

# Universalgateway

## BACnet Protocol Implementation Conformance Statement

Version: 2016, October 17

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# 1. Preface

This document describes the BACnet functionality implemented in the MBS Universalgateway.

## 2. BACnet PICS MBS Universalgateway

Date:	2016, October 17
Vendor Name:	MBS GmbH, Krefeld
Vendor Identifier:	50
Product Name:	Universalgateway
Product Model Names:	UGW Standard, x-link, M-Bus, KNX, DALI, LON, Profinet
Application Software Version:	Drv.bac V2_01C
Firmware Revision:	1.14
BACnet Protocol Version:	1
BACnet Protocol Revision:	14

### Product Description

The MBS Universal Gateway provides connection to BACnet-networks for several communication protocols.

### BACnet Standardized Device Profile (Annex L)

- BACnet Advanced Operator Workstation (B-AWS)
- BACnet Operator Workstation (B-OWS)
- BACnet Operator Display (B-OD)
- 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)

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

### K.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 – A	DS-COVP-A
Data Sharing – COVP – B	DS-COVP-B
Data Sharing – COV – Unsubscribed – A	DS-COVU-A

### K.2. Alarm and Event BIBBs

Alarm and Event – Notification Internal – B	AE-N-I-B
Alarm and Event – Notification External – B	AE-N-E-B
Alarm and Event – ACK – B	AE-ACK-B
Alarm and Event – Alarm Summary – B	AE-ASUM-B
Alarm and Event – Enrollment Summary – B	AE-ESUM-B
Alarm and Event – Event Information – B	AE-INFO-B
Alarm and Event – Life Safety – B	AE-LS-B
Alarm and Event – Event Log Internal – B	AE-EL-I-B

### K.3. Scheduling BIBBs

Scheduling – Internal – B	SCHED-I-B
Scheduling – External – B	SCHED-E-B

### K.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

### K.5. Device and Network 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 – Device Communication Control – B	DM-DCC-B
Device Management – Time-Synchronization – B	DM-TS-B
Device Management – UTC-Time-Synchronization – B	DM-UTC-B
Device Management – Reinitialize-Device – B	DM-RD-B
Device Management – Backup and Restore – B	DM-BR-B
Device Management – Restart – B	DM-R-B

Device Management – List Manipulation – B	DM-LM-B
Network Management – Connection Establishment – A	NM-CE-A
Network Management – Connection Establishment – B	NM-CE-B
Network Management – Router Configuration – B	NM-RC-B

**K.6. Network Security BIBBs**

No Network Security BIBBs supported.

**Segmentation Capability**

- Segmented requests supported Window Size: 8
- Segmented responses supported Window Size: 8

**Data Link Layer Options**

- BACnet IP, (Annex J)
- BACnet IP, (Annex J), Foreign Device
- ISO 8802-3, Ethernet (Clause 7)
- ANSI/ATA 878.1, 2.5 Mb. ARCNET (Clause 8)
- ANSI/ATA 878.1, RS-485 ARCNET (Clause 8) baud rate(s) \_\_\_\_\_
- MS/TP master (Clause 9), baud rate(s): 9600, 19200, 38400, 57600, 76800, 115200
- MS/TP slave (Clause 9), baud rate(s): \_\_\_\_\_
- Point-To-Point, EIA 232 (Clause 10) baud rate(s) \_\_\_\_\_
- \_\_\_\_\_
- Point-To-Point, modem, (Clause 10) baud rate(s) 1200, 2400, 4800, 9600, 19200, 38400, 57600, 76800, 115200
- LonTalk, (Clause 11) medium: \_\_\_\_\_
- BACnet/Zigbee (Annex O) \_\_\_\_\_
- Other: \_\_\_\_\_

**Device Address Binding**

Is static device binding supported? (This is currently necessary for two-way communication with MS/TP slaves and certain other devices.)

- Yes      No

### Networking Options

Router, Clause 6

Annex H, BACnet Tunneling Router over IP

BACnet/IP Broadcast Management Device (BBMD)

Does the BBMD support registrations by Foreign Devices?  Yes  No  
(Max. 50 FD-Entries)

Does the BBMD support network address translation?  Yes  No

### 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

Key Server (NS-KS BIBB)

### Character Sets Supported

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

ISO 10646 (UTF-8)

IBM/Microsoft DBCS

ISO 8859-1

ISO 10646 (UCS-2)

ISO 10646 (UCS-4)

JIS C 6226

### Communication Gateway

This BACnet Gateway provides interfaces for several communication protocols, either proprietary or standard. For a complete list of supported protocol visit our homepage.

## Standard Object Types Supported

The supported object types are:

Analog Input Object Type	(0)
Analog Output Object Type	(1)
Analog Value Object Type	(2)
Binary Input Object Type	(3)
Binary Output Object Type	(4)
Binary Value Object Type	(5)
Calendar Object Type	(6)
Command Object Type	(7)
Device Object Type	(8)
Event Enrollment Object Type	(9)
File Object Type	(10)
Multi-state Input Object Type	(13)
Multi-state Output Object Type	(14)
Notification Class Object Type	(15)
Schedule Object Type	(17)
Multi-state Value Object Type	(19)
Trend Log Object Type	(20)
Life Safety Point Object Type	(21)
Life Safety Zone Object Type	(22)
Event Log Object Type	(25)
Structured View Object Type	(29)

Creation and Deletion of objects is not supported.

The MBS Universalgateway does not contain any proprietary properties.

## Object Properties

### Analog Input Object Type

Property Identifier	Property Datatype	Availabl <sup>1</sup>
Object_Identifier	BACnetObjectIdentifier	Always
Object_Name	CharacterString	Always
Object_Type	BACnetObjectType	Always
Present_Value	REAL	Always
Description	CharacterString	Config
Device_Type	CharacterString	Config
Status_Flags	BACnetStatusFlags	Always
Event_State	BACnetEventState	Always
Reliability	BACnetReliability	Config
Out_Of_Service	BOOLEAN	Always
Update_Interval	Unsigned	Config
Units	BACnetEngineeringUnits	Always
Min_Pres_Value	REAL	Config
Max_Pres_Value	REAL	Config
Resolution	REAL	Config
COV_Increment	REAL	Config
Time_Delay	Unsigned	Config
Notification_Class	Unsigned	Config
High_Limit	REAL	Config
Low_Limit	REAL	Config
Deadband	REAL	Config
Limit_Enable	BACnetLimitEnable	Config
Event_Enable	BACnetEventTransitionBits	Config
Acked_Transitions	BACnetEventTransitionBits	Config
Notify_Type	BACnetNotifyType	Config
Event_Time_Stamps	BACnetARRAY[3] of BACnetTimeStamp	Config
Event_Message_Texts	BACnetARRAY[3] of CharacterString	Config
Event_Message_Texts_Config	BACnetARRAY[3] of CharacterString	Config
Event_Detection_Enable	BOOLEAN	Config
Event_Algorithm_Inhibit_Ref	BACnetObjectPropertyReference	Config
Event_Algorithm_Inhibit	BOOLEAN	Config
Time_Delay_Normal	Unsigned	Config
Reliability_Evaluation_Inhibit	BOOLEAN	Config
Property_List	BACnetARRAY[N] of BACnetPropertyIdentifier	Always
Profile_Name	CharacterString	Config

<sup>1)</sup> **Always** = Property is always present, **Config** = Property is present if configured, **Never** = Property is never present

<sup>2)</sup> **Read** = Property is read only, **Write** = Property is readable and writeable, **R/W** = Property can be configured to be readable or writeable, **Range** = Property is read only using Service ReadRange, **---** = Property is not available



## Analog Output Object Type

Property Identifier	Property Datatype	CC	Available	Access
Object_Identifier	BACnetObjectIdentifier	R	Always	Read
Object_Name	CharacterString	R	Always	R/W
Object_Type	BACnetObjectType	R	Always	Read
Present_Value	REAL	W	Always	Write
Description	CharacterString	O	Config	R/W
Device_Type	CharacterString	O	Config	Read
Status_Flags	BACnetStatusFlags	R	Always	Read
Event_State	BACnetEventState	R	Always	Read
Reliability	BACnetReliability	O	Config	Read
Out_Of_Service	BOOLEAN	R	Always	R/W
Units	BACnetEngineeringUnits	R	Always	Read
Min_Pres_Value	REAL	O	Config	R/W
Max_Pres_Value	REAL	O	Config	R/W
Resolution	REAL	O	Config	Read
Priority_Array	BACnetPriorityArray	R	Always	Read
Relinquish_Default	REAL	R	Always	R/W
COV_Increment	REAL	O	Config	R/W
Time_Delay	Unsigned	O	Config	R/W
Notification_Class	Unsigned	O	Config	R/W
High_Limit	REAL	O	Config	R/W
Low_Limit	REAL	O	Config	R/W
Deadband	REAL	O	Config	R/W
Limit_Enable	BACnetLimitEnable	O	Config	R/W
Event_Enable	BACnetEventTransitionBits	O	Config	R/W
Acked_Transitions	BACnetEventTransitionBits	O	Config	Read
Notify_Type	BACnetNotifyType	O	Config	R/W
Event_Time_Stamps	BACnetARRAY[3] of BACnetTimeStamp	O	Config	Read
Event_Message_Texts	BACnetARRAY[3] of CharacterString	O	Config	Read
Event_Message_Texts_Config	BACnetARRAY[3] of CharacterString	O	Config	R/W
Event_Detection_Enable	BOOLEAN	O	Config	R/W
Event_Algorithm_Inhibit_Ref	BACnetObjectPropertyReference	O	Config	R/W
Event_Algorithm_Inhibit	BOOLEAN	O	Config	Read
Time_Delay_Normal	Unsigned	O	Config	R/W
Reliability_Evaluation_Inhibit	BOOLEAN	O	Config	R/W
Property_List	BACnetARRAY[N] of BACnetPropertyIdentifier	R	Always	Read
Profile_Name	CharacterString	O	Config	Read

## Analog Value Object Typ

Property Identifie	Property Datatype	CC	Available	Access
Object_Identifier	BACnetObjectIdentifier	R	Always	Read
Object_Name	CharacterString	R	Always	R/W
Object_Type	BACnetObjectType	R	Always	Read
Present_Value	REAL	R	Always	R/W
Description	CharacterString	O	Config	R/W
Status_Flags	BACnetStatusFlags	R	Always	Read
Event_State	BACnetEventState	R	Always	Read
Reliability	BACnetReliability	O	Config	Read
Out_Of_Service	BOOLEAN	R	Always	R/W
Units	BACnetEngineeringUnits	R	Always	Read
Priority_Array	BACnetPriorityArray	O	Config	Read
Relinquish_Default	REAL	O	Config	R/W
COV_Increment	REAL	O	Config	R/W
Time_Delay	Unsigned	O	Config	R/W
Notification_Class	Unsigned	O	Config	R/W
High_Limit	REAL	O	Config	R/W
Low_Limit	REAL	O	Config	R/W
Deadband	REAL	O	Config	R/W
Limit_Enable	BACnetLimitEnable	O	Config	R/W
Event_Enable	BACnetEventTransitionBits	O	Config	R/W
Acked_Transitions	BACnetEventTransitionBits	O	Config	Read
Notify_Type	BACnetNotifyType	O	Config	R/W
Event_Time_Stamps	BACnetARRAY[3] of BACnetTimeStamp	O	Config	Read
Event_Message_Texts	BACnetARRAY[3] of CharacterString	O	Config	Read
Event_Message_Texts_Config	BACnetARRAY[3] of CharacterString	O	Config	R/W
Event_Detection_Enable	BOOLEAN	O	Config	R/W
Event_Algorithm_Inhibit_Ref	BACnetObjectPropertyReference	O	Config	R/W
Event_Algorithm_Inhibit	BOOLEAN	O	Config	Read
Time_Delay_Normal	Unsigned	O	Config	R/W
Reliability_Evaluation_Inhibit	BOOLEAN	O	Config	R/W
Min_Pres_Value	REAL	O	Config	R/W
Max_Pres_Value	REAL	O	Config	R/W
Resolution	REAL	O	Config	Read
Property_List	BACnetARRAY[N] of BACnetPropertyIdentifier	R	Always	Read
Profile_Name	CharacterString	O	Config	Read

## Binary Input Object Type

Property Identifier	Property Datatype	CC	Available	Access
Object_Identifier	BACnetObjectIdentifier	R	Always	Read
Object_Name	CharacterString	R	Always	R/W
Object_Type	BACnetObjectType	R	Always	Read
Present_Value	BACnetBinaryPV	R	Always	Read
Description	CharacterString	O	Config	R/W
Device_Type	CharacterString	O	Config	Read
Status_Flags	BACnetStatusFlags	R	Always	Read
Event_State	BACnetEventState	R	Always	Read
Reliability	BACnetReliability	O	Config	Read
Out_Of_Service	BOOLEAN	R	Always	R/W
Polarity	BACnetPolarity	R	Always	Read
Inactive_Text	CharacterString	O	Config	R/W
Active_Text	CharacterString	O	Config	R/W
Change_Of_State_Time	BACnetDateTime	O	Config	Read
Change_Of_State_Count	Unsigned	O	Config	R/W
Time_Of_State_Count_Reset	BACnetDateTime	O	Config	Read
Elapsed_Active_Time	Unsigned32	O	Config	R/W
Time_Of_Active_Time_Reset	BACnetDateTime	O	Config	Read
Time_Delay	Unsigned	O	Config	R/W
Notification_Class	Unsigned	O	Config	R/W
Alarm_Value	BACnetBinaryPV	O	Config	R/W
Event_Enable	BACnetEventTransitionBits	O	Config	R/W
Acked_Transitions	BACnetEventTransitionBits	O	Config	Read
Notify_Type	BACnetNotifyType	O	Config	R/W
Event_Time_Stamps	BACnetARRAY[3] of BACnetTimeStamp	O	Config	Read
Event_Message_Texts	BACnetARRAY[3] of CharacterString	O	Config	Read
Event_Message_Texts_Config	BACnetARRAY[3] of CharacterString	O	Config	R/W
Event_Detection_Enable	BOOLEAN	O	Config	R/W
Event_Algorithm_Inhibit_Ref	BACnetObjectPropertyReference	O	Config	R/W
Event_Algorithm_Inhibit	BOOLEAN	O	Config	Read
Time_Delay_Normal	Unsigned	O	Config	R/W
Reliability_Evaluation_Inhibit	BOOLEAN	O	Config	R/W
Property_List	BACnetARRAY[N] of BACnetPropertyIdentifier	R	Always	Read
Profile_Name	CharacterString	O	Config	Read

## Binary Output Object Type

Property Identifier	Property Datatype	CC	Available	Access
Object_Identifier	BACnetObjectIdentifier	R	Always	Read
Object_Name	CharacterString	R	Always	R/W
Object_Type	BACnetObjectType	R	Always	Read
Present_Value	BACnetBinaryPV	W	Always	Write
Description	CharacterString	O	Config	R/W
Device_Type	CharacterString	O	Config	Read
Status_Flags	BACnetStatusFlags	R	Always	Read
Event_State	BACnetEventState	R	Always	Read
Reliability	BACnetReliability	O	Config	Read
Out_Of_Service	BOOLEAN	R	Always	R/W
Polarity	BACnetPolarity	R	Always	Read
Inactive_Text	CharacterString	O	Config	R/W
Active_Text	CharacterString	O	Config	R/W
Change_Of_State_Time	BACnetDateTime	O	Config	Read
Change_Of_State_Count	Unsigned	O	Config	R/W
Time_Of_State_Count_Reset	BACnetDateTime	O	Config	Read
Elapsed_Active_Time	Unsigned32	O	Config	R/W
Time_Of_Active_Time_Reset	BACnetDateTime	O	Config	Read
Minimum_Off_Time	Unsigned32	O	Config	R/W
Minimum_On_Time	Unsigned32	O	Config	R/W
Priority_Array	BACnetPriorityArray	R	Always	Read
Relinquish_Default	BACnetBinaryPV	R	Always	R/W
Time_Delay	Unsigned	O	Config	R/W
Notification_Class	Unsigned	O	Config	R/W
Feedback_Value	BACnetBinaryPV	O	Config	Read
Event_Enable	BACnetEventTransitionBits	O	Config	R/W
Acked_Transitions	BACnetEventTransitionBits	O	Config	Read
Notify_Type	BACnetNotifyType	O	Config	R/W
Event_Time_Stamps	BACnetARRAY[3] of BACnetTimeStamp	O	Config	Read
Event_Message_Texts	BACnetARRAY[3] of CharacterString	O	Config	Read
Event_Message_Texts_Config	BACnetARRAY[3] of CharacterString	O	Config	R/W
Event_Detection_Enable	BOOLEAN	O	Config	R/W
Event_Algorithm_Inhibit_Ref	BACnetObjectPropertyReference	O	Config	R/W
Event_Algorithm_Inhibit	BOOLEAN	O	Config	Read
Time_Delay_Normal	Unsigned	O	Config	R/W
Reliability_Evaluation_Inhibit	BOOLEAN	O	Config	R/W
Property_List	BACnetARRAY[N] of BACnetPropertyIdentifier	R	Always	Read
Profile_Name	CharacterString	O	Config	Read

## Binary Value Object Type

Property Identifier	Property Datatype	CC	Available	Access
Object_Identifier	BACnetObjectIdentifier	R	Always	Read
Object_Name	CharacterString	R	Always	R/W
Object_Type	BACnetObjectType	R	Always	Read
Present_Value	BACnetBinaryPV	R	Always	R/W
Description	CharacterString	O	Config	R/W
Status_Flags	BACnetStatusFlags	R	Always	Read
Event_State	BACnetEventState	R	Always	Read
Reliability	BACnetReliability	O	Config	Read
Out_Of_Service	BOOLEAN	R	Always	R/W
Inactive_Text	CharacterString	O	Config	R/W
Active_Text	CharacterString	O	Config	R/W
Change_Of_State_Time	BACnetDateTime	O	Config	Read
Change_Of_State_Count	Unsigned	O	Config	R/W
Time_Of_State_Count_Reset	BACnetDateTime	O	Config	Read
Elapsed_Active_Time	Unsigned32	O	Config	R/W
Time_Of_Active_Time_Reset	BACnetDateTime	O	Config	Read
Minimum_Off_Time	Unsigned32	O	Config	R/W
Minimum_On_Time	Unsigned32	O	Config	R/W
Priority_Array	BACnetPriorityArray	O	Config	Read
Relinquish_Default	BACnetBinaryPV	O	Config	R/W
Time_Delay	Unsigned	O	Config	R/W
Notification_Class	Unsigned	O	Config	R/W
Alarm_Value	BACnetBinaryPV	O	Config	R/W
Event_Enable	BACnetEventTransitionBits	O	Config	R/W
Acked_Transitions	BACnetEventTransitionBits	O	Config	Read
Notify_Type	BACnetNotifyType	O	Config	R/W
Event_Time_Stamps	BACnetARRAY[3] of BACnetTimeStamp	O	Config	Read
Event_Message_Texts	BACnetARRAY[3] of CharacterString	O	Config	Read
Event_Message_Texts_Config	BACnetARRAY[3] of CharacterString	O	Config	R/W
Event_Detection_Enable	BOOLEAN	O	Config	R/W
Event_Algorithm_Inhibit_Ref	BACnetObjectPropertyReference	O	Config	R/W
Event_Algorithm_Inhibit	BOOLEAN	O	Config	Read
Time_Delay_Normal	Unsigned	O	Config	R/W
Reliability_Evaluation_Inhibit	BOOLEAN	O	Config	R/W
Property_List	BACnetARRAY[N] of BACnetPropertyIdentifier	R	Always	Read
Profile_Name	CharacterString	O	Config	Read

### Calendar Object Type

Property Identifier	Property Datatype	CC	Available	Access
Object_Identifier	BACnetObjectIdentifier	R	Always	Read
Object_Name	CharacterString	R	Always	R/W
Object_Type	BACnetObjectType	R	Always	Read
Description	CharacterString	O	Config	R/W
Present_Value	BOOLEAN	R	Always	Read
Date_List	BACnetLIST of BACnetCalendarEntry	R	Always	R/W
Property_List	BACnetARRAY[N] of BACnetPropertyIdentifier	R	Always	Read
Profile_Name	CharacterString	O	Config	Read

### Command Object Type

Property Identifier	Property Datatype	CC	Available	Access
Object_Identifier	BACnetObjectIdentifier	R	Always	Read
Object_Name	CharacterString	R	Always	R/W
Object_Type	BACnetObjectType	R	Always	Read
Description	CharacterString	O	Config	R/W
Present_Value	Unsigned	W	Always	Write
In_Process	BOOLEAN	R	Always	Read
All_Writes_Successful	BOOLEAN	R	Always	Read
Action	BACnetARRAY[N] of BACnetActionList	R	Always	R/W
Action_Text	BACnetARRAY[N] of CharacterString	O	Config	R/W
Property_List	BACnetARRAY[N] of BACnetPropertyIdentifier	R	Always	Read
Profile_Name	CharacterString	O	Config	Read

## Device Object Type

Property Identifier	Property Datatype	CC	Available	Access
Object_Identifier	BACnetObjectIdentifier	R	Always	Read
Object_Name	CharacterString	R	Always	Read
Object_Type	BACnetObjectType	R	Always	Read
System_Status	CharacterString	R	Always	Read
Vendor_Name	CharacterString	R	Always	Read
Vendor_Identifier	Unsigned16	R	Always	Read
Model_Name	CharacterString	R	Always	Read
Firmware_Revision	CharacterString	R	Always	Read
Application_Software_Version	CharacterString	R	Always	Read
Location	CharacterString	O	Config	Read
Description	CharacterString	O	Config	Read
Protocol_Version	Unsigned	R	Always	Read
Protocol_Revision	Unsigned	R	Always	Read
Protocol_Services_Supported	BACnetServicesSupported	R	Always	Read
Protocol_Object_Types_Support.	BACnetObjectTypesSupported	R	Always	Read
Object_List	BACnetARRAY[N] of BACnetObjectIdent.	R	Always	Read
Structured_Object_List	BACnetARRAY[N] of BACnetObjectIdent.	O	Config	Read
Max_APDU_Length_Accepted	Unsigned	R	Always	Read
Segmentation_Supported	BACnetSegmentation	R	Always	Read
Max_Segments_Accepted	Unsigned	O	Config	Read
VT_Classes_Supported	List of BACnetVTClass	O	Never	---
Active_VT_Sessions	List of BACnetVTSession	O	Never	---
Local_Time	Time	O	Config	Read
Local_Date	Date	O	Config	Read
UTC_Offset	INTEGER	O	Config	Read
Daylight_Saving_Status	BOOLEAN	O	Config	Read
APDU_Segment_Timeout	Unsigned	O	Config	Read
APDU_Timeout	Unsigned	R	Always	Read
Number_Of_APDU_Retries	Unsigned	R	Always	Read
Time_Synchronization_Recipients	List of BACnetRecipient	O	Never	---
Max_Master	Unsigned(1..127)	O	Config	R/W
Max_Info_Frames	Unsigned	O	Config	R/W
Device_Address_Binding	List of BACnetAdressBinding	R	Always	Read
Database_Revision	Unsigned	R	Always	Read
Configuration_Files	BACnetARRAY[N] of BACnetObjectIdent.	O	Config	Read
Last_Restore_Time	BACnetTimeStamp	O	Config	Read
Backup_Failure_Timeout	Unsigned16	O	Config	Write
Backup_Preparation_Time	Unsigned16	O	Config	Read

Property Identifier	Property Datatype	CC	Available	Access
Restore_Preparation_Time	Unsigned16	O	Config	Read
Restore_Completion_Time	Unsigned16	O	Config	Read
Backup_And_Restore_State	BACnetBackupState	O	Config	Read
Active_COV_Subscriptions	List of BACnetCOVSubscriptions	O	Config	Read
Slave_Proxy_Enable	BACnetARRAY[N] of BOOLEAN	O	Never	---
Manual_Slave_Address_Binding	List of BACnetAddressBinding	O	Never	---
Auto_Slave_Discovery	BACnetARRAY[N] of BOOLEAN	O	Never	---
Slave_Address_Binding	List of BACnetAddressBinding	O	Never	---
Last_Restart_Reason	BACnetRestartReason	O	Config	Read
Time_Of_Device_Restart	BACnetTimeStamp	O	Config	Read
Restart_Notification_Recipients	List of BACnetRecipient	O	Config	Write
UTC_Time_Synchron._Recipients	List of BACnetRecipient	O	Never	---
Time_Synchronization_Interval	Unsigned	O	Never	---
Align_Intervals	BOOLEAN	O	Never	---
Interval_Offset	Unsigned	O	Never	---
Serial_Number	CharacterString	O	Config	Read
Property_List	BACnetARRAY[N] of BACnetPropertyIdentifier	R	Always	Read
Profile_Name	CharacterString	O	Config	Read



## Event Enrollment Object Type

Property Identifier	Property Datatype	CC	Available	Access
Object_Identifier	BACnetObjectIdentifier	R	Always	Read
Object_Name	CharacterString	R	Always	R/W
Object_Type	BACnetObjectType	R	Always	Read
Description	CharacterString	O	Config	R/W
Event_Type	BACnetEventType	R	Always	Read
Notify_Type	BACnetNotifyType	R	Always	R/W
Event_Parameters	BACnetEventParameter	R	Always	R/W
Object_Property_Reference	BACnetDeviceObjectPropertyReference	R	Always	R/W
Event_State	BACnetEventState	R	Always	Read
Event_Enable	BACnetEventTransitionBits	R	Always	R/W
Acked_Transitions	BACnetEventTransitionBits	R	Always	Read
Notification_Class	Unsigned	R	Always	R/W
Event_Time_Stamps	BACnetARRAY[3] of BACnetTimeStamp	R	Always	Read
Event_Message_Texts	BACnetARRAY[3] of CharacterString	O	Config	Read
Event_Message_Texts_Config	BACnetARRAY[3] of CharacterString	O	Config	R/W
Event_Detection_Enable	BOOLEAN	R	Always	R/W
Event_Algorithm_Inhibit_Ref	BACnetObjectPropertyReference	O	Config	R/W
Event_Algorithm_Inhibit	BOOLEAN	O	Config	Read
Time_Delay_Normal	Unsigned	O	Config	R/W
Status_Flags	BACnetStatusFlags	R	Always	Read
Reliability	BACnetReliability	R	Always	Read
Fault_Type	BACnetFaultType	O	Config	Read
Fault_Parameters	BACnetFaultParameter	O	Config	R/W
Reliability_Evaluation_Inhibit	BOOLEAN	O	Config	R/W
Property_List	BACnetARRAY[N] of BACnetPropertyIdentifier	R	Always	Read
Profile_Name	CharacterString	O	Config	Read

### File Object Type

Property Identifier	Property Datatype	CC	Available	Access
Object_Identifier	BACnetObjectIdentifier	R	Always	Read
Object_Name	CharacterString	R	Always	R/W
Object_Type	BACnetObjectType	R	Always	Read
Description	CharacterString	O	Config	R/W
File_Type	CharacterString	R	Always	Read
File_Size	Unsigned	R	Always	R/W
Modification_Date	BACnetDateTime	R	Always	Read
Archive	BOOLEAN	W	Always	Write
Read_Only	BOOLEAN	R	Always	Read
File_Access_Method	BACnetFileAccessMethod	R	Always	Read
Record_Count	Unsigned	O	Never	---
Property_List	BACnetARRAY[N] of BACnetPropertyIdentifier	R	Always	Read
Profile_Name	CharacterString	O	Config	Read

### Notification Class Object Type

Property Identifier	Property Datatype	CC	Available	Access
Object_Identifier	BACnetObjectIdentifier	R	Always	Read
Object_Name	CharacterString	R	Always	R/W
Object_Type	BACnetObjectType	R	Always	Read
Description	CharacterString	O	Config	R/W
Notification_Class	Unsigned	R	Always	Read
Priority	BACnetARRAY[3] of Unsigned	R	Always	R/W
Ack_Required	BACnetEventTransitionBits	R	Always	R/W
Recipient_List	List of BACnetDestination	R	Always	R/W
Property_List	BACnetARRAY[N] of BACnetPropertyIdentifier	R	Always	Read
Profile_Name	CharacterString	O	Config	Read

## Multi-state Input Object Type

Property Identifier	Property Datatype	CC	Available	Access
Object_Identifier	BACnetObjectIdentifier	R	Always	Read
Object_Name	CharacterString	R	Always	R/W
Object_Type	BACnetObjectType	R	Always	Read
Present_Value	Unsigned	R	Always	Read
Description	CharacterString	O	Config	R/W
Device_Type	CharacterString	O	Config	Read
Status_Flags	BACnetStatusFlags	R	Always	Read
Event_State	BACnetEventState	R	Always	Read
Reliability	BACnetReliability	O	Config	Read
Out_Of_Service	BOOLEAN	R	Always	R/W
Number_Of_States	Unsigned	R	Always	Read
State_Text	BACnetARRAY[N] of CharacterString	O	Config	R/W
Time_Delay	Unsigned	O	Config	R/W
Notification_Class	Unsigned	O	Config	R/W
Alarm_Values	List of Unsigned	O	Config	R/W
Fault_Values	List of Unsigned	O	Config	R/W
Event_Enable	BACnetEventTransitionBits	O	Config	R/W
Acked_Transitions	BACnetEventTransitionBits	O	Config	Read
Notify_Type	BACnetNotifyType	O	Config	R/W
Event_Time_Stamps	BACnetARRAY[3] of BACnetTimeStamp	O	Config	Read
Event_Message_Texts	BACnetARRAY[3] of CharacterString	O	Config	Read
Event_Message_Texts_Config	BACnetARRAY[3] of CharacterString	O	Config	R/W
Event_Detection_Enable	BOOLEAN	O	Config	R/W
Event_Algorithm_Inhibit_Ref	BACnetObjectPropertyReference	O	Config	R/W
Event_Algorithm_Inhibit	BOOLEAN	O	Config	Read
Time_Delay_Normal	Unsigned	O	Config	R/W
Reliability_Evaluation_Inhibit	BOOLEAN	O	Config	R/W
Property_List	BACnetARRAY[N] of BACnetPropertyIdentifier	R	Always	Read
Profile_Name	CharacterString	O	Config	Read

## Multi-state Output Object Type

Property Identifier	Property Datatype	CC	Available	Access
Object_Identifier	BACnetObjectIdentifier	R	Always	Read
Object_Name	CharacterString	R	Always	R/W
Object_Type	BACnetObjectType	R	Always	Read
Present_Value	Unsigned	W	Always	Write
Description	CharacterString	O	Config	R/W
Device_Type	CharacterString	O	Config	Read
Status_Flags	BACnetStatusFlags	R	Always	Read
Event_State	BACnetEventState	R	Always	Read
Reliability	BACnetReliability	O	Config	Read
Out_Of_Service	BOOLEAN	R	Always	R/W
Number_Of_States	Unsigned	R	Always	Read
State_Text	BACnetARRAY[N] of CharacterString	O	Config	R/W
Priority_Array	BACnetPriorityArray	R	Always	Read
Relinquish_Default	Unsigned	R	Always	R/W
Time_Delay	Unsigned	O	Config	R/W
Notification_Class	Unsigned	O	Config	R/W
Feedback_Value	Unsigned	O	Config	Read
Event_Enable	BACnetEventTransitionBits	O	Config	R/W
Acked_Transitions	BACnetEventTransitionBits	O	Config	Read
Notify_Type	BACnetNotifyType	O	Config	R/W
Event_Time_Stamps	BACnetARRAY[3] of BACnetTimeStamp	O	Config	Read
Event_Message_Texts	BACnetARRAY[3] of CharacterString	O	Config	Read
Event_Message_Texts_Config	BACnetARRAY[3] of CharacterString	O	Config	R/W
Event_Detection_Enable	BOOLEAN	O	Config	R/W
Event_Algorithm_Inhibit_Ref	BACnetObjectPropertyReference	O	Config	R/W
Event_Algorithm_Inhibit	BOOLEAN	O	Config	Read
Time_Delay_Normal	Unsigned	O	Config	R/W
Reliability_Evaluation_Inhibit	BOOLEAN	O	Config	R/W
Property_List	BACnetARRAY[N] of BACnetPropertyIdentifier	R	Always	Read
Profile_Name	CharacterString	O	Config	Read

## Schedule Object Type

Property Identifier	Property Datatype	CC	Available	Access
Object_Identifier	BACnetObjectIdentifier	R	Always	Read
Object_Name	CharacterString	R	Always	R/W
Object_Type	BACnetObjectType	R	Always	Read
Present_Value	Any	R	Always	Read
Description	CharacterString	O	Config	R/W
Effective_Period	BACnetDateRange	R	Always	R/W
Weekly_Schedule	BACnetARRAY[7] of BACnetDailySchedule	O	Config	R/W
Exception_Schedule	BACnetARRAY[N] of BACnetSpecialEvent	O	Config	R/W
Schedule_Default	Any	R	Always	R/W
List_Of_Object_Property_Refer.	List of BACnetDeviceObjectPropertyRefer.	R	Always	R/W
Priority_For_Writing	Unsigned(1..16)	R	Always	R/W
Status_Flags	BACnetStatusFlags	R	Always	Read
Reliability	BACnetReliability	R	Always	Read
Out_Of_Service	BOOLEAN	R	Always	R/W
Event_Detection_Enable	BOOLEAN	O	Config	R/W
Notification_Class	Unsigned	O	Config	R/W
Event_Enable	BACnetEventTransitionBits	O	Config	R/W
Event_State	BACnetEventState	O	Config	Read
Acked_Transitions	BACnetEventTransitionBits	O	Config	Read
Notify_Type	BACnetNotifyType	O	Config	R/W
Event_Time_Stamps	BACnetARRAY[3] of BACnetTimeStamp	O	Config	Read
Event_Message_Texts	BACnetARRAY[3] of CharacterString	O	Config	Read
Event_Message_Texts_Config	BACnetARRAY[3] of CharacterString	O	Config	R/W
Reliability_Evaluation_Inhibit	BOOLEAN	O	Config	R/W
Property_List	BACnetARRAY[N] of BACnetPropertyIdentifier	R	Always	Read
Profile_Name	CharacterString	O	Config	Read

## Multi-state Value Object Type

Property Identifier	Property Datatype	CC	Available	Access
Object_Identifier	BACnetObjectIdentifier	R	Always	Read
Object_Name	CharacterString	R	Always	R/W
Object_Type	BACnetObjectType	R	Always	Read
Present_Value	Unsigned	R	Always	R/W
Description	CharacterString	O	Config	R/W
Status_Flags	BACnetStatusFlags	R	Always	Read
Event_State	BACnetEventState	R	Always	Read
Reliability	BACnetReliability	O	Config	Read
Out_Of_Service	BOOLEAN	R	Always	R/W
Number_Of_States	Unsigned	R	Always	Read
State_Text	BACnetARRAY[N] of CharacterString	O	Config	R/W
Priority_Array	BACnetPriorityArray	R	Always	Read
Relinquish_Default	Unsigned	R	Always	R/W
Time_Delay	Unsigned	O	Config	R/W
Notification_Class	Unsigned	O	Config	R/W
Alarm_Values	List of Unsigned	O	Config	R/W
Fault_Values	List of Unsigned	O	Config	R/W
Event_Enable	BACnetEventTransitionBits	O	Config	R/W
Acked_Transitions	BACnetEventTransitionBits	O	Config	Read
Notify_Type	BACnetNotifyType	O	Config	R/W
Event_Time_Stamps	BACnetARRAY[3] of BACnetTimeStamp	O	Config	Read
Event_Message_Texts	BACnetARRAY[3] of CharacterString	O	Config	Read
Event_Message_Texts_Config	BACnetARRAY[3] of CharacterString	O	Config	R/W
Event_Detection_Enable	BOOLEAN	O	Config	R/W
Event_Algorithm_Inhibit_Ref	BACnetObjectPropertyReference	O	Config	R/W
Event_Algorithm_Inhibit	BOOLEAN	O	Config	Read
Time_Delay_Normal	Unsigned	O	Config	R/W
Reliability_Evaluation_Inhibit	BOOLEAN	O	Config	R/W
Property_List	BACnetARRAY[N] of BACnetPropertyIdentifier	R	Always	Read
Profile_Name	CharacterString	O	Config	Read

## Trend Log Object Type

Property Identifier	Property Datatype	CC	Available	Access
Object_Identifier	BACnetObjectIdentifier	R	Always	Read
Object_Name	CharacterString	R	Always	R/W
Object_Type	BACnetObjectType	R	Always	Read
Description	CharacterString	O	Config	R/W
Enable	BOOLEAN	R	Always	Write
Start_Time	BACnetDateTime	O	Config	R/W
Stop_Time	BACnetDateTime	O	Config	R/W
Log_DeviceObjectProperty	BACnetDeviceObjectPropertyReference	O	Config	R/W
Log_Interval	Unsigned	O	Config	R/W
COV_Resubscription_Interval	Unsigned	O	Config	R/W
Client_COV_Increment	BACnetClientCOV	O	Config	R/W
Stop_When_Full	BOOLEAN	R	Always	R/W
Buffer_Size	Unsigned32	R	Always	R/W
Log_Buffer	List of BACnetLogRecord	R	Always	Range
Record_Count	Unsigned32	W	Always	Write
Total_Record_Count	Unsigned32	R	Always	Read
Logging_Type	BACnetLoggingType	R	Always	R/W
Align_Interval	BOOLEAN	O	Config	R/W
Interval_Offset	Unsigned	O	Config	R/W
Trigger	BOOLEAN	O	Config	Write
Status_Flags	BACnetStatusFlags	R	Always	Read
Reliability	BACnetReliability	O	Config	Read
Notification_Threshold	Unsigned32	O	Config	R/W
Record_Since_Notification	Unsigned32	O	Config	Read
Last_Notify_Record	Unsigned32	O	Config	Read
Event_State	BACnetEventState	R	Always	Read
Notification_Class	Unsigned	O	Config	R/W
Event_Enable	BACnetEventTransitionBits	O	Config	R/W
Acked_Transitions	BACnetEventTransitionBits	O	Config	Read
Notify_Type	BACnetNotifyType	O	Config	R/W
Event_Time_Stamps	BACnetARRAY[3] of BACnetTimeStamp	O	Config	Read
Event_Message_Texts	BACnetARRAY[3] of CharacterString	O	Config	Read
Event_Message_Texts_Config	BACnetARRAY[3] of CharacterString	O	Config	R/W
Event_Detection_Enable	BOOLEAN	O	Config	R/W
Event_Algorithm_Inhibit_Ref	BACnetObjectPropertyReference	O	Config	R/W
Event_Algorithm_Inhibit	BOOLEAN	O	Config	Read
Reliability_Evaluation_Inhibit	BOOLEAN	O	Config	R/W
Property_List	BACnetARRAY[N] of BACnetPropertyIdentifier	R	Always	Read

Property Identifier	Property Datatype	CC	Available	Access
Profile_Name	CharacterString	O	Config	Read

### Life Safety Point Object Type

Property Identifier	Property Datatype	CC	Available	Access
Object_Identifier	BACnetObjectIdentifier	R	Always	Read
Object_Name	CharacterString	R	Always	R/W
Object_Type	BACnetObjectType	R	Always	Read
Present_Value	BACnetLifeSafetyState	R	Always	Read
Tracking_Value	BACnetLifeSafetyState	R	Always	Read
Description	CharacterString	O	Config	R/W
Device_Type	CharacterString	O	Config	Read
Status_Flags	BACnetStatusFlags	R	Always	Read
Event_State	BACnetEventState	R	Always	Read
Reliability	BACnetReliability	R	Always	Read
Out_Of_Service	BOOLEAN	R	Always	R/W
Mode	BACnetLifeSafetyMode	W	Always	Write
Accepted_Modes	List of BACnetLifeSafetyMode	R	Always	Read
Time_Delay	Unsigned	O	Config	R/W
Notification_Class	Unsigned	O	Config	R/W
Life_Safety_Alarm_Values	List of BACnetLifeSafetyState	O	Config	R/W
Alarm_Values	List of BACnetLifeSafetyState	O	Config	R/W
Fault_Values	List of BACnetLifeSafetyState	O	Config	R/W
Event_Enable	BACnetEventTransitionBits	O	Config	R/W
Acked_Transitions	BACnetEventTransitionBits	O	Config	Read
Notify_Type	BACnetNotifyType	O	Config	R/W
Event_Time_Stamps	BACnetARRAY[3] of BACnetTimeStamp	O	Config	Read
Event_Message_Texts	BACnetARRAY[3] of CharacterString	O	Config	Read
Event_Message_Texts_Config	BACnetARRAY[3] of CharacterString	O	Config	R/W
Event_Detection_Enable	BOOLEAN	O	Config	R/W
Event_Algorithm_Inhibit_Ref	BACnetObjectPropertyReference	O	Config	R/W
Event_Algorithm_Inhibit	BOOLEAN	O	Config	Read
Time_Delay_Normal	Unsigned	O	Config	R/W
Reliability_Evaluation_Inhibit	BOOLEAN	O	Config	R/W
Silenced	BACnetSilencedState	R	Always	Read
Operation_Expected	BACnetLifeSafetyOperation	R	Always	Read
Maintenance_Required	BACnetMaintenance	O	Config	Read
Setting	Unsigned8	O	Config	R/W
Direct_Reading	REAL	O	Config	Read
Units	BACnetEngineeringUnits	O	Config	Read



Property Identifier	Property Datatype	CC	Available	Access
Member_Of	List of BACnetDeviceObjectReference	O	Config	R/W
Property_List	BACnetARRAY[N] of BACnetPropertyIdentifier	R	Always	Read
Profile_Name	CharacterString	O	Config	Read

### Life Safety Zone Object Type

Property Identifier	Property Datatype	CC	Available	Access
Object_Identifier	BACnetObjectIdentifier	R	Always	Read
Object_Name	CharacterString	R	Always	R/W
Object_Type	BACnetObjectType	R	Always	Read
Present_Value	BACnetLifeSafetyState	R	Always	Read
Tracking_Value	BACnetLifeSafetyState	R	Always	Read
Description	CharacterString	O	Config	R/W
Device_Type	CharacterString	O	Config	Read
Status_Flags	BACnetStatusFlags	R	Always	Read
Event_State	BACnetEventState	R	Always	Read
Reliability	BACnetReliability	R	Always	Read
Out_Of_Service	BOOLEAN	R	Always	R/W
Mode	BACnetLifeSafetyMode	W	Always	Write
Accepted_Modes	List of BACnetLifeSafetyMode	R	Always	Read
Time_Delay	Unsigned	O	Config	R/W
Notification_Class	Unsigned	O	Config	R/W
Life_Safety_Alarm_Values	List of BACnetLifeSafetyState	O	Config	R/W
Alarm_Values	List of BACnetLifeSafetyState	O	Config	R/W
Fault_Values	List of BACnetLifeSafetyState	O	Config	R/W
Event_Enable	BACnetEventTransitionBits	O	Config	R/W
Acked_Transitions	BACnetEventTransitionBits	O	Config	Read
Notify_Type	BACnetNotifyType	O	Config	R/W
Event_Time_Stamps	BACnetARRAY[3] of BACnetTimeStamp	O	Config	Read
Event_Message_Texts	BACnetARRAY[3] of CharacterString	O	Config	Read
Event_Message_Texts_Config	BACnetARRAY[3] of CharacterString	O	Config	R/W
Event_Detection_Enable	BOOLEAN	O	Config	R/W
Event_Algorithm_Inhibit_Ref	BACnetObjectPropertyReference	O	Config	R/W
Event_Algorithm_Inhibit	BOOLEAN	O	Config	Read
Time_Delay_Normal	Unsigned	O	Config	R/W
Reliability_Evaluation_Inhibit	BOOLEAN	O	Config	R/W
Silenced	BACnetSilencedState	R	Always	Read
Operation_Expected	BACnetLifeSafetyOperation	R	Always	Read

Property Identifier	Property Datatype	CC	Available	Access
Maintenance_Required	BOOLEAN	O	Config	Read
Zone_Members	List of BACnetDeviceObjectReference	R	Always	R/W
Member_Of	List of BACnetDeviceObjectReference	O	Config	Read
Property_List	BACnetARRAY[N] of BACnetPropertyIdentifier	R	Always	Read
Profile_Name	CharacterString	O	Config	Read

## Event Log Object Type

Property Identifier	Property Datatype	CC	Available	Access
Object_Identifier	BACnetObjectIdentifier	R	Always	Read
Object_Name	CharacterString	R	Always	R/W
Object_Type	BACnetObjectType	R	Always	Read
Description	CharacterString	O	Config	R/W
Status_Flags	BACnetStatusFlags	R	Always	Read
Event_State	BACnetEventState	R	Always	Read
Reliability	BACnetReliability	O	Config	Read
Enable	BOOLEAN	R	Always	Write
Start_Time	BACnetDateTime	O	Config	R/W
Stop_Time	BACnetDateTime	O	Config	R/W
Stop_When_Full	BOOLEAN	R	Always	R/W
Buffer_Size	Unsigned32	R	Always	R/W
Log_Buffer	List of BACnetEventLogRecord	R	Always	Range
Record_Count	Unsigned32	W	Always	Write
Total_Record_Count	Unsigned32	R	Always	Read
Notification_Threshold	Unsigned32	O	Config	R/W
Record_Since_Notification	Unsigned32	O	Config	Read
Last_Notify_Record	Unsigned32	O	Config	Read
Notification_Class	Unsigned	O	Config	R/W
Event_Enable	BACnetEventTransitionBits	O	Config	R/W
Acked_Transitions	BACnetEventTransitionBits	O	Config	Read
Notify_Type	BACnetNotifyType	O	Config	R/W
Event_Time_Stamps	BACnetARRAY[3] of BACnetTimeStamp	O	Config	Read
Event_Message_Texts	BACnetARRAY[3] of CharacterString	O	Config	Read
Event_Message_Texts_Config	BACnetARRAY[3] of CharacterString	O	Config	R/W
Event_Detection_Enable	BOOLEAN	O	Config	R/W
Event_Algorithm_Inhibit_Ref	BACnetObjectPropertyReference	O	Config	R/W
Event_Algorithm_Inhibit	BOOLEAN	O	Config	Read
Reliability_Evaluation_Inhibit	BOOLEAN	O	Config	R/W
Property_List	BACnetARRAY[N] of BACnetPropertyIdentifier	R	Always	Read
Profile_Name	CharacterString	O	Config	Read

## Structured View Object Type

Property Identifier	Property Datatype	CC	Available	Access
Object_Identifier	BACnetObjectIdentifier	R	Always	Read
Object_Name	CharacterString	R	Always	R/W
Object_Type	BACnetObjectType	R	Always	Read
Description	CharacterString	O	Config	R/W
Node_Type	BACnetNodeType	R	Always	R/W
Node_Subtype	CharacterString	O	Config	R/W
Subordinate_List	BACnetARRAY[N] of BACnetDeviceObj.Ref.	R	Always	Read
Subordinate_Annotations	BACnetARRAY[N] of CharacterString	O	Config	R/W
Property_List	BACnetARRAY[N] of BACnetPropertyIdentifier	R	Always	Read
Profile_Name	CharacterString	O	Config	Read

## Supported object types as BACnet-Client

MBS Universalgateway acting as a BACnet client supports the following standard object types:

Accumulator Object Type	Access Door Object Type
Analog Input Object Type	Event Log Object Type
Analog Output Object Type	Load Control Object Type
Analog Value Object Type	Structured View Object Type
Averaging Object Type	Trend Log Multiple Object Type
Binary Input Object Type	Access Point Object Type
Binary Output Object Type	Access Zone Object Type
Binary Value Object Type	Access User Object Type
Calendar Object Type	Access Rights Object Type
Command Object Type	Access Credential Object Type
Device Object Type	Credential Data Input Object Type
Event Enrollment Object Type	CharacterString Value Object Type
File Object Type	DateTime Value Object Type
Group Object Type	Large Analog Value Object Type
Life Safety Point Object Type	BitString Value Object Type
Life Safety Zone Object Type	OctetString Value Object Type
Loop Object Type	Time Value Object Type
Multi-state Input Object Type	Integer Value Object Type
Multi-state Output Object Type	Positive Integer Value Object Type
Multi-state Value Object Type	Date Value Object Type
Notification Class Object Type	DateTime Pattern Value Object Type
Program Object Type	Time Pattern Value Object Type
Pulse Converter Object Type	Date Pattern Value Object Type
Schedule Object Type	Network Security Object Type
Trend Log Object Type	Global Group Object Type

## 3. Annex

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