



**SAUTER BACnet PICS
EY-modulo 5 moduWeb500
BACnet Protocol Implementation
Conformance Statement**

D100101873 - 04

Note:

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

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Sauter Operator Workstation

1 Sauter Operator Workstation

1.1. SAUTER EY-modulo 5 Automation Stations

Date	February 2015
Vendor Name	Fr. Sauter AG (Vendor ID: 80)
Product Name	moduWeb Vision
Product Model Number	moduWeb500 : EY-WS500F005:
Applications Software Version	2 (Firmware Index) 2.4 (Visualization Index)
Firmware Revision	1.5.1
BACnet Protocol Revision	Version 1, Revision 12

1.1.1. Product Description

moduWeb500 is an operator workstation with a built in web server that allows to monitor and operate the controllers of a BACnet network.

The operator accesses moduWeb Vision with a standard web browser.

moduWeb Vision presents the BACnet objects and their properties either as a structured list or in dynamic images. The project structure is configured on behalf of structured view objects.

Alarms and faults are displayed in alarm lists, and may be forwarded to email and SMS recipients.

moduWeb Vision wraps the BACnet schedule and calendar objects of the attached devices into an intuitive user interface, so that they can be configured by an end user without specific BACnet knowledge.

moduWeb Vision can handle BACnet Trend Log objects, allowing to visualize their data in charts and lists. A sophisticated archiving system allows rapid access to historical data.

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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 DS-RPM-A, -B DS-WP-A DS-WPM-A DS-M-A DS-V-A DS-COV-A DS-COVP-A	AE-N-A AE-ACK-A AE-AS-A AE-VM-A AE-VN-A (AE-INFO-A)	SCHED-VM-A (SCHED-A) ¹⁾	T-V-A ²⁾ T-AVM-A ²⁾ T-ATR-A ²⁾	DM-DDB-A, -B DM-MTS-A DM-RD-A DM-R-A DM-TS-A, -B DM-UTC-A, -B DM-LM-A DM-OCD-A DM-BR-B ³⁾

BIBBs in brackets () are deprecated.

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

2) Only Trend Log Object is supported and, only for this object, T-V-A, T-ATR-A and T-AVM-A interoperability is available.

3) with CASE Suite

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1.1.4. Segmentation Capability

- Able to transmit segmented messages Window Size: 0-16
- Able to receive segmented messages Window Size: 0-16

1.1.5. Object Types

The standard object types "Device" and "File" are 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)	<input checked="" type="checkbox"/>	-		
File	(10)	<input checked="" type="checkbox"/>	-		

All listed standard object types below are supported by addressing the object properties of other BACnet devices. Creation and deletion of some objects on other devices and some BACnet services are supported by moduWeb Vision 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)	<input type="checkbox"/>	<input type="checkbox"/>	
Analog Input	(0)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	All
Analog Output	(1)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	All
Analog Value	(2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	All
Averaging	(18)	<input type="checkbox"/>	<input type="checkbox"/>	
Binary Input	(3)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	All
Binary Output	(4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	All
Binary Value	(5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	All
Calendar	(6)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	All
Command	(7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	All
Device	(8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	All

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Object Type (Enum)	Supported	OC / OD	Addressable Properties
Event Enrollment (9)	<input type="checkbox"/>	<input type="checkbox"/>	
Event Log (25)	<input type="checkbox"/>	<input type="checkbox"/>	
File (10)	<input type="checkbox"/>	<input type="checkbox"/>	
Group (11)	<input type="checkbox"/>	<input type="checkbox"/>	
Life Safety Point (21)	<input type="checkbox"/>	<input type="checkbox"/>	
Life Safety Zone (22)	<input type="checkbox"/>	<input type="checkbox"/>	
Load Control (28)	<input type="checkbox"/>	<input type="checkbox"/>	
Loop (12)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	All
Multi-State Input (13)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	All
Multi-State Output (14)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	All
Multi-State Value (19)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	All
Notification Class (15)	<input type="checkbox"/>	<input type="checkbox"/>	
Program (16)	<input type="checkbox"/>	<input type="checkbox"/>	
Pulse Converter (24)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	All
Schedule (17)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	All
Trend Log (20)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	All
Trend Log Multiple (27)	<input type="checkbox"/>	<input type="checkbox"/>	

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"/>	<input checked="" type="checkbox"/>	(up to 128 characters)
Description	O	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	(up to 128 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"/>		

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Standard Property	CC	R	W	Range Restriction
Object-List	R	<input checked="" type="checkbox"/>		
Structured-Object-List	O	-	-	
Max-APDU-Length-Accepted	R	<input checked="" type="checkbox"/>		
Segmentation-Supported	R	<input checked="" type="checkbox"/>		
Max-Segments-Accepted	O1	<input checked="" type="checkbox"/>		
VT-Classes-Supported	O2	-		
Active-VT-Sessions	O2	-		
Local-Time	O3,4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	(time sync service)
Local-Date	O3,4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	(time sync service)
UTC-Offset	O4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	-780..780 (configurable)
Daylight-Savings-Status	O4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	(automatic DST)
APDU-Segment-Timeout	O1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
APDU-Timeout	R	<input checked="" type="checkbox"/>		
Number-Of-APDU-Retries	R	<input checked="" type="checkbox"/>		
Time-Synchronization-Recipients	O5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	(up to 32 recipients)
Max-Master	O6	-		
Max-Info-Frames	O6	-		
Device-Address-Binding	R	<input checked="" type="checkbox"/>		(up to 100 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"/>	
Slave-Proxy-Enable	O10	-		
Manual-Slave-Address-Binding	O10	-		
Auto-Slave-Discovery	O11	-		
Slave-Address-Binding	O12	-		
Last-Restart-Reason	O13	<input checked="" type="checkbox"/>		
Time-Of-Device-Restart	O13	<input checked="" type="checkbox"/>		
Restart-Notification-Recipients	O13	<input checked="" type="checkbox"/>		(up to 32 recipients)
UTC-Time-Synchronization-Recipients	O5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	(up to 32 recipients)
Time-Synchronization-Interval	O14	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Align-Intervals	O14	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Interval-Offset	O14	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Profile-Name	O	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Proprietary Properties	Enum	R	W	Property Datatype Range Restriction
MAC-Address	8207	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
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"/>	
sauter_visualization_index	8356	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Sauter_software_product	8357	<input checked="" type="checkbox"/>	<input type="checkbox"/>	

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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"/>		
File-Type	R	<input checked="" type="checkbox"/>		
File-Size	R1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0 (delete)
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"/>		
Record-Count	O2	<input type="checkbox"/>		
Profile-Name	O	<input type="checkbox"/>	<input type="checkbox"/>	

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

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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
 - BBMB support network address translation (NAT) 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:

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