SAUTER BACnet PICS

SAUTER Smart Actuator

BACnet Protocol Implementation Conformance Statement

D100542357

SAUTER
Creating Sustainable Environments.

Note:

This statement corresponds to the ANSI/ASHRAE 135-2020 release. Changes are taking place constantly, without prior notification.

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Legend:

This document contains tables with symbols and abbreviations for which the following legend applies:

☑	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
OC	Dynamic object creation	**OD**	Dynamic object deletion
OOS	Out-Of-Service writeable	**COV**	Change of value
CMD	Object commandable	**IR/AR**	Intrinsic / Algorithmic change reporting

Content

I. BACnet Protocol Implementation Conformance Statement

I.1 SAUTER Smart Actuator Controllers

Date	May 2026
Vendor Name	Fr. Sauter AG (Vendor ID: 80)
Product Name	SAUTER Smart Actuator
Product Model Number	All SAUTER Smart Actuator BACnet Application Specific Controllers • AVM115SAF332 • AKM115SAF332 • ASM115SAF332
Applications Software Version	5.2 (CASE Engine Interface), 2.5 (Function Index)
Firmware Revision	V2.1.0b336 (BACnet Firmware)
BACnet Protocol Revision	Version 1, Revision 26

I.1.1 Product Description

The SAUTER Smart Actuator is an integrated combination of a freely programmable automation station (AS) and a valve or damper actuator. Without additional controllers, it enables self-sufficient, energy-optimized control to be set up in primary systems or individual rooms. Together with an ecoUnit room operating unit and additional SAIO 100 or ecoLink modules, even complex HVAC systems or room controls can be implemented. For system integration, cloud connection and programming, the Smart Actuator can be accessed via the communication interfaces Bluetooth LE, WLAN and Ethernet with BACnet/IP. It has integrated BBMD functionality. Peer-to-peer communication with other BACnet devices can be established over the BACnet/IP network.

I.1.2 BACnet Standardized Device Profile (Annex L)

☐	B-OWS	BACnet Operator Workstation
☐	B-OD	BACnet Operator Display
☐	B-BC	BACnet Building Controller
☐	B-LD	BACnet Lighting Device
☐	B-GWY	BACnet Gateway Device
☐	B-AAC	BACnet Advanced Application Controller
☒	B-ASC	BACnet Application Specific Controller
☐	B-SS	BACnet Smart Sensor
☐	B-SA	BACnet Smart Actuator

I.1.3 BACnet Interoperability Building Blocks (Annex K)

Supports following BIBBs:

Data Sharing-	**BIBB**	**-A**	**-B**
Read Property-	DS-RP-	☒	☒
Read Property Multiple-	DS-RPM-	☐	☒
Write Property-	DS-WP-	☐	☒
Write Property Multiple-	DS-WPM-	☐	☐
Change Of Value-	DS-COV-	☒	☒
Change Of Value Property-	DS-COVP-	☐	☐
Change Of Value Unsubscribed-	DS-COVU-	☒	☐

Data Sharing-	BIBB	-A	-B
View-	DS-V-	☐	-
Modify-	DS-M-	☐	-
Lighting Output-	DS-LO-	☐	☐

Scheduling-	BIBB	-A	-B
Scheduling-	SCHED-	☐	-
Internal-	SCHED-I-	-	☒
External-	SCHED-E-	-	☐
View and Modify-	SCHED-VM-	☐	-

Device Management-	BIBB	-A	-B
Dynamic Device Binding-	DM-DDB-	☒	☒
Dynamic Object Binding-	DM-DOB-	☐	☒
Device Communication Control-	DM-DCC-	☐	☒
Time Synchronization	DM-TS-	☐	☒
UTC Time Synchronization-	DM-UTC-	☐	☒
Reinitialize Device-	DM-RD-	☐	☒
Backup and Restore-	DM-BR-	☐	☒
Restart-	DM-R-	☐	☐
List Manipulation-	DM-LM-	☐	☐
Object Creation and Deletion-	DM-OCD-	☒	☐
Automatic Time Synchronization-	DM-ATS-		-
Manual Time Synchronization-	DM-MTS-		-

Network Management-	BIBB	A	B
BBMD Configuration-	NM-BBMDC-	☐	☐
Foreign Device Registration-	NM-FDR-	☒	☐
Secure Connect Hub-	NM-SCH-	-	☐

The table below consolidates all BIBBs required for B-ASC profile as of Annex L. Supplementary BIBBs are in *italics*.

Data Sharing	Alarm & Event Management	Scheduling	Trending	Device & Network Management
DS-RP-A, -B DS-RPM-B DS-WP-B *DS-COV-A, -B* *DS-COVU-A*		*SCHED-I-B*		DM-DDB-A, -B DM-DOB-B DM-DCC-B DM-TS-B DM-UTC-B DM-RD-B DM-BR-B

I.1.4 Segmentation Capability

☐ Able to transmit segmented messages Window Size: 16
☐ Able to receive segmented messages Window Size: 16

I.1.5 Object Types

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

Note:

Present-Value and Reliability properties are writable when Out-Of-Service = True. Standard and proprietary objects may support optional functionality (Overview):

Object Type	ID	Supported	OC / OD	Writable Properties (Additional)
Accumulator	23	☐	☐	
Analog Input	0	☐	☐	
Analog Output	1	☐	☐	
Analog Value	2	☒	☐	
Averaging	18	☐	☐	
Binary Input	3	☐	☐	
Binary Output	4	☐	☐	
Binary Value	5	☒	☐	
Calendar	6	☒	☐	
Command	7	☐	☐	
Device	8	☒	☐	
Event Enrollment	9	☐	☐	
Event Log	25	☐	☐	
File	10	☒	☐	
Group	11	☐	☐	
Life Safety Point	21	☐	☐	
Life Safety Zone	22	☐	☐	
Load Control	28	☐	☐	
Loop	12	☒	☐	
Multi-State Input	13	☐	☐	
Multi-State Outpu	14	☐	☐	
Multi-State Value	19	☒	☐	
Notification Class	15	☐	☐	
Program	16	☐	☐	
Pulse Converter	2	☐	☐	
Schedule	17	☒	☐	
Trend Log	20	☐	☐	
Trend Log Multiple	27	☐	☐	
……..		☐	☐	
network-port	56	☒	☐	
……..		☐	☐	
Staging	62	☐	☐	

Some standard objects may have proprietary properties in addition (Clause 23). There are no specific property range restrictions except those within the system SAUTER Smart Actuator and the range restrictions of the BACnet Standard. Supported standard and proprietary objects may support the following optional and proprietary properties and in addition to the standard conformance code some writable properties:

I.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	☒		
Description	O	☒		
Protocol-Version	R	☒		
Protocol-Revision	R	☒		
Protocol-Services-Supported	R	☒		
Protocol-Object-Types-Supported	R	☒		
Object-List	R	☒		
Max-APDU-Length-Accepted	R	☒		
Segmentation-Supported	R	☒		
Local-Time	O	☒		(time sync service)
Local-Date	O	☒		(time sync service)
UTC-Offset	O	☒		-1440…1440 (configurable)
Daylight-Savings-Status	O	☒		(automatic DST)
APDU-Segment-Timeout	O	☒		
APDU-Timeout	R	☒		
Number-Of-APDU-Retries	R	☒		
Device-Address-Binding	R	☒		(up to 16 devices)
Database-Revision	R	☒		
Configuration-Files	O	☒		
Last-Restore-Time	O	☒		
Backup-Failure-Timeout	O	☒	☒	
Backup-Preparation-Time	O	☒		
Restore-Preparation-Time	O	☒		
Restore-Completion-Time	O	☒		
Backup-And-Restore-State	O	☒		
Active-COV-Subscriptions	O	☒		
Serial-Number	O	☒		
Property-List	R	☒		

File (FL = 10)

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

Standard Property	CC	R	W	Range Restriction
Object-Name	R	☒		
Object-Type	R	☒		
Description	O	☒		
File-Type	R	☒		
File-Size	R	☒		0 (delete)
Modification-Date	R	☒		
Archive	W	☒	☒	
Read-Only	R	☒		
File-Access-Method	R	☒		
Property-List	O	☒		

Network Port (NP = 56)

Depending on the value of Network-Type property, the object properties required change. Properties are splitted into base properties which are independent of the Network-Type value, and a subset of properties related to the specific value of the Network-Type Property.

Base properties (present on any Network-Type value)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Description	O	☒	☐	
Status-Flags	R	☒		
Reliability	R	☒		
Out-Of-Service	R	☒	☐	
Network-Type	R	☒		
Protocol-Level	R	☒		
Reference-Port	O	☒	☐	
Changes-Pending	R	☒		
Property-List	R	☒		
Profile-Name	O	☒	☐	

Case 1: Network-Type == ETHERNET & Protocol-Level == PHYSICAL

Standard Property	CC	R	W	Range Restriction
Link-Speed	O	☒	☐	
Network-Interface-Name	O	☒	☐	

(R): The properties that are required based on the Network-Type and Protocol-Level are identified in the sub-tables with a (R) conformance code.

Case 2: Network-Type == IPV4 & Protocol-Level == BACNET_APPLICATION

Standard Property	CC.	R	W	Range Restriction
Network-Number	(R)	☒	☐	
Network-Number-Quality	(R)	☒		
Command	O	☒	☒	
Command-Validation-Result	O	☒	☐	
APDU-Length	(R)	☒		
MAC-Address	(R)	☒		
BACnet-IP-Mode	(R)	☒	☐	
BACnet-IP-UDP-Port	(R)	☒		
FD-BBMD-Address	O	☒	☒	
FD-Subscription-Lifetime	O	☒	☐	
Current-Health	O	☒	☐	

(R): The properties that are required based on the Network-Type and Protocol-Level are identified in the sub-tables with a (R) conformance code.

Case 3: Network-Type == IPV4 & Protocol-Level == PROTOCOL

Standard Property	CC.	R	W	Range Restriction
IP-Address	(R)	☒	☐	
IP-Subnet-Mask	(R)	☒	☐	
IP-Default-Gateway	(R)	☒	☐	
IP-DNS-Server	(R)	☒	☐	
IP-DHCP-Enable	O	☒	☐	
IP-DHCP-Lease-Time	O	☒	☐	
IP-DHCP-Lease-Time-Remaining	O	☒	☐	
IP-DHCP-Server	O	☒	☐	

(R): The properties that are required based on the Network-Type and Protocol-Level are identified in the sub-tables with a (R) conformance code

I.1.5.2 Input, Output, Value

Analog Value (AV = 2)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Present-Value	R	☒	☒	(CMD enabled)
Description	O	☒		
Status-Flags	R	☒		
Event-State	R	☒		
Out-Of-Service	R	☒	☒	
Units	R	☒	☒	

Priority-Array	O	☒		
current-command-priority	R	☒		
Relinquish-Default	O	☒		
COV-Increment	O	☒	☒	
Min-Pres-Value	O	☒	☒	
Max-Pres-Value	O	☒		
Property-List	R	☒		

Binary Value (BV = 5)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Present-Value	R	☒	☒	(CMD enabled)
Description	O	☒		
Status-Flags	R	☒		
Event-State	R	☒		
Out-Of-Service	R	☒	☒	
Priority-Array	O	☒	☒	
current-command-priority	R	☒		
Relinquish-Default	O	☒		
Property-List	R	☒		

Multi-State Value (MV = 19)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Present-Value	R	☒	☒	1.. up to 6 (CMD enbl.)
Description	O	☒		
Status-Flags	R	☒		
Event-State	R	☒		
Out-Of-Service	R	☒	☒	
Number-Of-States	R	☒		
State-Text	O	☒		
Priority-Array	O	☒		
current-command-priority	R	☒		
Relinquish-Default	O	☒	☒	
Property-List	R	☒		

I.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	☒		
Present-Value	R	☒		
Date-List	R	☒	☒	
Property-List	R	☒		

Schedule (SCHD = 17)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Present-Value	R	☒		
Description	O	☒		
Effective-Period	R	☒		
Weekly-Schedule	O	☒	☒	
Exception-Schedule	O	☒	☒	
Schedule-Default	R	☒		
List-Of-Object-Property-References	R	☒		
Priority-For-Writing	R	☒		
Status-Flags	R	☒		
Reliability	R	☒		
Out-Of-Service	R	☒	☒	
Property-List	R	☒		

I.1.5.4 Application

Loop (LP = 12)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	☒		
Object-Name	R	☒		
Object-Type	R	☒		
Present-Value	R	☒		
Description	O	☒		
Status-Flags	R	☒		
Event-State	R	☒		
Reliability	O	☒		
Out-Of-Service	R	☒	☒	
Output-Units	R	☒		
Manipulated-Variable-Reference	R	☒		
Controlled-Variable-Reference	R	☒		

Controlled-Variable-Value	R	☒	
Controlled-Variable-Units	R	☒	☐
Setpoint-Reference	R	☒	
Setpoint	R	☒	
Action	R	☒	☒
Proportional-Constant	O	☒	☒
Proportional-Constant-Units	O	☒	☐
Integral-Constant	O	☒	☒
Integral-Constant-Units	O	☒	☐
Derivative-Constant	O	☒	☒
Derivative-Constant-Units	O	☒	☐
Bias	O	☒	☒
Priority-For-Writing	R	☒	☐
Property-List	R	☒	☐

I.1.5.5 Proprietary Objects

There are no proprietary object types.

I.1.6 Data Link Layer Options

- ☑ BACnet/IP, Annex J
- ☑ BACnet/IP, Annex J BACnet Broadcast Management Device (BBMD)
- ☑ DNS host name resolution supported (RFC 1123)
- ☑ mDNS host name resolution supported (RFC 6762)

I.1.7 Device Address Binding

- ☐ Static device binding supported [1]

I.1.8 Networking Options

- ☐ Router (Clause 6) List of all routing configurations:
- ☐ BACnet Tunneling Router over IP (Annex H)

I.1.9 Networking 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)

I.1.10 Character Sets

Supports following character sets[2]:

☑ 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] This is currently necessary for two-way communication with MS/TP slaves and certain other devices.

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

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