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BACNET PROTOCOL IMPLEMENTATION CONFORMANCE STATEMENT

CU

Produal

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BACnet protocol implementation conformance statement

Date	22.11.2018
Vendor name	Produal Oy (Vendor ID: 783)
Product name	Produal Proxima CU
Product model number	CU
Application software version	N/A
Firmware version	1.2
Product description	HVAC controller
BACnet protocol revision	14

BACnet standardized device profile (Annex L)

BACnet Application Specific Controller (B-ASC)

Supported BACnet interoperability building blocks (Annex K)

- Data Sharing-ReadProperty (DS-RP-B)
- Data Sharing-WriteProperty (DS-WP-B)
- Data Sharing-ReadPropertyMultiple (DS-RPM-B)
- Data Sharing-WritePropertyMultiple (DS-WPM-B)
- Data Sharing-ChangeOfValue (DS-COV-B)
- Device Management-DynamicDeviceBindings (DM-DDB-B)
- Device Management-DynamicObjectBinding (DM-DOB-B)
- Device Management-DeviceCommunicationControl (DM-DCC-B)

Segmentation capability

- Segmentation requests are not supported.
- Segmentation responses are not supported.

Supported standard object types

Device object

Dynamically creatable using the CreateObject service?

- No

Dynamically deletable using the DeleteObject service?

- No

Supported optional properties

- Description
- Location

Writable properties that are not otherwise required by the standard

- N/A

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Conditionally writable properties that are not otherwise required by the standard

- N/A

Proprietary properties

- N/A

Property value range restrictions

- N/A

Binary input object

Dynamically creatable using the CreateObject service?

- No

Dynamically deletable using the DeleteObject service?

- No

Supported optional properties

- Description
- Inactive_Text
- Active_Text

Writable properties that are not otherwise required by the standard

- N/A

Conditionally writable properties that are not otherwise required by the standard

- N/A

Proprietary properties

- N/A

Property value range restrictions

- N/A

Binary value object

Dynamically creatable using the CreateObject service?

- No

Dynamically deletable using the DeleteObject service?

- No

Supported optional properties

- Description
- Inactive_Text
- Active_Text

Writable properties that are not otherwise required by the standard

- N/A

Conditionally writable properties that are not otherwise required by the standard

- N/A

Proprietary properties

- N/A

Property value range restrictions

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Object name	Values	Inactive/Active_Text	Default
Input 1 Contact	0 - 1	0. Off 1. On	0
Input 2 Contact	0 - 1	0. Off 1. On	0
Input 3 Contact	0 - 1	0. Off 1. On	0
Input 4 Contact	0 - 1	0. Off 1. On	0
Input 5 Contact	0 - 1	0. Off 1. On	0
Input 6 Contact	0 - 1	0. Off 1. On	0

Analog input object

Dynamically creatable using the CreateObject service?

- No

Dynamically deletable using the DeleteObject service?

- No

Supported optional properties

- Description
- Min_Pres_Value
- Max_Pres_Value
- COV_Increment

Writable properties that are not otherwise required by the standard

- N/A

Conditionally writable properties that are not otherwise required by the standard

- N/A

Proprietary properties

- N/A

Property value range restrictions

Present_value:

Object name	Values	Resolutic	Units
Input 1 Voltage	0...10	0,001	*volts (5)*
Input 1 Temperature	-50...100	0,1	*degrees-celsius (62)*
Input 1 Rh	0...100	0,01	*percent-relative-humidity (29)*
Input 1 CO2	0...10000	1,0	*parts-per-million (96)*
Input 1 Resistance	0...300000	30	*ohms (4)*
Input 1 Power	0...100	0,01	*percent (98)*
Input 2 Voltage	0...10	0,001	*volts (5)*
Input 2 Temperature	-50...100	0,1	*degrees-celsius (62)*
Input 2 Rh	0...100	0,01	*percent-relative-humidity (29)*

Object name	Values	Resolutic	Units
Input 2 CO2	0...10000	1,0	*parts-per-million (96)*
Input 2 Resistance	0...300000	30	*ohms (4)*
Input 2 Power	0...100	0,01	*percent (98)*
Input 3 Voltage	0...10	0,001	*volts (5)*
Input 3 Temperature	-50...100	0,1	*degrees-celsius (62)*
Input 3 Rh	0...100	0,01	*percent-relative-humidity (29)*
Input 3 CO2	0...10000	1,0	*parts-per-million (96)*
Input 3 Resistance	0...300000	30	*ohms (4)*
Input 3 Power	0...100	0,01	*percent (98)*
Input 4 Voltage	0...10	0,001	*volts (5)*
Input 4 Temperature	-50...100	0,1	*degrees-celsius (62)*
Input 4 Rh	0...100	0,01	*percent-relative-humidity (29)*
Input 4 CO2	0...10000	1,0	*parts-per-million (96)*
Input 4 Resistance	0...300000	30	*ohms (4)*
Input 4 Power	0...100	0,01	*percent (98)*
Input 5 Voltage	0...10	0,001	*volts (5)*
Input 5 Temperature	-50...100	0,1	*degrees-celsius (62)*
Input 5 Rh	0...100	0,01	*percent-relative-humidity (29)*
Input 5 CO2	0...10000	1,0	*parts-per-million (96)*
Input 5 Resistance	0...300000	30	*ohms (4)*
Input 5 Power	0...100	0,01	*percent (98)*
Input 6 Voltage	0...10	0,001	*volts (5)*
Input 6 Temperature	-50...100	0,1	*degrees-celsius (62)*
Input 6 Rh	0...100	0,01	*percent-relative-humidity (29)*
Input 6 CO2	0...10000	1,0	*parts-per-million (96)*
Input 6 Resistance	0...300000	30	*ohms (4)*
Input 6 Power	0...100	0,01	*percent (98)*
RU 1 Temperature	-50...100	0,1	*degrees-celsius (62)*
RU 1 RH	0...100	0,01	*percent-relative-humidity (29)*
RU 1 CO2	0...10000	1,0	*parts-per-million (96)*
RU 1 Power (Temp)	0...100	0,01	*percent (98)*
RU 1 Power (RH)	0...100	0,01	*percent (98)*
RU 1 Power (CO2)	0...100	0,01	*percent (98)*
RU 2 Temperature	-50...100	0,1	*degrees-celsius (62)*
RU 2 RH	0...100	1,0	*percent-relative-humidity (29)*
RU 2 CO2	0...10000	0,01	*parts-per-million (96)*
RU 2 Power (Temp)	0...100	0,01	*percent (98)*
RU 2 Power (RH)	0...100	0,01	*percent (98)*
RU 2 Power (CO2)	0...100	0,01	*percent (98)*

Analog value object

Dynamically creatable using the CreateObject service?

- No

Dynamically deletable using the DeleteObject service?

- No

Supported optional properties

- Description
- COV_Increment

Writable properties that are not otherwise required by the standard

- N/A

Conditionally writable properties that are not otherwise required by the standard

- N/A

Proprietary properties

- N/A

Property value range restrictions

Present_value:

Object name	Values	Resolut	Units	Default
RU 1 Current Setpoint Value	2...42	0,1	*degrees-celsius (62)*	21,0
RU 2 Current Setpoint Value	2...42	0,1	*degrees-celsius (62)*	21,0
Controller 1 Current Setpoint Value	2...32	0,1	*degrees-celsius (62)*	22,0
Controller 2 Current Setpoint Value	2...32	0,1	*degrees-celsius (62)*	22,0
Output 1 Voltage	0...10	0,001	*volts (5)*	0
Output 1 6-way Valve	0...10	0,001	*volts (5)*	0
Output 1 Fan	0...10	0,001	*volts (5)*	0
Output 1 Power	0...100	0,01	*percent (98)*	0
Output 2 Voltage	0...10	0,001	*volts (5)*	0
Output 2 6-way Valve	0...10	0,001	*volts (5)*	0
Output 2 Fan	0...10	0,001	*volts (5)*	0
Output 2 Power	0...100	0,01	*percent (98)*	0
Output 3 Voltage	0...10	0,001	*volts (5)*	0
Output 3 6-way Valve	0...10	0,001	*volts (5)*	0
Output 3 Fan	0...10	0,001	*volts (5)*	0
Output 3 Power	0...100	0,01	*percent (98)*	0
Output 4 Voltage	0...10	0,001	*volts (5)*	0
Output 4 6-way Valve	0...10	0,001	*volts (5)*	0
Output 4 Fan	0...10	0,001	*volts (5)*	0
Output 4 Power	0...100	0,01	*percent (98)*	0
Output 5 Voltage	0...10	0,001	*volts (5)*	0
Output 5 6-way Valve	0...10	0,001	*volts (5)*	0
Output 5 Fan	0...10	0,001	*volts (5)*	0
Output 5 Power	0...100	0,01	*percent (98)*	0
Output 5 Current	0...20	0,001	*milliamperes (2)*	0
Output 6 Voltage	0...10	0,001	*volts (5)*	0
Output 6 6-way Valve	0...10	0,001	*volts (5)*	0

Object name	Values	Resolut	Units	Default
Output 6 Fan	0...10	0,001	*volts (5)*	0
Output 6 Power	0...100	0,01	*percent (98)*	0
Output 6 Current	0...20	0,001	*milliamperes (2)*	0

Multi state input object

Dynamically creatable using the CreateObject service?

- No

Dynamically deletable using the DeleteObject service?

- No

Supported optional properties

- Description
- State_Text

Writable properties that are not otherwise required by the standard

- N/A

Conditionally writable properties that are not otherwise required by the standard

- N/A

Proprietary properties

- N/A

Property value range restrictions

Present_value:

Object name	Values	State text	Default
RU 1 Fan Speed	1 - 2 - 3 - 4 - 5	1. Fan Speed 0 2. Fan Speed 1 3. Fan Speed 2 4. Fan Speed 3 5. Fan Speed Auto	1
RU 2 Fan Speed	1 - 2 - 3 - 4 - 5	1. Fan Speed 0 2. Fan Speed 1 3. Fan Speed 2 4. Fan Speed 3 5. Fan Speed Auto	1

Multi state value object

Dynamically creatable using the CreateObject service?

- No

Dynamically deletable using the DeleteObject service?

- No

Supported optional properties

- Description
- State_Text

Writable properties that are not otherwise required by the standard

- N/A

Conditionally writable properties that are not otherwise required by the standard

- N/A

Proprietary properties

- N/A

Property value range restrictions

Present_value:

Object name	Values	State text	Default
RU 1 Operating Mode	1 - 2 - 3 - 4	1. Mode 0 2. Mode 1 3. Mode 2 4. Mode 3	1
RU 2 Operating Mode	1 - 2 - 3 - 4	1. Mode 0 2. Mode 1 3. Mode 2 4. Mode 3	1
Output 1 Fan Control	1 - 2 - 3 - 4 - 5 - 6 - 7 - 8	1. Fan Speed 0 2. Fan Speed 1 3. Fan Speed 2 4. Fan Speed 3 5. Fan Speed AUTO 6. Fan Speed AUTO EC 7. Fan Speed AUTO RU1 8. Fan Speed AUTO RU2	1
Output 2 Fan Control	1 - 2 - 3 - 4 - 5 - 6 - 7 - 8	1. Fan Speed 0 2. Fan Speed 1 3. Fan Speed 2 4. Fan Speed 3 5. Fan Speed AUTO 6. Fan Speed AUTO EC 7. Fan Speed AUTO RU1 8. Fan Speed AUTO RU2	1
Output 3 Fan Control	1 - 2 - 3 - 4 - 5 - 6 - 7 - 8	1. Fan Speed 0 2. Fan Speed 1 3. Fan Speed 2 4. Fan Speed 3 5. Fan Speed AUTO 6. Fan Speed AUTO EC 7. Fan Speed AUTO RU1 8. Fan Speed AUTO RU2	1
Output 4 Fan Control	1 - 2 - 3 - 4 - 5 - 6 - 7 - 8	1. Fan Speed 0 2. Fan Speed 1 3. Fan Speed 2 4. Fan Speed 3 5. Fan Speed AUTO 6. Fan Speed AUTO EC 7. Fan Speed AUTO RU1 8. Fan Speed AUTO RU2	1

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Object name	Values	State text	Default
Output 5 Fan Control	1 - 2 - 3 - 4 - 5 - 6 - 7 - 8	1. Fan Speed 0 2. Fan Speed 1 3. Fan Speed 2 4. Fan Speed 3 5. Fan Speed AUTO 6. Fan Speed AUTO EC 7. Fan Speed AUTO RU1 8. Fan Speed AUTO RU2	1
Output 6 Fan Control	1 - 2 - 3 - 4 - 5 - 6 - 7 - 8	1. Fan Speed 0 2. Fan Speed 1 3. Fan Speed 2 4. Fan Speed 3 5. Fan Speed AUTO 6. Fan Speed AUTO EC 7. Fan Speed AUTO RU1 8. Fan Speed AUTO RU2	1
Controller 1 Active Mode	1 - 2 - 3	1. Mode 0 2. Mode 1 3. Mode 2	1
Controller 2 Active Mode	1 - 2 - 3	1. Mode 0 2. Mode 1 3. Mode 2	1
Output 1 Fan Step	1 - 2 - 3 - 4	1. Fan Speed 0 2. Fan Speed 1 3. Fan Speed 2 4. Fan Speed 3	1
Output 2 Fan Step	1 - 2 - 3 - 4	1. Fan Speed 0 2. Fan Speed 1 3. Fan Speed 2 4. Fan Speed 3	1
Output 3 Fan Step	1 - 2 - 3 - 4	1. Fan Speed 0 2. Fan Speed 1 3. Fan Speed 2 4. Fan Speed 3	1
Output 4 Fan Step	1 - 2 - 3 - 4	1. Fan Speed 0 2. Fan Speed 1 3. Fan Speed 2 4. Fan Speed 3	1
Output 5 Fan Step	1 - 2 - 3 - 4	1. Fan Speed 0 2. Fan Speed 1 3. Fan Speed 2 4. Fan Speed 3	1
Output 6 Fan Step	1 - 2 - 3 - 4	1. Fan Speed 0 2. Fan Speed 1 3. Fan Speed 2 4. Fan Speed 3	1

Data link layer options

- BACnet IP, (Annex J)

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- MS/TP master (Clause 9), baud rates: 9600/19200/38400/57600/76800/115200 bps

Device address binding

Is static device binding supported?

- No

Networking options

- N/A

Character sets supported

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

- ISO 10646 (UTF-8)

Network security options

- Non-secure device - is capable of operating without BACnet Network security.

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