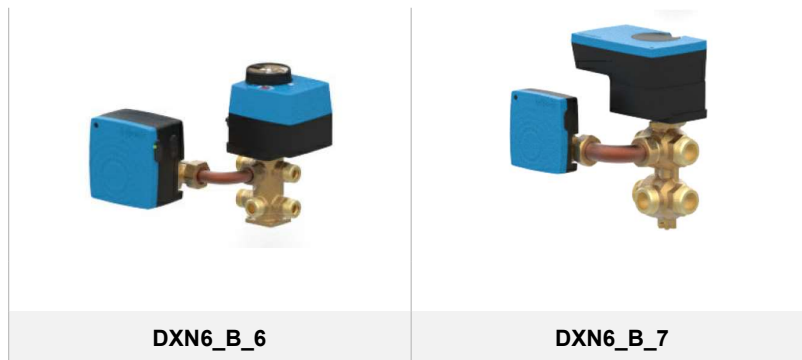




BACnet Protocol Implementation Conformance Statement (PICS) DXN6_B



Contents

| | | |
|--------|--|----|
| 1 | Introduction | 3 |
| 2 | DXN6 electronic pressure independent 6-port valve | 3 |
| 2.1 | Product model number | 3 |
| 2.2. | BACnet Standardized device profile (Annex L)..... | 3 |
| 2.3. | Supported BACnet interoperability building blocks (Annex K)..... | 3 |
| 2.4. | Supported Object types and Objects | 4 |
| 2.4.1. | Binary input | 4 |
| 2.4.2. | Binary value | 5 |
| 2.4.3. | Analog input | 6 |
| 2.4.4. | Analog value | 8 |
| 2.4.5. | Analog output..... | 10 |
| 2.4.6. | Multistate value | 11 |
| 2.4.7. | Network port..... | 13 |
| 2.4.8. | List of Proprietary Properties..... | 14 |
| 2.5. | Segmentation capability | 15 |
| 2.6. | Data Link layer options | 15 |
| 2.7. | Device address binding..... | 15 |
| 2.8. | Networking options | 15 |
| 2.9. | Character sets supported..... | 15 |
| 2.10. | Network Security Options..... | 15 |
| 3 | Annex A: Variables description list | 16 |

1 Introduction

DXN6 is a motorized 6-port control valve with an integrated closed-loop flow controller and optionally a room temperature controller.

2 DXN6 electronic pressure independent 6-port valve

| | |
|-------------------------------------|---|
| Date | October 2023 |
| Vendor name | Belparts NV |
| Vendor Id | 932 |
| Product name | <i>dynamx</i> ™ |
| Product model number | DXN6 (see table below) |
| Application software version | 4.07.09 and higher |
| Firmware revision | 0.8.3 |
| Product description | Dynamic flow control system with 6-way ball valve |
| BACnet protocol revision | 135-2016 |

2.1 Product model number

DXN6 is a series of 6-port control valves. Depending on the version, some variables may or may not be present in the device. The valve exists in two DN sizes (DN15 and DN25), which use the same PICS.

| Product | Description |
|-----------------------|--|
| DXN6 __ B. ____ 2 _ | Version without IRC with energy measurement |
| DXN6 __ B. ____ 0 _ | Version without IRC without energy measurement |
| DXN6 __ B00. ____ 0 _ | Version with IRC without energy measurement |
| DXN6 __ B16. ____ 2 _ | Version with IRC with energy measurement |

2.2. BACnet Standardized device profile (Annex L)

- BACnet Application Specific Controller (B-ACS)

2.3. Supported BACnet interoperability building blocks (Annex K)

- Data Sharing-ReadProperty (DS-RP-B)
- Data Sharing-WriteProperty (DS-WP-B)
- Device Management-DynamicDeviceBindings(DM-DDB-B)

2.4. Supported Object types and Objects

Object instantiation is static; objects cannot be created or deleted.

Important note! Each overview of objects in this chapter only describe the objects that apply to this series of *dynamx*TM valves.

RW Read/Write
R Read Only

2.4.1. Binary input

| Binary value | |
|--|-----|
| <i>Dynamically creatable using CreateObject service?</i> | No |
| <i>Dynamically deletable using DeleteObject service?</i> | No |
| <i>Writable properties that are not otherwise required by the standard</i> | N/A |
| <i>Conditionally writable properties that are otherwise not required by the standard</i> | N/A |
| <i>Proprietary properties</i> | N/A |

Supported optional properties

- InactiveText
- ActiveText

Supported Objects

| Instance ID | Object Name | Restrictions | Resolution | Value Access Type |
|-------------|-------------|--------------|------------------------|-------------------------------|
| 0 | DI1 State | 0..1 | 0 Inactive 1 Active | Present Value, R ¹ |
| 1 | DI2 State | 0..1 | 0 Inactive 1 Active | Present Value, R ¹ |
| 2 | DI3 State | 0..1 | 0 Inactive 1 Active | Present Value, R ¹ |

¹ Objects accessible / implemented depending on product type

2.4.2. Binary value

| Binary value | |
|--|-----|
| <i>Dynamically creatable using CreateObject service?</i> | No |
| <i>Dynamically deletable using DeleteObject service?</i> | No |
| <i>Writable properties that are not otherwise required by the standard</i> | N/A |
| <i>Conditionally writable properties that are otherwise not required by the standard</i> | N/A |
| <i>Proprietary properties</i> | N/A |

Supported optional properties

- InactiveText
- ActiveText

Supported Objects

| Instance ID | Object Name | Restrictions | Resolution | Value Access Type |
|-------------|-----------------------|--------------|--|--------------------------------|
| 0 | Ctrl Sig | 0..1 | 0 Analog mode 1 Digital mode | Present Value, RW |
| 1 | Meas Sig | 0..1 | 0 Analog mode 1 Digital mode | Present Value, RW ¹ |
| 3 | Port 1 Active | 0..1 | 0 Port 1 is inactive 1 Port 1 is active | Present Value, R |
| 4 | Night Mode | 0..1 | 0 Night Mode disabled 1 Night Mode enabled | Present Value, RW ¹ |
| 6 | DI1 Type | 0..1 | 0 Normally Closed 1 Normally Open | Present Value, RW ¹ |
| 7 | DI2 Type | 0..1 | 0 Normally Closed 1 Normally Open | Present Value, RW ¹ |
| 12 | Reboot | 0..1 | 0 Inactive 1 Reboot | Present Value, RW ¹ |
| 13 | DI3 Type | 0..1 | 0 Normally Closed 1 Normally Open | Present Value, RW ¹ |
| 14 | X1 Mode | 0..1 | 0 Analog mode 1 Digital mode | Present Value, RW ¹ |
| 15 | ObjectValues MB based | 0..1 | 0 Default Multistate Values 1 Multistate Values MBbased | Present Value, RW |
| 16 | Temp Unit | 0..1 | 0 °C 1 °F | Present Value, RW |
| 17 | Frost Protection | 0..1 | 0 Disabled 1 Enabled | Present Value, RW ¹ |

¹ Objects accessible / implemented depending on product type

2.4.3. Analog input

| Analog input | |
|--|-----|
| <i>Dynamically creatable using CreateObject service?</i> | No |
| <i>Dynamically deletable using DeleteObject service?</i> | No |
| <i>Writable properties that are not otherwise required by the standard</i> | N/A |
| <i>Conditionally writable properties that are otherwise not required by the standard</i> | N/A |
| <i>Proprietary properties</i> | N/A |

Supported optional properties

- N/A

Supported Objects

| Instance ID | Object Name | Restrictions | Resolution | Value Access Type |
|-------------|-------------|--------------|------------|-------------------------------|
| 0 | Vam | N/A | Real | Present Value, R |
| 1 | Tam1 | N/A | Real | Present Value, R ¹ |
| 2 | Tam2 | N/A | Real | Present Value, R ¹ |
| 4 | Text 1 | N/A | Real | Present Value, R ¹ |
| 5 | Text 2 | N/A | Real | Present Value, R ¹ |
| 6 | Y1 | N/A | Real | Present Value, R ¹ |
| 7 | Y2 | N/A | Real | Present Value, R ¹ |
| 8 | Warning | N/A | Real | Present Value, R |
| 9 | Error | N/A | Real | Present Value, R |
| 10 | Warning2 | N/A | Real | Present Value, R |
| 11 | Error2 | N/A | Real | Present Value, R |
| 12 | Vr | N/A | Real | Present Value, R |

¹ Objects accessible / implemented depending on product type

Description Analog Input [8] - Warning

| Bit | Value | Name | Explanation |
|-----|-------|-----------------|---|
| b0 | 1 | Temperature | One of the Tam temperature sensors returns an invalid reading |
| b1 | 2 | <i>Not Used</i> | |
| b2 | 4 | <i>Not Used</i> | |
| b3 | 8 | Negative Flow | Flow direction is wrong |
| b4 | 16 | Manual Mode | Actuator is on manual |

Description Analog Input [9] - Error

| Bit | Value | Name | Explanation |
|-----|-------|-----------------|--|
| b0 | 1 | CRC Error | Internal Error, contact manufacturer |
| b1 | 2 | EE | Internal Error, contact manufacturer |
| b2 | 4 | Parameter error | In this case, one or more parameters are written over the BACNet, which are not valid. When the parameter is correctly written again, the error automatically resets |
| b3 | 8 | ChangeOver | Error during changeover |
| b4 | 16 | <i>Not Used</i> | |
| b5 | 32 | <i>Not Used</i> | |
| b6 | 64 | <i>Not Used</i> | |
| b7 | 128 | ADC Calibration | ADC Calibration not done |
| b8 | 256 | Range Error | Ranges of Y1h/c are incorrectly defined in split-range systems |
| b9 | 512 | No Flow sensor | Connection with flow sensor is lost |
| b10 | 1024 | <i>Not Used</i> | |

Description Analog Input [10] – Warning2

| Bit | Value | Name | Explanation |
|-----|-------|-------|--|
| b0 | 1 | TAM1 | Measurement Tam1 out of range (warning 1) |
| b1 | 2 | TAM2 | Measurement Tam2 out of range (warning 1) |
| b2 | 4 | TEXT1 | Measurement Text1 out of range (warning 1) |
| b3 | 8 | TEXT2 | Measurement Text2 out of range (warning 1) |

Description Analog Input [11] – Error2

| Bit | Value | Name | Explanation |
|-----|-------|-----------------|--|
| b0 | 1 | Y1_0V | Calibration value not present for Y1 0V (error 128) |
| b1 | 2 | Y1_10V | Calibration value not present for Y1 10V (error 128) |
| b2 | 4 | Y2_0V | Calibration value not present for Y2 0V (error 128) |
| b3 | 8 | Y2_10V | Calibration value not present for Y2 10V (error 128) |
| b4 | 16 | X1_10V | Calibration value not present for X1 10V (error 128) |
| b5 | 32 | <i>Not Used</i> | |
| b6 | 64 | <i>Not Used</i> | |
| b7 | 128 | <i>Not Used</i> | |
| b8 | 256 | <i>Not Used</i> | |
| b9 | 512 | <i>Not Used</i> | |

2.4.4. Analog value

| Analog value | |
|---|-----|
| Dynamically creatable using CreateObject service? | No |
| Dynamically deletable using DeleteObject service? | No |
| Writable properties that are not otherwise required by the standard | N/A |
| Conditionally writable properties that are otherwise not required by the standard | N/A |
| Proprietary properties | N/A |

Supported optional properties

- N/A

Supported Objects

| Instance ID | Object Name | Restrictions | Resolution | Value Access Type |
|-------------|-------------|----------------------------|---|----------------------------------|
| 0 | Y1h | Y1minh .. Y1maxh; 0,1 | Real | Present Value, RW ² |
| | Y1minh | 0..10; 0,1 | Real | Low Limit, RW |
| | Y1maxh | 0..10; 0,1 | Real | High Limit, RW |
| 1 | Y1c | Y1minc .. Y1maxc; 0,1 | Real | Present Value, RW ² |
| | Y1minc | 0..10; 0,1 | Real | Low Limit, RW |
| | Y1maxc | 0..10; 0,1 | Real | High Limit, RW |
| 2 | Vsh | Type dependent | Real | Present Value, RW ² |
| | Vs minhd | 0..Vsmahd | Real | Low Limit, RW |
| | Vs maxhd | Vsminhd..Vnomh | Real | High Limit, RW |
| 3 | Vsc | Type dependent | Real | Present Value, RW ² |
| | Vs mincd | 0..Vsmahcd | Real | Low Limit, RW |
| | Vs maxcd | Vsmincd..Vnomc | Real | High Limit, RW |
| 4 | Tset | 14..35°C; 0,1 | Real | Present Value, RW ¹ |
| 5 | Tsetcalc | 0,1 | Real | Present Value, R ¹ |
| 6 | Setp Modif | N/A | Bitfield;b0: window open b1: away mode b2: night mode b3: condensation b4: frost protection | Present Value, R ¹ |
| 7 | Tcoolmin | 9..35°C; 0,1 | Real | Present Value, RW ¹ |
| 10 | EnerHeat | DXN6 = Wh: 1 ,BTU: 10 | Real | Present Value, R ¹ |
| 11 | EnerCool | DXN6 = Wh: 1 ,BTU: 10 | Real | Present Value, R ¹ |
| 12 | Troom | Troom min .. Troom max | Real | Present Value, RW ^{1,2} |
| | Troom max | 0..90°C; 0,1 | Real | Low Limit, RW ¹ |
| | Troom min | 0..90°C; 0,1 | Real | High Limit, RW ¹ |
| 13 | Tsetadj | -Tsetadj max..Tsetadj max; | Real | Present Value, RW ¹ |
| | Tsetadj max | 0..5°C; 0,1 | Real | High Limit, RW ¹ |
| 14 | Test Reg | Limited to test command | Real | Present Value, RW |
| 15 | Command Reg | Limited to command value, | Real | Present Value, RW |
| 16 | Y2 Digital | Y2min ..Y2max | Real | Present Value, R ¹ |
| 17 | Vsmax h | Vsminhd ..Vsnomh | Real | Present Value, RW |
| 18 | Vsmax c | Vsmincd .. Vsnomc | Real | Present Value, RW |

| | | | | |
|----|---------------------|----------------------------|------|--------------------------------|
| 20 | XM | Motor Position: 0..10; 0,1 | Real | Present Value, R ¹ |
| 21 | T1 Correction | -5..+5; 0,1 | Real | Present Value, RW ¹ |
| 22 | T2 Correction | -5..+5; 0,1 | Real | Present Value, RW ¹ |
| 23 | Temp Dead band | 0,2..6°C; 0,1 | Real | Present Value, RW ¹ |
| 24 | Temp Db Night | 0,2..20°C; 0,1 | Real | Present Value, RW ¹ |
| 25 | Window Open MinTemp | 6..35°C; 0,1 | Real | Present Value, RW ¹ |
| 26 | Window Open MaxTemp | 6..40°C; 0,1 | Real | Present Value, RW ¹ |
| 27 | Prop band Heating | 0,5..6°C; 0,1 | Real | Present Value, RW ¹ |
| 28 | Prop band Cooling | 0,5..6°C; 0,1 | Real | Present Value, RW ¹ |
| 29 | Integration Time | 50..50000 sec; 1 | Real | Present Value, RW ¹ |
| 30 | Power Consumption | DXN6 = 0,001 kW | Real | Present Value, R ¹ |

¹ Objects accessible / implemented depending on product type

² Write enabled depending on the Control Signal or Measuring Signal status

2.4.5. Analog output

| Analog Output | |
|--|-----|
| <i>Dynamically creatable using CreateObject service?</i> | No |
| <i>Dynamically deletable using DeleteObject service?</i> | No |
| <i>Writable properties that are not otherwise required by the standard</i> | N/A |
| <i>Conditionally writable properties that are otherwise not required by the standard</i> | N/A |
| <i>Proprietary properties</i> | N/A |

Supported optional properties

- N/A

Supported Objects

| Instance ID | Object Name | Restrictions | Resolution | Value Access Type |
|-------------|-------------|--------------|------------|-------------------------------|
| 0 | X1 | N/A | Real | Present Value, R ¹ |

¹ Objects accessible / implemented depending on product type

2.4.6. Multistate value

| Multistate Value | |
|--|-----|
| <i>Dynamically creatable using CreateObject service?</i> | No |
| <i>Dynamically deletable using DeleteObject service?</i> | No |
| <i>Writable properties that are not otherwise required by the standard</i> | N/A |
| <i>Conditionally writable properties that are otherwise not required by the standard</i> | N/A |
| <i>Proprietary properties</i> | N/A |

Supported optional properties

- NumberOfStates
- StateText

Supported Objects

| Instance ID | Object Name | Restrictions | Resolution | Value Access Type |
|-------------|--------------|-------------------|--|--------------------------------|
| 0 | SysType | 1..8 ¹ | 1 <i>Not used for this device type</i> 2 <i>Not used for this device type</i> 3 Climate 4P 4 <i>Not used for this device type</i> 5 <i>Not used for this device type</i> 6 Room control climate ceiling 7 <i>Not used for this device type</i> 8 <i>Not used for this device type</i> | Present Value, RW |
| 1 | ClimStatus | 1..6 | 1 Heating 2 Cooling 3 Not defined 4 Error 5 Check flow 6 Flush mode | Present Value, R |
| 2 | End mode | 1..3 | 1 Normal behavior 2 No flow 3 Flush mode | Present Value, RW |
| 3 | 6WayFlush | 1..3 | 1 Inactive 2 Flush cooling 3 Flush heating | Present Value, RW |
| 4 | Control Char | 1..2 | 1 Linear 2 Equal percentage | Present Value, RW |
| 5 | DI1 Usage | 1..9 | 1 DI1 Not used 2 Window open 3 Away mode 4 Counter 5 Night mode 6 <i>Not used for this device type</i> 7 <i>Not used for this device type</i> 8 <i>Not used for this device type</i> 9 Condensation | Present Value, RW ¹ |

| | | | | |
|----|-------------------|------|---|--------------------------------|
| 6 | DI2 Usage | 1..9 | <ul style="list-style-type: none"> 1 DI2 Not used 2 Window open 3 Away mode 4 Counter 5 Night mode 6 <i>Not used for this device type</i> 7 <i>Not used for this device type</i> 8 <i>Not used for this device type</i> 9 Condensation | Present Value, RW ¹ |
| 8 | DI3 Usage | 1..9 | <ul style="list-style-type: none"> 1 DI3 Not used 2 Window open 3 Away mode 4 Counter 5 Night mode 6 <i>Not used for this device type</i> 7 <i>Not used for this device type</i> 8 <i>Not used for this device type</i> 9 Condensation | Present Value, RW ¹ |
| 9 | Text1 Usage | 1..3 | <ul style="list-style-type: none"> 1 Pt500 2 Pt1000 3 Potentiometer 10k | Present Value, RW ¹ |
| 10 | Text2 Usage | 1..3 | <ul style="list-style-type: none"> 1 Pt500 2 Pt1000 3 Potentiometer 10k | Present Value, RW ¹ |
| 11 | X1 type | 1..4 | <ul style="list-style-type: none"> 1 Flow 2 <i>Not used for this device type</i> 3 Y2 Controlled 4 Y1 Controlled | Present Value, RW ¹ |
| 12 | X1 char | 1..2 | <ul style="list-style-type: none"> 1 Linear 2 Equal percentage | Present Value, RW ¹ |
| 13 | Temp Control Type | 1..2 | <ul style="list-style-type: none"> 1 P 2 PI | Present Value, RW ¹ |

¹ Objects accessible / implemented depending on product type

2.4.7. Network port

Supported properties

| Property Identifier | Datatype | Restrictions |
|------------------------|----------------------------|--------------|
| Object_Identifier | BACnetObjectIdentifier | |
| Object_Name | CharacterString | |
| Object_Type | BACnetObjectType | |
| Description | CharacterString | |
| Status_Flags | BACnetStatusFlags | |
| Reliability | BACnetReliability | |
| Out_Of_Service | Boolean | |
| Network_Type | BACnetNetworkType | |
| Protocol_Level | BACnetProtocolLevel | |
| Network_Number | Unsigned16 | |
| Network_Number_Quality | BACnetNetworkNumberQuality | |
| Changes_Pending | Boolean | |
| Command | BACnetNetworkPortCommand | |
| MAC_Address | Octet String | |
| Link_Speed | Real | |
| Link_Speeds | BACnetARRAY[N] of Real | |

2.4.8. List of Proprietary Properties

Generally, *dynamx*™ BACNet implements the open BACNet communication using standard objects and properties. The following proprietary properties may be used to retrieve additional information from the device.

Supported properties

| Property Name | Identifier | Datatype | Value Access Type |
|-------------------|------------|------------------|-------------------|
| Device FreeText | 514 | Character String | RW |
| BACNet address | 515 | Unsigned | RW |
| Production Number | 516 | Character String | RW |
| FSB Serial number | 517 | Character String | R |

2.5. Segmentation capability

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

2.6. Data Link layer options

- MS/TP master (Clause 9), Baud rates : 9600/19200/38400
- MS/TP slave (Clause 9), Baud rates : 9600/19200/38400

2.7. Device address binding

- Static device binding is not supported

2.8. Networking options

N/A

2.9. Character sets supported

- ANSI X34

2.10. Network Security Options

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

3 Annex A: Variables description list

| | | |
|-----------------|--|----------------------|
| BACNet Address | Network address (1..127) | Proprietary Property |
| ClimStatus | Status of the current working mode | Multistate value |
| Command reg | Internal command register. (to be used by manufacturer only) | Analog value |
| Control char | Defines whether the control characteristic, i.e. the relation between Y1 and Vsh is linear or equal percentage | Multistate value |
| Control Sig | Sets the flow mode of the device to analog (accepts setpoint from external analog input signal) or digital (accepts setpoint from internal parameter). After Ctrl Sig is changed, the control loop state is reset. | Binary value |
| Device FreeText | Free to use 20 character text string | Proprietary Property |
| DI1 State | Logical, current state of the digital input | Binary input |
| DI1 Type | It defines the digital input 1 contact has normally open or normally closed. It has no impact if the digital input 1 is defined as a counter. | Binary value |
| DI1 Usage | Bits 0x000F are used as a bitfield to define DI1 Usage. It can be of type window contact, presence detection, night mode active, and condensation. It will have an impact on the SetpModif value. If the user choose the counter, pulses received in the digital input will be recorded into Counter 1 (no effect on SetpModif) | Multistate value |
| DI2 State | Logical, current state of the digital input | Binary input |
| DI2 Type | It defines the digital input 2 contact has normally open or normally closed. It has no impact if the digital input 2 is defined as a counter | Binary value |
| DI2 Usage | Bits 0x00F0 are used as a bitfield to define DI2 Usage. It can be of type window contact, presence detection, night mode active, and condensation. It will have an impact on the SetpModif value. If the user choose the counter, pulses received in the digital input will be recorded into Counter 2 (no effect on SetpModif) | Multistate value |
| DI3 State | Logical, current state of the digital input | Binary input |
| DI3 Type | It defines the digital input 3 contact has normally open or normally closed. It has no impact if the digital input 3 is defined as a counter | Binary value |
| DI3 Usage | Bits 0x0F00 are used as a bitfield to define DI3 Usage. It can be of type window contact, presence detection, night mode active, and condensation. It will have an impact on the SetpModif value. If the user choose the counter, pulses received in the digital input will be recorded into Counter 3 (no effect on SetpModif) | Multistate value |
| EndMode | The EndMode will define how the valve should react if the analog input Y1 is set in the range [0V - 0.2V] or [9.8V - 10V]. In Normal behavior, the flow setpoint will follow Vsmaxcd or Vsmaxhd. In No flow, the valve will be closed. In Flush mode, the valve will open completely to the correspondent port (If Y1 is set to 0 and 0.5 to 4.5 set the boundaries for heating, the valve will open completely to the correspondent heating port) | Multistate value |
| Ener. cool | Cumulative energy consumption in climate status cooling mode | Analog value |

| | | |
|-----------------------|---|----------------------|
| Ener. heat | Cumulative energy consumption in climate status heating mode | Analog value |
| Error | Bitfield that displays error code | Analog Input |
| Error 2 | Bitfield that displays details of error code | Analog Input |
| Flush 6-way | In the 6-port <i>dynamx</i> ™ valves (DXN6), the "Flush 6 way" parameter will replace the default "Flush" parameter. Setting to Flush cooling will force the device in commissioning mode on the cooling port. Setting to Flush heating will force the device in commissioning mode on the heating port. If it's inactive, the valve will follow the set points | Multistate value |
| FSB Serial Number | Serial number of the flow sensor board | Proprietary Property |
| Frost Protection | Enables or disables frost protection based on Troom | Binary Value |
| Integration Time | Integration time of the RC/Temperature control | Analog value |
| Meas Sig | Set Meas Sig in analog mode (by default) will accept values on Troom from external input signal. In digital mode values for Troom will be defined either via BACNet | Binary Value |
| Night mode | Night mode disabled / enabled | Binary Value |
| ObjectValues MB based | When active, the values of Mutistate Value Objects will be the same as used in the MODBUS driver | Binary Value |
| Port 1 Active | Set to true if Port 1 is active, otherwise Port 2 is active | Binary value |
| Power Consumption | Current power calculation based on flow and temperature measurements | Analog value |
| Production Number | Free to use 12 character text string for customer production number | Proprietary Property |
| Prop band Cooling | Width of proportional band for cooling | Analog value |
| Prop band Heating | Width of proportional band for heating | Analog value |
| Reboot | Setting this to True causes the device to reboot | Binary Value |
| Setp modif | b0: window open; b1 away mode; b2 night mode; b3 condensation | Analog value |
| Sys type | The mode will determine whether the energy consumption will be added to the heating energy variable EnerHeat or the cooling energy variable EnerCool | Multistate value |
| T1 Correction | Adjustable offset for measurement Text1 | Analog value |
| T2 Correction | Adjustable offset for measurement Text2 | Analog value |

| | | |
|-------------------|---|------------------|
| Tam 1 | Actual medium temperature Reporting Unit can be °C or °F, depending on value of Tunit | Analog Input |
| Tam 2 | Actual medium temperature from the 2 nd built-in sensor. Reporting Unit can be °C or °F, depending on value of Tunit. Only used when 2 temperature sensors present | Analog Input |
| Tcoolmin | Minimum cooling setpoint | Analog value |
| Temp Control Type | Control type of room controller: P or PI | Multistate value |
| Temp Dead band | Controller dead band of the RC/Temperature control | Analog value |
| Temp Db Night | Controller dead band of the RC/Temperature control in Night mode | Analog value |
| Temp Unit | Reporting unit of Tam. Can be degrees Celsius (°C) or degrees Fahrenheit (°F) | Binary Value |
| Test Reg | Setting this value is used to perform specific tests | Analog Value |
| Text1 | Value of the 1 st external temperature sensor or corresponding potentiometer value | Analog Input |
| Text2 | Value of the 2 nd external temperature sensor or corresponding potentiometer value | Analog Input |
| Text 1 Type | Used to define what Text1 functions as, can be set as Pt500, Pt1000 or a potentiometer | Multistate Value |
| Text 2 Type | Used to define what Text2 functions as, can be set as Pt500, Pt1000 or a potentiometer | Multistate Value |
| Troom | Actual room temperature | Analog value |
| Troom max | Actual maximum room temperature | Analog value |
| Troom min | Actual minimum room temperature | Analog value |
| Tset | Room temperature setpoint | Analog value |
| Tsetadj | Room temperature setpoint adjustment | Analog value |
| TsetadjMax | Room temperature setpoint adjustment limits | Analog value |
| Tsetcalc | Room temperature setpoint calculated, calculation depends on chosen settings | Analog value |
| Vam | Actual medium flow reported in the unit defined by Vunit | Analog Input |
| Vr | Realtime medium flow measurement reported in the unit defined by Vunit | Analog Input |
| Vs maxc d | Maximum flow setpoint in climate status cooling mode. Will always mirror Vsminh | Analog value |

| | | |
|---------------------|---|---------------|
| Vs maxh d | Maximum flow setpoint in climate status heating mode. Will always mirror Vsminh | Analog value |
| Vs minc d | Minimum flow setpoint in climate status cooling mode. Will always mirror Vsminh | Analog value |
| Vs minh d | Minimum flow setpoint in climate status heating mode. Will always mirror Vsminh | Analog value |
| Vsc | Setpoint used when climate status is in cooling mode | Analog value |
| Vsh | Setpoint used when climate status is in heating mode | Analog value |
| Warning | Bitfield that displays warning code | Analog Input |
| Warning2 | Bitfield that displays details of warning code | Analog Input |
| Window Open MaxTemp | Maximum temperature when window open | Analog value |
| Window Open MinTemp | Minimum temperature when window open | Analog value |
| X1 | Flow feedback signal or Controlled signal (by Y2 or Y2 digital). Range: 0..10Vdc, representing a flow /Y2 control between 0 and Vsmaxd/Y2max by means of a linear or equal percentage relation between voltage and flow/Y2. | Analog output |
| X1 type | Defines the type of output for X1. It can be a representation of the flow or controlled by an external device like a CO ₂ analyzer (linked to Y2 or Y2 digital) | Analog value |
| X1 char | Defines whether the X1 feedback signal should return a value in relation with the flow in a linear or in an equal percentage way | Analog value |
| X1 mode | In case the X1 output is defined as controlled by Y2, the output will reflect Y2 digital if X1 mode is defined in digital mode | Binary Value |
| Xm | Value indicating the physical drive/valve position | Analog value |
| Y1 | Setpoint voltage level. In analog mode, it's used to define Y1h or Y1c depending on the Sys Type. In digital mode, it's NOT used but it can be read | Analog Input |
| Y1 maxc | The value of Y1c at which the flow control loop still operates | Analog value |
| Y1 maxh | The value of Y1h at which the flow control loop still operates | Analog value |
| Y1 minc | The value of Y1c at which the flow control loop starts to operate | Analog value |
| Y1 minh | The value of Y1h at which the flow control loop starts to operate | Analog value |
| Y1c | Setpoint cooling. In digital mode this is a read-write parameter. In analog mode it is set by the external analog input signal and read-only on the UI and bus | Analog value |
| Y1h | Setpoint heating. In digital mode this is a read-write parameter. In analog mode it is set by the external analog input signal and read-only on the UI and bus | Analog value |

| | | |
|----|--------------------------------------|--------------|
| Y2 | Voltage level of second analog input | Analog Input |
|----|--------------------------------------|--------------|