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CVR 10643597



## OJ-Air2 BACnet PICS 4.04

### BACnet Protocol Implementation Conformance Statement

**Date:** 19-07-2017

**Vendor Name:** OJ Electronics A/S (Vendor Identifier 368)

**Product Name:** OJ-Air2

**Product Model Number:** OJ-Air2Master

**Application Software Version:** 1.2 **Firmware Revision:** 1.2 **BACnet Protocol Revision:** 12

#### **Product Description:**

The BACnet driver enables BACnet control and supervision of a complete Air Handling Unit (AHU), which have an embedded OJ-Air2Master controller. The BACnet driver is embedded in the OJ-Air2Master with software version 4.02 or higher.

#### **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)

**List all BACnet Interoperability Building Blocks Supported (Annex K):**

**Data sharing**

DS-RP-B      Data Sharing-Read Property-B  
*DS-RPM-B      Data Sharing-Read Property Multiple-B*  
DS-WP-B      Data Sharing-Write Property-B  
*DS-WPM-B      Data Sharing-Write Property Multiple-B*  
*DS-COV-B      Data Sharing-COV-B*

**Alarm&Event Management**

*AE-N-I-B      Alarm&Event-Notification Internal-B*  
*AE-ACK-B      Alarm&Event Acknowledge Alarm-B*  
*AE-INFO-B      Alarm&Event Information-B*  
*AE-ASUM-B      Alarm&Event-Alarm Summary-B*  
*AE-ESUM-B      Alarm&Event-Enrollment Summary-B*

**Scheduling**

*SCHED-I-B      Scheduling-Internal-B*

**Device Management**

*DM-DDB-A      Device Management-Dynamic Device Binding-A*  
*DM-DDB-B      Device Management-Dynamic Device Binding-B*  
*DM-DOB-B      Device Management-Dynamic Object Binding-B*  
*DM-DCC-B      Device Management-Dynamic Communication Control-B*  
*DM-TS-B      Device Management-TimeSynchronization-B*  
*DM-UTC-B      Device Management-UTC Time Synchronization-B*  
*DM-RD-B      Device Management-Reinitialize Device-B*  
*DM-R-B      Device Management-Restart-B*  
*DM-LM-B      Device Management- List Manipulation-B*

**Segmentation Capability:**

Able to transmit segmented messages      Window Size   32    
 Able to receive segmented messages      Window Size   32

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### **Standard Object Types Supported:**

The CreateObject service is not supported.  
The DeleteObject service is not supported.  
Writable properties are listed in **bold**.

### **Device objects**

Object\_Identifier

Object\_Name

Object\_Type

**Description**

**Location**

Vendor\_Name

Vendor\_Identifier

Model\_Name

Firmware\_Revision

Application\_Software\_Version

Protocol\_Version

Protocol\_Revision

Protocol\_Services\_Supported

Protocol\_Object\_Types\_Supported

Local\_Time

Local\_Date

UTC\_Offset

Daylight\_Savings\_Status

System\_Status

Database\_Revision

Device\_Address\_Binding

Active\_COV\_Supscriptions

Last\_Restart\_Reason

Time\_Of\_Device\_Restart

Object\_List

**Restart\_Notification\_Recipients**

Max\_APDU\_Length\_Accepted

Segmentation\_Supported

Max\_Segments\_Supported

APDU\_Segment\_Timeout

APDU\_Timeout

Number\_Of\_APDU\_Retries

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### **Analog Input Objects**

Object\_Identifier  
Object\_Name  
Object\_Type  
Present\_Value

#### **Description**

Status\_Flags  
Event\_State  
Reliability

#### **Out\_Of\_Service**

Units  
Min\_Pres\_Value  
Max\_Pres\_Value  
**COV\_Increment**

### **Analog Value Objects**

Object\_Identifier  
Object\_Name  
Object\_Type

#### **Present\_Value**

#### **Description**

Status\_Flags  
Event\_State  
Reliability

#### **Out\_Of\_Service**

Units  
**COV\_Increment**

### **Binary Input Objects**

Object\_Identifier  
Object\_Name  
Object\_Type

#### **Description**

Present\_Value  
Status\_Flags  
Event\_State  
Reliability

#### **Out\_Of\_Service**

**Polarity**

### Binary Input Objects with alarming and event reporting

Object_Identifier	(instance number: 34, 37, 38, 39, 40, 41, 51, 60, 79, 80, 81, 82, 83, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 110, 111, 135, 136, 153, 154, 155, 156, 157, 158,159, 160,161, 162,163, 164,165,166,167,168,169,170,171, 172,182,183,184,185, 186, 187,188, 189,190, 191, 192, 193, 194, 195, 196, 197, 198, 201, 202, 203, 204, 205, 209, 220, 222, 223, 224,299, 230, 231, 232, 233, 234, 235, 236, 240, 241, 242, 243, 244, 246, 247)
Object_Name	
Object_Type	
<b>Description</b>	
Notification Class	
<b>Time Delay</b>	
<b>Notify Type</b>	(Value list: [ID:Alarm;Value=0] and [ID:Event;Value=1])
<b>Event enable</b>	(Checkbox list: Off-Normal; Fault; Normal)
Present_Value	
Status_Flags	
Reliability	
<b>Out_Of_Service</b>	
Event_State	
Event time stamps	(For: Off-Normal; Fault; Normal)
Acked Transitions	(Show checked box for Off-Normal; Fault; Normal)
<b>Alarm Value</b>	(Value list: [ID=0; Description=Inactive]; [ID=1; Description=Active])
<b>Polarity</b>	

### Binary Value Objects

Object_Identifier
Object_Name
Object_Type
<b>Description</b>
<b>Present_Value</b>
Status_Flags
Reliability
<b>Out_Of_Service</b>
Event_State

### Binary Value Objects with alarming and event reporting

Object_Identifier	(instance number:0)
Object_Name	
Object_Type	

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### **Description**

Notification Class

#### **Time Delay**

#### **Notify Type**

(Value list: [ID:Alarm;Value=0] and [ID:Event;Value=1])

#### **Event enable**

(Checkbox list: Off-Normal; Fault; Normal)

#### **Present\_Value**

Status\_Flags

Reliability

#### **Out\_Of\_Service**

Event\_State

Event time stamps (For: Off-Normal; Fault; Normal)

Acked Transitions (Show checked box for Off-Normal; Fault; Normal)

#### **Alarm Value**

(Value list: [ID=0; Description=Inactive]; [ID=1; Description=Active])

### **Calendar Object**

*Object\_Identifier*

*Object\_Name*

*Object\_Type*

*Present\_Value*

#### **Description**

**Date\_List** (max 10 entries, valid range 1.1.2000 to 31.12.2099)

### **Schedule Object**

Object\_Identifier

Object\_Name

Object\_Type

Present\_Value

#### **Description**

#### **Effective\_Period**

#### **Weekly\_Schedule**

**Exception Schedule** (Max. 3 entries)

#### **Schedule\_Default**

List\_Of\_Object\_Property\_References

#### **Priority\_For\_Writing**

Status\_Flags

Reliability

Out\_Of\_Service

### **Notification Class**

Object\_Identifier

Object\_Name

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Object\_Type  
Description  
Notification\_Class  
**Priority**  
**Ack\_Required**  
**Recipient\_List**

An object type is supported if it may be present in the device. For each standard Object Type supported provide the following data:

- 1) Whether objects of this type are dynamically creatable using the CreateObject service
- 2) Whether objects of this type are dynamically deletable using the DeleteObject service
- 3) List of the optional properties supported
- 4) List of all properties that are writable where not otherwise required by this standard
- 5) List of all properties that are conditionally writable where not otherwise required by this standard
- 6) List of proprietary properties and for each its property identifier, datatype, and meaning
- 7) List of any property range restrictions

#### Data Link Layer Options:

- BACnet IP, (Annex J)
- BACnet IP, (Annex J), Foreign Device
- ISO 8802-3, Ethernet (Clause 7)
- ATA 878.1, 2.5 Mb. ARCNET (Clause 8)
- ATA 878.1, EIA-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: \_\_\_\_\_

#### Device Address Binding:

Is static device binding supported? (This is currently necessary for two-way communication with MS/TP slaves and certain other devices.)  Yes  No

#### Networking Options:

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- Router, Clause 6 - List all routing configurations, e.g., ARCNET-Ethernet, Ethernet-MS/TP, etc.
- Annex H, BACnet Tunneling Router over IP
- BACnet/IP Broadcast Management Device (BBMD)
  - Does the BBMD support registrations by Foreign Devices  Yes  No
  - Does the BBMD support network address translation  Yes  No

**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)

**Character Sets Supported:**

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

- ANSIX3.4
- ISO 10646 (UTF-8)
- IBM™/Microsoft™ DBCS
- ISO 8859-1
- ISO 10646 (UCS-2)
- ISO 10646 (UCS-4)
- JIS X 0208

**If this product is a communication gateway, describe the types of non-BACnet equipment/networks(s) that the gateway supports:**

Not applicable