W | |
| Event_Enable | BACnetEventTransitionBits | O ³ | W | |
| Acked_Transitions | BACnetEventTransitionBits | O ³ | R | |
| Notify_Type | BACnetNotifyType | O ³ | W | |
| Event_Time_Stamps | BACnetARRAY[3] of BACnetTimeStamp | O ³ | R | |
| Event_Message_Texts | BACnetARRAY[3] of CharacterString | Ø ⁵ | - | |
| Profile_Name | CharacterString | Ø | - | |
| Message_Text (512) | BACnetARRAY[3] of CharacterString | Proprietary | W | Depending on the UTF-8 characters between 25 and 101 characters. |

1 If Present_Value is commandable, then both of these properties shall be present.

2 This property is required if the object supports COV reporting.

3 These properties are required if the object supports intrinsic reporting.

4 If Present_Value is commandable, then it is required to be writable. This property is required to be writable when Out_Of_Service is TRUE.

5 This property, if present, is required to read only.

1.4.5 Averaging

Dynamically Creatable: No
 Dynamically Deletable: No
 Proprietary Properties: Message_Text (512)

Table 5: Averaging

| Property Identifier | Property Datatype | Conformance Code | WAGO | Property Range Restrictions |
|---------------------------|--------------------------------------|------------------|------|--|
| Object_Identifier | BACnetObjectIdentifier | R | R | |
| Object_Name | CharacterString | R | R | |
| Object_Type | BACnetObjectType | R | R | |
| Minimum_Value | REAL | R | R | |
| Minimum_Value_Stamp | BACnetDateTime | O | W | |
| Average_Value | REAL | R | R | |
| Variance_Value | REAL | O | R | |
| Maximum_Value | REAL | R | R | |
| Maximum_Value_Stamp | BACnetDateTime | O | W | |
| Description | CharacterString | O | W | Depending on the UTF-8 characters between 25 and 101 characters. |
| Attempted_Samples | Unsigned | W ¹ | W | |
| Valid_Samples | Unsigned | R | R | |
| Object_Property_Reference | BACnetDeviceObject-PropertyReference | R ¹ | W | |
| Window_Interval | Unsigned | W ¹ | W | |
| Window_Samples | Unsigned | W ¹ | W | |
| Profile_Name | CharacterString | Ø | - | |
| Message_Text (512) | BACnetARRAY[3] of CharacterString | Proprietary | W | Depending on the UTF-8 characters between 25 and 101 characters. |

¹ If any of these properties are written to using BACnet services, then all of the buffer samples shall become invalid, 'Attempted_Samples' shall become zero, 'Valid_Samples' shall become zero, 'Minimum_Value' shall become INF, 'Average_Value' shall become NaN and 'Maximum_Value' shall become -INF.

1.4.6 Binary Input

Dynamically Creatable: No
 Dynamically Deletable: No
 Proprietary Properties: Message_Text (512)

Table 6: Binary Input

| Property Identifier | Property Datatype | Conformance Code | WAGO | Property Range Restrictions |
|---------------------------|-----------------------------------|------------------|----------------|--|
| Object_Identifier | BACnetObjectIdentifier | R | R | |
| Object_Name | CharacterString | R | R | |
| Object_Type | BACnetObjectType | R | R | |
| Present_Value | BACnetBinaryPV | R ¹ | R ¹ | |
| Description | CharacterString | O | W | Depending on the UTF-8 characters between 25 and 101 characters. |
| Device_Type | CharacterString | O | W | Depending on the UTF-8 characters between 25 and 101 characters. |
| Status_Flags | BACnetStatusFlags | R | R | |
| Event_State | BACnetEventState | R | R | |
| Reliability | BACnetReliability | O | R | W if OoS = true |
| Out_Of_Service | BOOLEAN | R | W | |
| Polarity | BACnetPolarity | R | W | |
| Inactive_Text | CharacterString | O ² | W | Depending on the UTF-8 characters between 25 and 101 characters. |
| Active_Text | CharacterString | O ² | W | Depending on the UTF-8 characters between 25 and 101 characters. |
| Change_Of_State_Time | BACnetDateTime | O ³ | R | |
| Change_Of_State_Count | Unsigned | O ³ | W | only 0 (zero) allowed for Write; count at least up to 65535 |
| Time_Of_State_Count_Reset | BACnetDateTime | O ³ | R | |
| Elapsed_Active_Time | Unsigned32 | O ⁴ | W | only 0 (zero) allowed for Write |
| Time_Of_Active_Time_Reset | BACnetDateTime | O ⁴ | R | |
| Time_Delay | Unsigned | O ⁵ | W | |
| Notification_Class | Unsigned | O ⁵ | W | |
| Alarm_Value | BACnetBinaryPV | O ⁵ | W | |
| Event_Enable | BACnetEventTransitionBits | O ⁵ | W | |
| Acked_Transitions | BACnetEventTransitionBits | O ⁵ | R | |
| Notify_Type | BACnetNotifyType | O ⁵ | W | |
| Event_Time_Stamps | BACnetARRAY[3] of BACnetTimeStamp | O ⁵ | R | |

Table 6: Binary Input

| Property Identifier | Property Datatype | Conformance Code | WAGO | Property Range Restrictions |
|---------------------|-----------------------------------|------------------|------|--|
| Event_Message_Texts | BACnetARRAY[3] of CharacterString | Θ^6 | - | |
| Profile_Name | CharacterString | Θ | - | |
| Message_Text (512) | BACnetARRAY[3] of CharacterString | Proprietary | W | Depending on the UTF-8 characters between 25 and 101 characters. |

- 1 This property is required to be writable when Out_Of_Service is TRUE.
- 2 If one of the optional properties Inactive_Text or Active_Text is present, then both of these properties shall be present.
- 3 If one of the optional properties Change_Of_State_Time, Change_Of_State_Count, or Time_Of_State_Count_Reset is present, then all of these properties shall be present.
- 4 If one of the optional properties Elapsed_Active_Time or Time_Of_Active_Time_Reset is present, then both of these properties shall be present.
- 5 These properties are required if the object supports intrinsic reporting.
- 6 This property, if present, is required to read only.

1.4.7 Binary Output

Dynamically Creatable: No
 Dynamically Deletable: No
 Proprietary Properties: Message_Text (512)

Table 7: Binary Output

| Property Identifier | Property Datatype | Conformance Code | WAGO | Property Range Restrictions |
|---------------------------|----------------------------|------------------|------|--|
| Object_Identifier | BACnetObjectIdentifier | R | R | |
| Object_Name | CharacterString | R | R | |
| Object_Type | BACnetObjectType | R | R | |
| Present_Value | BACnetBinaryPV | W | W | |
| Description | CharacterString | O | W | Depending on the UTF-8 characters between 25 and 101 characters. |
| Device_Type | CharacterString | O | W | Depending on the UTF-8 characters between 25 and 101 characters. |
| Status_Flags | BACnetStatusFlags | R | R | |
| Event_State | BACnetEventState | R | R | |
| Reliability | BACnetReliability | O | R | |
| Out_Of_Service | BOOLEAN | R | W | |
| Polarity | BACnetPolarity | R | W | |
| Inactive_Text | CharacterString | O ¹ | W | Depending on the UTF-8 characters between 25 and 101 characters. |
| Active_Text | CharacterString | O ¹ | W | Depending on the UTF-8 characters between 25 and 101 characters. |
| Change_Of_State_Time | BACnetDateTime | O ² | R | |
| Change_Of_State_Count | Unsigned | O ² | W | only 0 (zero) allowed for Write; count at least up to 65535 |
| Time_Of_State_Count_Reset | BACnetDateTime | O ² | R | |
| Elapsed_Active_Time | Unsigned32 | O ³ | W | only 0 (zero) allowed for Write |
| Time_Of_Active_Time_Reset | BACnetDateTime | O ³ | R | |
| Minimum_Off_Time | Unsigned32 | O | W | |
| Minimum_On_Time | Unsigned32 | O | W | |
| Priority_Array | BACnetPriorityArray | R | R | |
| Relinquish_Default | BACnetBinaryPV | R | W | |
| Time_Delay | Unsigned | O ⁴ | W | |
| Notification_Class | Unsigned | O ⁴ | W | |
| Feedback_Value | BACnetBinaryPV | O ⁴ | W | |
| Event_Enable | BACnetEventTransition Bits | O ⁴ | W | |
| Acked_Transitions | BACnetEventTransition Bits | O ⁴ | R | |
| Notify_Type | BACnetNotifyType | O ⁴ | W | |

Table 7: Binary Output

| Property Identifier | Property Datatype | Conformance Code | WAGO | Property Range Restrictions |
|---------------------|-----------------------------------|------------------|------|--|
| Event_Time_Stamps | BACnetARRAY[3] of BACnetTimeStamp | O ⁴ | R | |
| Event_Message_Texts | BACnetARRAY[3] of CharacterString | Ø ⁵ | - | |
| Profile_Name | CharacterString | Ø | - | |
| Message_Text (512) | BACnetARRAY[3] of CharacterString | Proprietary | W | Depending on the UTF-8 characters between 25 and 101 characters. |

- 1 If one of the optional properties Inactive_Text or Active_Text is present, then both of these properties shall be present.
- 2 If one of the optional properties Change_Of_State_Time, Change_Of_State_Count, or Time_Of_State_Count_Reset is present, then all of these properties shall be present.
- 3 If one of the optional properties Elapsed_Active_Time or Time_Of_Active_Time_Reset is present, then both of these properties shall be present.
- 4 These properties are required if the object supports intrinsic reporting.
- 5 This property, if present, is required to read only.

1.4.8 Binary Value

Dynamically Creatable: No
 Dynamically Deletable: No
 Proprietary Properties: Message_Text (512)

Table 8: Binary Value

| Property Identifier | Property Datatype | Conformance Code | WAGO | Property Range Restrictions |
|---------------------------|-----------------------------------|------------------|------|--|
| Object_Identifier | BACnetObjectIdentifier | R | R | |
| Object_Name | CharacterString | R | R | |
| Object_Type | BACnetObjectType | R | R | |
| Present_Value | BACnetBinaryPV | R ¹ | W | |
| Description | CharacterString | O | W | Depending on the UTF-8 characters between 25 and 101 characters. |
| Status_Flags | BACnetStatusFlags | R | R | |
| Event_State | BACnetEventState | R | R | |
| Reliability | BACnetReliability | O | W | |
| Out_Of_Service | BOOLEAN | R | W | |
| Inactive_Text | CharacterString | O ² | W | Depending on the UTF-8 characters between 25 and 101 characters. |
| Active_Text | CharacterString | O ² | W | Depending on the UTF-8 characters between 25 and 101 characters. |
| Change_Of_State_Time | BACnetDateTime | O ³ | R | |
| Change_Of_State_Count | Unsigned | O ³ | W | only 0 (zero) allowed for Write; count at least up to 65535 |
| Time_Of_State_Count_Reset | BACnetDateTime | O ³ | R | |
| Elapsed_Active_Time | Unsigned32 | O ⁴ | W | only 0 (zero) allowed for Write |
| Time_Of_Active_Time_Reset | BACnetDateTime | O ⁴ | R | |
| Minimum_Off_Time | Unsigned32 | O | W | |
| Minimum_On_Time | Unsigned32 | O | W | |
| Priority_Array | BACnetPriorityArray | O ⁵ | R | |
| Relinquish_Default | BACnetBinaryPV | O ⁵ | W | |
| Time_Delay | Unsigned | O ⁶ | W | |
| Notification_Class | Unsigned | O ⁶ | W | |
| Alarm_Value | BACnetBinaryPV | O ⁶ | W | |
| Event_Enable | BACnetEventTransition Bits | O ⁶ | W | |
| Acked_Transitions | BACnetEventTransition Bits | O ⁶ | R | |
| Notify_Type | BACnetNotifyType | O ⁶ | W | |
| Event_Time_Stamps | BACnetARRAY[3] of BACnetTimeStamp | O ⁶ | R | |

Table 8: Binary Value

| Property Identifier | Property Datatype | Conformance Code | WAGO | Property Range Restrictions |
|---------------------|-----------------------------------|------------------|------|--|
| Event_Message_Texts | BACnetARRAY[3] of CharacterString | Θ^7 | - | |
| Profile_Name | CharacterString | Θ | - | |
| Message_Text (512) | BACnetARRAY[3] of CharacterString | Proprietary | W | Depending on the UTF-8 characters between 25 and 101 characters. |

- 1 If Present_Value is commandable, then it is required to be writable. This property is required to be writable when Out_Of_Service is TRUE.
- 2 If one of the optional properties Inactive_Text or Active_Text is present, then both of these properties shall be present.
- 3 If one of the optional properties Change_Of_State_Time, Change_Of_State_Count, or Time_Of_State_Count_Reset is present, then all of these properties shall be present.
- 4 If one of the optional properties Elapsed_Active_Time or Time_Of_Active_Time_Reset is present, then both of these properties shall be present.
- 5 If Present_Value is commandable, then both of these properties shall be present.
- 6 These properties are required if the object supports intrinsic reporting.
- 7 This property, if present, is required to read only.

1.4.9 Calendar

Dynamically Creatable: Yes
 Dynamically Deletable: Yes
 Proprietary Properties: Message_Text (512)

Table 9: Calendar

| Property Identifier | Property Datatype | Conformance Code | WAGO | Property Range Restrictions |
|---------------------|-----------------------------------|------------------|------|--|
| Object_Identifier | BACnetObjectIdentifier | R | R | |
| Object_Name | CharacterString | R | R | |
| Object_Type | BACnetObjectType | R | R | |
| Description | CharacterString | O | W | Depending on the UTF-8 characters between 25 and 101 characters. |
| Present_Value | BOOLEAN | R | R | |
| Date_List | List of BACnetCalendarEntry | R | W | |
| Profile_Name | CharacterString | Ø | - | |
| Message_Text (512) | BACnetARRAY[3] of CharacterString | Proprietary | W | Depending on the UTF-8 characters between 25 and 101 characters. |

1.4.10 Command

Dynamically Creatable: No
 Dynamically Deletable: No
 Proprietary Properties: Message_Text (512)

Table 10: Command

| Property Identifier | Property Datatype | Conformance Code | WAGO | Property Range Restrictions |
|-------------------------|------------------------------------|------------------|--------------|--|
| Object_Identifier | BACnetObjectIdentifier | R | R | |
| Object_Name | CharacterString | R | R | |
| Object_Type | BACnetObjectType | R | R | |
| Description | CharacterString | O | W | Depending on the UTF-8 characters between 25 and 101 characters. |
| Present_Value | Unsigned | W | W | |
| In_Process | BOOLEAN | R | R | |
| All_Writes_Successful | BOOLEAN | R | R | |
| Action | BACnetARRAY[N] of BACnetActionList | R | W | |
| Action_Text | BACnetARRAY[N] of CharacterString | O | W | Depending on the UTF-8 characters between 25 and 101 characters. |
| Profile_Name | CharacterString | Ø | - | |
| Message_Text (512) | BACnetARRAY[3] of CharacterString | Proprietary | W | Depending on the UTF-8 characters between 25 and 101 characters. |

1.4.11 Device

Dynamically Creatable: No
 Dynamically Deletable: No
 Proprietary Properties: Message_Text (512)

Table 11: Device

| Property Identifier | Property Datatype | Conformance Code | WAGO | Property Range Restrictions |
|---------------------------------|---|---------------------|------|--|
| Object_Identifier | BACnetObjectIdentifier | R | R | |
| Object_Name | CharacterString | R | R | |
| Object_Type | BACnetObjectType | R | R | |
| System_Status | BACnetDeviceStatus | R | R | |
| Vendor_Name | CharacterString | R | R | |
| Vendor_Identifier | Unsigned16 | R | R | |
| Model_Name | CharacterString | R | R | |
| Firmware_Revision | CharacterString | R | R | |
| Application_Software_Version | CharacterString | R | R | |
| Location | CharacterString | O | W | Depending on the UTF-8 characters between 25 and 101 characters. |
| Description | CharacterString | O | W | Depending on the UTF-8 characters between 25 and 101 characters. |
| Protocol_Version | Unsigned | R | R | |
| Protocol_Revision | Unsigned | R | R | |
| Protocol_Services_Supported | BACnetServicesSupported | R | R | |
| Protocol_Object_Types_Supported | BACnetObjectTypesSupported | R | R | |
| Object_List | BACnetARRAY[N]of BACnetObjectIdentifier | R | R | |
| Structured_Object_List | BACnetARRAY[N]of BACnetObjectIdentifier | Ø | - | |
| Max_APDU_Length_Accepted | Unsigned | R | R | |
| Segmentation_Supported | BACnetSegmentation | R | R | |
| Max_Segments_Accepted | Unsigned | O ¹ | R | |
| VT_Classes_Supported | List of BACnetVTClass | Ø ² | - | |
| Active_VT_Sessions | List of BACnetVTSession | Ø ² | - | |
| Local_Time | Time | O ^{3,4,15} | R | |
| Local_Date | Date | O ^{3,4,15} | R | |
| UTC_Offset | INTEGER | O ⁴ | W | |
| Daylight_Savings_Status | BOOLEAN | O ⁴ | W | |
| APDU_Segment_Timeout | Unsigned | O ¹ | W | |
| APDU_Timeout | Unsigned | R | R | |
| Number_Of_APDU_Retries | Unsigned | R | W | |

Table 11: Device

| Property Identifier | Property Datatype | Conformance Code | WAGO | Property Range Restrictions |
|-------------------------------------|--|------------------|------|--|
| Time_Synchronization_Recipients | List of BACnetRecipient | Θ^5 | - | |
| Max_Master | Unsigned(1..127) | Θ^6 | - | |
| Max_Info_Frames | Unsigned | Θ^6 | - | |
| Device_Address_Binding | List of BACnetAddressBinding | R | R | |
| Database_Revision | Unsigned | R | R | |
| Configuration_Files | BACnetARRAY[N] of BACnetObjectIdentifier | O^7 | W | |
| Last_Restore_Time | BACnetTimeStamp | O^7 | R | |
| Backup_Failure_Timeout | Unsigned16 | O^8 | W | |
| Backup_Preparation_Time | Unsigned16 | Θ | - | |
| Restore_Preparation_Time | Unsigned16 | Θ | - | |
| Restore_Completion_Time | Unsigned16 | Θ | - | |
| Backup_And_Restore_State | BACnetBackupState | Θ | - | |
| Active_COV_Subscriptions | List of BACnetCOVSubscription | O^9 | R | |
| Slave_Proxy_Enable | BACnetArray[N] of BOOLEAN | Θ^{10} | - | |
| Manual_Slave_Address_Binding | List of BACnetAddressBinding | Θ^{10} | - | |
| Auto_Slave_Discovery | BACnetArray[N] of BOOLEAN | Θ^{11} | - | |
| Slave_Address_Binding | List of BACnetAddressBinding | Θ^{12} | - | |
| Last_Restart_Reason | BACnetRestartReason | Θ^{13} | - | |
| Time_of_Device_Restart | BACnetTimeStamp | Θ^{13} | - | |
| Restart_Notification_Recipients | List of BACnetRecipient | Θ^{13} | - | |
| UTC_Time_Synchronization_Recipients | List of BACnetRecipient | Θ^5 | - | |
| Time_Synchronization_Interval | Unsigned | Θ^{14} | - | |
| Align_Intervals | BOOLEAN | Θ^{14} | - | |
| Interval_Offset | Unsigned | Θ^{14} | - | |
| Profile_Name | CharacterString | Θ | - | |
| Message_Text (512) | BACnetARRAY[3] of CharacterString | Proprietary | W | Depending on the UTF-8 characters between 25 and 101 characters. |

- 1 Required if segmentation of any kind is supported.
- 2 If one of the properties VT_Classes_Supported or Active_VT_Sessions is present, then both of these properties shall be present. Both properties are required if support for VT Services is indicated in the PICS.
- 3 If the device supports the execution of the TimeSynchronization service, then these properties shall be present.
- 4 If the device supports the execution of the UTCTimeSynchronization service, then these properties shall be present.
- 5 Required if PICS indicates that this device is a Time Master. If present, this property shall be writable.
- 6 These properties are required if the device is an MS/TP master node.
- 7 These properties are required if the device supports the backup and restore procedures.
- 8 This property must be present and writable if the device supports the backup and restore procedures.
- 9 This property is required if the device supports execution of either the SubscribeCOV or SubscribeCOVProperty service.
- 10 This property shall be present and writable if the device is capable of being a Slave-Proxy device.
- 11 This property shall be present if the device is capable of being a Slave-Proxy device that implements automatic discovery of slaves.
- 12 This property shall be present if the device is capable of being a Slave-Proxy device.
- 13 These properties are required if the device supports the Device Restart Procedure.
- 14 If either Time_Synchronization_Recipients or UTC_Time_Synchronization_Recipients is present, then this property shall be present and writable.
- 15 This property shall be present if the device is capable of tracking date and time.

1.4.12 Event-Enrollment

Dynamically Creatable: No
 Dynamically Deletable: No
 Proprietary Properties: Message_Text (512)

Table 12: Event-Enrollment

| Property Identifier | Property Datatype | Conformance Code | WAGO | Property Range Restrictions |
|---------------------------|-------------------------------------|------------------|------|--|
| Object_Identifier | BACnetObjectIdentifier | R | R | |
| Object_Name | CharacterString | R | R | |
| Object_Type | BACnetObjectType | R | R | |
| Description | CharacterString | O | W | Depending on the UTF-8 characters between 25 and 101 characters. |
| Event_Type | BACnetEventType | R | R | |
| Notify_Type | BACnetNotifyType | R | W | |
| Event_Parameters | BACnetEventParameters | R | R | |
| Object_Property_Reference | BACnetDeviceObjectPropertyReference | R | R | |
| Event_State | BACnetEventState | R | R | |
| Event_Enable | BACnetEventTransitionBits | R | W | |
| Acked_Transitions | BACnetEventTransitionBits | R | R | |
| Notification_Class | Unsigned | R | W | |
| Event_Time_Stamps | BACnetARRAY[3] of BACnetTimeStamp | R | R | |
| Event_Message_Texts | BACnetARRAY[3] of CharacterString | Θ^+ | - | |
| Profile_Name | CharacterString | Θ | - | |
| Message_Text (512) | BACnetARRAY[3] of CharacterString | Proprietary | W | Depending on the UTF-8 characters between 25 and 101 characters. |

1 This property, if present, is required to read only.

1.4.13 File

Dynamically Creatable: Yes
 Dynamically Deletable: Yes
 Proprietary Properties: Message_Text (512)

Table 13: File

| Property Identifier | Property Datatype | Conformance Code | WAGO | Property Range Restrictions |
|---------------------|-----------------------------------|------------------|------|--|
| Object_Identifier | BACnetObjectIdentifier | R | R | |
| Object_Name | CharacterString | R | R | |
| Object_Type | BACnetObjectType | R | R | |
| Description | CharacterString | O | W | Depending on the UTF-8 characters between 25 and 101 characters. |
| File_Type | CharacterString | R | R | |
| File_Size | Unsigned | R ¹ | W | |
| Modification_Date | BACnetDateTime | R | R | |
| Archive | BOOLEAN | W | W | |
| Read_Only | BOOLEAN | R | W | |
| File_Access_Method | BACnetFileAccessMethod | R | R | |
| Record_Count | Unsigned | Ø ² | - | |
| Profile_Name | CharacterString | Ø | - | |
| Message_Text (512) | BACnetARRAY[3] of CharacterString | Proprietary | W | Depending on the UTF-8 characters between 25 and 101 characters. |

- 1 If the file size can be changed by writing to the file, and File_Access_Method is STREAM_ACCESS, then this property shall be writable.
- 2 This property shall be present only if File_Access_Method is RECORD_ACCESS. If the number of records can be changed by writing to the file, then this property shall be writable.

1.4.14 Group

Dynamically Creatable: No
 Dynamically Deletable: No
 Proprietary Properties: Message_Text (512)

Table 14: Group

| Property Identifier | Property Datatype | Conformance Code | WAGO | Property Range Restrictions |
|-----------------------|-----------------------------------|------------------|------|--|
| Object_Identifier | BACnetObjectIdentifier | R | R | |
| Object_Name | CharacterString | R | R | |
| Object_Type | BACnetObjectType | R | R | |
| Description | CharacterString | O | W | Depending on the UTF-8 characters between 25 and 101 characters. |
| List_Of_Group_Members | List of ReadAccessSpecification | R | W | |
| Present_Value | List of ReadAccessResult | R | R | |
| Profile_Name | CharacterString | ⊖ | - | |
| Message_Text (512) | BACnetARRAY[3] of CharacterString | Proprietary | W | Depending on the UTF-8 characters between 25 and 101 characters. |

1.4.15 Life Safety Point

Dynamically Creatable: No
 Dynamically Deletable: No
 Proprietary Properties: Message_Text (512)

Table 15: Life Safety Point

| Property Identifier | Property Datatype | Conformance Code | WAGO | Property Range Restrictions |
|--------------------------|-------------------------------------|------------------|------|--|
| Object_Identifier | BACnetObjectIdentifier | R | R | |
| Object_Name | CharacterString | R | R | |
| Object_Type | BACnetObjectType | R | R | |
| Present_Value | BACnetLifeSafetyState | R | R | |
| Tracking_Value | BACnetLifeSafetyState | R ¹ | R | |
| Description | CharacterString | O | W | Depending on the UTF-8 characters between 25 and 101 characters. |
| Device_Type | CharacterString | O | W | Depending on the UTF-8 characters between 25 and 101 characters. |
| Status_Flags | BACnetStatusFlags | R | R | |
| Event_State | BACnetEventState | R | R | |
| Reliability | BACnetReliability | R ¹ | W | |
| Out_Of_Service | BOOLEAN | R | W | |
| Mode | BACnetLifeSafetyMode | W | W | |
| Accepted_Modes | List of BACnetLifeSafetyMode | R | W | |
| Time_Delay | Unsigned | O ² | W | |
| Notification_Class | Unsigned | O ² | W | |
| Life_Safety_Alarm_Values | List of BACnetLifeSafetyState | O ² | W | |
| Alarm_Values | List of BACnetLifeSafetyState | O ² | W | |
| Fault_Values | List of BACnetLifeSafetyState | O ² | W | |
| Event_Enable | BACnetEventTransitionBits | O ² | W | |
| Acked_Transitions | BACnetEventTransitionBits | O ² | R | |
| Notify_Type | BACnetNotifyType | O ² | W | |
| Event_Time_Stamps | BACnetARRAY [3] of BACnetTimeStamp | O ² | R | |
| Event_Message_Texts | BACnetARRAY[3] of CharacterString | O ⁴ | - | |
| Silenced | BACnetSilencedState | R | R | |
| Operation_Expected | BACnetLifeSafetyOperation | R | R | |
| Maintenance_Required | BACnetMaintenance | O | W | |
| Setting | Unsigned8 | O | W | |
| Direct_Reading | REAL | O ³ | W | |
| Units | BACnetEngineeringUnits | O ³ | W | |
| Member_Of | List of BACnetDeviceObjectReference | O | W | |
| Profile_Name | CharacterString | O | - | |

Table 15: Life Safety Point

| Property Identifier | Property Datatype | Conformance Code | WAGO | Property Range Restrictions |
|---------------------|--------------------------------------|------------------|------|--|
| Message_Text (512) | BACnetARRAY[3] of CharacterString | Proprietary | W | Depending on the UTF-8 characters between 25 and 101 characters. |

- 1 These properties are required to be writable when Out_Of_Service is TRUE.
- 2 These properties are required if the object supports intrinsic alarming.
- 3 If either of these properties is present, then both must be present.
- 4 This property, if present, is required to read only.

1.4.16 Life Safety Zone

Dynamically Creatable: No
 Dynamically Deletable: No
 Proprietary Properties: Message_Text (512)

Table 16: Life Safety Zone

| Property Identifier | Property Datatype | Conformance Code | WAGO | Property Range Restrictions |
|--------------------------|-------------------------------------|------------------|------|--|
| Object_Identifier | BACnetObjectIdentifier | R | R | |
| Object_Name | CharacterString | R | R | |
| Object_Type | BACnetObjectType | R | R | |
| Present_Value | BACnetLifeSafetyState | R | R | |
| Tracking_Value | BACnetLifeSafetyState | R ¹ | R | |
| Description | CharacterString | O | W | Depending on the UTF-8 characters between 25 and 101 characters. |
| Device_Type | CharacterString | O | W | Depending on the UTF-8 characters between 25 and 101 characters. |
| Status_Flags | BACnetStatusFlags | R | R | |
| Event_State | BACnetEventState | R | R | |
| Reliability | BACnetReliability | R ¹ | W | |
| Out_Of_Service | BOOLEAN | R | W | |
| Mode | BACnetLifeSafetyMode | W | W | |
| Accepted_Modes | List of BACnetLifeSafetyMode | R | W | |
| Time_Delay | Unsigned | O ² | W | |
| Notification_Class | Unsigned | O ² | W | |
| Life_Safety_Alarm_Values | List of BACnetLifeSafetyState | O ² | W | |
| Alarm_Values | List of BACnetLifeSafetyState | O ² | W | |
| Fault_Values | List of BACnetLifeSafetyState | O ² | W | |
| Event_Enable | BACnetEventTransitionBits | O ² | W | |
| Acked_Transitions | BACnetEventTransitionBits | O ² | R | |
| Notify_Type | BACnetNotifyType | O ² | W | |
| Event_Time_Stamps | BACnetARRAY [3] of BACnetTimeStamp | O ² | R | |
| Event_Message_Texts | BACnetARRAY[3] of CharacterString | Θ ³ | - | |
| Silenced | BACnetSilencedState | R | R | |
| Operation_Expected | BACnetLifeSafetyOperation | R | R | |
| Maintenance_Required | BOOLEAN | O | W | |
| Zone_Members | List of BACnetDeviceObjectReference | R | W | |
| Member_Of | List of BACnetDeviceObjectReference | O | W | |
| Profile_Name | CharacterString | Θ | - | |

Table 16: Life Safety Zone

| Property Identifier | Property Datatype | Conformance Code | WAGO | Property Range Restrictions |
|---------------------|-----------------------------------|------------------|------|--|
| Message_Text (512) | BACnetARRAY[3] of CharacterString | Proprietary | W | Depending on the UTF-8 characters between 25 and 101 characters. |

- 1 These properties are required to be writable when Out_Of_Service is TRUE.
- 2 These properties are required if the object supports intrinsic alarming.
- 3 This property, if present, is required to read only.

1.4.17 Loop

Dynamically Creatable: No
 Dynamically Deletable: No
 Proprietary Properties: Message_Text (512)

Table 17: Loop

| Property Identifier | Property Datatype | Conformance Code | WAGO | Property Range Restrictions |
|--------------------------------|-------------------------------|------------------|------|--|
| Object_Identifier | BACnetObjectIdentifier | R | R | |
| Object_Name | CharacterString | R | R | |
| Object_Type | BACnetObjectType | R | R | |
| Present_Value | REAL | R | R | |
| Description | CharacterString | O | W | Depending on the UTF-8 characters between 25 and 101 characters. |
| Status_Flags | BACnetStatusFlags | R | R | |
| Event_State | BACnetEventState | R | R | |
| Reliability | BACnetReliability | O | W | |
| Out_Of_Service | BOOLEAN | R | W | |
| Update_Interval | Unsigned | O | R | |
| Output_Units | BACnetEngineeringUnits | R | W | |
| Manipulated_Variable_Reference | BACnetObjectPropertyReference | R | W | |
| Controlled_Variable_Reference | BACnetObjectPropertyReference | R | W | |
| Controlled_Variable_Value | REAL | R | R | |
| Controlled_Variable_Units | BACnetEngineeringUnits | R | W | |
| Setpoint_Reference | BACnetSetpointReference | R | W | |
| Setpoint | REAL | R | W | |
| Action | BACnetAction | R | W | |
| Proportional_Constant | REAL | O ¹ | W | |
| Proportional_Constant_Units | BACnetEngineeringUnits | O ¹ | W | |
| Integral_Constant | REAL | O ¹ | W | |
| Integral_Constant_Units | BACnetEngineeringUnits | O ¹ | W | |
| Derivative_Constant | REAL | O ¹ | W | |
| Derivative_Constant_Units | BACnetEngineeringUnits | O ¹ | W | |
| Bias | REAL | O | W | |
| Maximum_Output | REAL | O | W | |
| Minimum_Output | REAL | O | W | |
| Priority_For_Writing | Unsigned | R | W | |
| COV_Increment | REAL | O ² | W | |
| Time_Delay | Unsigned | O ³ | W | |
| Notification_Class | Unsigned | O ³ | W | |
| Error_Limit | REAL | O ³ | W | |
| Deadband | REAL | O ³ | W | |
| Event_Enable | BACnetEventTransitionBits | O ³ | W | |
| Acked_Transitions | BACnetEventTransitionBits | O ³ | R | |

Table 17: Loop

| Property Identifier | Property Datatype | Conformance Code | WAGO | Property Range Restrictions |
|---------------------|-----------------------------------|------------------|------|--|
| Notify_Type | BACnetNotifyType | O ³ | W | |
| Event_Time_Stamps | BACnetARRAY[3] of BACnetTimeStamp | O ³ | R | |
| Event_Message_Texts | BACnetARRAY[3] of CharacterString | O ⁴ | - | |
| Profile_Name | CharacterString | O | - | |
| Message_Text (512) | BACnetARRAY[3] of CharacterString | Proprietary | W | Depending on the UTF-8 characters between 25 and 101 characters. |

- 1 If one of these optional properties is present, then both of these properties shall be present.
- 2 This property is required if the object supports COV reporting.
- 3 These properties are required if the object supports intrinsic reporting.
- 4 This property, if present, is required to read only.

1.4.18 Multi State Value

Dynamically Creatable: No
 Dynamically Deletable: No
 Proprietary Properties: Message_Text (512)

Table 18: Multi State Value

| Property Identifier | Property Datatype | Conformance Code | WAGO | Property Range Restrictions |
|---------------------|-----------------------------------|------------------|------|--|
| Object_Identifier | BACnetObjectIdentifier | R | R | |
| Object_Name | CharacterString | R | R | |
| Object_Type | BACnetObjectType | R | R | |
| Present_Value | Unsigned | R ¹ | W | |
| Description | CharacterString | O | W | Depending on the UTF-8 characters between 25 and 101 characters. |
| Status_Flags | BACnetStatusFlags | R | R | |
| Event_State | BACnetEventState | R | R | |
| Reliability | BACnetReliability | O ² | W | no-fault-detected not allowed when Present_Value = Fault_Value |
| Out_Of_Service | BOOLEAN | R | W | |
| Number_Of_States | Unsigned | R | R | |
| State_Text | BACnetARRAY[N] of CharacterString | O | W | Depending on the UTF-8 characters between 25 and 101 characters. per entry |
| Priority_Array | BACnetPriorityArray | O ³ | R | |
| Relinquish_Default | Unsigned | O ³ | W | |
| Time_Delay | Unsigned | O ⁴ | W | |
| Notification_Class | Unsigned | O ⁴ | W | |
| Alarm_Values | List of Unsigned | O ⁴ | W | |
| Fault_Values | List of Unsigned | O ⁴ | W | |
| Event_Enable | BACnetEventTransitionBits | O ⁴ | W | |
| Acked_Transitions | BACnetEventTransitionBits | O ⁴ | R | |
| Notify_Type | BACnetNotifyType | O ⁴ | W | |
| Event_Time_Stamps | BACnetARRAY[3] of BACnetTimeStamp | O ⁴ | R | |
| Event_Message_Texts | BACnetARRAY[3] of CharacterString | O ⁵ | - | |
| Profile_Name | CharacterString | O | - | |
| Message_Text (512) | BACnetARRAY[3] of CharacterString | Proprietary | W | Depending on the UTF-8 characters between 25 and 101 characters. |

1 If Present_Value is commandable, then it is required to also be writable. This property is required to be writable when Out_Of_Service is TRUE.

2 This property shall be required if Fault_Values is present.

3 If Present_Value is commandable, then both of these properties shall be present.

4 These properties are required if the object supports intrinsic reporting.

5 This property, if present, is required to read only.

1.4.19 Notification Class

Dynamically Creatable: No
 Dynamically Deletable: No
 Proprietary Properties: Message_Text (512)

Table 19: Notification Class

| Property Identifier | Property Datatype | Conformance Code | WAGO | Property Range Restrictions |
|---------------------|-----------------------------------|------------------|------|--|
| Object_Identifier | BACnetObjectIdentifier | R | R | |
| Object_Name | CharacterString | R | R | |
| Object_Type | BACnetObjectType | R | R | |
| Description | CharacterString | O | W | Depending on the UTF-8 characters between 25 and 101 characters. |
| Notification_Class | Unsigned | R | R | |
| Priority | BACnetARRAY[3] of Unsigned | R | W | |
| Ack_Required | BACnetEventTransitionBits | R | W | |
| Recipient_List | List of BACnetDestination | R | W | |
| Profile_Name | CharacterString | Ø | - | |
| Message_Text (512) | BACnetARRAY[3] of CharacterString | Proprietary | W | Depending on the UTF-8 characters between 25 and 101 characters. |

1.4.20 Pulse Converter

Dynamically Creatable: No
 Dynamically Deletable: No
 Proprietary Properties: Message_Text (512)

Table 20: Pulse Converter

| Property Identifier | Property Datatype | Conformance Code | WAGO | Property Range Restrictions |
|---------------------|-----------------------------------|------------------|------|--|
| Object_Identifier | BACnetObjectIdentifier | R | R | |
| Object_Name | CharacterString | R | R | |
| Object_Type | BACnetObjectType | R | R | |
| Description | CharacterString | O | W | Depending on the UTF-8 characters between 25 and 101 characters. |
| Present_Value | REAL | R ¹ | R | |
| Input_Reference | BACnetObjectProperty Reference | O | W | |
| Status_Flags | BACnetStatusFlags | R | R | |
| Event_State | BACnetEventState | R | R | |
| Reliability | BACnetReliability | O | W | |
| Out_Of_Service | BOOLEAN | R | W | |
| Units | BACnetEngineeringUnits | R | W | |
| Scale_Factor | REAL | R | W | |
| Adjust_Value | REAL | W | W | |
| Count | Unsigned | R | R | |
| Update_Time | BACnetDateTime | R | R | |
| Count_Change_Time | BACnetDateTime | R | R | |
| Count_Before_Change | Unsigned | R | R | |
| COV_Increment | REAL | O ² | W | |
| COV_Period | Unsigned | O ² | W | |
| Notification_Class | Unsigned | O ³ | W | |
| Time_Delay | Unsigned | O ³ | W | |
| High_Limit | REAL | O ³ | W | |
| Low_Limit | REAL | O ³ | W | |
| Deadband | REAL | O ³ | W | |
| Limit_Enable | BACnetLimitEnable | O ³ | W | |
| Event_Enable | BACnetEventTransitionBits | O ³ | W | |
| Acked_Transitions | BACnetEventTransitionBits | O ³ | R | |
| Notify_Type | BACnetNotifyType | O ³ | W | |
| Event_Time_Stamps | BACnetARRAY[3] of BACnetTimeStamp | O ³ | R | |
| Event_Message_Texts | BACnetARRAY[3] of CharacterString | O ⁴ | - | |
| Profile_Name | CharacterString | O | - | |
| Message_Text (512) | BACnetARRAY[3] of CharacterString | Proprietary | W | Depending on the UTF-8 characters between 25 and 101 characters. |

- 1 This property is required to be writable when Out_Of_Service is TRUE.
- 2 These properties are required if the object supports COV reporting.
- 3 These properties are required if the object supports intrinsic reporting.
- 4 This property, if present, is required to read only.

1.4.21 Schedule

Dynamically Creatable: Yes
 Dynamically Deletable: Yes
 Proprietary Properties: Message_Text (512)

Table 21: Schedule

| Property Identifier | Property Datatype | Conformance Code | WAGO | Property Range Restrictions |
|------------------------------------|---|------------------|------|--|
| Object_Identifier | BACnetObjectIdentifier | R | R | |
| Object_Name | CharacterString | R | R | |
| Object_Type | BACnetObjectType | R | R | |
| Present_Value | Any | R | R | |
| Description | CharacterString | O | W | Depending on the UTF-8 characters between 25 and 101 characters. |
| Effective_Period | BACnetDateRange | R | W | |
| Weekly_Schedule | BACnetARRAY[7]of BACnetDailySchedule | O ¹ | W | |
| Exception_Schedule | BACnetARRAY[N]of BACnetSpecialEvent | O ¹ | W | |
| Schedule_Default | Any | R | W | |
| List_Of_Object_Property_References | List of BACnetDeviceObjectPropertyReference | R | W | |
| Priority_For_Writing | Unsigned(1..16) | R | W | |
| Status_Flags | BACnetStatusFlags | R | R | |
| Reliability | BACnetReliability | R | R | |
| Out_Of_Service | BOOLEAN | R | W | |
| Profile_Name | CharacterString | Ø | - | |
| Message_Text (512) | BACnetARRAY[3] of CharacterString | Proprietary | W | Depending on the UTF-8 characters between 25 and 101 characters. |

1 At least one of these properties is required.

1.4.22 Trend Log

Dynamically Creatable: Yes
 Dynamically Deletable: Yes
 Proprietary Properties: Message_Text (512)

Table 22: Trend Log

| Property Identifier | Property Datatype | Conformance Code | WAGO | Property Range Restrictions |
|-----------------------------|--------------------------------------|------------------|------|--|
| Object_Identifier | BACnetObjectIdentifier | R | R | |
| Object_Name | CharacterString | R | R | |
| Object_Type | BACnetObjectType | R | R | |
| Description | CharacterString | O | W | Depending on the UTF-8 characters between 25 and 101 characters. |
| Enable | BOOLEAN | W | W | |
| Start_Time | BACnetDateTime | O ^{1,2} | W | |
| Stop_Time | BACnetDateTime | O ^{1,2} | W | |
| Log_DeviceObject Property | BACnetDeviceObject PropertyReference | O ¹ | W | |
| Log_Interval | Unsigned | O ^{1,3} | W | > 99 required |
| COV_Resubscription_Interval | Unsigned | O | W | |
| Client_COV_Increment | BACnetClientCOV | O | W | |
| Stop_When_Full | BOOLEAN | R | W | |
| Buffer_Size | Unsigned32 | R | W | |
| Log_Buffer | List of BACnetLogRecord | R | R | |
| Record_Count | Unsigned32 | W | W | |
| Total_Record_Count | Unsigned32 | R | R | |
| Notification_Threshold | Unsigned32 | O ⁴ | W | |
| Records_Since_Notification | Unsigned32 | O ⁴ | R | |
| Last_Notify_Record | Unsigned32 | O ⁴ | R | |
| Event_State | BACnetEventState | R | R | |
| Notification_Class | Unsigned | O ⁴ | W | |
| Event_Enable | BACnetEventTransitionBits | O ⁴ | W | |
| Acked_Transitions | BACnetEventTransitionBits | O ⁴ | R | |
| Notify_Type | BACnetNotifyType | O ⁴ | W | |
| Event_Time_Stamps | BACnetARRAY[3] of BACnetTimeStamp | O ⁴ | R | |
| Event_Message_Texts | BACnetARRAY[3] of CharacterString | O ⁶ | - | |
| Profile_Name | CharacterString | O | - | |
| Logging_Type | BACnetLoggingType | R | R | |
| Align_Intervals | BOOLEAN | O ⁵ | W | |
| Interval_Offset | Unsigned | O ⁵ | W | |
| Trigger | BOOLEAN | O | W | |
| Status_Flags | BACnetStatusFlags | R | R | |
| Reliability | BACnetReliability | O | R | |

Table 22: Trend Log

| Property Identifier | Property Datatype | Conformance Code | WAGO | Property Range Restrictions |
|---------------------|--------------------------------------|------------------|------|--|
| Message_Text (512) | BACnetARRAY[3] of CharacterString | Proprietary | W | Depending on the UTF-8 characters between 25 and 101 characters. |

- 1 These properties are required to be present if the monitored property is a BACnet property.
- 2 If present, these properties are required to be writable.
- 3 If present, this property is required to be writable when Logging_Type has the value POLLED or the value COV. Also, if present this property is required to be read-only if Logging_Type has the value TRIGGERED.
- 4 These properties are required to be present if the object supports intrinsic reporting.
- 5 These properties are required to be present if the object supports clock-aligned logging.
- 6 This property, if present, is required to read only.

1.5 Data Link Layer Options

- BACnet IP, (Annex J)
- BACnet IP, (Annex J), Foreign Device
- ISO 8802-3, Ethernet (Clause 7)
- ASTM 878.1, 2.5 Mb. ARCNET (Clause 8)
- ASTM 878.1, RS-485 ARCNET (Clause 8) baud rate(s): _____
- MS/TP master (Clause 9), baud rate(s): _____
- MS/TP slave (Clause 9), baud rate(s): _____
- Point-To-Point, EIA 232 (Clause 10), baud rate(s): max. EIA 232
- Point-To-Point, modem, (Clause 10), baud rate(s): max. modem
- LonTalk, (Clause 11), medium: _____
- Other: _____

1.6 Networking Options

- Router, Clause 6 - List all routing configurations:
- Annex H, BACnet Tunneling Router over IP
- BACnet Broadcast Management Device (BBMD)

Does the BBMD support registrations by Foreign Devices?
(BTD, FDT summarized number limitation: max. 16)

Yes
No

1.7 Character Sets Supported

Indicating support for multiple character sets does not imply that they can all be supported simultaneously.

- | | | |
|---|---|-------------------------------------|
| <input checked="" type="checkbox"/> ISO 10646 (UTF-8) | <input type="checkbox"/> IBM™/Microsoft™ DBCS | <input type="checkbox"/> ISO 8859-1 |
| <input type="checkbox"/> ISO 10646 (UCS-2) | <input type="checkbox"/> ISO 10646 (UCS-4) | <input type="checkbox"/> JIS X 0208 |

1.8 Network Security Options

- Non-secure Device - is capable of operating without BACnet Network Security
- Secure Device - is capable of using BACnet Network Security (NS-SD BIBB)
 - Multiple Application-Specific Keys
 - Supports encryption (NS-ED BIBB)
 - Key Server (NS-KS BIBB)

List of Tables

| | |
|-----------------------------------|----|
| Table 1: Accumulator | 7 |
| Table 2: Analog Input..... | 9 |
| Table 3: Analog Output..... | 11 |
| Table 4: Analog Value | 12 |
| Table 5: Averaging..... | 13 |
| Table 6: Binary Input | 14 |
| Table 7: Binary Output..... | 16 |
| Table 8: Binary Value | 18 |
| Table 9: Calendar | 20 |
| Table 10: Command | 21 |
| Table 11: Device | 22 |
| Table 12: Event-Enrollment | 25 |
| Table 13: File..... | 26 |
| Table 14: Group..... | 27 |
| Table 15: Life Safety Point | 28 |
| Table 16: Life Safety Zone..... | 30 |
| Table 17: Loop | 32 |
| Table 18: Multi State Value | 34 |
| Table 19: Notification Class..... | 35 |
| Table 20: Pulse Converter | 36 |
| Table 21: Schedule | 38 |
| Table 22: Trend Log..... | 39 |

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