

**600-2 PICS APPLICABLE AUX MISE EN ŒUVRE D'AUTOMATISMES DES
LIEUX SOUS ENVIRONNEMENT SAUTER NPO OU SVC**

Les pages suivantes contiennent les documents originaux :

**SAUTER BACnet PICS
novaPro Open
7010062003-04**

**SAUTER BACnet PICS
SAUTER Vision Center**

**SAUTER BACnet PICS
EY-modulo 5 ecos500 / ecos502
D100031143-13**

**SAUTER BACnet PICS
EY-modulo 5 ecos504
D1000275255-02**

**SAUTER BACnet PICS
EY-modulo 5 modu524/525
D100025510-18**

**SAUTER BACnet PICS
novaPro Open
BACnet Protocol Implementation
Conformance Statement**

7010062003 - 04

Note:

This statement corresponds to the current releases. Changes are taking place constantly, without prior notification.

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1 BACnet Advanced Operator Workstation (B-AWS)

1.1 SAUTER novaPro Open BACnet-AWS

Date	December 2012
Vendor Name	Fr. Sauter AG (Vendor ID: 80)
Product Name	SAUTER <i>novaPro Open</i> BACnet-AWS
Product Model Number	YZP 410 + YZP 416 F311
Applications Software Version	4.2.0.17 (novaPro Open)
Firmware Revision	4.2.0.17 (BACnet Driver - vpiwnbcn.dll)
BACnet Protocol Revision	Version 1, Revision 9

BACnet Testing Laboratory (BTL):

BACnet Profile:	B-AWS
Date:	December 2012
MBS (Test Lab):	VG 2012_7069
Firmware:	4.2.0.17
Model:	YZP410 + YZP416F311

1.1.1 Product Description

The BACnet driver vpiwnbcn.dll for SAUTER novaPro Open turns it into a BACnet advanced operator workstation. SAUTER novaPro Open has two operation modes with integrated BACnet/IP BBMD and FD functionality:

- BACnet advanced operator workstation, suitable for configuring BACnet servers and accessing any property of any object, and
- Standard SCADA operation, providing a graphical, intuitive user interface in order to allow the end user to easily access and operate the plant. Data sharing, scheduling, alarming and trending services are fully integrated with the services of the SCADA system.

The client implementation is based on Cimetrix BACstac 6.3.A

1.1.2 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)

1.1.3 BACnet Interoperability Building Blocks (Annex K)

Supports following BIBBs:

Data Sharing	Alarm & Event Management	Scheduling	Trending	Device & Network Management
DS-RP-A, -B	AE-N-A	(SCHED-A)	T-ATR-A	DM-DDB-A, -B
DS-RPM-A, -B	AE-ACK-A	SCHED-VM-A	(T-VMT-A)	DM-ANM-A
DS-WP-A	(AE-ASUM-A)	SCHED-AVM-A	(T-VMMV-A)	DM-ADM-A
DS-WPM-A	(AE-ESUM-A)	SCHED-WS-A	T-AMVR-A	DM-DOB-B
DS-COV-A	(AE-INFO-A)		T-V-A	DM-DCC-A
DS-COVP-A	AE-LS-A		T-AVM-A	DM-TS-A
DS-COVU-A	AE-AS-A		T-A-A	DM-UTC-A
DS-V-A	AE-VN-A			DM-MTS-A
DS-AV-A	AE-AVN-A			DM-RD-A
DS-M-A	AE-VM-A			DM-R-A
DS-AM-A	AE-AVM-A			DM-BR-A
	AE-ELV-A			DM-LM-A
	AE-ELVM-A			DM-OCD-A
				NM-CE-A

() = This BIBB has been deprecated and is included solely for historical purposes. (Addendum I to ANSI/ASHRAE Standard 135-2008)

1.1.4 Segmentation Capability

- ☒ Able to transmit segmented messages Window Size: 16
- ☒ Able to receive segmented messages Window Size: 16

1.1.5 Object Types

The standard object type "**Device**" is supported and present.

Legend: ☒ = yes, supported ☐ = no, not supported -, n/a = not applicable
Objects may be created and deleted dynamically:
OC = Dynamic object creation OD = Dynamic object deletion

Object Type (Enum)	Supported	OC / OD	Optional Properties	Writable Properties (Additional)
Device (8)	☒	-	Description	

All listed standard object types are supported by addressing the object properties of other BACnet devices. Creation and deletion of objects on other devices and some BACnet services are supported by novaPro Open BACnet Configuration Console. All proprietary object types and proprietary properties are supported and may be addressed by BACnet enumeration codes (Clause 23).

Object Type (Enum)	Supported	OC / OD	Addressable Properties
Accumulator (23)	☒	☒	All
Analog Input (0)	☒	☒	All
Analog Output (1)	☒	☒	All
Analog Value (2)	☒	☒	All
Averaging (18)	☒	☒	All
Binary Input (3)	☒	☒	All
Binary Output (4)	☒	☒	All
Binary Value (5)	☒	☒	All
Calendar (6)	☒	☒	All
Command (7)	☒	☒	All
Device (8)	☒	☐	All
Event Enrollment (9)	☒	☒	All
File (10)	☒	☒	All
Group (11)	☒	☒	All
Life Safety Point (21)	☒	☒	All
Life Safety Zone (22)	☒	☒	All
Loop (12)	☒	☒	All
Multi-State Input (13)	☒	☒	All
Multi-State Output (14)	☒	☒	All
Multi-State Value (19)	☒	☒	All
Notification Class (15)	☒	☒	All
Program (16)	☒	☒	All
Pulse Converter (24)	☒	☒	All
Schedule ¹⁾ (17)	☒	☒	All
Trend Log ²⁾ (20)	☒	☒	All
Structured-View (29)	☒	☒	All

BACnet Advanced Operator Workstation (B-AWS)

Object Type (Enum)	Supported	OC / OD	Addressable Properties
Load-Control (28)	☒	☒	All
Access-Door (30)	☒	☒	All
Event-Log (25)	☒	☒	All
Trend-Log-Multiple (27)	☒	☒	All
Access-Point (33)	☒	☒	All
Access-Zone (36)	☒	☒	All
Access-User (35)	☒	☒	All
Access-Rights (34)	☒	☒	All
Access-Credential (32)	☒	☒	All
Credential-Data-Input (37)	☒	☒	All

1) BACnet Protocol Revision supported for Schedule: 1, 1.4

2) BACnet Protocol Revision supported for Trend Log: 1.1, 1.3, 1.7

1.1.6 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): ____
- ☐ MS/TP slave (Clause 9), baud rate(s): ____
- ☒ Point-To-Point, EIA-232 (Clause 10), baud rate(s): as supported by PC
- ☒ Point-To-Point, modem (Clause 10), baud rate(s): as supported by modem
- ☐ LonTalk, (Clause 11), medium: ____
- ☐ BACnet/ZigBee (Annex O)
- ☐ Other: ____

1.1.7 Device Address Binding

Static device binding is supported:

☐ Yes ☒ No

1.1.8 Networking Options

- ☐ Router (Clause 6) - All routing configurations: ____
- ☐ BACnet Tunneling Router over IP (Annex H)
- ☒ BACnet/IP Broadcast Management Device (BBMD)
- BBMD supports registrations by Foreign Devices: ☒ Yes ☐ No
- BDT size: max. 32 FDT size: max. 32
- BBMD supports network address translation: ☒ Yes ☐ No

1.1.9 Character Sets

Supports following character sets:

- ☒ ISO 10646 (UTF-8) ☐ IBM™/Microsoft™ DBCS ☐ ISO 8859-1
- ☐ ISO 10646 (UCS-2) ☐ ISO 10646 (UCS-4) ☐ JIS C 6226

Notice: Not all UTF-8 characters can be handled at the same time. It depends on the used Windows Operating System settings.

1.1.10 Communication Gateway

In conjunction with other communication drivers of SAUTER novaPro Open (e.g. Modbus/TCP, OPC DA) and the integrated Software PLC functionality foreign networks and devices can be supported and integrated.



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**SAUTER BACnet PICS
SAUTER Vision Center**

**BACnet Protocol Implementation
Conformance Statement**

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1 BACnet Operator Workstation (B-OWS)

1.1 SAUTER Vision Center with BACnet Client

Date	Mai 2016
Vendor Name	Fr. Sauter AG (Vendor ID: 80)
Product Name	BACnet native Client for <i>SAUTER Vision Center</i>
Product Model Number	YZP480 / 481 + YZP487 F201
Applications Software Version	4.1.x.x (Sauter.VisionCenter.ProcessBinding.BACnet.dll)
Firmware Revision	4.1.x.x
BACnet Protocol Revision	Version 1, Revision 13

1.1.1 Product Description

The BACnet client turns SAUTER Vision Center into a BACnet operator workstation. SAUTER Vision Center has two operation modes with integrated BACnet/IP BBMD, and FD functionality:

- a) BACnet advanced operator workstation, suitable for configuring BACnet servers and accessing any property of any object, and
- b) Web based Building and energy Management system for operation, providing a graphical, intuitive user interface in order to allow the end user to easily access and operate the Building Automation and Control System (BACS) of the building (plant, room,...). BACnet data sharing, scheduling, alarming and trending services are fully integrated with the services of SAUTER Vision Center.

The client implementation is based on Cimetrix BACstac 6.6

1.1.2 BACnet Standardized Device Profile (Annex L)

- ☒ BACnet Advanced 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)

1.1.3 BACnet Interoperability Building Blocks (Annex K)

Supports following BIBBs:

Data Sharing	Alarm & Event Management	Scheduling	Trending	Device & Network Management
DS-RP-A,B	AE-N-A	(SCHED-A)	T-V-A	DM-DDB-A,B
DS-RPM-A	AE-ACK-A	SCHED-VM-A	T-AVM-A	DM-ANM-A
DS-RPM-B	AE-ASUM-A	SCHED-WS-A	T-ATR-A	DM-ADM-A
DS-WP-A	AE-ESUM-A	SCHED-AVM-A	T-AMVR-A	DM-DOB-B
DS-WPM-A	AE-INFO-A		T-A-A	DM-DCC-A
DS-AV-A	AE-AS-A			DM-TS-A
DS-AM-A	AE-AVM-A			DM-UTC-A
DS-COV-A	AE-AVN-A			DM-MTS-A
DS-COVP-A	AE-ELV-A			DM-ATS-A
DS-COVU-A	AE-ELVM-A			DM-OCD-A
				DM-RD-A
				DM-BR-A
				DM-LM-A
				DM-R-A

1) Access to the list of object property references is provided by service AddListElement.

() = This BIBB has been deprecated and is included solely for historical purposes. (Addendum I to ANSI/ASHRAE Standard 135-2008)

1.1.4 Object Types

The standard object type "**Device**" is supported and present.

Legend: ☒ = yes, supported ☐ = no, not supported -, n/a = not applicable

Objects may be created and deleted dynamically:

OC = Dynamic object creation

OD = Dynamic object deletion

Object Type (Enum)	Supported	OC / OD	Optional Properties	Writable Properties (Additional)
Device (8)	☒	-		

All listed standard object types are supported by addressing the object properties of other BACnet devices. All proprietary object types and proprietary properties are supported and may be addressed by BACnet enumeration codes (Clause 23).

Object Type (Enum)	Supported	OC / OD	Addressable Properties
-----------------------	-----------	---------	------------------------

Object Type (Enum)	Supported	OC / OD	Addressable Properties
Accumulator (23)	☒	☒	All
Analog Input (0)	☒	☒	All
Analog Output (1)	☒	☒	All
Analog Value (2)	☒	☒	All
Averaging (18)	☒	☒	
Binary Input (3)	☒	☒	All
Binary Output (4)	☒	☒	All
Binary Value (5)	☒	☒	All
Calendar (6)	☒	☒	All
Command (7)	☒	☒	All
Device (8)	☒	☐	All
Event Enrollment (9)	☒	☒	All
File (10)	☒	☒	All
Group (11)	☒	☒	All
Life Safety Point (21)	☒	☒	All
Life Safety Zone (22)	☒	☒	All
Loop (12)	☒	☒	All
Multi-State Input (13)	☒	☒	All
Multi-State Output (14)	☒	☒	All
Multi-State Value (19)	☒	☒	All
Notification Class (15)	☒	☒	All
Program (16)	☒	☒	All
Pulse Converter (24)	☒	☒	All
Schedule ²⁾ (17)	☒	☒	All
Trend Log ²⁾ (20)	☒	☒	All
Structured-View (29)	☒	☒	All
Load-Control (28)	☒	☒	All
Access-Door (30)	☒	☒	All
Event-Log (25)	☒	☒	All

Object Type (Enum)	Supported	OC / OD	Addressable Properties
Trend-Log-Multiple (27)	☒	☒	All
Access-Point (33)	☒	☒	All
Access-Zone (36)	☒	☒	All
Access-User (25)	☒	☒	All
Access-Rights (34)	☒	☒	All
Access-Credential (32)	☒	☒	All
Credential-Data-Input (37)	☒	☒	All

1) BACnet Protocol Revision supported: 1.1, 1.2, 1.3, 1.4,1.9,

1.1.5 Segmentation Capability

- ☒ Able to transmit segmented messages Window Size 16
- ☒ Able to receive segmented messages Window Size 16

1.1.6 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): ____
- ☐ 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): ____
- ☐ LonTalk, (Clause 11), medium: ____
- ☐ Other: ____

1.1.7 Device Address Binding

Static device binding is supported:

☐ Yes ☒ No

1.1.8 Networking Options

☐ Router (Clause 6) - List of all routing configurations: ____

☐ BACnet Tunneling Router over IP (Annex H)

☒ BACnet/IP Broadcast Management Device (BBMD)

BBMD supports registrations by Foreign Devices:

☒ Yes ☐ No

BDT size: max. 32

FDT size: max. 32

1.1.9 Character Sets

Supports following character sets:

☒ UTF 8

☐ IBM™/Microsoft™ DBCS

☐ ISO 8859-1

☐ ISO 10646 (UCS-2)

☐ ISO 10646 (UCS-4)

☐ JIS C 6226

Notice: Not all UTF-8 characters can be handled at the same time. It depends on the used Windows Operating System settings and the Web browser client.

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**SAUTER BACnet PICS
EY-modulo 5 ecos500 / ecos502**

**BACnet Protocol Implementation
Conformance Statement**

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1 BACnet Building Controller (B-BC)

1.1. SAUTER EY-modulo 5 Room Automation Stations

Date	December 2013
Vendor Name	Fr. Sauter AG (Vendor ID: 80)
Product Name	EY-modulo 5 Room Automation Controller
Product Model Number	ecos500 : EY-RC500F001 / F002 : BACnet Room Automation Station ecos500 ecos502 : EY-RC502F001 : BACnet Room Automation Station ecos502
Applications Software Version	2.10 (CASE Engine Interface, Function Index)
Firmware Revision	V2.8.0 (BACnet Firmware)
BACnet Protocol Revision	Version 1, Revision 12

BACnet Testing Laboratory (BTL):

BACnet Profile: B-BC
Date: 17/08/2015
WSPCert: BAC-0184-01
MBS Test Report: VG 2013_7789_05
Firmware: 2.8.0
Model: EY-RC502F001

BACnet Profile: B-BC
Date: 17/08/2015
WSPCert: BAC-0183-01
MBS Test Report: VG 2013_7789_05
Firmware: 2.8.0
Model: EY-RC500F001

1.1.1. Product Description

The SAUTER BACnet Room Automation Station family EY-modulo 5 ecos are programmable automation stations for common room automation control applications (e.g. room control, light, blinds, fan...). The software component on the controller is a BACnet Server and includes as well BACnet Client functionality for peer-to-peer communication with other BACnet devices. It has integrated BBMD and FD functionality.

1.1.2. BACnet Standardized Device Profile (Annex L)

- ☐ BACnet Operator Workstation (B-OWS)
- ☐ BACnet Advanced Operator Workstation (B-AWS)
- ☐ 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)

Error! Use the Home tab to apply Überschrift 1 to the text that you want to appear here.

☐ BACnet Smart Actuator (B-SA)

1.1.3. BACnet Interoperability Building Blocks (Annex K)

Supports following BIBBs:

Data Sharing	Alarm & Event Management	Scheduling	Trending	Device & Network Management
DS-RP-A, -B DS-RPM-A, -B DS-WP-A, -B DS-WPM-B DS-COV-A, -B DS-COVP-B DS-COVU-A, -B	AE-ACK-B AE-ESUM-B AE-INFO-B AE-N-I-B AE-N-E-B AE-ASUM-B	SCHED-I-B SCHED-E-B	T-VMT-I-B T-VMT-E-B T-ATR-B	DM-DDB-A, -B DM-DOB-B DM-DCC-B DM-RD-B DM-TS-A, -B DM-UTC-A, -B DM-BR-B DM-ATS-A DM-LM-B DM-OCD-B DM-R-A, -B

1.1.4. Segmentation Capability

- ☒ Able to transmit segmented messages Window Size: 16
- ☒ Able to receive segmented messages Window Size: 16

1.1.5. Object Types

Standard and proprietary object types are supported and may be present in the device.

Legend: ☒ = yes, supported ☐ = no, not supported -, n/a = not applicable

Objects may be created and deleted dynamically:

OC = Dynamic object creation OD = Dynamic object deletion

Objects may support optional functionality:

OOS = Out-Of-Service writeable COV = Change of value

Objects may be diversified with optional functionalities by the object data structure definition (CASE Suite - Project Engineering):

CMD = Object commandable IR/AR = Intrinsic / Algorithmic change reporting

Notice: Present-Value and Reliability properties are writable when Out-Of-Service = True.

Error! Use the Home tab to apply Überschrift 1 to the text that you want to appear here.

Standard and proprietary objects may support optional functionality (Overview):

Object Type (Enum)	Supported	OC	OD	CMD	OOS	COV	IR/AR
Analog Input (0)	☒	☐	☐	-	☒	☒	☒
Analog Output (1)	☒	☐	☐	☒	☒	☒	☒
Analog Value (2)	☒	☐	☐	☒	☒	☒	☒
Binary Input (3)	☒	☐	☐	-	☒	☒	☒
Binary Output (4)	☒	☐	☐	☒	☒	☒	☒
Binary Value (5)	☒	☐	☐	☒	☒	☒	☒
Calendar (6)	☒	☒	☒	-	-	-	-
Command (7)	☒	☒	☒	-	-	☒	-
Device (8)	☒	☐	☐	-	-	-	-
Event Enrollment (9)	☒	☒	☒	-	-	-	☒
File (10)	☒	☐	☐	-	-	-	-
Loop (12)	☒	☐	☐	-	☒	☒	☒
Multi-State Input (13)	☒	☐	☐	-	☒	☒	☒
Multi-State Output (14)	☒	☐	☐	☒	☒	☒	☒
Multi-State Value (19)	☒	☐	☐	☒	☒	☒	☒
Notification Class (15)	☒	☒	☒	-	-	-	-
Program (16)	☒	☐	☐	-	-	-	-
Pulse Converter (24)	☒	☐	☐	-	☒	☒	☒
Schedule (17)	☒	☒	☒	-	☒	-	-
Structured View (29)	☒	☐	☐	-	-	-	-
Trend Log (20)	☒	☒	☒	-	-	-	☒
IO Unit (384)	☒	☐	☐	-	-	-	-

Some standard objects may have proprietary properties in addition (Clause 23).

There are no specific property range restrictions except those within the system SAUTER EY-modulo 5 and the range restrictions of the BACnet Standard. Supported standard and proprietary objects may support following optional and proprietary properties and in addition to the standard conformance code some writable properties:

Error! Use the Home tab to apply Überschrift 1 to the text that you want to appear here.

Legend: ☒ = yes, supported ☐ = no, not supported -, n/a = not applicable
CC = Conformance Code () = comments in parenthesis
R = Required Readable W = Required Readable and Writable
O = (Conditionally) Optional P = Proprietary

1.1.5.1. Device Management

Device (DEV = 8)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
System-Status	R	☒		
Vendor-Name	R	☒		
Vendor-Identifier	R	☒		
Model-Name	R	☒		
Firmware-Revision	R	☒		
Application-Software-Version	R	☒		
Location	O	☒	☒	(up to 128 characters)
Description	O	☒	☒	(up to 128 characters)
Protocol-Version	R	☒		
Protocol-Revision	R	☒		
Protocol-Services-Supported	R	☒		
Protocol-Object-Types-Supported	R	☒		
Object-List	R	☒		
Structured-Object-List	O	☒	☐	
Max-APDU-Length-Accepted	R	☒		
Segmentation-Supported	R	☒		
Max-Segments-Accepted	O1	☒		
VT-Classes-Supported	O2	-		
Active-VT-Sessions	O2	-		
Local-Time	O3,4	☒	☒	(time sync service)
Local-Date	O3,4	☒	☒	(time sync service)
UTC-Offset	O4	☒	☒	-780..780 (configurable)
Daylight-Savings-Status	O4	☒	☐	(automatic DST)
APDU-Segment-Timeout	O1	☒	☐	
APDU-Timeout	R	☒		
Number-Of-APDU-Retries	R	☒		
Time-Synchronization-Recipients	O5	☒	☒	(up to 32 recipients)
Max-Master	O6	-		
Max-Info-Frames	O6	-		
Device-Address-Binding	R	☒		(up to 100 devices)
Database-Revision	R	☒		
Configuration-Files	O7	☒	☐	
Last-Restore-Time	O7	☒	☐	
Backup-Failure-Timeout	O8	☒	☒	
Backup-Preparation-Time	O	☒	☐	(Add135-2008n-1)
Restore-Preparation-Time	O	☒	☐	(Add135-2008n-1)
Restore-Completion-Time	O	☒	☐	(Add135-2008n-1)

Error! Use the Home tab to apply Überschrift 1 to the text that you want to appear here.

Backup-And-Restore-State	O	☒	☐	(Add135-2008n-1)
Active-COV-Subscriptions	O9	☒	☐	
Slave-Proxy-Enable	O10	-		
Manual-Slave-Address-Binding	O10	-		
Auto-Slave-Discovery	O11	-		
Slave-Address-Binding	O12	-		
Last-Restart-Reason	O13	☒		
Time-Of-Device-Restart	O13	☒		
Restart-Notification-Recipients	O13	☒		(up to 32 recipients)
UTC-Time-Synchronization-Recipients	O5	☒	☒	(up to 32 recipients)
Time-Synchronization-Interval	O14	☒	☒	
Align-Intervals	O14	☒	☒	
Interval-Offset	O14	☒	☒	
Profile-Name	O	☒	☐	
Proprietary Property	Enum	R	W	Property Datatype Range Restriction
MAC-Address	8207	☒	☐	
Hardware-Revision	8208	☒	☐	
Log-Object-List	8252	☒	☐	
Firmware-Index	8255	☒	☐	
Serial-Number	8277	☒	☐	
Production-Date	8278	☒	☐	
Status-Flag-Sum	8300	☒	☐	
Number-Of-Active-Transition	8301	☒	☐	
Number-Of-Open-Transition	8302	☒	☐	
MSP-Version	8313	☒	☐	
Sauter-Character-Set	8351	☒	☐	0: UTF8; 5: ISO-8859-1
Sauter-DST-Start-Date	8352	☒	☐	
Sauter-DST-End-Date	8353	☒	☐	
Sauter-DST-Start-Offset	8354	☒	☐	
Sauter-DST-End-Offset	8355	☒	☐	
Sauter-Disable-Event-Message-Text	8358	☒	☒	

File (FL = 10)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Description	O	☒	☒	
File-Type	R	☒		
File-Size	R1	☒	☒	0 (delete)
Modification-Date	R	☒		
Archive	W	☒	☒	
Read-Only	R	☒		
File-Access-Method	R	☒		
Record-Count	O2	☐		
Profile-Name	O	☒	☐	

Error! Use the Home tab to apply Überschrift 1 to the text that you want to appear here.

Program (PRG = 16)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Program-State	R	☒		
Program-Change	W	☒	☒	1..4
Reason-For-Halt	O1	☒		
Description-Of-Halt	O1	☒		
Program-Location	O	-		
Description	O	☒	☒	(up to 128 characters)
Instance-Of	O	-		
Status-Flags	R	☒		
Reliability	O	☒	☐	
Out-Of-Service	R	☒		
Profile-Name	O	☒	☐	
Proprietary Property	Enum	R	W	Property Datatype Range Restriction
Download-User	8322	☒	☐	
Download-Comment	8323	☒	☐	

Structured View (SV = 29)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Description	O	☒	☒	(up to 128 characters)
Node-Type	R	☒		
Node-Subtype	O	☒	☐	
Subordinate-List	R	☒		
Subordinate-Annotations	O	☒	☐	
Profile-Name	O	☒	☐	

1.1.5.2. Input, Output, Value

Analog Input (AI = 0)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Present-Value	R1	☒		
Description	O	☒	☒	(up to 128 characters)
Device-Type	O	☒	☐	
Status-Flags	R	☒		
Event-State	R	☒		
Reliability	O	☒	☐	

Error! Use the Home tab to apply Überschrift 1 to the text that you want to appear here.

Out-Of-Service	R	☒	☒	
Update-Interval	O	☒		
Units	R	☒	☒	
Min-Pres-Value	O	☒	☒	
Max-Pres-Value	O	☒	☒	
Resolution	O	☒		
COV-Increment	O2	☒	☒	
Time-Delay	O3	☒	☒	
Notification-Class	O3	☒	☒	
High-Limit	O3	☒	☒	
Low-Limit	O3	☒	☒	
Deadband	O3	☒	☒	
Limit-Enable	O3	☒	☒	
Event-Enable	O3	☒	☒	
Acked-Transitions	O3	☒	☐	
Notify-Type	O3	☒	☒	
Event-Time-Stamps	O3	☒	☐	
Event-Message-Texts	O	☐	☐	
Profile-Name	O	☒	☐	
Proprietary Property	Enum	R	W	Property Datatype Range Restriction
Event-Suppress-Reference	8244	☒	☐	(IR enabled)
Event-Suppress-Active	8245	☒	☐	(IR enabled)
Event-Suppress-Cascade-Active	8246	☒	☐	(IR enabled)
Min-Hardware-Value	8248	☒	☒	REAL
Max-Hardware-Value	8249	☒	☒	REAL
Offset	8250	☒	☒	REAL
Slope	8251	☒	☒	REAL
Hardware-Input-Module-Id	8263	☒	☐	
Hardware-Input-Channel-Id	8264	☒	☐	
COV-Synchronization-Period	8314	☒	☒	

Analog Output (AO = 1)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Present-Value	W	☒	☒	
Description	O	☒	☒	(up to 128 characters)
Device-Type	O	☒	☐	
Status-Flags	R	☒		
Event-State	R	☒		
Reliability	O	☒	☐	
Out-Of-Service	R	☒	☒	
Units	R	☒	☒	
Min-Pres-Value	O	☒	☒	
Max-Pres-Value	O	☒	☒	
Resolution	O	☒		
Priority-Array	R	☒		

Error! Use the Home tab to apply Überschrift 1 to the text that you want to appear here.

Relinquish-Default	R	☒	☒	
COV-Increment	O1	☒	☒	
Time-Delay	O2	☒	☒	
Notification-Class	O2	☒	☒	
High-Limit	O2	☒	☒	
Low-Limit	O2	☒	☒	
Deadband	O2	☒	☒	
Limit-Enable	O2	☒	☒	
Event-Enable	O2	☒	☒	
Acked-Transitions	O2	☒	☐	
Notify-Type	O2	☒	☒	
Event-Time-Stamps	O2	☒	☐	
Event-Message-Texts	O	☐	☐	
Profile-Name	O	☒	☐	
Proprietary Property	Enum	R	W	Property Datatype Range Restriction
Event-Suppress-Reference	8244	☒	☐	(IR enabled)
Event-Suppress-Active	8245	☒	☐	(IR enabled)
Event-Suppress-Cascade-Active	8246	☒	☐	(IR enabled)
Min-Hardware-Value	8248	☒	☒	REAL
Max-Hardware-Value	8249	☒	☒	REAL
Hardware-Output-Module-Id	8265	☒	☐	
Hardware-Output-Channel-Id	8266	☒	☐	
Priority-Array-Reset	8309	☒	☐	
COV-Synchronization-Period	8314	☒	☒	
Hardware-Output-Value	8334	☒	☐	

Analog Value (AV = 2)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Present-Value	R4	☒	☒	(CMD enabled)
Description	O	☒	☒	(up to 128 characters)
Status-Flags	R	☒		
Event-State	R	☒		
Reliability	O	☒	☐	
Out-Of-Service	R	☒	☒	
Units	R	☒	☒	
Priority-Array	O1	☒	☐	
Relinquish-Default	O1	☒	☒	
COV-Increment	O2	☒	☒	
Time-Delay	O3	☒	☒	
Notification-Class	O3	☒	☒	
High-Limit	O3	☒	☒	
Low-Limit	O3	☒	☒	
Deadband	O3	☒	☒	
Limit-Enable	O3	☒	☒	
Event-Enable	O3	☒	☒	

Error! Use the Home tab to apply Überschrift 1 to the text that you want to appear here.

Acked-Transitions	O3	☒	☐	
Notify-Type	O3	☒	☒	
Event-Time-Stamps	O3	☒	☐	
Event-Message-Texts	O	☐	☐	
Profile-Name	O	☒	☐	
				Property Datatype
Proprietary Property	Enum	R	W	Range Restriction
Event-Suppress-Reference	8244	☒	☐	(IR enabled)
Event-Suppress-Active	8245	☒	☐	(IR enabled)
Event-Suppress-Cascade-Active	8246	☒	☐	(IR enabled)
Priority-Array-Reset	8309	☒	☐	(CMD enabled)
COV-Synchronization-Period	8314	☒	☒	
Min-Range-Value	8332	☒	☒	
Max-Range-Value	8333	☒	☒	

Binary Input (BI = 3)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Present-value	R1	☒		
Description	O	☒	☒	(up to 128 characters)
Device-Type	O	☒	☐	
Status-Flags	R	☒		
Event-State	R	☒		
Reliability	O	☒	☐	
Out-Of-Service	R	☒	☒	
Polarity	R	☒		
Inactive-Text	O2	☒	☒	(up to 32 characters)
Active-Text	O2	☒	☒	(up to 32 characters)
Change-Of-State-Time	O3	☒	☐	
Change-Of-State-Count	O3	☒	☒	0 (reset)
Time-Of-State-Count-Reset	O3	☒	☐	
Elapsed-Active-Time	O4	☒	☒	0 (reset)
Time-Of-Active-Time-Reset	O4	☒	☐	
Time-Delay	O5	☒	☒	
Notification-Class	O5	☒	☒	
Alarm-Value	O5	☒	☒	
Event-Enable	O5	☒	☒	
Acked-Transitions	O5	☒	☐	
Notify-Type	O5	☒	☒	
Event-Time-Stamps	O5	☒	☐	
Event-Message-Texts	O	☐	☐	
Profile-Name	O	☒	☐	
				Property Datatype
Proprietary Property	Enum	R	W	Range Restriction
Event-Suppress-Reference	8244	☒	☐	(IR enabled)
Event-Suppress-Active	8245	☒	☐	(IR enabled)

Error! Use the Home tab to apply Überschrift 1 to the text that you want to appear here.

Event-Suppress-Cascade-Active	8246	☒	☐	(IR enabled)
Hardware-Input-Module-Id	8263	☒	☐	
Hardware-Input-Channel-Id	8264	☒	☐	

Binary Output (BO = 4)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Present-Value	W	☒	☒	
Description	O	☒	☒	(up to 128 characters)
Device-Type	O	☒	☐	
Status-Flags	R	☒		
Event-State	R	☒		
Reliability	O	☒	☐	
Out-Of-Service	R	☒	☒	
Polarity	R	☒		
Inactive-Text	O1	☒	☒	(up to 32 characters)
Active-Text	O1	☒	☒	(up to 32 characters)
Change-Of-State-Time	O2	☒	☐	
Change-Of-State-Count	O2	☒	☒	0 (reset)
Time-Of-State-Count-Reset	O2	☒	☐	
Elapsed-Active-Time	O3	☒	☒	0 (reset)
Time-Of-Active-Time-Reset	O3	☒	☐	
Minimum-Off-Time	O	☒	☒	
Minimum-On-Time	O	☒	☒	
Priority-Array	R	☒		
Relinquish-Default	R	☒	☒	
Time-Delay	O4	☒	☒	
Notification-Class	O4	☒	☒	
Feedback-Value	O4	☒	☐	
Event-Enable	O4	☒	☒	
Acked-Transitions	O4	☒	☐	
Notify-Type	O4	☒	☒	
Event-Time-Stamps	O4	☒	☐	
Event-Message-Texts	O	☐	☐	
Profile-Name	O	☒	☐	
Proprietary Property	Enum	R	W	Property Datatype Range Restriction
Event-Suppress-Reference	8244	☒	☐	(IR enabled)
Event-Suppress-Active	8245	☒	☐	(IR enabled)
Event-Suppress-Cascade-Active	8246	☒	☐	(IR enabled)
Hardware-Input-Module-Id	8263	☒	☐	
Hardware-Input-Channel-Id	8264	☒	☐	
Hardware-Output-Module-Id	8265	☒	☐	
Hardware-Output-Channel-Id	8266	☒	☐	
Priority-Array-Reset	8309	☒	☐	
Hardware-Output-Value	8334	☒	☐	

Error! Use the Home tab to apply Überschrift 1 to the text that you want to appear here.

Binary Value (BV = 5)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Present-Value	R1	☒	☒	(CMD enabled)
Description	O	☒	☒	(up to 128 characters)
Status-Flags	R	☒		
Event-State	R	☒		
Reliability	O	☒	☐	
Out-Of-Service	R	☒	☒	
Inactive-Text	O2	☒	☒	(up to 32 characters)
Active-Text	O2	☒	☒	(up to 32 characters)
Change-Of-State-Time	O3	☒	☐	
Change-Of-State-Count	O3	☒	☒	0 (reset)
Time-Of-State-Count-Reset	O3	☒	☐	
Elapsed-Active-Time	O4	☒	☒	0 (reset)
Time-Of-Active-Time-Reset	O4	☒	☐	
Minimum-Off-Time	O	☒	☒	
Minimum-On-Time	O	☒	☒	
Priority-Array	O5	☒	☐	
Relinquish-Default	O5	☒	☒	
Time-Delay	O6	☒	☒	
Notification-Class	O6	☒	☒	
Alarm-Value	O6	☒	☒	
Event-Enable	O6	☒	☒	
Acked-Transitions	O6	☒	☐	
Notify-Type	O6	☒	☒	
Event-Time-Stamps	O6	☒	☐	
Event-Message-Texts	O	☐	☐	
Profile-Name	O	☒	☐	
Proprietary Property	Enum	R	W	Property Datatype Range Restriction
Event-Suppress-Reference	8244	☒	☐	(IR enabled)
Event-Suppress-Active	8245	☒	☐	(IR enabled)
Event-Suppress-Cascade-Active	8246	☒	☐	(IR enabled)
Priority-Array-Reset	8309	☒	☐	(CMD enabled)

Command (CMD = 7)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Present-Value	W	☒	☒	[0..12]
Description	O	☒	☒	(up to 128 characters)
In-Process	R	☒		
All-Writes-Successful	R	☒		

Error! Use the Home tab to apply Überschrift 1 to the text that you want to appear here.

Action	R	☒	☒	(array, up to 12, max. 16 action commands each)
Action-Text	O	☒	☒	(array, up to 12, max. 32 characters long each)
Profile-Name	O	☒	☐	

Multi-State Input (MI = 13)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Present-Value	R1	☒		
Description	O	☒	☒	(up to 128 characters)
Device-Type	O	☒	☐	
Status-Flags	R	☒		
Event-State	R	☒		
Reliability	O2	☒	☐	
Out-Of-Service	R	☒	☒	
Number-Of-States	R	☒		
State-Text	O	☒	☐	
Time-Delay	O3	☒	☒	
Notification-Class	O3	☒	☒	
Alarm-Values	O3	☒	☐	
Fault-Values	O3	☒	☐	
Event-Enable	O3	☒	☒	
Acked-Transitions	O3	☒	☐	
Notify-Type	O3	☒	☒	
Event-Time-Stamps	O3	☒	☐	
Event-Message-Texts	O	☐	☐	
Profile-Name	O	☒	☐	
Proprietary Property	Enum	R	W	Property Datatype Range Restriction
Event-Suppress-Reference	8244	☒	☐	(IR enabled)
Event-Suppress-Active	8245	☒	☐	(IR enabled)
Event-Suppress-Cascade-Active	8246	☒	☐	(IR enabled)
Hardware-Input-Module-Id	8263	☒	☐	List
Hardware-Input-Channel-Id	8264	☒	☐	List

Multi-State Output (MO = 14)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Present-value	W	☒	☒	1.. up to 12
Description	O	☒	☒	(up to 128 characters)
Device-Type	O	☒	☐	

Error! Use the Home tab to apply Überschrift 1 to the text that you want to appear here.

Status-Flags	R	☒		
Event-State	R	☒		
Reliability	O	☒	☐	
Out-Of-Service	R	☒	☒	
Number-Of-States	R	☒		
State-Text	O	☒	☐	
Priority-Array	R	☒		
Relinquish-Default	R	☒	☒	
Time-Delay	O1	☒	☒	
Notification-Class	O1	☒	☒	
Feedback-Value	O1	☒	☐	
Event-Enable	O1	☒	☒	
Acked-Transitions	O1	☒	☐	
Notify-Type	O1	☒	☒	
Event-Time-Stamps	O1	☒	☐	
Event-Message-Texts	O	☐	☐	
Profile-Name	O	☒	☐	
				Property Datatype
Proprietary Property	Enum	R	W	Range Restriction
Event-Suppress-Reference	8244	☒	☐	(IR enabled)
Event-Suppress-Active	8245	☒	☐	(IR enabled)
Event-Suppress-Cascade-Active	8246	☒	☐	(IR enabled)
Hardware-Input-Module-Id	8263	☒	☐	List
Hardware-Input-Channel-Id	8264	☒	☐	List
Hardware-Output-Module-Id	8265	☒	☐	List
Hardware-Output-Channel-Id	8266	☒	☐	List
Priority-Array-Reset	8309	☒	☐	
Hardware-Output-Value	8334	☒	☐	

Multi-State Value (MV = 19)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Present-Value	R1	☒	☒	1.. up to 12 (CMD enbl.)
Description	O	☒	☒	(up to 128 characters)
Status-Flags	R	☒		
Event-State	R	☒		
Reliability	O2	☒	☐	
Out-Of-Service	R	☒	☒	
Number-Of-States	R	☒		
State-Text	O	☒	☐	
Priority-Array	O3	☒	☐	
Relinquish-Default	O3	☒	☒	
Time-Delay	O4	☒	☒	
Notification-Class	O4	☒	☒	
Alarm-Values	O4	☒	☐	
Fault-Values	O4	☒	☐	
Event-Enable	O4	☒	☒	

Error! Use the Home tab to apply Überschrift 1 to the text that you want to appear here.

Acked-Transitions	O4	☒	☐	
Notify-Type	O4	☒	☒	
Event-Time-Stamps	O4	☒	☐	
Event-Message-Texts	O	☐	☐	
Profile-Name	O	☒	☐	
Proprietary Property	Enum	R	W	Property Datatype Range Restriction
Event-Suppress-Reference	8244	☒	☐	(IR enabled)
Event-Suppress-Active	8245	☒	☐	(IR enabled)
Event-Suppress-Cascade-Active	8246	☒	☐	(IR enabled)
Priority-Array-Reset	8309	☒	☐	(CMD enabled)

1.1.5.3. Scheduling

Calendar (CAL = 6)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Description	O	☒	☒	(up to 128 characters)
Present-Value	R	☒		
Date-List	R	☒	☒	
Profile-Name	O	☒	☐	

Schedule (SCHD = 17)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Present-Value	R	☒		
Description	O	☒	☒	(up to 128 characters)
Effective-Period	R	☒	☒	
Weekly-Schedule	O1	☒	☒	
Exception-Schedule	O1	☒	☒	
Schedule-Default	R	☒	☒	
List-Of-Object-Property-References	R	☒	☒	
Priority-For-Writing	R	☒	☒	
Status-Flags	R	☒		
Reliability	R	☒		
Out-Of-Service	R	☒	☒	
Profile-Name	O	☒	☐	

1.1.5.4. Alarm and Event Management

Event Enrollment (EE = 9)

Error! Use the Home tab to apply Überschrift 1 to the text that you want to appear here.

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Description	O	☒	☒	(up to 128 characters)
Event-Type	R	☒		
Notify-Type	R	☒	☒	
Event-Parameters	R	☒	☒	(Out-Of-Range only)
Object-Property-Reference	R	☒	☒	
Event-State	R	☒		
Event-Enable	R	☒	☒	
Acked-Transitions	R	☒		
Notification-Class	R	☒	☒	
Event-Time-Stamps	R	☒		
Event-Message-Texts	O	☐	☐	
Profile-Name	O	☒	☐	
Proprietary Property	Enum	R	W	Property Datatype Range Restriction
Event-Suppress-Reference	8244	☒	☐	(IR enabled)
Event-Suppress-Active	8245	☒	☐	(IR enabled)
Event-Suppress-Cascade-Active	8246	☒	☐	(IR enabled)

Notification Class (NC = 15)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Description	O	☒	☒	(up to 128 characters)
Notification-Class	R	☒		
Priority	R	☒	☒	
Ack-Required	R	☒	☒	
Recipient-List	R	☒	☒	
Profile-Name	O	☒	☐	
Proprietary Property	Enum	R	W	Property Datatype Range Restriction
Status-Flag-Sum	8300	☒	☐	
Number-Of-Active-Transition	8301	☒	☐	
Number-Of-Open-Transition	8302	☒	☐	

1.1.5.5. Trending and Logging

Trend Log (TL = 20)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		

Error! Use the Home tab to apply Überschrift 1 to the text that you want to appear here.

Object-Type	R	☒		
Description	O	☒	☒	(up to 128 characters)
Enable	W	☒	☒	
Start-Time	O1,2	☒	☒	
Stop-Time	O1,2	☒	☒	
Log-DeviceObjectProperty	O1	☒	☒	
Log-Interval	O1,2	☒	☒	
COV-Resubscription-Interval	O	☒	☒	
Client-COV-Increment	O	☒	☒	(NULL)
Stop-When-Full	R	☒	☒	
Buffer-Size	R	☒	☒	(Create only)
Log-Buffer	R	☒		
Record-Count	W	☒	☒	0 (Reset)
Total-Record-Count	R	☒		
Notification-Threshold	O3	☒	☒	
Records-Since-Notification	O3	☒	☐	
Last-Notify-Record	O3	☒	☐	
Event-State	R	☒		
Notification-Class	O3	☒	☒	
Event-Enable	O3	☒	☒	
Acked-Transitions	O3	☒	☐	
Notify-Type	O3	☒	☒	
Event-Time-Stamps	O3	☒	☐	
Event-Message-Texts	O	☐	☐	
Profile-Name	O	☒	☐	
Logging-Type	O	☒	☐	
Align-Intervals	O	☒	☒	
Interval-Offset	O	☒	☒	
Trigger	O	☒	☒	
Status-Flags	O	☒	☐	
Reliability	O	☒	☐	

1.1.5.6. Application

Pulse Converter (PC = 24)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Description	O	☒	☒	(up to 128 characters)
Present-Value	R1	☒		
Input-Reference	O	☐		
Status-Flags	R	☒		
Event-State	R	☒		
Reliability	O	☒	☐	
Out-Of-Service	R	☒	☒	
Units	R	☒	☒	
Scale-Factor	R	☒	☒	
Adjust-Value	W	☒	☒	
Count	R	☒		

Error! Use the Home tab to apply Überschrift 1 to the text that you want to appear here.

Update-Time	R	☒		
Count-Change-Time	R2	☒		
Count-Before-Change	R2	☒		
COV-Increment	O3	☒	☒	
COV-Period	O3	☒	☒	
Notification-Class	O4	☒	☒	
Time-Delay	O4	☒	☒	
High-Limit	O4	☒	☒	
Low-Limit	O4	☒	☒	
Deadband	O4	☒	☒	
Limit-Enable	O4	☒	☒	
Event-Enable	O4	☒	☒	
Acked-Transitions	O4	☒	☐	
Notify-Type	O4	☒	☒	
Event-Time-Stamps	O4	☒	☐	
Event-Message-Texts	O	☐	☐	
Profile-Name	O	☒	☐	
				Property Datatype
Proprietary Property	Enum	R	W	Range Restriction
Event-Suppress-Reference	8244	☒	☐	(IR enabled)
Event-Suppress-Active	8245	☒	☐	(IR enabled)
Event-Suppress-Cascade-Active	8246	☒	☐	(IR enabled)
Hardware-Input-Module-Id	8263	☒	☐	
Hardware-Input-Channel-Id	8264	☒	☐	
PC-Limit-Monitoring-Interval	8281	☒	☒	Unsigned, 1..86400
PC-Pulse-Rate	8282	☒	☒	REAL
Priority-Array-Reset	8309	☒	☐	

Loop (LP = 12)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Present-Value	R	☒		
Description	O	☒	☒	(up to 128 characters)
Status-Flags	R	☒		
Event-State	R	☒		
Reliability	O	☒	☐	
Out-Of-Service	R	☒	☒	
Update-Interval	O	☒	☐	
Output-Units	R	☒	☒	
Manipulated-Variable-Reference	R	☒		
Controlled-Variable-Reference	R	☒		
Controlled-Variable-Value	R	☒		
Controlled-Variable-Units	R	☒	☒	
Setpoint-Reference	R	☒		
Setpoint	R	☒	☒	(W, if no Setpoint-Ref)
Action	R	☒	☒	
Proportional-Constant	O1	☒	☒	

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Proportional-Constant-Units	O1	☒	☒	
Integral-Constant	O2	☒	☒	
Integral-Constant-Units	O2	☒	☒	
Derivative-Constant	O3	☒	☒	
Derivative-Constant-Units	O3	☒	☒	
Bias	O	☒	☒	
Maximum-Output	O	☒	☒	
Minimum-Output	O	☒	☒	
Priority-For-Writing	R	☒	☐	
COV-Increment	O4	☒	☒	
Time-Delay	O5	☒	☒	
Notification-Class	O5	☒	☒	
Error-Limit	O5	☒	☒	
Deadband	O5	☒	☒	
Event-Enable	O5	☒	☒	
Acked-Transitions	O5	☒	☐	
Notify-Type	O5	☒	☒	
Event-Time-Stamps	O5	☒	☐	
Event-Message-Texts	O	☐	☐	
Profile-Name	O	☒	☐	
Proprietary Property	Enum	R	W	Property Datatype Range Restriction
Event-Suppress-Reference	8244	☒	☐	(IR enabled)
Event-Suppress-Active	8245	☒	☐	(IR enabled)
Event-Suppress-Cascade-Active	8246	☒	☐	(IR enabled)
Controller-Deadband	8262	☒	☐	
COV-Synchronization-Period	8314	☒	☒	

1.1.5.7. Proprietary Objects

The proprietary objects are implemented according to all requirements for Conformance and Interoperability (Clause 22) and according to Extending BACnet To Accommodate Vendor Proprietary Information (Clause 23).

There are no specific property range restrictions except those specified in the BACnet Standard.

Proprietary object types are supported as listed:

IO Unit (IOU = 384)

Description: The IO-Unit object type defines the hardware units and represents the hardware inputs and outputs from the BACnet building controller and from the I/O-modules, the operating panel and the communication modules connected to the controller.

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		

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Object-Type	R	☒		
Description	O	☒	☒	(up to 128 characters)
Firmware-Revision	O	☒	☐	
Profile-Name	O	☒	☐	
Proprietary Property	Enum	R	W	Property Datatype Range Restriction
Hardware-Revision	8208	☒	☐	
IUnit-Idx	8227	☒	☐	
Plugged-In	8228	☒	☐	
Serial-Number-Actual	8230	☒	☐	
OP-Unit-Id-Actual	8233	☒	☐	
OP-Unit-Id-Expected	8234	☒	☐	
OP-Unit-Serial-Number-Expected	8235	☒	☐	
OP-Unit-Serial-Number-Actual	8236	☒	☐	
Model-Name-Expected	8237	☒	☐	
Model-Name-Actual	8238	☒	☐	
Channel-Values	8239	☒	☐	
Channel-Types	8240	☒	☐	
Sauter-On-Delay	8338	☒	☐	(ecoLink Devices only)

1.1.6. 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): ____
- ☐ 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): ____
- ☐ LonTalk, (Clause 11), medium: ____
- ☐ BACnet/ZigBee (Annex O)
- ☐ Other: ____

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1.1.7. Device Address Binding

Static device binding is supported:

☐ Yes ☒ No

1.1.8. Networking Options

☐ Router (Clause 6) - List of all routing configurations: ____

☐ BACnet Tunneling Router over IP (Annex H)

☒ BACnet/IP Broadcast Management Device (BBMD)

BBMD supports registrations by Foreign Devices: ☒ Yes ☐ No

BDT size: max. 32 FDT size: max. 32

BBMD supports network address translation? ☐ Yes ☒ No

1.1.9. 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)

1.1.10. Character Sets

Supports following character sets:

☒ ISO 10646 (UTF-8) ☐ IBM™/Microsoft™ DBCS ☒ ISO 8859-1

☐ ISO 10646 (UCS-2) ☐ ISO 10646 (UCS-4) ☐ JIS 0208

Outgoing character strings are communicated according to the selected character set (Sauter-character-set).

Incoming character strings with character sets other than ISO 10646 (UTF-8) will be mapped to ISO 10646 (UTF-8) internally.

1.1.11. Communication Gateway

In conjunction with the extension module ecoMod580 EnOcean devices can be supported.

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Error! Use the Home tab to apply Überschrift 1 to the text that you want to appear here.



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**SAUTER BACnet PICS
EY-modulo 5 ecos504**

**BACnet Protocol Implementation
Conformance Statement**

D100275255 - 02

Note:

This statement corresponds to the current releases. Changes are taking place constantly, without prior notification.

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BACnet Building Controller (B-BC)

1 BACnet Building Controller (B-BC)

1.1. SAUTER EY-modulo 5 Room Automation Stations

Date	December 2013	
Vendor Name	Fr. Sauter AG (Vendor ID: 80)	
Product Name	EY-modulo 5 Room Automation Controller	
Product Model Number	ecos504 : EY-RC504F001 / F011 : BACnet Room Automation Station ecos504	
Applications Software Version	2.12	(CASE Engine Interface, Function Index)
Firmware Revision	V2.8.1	(BACnet Firmware)
BACnet Protocol Revision	Version 1, Revision 12	

1.1.1. Product Description

The SAUTER BACnet Room Automation Station family EY-modulo 5 ecos are programmable automation stations for common room automation control applications (e.g. room control, light, blinds, fan...). The software component on the controller is a BACnet Server and includes as well BACnet Client functionality for peer-to-peer communication with other BACnet devices. It has integrated BBMD and FD functionality.

1.1.2. BACnet Standardized Device Profile (Annex L)

- ☐ BACnet Operator Workstation (B-OWS)
- ☐ BACnet Advanced Operator Workstation (B-AWS)
- ☐ 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)

1.1.3. BACnet Interoperability Building Blocks (Annex K)

Supports following BIBBs:

BACnet Building Controller (B-BC)

Data Sharing	Alarm & Event Management	Scheduling	Trending	Device & Network Management
DS-RP-A, -B DS-RPM-A, -B DS-WP-A, -B DS-WPM-B DS-COV-A, -B DS-COVP-B DS-COVU-A, -B	AE-ACK-B AE-ESUM-B AE-INFO-B AE-N-I-B AE-N-E-B AE-ASUM-B	SCHED-I-B SCHED-E-B	T-VMT-I-B T-VMT-E-B T-ATR-B	DM-DDB-A, -B DM-DOB-B DM-DCC-B DM-RD-B DM-TS-A, -B DM-UTC-A, -B DM-BR-B DM-ATS-A DM-LM-B DM-OCD-B DM-R-A, -B

1.1.4. Segmentation Capability

- | | |
|---|-----------------|
| ☒ Able to transmit segmented messages | Window Size: 16 |
| ☒ Able to receive segmented messages | Window Size: 16 |

1.1.5. Object Types

Standard and proprietary object types are supported and may be present in the device.

Legend: ☒ = yes, supported ☐ = no, not supported -, n/a = not applicable

Objects may be created and deleted dynamically:

OC = Dynamic object creation OD = Dynamic object deletion

Objects may support optional functionality:

OOS = Out-Of-Service writeable COV = Change of value

Objects may be diversified with optional functionalities by the object data structure definition (CASE Suite - Project Engineering):

CMD = Object commandable IR/AR = Intrinsic / Algorithmic change reporting

Notice: Present-Value and Reliability properties are writable when Out-Of-Service = True.

BACnet Building Controller (B-BC)

Standard and proprietary objects may support optional functionality (Overview):

Object Type (Enum)	Supported	OC	OD	CMD	OOS	COV	IR/AR
Analog Input (0)	☒	☐	☐	-	☒	☒	☒
Analog Output (1)	☒	☐	☐	☒	☒	☒	☒
Analog Value (2)	☒	☐	☐	☒	☒	☒	☒
Binary Input (3)	☒	☐	☐	-	☒	☒	☒
Binary Output (4)	☒	☐	☐	☒	☒	☒	☒
Binary Value (5)	☒	☐	☐	☒	☒	☒	☒
Calendar (6)	☒	☒	☒	-	-	-	-
Command (7)	☒	☒	☒	-	-	☒	-
Device (8)	☒	☐	☐	-	-	-	-
Event Enrollment (9)	☒	☒	☒	-	-	-	☒
File (10)	☒	☐	☐	-	-	-	-
Loop (12)	☒	☐	☐	-	☒	☒	☒
Multi-State Input (13)	☒	☐	☐	-	☒	☒	☒
Multi-State Output (14)	☒	☐	☐	☒	☒	☒	☒
Multi-State Value (19)	☒	☐	☐	☒	☒	☒	☒
Notification Class (15)	☒	☒	☒	-	-	-	-
Program (16)	☒	☐	☐	-	-	-	-
Pulse Converter (24)	☒	☐	☐	-	☒	☒	☒
Schedule (17)	☒	☒	☒	-	☒	-	-
Structured View (29)	☒	☐	☐	-	-	-	-
Trend Log (20)	☒	☒	☒	-	-	-	☒
IO Unit (384)	☒	☐	☐	-	-	-	-
Communication device (393)	☒	☐	☐	-	-	-	-

Some standard objects may have proprietary properties in addition (Clause 23).

There are no specific property range restrictions except those within the system SAUTER EY-modulo 5 and the range restrictions of the BACnet Standard. Supported standard and proprietary objects may support following optional and proprietary properties and in addition to the standard conformance code some writable properties:

BACnet Building Controller (B-BC)

Legend: ☒ = yes, supported ☐ = no, not supported -, n/a = not applicable
 CC = Conformance Code () = comments in parenthesis
 R = Required Readable W = Required Readable and Writable
 O = (Conditionally) Optional P = Proprietary

1.1.5.1. Device Management

Device (DEV = 8)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
System-Status	R	☒		
Vendor-Name	R	☒		
Vendor-Identifier	R	☒		
Model-Name	R	☒		
Firmware-Revision	R	☒		
Application-Software-Version	R	☒		
Location	O	☒	☒	(up to 128 characters)
Description	O	☒	☒	(up to 128 characters)
Protocol-Version	R	☒		
Protocol-Revision	R	☒		
Protocol-Services-Supported	R	☒		
Protocol-Object-Types-Supported	R	☒		
Object-List	R	☒		
Structured-Object-List	O	☒	☐	
Max-APDU-Length-Accepted	R	☒		
Segmentation-Supported	R	☒		
Max-Segments-Accepted	O1	☒		
VT-Classes-Supported	O2	-		
Active-VT-Sessions	O2	-		
Local-Time	O3,4	☒	☒	(time sync service)
Local-Date	O3,4	☒	☒	(time sync service)
UTC-Offset	O4	☒	☒	-780..780 (configurable)
Daylight-Savings-Status	O4	☒	☐	(automatic DST)
APDU-Segment-Timeout	O1	☒	☐	
APDU-Timeout	R	☒		
Number-Of-APDU-Retries	R	☒		
Time-Synchronization-Recipients	O5	☒	☒	(up to 32 recipients)
Max-Master	O6	-		
Max-Info-Frames	O6	-		
Device-Address-Binding	R	☒		(up to 100 devices)
Database-Revision	R	☒		
Configuration-Files	O7	☒	☐	
Last-Restore-Time	O7	☒	☐	
Backup-Failure-Timeout	O8	☒	☒	
Backup-Preparation-Time	O	☒	☐	(Add135-2008n-1)
Restore-Preparation-Time	O	☒	☐	(Add135-2008n-1)
Restore-Completion-Time	O	☒	☐	(Add135-2008n-1)
Backup-And-Restore-State	O	☒	☐	(Add135-2008n-1)

BACnet Building Controller (B-BC)

Active-COV-Subscriptions	O9	☒	☐	
Slave-Proxy-Enable	O10	-		
Manual-Slave-Address-Binding	O10	-		
Auto-Slave-Discovery	O11	-		
Slave-Address-Binding	O12	-		
Last-Restart-Reason	O13	☒		
Time-Of-Device-Restart	O13	☒		
Restart-Notification-Recipients	O13	☒		(up to 32 recipients)
UTC-Time-Synchronization-Recipients	O5	☒	☒	(up to 32 recipients)
Time-Synchronization-Interval	O14	☒	☒	
Align-Intervals	O14	☒	☒	
Interval-Offset	O14	☒	☒	
Profile-Name	O	☒	☐	
Proprietary Property	Enum	R	W	Property Datatype Range Restriction
MAC-Address	8207	☒	☐	
Hardware-Revision	8208	☒	☐	
Log-Object-List	8252	☒	☐	
Firmware-Index	8255	☒	☐	
Serial-Number	8277	☒	☐	
Production-Date	8278	☒	☐	
Status-Flag-Sum	8300	☒	☐	
Number-Of-Active-Transition	8301	☒	☐	
Number-Of-Open-Transition	8302	☒	☐	
MSP-Version	8313	☒	☐	
Sauter-Character-Set	8351	☒	☐	0: UTF8; 5: ISO-8859-1
Sauter-DST-Start-Date	8352	☒	☐	
Sauter-DST-End-Date	8353	☒	☐	
Sauter-DST-Start-Offset	8354	☒	☐	
Sauter-DST-End-Offset	8355	☒	☐	
Sauter-Disable-Event-Message-Text	8358	☒	☒	

File (FL = 10)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Description	O	☒	☒	
File-Type	R	☒		
File-Size	R1	☒	☒	0 (delete)
Modification-Date	R	☒		
Archive	W	☒	☒	
Read-Only	R	☒		
File-Access-Method	R	☒		
Record-Count	O2	☐		
Profile-Name	O	☒	☐	

BACnet Building Controller (B-BC)

Program (PRG = 16)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Program-State	R	☒		
Program-Change	W	☒	☒	1..4
Reason-For-Halt	O1	☒		
Description-Of-Halt	O1	☒		
Program-Location	O	-		
Description	O	☒	☒	(up to 128 characters)
Instance-Of	O	-		
Status-Flags	R	☒		
Reliability	O	☒	☐	
Out-Of-Service	R	☒		
Profile-Name	O	☒	☐	
Proprietary Property	Enum	R	W	Property Datatype Range Restriction
Download-User	8322	☒	☐	
Download-Comment	8323	☒	☐	

Structured View (SV = 29)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Description	O	☒	☒	(up to 128 characters)
Node-Type	R	☒		
Node-Subtype	O	☒	☐	
Subordinate-List	R	☒		
Subordinate-Annotations	O	☒	☐	
Profile-Name	O	☒	☐	

1.1.5.2. Input, Output, Value

Analog Input (AI = 0)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Present-Value	R1	☒		
Description	O	☒	☒	(up to 128 characters)
Device-Type	O	☒	☐	
Status-Flags	R	☒		
Event-State	R	☒		
Reliability	O	☒	☐	

BACnet Building Controller (B-BC)

Out-Of-Service	R	☒	☒	
Update-Interval	O	☒		
Units	R	☒	☒	
Min-Pres-Value	O	☒	☒	
Max-Pres-Value	O	☒	☒	
Resolution	O	☒		
COV-Increment	O2	☒	☒	
Time-Delay	O3	☒	☒	
Notification-Class	O3	☒	☒	
High-Limit	O3	☒	☒	
Low-Limit	O3	☒	☒	
Deadband	O3	☒	☒	
Limit-Enable	O3	☒	☒	
Event-Enable	O3	☒	☒	
Acked-Transitions	O3	☒	☐	
Notify-Type	O3	☒	☒	
Event-Time-Stamps	O3	☒	☐	
Event-Message-Texts	O	☐	☐	
Profile-Name	O	☒	☐	
Proprietary Property	Enum	R	W	Property Datatype Range Restriction
Event-Suppress-Reference	8244	☒	☐	(IR enabled)
Event-Suppress-Active	8245	☒	☐	(IR enabled)
Event-Suppress-Cascade-Active	8246	☒	☐	(IR enabled)
Min-Hardware-Value	8248	☒	☒	REAL
Max-Hardware-Value	8249	☒	☒	REAL
Offset	8250	☒	☒	REAL
Slope	8251	☒	☒	REAL
Hardware-Input-Module-Id	8263	☒	☐	
Hardware-Input-Channel-Id	8264	☒	☐	
COV-Synchronization-Period	8314	☒	☒	

Analog Output (AO = 1)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Present-Value	W	☒	☒	
Description	O	☒	☒	(up to 128 characters)
Device-Type	O	☒	☐	
Status-Flags	R	☒		
Event-State	R	☒		
Reliability	O	☒	☐	
Out-Of-Service	R	☒	☒	
Units	R	☒	☒	
Min-Pres-Value	O	☒	☒	
Max-Pres-Value	O	☒	☒	
Resolution	O	☒		
Priority-Array	R	☒		
Relinquish-Default	R	☒	☐	

BACnet Building Controller (B-BC)

COV-Increment	O1	☒	☒	
Time-Delay	O2	☒	☒	
Notification-Class	O2	☒	☒	
High-Limit	O2	☒	☒	
Low-Limit	O2	☒	☒	
Deadband	O2	☒	☒	
Limit-Enable	O2	☒	☒	
Event-Enable	O2	☒	☒	
Acked-Transitions	O2	☒	☐	
Notify-Type	O2	☒	☒	
Event-Time-Stamps	O2	☒	☐	
Event-Message-Texts	O	☐	☐	
Profile-Name	O	☒	☐	
Proprietary Property	Enum	R	W	Property Datatype Range Restriction
Event-Suppress-Reference	8244	☒	☐	(IR enabled)
Event-Suppress-Active	8245	☒	☐	(IR enabled)
Event-Suppress-Cascade-Active	8246	☒	☐	(IR enabled)
Min-Hardware-Value	8248	☒	☒	REAL
Max-Hardware-Value	8249	☒	☒	REAL
Hardware-Output-Module-Id	8265	☒	☐	
Hardware-Output-Channel-Id	8266	☒	☐	
Priority-Array-Reset	8309	☒	☐	
COV-Synchronization-Period	8314	☒	☒	
Hardware-Output-Value	8334	☒	☐	

Analog Value (AV = 2)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Present-Value	R4	☒	☒	(CMD enabled)
Description	O	☒	☒	(up to 128 characters)
Status-Flags	R	☒		
Event-State	R	☒		
Reliability	O	☒	☐	
Out-Of-Service	R	☒	☒	
Units	R	☒	☒	
Priority-Array	O1	☒	☐	
Relinquish-Default	O1	☒	☒	
COV-Increment	O2	☒	☒	
Time-Delay	O3	☒	☒	
Notification-Class	O3	☒	☒	
High-Limit	O3	☒	☒	
Low-Limit	O3	☒	☒	
Deadband	O3	☒	☒	
Limit-Enable	O3	☒	☒	
Event-Enable	O3	☒	☒	
Acked-Transitions	O3	☒	☐	
Notify-Type	O3	☒	☒	

BACnet Building Controller (B-BC)

Event-Time-Stamps	O3	☒	☐	
Event-Message-Texts	O	☐	☐	
Profile-Name	O	☒	☐	
Proprietary Property	Enum	R	W	Property Datatype Range Restriction
Event-Suppress-Reference	8244	☒	☐	(IR enabled)
Event-Suppress-Active	8245	☒	☐	(IR enabled)
Event-Suppress-Cascade-Active	8246	☒	☐	(IR enabled)
Priority-Array-Reset	8309	☒	☐	(CMD enabled)
COV-Synchronization-Period	8314	☒	☒	
Min-Range-Value	8332	☒	☒	
Max-Range-Value	8333	☒	☒	

Binary Input (BI = 3)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Present-value	R1	☒		
Description	O	☒	☒	(up to 128 characters)
Device-Type	O	☒	☐	
Status-Flags	R	☒		
Event-State	R	☒		
Reliability	O	☒	☐	
Out-Of-Service	R	☒	☒	
Polarity	R	☒		
Inactive-Text	O2	☒	☒	(up to 32 characters)
Active-Text	O2	☒	☒	(up to 32 characters)
Change-Of-State-Time	O3	☒	☐	
Change-Of-State-Count	O3	☒	☒	0 (reset)
Time-Of-State-Count-Reset	O3	☒	☐	
Elapsed-Active-Time	O4	☒	☒	0 (reset)
Time-Of-Active-Time-Reset	O4	☒	☐	
Time-Delay	O5	☒	☒	
Notification-Class	O5	☒	☒	
Alarm-Value	O5	☒	☒	
Event-Enable	O5	☒	☒	
Acked-Transitions	O5	☒	☐	
Notify-Type	O5	☒	☒	
Event-Time-Stamps	O5	☒	☐	
Event-Message-Texts	O	☐	☐	
Profile-Name	O	☒	☐	
Proprietary Property	Enum	R	W	Property Datatype Range Restriction
Event-Suppress-Reference	8244	☒	☐	(IR enabled)
Event-Suppress-Active	8245	☒	☐	(IR enabled)
Event-Suppress-Cascade-Active	8246	☒	☐	(IR enabled)
Hardware-Input-Module-Id	8263	☒	☐	
Hardware-Input-Channel-Id	8264	☒	☐	

BACnet Building Controller (B-BC)

Binary Output (BO = 4)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Present-Value	W	☒	☒	
Description	O	☒	☒	(up to 128 characters)
Device-Type	O	☒	☐	
Status-Flags	R	☒		
Event-State	R	☒		
Reliability	O	☒	☐	
Out-Of-Service	R	☒	☒	
Polarity	R	☒		
Inactive-Text	O1	☒	☒	(up to 32 characters)
Active-Text	O1	☒	☒	(up to 32 characters)
Change-Of-State-Time	O2	☒	☐	
Change-Of-State-Count	O2	☒	☒	0 (reset)
Time-Of-State-Count-Reset	O2	☒	☐	
Elapsed-Active-Time	O3	☒	☒	0 (reset)
Time-Of-Active-Time-Reset	O3	☒	☐	
Minimum-Off-Time	O	☒	☒	
Minimum-On-Time	O	☒	☒	
Priority-Array	R	☒		
Relinquish-Default	R	☒	☐	
Time-Delay	O4	☒	☒	
Notification-Class	O4	☒	☒	
Feedback-Value	O4	☒	☐	
Event-Enable	O4	☒	☒	
Acked-Transitions	O4	☒	☐	
Notify-Type	O4	☒	☒	
Event-Time-Stamps	O4	☒	☐	
Event-Message-Texts	O	☐	☐	
Profile-Name	O	☒	☐	
Proprietary Property	Enum	R	W	Property Datatype Range Restriction
Event-Suppress-Reference	8244	☒	☐	(IR enabled)
Event-Suppress-Active	8245	☒	☐	(IR enabled)
Event-Suppress-Cascade-Active	8246	☒	☐	(IR enabled)
Hardware-Input-Module-Id	8263	☒	☐	
Hardware-Input-Channel-Id	8264	☒	☐	
Hardware-Output-Module-Id	8265	☒	☐	
Hardware-Output-Channel-Id	8266	☒	☐	
Priority-Array-Reset	8309	☒	☐	
Hardware-Output-Value	8334	☒	☐	

Binary Value (BV = 5)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		

BACnet Building Controller (B-BC)

Object-Type	R	☒		
Present-Value	R1	☒	☒	(CMD enabled)
Description	O	☒	☒	(up to 128 characters)
Status-Flags	R	☒		
Event-State	R	☒		
Reliability	O	☒	☐	
Out-Of-Service	R	☒	☒	
Inactive-Text	O2	☒	☒	(up to 32 characters)
Active-Text	O2	☒	☒	(up to 32 characters)
Change-Of-State-Time	O3	☒	☐	
Change-Of-State-Count	O3	☒	☒	0 (reset)
Time-Of-State-Count-Reset	O3	☒	☐	
Elapsed-Active-Time	O4	☒	☒	0 (reset)
Time-Of-Active-Time-Reset	O4	☒	☐	
Minimum-Off-Time	O	☒	☒	
Minimum-On-Time	O	☒	☒	
Priority-Array	O5	☒	☐	
Relinquish-Default	O5	☒	☒	
Time-Delay	O6	☒	☒	
Notification-Class	O6	☒	☒	
Alarm-Value	O6	☒	☒	
Event-Enable	O6	☒	☒	
Acked-Transitions	O6	☒	☐	
Notify-Type	O6	☒	☒	
Event-Time-Stamps	O6	☒	☐	
Event-Message-Texts	O	☐	☐	
Profile-Name	O	☒	☐	
Proprietary Property	Enum	R	W	Property Datatype Range Restriction
Event-Suppress-Reference	8244	☒	☐	(IR enabled)
Event-Suppress-Active	8245	☒	☐	(IR enabled)
Event-Suppress-Cascade-Active	8246	☒	☐	(IR enabled)
Priority-Array-Reset	8309	☒	☐	(CMD enabled)

Command (CMD = 7)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Present-Value	W	☒	☒	[0..12]
Description	O	☒	☒	(up to 128 characters)
In-Process	R	☒		
All-Writes-Successful	R	☒		
Action	R	☒	☒	(array, up to 12, max. 16 action commands each)
Action-Text	O	☒	☒	(array, up to 12, max. 32 characters long each)
Profile-Name	O	☒	☐	

BACnet Building Controller (B-BC)

Multi-State Input (MI = 13)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Present-Value	R1	☒		
Description	O	☒	☒	(up to 128 characters)
Device-Type	O	☒	☐	
Status-Flags	R	☒		
Event-State	R	☒		
Reliability	O2	☒	☐	
Out-Of-Service	R	☒	☒	
Number-Of-States	R	☒		
State-Text	O	☒	☐	
Time-Delay	O3	☒	☒	
Notification-Class	O3	☒	☒	
Alarm-Values	O3	☒	☐	
Fault-Values	O3	☒	☐	
Event-Enable	O3	☒	☒	
Acked-Transitions	O3	☒	☐	
Notify-Type	O3	☒	☒	
Event-Time-Stamps	O3	☒	☐	
Event-Message-Texts	O	☐	☐	
Profile-Name	O	☒	☐	
Proprietary Property	Enum	R	W	Property Datatype Range Restriction
Event-Suppress-Reference	8244	☒	☐	(IR enabled)
Event-Suppress-Active	8245	☒	☐	(IR enabled)
Event-Suppress-Cascade-Active	8246	☒	☐	(IR enabled)
Hardware-Input-Module-Id	8263	☒	☐	List
Hardware-Input-Channel-Id	8264	☒	☐	List

Multi-State Output (MO = 14)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Present-value	W	☒	☒	1.. up to 12
Description	O	☒	☒	(up to 128 characters)
Device-Type	O	☒	☐	
Status-Flags	R	☒		
Event-State	R	☒		
Reliability	O	☒	☐	
Out-Of-Service	R	☒	☒	
Number-Of-States	R	☒		
State-Text	O	☒	☐	
Priority-Array	R	☒		
Relinquish-Default	R	☒	☐	
Time-Delay	O1	☒	☒	

BACnet Building Controller (B-BC)

Notification-Class	O1	☒	☒	
Feedback-Value	O1	☒	☐	
Event-Enable	O1	☒	☒	
Acked-Transitions	O1	☒	☐	
Notify-Type	O1	☒	☒	
Event-Time-Stamps	O1	☒	☐	
Event-Message-Texts	O	☐	☐	
Profile-Name	O	☒	☐	
Proprietary Property	Enum	R	W	Property Datatype Range Restriction
Event-Suppress-Reference	8244	☒	☐	(IR enabled)
Event-Suppress-Active	8245	☒	☐	(IR enabled)
Event-Suppress-Cascade-Active	8246	☒	☐	(IR enabled)
Hardware-Input-Module-Id	8263	☒	☐	List
Hardware-Input-Channel-Id	8264	☒	☐	List
Hardware-Output-Module-Id	8265	☒	☐	List
Hardware-Output-Channel-Id	8266	☒	☐	List
Priority-Array-Reset	8309	☒	☐	
Hardware-Output-Value	8334	☒	☐	

Multi-State Value (MV = 19)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Present-Value	R1	☒	☒	1.. up to 12 (CMD enbl.)
Description	O	☒	☒	(up to 128 characters)
Status-Flags	R	☒		
Event-State	R	☒		
Reliability	O2	☒	☐	
Out-Of-Service	R	☒	☒	
Number-Of-States	R	☒		
State-Text	O	☒	☐	
Priority-Array	O3	☒	☐	
Relinquish-Default	O3	☒	☒	
Time-Delay	O4	☒	☒	
Notification-Class	O4	☒	☒	
Alarm-Values	O4	☒	☐	
Fault-Values	O4	☒	☐	
Event-Enable	O4	☒	☒	
Acked-Transitions	O4	☒	☐	
Notify-Type	O4	☒	☒	
Event-Time-Stamps	O4	☒	☐	
Event-Message-Texts	O	☐	☐	
Profile-Name	O	☒	☐	
Proprietary Property	Enum	R	W	Property Datatype Range Restriction
Event-Suppress-Reference	8244	☒	☐	(IR enabled)
Event-Suppress-Active	8245	☒	☐	(IR enabled)

BACnet Building Controller (B-BC)

Event-Suppress-Cascade-Active	8246	☒	☐	(IR enabled)
Priority-Array-Reset	8309	☒	☐	(CMD enabled)

1.1.5.3. Scheduling

Calendar (CAL = 6)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Description	O	☒	☒	(up to 128 characters)
Present-Value	R	☒		
Date-List	R	☒	☒	
Profile-Name	O	☒	☐	

Schedule (SCHD = 17)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Present-Value	R	☒		
Description	O	☒	☒	(up to 128 characters)
Effective-Period	R	☒	☒	
Weekly-Schedule	O1	☒	☒	
Exception-Schedule	O1	☒	☒	
Schedule-Default	R	☒	☒	
List-Of-Object-Property-References	R	☒	☒	
Priority-For-Writing	R	☒	☒	
Status-Flags	R	☒		
Reliability	R	☒		
Out-Of-Service	R	☒	☒	
Profile-Name	O	☒	☐	

1.1.5.4. Alarm and Event Management

Event Enrollment (EE = 9)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Description	O	☒	☒	(up to 128 characters)
Event-Type	R	☒		
Notify-Type	R	☒	☒	
Event-Parameters	R	☒	☒	(Out-Of-Range only)
Object-Property-Reference	R	☒	☒	
Event-State	R	☒		
Event-Enable	R	☒	☒	

BACnet Building Controller (B-BC)

Acked-Transitions	R	☒		
Notification-Class	R	☒	☒	
Event-Time-Stamps	R	☒		
Event-Message-Texts	O	☐	☐	
Profile-Name	O	☒	☐	
Proprietary Property	Enum	R	W	Property Datatype Range Restriction
Event-Suppress-Reference	8244	☒	☐	(IR enabled)
Event-Suppress-Active	8245	☒	☐	(IR enabled)
Event-Suppress-Cascade-Active	8246	☒	☐	(IR enabled)

Notification Class (NC = 15)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Description	O	☒	☒	(up to 128 characters)
Notification-Class	R	☒		
Priority	R	☒	☒	
Ack-Required	R	☒	☒	
Recipient-List	R	☒	☒	
Profile-Name	O	☒	☐	
Proprietary Property	Enum	R	W	Property Datatype Range Restriction
Status-Flag-Sum	8300	☒	☐	
Number-Of-Active-Transition	8301	☒	☐	
Number-Of-Open-Transition	8302	☒	☐	

1.1.5.5. Trending and Logging

Trend Log (TL = 20)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Description	O	☒	☒	(up to 128 characters)
Enable	W	☒	☒	
Start-Time	O1,2	☒	☒	
Stop-Time	O1,2	☒	☒	
Log-DeviceObjectProperty	O1	☒	☒	
Log-Interval	O1,2	☒	☒	
COV-Resubscription-Interval	O	☒	☒	
Client-COV-Increment	O	☒	☒	(NULL)
Stop-When-Full	R	☒	☒	
Buffer-Size	R	☒	☒	(Create only)
Log-Buffer	R	☒		

BACnet Building Controller (B-BC)

Record-Count	W	☒	☒	0 (Reset)
Total-Record-Count	R	☒		
Notification-Threshold	O3	☒	☒	
Records-Since-Notification	O3	☒	☐	
Last-Notify-Record	O3	☒	☐	
Event-State	R	☒		
Notification-Class	O3	☒	☒	
Event-Enable	O3	☒	☒	
Acked-Transitions	O3	☒	☐	
Notify-Type	O3	☒	☒	
Event-Time-Stamps	O3	☒	☐	
Event-Message-Texts	O	☐	☐	
Profile-Name	O	☒	☐	
Logging-Type	O	☒	☐	
Align-Intervals	O	☒	☒	
Interval-Offset	O	☒	☒	
Trigger	O	☒	☒	
Status-Flags	O	☒	☐	
Reliability	O	☒	☐	

1.1.5.6. Application

Pulse Converter (PC = 24)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Description	O	☒	☒	(up to 128 characters)
Present-Value	R1	☒		
Input-Reference	O	☐		
Status-Flags	R	☒		
Event-State	R	☒		
Reliability	O	☒	☐	
Out-Of-Service	R	☒	☒	
Units	R	☒	☒	
Scale-Factor	R	☒	☒	
Adjust-Value	W	☒	☒	
Count	R	☒		
Update-Time	R	☒		
Count-Change-Time	R2	☒		
Count-Before-Change	R2	☒		
COV-Increment	O3	☒	☒	
COV-Period	O3	☒	☒	
Notification-Class	O4	☒	☒	
Time-Delay	O4	☒	☒	
High-Limit	O4	☒	☒	
Low-Limit	O4	☒	☒	
Deadband	O4	☒	☒	
Limit-Enable	O4	☒	☒	
Event-Enable	O4	☒	☒	

BACnet Building Controller (B-BC)

Acked-Transitions	O4	☒	☐	
Notify-Type	O4	☒	☒	
Event-Time-Stamps	O4	☒	☐	
Event-Message-Texts	O	☐	☐	
Profile-Name	O	☒	☐	
Proprietary Property	Enum	R	W	Property Datatype Range Restriction
Event-Suppress-Reference	8244	☒	☐	(IR enabled)
Event-Suppress-Active	8245	☒	☐	(IR enabled)
Event-Suppress-Cascade-Active	8246	☒	☐	(IR enabled)
Hardware-Input-Module-Id	8263	☒	☐	
Hardware-Input-Channel-Id	8264	☒	☐	
PC-Limit-Monitoring-Interval	8281	☒	☒	Unsigned, 1..86400
PC-Pulse-Rate	8282	☒	☒	REAL
Priority-Array-Reset	8309	☒	☐	

Loop (LP = 12)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Present-Value	R	☒		
Description	O	☒	☒	(up to 128 characters)
Status-Flags	R	☒		
Event-State	R	☒		
Reliability	O	☒	☐	
Out-Of-Service	R	☒	☒	
Update-Interval	O	☒	☐	
Output-Units	R	☒	☒	
Manipulated-Variable-Reference	R	☒		
Controlled-Variable-Reference	R	☒		
Controlled-Variable-Value	R	☒		
Controlled-Variable-Units	R	☒	☒	
Setpoint-Reference	R	☒		
Setpoint	R	☒	☒	(W, if no Setpoint-Ref)
Action	R	☒	☒	
Proportional-Constant	O1	☒	☒	
Proportional-Constant-Units	O1	☒	☒	
Integral-Constant	O2	☒	☒	
Integral-Constant-Units	O2	☒	☒	
Derivative-Constant	O3	☒	☒	
Derivative-Constant-Units	O3	☒	☒	
Bias	O	☒	☒	
Maximum-Output	O	☒	☒	
Minimum-Output	O	☒	☒	
Priority-For-Writing	R	☒	☐	
COV-Increment	O4	☒	☒	
Time-Delay	O5	☒	☒	
Notification-Class	O5	☒	☒	
Error-Limit	O5	☒	☒	

BACnet Building Controller (B-BC)

Deadband	O5	☒	☒	
Event-Enable	O5	☒	☒	
Acked-Transitions	O5	☒	☐	
Notify-Type	O5	☒	☒	
Event-Time-Stamps	O5	☒	☐	
Event-Message-Texts	O	☐	☐	
Profile-Name	O	☒	☐	
Proprietary Property	Enum	R	W	Property Datatype Range Restriction
Event-Suppress-Reference	8244	☒	☐	(IR enabled)
Event-Suppress-Active	8245	☒	☐	(IR enabled)
Event-Suppress-Cascade-Active	8246	☒	☐	(IR enabled)
Controller-Deadband	8262	☒	☐	
COV-Synchronization-Period	8314	☒	☒	

1.1.5.7. Proprietary Objects

The proprietary objects are implemented according to all requirements for Conformance and Interoperability (Clause 22) and according to Extending BACnet To Accommodate Vendor Proprietary Information (Clause 23).

There are no specific property range restrictions except those specified in the BACnet Standard.

Proprietary object types are supported as listed:

IO Unit (IOU = 384)

Description: The IO-Unit object type defines the hardware units and represents the hardware inputs and outputs from the BACnet building controller and from the I/O-modules, the operating panel and the communication modules connected to the controller.

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Description	O	☒	☒	(up to 128 characters)
Firmware-Revision	O	☒	☐	
Profile-Name	O	☒	☐	
Proprietary Property	Enum	R	W	Property Datatype Range Restriction
Hardware-Revision	8208	☒	☐	
IOunit-Idx	8227	☒	☐	
Plugged-In	8228	☒	☐	
Serial-Number-Actual	8230	☒	☐	
OP-Unit-Id-Actual	8233	☒	☐	
OP-Unit-Id-Expected	8234	☒	☐	
OP-Unit-Serial-Number-Expected	8235	☒	☐	

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OP-Unit-Serial-Number-Actual	8236	☒	☐	
Model-Name-Expected	8237	☒	☐	
Model-Name-Actual	8238	☒	☐	
Channel-Values	8239	☒	☐	
Channel-Types	8240	☒	☐	
Sauter-On-Delay	8338	☒	☐	(ecoLink Devices only)

Communication Device (= 393)

Description: The Communication Device object type defines the hardware units and represents the hardware interface to external inputs and outputs.

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Description	O	☒	☒	(up to 128 characters)
Application-Software-Version	O	☒	☐	
Model-Name	O	☒	☐	
Profile-Name	O	☒	☐	
Proprietary Property	Enum	R	W	Property Datatype Range Restriction
Hardware-Revision	8208	☒	☐	
Production-Date	8278	☒	☐	
Sauter-Software-Product	8357	☒	☐	
Sauter-IOWUnit-Object-List	8369	☒	☐	
Sauter-Date_of_Compilation	8370	☒	☐	

1.1.6. 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): ____
- ☐ 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): ____
- ☐ LonTalk, (Clause 11), medium: ____
- ☐ BACnet/ZigBee (Annex O)

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☐ Other: ____

1.1.7. Device Address Binding

Static device binding is supported:

☐ Yes ☒ No

1.1.8. Networking Options

☐ Router (Clause 6) - List of all routing configurations: ____

☐ BACnet Tunneling Router over IP (Annex H)

☒ BACnet/IP Broadcast Management Device (BBMD)

BBMD supports registrations by Foreign Devices:

☒ Yes ☐ No

BDT size: max. 32 FDT size: max. 32

BBMD supports network address translation?

☐ Yes ☒ No

1.1.9. 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)

1.1.10. Character Sets

Supports following character sets:

☒ ISO 10646 (UTF-8)

☐ IBM™/Microsoft™ DBCS

☒ ISO 8859-1

☐ ISO 10646 (UCS-2)

☐ ISO 10646 (UCS-4)

☐ JIS 0208

Outgoing character strings are communicated according to the selected character set (Sauter-character-set).

Incoming character strings with character sets other than ISO 10646 (UTF-8) will be mapped to ISO 10646 (UTF-8) internally.

BACnet Building Controller (B-BC)

1.1.11. Communication Gateway

In conjunction with the extension module ecoMod580, EnOcean devices can be supported.

The room automation station ecos504 with the KNX module (Type EY-RC504F011) supports KNX/TP devices on a sub-network.



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SAUTER BACnet PICS
EY-modulo 5 modu524/525
BACnet Protocol Implementation
Conformance Statement

D100025510 - 18

Content

Note:

This statement corresponds to the current releases. Changes are taking place constantly, without prior notification.

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BACnet Building Controller (B-BC)

1 BACnet Building Controller (B-BC)

1.1. SAUTER EY-modulo 5 Automation Stations

Date	January 2016
Vendor Name	Fr. Sauter AG (Vendor ID: 80)
Product Name	EY-modulo 5 Building Controller
Product Model Number	Modular BACnet Automation Station modu524/525 modu524 : EY-AS524F001 : modu525 : EY-AS525F00x :
Applications Software Version	2.10 (CASE Engine Interface, Function Index)
Firmware Revision	2.8.0 (BACnet Firmware)
BACnet Protocol Revision	Version 1, Revision 12

BACnet Testing Laboratory (BTL):

BACnet Profile:	B-BC
Date:	17/08/2015
WSPCert:	BAC-0182-01
MBS Test Report:	VG_2013_7789_05
Firmware:	2.8.0.
Model:	EY-AS525F001

1.1.1. Product Description

The SAUTER BACnet Building Controller family EY-modulo 5 are programmable automation stations for common building control applications (e.g. HVAC&R, room control, lighting...). The software component on the controller is a BACnet Server and includes as well BACnet Client functionality for peer-to-peer communication with other BACnet devices. It has integrated BBMD and FD functionality.

1.1.2. BACnet Standardized Device Profile (Annex L)

- ☐ BACnet Operator Workstation (B-OWS)
- ☐ BACnet Advanced Operator Workstation (B-AWS)
- ☐ 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)

BACnet Building Controller (B-BC)

1.1.3. BACnet Interoperability Building Blocks (Annex K)

Supports following BIBBs:

Data Sharing	Alarm & Event Management	Scheduling	Trending	Device & Network Management
DS-RP-A, -B DS-RPM-A, -B DS-WP-A, -B DS-WPM-B DS-COV-A, -B DS-COVP-B DS-COVU-A, -B	AE-ACK-B AE-ESUM-B AE-INFO-B AE-N-I-B AE-N-E-B AE-ASUM-B	SCHED-I-B SCHED-E-B	T-VMT-I-B T-VMT-E-B T-ATR-B	DM-DDB-A, -B DM-DOB-B DM-DCC-B DM-RD-B DM-TS-A, -B DM-UTC-A, -B DM-BR-B DM-ATS-A DM-LM-B DM-OCD-B DM-R-A, -B

1.1.4. Segmentation Capability

- | | |
|---|-----------------|
| ☒ Able to transmit segmented messages | Window Size: 16 |
| ☒ Able to receive segmented messages | Window Size: 16 |

1.1.5. Object Types

Standard and proprietary object types are supported and may be present in the device.

Legend: ☒ = yes, supported ☐ = no, not supported -, n/a = not applicable

Objects may be created and deleted dynamically:

OC = Dynamic object creation OD = Dynamic object deletion

Objects may support optional functionality:

OOS = Out-Of-Service writeable COV = Change of value

Objects may be diversified with optional functionalities by the object data structure definition (CASE Suite - Project Engineering):

CMD = Object commandable IR/AR = Intrinsic / Algorithmic change reporting

Notice: Present-Value and Reliability properties are writable when Out-Of-Service = True.

BACnet Building Controller (B-BC)

Standard and proprietary objects may support optional functionality (Overview):

Object Type (Enum)	Supported	OC	OD	CMD	OOS	COV	IR/AR
Analog Input (0)	☒	☐	☐	-	☒	☒	☒
Analog Output (1)	☒	☐	☐	☒	☒	☒	☒
Analog Value (2)	☒	☐	☐	☒	☒	☒	☒
Binary Input (3)	☒	☐	☐	-	☒	☒	☒
Binary Output (4)	☒	☐	☐	☒	☒	☒	☒
Binary Value (5)	☒	☐	☐	☒	☒	☒	☒
Calendar (6)	☒	☒	☒	-	-	-	-
Command (7)	☒	☒	☒	-	-	☒	-
Device (8)	☒	☐	☐	-	-	-	-
Event Enrollment (9)	☒	☒	☒	-	-	-	☒
File (10)	☒	☐	☐	-	-	-	-
Loop (12)	☒	☐	☐	-	☒	☒	☒
Multi-State Input (13)	☒	☐	☐	-	☒	☒	☒
Multi-State Output (14)	☒	☐	☐	☒	☒	☒	☒
Multi-State Value (19)	☒	☐	☐	☒	☒	☒	☒
Notification Class (15)	☒	☒	☒	-	-	-	-
Program (16)	☒	☐	☐	-	-	-	-
Pulse Converter (24)	☒	☐	☐	-	☒	☒	☒
Schedule (17)	☒	☒	☒	-	☒	-	-
Structured View (29)	☒	☐	☐	-	-	-	-
Trend Log (20)	☒	☒	☒	-	-	-	☒
IO Unit (384)	☒	☐	☐	-	-	-	-

Some standard objects may have proprietary properties in addition (Clause 23).

There are no specific property range restrictions except those within the system SAUTER EY-modulo 5 and the range restrictions of the BACnet Standard. Supported standard and proprietary objects may support following optional and proprietary properties and in addition to the standard conformance code some writable properties:

BACnet Building Controller (B-BC)

Legend: ☒ = yes, supported ☐ = no, not supported -, n/a = not applicable
 CC = Conformance Code () = comments in parenthesis
 R = Required Readable W = Required Readable and Writable
 O = (Conditionally) Optional P = Proprietary

1.1.5.1. Device Management

Device (DEV = 8)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
System-Status	R	☒		
Vendor-Name	R	☒		
Vendor-Identifier	R	☒		
Model-Name	R	☒		
Firmware-Revision	R	☒		
Application-Software-Version	R	☒		
Location	O	☒	☒	(up to 128 characters)
Description	O	☒	☒	(up to 128 characters)
Protocol-Version	R	☒		
Protocol-Revision	R	☒		
Protocol-Services-Supported	R	☒		
Protocol-Object-Types-Supported	R	☒		
Object-List	R	☒		
Structured-Object-List	O	☒	☐	
Max-APDU-Length-Accepted	R	☒		
Segmentation-Supported	R	☒		
Max-Segments-Accepted	O1	☒		
VT-Classes-Supported	O2	-		
Active-VT-Sessions	O2	-		
Local-Time	O3,4	☒	☒	(time sync service)
Local-Date	O3,4	☒	☒	(time sync service)
UTC-Offset	O4	☒	☒	-780..780 (configurable)
Daylight-Savings-Status	O4	☒	☐	(automatic DST)
APDU-Segment-Timeout	O1	☒	☐	
APDU-Timeout	R	☒		
Number-Of-APDU-Retries	R	☒		
Time-Synchronization-Recipients	O5	☒	☒	(up to 32 recipients)
Max-Master	O6	-		
Max-Info-Frames	O6	-		
Device-Address-Binding	R	☒		(up to 100 devices)
Database-Revision	R	☒		
Configuration-Files	O7	☒	☐	
Last-Restore-Time	O7	☒	☐	
Backup-Failure-Timeout	O8	☒	☒	
Backup-Preparation-Time	O	☒	☐	(Add135-2008n-1)
Restore-Preparation-Time	O	☒	☐	(Add135-2008n-1)
Restore-Completion-Time	O	☒	☐	(Add135-2008n-1)
Backup-And-Restore-State	O	☒	☐	(Add135-2008n-1)

BACnet Building Controller (B-BC)

Active-COV-Subscriptions	O9	☒	☐	
Slave-Proxy-Enable	O10	-		
Manual-Slave-Address-Binding	O10	-		
Auto-Slave-Discovery	O11	-		
Slave-Address-Binding	O12	-		
Last-Restart-Reason	O13	☒		
Time-Of-Device-Restart	O13	☒		
Restart-Notification-Recipients	O13	☒		(up to 32 recipients)
UTC-Time-Synchronization-Recipients	O5	☒	☒	(up to 32 recipients)
Time-Synchronization-Interval	O14	☒	☒	
Align-Intervals	O14	☒	☒	
Interval-Offset	O14	☒	☒	
Profile-Name	O	☒	☐	
Proprietary Property	Enum	R	W	Property Datatype Range Restriction
MAC-Address	8207	☒	☐	
Hardware-Revision	8208	☒	☐	
Log-Object-List	8252	☒	☐	
Firmware-Index	8255	☒	☐	
Serial-Number	8277	☒	☐	
Production-Date	8278	☒	☐	
Status-Flag-Sum	8300	☒	☐	
Number-Of-Active-Transition	8301	☒	☐	
Number-Of-Open-Transition	8302	☒	☐	
MSP-Version	8313	☒	☐	
Sauter-character-set	8351	☒	☐	0: UTF8; 5: ISO-8859-1
Sauter-DST-Start-Date	8352	☒	☐	
Sauter-DST-End-Date	8353	☒	☐	
Sauter-DST-Start-Offset	8354	☒	☐	
Sauter-DST-End-Offset	8355	☒	☐	
Sauter-Disable-Event-Message-Text	8358	☒	☒	

File (FL = 10)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Description	O	☒	☒	
File-Type	R	☒		
File-Size	R1	☒	☒	0 (delete)
Modification-Date	R	☒		
Archive	W	☒	☒	
Read-Only	R	☒		
File-Access-Method	R	☒		
Record-Count	O2	☐		
Profile-Name	O	☒	☐	

BACnet Building Controller (B-BC)

Program (PRG = 16)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Program-State	R	☒		
Program-Change	W	☒	☒	1..4
Reason-For-Halt	O1	☒		
Description-Of-Halt	O1	☒		
Program-Location	O	-		
Description	O	☒	☒	(up to 128 characters)
Instance-Of	O	-		
Status-Flags	R	☒		
Reliability	O	☒	☐	
Out-Of-Service	R	☒		
Profile-Name	O	☒	☐	
Proprietary Property	Enum	R	W	Property Datatype Range Restriction
Download-User	8322	☒	☐	
Download-Comment	8323	☒	☐	

Structured View (SV = 29)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Description	O	☒	☒	(up to 128 characters)
Node-Type	R	☒		
Node-Subtype	O	☒	☐	
Subordinate-List	R	☒		
Subordinate-Annotations	O	☒	☐	
Profile-Name	O	☒	☐	

1.1.5.2. Input, Output, Value

Analog Input (AI = 0)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Present-Value	R1	☒		
Description	O	☒	☒	(up to 128 characters)
Device-Type	O	☒	☐	
Status-Flags	R	☒		
Event-State	R	☒		
Reliability	O	☒	☐	

BACnet Building Controller (B-BC)

Out-Of-Service	R	☒	☒	
Update-Interval	O	☒		
Units	R	☒	☒	
Min-Pres-Value	O	☒	☒	
Max-Pres-Value	O	☒	☒	
Resolution	O	☒		
COV-Increment	O2	☒	☒	
Time-Delay	O3	☒	☒	
Notification-Class	O3	☒	☒	
High-Limit	O3	☒	☒	
Low-Limit	O3	☒	☒	
Deadband	O3	☒	☒	
Limit-Enable	O3	☒	☒	
Event-Enable	O3	☒	☒	
Acked-Transitions	O3	☒	☐	
Notify-Type	O3	☒	☒	
Event-Time-Stamps	O3	☒	☐	
Event-Message-Texts	O	☐	☐	
Profile-Name	O	☒	☐	
Proprietary Property	Enum	R	W	Property Datatype Range Restriction
Event-Suppress-Reference	8244	☒	☐	(IR enabled)
Event-Suppress-Active	8245	☒	☐	(IR enabled)
Event-Suppress-Cascade-Active	8246	☒	☐	(IR enabled)
Min-Hardware-Value	8248	☒	☒	REAL
Max-Hardware-Value	8249	☒	☒	REAL
Offset	8250	☒	☒	REAL
Slope	8251	☒	☒	REAL
Hardware-Input-Module-Id	8263	☒	☐	
Hardware-Input-Channel-Id	8264	☒	☐	
COV-Synchronization-Period	8314	☒	☒	

Analog Output (AO = 1)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Present-Value	W	☒	☒	
Description	O	☒	☒	(up to 128 characters)
Device-Type	O	☒	☐	
Status-Flags	R	☒		
Event-State	R	☒		
Reliability	O	☒	☐	
Out-Of-Service	R	☒	☒	
Units	R	☒	☒	
Min-Pres-Value	O	☒	☒	
Max-Pres-Value	O	☒	☒	
Resolution	O	☒		
Priority-Array	R	☒		
Relinquish-Default	R	☒	☒	

BACnet Building Controller (B-BC)

COV-Increment	O1	☒	☒	
Time-Delay	O2	☒	☒	
Notification-Class	O2	☒	☒	
High-Limit	O2	☒	☒	
Low-Limit	O2	☒	☒	
Deadband	O2	☒	☒	
Limit-Enable	O2	☒	☒	
Event-Enable	O2	☒	☒	
Acked-Transitions	O2	☒	☐	
Notify-Type	O2	☒	☒	
Event-Time-Stamps	O2	☒	☐	
Event-Message-Texts	O	☐	☐	
Profile-Name	O	☒	☐	
Proprietary Property	Enum	R	W	Property Datatype Range Restriction
Event-Suppress-Reference	8244	☒	☐	(IR enabled)
Event-Suppress-Active	8245	☒	☐	(IR enabled)
Event-Suppress-Cascade-Active	8246	☒	☐	(IR enabled)
Min-Hardware-Value	8248	☒	☒	REAL
Max-Hardware-Value	8249	☒	☒	REAL
Hardware-Output-Module-Id	8265	☒	☐	
Hardware-Output-Channel-Id	8266	☒	☐	
Priority-Array-Reset	8309	☒	☐	
COV-Synchronization-Period	8314	☒	☒	
Hardware-Output-Value	8334	☒	☐	

Analog Value (AV = 2)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Present-Value	R4	☒	☒	(CMD enabled)
Description	O	☒	☒	(up to 128 characters)
Status-Flags	R	☒		
Event-State	R	☒		
Reliability	O	☒	☐	
Out-Of-Service	R	☒	☒	
Units	R	☒	☒	
Priority-Array	O1	☒	☐	
Relinquish-Default	O1	☒	☒	
COV-Increment	O2	☒	☒	
Time-Delay	O3	☒	☒	
Notification-Class	O3	☒	☒	
High-Limit	O3	☒	☒	
Low-Limit	O3	☒	☒	
Deadband	O3	☒	☒	
Limit-Enable	O3	☒	☒	
Event-Enable	O3	☒	☒	
Acked-Transitions	O3	☒	☐	
Notify-Type	O3	☒	☒	

BACnet Building Controller (B-BC)

Event-Time-Stamps	O3	☒	☐	
Event-Message-Texts	O	☐	☐	
Profile-Name	O	☒	☐	
Proprietary Property	Enum	R	W	Property Datatype Range Restriction
Event-Suppress-Reference	8244	☒	☐	(IR enabled)
Event-Suppress-Active	8245	☒	☐	(IR enabled)
Event-Suppress-Cascade-Active	8246	☒	☐	(IR enabled)
Priority-Array-Reset	8309	☒	☐	(CMD enabled)
COV-Synchronization-Period	8314	☒	☒	
Min-Range-Value	8332	☒	☒	
Max-Range-Value	8333	☒	☒	

Binary Input (BI = 3)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Present-value	R1	☒		
Description	O	☒	☒	(up to 128 characters)
Device-Type	O	☒	☐	
Status-Flags	R	☒		
Event-State	R	☒		
Reliability	O	☒	☐	
Out-Of-Service	R	☒	☒	
Polarity	R	☒		
Inactive-Text	O2	☒	☒	(up to 32 characters)
Active-Text	O2	☒	☒	(up to 32 characters)
Change-Of-State-Time	O3	☒	☐	
Change-Of-State-Count	O3	☒	☒	0 (reset)
Time-Of-State-Count-Reset	O3	☒	☐	
Elapsed-Active-Time	O4	☒	☒	0 (reset)
Time-Of-Active-Time-Reset	O4	☒	☐	
Time-Delay	O5	☒	☒	
Notification-Class	O5	☒	☒	
Alarm-Value	O5	☒	☒	
Event-Enable	O5	☒	☒	
Acked-Transitions	O5	☒	☐	
Notify-Type	O5	☒	☒	
Event-Time-Stamps	O5	☒	☐	
Event-Message-Texts	O	☐	☐	
Profile-Name	O	☒	☐	
Proprietary Property	Enum	R	W	Property Datatype Range Restriction
Event-Suppress-Reference	8244	☒	☐	(IR enabled)
Event-Suppress-Active	8245	☒	☐	(IR enabled)
Event-Suppress-Cascade-Active	8246	☒	☐	(IR enabled)
Hardware-Input-Module-Id	8263	☒	☐	
Hardware-Input-Channel-Id	8264	☒	☐	

BACnet Building Controller (B-BC)

Binary Output (BO = 4)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Present-Value	W	☒	☒	
Description	O	☒	☒	(up to 128 characters)
Device-Type	O	☒	☐	
Status-Flags	R	☒		
Event-State	R	☒		
Reliability	O	☒	☐	
Out-Of-Service	R	☒	☒	
Polarity	R	☒		
Inactive-Text	O1	☒	☒	(up to 32 characters)
Active-Text	O1	☒	☒	(up to 32 characters)
Change-Of-State-Time	O2	☒	☐	
Change-Of-State-Count	O2	☒	☒	0 (reset)
Time-Of-State-Count-Reset	O2	☒	☐	
Elapsed-Active-Time	O3	☒	☒	0 (reset)
Time-Of-Active-Time-Reset	O3	☒	☐	
Minimum-Off-Time	O	☒	☒	
Minimum-On-Time	O	☒	☒	
Priority-Array	R	☒		
Relinquish-Default	R	☒	☒	
Time-Delay	O4	☒	☒	
Notification-Class	O4	☒	☒	
Feedback-Value	O4	☒	☐	
Event-Enable	O4	☒	☒	
Acked-Transitions	O4	☒	☐	
Notify-Type	O4	☒	☒	
Event-Time-Stamps	O4	☒	☐	
Event-Message-Texts	O	☐	☐	
Profile-Name	O	☒	☐	
Proprietary Property	Enum	R	W	Property Datatype Range Restriction
Event-Suppress-Reference	8244	☒	☐	(IR enabled)
Event-Suppress-Active	8245	☒	☐	(IR enabled)
Event-Suppress-Cascade-Active	8246	☒	☐	(IR enabled)
Hardware-Input-Module-Id	8263	☒	☐	
Hardware-Input-Channel-Id	8264	☒	☐	
Hardware-Output-Module-Id	8265	☒	☐	
Hardware-Output-Channel-Id	8266	☒	☐	
Priority-Array-Reset	8309	☒	☐	
Hardware-Output-Value	8334	☒	☐	

Binary Value (BV = 5)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		

BACnet Building Controller (B-BC)

Object-Type	R	☒		
Present-Value	R1	☒	☒	(CMD enabled)
Description	O	☒	☒	(up to 128 characters)
Status-Flags	R	☒		
Event-State	R	☒		
Reliability	O	☒	☐	
Out-Of-Service	R	☒	☒	
Inactive-Text	O2	☒	☒	(up to 32 characters)
Active-Text	O2	☒	☒	(up to 32 characters)
Change-Of-State-Time	O3	☒	☐	
Change-Of-State-Count	O3	☒	☒	0 (reset)
Time-Of-State-Count-Reset	O3	☒	☐	
Elapsed-Active-Time	O4	☒	☒	0 (reset)
Time-Of-Active-Time-Reset	O4	☒	☐	
Minimum-Off-Time	O	☒	☒	
Minimum-On-Time	O	☒	☒	
Priority-Array	O5	☒	☐	
Relinquish-Default	O5	☒	☒	
Time-Delay	O6	☒	☒	
Notification-Class	O6	☒	☒	
Alarm-Value	O6	☒	☒	
Event-Enable	O6	☒	☒	
Acked-Transitions	O6	☒	☐	
Notify-Type	O6	☒	☒	
Event-Time-Stamps	O6	☒	☐	
Event-Message-Texts	O	☐	☐	
Profile-Name	O	☒	☐	
Proprietary Property	Enum	R	W	Property Datatype Range Restriction
Event-Suppress-Reference	8244	☒	☐	(IR enabled)
Event-Suppress-Active	8245	☒	☐	(IR enabled)
Event-Suppress-Cascade-Active	8246	☒	☐	(IR enabled)
Priority-Array-Reset	8309	☒	☐	(CMD enabled)

Command (CMD = 7)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Present-Value	W	☒	☒	[0..12]
Description	O	☒	☒	(up to 128 characters)
In-Process	R	☒		
All-Writes-Successful	R	☒		
Action	R	☒	☒	(array, up to 12, max. 16 action commands each)
Action-Text	O	☒	☒	(array, up to 12, max. 32 characters long each)
Profile-Name	O	☒	☐	

BACnet Building Controller (B-BC)

Multi-State Input (MI = 13)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Present-Value	R1	☒		
Description	O	☒	☒	(up to 128 characters)
Device-Type	O	☒	☐	
Status-Flags	R	☒		
Event-State	R	☒		
Reliability	O2	☒	☐	
Out-Of-Service	R	☒	☒	
Number-Of-States	R	☒		
State-Text	O	☒	☐	
Time-Delay	O3	☒	☒	
Notification-Class	O3	☒	☒	
Alarm-Values	O3	☒	☐	
Fault-Values	O3	☒	☐	
Event-Enable	O3	☒	☒	
Acked-Transitions	O3	☒	☐	
Notify-Type	O3	☒	☒	
Event-Time-Stamps	O3	☒	☐	
Event-Message-Texts	O	☐	☐	
Profile-Name	O	☒	☐	
Property Datatype				
Proprietary Property	Enum	R	W	Range Restriction
Event-Suppress-Reference	8244	☒	☐	(IR enabled)
Event-Suppress-Active	8245	☒	☐	(IR enabled)
Event-Suppress-Cascade-Active	8246	☒	☐	(IR enabled)
Hardware-Input-Module-Id	8263	☒	☐	List
Hardware-Input-Channel-Id	8264	☒	☐	List

Multi-State Output (MO = 14)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Present-value	W	☒	☒	1.. up to 12
Description	O	☒	☒	(up to 128 characters)
Device-Type	O	☒	☐	
Status-Flags	R	☒		
Event-State	R	☒		
Reliability	O	☒	☐	
Out-Of-Service	R	☒	☒	
Number-Of-States	R	☒		
State-Text	O	☒	☐	
Priority-Array	R	☒		
Relinquish-Default	R	☒	☒	
Time-Delay	O1	☒	☒	

BACnet Building Controller (B-BC)

Notification-Class	O1	☒	☒	
Feedback-Value	O1	☒	☐	
Event-Enable	O1	☒	☒	
Acked-Transitions	O1	☒	☐	
Notify-Type	O1	☒	☒	
Event-Time-Stamps	O1	☒	☐	
Event-Message-Texts	O	☐	☐	
Profile-Name	O	☒	☐	
Proprietary Property	Enum	R	W	Property Datatype Range Restriction
Event-Suppress-Reference	8244	☒	☐	(IR enabled)
Event-Suppress-Active	8245	☒	☐	(IR enabled)
Event-Suppress-Cascade-Active	8246	☒	☐	(IR enabled)
Hardware-Input-Module-Id	8263	☒	☐	List
Hardware-Input-Channel-Id	8264	☒	☐	List
Hardware-Output-Module-Id	8265	☒	☐	List
Hardware-Output-Channel-Id	8266	☒	☐	List
Priority-Array-Reset	8309	☒	☐	
Hardware-Output-Value	8334	☒	☐	

Multi-State Value (MV = 19)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Present-Value	R1	☒	☒	1 up to 12 (CMD enbl.)
Description	O	☒	☒	(up to 128 characters)
Status-Flags	R	☒		
Event-State	R	☒		
Reliability	O2	☒	☐	
Out-Of-Service	R	☒	☒	
Number-Of-States	R	☒		
State-Text	O	☒	☐	
Priority-Array	O3	☒	☐	
Relinquish-Default	O3	☒	☒	
Time-Delay	O4	☒	☒	
Notification-Class	O4	☒	☒	
Alarm-Values	O4	☒	☐	
Fault-Values	O4	☒	☐	
Event-Enable	O4	☒	☒	
Acked-Transitions	O4	☒	☐	
Notify-Type	O4	☒	☒	
Event-Time-Stamps	O4	☒	☐	
Event-Message-Texts	O	☐	☐	
Profile-Name	O	☒	☐	
Proprietary Property	Enum	R	W	Property Datatype Range Restriction
Event-Suppress-Reference	8244	☒	☐	(IR enabled)

BACnet Building Controller (B-BC)

Event-Suppress-Active	8245	☒	☐	(IR enabled)
Event-Suppress-Cascade-Active	8246	☒	☐	(IR enabled)
Priority-Array-Reset	8309	☒	☐	(CMD enabled)

1.1.5.3. Scheduling

Calendar (CAL = 6)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Description	O	☒	☒	(up to 128 characters)
Present-Value	R	☒		
Date-List	R	☒	☒	
Profile-Name	O	☒	☐	

Schedule (SCHD = 17)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Present-Value	R	☒		
Description	O	☒	☒	(up to 128 characters)
Effective-Period	R	☒	☒	
Weekly-Schedule	O1	☒	☒	
Exception-Schedule	O1	☒	☒	
Schedule-Default	R	☒	☒	
List-Of-Object-Property-References	R	☒	☒	
Priority-For-Writing	R	☒	☒	
Status-Flags	R	☒		
Reliability	R	☒		
Out-Of-Service	R	☒	☒	
Profile-Name	O	☒	☐	

1.1.5.4. Alarm and Event Management

Event Enrollment (EE = 9)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Description	O	☒	☒	(up to 128 characters)
Event-Type	R	☒		
Notify-Type	R	☒	☒	
Event-Parameters	R	☒	☒	(Out-Of-Range only)
Object-Property-Reference	R	☒	☒	
Event-State	R	☒		

BACnet Building Controller (B-BC)

Event-Enable	R	☒	☒	
Acked-Transitions	R	☒		
Notification-Class	R	☒	☒	
Event-Time-Stamps	R	☒		
Event-Message-Texts	O	☐	☐	
Profile-Name	O	☒	☐	
Proprietary Property	Enum	R	W	Property Datatype Range Restriction
Event-Suppress-Reference	8244	☒	☐	(IR enabled)
Event-Suppress-Active	8245	☒	☐	(IR enabled)
Event-Suppress-Cascade-Active	8246	☒	☐	(IR enabled)

Notification Class (NC = 15)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Description	O	☒	☒	(up to 128 characters)
Notification-Class	R	☒		
Priority	R	☒	☒	
Ack-Required	R	☒	☒	
Recipient-List	R	☒	☒	
Profile-Name	O	☒	☐	
Proprietary Property	Enum	R	W	Property Datatype Range Restriction
Status-Flag-Sum	8300	☒	☐	
Number-Of-Active-Transition	8301	☒	☐	
Number-Of-Open-Transition	8302	☒	☐	

1.1.5.5. Trending and Logging

Trend Log (TL = 20)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Description	O	☒	☒	(up to 128 characters)
Enable	W	☒	☒	
Start-Time	O1,2	☒	☒	
Stop-Time	O1,2	☒	☒	
Log-DeviceObjectProperty	O1	☒	☒	
Log-Interval	O1,2	☒	☒	
COV-Resubscription-Interval	O	☒	☒	
Client-COV-Increment	O	☒	☒	(NULL)
Stop-When-Full	R	☒	☒	
Buffer-Size	R	☒	☒	(Create only)

BACnet Building Controller (B-BC)

Log-Buffer	R	☒		
Record-Count	W	☒	☒	0 (Reset)
Total-Record-Count	R	☒		
Notification-Threshold	O3	☒	☒	
Records-Since-Notification	O3	☒	☐	
Last-Notify-Record	O3	☒	☐	
Event-State	R	☒		
Notification-Class	O3	☒	☒	
Event-Enable	O3	☒	☒	
Acked-Transitions	O3	☒	☐	
Notify-Type	O3	☒	☒	
Event-Time-Stamps	O3	☒	☐	
Event-Message-Texts	O	☐	☐	
Profile-Name	O	☒	☐	
Logging-Type	O	☒	☐	
Align-Intervals	O	☒	☒	
Interval-Offset	O	☒	☒	
Trigger	O	☒	☒	
Status-Flags	O	☒	☐	
Reliability	O	☒	☐	

1.1.5.6. Application

Pulse Converter (PC = 24)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Description	O	☒	☒	(up to 128 characters)
Present-Value	R1	☒		
Input-Reference	O	☐		
Status-Flags	R	☒		
Event-State	R	☒		
Reliability	O	☒	☐	
Out-Of-Service	R	☒	☒	
Units	R	☒	☒	
Scale-Factor	R	☒	☒	
Adjust-Value	W	☒	☒	
Count	R	☒		
Update-Time	R	☒		
Count-Change-Time	R2	☒		
Count-Before-Change	R2	☒		
COV-Increment	O3	☒	☒	
COV-Period	O3	☒	☒	
Notification-Class	O4	☒	☒	
Time-Delay	O4	☒	☒	
High-Limit	O4	☒	☒	
Low-Limit	O4	☒	☒	
Deadband	O4	☒	☒	
Limit-Enable	O4	☒	☒	

BACnet Building Controller (B-BC)

Event-Enable	O4	☒	☒	
Acked-Transitions	O4	☒	☐	
Notify-Type	O4	☒	☒	
Event-Time-Stamps	O4	☒	☐	
Event-Message-Texts	O	☐	☐	
Profile-Name	O	☒	☐	
				Property Datatype
Proprietary Property	Enum	R	W	Range Restriction
Event-Suppress-Reference	8244	☒	☐	(IR enabled)
Event-Suppress-Active	8245	☒	☐	(IR enabled)
Event-Suppress-Cascade-Active	8246	☒	☐	(IR enabled)
Hardware-Input-Module-Id	8263	☒	☐	
Hardware-Input-Channel-Id	8264	☒	☐	
PC-Limit-Monitoring-Interval	8281	☒	☒	Unsigned, 1..86400
PC-Pulse-Rate	8282	☒	☒	REAL
Priority-Array-Reset	8309	☒	☐	

Loop (LP = 12)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Present-Value	R	☒		
Description	O	☒	☒	(up to 128 characters)
Status-Flags	R	☒		
Event-State	R	☒		
Reliability	O	☒	☐	
Out-Of-Service	R	☒	☒	
Update-Interval	O	☒	☐	
Output-Units	R	☒	☒	
Manipulated-Variable-Reference	R	☒		
Controlled-Variable-Reference	R	☒		
Controlled-Variable-Value	R	☒		
Controlled-Variable-Units	R	☒	☒	
Setpoint-Reference	R	☒		
Setpoint	R	☒	☒	(W, if no Setpoint-Ref)
Action	R	☒	☒	
Proportional-Constant	O1	☒	☒	
Proportional-Constant-Units	O1	☒	☒	
Integral-Constant	O2	☒	☒	
Integral-Constant-Units	O2	☒	☒	
Derivative-Constant	O3	☒	☒	
Derivative-Constant-Units	O3	☒	☒	
Bias	O	☒	☒	
Maximum-Output	O	☒	☒	
Minimum-Output	O	☒	☒	
Priority-For-Writing	R	☒	☐	
COV-Increment	O4	☒	☒	
Time-Delay	O5	☒	☒	
Notification-Class	O5	☒	☒	

BACnet Building Controller (B-BC)

Error-Limit	O5	☒	☒	
Deadband	O5	☒	☒	
Event-Enable	O5	☒	☒	
Acked-Transitions	O5	☒	☐	
Notify-Type	O5	☒	☒	
Event-Time-Stamps	O5	☒	☐	
Event-Message-Texts	O	☐	☐	
Profile-Name	O	☒	☐	
Proprietary Property	Enum	R	W	Property Datatype Range Restriction
Event-Suppress-Reference	8244	☒	☐	(IR enabled)
Event-Suppress-Active	8245	☒	☐	(IR enabled)
Event-Suppress-Cascade-Active	8246	☒	☐	(IR enabled)
Controller-Deadband	8262	☒	☐	
COV-Synchronization-Period	8314	☒	☒	

1.1.5.7. Proprietary Objects

The proprietary objects are implemented according to all requirements for Conformance and Interoperability (Clause 22) and according to Extending BACnet To Accommodate Vendor Proprietary Information (Clause 23).

There are no specific property range restrictions except those specified in the BACnet Standard.

Proprietary object types are supported as listed:

IO Unit (IOU = 384)

Description: The IO-Unit object type defines the hardware units and represents the hardware inputs and outputs from the BACnet building controller and from the I/O-modules, the operating panel and the communication modules connected to the controller.

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Description	O	☒	☒	(up to 128 characters)
Firmware-Revision	O	☒	☐	
Profile-Name	O	☒	☐	
Proprietary Property	Enum	R	W	Property Datatype Range Restriction
Hardware-Revision	8208	☒	☐	
IOUnit-Idx	8227	☒	☐	
Plugged-In	8228	☒	☐	
Serial-Number-Actual	8230	☒	☐	
OP-Unit-Id-Actual	8233	☒	☐	
OP-Unit-Id-Expected	8234	☒	☐	

BACnet Building Controller (B-BC)

OP-Unit-Serial-Number-Expected	8235	☒	☐	
OP-Unit-Serial-Number-Actual	8236	☒	☐	
Model-Name-Expected	8237	☒	☐	
Model-Name-Actual	8238	☒	☐	
Channel-Values	8239	☒	☐	
Channel-Types	8240	☒	☐	
CM-Protocol-ID-Actual	8269	☒	☐	(moduCom only)
CM-Protocol-ID-Expected	8270	☒	☐	(moduCom only)
CM-Protocol-Version	8271	☒	☐	(moduCom only)
CM-Status	8276	☒	☒	Enum (moduCom only)
CM-Statistics	8303	☒	☐	(moduCom only)
Sauter-On-Delay	8338	☒	☒	

1.1.6. 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): ____
- ☐ 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): ____
- ☐ LonTalk, (Clause 11), medium: ____
- ☐ BACnet/ZigBee (Annex O)
- ☐ Other: ____

1.1.7. Device Address Binding

Static device binding is supported: ☐ Yes ☒ No

BACnet Building Controller (B-BC)

1.1.8. Networking Options

- ☐ Router (Clause 6) - List of all routing configurations: ____
- ☐ BACnet Tunneling Router over IP (Annex H)
- ☒ BACnet/IP Broadcast Management Device (BBMD)
 - BBMD supports registrations by Foreign Devices: ☒ Yes ☐ No
 - BDT size: max. 32 FDT size: max. 32
 - BBMD supports network address translation? ☐ Yes ☒ No

1.1.9. 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)

1.1.10. Character Sets

Supports following character sets:

- | | | |
|---|---|--|
| ☒ ISO 10646 (UTF-8) | ☐ IBM™/Microsoft™ DBCS | ☒ ISO 8859-1 |
| ☐ ISO 10646 (UCS-2) | ☐ ISO 10646 (UCS-4) | ☐ JIS 0208 |

Outgoing character strings are communicated according to the selected character set (Sauter-character-set).

Incoming character strings with character sets other than ISO 10646 (UTF-8) will be mapped to ISO 10646 (UTF-8) internally.

1.1.11. Communication Gateway

In conjunction with the moduCom extension modules modu721 or modu731 Modbus/RTU or M-Bus devices can be supported.

BACnet Building Controller (B-BC)



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