



**SAUTER BACnet PICS
EY-modulo 3 – ecos311**

**BACnet Protocol Implementation
Conformance Statement**

D100337923 - 01

Note:

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

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Content

Content

Content	3
1 BACnet Building Controller (B-ASC).....	4
1.1. SAUTER EY-modulo 3 Room Controllers.....	4
1.1.1. Product Description.....	4
1.1.2. BACnet Standardized Device Profile (Annex L).....	4
1.1.3. BACnet Interoperability Building Blocks (Annex K)	5
1.1.4. Segmentation Capability	5
1.1.5. Object Types	5
1.1.6. Data Link Layer Options.....	10
1.1.7. Device Address Binding	10
1.1.8. Networking Options.....	11
1.1.9. Network Security Options:.....	11
1.1.10. Character Sets	11
1.1.11. Communication Gateway	11

1 BACnet Application Specific Controller (B-ASC)

1.1. SAUTER EY-modulo 3 Room Controllers

Date	Mai 2017
Vendor Name	Fr. Sauter AG (Vendor ID: 80)
Product Name	EY-modulo 3 Room Controllers – ecos311
Product Model Number	ecos311 : EY-RC311F001: BACnet Room Controller ecos311
Applications Software Version	2.1 (CASE Engine Interface, Function Index)
Firmware Revision	V1.0.1 (BACnet Firmware)
BACnet Protocol Revision	Version 1, Revision 14

BACnet Testing Laboratory (BTL):

BACnet Profile: B-ASC

Date: Mai 2017
Lab: Rapport-No.:
Firmware: V1.0.1b22
Model: EY-RC311F001

1.1.1. Product Description

The SAUTER BACnet Room Controller EY-modulo 3 ecos311 is a programmable controller for individual room or zone control applications (e.g. room climate control, light, blinds, fan, chilled ceiling and radiator heating). 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. The controller can be monitored by a BACnet IP client through an external BACnet MS/TP<>IP router.

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:

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-RD-B DM-TS-B DM-UTC-B DM-BR-B

1.1.4. Segmentation Capability

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

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.

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

Object Type	(Enum)	Supported	OC	OD	CMD	OOS	COV	IR/AR
Analog Value	(2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	-
Binary Value	(5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	-
Calendar	(6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-	-	-	-
Device	(8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-	-	-	-
File	(10)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-	-	-	-
Loop	(12)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-	<input checked="" type="checkbox"/>	-	-
Multi-State Value	(19)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	-
Schedule	(17)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	-	<input checked="" type="checkbox"/>	-	-

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 3 ecos311 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:

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	<input checked="" type="checkbox"/>		
Object-Name	R	<input checked="" type="checkbox"/>		
Object-Type	R	<input checked="" type="checkbox"/>		
System-Status	R	<input checked="" type="checkbox"/>		
Vendor-Name	R	<input checked="" type="checkbox"/>		
Vendor-Identifier	R	<input checked="" type="checkbox"/>		
Model-Name	R	<input checked="" type="checkbox"/>		
Firmware-Revision	R	<input checked="" type="checkbox"/>		
Application-Software-Version	R	<input checked="" type="checkbox"/>		
Location	O	<input checked="" type="checkbox"/>		(up to 32 characters)
Description	O	<input checked="" type="checkbox"/>		(up to 32 characters)
Protocol-Version	R	<input checked="" type="checkbox"/>		
Protocol-Revision	R	<input checked="" type="checkbox"/>		
Protocol-Services-Supported	R	<input checked="" type="checkbox"/>		
Protocol-Object-Types-Supported	R	<input checked="" type="checkbox"/>		
Object-List	R	<input checked="" type="checkbox"/>		
Max-APDU-Length-Accepted	R	<input checked="" type="checkbox"/>		
Segmentation-Supported	R	<input checked="" type="checkbox"/>		
Local-Time	O3,4	<input checked="" type="checkbox"/>		(time sync service)
Local-Date	O3,4	<input checked="" type="checkbox"/>		(time sync service)
UTC-Offset	O4	<input checked="" type="checkbox"/>		-780..780 (configurable)
Daylight-Savings-Status	O4	<input checked="" type="checkbox"/>		(automatic DST)
APDU-Timeout	R	<input checked="" type="checkbox"/>		
Number-Of-APDU-Retries	R	<input checked="" type="checkbox"/>		
Max-Master	O6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Max-Info-Frames	O6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Device-Address-Binding	R	<input checked="" type="checkbox"/>		(up to 16 devices)
Database-Revision	R	<input checked="" type="checkbox"/>		
Configuration-Files	O7	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Last-Restore-Time	O7	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Backup-Failure-Timeout	O8	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Backup-Preparation-Time	O	<input checked="" type="checkbox"/>	<input type="checkbox"/>	(Add135-2008n-1)
Restore-Preparation-Time	O	<input checked="" type="checkbox"/>	<input type="checkbox"/>	(Add135-2008n-1)
Restore-Completion-Time	O	<input checked="" type="checkbox"/>	<input type="checkbox"/>	(Add135-2008n-1)
Backup-And-Restore-State	O	<input checked="" type="checkbox"/>	<input type="checkbox"/>	(Add135-2008n-1)
Active-COV-Subscriptions	O9	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Property-List	R	<input checked="" type="checkbox"/>		
Proprietary Property	Enum	R	W	Property Datatype Range Restriction
Hardware-Revision	8208	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Firmware-Index	8255	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Serial-Number	8277	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Production-Date	8278	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Sauter-Software-Product	8357	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Sauter-Battery-Ok-Indication	8380	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Sauter-Identification-Enable	8411	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Sauter-Build-Id	8412	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

File (FL = 10)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	<input checked="" type="checkbox"/>		
Object-Name	R	<input checked="" type="checkbox"/>		
Object-Type	R	<input checked="" type="checkbox"/>		
Description	O	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
File-Type	R	<input checked="" type="checkbox"/>		
File-Size	R1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Modification-Date	R	<input checked="" type="checkbox"/>		
Archive	W	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Read-Only	R	<input checked="" type="checkbox"/>		
File-Access-Method	R	<input checked="" type="checkbox"/>		
Property-List	R	<input checked="" type="checkbox"/>		

1.1.5.2. Input, Output, Value

Analog Value (AV = 2)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	<input checked="" type="checkbox"/>		
Object-Name	R	<input checked="" type="checkbox"/>		
Object-Type	R	<input checked="" type="checkbox"/>		
Present-Value	R4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	(CMD enabled)
Description	O	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Status-Flags	R	<input checked="" type="checkbox"/>		
Event-State	R	<input checked="" type="checkbox"/>		
Out-Of-Service	R	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Units	R	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Priority-Array	O1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Relinquish-Default	O1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
COV-Increment	O2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Min-Pres-Value	O	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Max-Pres-Value	O	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Property-List	R	<input checked="" type="checkbox"/>		
Proprietary Property	Enum	R	W	Property Datatype Range Restriction
COV-Synchronization-Period	8314	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

Binary Value (BV = 5)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	<input checked="" type="checkbox"/>		
Object-Name	R	<input checked="" type="checkbox"/>		
Object-Type	R	<input checked="" type="checkbox"/>		
Present-Value	R1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	(CMD enabled)
Description	O	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Status-Flags	R	<input checked="" type="checkbox"/>		
Event-State	R	<input checked="" type="checkbox"/>		
Out-Of-Service	R	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Priority-Array	O5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Relinquish-Default	O5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Property-List	R	<input checked="" type="checkbox"/>		

Multi-State Value (MV = 19)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	<input checked="" type="checkbox"/>		
Object-Name	R	<input checked="" type="checkbox"/>		
Object-Type	R	<input checked="" type="checkbox"/>		
Present-Value	R1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1..255 (CMD enabled)
Description	O	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Status-Flags	R	<input checked="" type="checkbox"/>		
Event-State	R	<input checked="" type="checkbox"/>		
Out-Of-Service	R	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Number-Of-States	R	<input checked="" type="checkbox"/>		
Priority-Array	O3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Relinquish-Default	O3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Property-List	R	<input checked="" type="checkbox"/>		

1.1.5.3. Scheduling

Calendar (CAL = 6)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	<input checked="" type="checkbox"/>		
Object-Name	R	<input checked="" type="checkbox"/>		
Object-Type	R	<input checked="" type="checkbox"/>		
Description	O	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Present-Value	R	<input checked="" type="checkbox"/>		
Date-List	R	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	()
Property-List	R	<input checked="" type="checkbox"/>		

Schedule (SCHD = 17)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	<input checked="" type="checkbox"/>		
Object-Name	R	<input checked="" type="checkbox"/>		
Object-Type	R	<input checked="" type="checkbox"/>		
Present-Value	R	<input checked="" type="checkbox"/>		
Description	O	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Effective-Period	R	<input checked="" type="checkbox"/>		
Weekly-Schedule	O1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	(max. 7 T/V@weekday)
Exception-Schedule	O1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	(max. 12 with 7 T/V)
Schedule-Default	R	<input checked="" type="checkbox"/>		
List-Of-Object-Property-References	R	<input checked="" type="checkbox"/>		
Priority-For-Writing	R	<input checked="" type="checkbox"/>		
Status-Flags	R	<input checked="" type="checkbox"/>		
Reliability	R	<input checked="" type="checkbox"/>		
Out-Of-Service	R	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Property-List	R	<input checked="" type="checkbox"/>		

1.1.5.4. Alarm and Event Management

1.1.5.5. Trending and Logging

1.1.5.6. Application

Loop (LP = 12)

Standard Property	CC	R	W	Range Restriction
Object-Identifier	R	<input checked="" type="checkbox"/>		
Object-Name	R	<input checked="" type="checkbox"/>		
Object-Type	R	<input checked="" type="checkbox"/>		
Present-Value	R	<input checked="" type="checkbox"/>		
Description	O	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Status-Flags	R	<input checked="" type="checkbox"/>		
Event-State	R	<input checked="" type="checkbox"/>		
Reliability	O	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Out-Of-Service	R	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Output-Units	R	<input checked="" type="checkbox"/>		
Manipulated-Variable-Reference	R	<input checked="" type="checkbox"/>		
Controlled-Variable-Reference	R	<input checked="" type="checkbox"/>		
Controlled-Variable-Value	R	<input checked="" type="checkbox"/>		
Controlled-Variable-Units	R	<input checked="" type="checkbox"/>		
Setpoint-Reference	R	<input checked="" type="checkbox"/>		
Setpoint	R	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	(W, if no Setpoint-Ref)
Action	R	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Proportional-Constant	O1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Proportional-Constant-Units	O1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Integral-Constant	O2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Integral-Constant-Units	O2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Derivative-Constant	O3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Derivative-Constant-Units	O3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Bias	O	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Priority-For-Writing	R	<input checked="" type="checkbox"/>		
Property-List	R	<input checked="" type="checkbox"/>		

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.

There are no proprietary object types.

1.1.6. Data Link Layer Options

MS/TP master (Clause 9), baud rate(s): 9k6, 19k2, 38k4, 57k6, 76k8, 115k2 bit/s

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: ____

1.1.9. Network Security Options:

Non-secure Device

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

1.1.11. Communication Gateway

In conjunction with the extension interface SLC/RS-485 SAUTER ecoLink and SAUTER ecoUnit modules can expand the I/O range of the controller.

The room controller ecos311 supports SLC/RS-485 devices on a sub-network.



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