

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

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

Object name	Values	Inactive/Active_Text	Default
<i>Input 1 Contact</i>	0 - 1	0. Off 1. On	0
<i>Input 2 Contact</i>	0 - 1	0. Off 1. On	0
<i>Input 3 Contact</i>	0 - 1	0. Off 1. On	0
<i>Input 4 Contact</i>	0 - 1	0. Off 1. On	0
<i>Input 5 Contact</i>	0 - 1	0. Off 1. On	0
<i>Input 6 Contact</i>	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	Resolutio	Units
<i>Input 1 Voltage</i>	0...10	0,001	<i>volts (5)</i>
<i>Input 1 Temperature</i>	-50...100	0,1	<i>degrees-celsius (62)</i>
<i>Input 1 Rh</i>	0...100	0,01	<i>percent-relative-humidity (29)</i>
<i>Input 1 CO2</i>	0...10000	1,0	<i>parts-per-million (96)</i>
<i>Input 1 Resistance</i>	0...300000	30	<i>ohms (4)</i>
<i>Input 1 Power</i>	0...100	0,01	<i>percent (98)</i>
<i>Input 2 Voltage</i>	0...10	0,001	<i>volts (5)</i>
<i>Input 2 Temperature</i>	-50...100	0,1	<i>degrees-celsius (62)</i>
<i>Input 2 Rh</i>	0...100	0,01	<i>percent-relative-humidity (29)</i>

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

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
<i>RU 1 Current Setpoint Value</i>	2...42	0,1	<i>degrees-celsius (62)</i>	21,0
<i>RU 2 Current Setpoint Value</i>	2...42	0,1	<i>degrees-celsius (62)</i>	21,0
<i>Controller 1 Current Setpoint Value</i>	2...32	0,1	<i>degrees-celsius (62)</i>	22,0
<i>Controller 2 Current Setpoint Value</i>	2...32	0,1	<i>degrees-celsius (62)</i>	22,0
<i>Output 1 Voltage</i>	0...10	0,001	<i>volts (5)</i>	0
<i>Output 1 6-way Valve</i>	0...10	0,001	<i>volts (5)</i>	0
<i>Output 1 Fan</i>	0...10	0,001	<i>volts (5)</i>	0
<i>Output 1 Power</i>	0...100	0,01	<i>percent (98)</i>	0
<i>Output 2 Voltage</i>	0...10	0,001	<i>volts (5)</i>	0
<i>Output 2 6-way Valve</i>	0...10	0,001	<i>volts (5)</i>	0
<i>Output 2 Fan</i>	0...10	0,001	<i>volts (5)</i>	0
<i>Output 2 Power</i>	0...100	0,01	<i>percent (98)</i>	0
<i>Output 3 Voltage</i>	0...10	0,001	<i>volts (5)</i>	0
<i>Output 3 6-way Valve</i>	0...10	0,001	<i>volts (5)</i>	0
<i>Output 3 Fan</i>	0...10	0,001	<i>volts (5)</i>	0
<i>Output 3 Power</i>	0...100	0,01	<i>percent (98)</i>	0
<i>Output 4 Voltage</i>	0...10	0,001	<i>volts (5)</i>	0
<i>Output 4 6-way Valve</i>	0...10	0,001	<i>volts (5)</i>	0
<i>Output 4 Fan</i>	0...10	0,001	<i>volts (5)</i>	0
<i>Output 4 Power</i>	0...100	0,01	<i>percent (98)</i>	0
<i>Output 5 Voltage</i>	0...10	0,001	<i>volts (5)</i>	0
<i>Output 5 6-way Valve</i>	0...10	0,001	<i>volts (5)</i>	0
<i>Output 5 Fan</i>	0...10	0,001	<i>volts (5)</i>	0
<i>Output 5 Power</i>	0...100	0,01	<i>percent (98)</i>	0
<i>Output 5 Current</i>	0...20	0,001	<i>milliamperes (2)</i>	0
<i>Output 6 Voltage</i>	0...10	0,001	<i>volts (5)</i>	0
<i>Output 6 6-way Valve</i>	0...10	0,001	<i>volts (5)</i>	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
<i>RU 1 Operating Mode</i>	1 - 2 - 3 - 4	1. Mode 0 2. Mode 1 3. Mode 2 4. Mode 3	1
<i>RU 2 Operating Mode</i>	1 - 2 - 3 - 4	1. Mode 0 2. Mode 1 3. Mode 2 4. Mode 3	1
<i>Output 1 Fan Control</i>	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
<i>Output 2 Fan Control</i>	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
<i>Output 3 Fan Control</i>	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
<i>Output 4 Fan Control</i>	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

Object name	Values	State text	Default
<i>Output 5 Fan Control</i>	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
<i>Output 6 Fan Control</i>	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
<i>Controller 1 Active Mode</i>	1 - 2 - 3	1. Mode 0 2. Mode 1 3. Mode 2	1
<i>Controller 2 Active Mode</i>	1 - 2 - 3	1. Mode 0 2. Mode 1 3. Mode 2	1
<i>Output 1 Fan Step</i>	1 - 2 - 3 - 4	1. Fan Speed 0 2. Fan Speed 1 3. Fan Speed 2 4. Fan Speed 3	1
<i>Output 2 Fan Step</i>	1 - 2 - 3 - 4	1. Fan Speed 0 2. Fan Speed 1 3. Fan Speed 2 4. Fan Speed 3	1
<i>Output 3 Fan Step</i>	1 - 2 - 3 - 4	1. Fan Speed 0 2. Fan Speed 1 3. Fan Speed 2 4. Fan Speed 3	1
<i>Output 4 Fan Step</i>	1 - 2 - 3 - 4	1. Fan Speed 0 2. Fan Speed 1 3. Fan Speed 2 4. Fan Speed 3	1
<i>Output 5 Fan Step</i>	1 - 2 - 3 - 4	1. Fan Speed 0 2. Fan Speed 1 3. Fan Speed 2 4. Fan Speed 3	1
<i>Output 6 Fan Step</i>	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)

- 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.