



**SAUTER BACnet PICS**  
**ASV2x5B – VAV-Compact Controller**  
**BACnet Protocol Implementation Conformance Statement**

D100506990 - 01

Note:

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

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## 1 BACnet Application Specific Controller (B-ASC)

### 1.1. SAUTER ASV2x5B – VAV compact controller

Date	July 2022
Vendor Name	Fr. Sauter AG (Vendor ID: 80)
Product Name	VAV Kompaktregler BACnet MS/TP
Product Model Number	ASV205BF132E ASV215BF132E ASV215BF152D ASV215BF152E
Applications Software Version	2.2
Firmware Revision	V1.4.2b69
BACnet Protocol Revision	Version 1, Revision 20

### 1.2. Product Description

The microprocessor-controlled controller provides variable and individual control of the air volume as a function of its setpoint. The controller has special functions for fast and stable control of critical applications in laboratory and pharmaceutical environments as well as in commercial applications with re-cooler and / or re-heater functionalities.

Based on the application field, damper running times between 3 sec. and 120 sec. can be selected based on the different model numbers.

All necessary information can be monitored by a BACnet MS/TP network. The application configuration is done by a dedicated software tool (CASE VAV).

1.3. 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)

1.4. BACnet Interoperability Building Blocks (Annex K)

Supports following BIBBs:

<b>Data Sharing</b>	<b>Alarm &amp; Event Management</b>	<b>Scheduling</b>	<b>Trending</b>	<b>Device &amp; Network Management</b>
DS-RP-B DS-RPM-B DS-WP-B DS-COV-B				DM-DDB-BDM- DOB-B DM-DCC-B DM-RD-B DM-BR-B

BIBBs in brackets () are deprecated.

### 1.4.1. Segmentation Capability

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

### 1.4.2. 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	Writable Properties (Additional)
Accumulator (23)	<input type="checkbox"/>	<input type="checkbox"/>	
Analog Input (0)	<input type="checkbox"/>	<input type="checkbox"/>	
Analog Output (1)	<input type="checkbox"/>	<input type="checkbox"/>	
Analog Value (2)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Averaging (18)	<input type="checkbox"/>	<input type="checkbox"/>	
Binary Input (3)	<input type="checkbox"/>	<input type="checkbox"/>	
Binary Output (4)	<input type="checkbox"/>	<input type="checkbox"/>	
Binary Value (5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Calendar (6)	<input type="checkbox"/>	<input type="checkbox"/>	
Command (7)	<input type="checkbox"/>	<input type="checkbox"/>	
Device (8)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Event Enrollment (9)	<input type="checkbox"/>	<input type="checkbox"/>	
Event Log (25)	<input type="checkbox"/>	<input type="checkbox"/>	
File (10)	<input checked="" 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"/>	
Multi-State Input (13)	<input type="checkbox"/>	<input type="checkbox"/>	
Multi-State Output (14)	<input type="checkbox"/>	<input type="checkbox"/>	
Multi-State Value (19)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Notification Class (15)	<input type="checkbox"/>	<input type="checkbox"/>	
Program (16)	<input type="checkbox"/>	<input type="checkbox"/>	
Pulse Converter (24)	<input type="checkbox"/>	<input type="checkbox"/>	
Schedule (17)	<input type="checkbox"/>	<input type="checkbox"/>	
Trend Log (20)	<input type="checkbox"/>	<input type="checkbox"/>	
Trend Log Multiple (27)	<input type="checkbox"/>	<input type="checkbox"/>	
..... (..)	<input type="checkbox"/>	<input type="checkbox"/>	
network-port (56)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
..... (..)	<input type="checkbox"/>	<input type="checkbox"/>	
audit-reporter (62)	<input type="checkbox"/>	<input type="checkbox"/>	

### 1.4.3. 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"/>		
Description	O	<input checked="" type="checkbox"/>		
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"/>		
APDU-Segment-Timeout	O	<input checked="" type="checkbox"/>		
APDU-Timeout	R	<input checked="" type="checkbox"/>		
Number-Of-APDU-Retries	R	<input checked="" type="checkbox"/>		
Max-Master	O	<input checked="" type="checkbox"/>		
Max-Info-Frames	O	<input checked="" type="checkbox"/>		
Device-Address-Binding	R	<input checked="" type="checkbox"/>		
Database-Revision	R	<input checked="" type="checkbox"/>		
Configuration-Files	O	<input checked="" type="checkbox"/>		
Last-Restore-Time	O	<input checked="" type="checkbox"/>		
Backup-Failure-Timeout	O	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Backup-Preparation-Time	O	<input checked="" type="checkbox"/>		
Restore-Preparation-Time	O	<input checked="" type="checkbox"/>		
Restore-Completion-Time	O	<input checked="" type="checkbox"/>		
Backup-And-Restore-State	O	<input checked="" type="checkbox"/>		
Active-COV-Subscriptions	O	<input checked="" type="checkbox"/>		
Serial-Number	O	<input checked="" type="checkbox"/>		
Property-List	O	<input checked="" type="checkbox"/>		

**Network Port (NP = 56)**

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"/>		
Status_Flags	R	<input checked="" type="checkbox"/>		
Reliability	R	<input checked="" type="checkbox"/>		
Out_Of_Service	R	<input checked="" type="checkbox"/>		
Network_Type	R	<input checked="" type="checkbox"/>		
Protocol_Level	R	<input checked="" type="checkbox"/>		
Network_Number	R	<input checked="" type="checkbox"/>		
Network_Number_Quality	R	<input checked="" type="checkbox"/>		
Changes_Pending	R	<input checked="" type="checkbox"/>		
MAC_Address	R	<input checked="" type="checkbox"/>		
APDU_Length	R	<input checked="" type="checkbox"/>		
Link_Speed	R	<input checked="" type="checkbox"/>		
Max_Master	O	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Max_Info_Frames	O	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Property_List	R	<input checked="" 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"/>		
File-Type	R	<input checked="" type="checkbox"/>		
File-Size	R	<input checked="" 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	O	<input checked="" type="checkbox"/>		

1.4.4. 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	R	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	(CMD enabled)
Description	O	<input checked="" type="checkbox"/>		
Status-Flags	R	<input checked="" type="checkbox"/>		
Event-State	R	<input checked="" type="checkbox"/>		



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Standard Property	CC	R	W	Range Restriction
Out-Of-Service	R	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Units	R	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Priority-Array	O	<input checked="" type="checkbox"/>		
Relinquish-Default	O	<input checked="" type="checkbox"/>		
COV-Increment	O	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Min-Pres-Value	O	<input checked="" type="checkbox"/>		
Max-Pres-Value	O	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
Property-List	R	<input checked="" 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	R	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	(CMD enabled)
Description	O	<input checked="" 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	O	<input checked="" type="checkbox"/>		
Relinquish-Default	O	<input checked="" 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	R	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1..6 (CMD enabled)
Description	O	<input checked="" 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	O	<input checked="" type="checkbox"/>		
Relinquish-Default	O	<input checked="" type="checkbox"/>		
Property-List	R	<input checked="" type="checkbox"/>		

**1.4.5. Scheduling**

Not supported

**1.4.6. Alarm and Event Management**

Not supported

#### 1.4.7. Trending and Logging

Not supported

#### 1.4.8. 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"/>		
Status-Flags	R	<input checked="" type="checkbox"/>		
Event-State	R	<input checked="" type="checkbox"/>		
Reliability	O	<input checked="" 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"/>		
Action	R	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Proportional-Constant	O	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Proportional-Constant-Units	O	<input checked="" type="checkbox"/>		
Integral-Constant	O	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Integral-Constant-Units	O	<input checked="" type="checkbox"/>		
Derivative-Constant	O	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Derivative-Constant-Units	O	<input checked="" 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"/>		

#### 1.4.9. Proprietary Objects

There are no proprietary object types.

#### 1.5. Data Link Layer Options

- BACnet IP (Annex J)
- BACnet IP (Annex J), Foreign Device
- ISO 8802-3, Ethernet (Clause 7)

- ANSI/ATA 878.1, 2.5 Mb. ARCNET (Clause 8)
- ANSI/ATA 878.1, RS-485 ARCNET (Clause 8), baud rate(s): \_\_\_\_
- MS/TP master (Clause 9), baud rate(s): 9600, 19200,38400, 57600, 76800,115200 \_\_\_\_
- MS/TP slave (Clause 9), baud rate(s):  Point-To-Point, EIA-232 (Clause 10), baud rate(s): \_\_\_\_
- Point-To-Point, modem (Clause 10), baud rate(s): \_\_\_\_
- LonTalk, (Clause 11), medium: \_\_\_\_
- BACnet/ZigBee (Annex O)
- Other: \_\_\_\_

#### 1.6. Device Address Binding

Static device binding is supported:  Yes  No

### 1.7. 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

### 1.8. 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)

### 1.9. 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 X 0208