



# Corrigo heating and Exigo

List of network variables for EXOline, Modbus and BACnet communication.  
From version 3.4.



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THE CHALLENGER IN BUILDING AUTOMATION

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# Chapter 1 Corrigo/Exigo with EXOline, Modbus and BACnet communication

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## Introduction

Exigo/Corrigo heating is a pre-programmed application for control of a heating system. The Corrigo/Exigo controllers can be used either stand-alone or integrated in an existing EXO project. In both cases, they are configured via the display or by using the configuration tool E tool<sup>®</sup> on a PC.

This document describes all signals that are accessible via EXOline, Modbus and BACnet. It does not describe how to create an EXO project.

## Signal types

All signals accessible from a SCADA system are described further in this document. Signals with a default value are settings that can be changed via a SCADA system. Signals without a default value are actual values which cannot be changed using a SCADA system.

### EXOL type

The EXOL type of the signals:

R = Real (-3.3E38 - 3.3E38)

I = Integer (-32768 - 32767)

X = Index (0 - 255)

L = Logic (0/1)

### Modbus type

The Modbus type of the signals:

1 = Coil Status Register (Modbus function = 1, 5 and 15)

2 = Input Status Register (Modbus function = 2)

3 = Holding Register (Modbus function = 3, 6 and 16)

4 = Input Register (Modbus function = 4)

Supported Modbus functions:

1 = Read Coils

2 = Read Discrete Input

3 = Read Holding Register

4 = Read Input Register

5 = Write Single Coil

6 = Write Single Register

15 = Write Multiple Coils

16 = Write Multiple Registers

## BACnet type

The BACnet type of signals:

10XXX = Read and write binary

20XXX = Read binary

30XXX = Read and write analogue

40XXX = Read analogue

30XXX = Read and write multistate

40XXX = Read multistate

(Where XXX = Modbus address)

**NOTE:** In the variable lists contained in this manual, the following abbreviations are used:

**AV** = Analogue Value

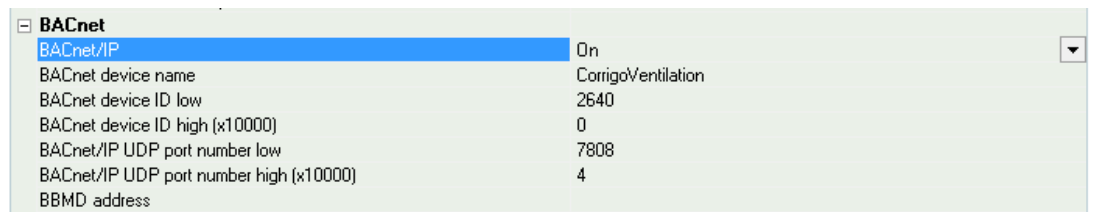
**BV** = Binary Value

**MSV** = Multistate Value

BACnet object names are the same as for EXOL type objects, but are shortened by removing the preamble “Cor\_” (e.g.: “VentSettings.Cor\_OverHeatFastStop” becomes “VentSettings.OverHeatFastStop”, etc.).

## Addressing

The below picture illustrates the appearance of BACnet addressing in E tool<sup>®</sup>:



BACnet	
BACnet/IP	On
BACnet device name	CorrigoVentilation
BACnet device ID low	2640
BACnet device ID high (x10000)	0
BACnet/IP UDP port number low	7808
BACnet/IP UDP port number high (x10000)	4
BBMD address	

BACnet/IP = Activation status of BACnet/IP protocol.

BACnet device name = The name of the device.

The device ID is divided into two parts, one low and one high. For example: If the high part of the ID would be “1”, then the device ID above would be “00012640”.

BACnet device ID low = The lower part of the device identification.

BACnet device ID high (x10000) = The higher part of the device identification.

The port number is divided into two parts, one low and one high. For example: In the picture above, the port number is “47808”.

BACnet/IP UDP port number low = Port number, lower part.

BACnet/IP UDP port number high (x10000) = Port number, higher part. This is the dedicated communication port.

BBMD address = BACnet Broadcast Management Device address. This is used for communication over the Internet between devices running BACnet.

# Modbus

## Communication limitations

The Modbus master must wait for a minimum of 3.5 character times (4 ms at 9600 bps) between two messages. When the Modbus master communicates with more than one Corrigo/Exigo controller on the same communication line (RS485), the Modbus master must wait for a minimum of 14 character times (16 ms at 9600 bps) between the answer and the first question for the next controller.

The Corrigo/Exigo controller is limited to 10 fast communications every 30 seconds. Any other communications will have a delayed answer time of approximately 1 second.

## Scale factor Modbus

Real signals have scale factor 10, except for the time setting signals which have scale factor 100, and the air flow signals which have scale factor 1 for Modbus communication. Integer, Index and Logic always have scale factor 1.

## Modbus activation

Corrigo/Exigo uses the same port for communication via Modbus and via EXOline. When attempting to communicate with a Modbus-activated unit by using E tool<sup>®</sup> or other EXOline communication, the input port will automatically adapt itself after approx. 1 second. The port will remain in EXO-mode until no communication has taken place for 10 seconds, after which it will revert to Modbus mode.

## Modbus wiring, etc.

A protocol like Modbus consists of several layers (OSI-model). The bottom layer is always the physical layer; the number of wires and signal levels. The next layer describes the communication digits (number of data bits, stop-bits, parity etc.). Next are the layers describing the Modbus-specific functions (number of digits per message, the meaning of different messages, etc.).

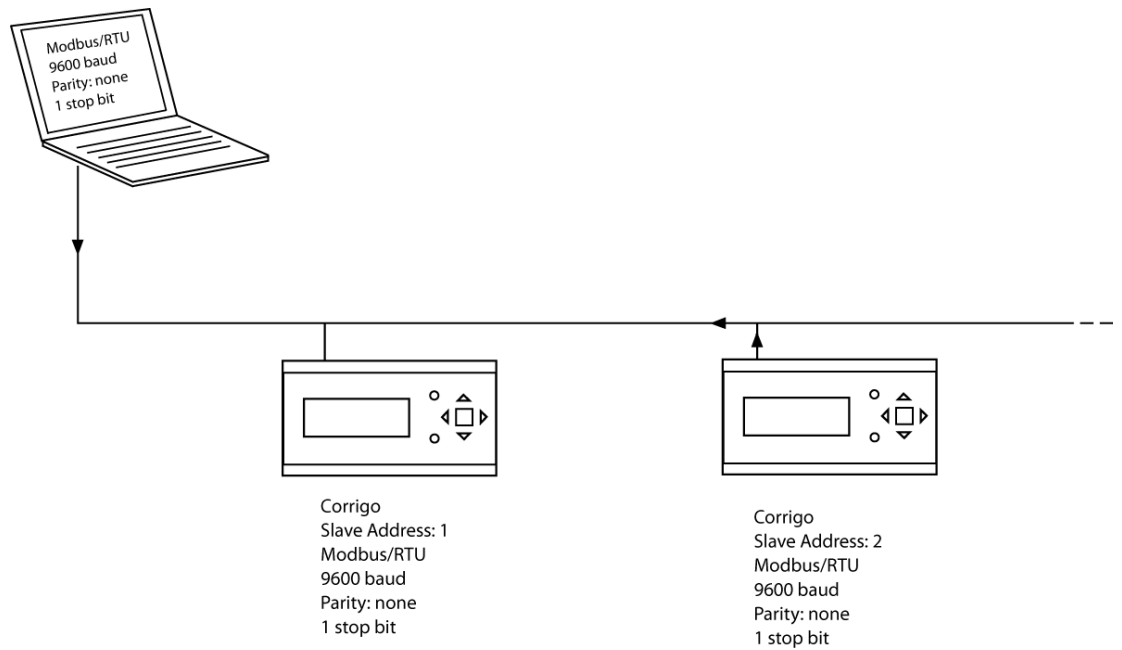
For Modbus, the bottom layer can be RS485, RS422 or RS232.

## Max. 47 registers

A maximum of 47 registers can be read in one message.

## Visualised example

The simplified example below visualises the Master/Slave relation. In addition to the figure, checksums for message validation are also transmitted in both query and answer.



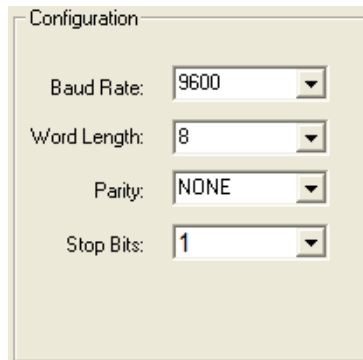
# Chapter 2 System integration using Modbus

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## Configuration

The communication parameters for the Modbus line are the most important thing to configure first. As described earlier, these parameters must be identical in both the master unit and slave units, since they define the structure of messages and the transmission speed.

The default configuration values of a Corrigo/Exigo controller are shown in the figure below.



The screenshot shows a 'Configuration' dialog box with the following settings:

- Baud Rate: 9600
- Word Length: 8
- Parity: NONE
- Stop Bits: 1

Corrigo/Exigo is set to Slave Address 1 as a default. If more units are added, a new Modbus address can be set for each unit using the Corrigo/Exigo display or E tool<sup>®</sup>.

## Transmission mode

Corrigo/Exigo uses the RTU transmission mode; not to be confused with the ASCII mode in the settings. The settings for the transmission mode must be the same in the master unit and the slave units, since Modbus/RTU cannot understand Modbus/ASCII messages. The configuration parameter Word length is always 8 for Modbus/RTU.



The screenshot shows a 'Transmission Mode' dialog box with the following settings:

- STANDARD
- ASCII
- RTU

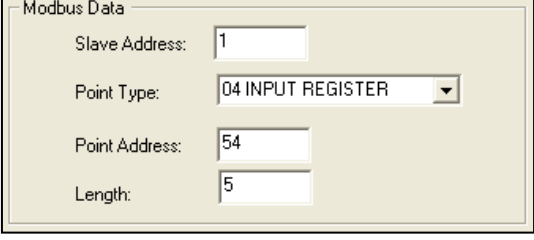
## Writing values

To override the Corrigo/Exigo output values, set the output to manual mode using a Modbus signal. Then set the corresponding ...\_ManSet signal to the wanted level. These signals are listed in Chapter 5: Holding Registers. Remember that only values with a default value are adjustable, you will find these in the chapters Coil Status Register and Holding Register.



## Reading values

An effective way to read values is to read multiple variables simultaneously. To, for example, read all analogue outputs, set the Modbus query to the values shown in the figure below. The first analogue output variable starts at address 54 (QAnaOut.AQ1). To read address 54 to 58, set the length to 5. The Modbus answer will then communicate all 5 values in just one message, making the communication more effective.



The image shows a window titled "Modbus Data" with four input fields:

- Slave Address: 1
- Point Type: 04 INPUT REGISTER (dropdown menu)
- Point Address: 54
- Length: 5

# Chapter 3 Actual/Setpoint

## 2.1. General

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingActual.Cor_Outdoor temp(0)	R,4	1			Outdoor temperature
HeatingActual.Cor_Outdoor temp(0)	R,3	507	AV, 30507		Outdoor temperature (can be modified if not connected to a physical analogue input)
HeatingActual.Cor_HPSupplyTemp	R,4	358	AV, 40358		Heating primary supply temperature
HeatingActual.Cor_HPReturnTemp	R,4	359	AV, 40359		Heating primary return temperature
HeatingActual.Cor_CPSupplyTemp	R,4	360	AV, 40360		Cooling primary supply temperature
HeatingActual.Cor_CPReturnTemp	R,4	361	AV, 40361		Cooling primary return temperature
HeatingActual.Cor_ExtraSensor1	R,4	362	AV, 40362		Additional sensor 1
HeatingActual.Cor_ExtraSensor2	R,4	363	AV, 40363		Additional sensor 2
HeatingActual.Cor_ExtraSensor3	R,4	364	AV, 40364		Additional sensor 3
HeatingActual.Cor_ExtraSensor4	R,4	365	AV, 40365		Additional sensor 4
HeatingActual.Cor_ExtraSensor5	R,4	366	AV, 40366		Additional sensor 5
TimePro.TimeGroupHS1	L,2	1			Is set if time channel comfort time HS1 is active
TimePro.TimeGroupHS2	L,2	2			Is set if time channel comfort time HS2 is active
TimePro.TimeGroupHS3	L,2	3			Is set if time channel comfort time HS3 is active
TimePro.TimeGroupHW1	L,2	4			Is set if time channel comfort time HW1 is active
TimePro.TimeGroupHW2	L,2	5			Is set if time channel comfort time HW2 is active
TimePro.TimeGroupCor_ExtraTimeGroup1	L,2	6			Is set if timer output 1 is active
TimePro.TimeGroupCor_ExtraTimeGroup2	L,2	7			Is set if timer output 2 is active
TimePro.TimeGroupCor_ExtraTimeGroup3	L,2	8			Is set if timer output 3 is active
TimePro.TimeGroupCor_ExtraTimeGroup4	L,2	9			Is set if timer output 4 is active
TimePro.TimeGroupCor_ExtraTimeGroup5	L,2	10			Is set if timer output 5 is active
TimePro.TimeGroupCS1	L,2	237			Is set if time channel comfort time CS1 is active
HeatingActual.Cor_UnitShutDown	L,2	272	BV, 20272		Start/stop function for the entire heating controller

## 2.2. Heating system 1 (HS1)

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingActual.Cor_HS1PID_Input	R,4	2	AV, 40002		Supply temperature HS1
HeatingActual.Cor_HS1PID_SetP	R,4	3	AV, 40003		Outdoor compensated setpoint supply temperature HS1
HeatingSettings.Cor_HS1Curve_X1	I,3	1		-20°C	Outdoor temp for first curve point for outdoor compensated setpoint HS1
HeatingSettings.Cor_HS1Curve_X2	I,3	2		-15°C	Outdoor temp for second curve point for outdoor compensated setpoint HS1
HeatingSettings.Cor_HS1Curve_X3	I,3	3		-10°C	Outdoor temp for third curve point for outdoor compensated setpoint HS1
HeatingSettings.Cor_HS1Curve_X4	I,3	4		-5°C	Outdoor temp for fourth curve point for outdoor compensated setpoint HS1
HeatingSettings.Cor_HS1Curve_X5	I,3	5		0°C	Outdoor temp for fifth curve point for outdoor compensated setpoint HS1
HeatingSettings.Cor_HS1Curve_X6	I,3	6		5°C	Outdoor temp for sixth curve point for outdoor compensated setpoint HS1
HeatingSettings.Cor_HS1Curve_X7	I,3	7		10°C	Outdoor temp for seventh curve point for outdoor compensated setpoint HS1
HeatingSettings.Cor_HS1Curve_X8	I,3	8		15°C	Outdoor temp for eighth curve point for outdoor compensated setpoint HS1
HeatingSettings.Cor_HS1Curve_Y1	I,3	9	AV, 30009	67°C	Setpoint for first curve point for outdoor compensated setpoint HS1
HeatingSettings.Cor_HS1Curve_Y2	I,3	10	AV, 30010	63°C	Setpoint for second curve point for outdoor compensated setpoint HS1
HeatingSettings.Cor_HS1Curve_Y3	I,3	11	AV, 30011	59°C	Setpoint for third curve point for outdoor compensated setpoint HS1
HeatingSettings.Cor_HS1Curve_Y4	I,3	12	AV, 30012	55°C	Setpoint for fourth curve point for outdoor compensated setpoint HS1
HeatingSettings.Cor_HS1Curve_Y5	I,3	13	AV, 30013	53°C	Setpoint for fifth curve point for outdoor compensated setpoint HS1
HeatingSettings.Cor_HS1Curve_Y6	I,3	14	AV, 30014	43°C	Setpoint for sixth curve point for outdoor compensated setpoint HS1
HeatingSettings.Cor_HS1Curve_Y7	I,3	15	AV, 30015	35°C	Setpoint for seventh curve point for outdoor compensated setpoint HS1
HeatingSettings.Cor_HS1Curve_Y8	I,3	16	AV, 30016	25°C	Setpoint for eighth curve point for outdoor compensated setpoint HS1
HeatingActual.Cor_HS1RoomTemp	R,4	4	AV, 40004		Room temperature HS1
HeatingSettings.Cor_HS1RoomSetP	R,3	17	AV, 30017	21°C	Setpoint room temperature HS1
HeatingActual.Cor_HS1ReturnTemp	R,4	5	AV, 40005		Return temperature HS1
HeatingActual.Cor_HS1PumpARun(0)	L,2	11	BV, 20011		Is set if running pump HS1 P1A
HeatingActual.Cor_HS1PumpBRun	L,2	12	BV, 20012		Is set if running pump HS1 P1B
HeatingActual.Cor_HS1PumpAStart(0)	L,2	103			Start signal pump HS1 P1A
HeatingActual.Cor_HS1PumpBStart	L,2	104			Start signal pump HS1 P1B
HeatingActual.Cor_HS1CV1(0)	R,4	153			Control signal HS1 CV (0...10 V)

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingActual.Cor_HS1PID_Output	R,4	160	AV, 40160		Controller output HS1 (0...100 %)
HeatingActual.Cor_HS1RetPID_Output	R,4	346	AV, 40346		Controller output HS1 Return temp (0...100 %)
HeatingSettings.Cor_HS1PumpDayLimit(0)	R,3	521		17°C	Outdoor temp for pump stop day HS1
HeatingSettings.Cor_HS1PumpNightLimit(0)	R,3	524		17°C	Outdoor temp for pump stop night HS1
HeatingSettings.Cor_PowerLimit_SetPoint	R,3	617	AV, 30617		Setpoint HS1 power limit
HeatingSettings.Cor_PowerLimitPID_Pgain	R,3	620			P-band HS1 power limit
HeatingSettings.Cor_PowerLimitPID_Itime	R,3	621			I-time HS1 power limit
HeatingActual.Cor_PowerLimitPID_Input	R,4	353	AV, 40353		Controller input HS1 power limit (kW)
HeatingActual.Cor_PowerLimitPID_SetP	R,4	355	AV, 40355		Controller setpoint HS1 power limit (kW)
HeatingActual.Cor_HS1OptActualStartTime(0)	R,4	350			Start optimizer, time until start HS1
HeatingActual.Cor_HS1RetPID_Input	R,4	410	AV, 40410		Actual difference between HP and HS1 return
HeatingSettings.Cor_HS1PID_PGain	R,3	443	AV, 30443	100°C	P-band supply HS1 control
HeatingSettings.Cor_HS1PID_ITime	R,3	444	AV, 30444	100 s	I-time supply HS1 control
HeatingActual.Cor_HS1RetPID_Output	R,4	413			Controller output HS1 Return temp (0...100 %)
HeatingSettings.Cor_HS1PumpAAutoMode(0)	X,3	497	MSV, 30497	2	Manual/Auto HS1 P1A: 0=Manual off 1=Manual on 2=Auto
HeatingSettings.Cor_HS1PumpBAutoMode	X,3	498	MSV, 30498	2	Manual/Auto HS1 P1B: 0=Manual off 1=Manual on 2=Auto
HeatingSettings.Cor_HS1PumpDayLimit(0)	R,3	521	AV, 30521	17°C	Outdoor temp for pump stop day HS1
HeatingSettings.Cor_HS1PumpNightLimit(0)	R,3	524	AV, 30254	17°C	Outdoor temp for pump stop night HS1
HeatingSettings.Cor_HS1ParallelTransfer	R,3	535	AV, 30535	0°C	Parallel transfer of setpoint curve HS1
HeatingSettings.Cor_HS1RetPID_Pgain	R,3	595	AV, 30595	100°C	P-band HS1 return temp.
HeatingSettings.Cor_HS1RetPID_Itime	R,3	596	AV, 30596	100 s	I-time HS1 return temp.
HeatingSettings.Cor_HS1RetPID_SetPoint	R,3	731	AV, 30731	3°C	HS1 Max Delta-T HP/HS

## 2.3. Heating system 2 (HS2)

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingActual.Cor_HS2PID_Input	R,4	6	AV, 40006		Supply temperature HS2
HeatingActual.Cor_HS2PID_SetP	R,4	7	AV, 40007		Outdoor compensated setpoint supply temperature HS2
HeatingActual.Cor_HS2RoomTemp	R,4	8	AV, 40008		Room temperature HS2
HeatingActual.Cor_HS2ReturnTemp	R,4	9	AV, 40009		Return temperature HS2
HeatingActual.Cor_HS2PumpARun	L,2	13	BV, 20013		Set if running pump HS2 P1A
HeatingActual.Cor_HS2PumpBRun	L,2	14	BV, 20014		Set if running pump HS2 P1B
HeatingSettings.Cor_HS2Curve_X1	I,3	18		-20°C	Outdoor temp for first curve point for outdoor compensated setpoint HS2
HeatingSettings.Cor_HS2Curve_X2	I,3	19		-15°C	Outdoor temp for second curve point for outdoor compensated setpoint HS2
HeatingSettings.Cor_HS2Curve_X3	I,3	20		-10°C	Outdoor temp for third curve point for outdoor compensated setpoint HS2
HeatingSettings.Cor_HS2Curve_X4	I,3	21		-5°C	Outdoor temp for fourth curve point for outdoor compensated setpoint HS2
HeatingSettings.Cor_HS2Curve_X5	I,3	22		0°C	Outdoor temp for fifth curve point for outdoor compensated setpoint HS2
HeatingSettings.Cor_HS2Curve_X6	I,3	23		5°C	Outdoor temp for sixth curve point for outdoor compensated setpoint HS2
HeatingSettings.Cor_HS2Curve_X7	I,3	24		10°C	Outdoor temp for seventh curve point for outdoor compensated setpoint HS2
HeatingSettings.Cor_HS2Curve_X8	I,3	25		15°C	Outdoor temp for eighth curve point for outdoor compensated setpoint HS2
HeatingSettings.Cor_HS2Curve_Y1	I,3	26	AV, 30026	67°C	Setpoint for first curve point for outdoor compensated setpoint HS2
HeatingSettings.Cor_HS2Curve_Y2	I,3	27	AV, 30027	63°C	Setpoint for second curve point for outdoor compensated setpoint HS2
HeatingSettings.Cor_HS2Curve_Y3	I,3	28	AV, 30028	59°C	Setpoint for third curve point for outdoor compensated setpoint HS2
HeatingSettings.Cor_HS2Curve_Y4	I,3	29	AV, 30029	55°C	Setpoint for fourth curve point for outdoor compensated setpoint HS2
HeatingSettings.Cor_HS2Curve_Y5	I,3	30	AV, 30030	53°C	Setpoint for fifth curve point for outdoor compensated setpoint HS2
HeatingSettings.Cor_HS2Curve_Y6	I,3	31	AV, 30031	43°C	Setpoint for sixth curve point for outdoor compensated setpoint HS2
HeatingSettings.Cor_HS2Curve_Y7	I,3	32	AV, 30032	35°C	Setpoint for seventh curve point for outdoor compensated setpoint HS2
HeatingSettings.Cor_HS2Curve_Y8	I,3	33	AV, 30033	25°C	Setpoint for eighth curve point for outdoor compensated setpoint HS2
HeatingSettings.Cor_HS2RoomSetP	R,3	34		21°C	Setpoint room temperature HS2
HeatingActual.Cor_HS2PumpAStart	L,2	105			Start signal pump HS2 P1A
HeatingActual.Cor_HS2PumpBStart	L,2	106			Start signal pump HS2 P1B
HeatingActual.Cor_HS2CV1	R,4	154			Control signal HS2 CV (0...10 V)

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingActual.Cor_HS2PID_Output	R,4	161	AV, 40161		Controller output HS2 (0...100 %)
HeatingActual.Cor_HS2RetPID_Output	R,4	347	AV, 40347		Controller output HS2 return temp (0...100 %)
HeatingActual.Cor_HS2OptActualStartTime	X,4	351			Start optimizer, time until start of HS2
HeatingActual.Cor_HS2RetPID_Input	R,4	411	AV, 40411		Actual difference between HP and HS2 return
HeatingActual.Cor_HS2RetPID_Output	R,4	414			Controller output HS2 Return temp (0...100 %)
HeatingActual.Cor_OutDoorTemp2	R,4	443	AV, 40443		Outdoor temperature HS2
HeatingSettings.Cor_HS2PID_PGain	R,3	445	AV, 30445	100°C	P-band supply HS2 control
HeatingSettings.Cor_HS2PID_ITime	R,3	446	AV, 30446	100 s	I-time supply HS2 control
HeatingSettings.Cor_HS2PumpAAutoMode	X,3	499	MSV, 30499	2	Manual/Auto HS2 P1A: 0=Manual off 1=Manual on 2=Auto
HeatingSettings.Cor_HS2PumpBAutoMode	X,3	500	MSV, 30500	2	Manual/Auto HS2 P1B: 0=Manual off 1=Manual on 2=Auto
HeatingSettings.Cor_HS2PumpDayLimit(0)	R,3	522	AV, 30522	17°C	Outdoor temp for pump stop day HS2
HeatingSettings.Cor_HS2PumpNightLimit(0)	R,3	525	AV, 30525	17°C	Outdoor temp for pump stop night HS2
HeatingSettings.Cor_HS2ParallelTransfer	R,3	536	AV, 30536	0 °C	Parallel transfer of setpoint curve HS2
HeatingSettings.Cor_HS2RetPID_Pgain	R,3	597	AV, 30597	100°C	P-band HS2 return temp.
HeatingSettings.Cor_HS2RetPID_ITime	R,3	598	AV, 30598	100 s	I-time HS2 return temp.
HeatingSettings.Cor_HS2RetPID_SetPoint	R,3	732	AV, 30732	3°C	HS2 max. Delta-T HP/HS

## 2.4. Heating system 3 (HS3)

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingActual.Cor_HS3PID_Input	R,4	10			Supply temperature HS3
HeatingActual.Cor_HS3PID_SetP	R,4	11			Outdoor compensated setpoint supply temperature HS3
HeatingActual.Cor_HS3RoomTemp	R,4	12			Room temperature HS3
HeatingActual.Cor_HS3ReturnTemp	R,4	13			Return temperature HS3
HeatingActual.Cor_HS3PumpARun	L,2	15			Set if running pump HS3 P1A
HeatingActual.Cor_HS3PumpBRun	L,2	16			Set if running pump HS3 P1B

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingSettings.Cor_HS3Curve_X1	I,3	35		-20°C	Outdoor temp for first curve point for outdoor compensated setpoint HS3
HeatingSettings.Cor_HS3Curve_X2	I,3	36		-15°C	Outdoor temp for second curve point for outdoor compensated setpoint HS3
HeatingSettings.Cor_HS3Curve_X3	I,3	37		-10°C	Outdoor temp for third curve point for outdoor compensated setpoint HS3
HeatingSettings.Cor_HS3Curve_X4	I,3	38		-5°C	Outdoor temp for fourth curve point for outdoor compensated setpoint HS3
HeatingSettings.Cor_HS3Curve_X5	I,3	39		0°C	Outdoor temp for fifth curve point for outdoor compensated setpoint HS3
HeatingSettings.Cor_HS3Curve_X6	I,3	40		5°C	Outdoor temp for sixth curve point for outdoor compensated setpoint HS3
HeatingSettings.Cor_HS3Curve_X7	I,3	41		10°C	Outdoor temp for seventh curve point for outdoor compensated setpoint HS3
HeatingSettings.Cor_HS3Curve_X8	I,3	42		15°C	Outdoor temp for eighth curve point for outdoor compensated setpoint HS3
HeatingSettings.Cor_HS3Curve_Y1	I,3	43		67°C	Setpoint for first curve point for outdoor compensated setpoint HS3
HeatingSettings.Cor_HS3Curve_Y2	I,3	44		63°C	Setpoint for second curve point for outdoor compensated setpoint HS3
HeatingSettings.Cor_HS3Curve_Y3	I,3	45		59°C	Setpoint for third curve point for outdoor compensated setpoint HS3
HeatingSettings.Cor_HS3Curve_Y4	I,3	46		55°C	Setpoint for fourth curve point for outdoor compensated setpoint HS3
HeatingSettings.Cor_HS3Curve_Y5	I,3	47		53°C	Setpoint for fifth curve point for outdoor compensated setpoint HS3
HeatingSettings.Cor_HS3Curve_Y6	I,3	48		43°C	Setpoint for sixth curve point for outdoor compensated setpoint HS3
HeatingSettings.Cor_HS3Curve_Y7	I,3	49		35°C	Setpoint for seventh curve point for outdoor compensated setpoint HS3
HeatingSettings.Cor_HS3Curve_Y8	I,3	50		25°C	Setpoint for eighth curve point for outdoor compensated setpoint HS3
HeatingSettings.Cor_HS3RoomSetP	R,3	51		21°C	Setpoint room temperature HS3
HeatingActual.Cor_HS3PumpAStart	L,2	107			Start signal pump HS3 P1A
HeatingActual.Cor_HS3PumpBStart	L,2	108			Start signal pump HS3 P1B
HeatingActual.Cor_HS3CV1	R,4	155			Control signal HS3 CV (0...10 V)
HeatingActual.Cor_HS3PID_Output	R,4	162			Controller output HS3 (0...100 %)
HeatingActual.Cor_HS3OptActualStartTime	X,4	352			Start optimizer, time until start HS3
HeatingActual.Cor_OutDoorTemp3	R,4	444			Outdoor temperature HS3
HeatingSettings.Cor_HS3PumpDayLimit(0)	R,3	523		17°C	Outdoor temp for pump stop day HS3
HeatingSettings.Cor_HS3PumpNightLimit(0)	R,3	526		17°C	Outdoor temp for pump stop night HS3
Heating1. Cor_HS3ParallelTransfer	R,3	537		0 °C	Parallel transfer of setpoint curve HS3

## 2.5. Hot water 1 (HWC1)

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingActual.Cor_HW1SupplyTemp	R,4	14	AV, 40014		Supply temperature HWC1
HeatingActual. Cor_HW1PumpRun	L,2	17	BV, 20017		Set if running pump HW1
HeatingSettings.Cor_HW1Setpoint	R,3	52	AV, 30052	55°C	Setpoint supply HWC1
HeatingActual.Cor_HW1PumpStart	L,2	109			Start signal pump HW1
HeatingActual.Cor_HW1CV1	R,4	156			Control signal HW1 CV (0...10 V)
HeatingActual.Cor_HW1PID_Output	R,4	163	AV, 40163		Controller output HW1 (0...100 %)
HeatingActual.Cor_HW1FlowSwitch	L,2	270			Hot water 1 (HW1) flow switch
HeatingSettings.Cor_HW1PID_PGain	R,3	449	AV, 30449	25°C	P-band HW1 control
HeatingSettings.Cor_HW1PID_ITime	R,3	450	AV, 30450	75 s	I-time HW1 control

## 2.6. Hot water 2 (HWC2)

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingActual.Cor_HW2SupplyTemp	R,4	15	AV, 40015		Supply temperature HWC2
HeatingSettings.Cor_HW2Setpoint	R,3	53	AV, 30053	55°C	Setpoint supply HWC2
HeatingActual.Cor_HW2CV1	R,4	157			Control signal HWC2 CV (0...10 V)
HeatingActual.Cor_HW2PID_Output	R,4	164	AV, 40164		Controller output HWC2 (0...100 %)
HeatingActual.Cor_HW2FlowSwitch	L,2	271			Hot water 2 (HW2) flow switch
HeatingSettings.Cor_HW2PID_PGain	R,3	451	AV, 30451	25°C	P-band HW2 control
HeatingSettings.Cor_HW2PID_ITime	R,3	452	AV, 30452	75 s	I-time HW2 control

## 2.7. Primary tap hot water (HP1)

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingActual.Cor_HP1SupplyTemp	R,4	16	AV, 40016		Supply temperature HP1
HeatingActual.Cor_HP1ReturnTemp	R,4	17	AV, 40017		Return temperature HP1
HeatingActual.Cor_HP1PumpRun	L,2	18	BV, 20018		Is set if running pump HP1
HeatingSettings.Cor_HP1StartTemp	R,3	54		46°C	Start temperature for start of load pump HP1 on return temperature



Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingSettings.Cor_HP1StopTemp	R,3	55		55°C	Stop temperature for stop of load pump HP1 on supply temperature
HeatingSettings.Cor_HP1TempDiff	R,3	56		2°C	Difference temperature for stop of load pump HP1 on return temperature
HeatingActual.Cor_HP1PumpStart	L,2	110			Start signal pump HP1

## 2.8. Boiler control

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingActual.Cor_BoilerTemp	R,4	18			Boiler temperature (version 3.1 or earlier)
HeatingActual.Cor_BoilerReturnTemp	R,4	356	AV, 40356		Boiler return temperature
HeatingSettings.Cor_BoilerStartTemp1	R,3	57		45°C	Start temperature boiler for start signal 1 (version 3.1 or earlier)
HeatingSettings.Cor_BoilerStartTemp2	R,3	58		40°C	Start temperature boiler for start signal 2 (version 3.1 or earlier)
HeatingSettings.Cor_BoilerStopTemp1	R,3	59		55°C	Boiler stop temperature, for stop signal 1 (version 3.1 or earlier)
HeatingSettings.Cor_BoilerStopTemp2	R,3	623		55°C	Boiler stop temperature 2, for stop signal 2 (version 3.1 or earlier)
HeatingActual.Cor_BoilerStart1	L,2	112			Start signal 1 boiler (version 3.1 or earlier)
HeatingActual.Cor_BoilerStart2	L,2	113			Start signal 2 boiler (version 3.1 or earlier)
HeatingSettings.Cor_BoilerStartHyst1	R,3	624		2	Boiler start hyst.1, for start signal 1 (version 3.1 or earlier)
HeatingSettings.Cor_BoilerStartHyst2	R,3	625		4	Boiler start hyst.2, for start signal 2 (version 3.1 or earlier)
HeatingSettings.Cor_BoilerStopHyst1	R,3	626		0	Boiler stop hyst.1, for stop signal 1 (version 3.1 or earlier)
HeatingSettings.Cor_BoilerStopHyst2	R,3	627		2	Boiler stop hyst.2, for stop signal 2 (version 3.1 or earlier)
HeatingActual.Cor_HB1Run(0)	L,2	242	BV, 20242		Run indication Boiler 1
HeatingActual.Cor_HB2Run	L,2	243	BV, 20243		Run indication Boiler 2
HeatingActual.Cor_HB3Run	L,2	244	BV, 20244		Run indication Boiler 3
HeatingActual.Cor_HB4Run	L,2	245			Run indication Boiler 4
HeatingActual.Cor_HB1PumpRun	L,2	246	BV, 20246		Run indication Boiler 1 pump
HeatingActual.Cor_HB2PumpRun	L,2	247	BV, 20247		Run indication Boiler 2 pump

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingActual.Cor_HB3PumpRun	L,2	248	BV, 20248		Run indication Boiler 3 pump
HeatingActual.Cor_HB4PumpRun	L,2	249			Run indication Boiler 4 pump
HeatingActual.Cor_TPRun	L,2	250	BV, 20250		Run indication transport pump
HeatingActual.Cor_HB1Exercising	L,2	251			Boiler 1 exercising
HeatingActual.Cor_HB2Exercising	L,2	252			Boiler 2 exercising
HeatingActual.Cor_HB3Exercising	L,2	253			Boiler 3 exercising
HeatingActual.Cor_HB4Exercising	L,2	254			Boiler 4 exercising
HeatingActual.Cor_HBPumpExercising	L,2	255			Boiler pump exercising
HeatingActual.Cor_HB1StartLow(0)	L,2	256	BV, 20256		Start boiler 1, low effect
HeatingActual.Cor_HB1StartHigh	L,2	257	BV, 20257		Start boiler 1, high effect
HeatingActual.Cor_HB2StartLow	L,2	258	BV, 20258		Start boiler 2, low effect
HeatingActual.Cor_HB2StartHigh	L,2	259	BV, 20259		Start boiler 2, high effect
HeatingActual.Cor_HB3StartLow	L,2	260	BV, 20260		Start boiler 3, low effect
HeatingActual.Cor_HB3StartHigh	L,2	261	BV, 20261		Start boiler 3, high effect
HeatingActual.Cor_HB4StartLow	L,2	262			Start boiler 4, low effect
HeatingActual.Cor_HB4StartHigh	L,2	263			Start boiler 4, high effect
HeatingActual.Cor_HB1PumpStart(0)	L,2	264			Start boiler pump 1
HeatingActual.Cor_HB2PumpStart	L,2	265			Start boiler pump 2
HeatingActual.Cor_HB3PumpStart	L,2	266			Start boiler pump 3
HeatingActual.Cor_HB4PumpStart	L,2	267			Start boiler pump 4
HeatingActual.Cor_TPStart	L,2	268			Starting the transport pump
HeatingSettings.Cor_HB1Exercise	L,1	8		0	Activate exercise boiler 1: 0= Exercise off 1= Exercise on
HeatingSettings.Cor_HB2Exercise	L,1	9		0	Activate exercise boiler 2
HeatingSettings.Cor_HB3Exercise	L,1	10		0	Activate exercise boiler 3
HeatingSettings.Cor_HB4Exercise	L,1	11		0	Activate exercise boiler 4
HeatingSettings.Cor_HB1Reset	L,1	12		0	Boiler 1 reset: Resets the total run time when set to 1.
HeatingSettings.Cor_HB2Reset	L,1	13		0	Boiler 2 reset
HeatingSettings.Cor_HB3Reset	L,1	14		0	Boiler 3 reset
HeatingSettings.Cor_HB4Reset	L,1	15		0	Boiler 4 reset
HeatingSettings.Cor_HBAlternate	L,1	16		0	Command to alternate Boilers.
HeatingActual.Cor_HB1RunMode	R,4	377			Run mode HB1: 0= Off 1= On (normal effect) 2= High effect
HeatingActual.Cor_HB2RunMode	R,4	378			Run mode HB2
HeatingActual.Cor_HB3RunMode	R,4	379			Run mode HB3
HeatingActual.Cor_HB4RunMode	R,4	380			Run mode HB4
HeatingActual.Cor_HB1TotalRT	R,4	381			Total run time boiler 1

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingActual.Cor_HB2TotalRT	R,4	382			Total run time boiler 2
HeatingActual.Cor_HB3TotalRT	R,4	383			Total run time boiler 3
HeatingActual.Cor_HB4TotalRT	R,4	384			Total run time boiler 4
HeatingActual.Cor_HB1NoOfStarts	R,4	385			Total number of starts, boiler 1
HeatingActual.Cor_HB2NoOfStarts	R,4	386			Total number of starts, boiler 2
HeatingActual.Cor_HB3NoOfStarts	R,4	387			Total number of starts, boiler 3
HeatingActual.Cor_HB4NoOfStarts	R,4	388			Total number of starts, boiler 4
HeatingActual.Cor_HB1ReturnTemp_Output	R,4	389	AV, 40389		Controller output HB1, return temp valve (0...100 %)
HeatingActual.Cor_HB2ReturnTemp_Output	R,4	390	AV, 40390		Controller output HB2, return temp valve (0...100 %)
HeatingActual.Cor_HB3ReturnTemp_Output	R,4	391	AV, 40391		Controller output HB3, return temp valve (0...100 %)
HeatingActual.Cor_HB4ReturnTemp_Output	R,4	392			Controller output HB4, return temp valve (0...100 %)
HeatingActual.Cor_HBPID_Output	R,4	393	AV, 40393		Controller output HB (0...100 %)
HeatingSettings.Cor_HB1MinRunTime	I,3	628		180	Minimum runtime before HB1 is allowed to stop again.
HeatingSettings.Cor_HB2MinRunTime	I,3	629		180	Minimum runtime before HB2 is allowed to stop again.
HeatingSettings.Cor_HB3MinRunTime	I,3	630		180	Minimum runtime before HB3 is allowed to stop again.
HeatingSettings.Cor_HB4MinRunTime	I,3	631		180	Minimum runtime before HB4 is allowed to stop again.
HeatingSettings.Cor_HB1MinStopTime	I,3	632		180	Minimum stop time before HB1 is allowed to start again.
HeatingSettings.Cor_HB2MinStopTime	I,3	633		180	Minimum stop time before HB2 is allowed to start again.
HeatingSettings.Cor_HB3MinStopTime	I,3	634		180	Minimum stop time before HB3 is allowed to start again.
HeatingSettings.Cor_HB4MinStopTime	I,3	635		180	Minimum stop time before HB4 is allowed to start again.
HeatingSettings.Cor_HB1ReturnTempSetP	R,3	636	AV, 30636	40	Setpoint return temp HB1
HeatingSettings.Cor_HB2ReturnTempSetP	R,3	637	AV, 30637	40	Setpoint return temp HB2
HeatingSettings.Cor_HB3ReturnTempSetP	R,3	638	AV, 30638	40	Setpoint return temp HB3
HeatingSettings.Cor_HB4ReturnTempSetP	R,3	639		40	Setpoint return temp HB4
HeatingSettings.Cor_HBSetPointHSdepending	R,3	640	AV, 30640	5	Offset (heating system setpoint-dependent).
HeatingSettings.Cor_HBHyst	R,3	641		0,5	Hysteresis for stopping/starting boilers
HeatingSettings.Cor_TPStartLimit	R,3	642	AV, 30642	18	Transport pump start limit
HeatingSettings.Cor_TPHyst	R,3	643	AV, 30643	1	Hysteresis for stopping the transport pump
HeatingSettings.Cor_HB1SD1	R,3	644	AV, 30644	5	HB1 switch difference 1
HeatingSettings.Cor_HB2SD1	R,3	645	AV, 30645	5	HB2 switch difference 1

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingSettings.Cor_HB3SD1	R,3	646	AV, 30646	5	HB3 switch difference 1
HeatingSettings.Cor_HB4SD1	R,3	647		5	HB4 switch difference 1
HeatingSettings.Cor_HB1SD2	R,3	648	AV, 30648	5	HB1 switch difference 2
HeatingSettings.Cor_HB2SD2	R,3	649	AV, 30649	5	HB2 switch difference 2
HeatingSettings.Cor_HB3SD2	R,3	650	AV, 30650	5	HB3 switch difference 2
HeatingSettings.Cor_HB4SD2	R,3	651		5	HB4 switch difference 2
HeatingSettings.Cor_HB1OffsetSD2	R,3	652	AV, 30652	3	HB1 offset switch diff. 2
HeatingSettings.Cor_HB2OffsetSD2	R,3	653	AV, 30653	3	HB2 offset switch diff. 2
HeatingSettings.Cor_HB3OffsetSD2	R,3	654	AV, 30654	3	HB3 offset switch diff. 2
HeatingSettings.Cor_HB4OffsetSD2	R,3	655		3	HB4 offset switch diff. 2
HeatingSettings.Cor_HB1VesselConf	X,3	658		1	Vessel configuration HB1 0= Off 1= Off/On 2= Off/Low/High 3= Modulation
HeatingSettings.Cor_HB2VesselConf	X,3	659		1	Vessel configuration HB2 (See list for vessel configuration HB1)
HeatingSettings.Cor_HB3VesselConf	X,3	660		1	Vessel configuration HB3 (See list for vessel configuration HB1)
HeatingSettings.Cor_HB4VesselConf	X,3	661		1	Vessel configuration HB4 (See list for vessel configuration HB1)
HeatingSettings.Cor_HBAlternateWDay	X,3	672		0	Weekday for boiler alternation: 0= No alternation 1= Monday 2= Tuesday 3= Wednesday 4= Thursday 5= Friday 6= Saturday 7= Sunday 8= Every day
HeatingSettings.Cor_HBAlternateHour	X,3	673		10	Hour for boiler alternation
HeatingSettings.Cor_HBPumpStartDelay	X,3	674		30	Pump running time before boiler start
HeatingSettings.Cor_HBPumpStopDelay	X,3	675		30	Pump running time after boiler stop
HeatingSettings.Cor_HBPumpExerciseHour	X,3	676		15	Boiler pump exercise hour
HeatingSettings.Cor_HBPumpExerciseTime	X,3	677		5	Boiler pump exercise time
HeatingSettings.Cor_HB1ExerciseNoOfWeeks	X,3	678		4	Boiler 1 exercising every XX week (0-4)
HeatingSettings.Cor_HB2ExerciseNoOfWeeks	X,3	679		4	Boiler 2 exercising every XX week (0-4)
HeatingSettings.Cor_HB3ExerciseNoOfWeeks	X,3	680		4	Boiler 3 exercising every XX week (0-4)
HeatingSettings.Cor_HB4ExerciseNoOfWeeks	X,3	681		4	Boiler 4 exercising every XX week (0-4)

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingSettings.Cor_HB1ExerciseWDay	X,3	682		7	Boiler 1 exercise weekday: 1= Monday 2= Tuesday 3= Wednesday 4= Thursday 5= Friday 6= Saturday 7= Sunday
HeatingSettings.Cor_HB2ExerciseWDay	X,3	683		7	Boiler 2 exercise weekday (see list for boiler 1)
HeatingSettings.Cor_HB3ExerciseWDay	X,3	684		7	Boiler 3 exercise weekday (see list for boiler 1)
HeatingSettings.Cor_HB4ExerciseWDay	X,3	685		7	Boiler 4 exercise weekday (see list for boiler 1)
HeatingSettings.Cor_HB1ExerciseHour	X,3	686		15	Boiler 1 exercising hour
HeatingSettings.Cor_HB2ExerciseHour	X,3	687		15	Boiler 2 exercising hour
HeatingSettings.Cor_HB3ExerciseHour	X,3	688		15	Boiler 3 exercising hour
HeatingSettings.Cor_HB4ExerciseHour	X,3	689		15	Boiler 4 exercising hour
HeatingSettings.Cor_HB1ExerciseTime	X,3	690		5	Time for exercising Boiler 1
HeatingSettings.Cor_HB2ExerciseTime	X,3	691		5	Time for exercising Boiler 2
HeatingSettings.Cor_HB3ExerciseTime	X,3	692		5	Time for exercising Boiler 3
HeatingSettings.Cor_HB4ExerciseTime	X,3	693		5	Time for exercising Boiler 4
HeatingSettings.Cor_NoOfBoilers	X,3	694		0	Number of active boilers
HeatingSettings.Cor_HB1StartMode	X,3	695		1	Start mode HB1: 0= Alternate 1= Fixed 1 2= Fixed 2 3= Fixed 3 4= Fixed 4 5= Run time controlled
HeatingSettings.Cor_HB2StartMode	X,3	696		2	Start mode HB2: (See list for HB1)
HeatingSettings.Cor_HB3StartMode	X,3	697		3	Start mode HB3: (See list for HB1)
HeatingSettings.Cor_HB4StartMode	X,3	698		4	Start mode HB4: (See list for HB1)
HeatingSettings.Cor_HBCurve_X1	I,3	699		- 20°C	Outdoor temp for first curve point for outdoor compensated setpoint HB1
HeatingSettings.Cor_HBCurve_X2	I,3	700		- 15°C	Outdoor temp for first curve point for outdoor compensated setpoint HB2
HeatingSettings.Cor_HBCurve_X3	I,3	701		- 10°C	Outdoor temp for first curve point for outdoor compensated setpoint HB3
HeatingSettings.Cor_HBCurve_X4	I,3	702		-5°C	Outdoor temp for first curve point for outdoor compensated setpoint HB4
HeatingSettings.Cor_HBCurve_X5	I,3	703		0°C	Outdoor temp for first curve point for outdoor compensated setpoint HB5

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingSettings.Cor_HBCurve_X6	I,3	704		5°C	Outdoor temp for first curve point for outdoor compensated setpoint HB6
HeatingSettings.Cor_HBCurve_X7	I,3	705		10°C	Outdoor temp for first curve point for outdoor compensated setpoint HB7
HeatingSettings.Cor_HBCurve_X8	I,3	706		15°C	Outdoor temp for first curve point for outdoor compensated setpoint HB8
HeatingSettings.Cor_HBCurve_Y1	I,3	707		67°C	Setpoint for first curve point for outdoor compensated setpoint HB1
HeatingSettings.Cor_HBCurve_Y2	I,3	708		63°C	Setpoint for first curve point for outdoor compensated setpoint HB2
HeatingSettings.Cor_HBCurve_Y3	I,3	709		59°C	Setpoint for first curve point for outdoor compensated setpoint HB3
HeatingSettings.Cor_HBCurve_Y4	I,3	710		55°C	Setpoint for first curve point for outdoor compensated setpoint HB4
HeatingSettings.Cor_HBCurve_Y5	I,3	711		53°C	Setpoint for first curve point for outdoor compensated setpoint HB5
HeatingSettings.Cor_HBCurve_Y6	I,3	712		43°C	Setpoint for first curve point for outdoor compensated setpoint HB6
HeatingSettings.Cor_HBCurve_Y7	I,3	713		35°C	Setpoint for first curve point for outdoor compensated setpoint HB7
HeatingSettings.Cor_HBCurve_Y8	I,3	714		25°C	Setpoint for first curve point for outdoor compensated setpoint HB8
HeatingSettings.Cor_BoilerSetPCtrl	X,3	715		0	Type of HB setpoint: 0= Constant setpoint 1= HS depending 2= HS & HW depending 3= HS & HP depending 4= HS & HW & HP depending 5= Outdoor comp. setp.
HeatingSettings.Cor_BoilerReturnTempLow	R,3	716		30	If boiler return temp is lower, blocks the supply valves.
HeatingSettings.Cor_BoilerReturnTempHyst	R,3	717		5	Hysteresis when supply valves is blocked before opening
HeatingActual.Cor_HBSupplyTemp	R,4	394	AV, 40394		Boiler supply temperature
HeatingActual.Cor_HB1ReturnTemp(0)	R,4	395	AV, 40395		Return temperature boiler 1
HeatingActual.Cor_HB2ReturnTemp	R,4	396	AV, 40396		Return temperature boiler 2
HeatingActual.Cor_HB3ReturnTemp	R,4	397	AV, 40397		Return temperature boiler 3
HeatingActual.Cor_HB4ReturnTemp	R,4	398			Return temperature boiler 4
HeatingActual.Cor_HB1Vessel(0)	R,4	401			Control signal modulating boiler 1 (0...10 V)
HeatingActual.Cor_HB2Vessel	R,4	402			Control signal modulating boiler 2 (0...10 V)
HeatingActual.Cor_HB3Vessel	R,4	403			Control signal modulating boiler 3 (0...10 V)
HeatingActual.Cor_HB4Vessel	R,4	404			Control signal modulating boiler 4 (0...10 V)

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingActual.Cor_HBReturnTCV1(0)	R,4	405			Return temp CV boiler 1 (0...10 V)
HeatingActual.Cor_HBReturnTCV2	R,4	406			Return temp CV boiler 2 (0...10 V)
HeatingActual.Cor_HBReturnTCV3	R,4	407			Return temp CV boiler 3 (0...10 V)
HeatingActual.Cor_HBReturnTCV4	R,4	408			Return temp CV boiler 4 (0...10 V)
HeatingActual.Cor_HBPID_SetP	R,4	409	AV, 40409		HB Actual setpoint (HS-dependent or outdoor compensated)
HeatingActual.Cor_HBPID_Input	R,4	412	AV, 40412		Supply temperature HB
HeatingActual.Cor_TPStartB	L,2	293			Start transport pump B
HeatingActual.Cor_HeatDemandTemp	R,4	442			Heat demand setpoint
HeatingActual.Cor_HB1SupplyTemp	R,4	445			Boiler 1 supply temp
HeatingActual.Cor_HB2SupplyTemp	R,4	446			Boiler 2 supply temp
HeatingActual.Cor_HB3SupplyTemp	R,4	447			Boiler 3 supply temp
HeatingActual.Cor_HB4SupplyTemp	R,4	448			Boiler 4 supply temp
HeatingSettings.Cor_HBControl	X,3	607			Type of boiler control

## 2.9. Extra circuit

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingActual.Cor_ExtCircSensor1	R,4	399	AV, 40399		Extra control circuit Sensor 1
HeatingActual.Cor_ExtCircSensor2	R,4	400	AV, 40400		Extra control circuit Sensor 2
HeatingActual.Cor_ExtCircPumpStart	L,2	269	BV, 20269		Starting the extra circuit pump
HeatingSettings.Cor_ExtCircHyst	R,3	734	AV, 30734	5	Start pump if S1 > S2 + hyst. °C

## 2.10. Cooling system (CS1)

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingSettings.Cor_CS1_SetPoint	R,3	606	AV, 30606	13	Setpoint CS1
HeatingActual.Cor_CS1PID_Input	R,4	342	AV, 40342		Supply temperature CS1
HeatingActual.Cor_CS1PID_SetP	R,4	343	AV, 40343		Setpoint supply temperature CS1 dewpoint compensated

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingActual.Cor_CS1RoomTemp	R,4	344	AV, 40344		Room temperature CS1
HeatingActual.Cor_CS1ReturnTemp	R,4	345	AV, 40345		Return temperature CS1
HeatingActual.Cor_CS1PID_Output	R,4	348	AV, 40348		Controller output CS1 (0...100 %)
HeatingActual.Cor_CS1CV1	R,4	349			Control signal CS1 CV (0...10 V)
HeatingActual.Cor_RH	R,4	357	AV, 40357		Humidity
HeatingActual.Cor_CS1PumpAStart	L,2	238			Start signal pump CS1 P1A
HeatingActual.Cor_CS1PumpBStart	L,2	239			Start signal pump CS1 P1B
HeatingActual.Cor_CS1PumpARun	L,2	240	BV, 20240		Is set if running pump CS1 P1A
HeatingActual.Cor_CS1PumpBRun	L,2	241	BV, 20241		Is set if running pump CS1 P1B
HeatingSettings.Cor_CS1PumpDayLimit(0)	R,3	604		17 °C	Outdoor temp for pump stop day CS1
HeatingSettings.Cor_CS1PumpNightLimit(0)	R,3	605		17 °C	Outdoor temp for pump stop night CS1
HeatingSettings.Cor_CS1ParallelTransfer	R,3	538		0 °C	Parallel adjustment of setpoint curve CS1
HeatingSettings.Cor_CS1Curve_X1	I,3	539		20 °C	Outdoor temp for first curve point for outdoor compensated setpoint CS1
HeatingSettings.Cor_CS1Curve_X2	I,3	540		22 °C	Outdoor temp for second curve point for outdoor compensated setpoint CS1
HeatingSettings.Cor_CS1Curve_X3	I,3	541		24 °C	Outdoor temp for third curve point for outdoor compensated setpoint CS1
HeatingSettings.Cor_CS1Curve_X4	I,3	542		26 °C	Outdoor temp for fourth curve point for outdoor compensated setpoint CS1
HeatingSettings.Cor_CS1Curve_X5	I,3	543		28 °C	Outdoor temp for fifth curve point for outdoor compensated setpoint CS1
HeatingSettings.Cor_CS1Curve_X6	I,3	544		30 °C	Outdoor temp for sixth curve point for outdoor compensated setpoint CS1
HeatingSettings.Cor_CS1Curve_X7	I,3	545		32 °C	Outdoor temp for seventh curve point for outdoor compensated setpoint CS1
HeatingSettings.Cor_CS1Curve_X8	I,3	546		34 °C	Outdoor temp for eighth curve point for outdoor compensated setpoint CS1
HeatingSettings.Cor_CS1Curve_Y1	I,3	547		15 °C	Setpoint for first curve point for outdoor compensated setpoint CS1
HeatingSettings.Cor_CS1Curve_Y2	I,3	548		14 °C	Setpoint for second curve point for outdoor compensated setpoint CS1
HeatingSettings.Cor_CS1Curve_Y3	I,3	549		13 °C	Setpoint for third curve point for outdoor compensated setpoint CS1
HeatingSettings.Cor_CS1Curve_Y4	I,3	550		12 °C	Setpoint for fourth curve point for outdoor compensated setpoint CS1
HeatingSettings.Cor_CS1Curve_Y5	I,3	551		12 °C	Setpoint for fifth curve point for outdoor compensated setpoint CS1
HeatingSettings.Cor_CS1Curve_Y6	I,3	552		11 °C	Setpoint for sixth curve point for outdoor compensated setpoint CS1
HeatingSettings.Cor_CS1Curve_Y7	I,3	553		10 °C	Setpoint for seventh curve point for outdoor compensated setpoint CS1
HeatingSettings.Cor_CS1Curve_Y8	I,3	554		9 °C	Setpoint for eighth curve point for outdoor compensated setpoint CS1



Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingSettings.Cor_CS1RoomSetP	I,3	555		21 °C	Setpoint room temperature CS1
HeatingActual.Cor_DewpointTemp_Output	R,4	413			Calculated dewpoint temp

## 2.11. Difference pressure control (DP)

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingActual.Cor_DP	R,4	19			Difference pressure (kPa)
HeatingSettings.Cor_DPSetpoint	R,3	60		50 kPa	Setpoint difference pressure
HeatingActual.Cor_FrequencyStart	L,2	111			Start signal Frequencer
HeatingActual.Cor_DPCV1	R,4	158			Control signal Frequencer (0...10 V)
HeatingActual.Cor_DPPID_Output	R,4	165	AV, 40165		Controller output Frequencer (0...100 %)

## 2.12. Wind speed

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingActual.Cor_Windspeed	R,4	20			Wind speed (m/s)
HeatingSettings.Cor_WindScale	R,3	61		1 m/s/V	Scale factor for wind speed meter
HeatingSettings.Cor_HS1WindComp	R,3	62		0°C/m/s	Wind compensation HS1
HeatingSettings.Cor_HS2WindComp	R,3	63		0°C/m/s	Wind compensation HS2
HeatingSettings.Cor_HS3WindComp	R,3	64		0°C/m/s	Wind compensation HS3

# Chapter 4 Energy/Cold water

## 3.1. Heating meter

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingActual.Cor_EnergyConsumptionMWh	R,3	65			Energy total (MWh)
HeatingActual.Cor_WaterConsumptionm3	R,3	66			Hot water total (m3)
HeatingActual.Cor_EnergyConsumptionToday	R,4	21			Energy today (kWh)
HeatingActual.Cor_EnergyConsumptionYesterday	R,4	22			Energy yesterday (kWh)
HeatingActual.Cor_EnergyConsumptionBeforYesterday	R,4	23			Energy day before yesterday (kWh)
HeatingActual.Cor_WaterConsumptionToday	R,4	24			Usage today (l)
HeatingActual.Cor_WaterConsumptionYesterday	R,4	25			Usage yesterday (l)
HeatingActual.Cor_WaterConsumptionBeforYesterday	R,4	26			Usage day before yesterday (l)
HeatingActual.Cor_EnergyEffect	R,4	27			Power usage instant (kW)
HeatingActual.Cor_EnergyEffectAverage	R,4	28			Power usage average
HeatingActual.Cor_EnergyEffectAverageMax	R,4	29			Power usage max average

## 3.2. Cold water meter 1 (CW1)

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingActual.Cor_CW1Consumptionm3	R,3	67			Cold water 1 usage total (m3)
HeatingActual.Cor_CW1Flow	R,4	30			Cold water 1 flow (l/min)
HeatingActual.Cor_CW1ConsumptionToday	R,4	31			Cold water 1 usage today (m3)
HeatingActual.Cor_CW1ConsumptionYesterday	R,4	32			Cold water 1 usage yesterday (m3)
HeatingActual.Cor_CW1ConsumptionBeforYesterday	R,4	33			Cold water 1 usage day before yesterday (m3)
HeatingActual.Cor_CW1LowestConsumptionToday	R,4	34			Lowest cold water 1 usage today (l/h)
HeatingActual.Cor_CW1LowestConsumptionYesterday	R,4	35			Lowest cold water 1 usage yesterday (l/h)

### 3.3. Cold water meter 2 (CW2)

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingActual.Cor_CW2Consumptionm3	R,3	68			Cold water 2 usage total (m3)
HeatingActual.Cor_CW2Flow	R,4	36			Cold water 2 flow (l/min)
HeatingActual.Cor_CW2ConsumptionToday	R,4	37			Cold water 2 usage today (m3)
HeatingActual.Cor_CW2ConsumptionYesterday	R,4	38			Cold water 2 usage yesterday (m3)
HeatingActual.Cor_CW2ConsumptionBeforYesterday	R,4	39			Cold water 2 usage day before yesterday (m3)
HeatingActual.Cor_CW2LowestConsumptionToday	R,4	40			Lowest cold water 2 usage today (l/h)
HeatingActual.Cor_CW2LowestConsumptionYesterday	R,4	41			Lowest cold water 2 usage yesterday (l/h)

### 3.4. Electricity meter

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingActual.Cor_ElectricConsumptionMWh	R,3	69			Energy total (MWh)

### 3.5. Leakage monitoring

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingActual.Cor_Leak	R,4	42			Leakage power (kW)

### 3.6. District heat meter M-Bus

Signal name	Type	Modbus address	BACnet	Default value	Description
MeterDat.Pages(1).TempForw	R,4	367	AV, 40367		Supply temperature (°C)
MeterDat.Pages(1).TempRet	R,4	368	AV, 40368		Return Temperature (°C)
MeterDat.Pages(1).Energy	R,4	369	AV, 40369		Energy (Mwh)
MeterDat.Pages(1).Power	R,4	370	AV, 40370		Power (Kw)
MeterDat.Pages(1).Volume	R,4	371	AV, 40371		Volume (m3)
MeterDat.Pages(1).Flow	R,4	372	AV, 40372		Flow (l/m)

### 3.7. Water meter 1 M-Bus

Signal name	Type	Modbus address	BACnet	Default value	Description
MeterDat.Pages(2).Volume	R,4	373			Volume (m3)
MeterDat.Pages(2).Flow	R,4	374			Flow (l/m)

### 3.8. Water meter 2 M-Bus

Signal name	Type	Modbus address	BACnet	Default value	Description
MeterDat.Pages(3).Volume	R,4	375			Volume (m3)
MeterDat.Pages(3).Flow	R,4	376			Flow (l/m)

# Chapter 5 Input/Output

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## 4.1. Analogue inputs

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingActual.Cor_AnalogInput1(0)	R,4	43			The scaled and filtered value of AI1
HeatingActual.Cor_AnalogInput2	R,4	44			The scaled and filtered value of AI2
HeatingActual.Cor_AnalogInput3	R,4	45			The scaled and filtered value of AI3
HeatingActual.Cor_AnalogInput4	R,4	46			The scaled and filtered value of AI4

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingSettings.Cor_Ai1(0)	X,4	51			Connected signal on AI1: 0 = Disable 1 = Outdoor temp 2 = HS1 supply temperature 3 = HS2 supply temperature 4 = HS3 supply temperature 5 = CS1 supply temperature 6 = HW1 supply temperature 7 = HW2 supply temperature 8 = HP1 supply temperature 9 = HS1 room temperature 10 = HS2 room temperature 11 = HS3 room temperature 12 = CS1 room temperature 1 = PT1000 13 = CS1 room temperature 2 = 0...10 V 14 = HS1 return temperature 15 = HS2 return temperature 16 = HS3 return temperature 17 = CS1 return temperature 18 = HW1 return temperature 19 = HP1 return temperature 20 = Wind speed 21 = Differential pressure 22 = Boiler temperature (not used in v. 3.2) 23 = Boiler return temperature 24 = RH 25 = HP supply temperature 26 = HP return temperature 27 = CP supply temperature 28 = CP return temperature 29 = Extra sensor temp 1 30 = Extra sensor temp 2 31 = Extra sensor temp 3 32 = Extra sensor temp 4 33 = Extra sensor temp 5 34 = HB supply temp 35 = HB1 return temp 36 = HB2 return temp 37 = HB3 return temp 38 = HB4 return temp 39 = Extra circuit sensor 1 40 = Extra circuit sensor 2
HeatingSettings.Cor_Ai2	X,4	52			Connected signal on AI2: (See signal list for AI1)
HeatingSettings.Cor_Ai3	X,4	53			Connected signal on AI3: (See signal list for AI1)
HeatingSettings.Cor_Ai4	X,4	54			Connected signal on AI4: (See signal list for AI1)
HeatingActual.Cor_ExpAnalogInput(0)	R,4	252			The scaled and filtered value of EXP1 AI1
HeatingActual.Cor_ExpAnalogInput(1)	R,4	253			The scaled and filtered value of EXP1 AI2
HeatingActual.Cor_ExpAnalogInput(2)	R,4	254			The scaled and filtered value of EXP1 AI3
HeatingActual.Cor_ExpAnalogInput(3)	R,4	255			The scaled and filtered value of EXP1 AI4
HeatingActual.Cor_ExpAnalogInput(8)	R,4	260			The scaled and filtered value of EXP2 AI1
HeatingActual.Cor_ExpAnalogInput(9)	R,4	261			The scaled and filtered value of EXP2 AI2

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingActual.Cor_ExpAnalogInput(10)	R,4	262			The scaled and filtered value of EXP2 AI13
HeatingActual.Cor_ExpAnalogInput(11)	R,4	263			The scaled and filtered value of EXP2 AI4
HeatingSettings.Cor_ExpAi(0)	X,4	268			Connected signal on EXP1 AI1: (See signal list for AI1)
HeatingSettings.Cor_ExpAi(1)	X,4	269			Connected signal on EXP1 AI2: (See signal list for AI1)
HeatingSettings.Cor_ExpAi(2)	X,4	270			Connected signal on EXP1 AI3: (See signal list for AI1)
HeatingSettings.Cor_ExpAi(3)	X,4	271			Connected signal on EXP1 AI4: (See signal list for AI1)
HeatingSettings.Cor_ExpAi(8)	X,4	276			Connected signal on EXP2 AI1: (See signal list for AI1)
HeatingSettings.Cor_ExpAi(9)	X,4	277			Connected signal on EXP2 AI2: (See signal list for AI1)
HeatingSettings.Cor_ExpAi(10)	X,4	278			Connected signal on EXP2 AI3: (See signal list for AI1)
HeatingSettings.Cor_ExpAi(11)	X,4	279			Connected signal on EXP2 AI4: (See signal list for AI1)

## 4.2. Digital inputs

Signal name	Type	Modbus address	BACnet	Default value	Description
QDig.DI1	L,2	19			Value of DI1
QDig.DI2	L,2	20			Value of DI2
QDig.DI3	L,2	21			Value of DI3
QDig.DI4	L,2	22			Value of DI4
QDig.DI5	L,2	23			Value of DI5
QDig.DI6	L,2	24			Value of DI6
QDig.DI7	L,2	25			Value of DI7
QDig.DI8	L,2	26			Value of DI8
InputOutput.Exp1DigIn1	L,2	199			Value of EXP1 DI1
InputOutput.Exp1DigIn2	L,2	200			Value of EXP1 DI2
InputOutput.Exp1DigIn3	L,2	201			Value of EXP1 DI3
InputOutput.Exp1DigIn4	L,2	202			Value of EXP1 DI4
InputOutput.Exp1DigIn5	L,2	203			Value of EXP1 DI5
InputOutput.Exp1DigIn6	L,2	204			Value of EXP1 DI6
InputOutput.Exp1DigIn7	L,2	205			Value of EXP1 DI7
InputOutput.Exp1DigIn8	L,2	206			Value of EXP1 DI8
InputOutput.Exp2DigIn1	L,2	218			Value of EXP2 DI1
InputOutput.Exp2DigIn2	L,2	219			Value of EXP2 DI2
InputOutput.Exp2DigIn3	L,2	220			Value of EXP2 DI3
InputOutput.Exp2DigIn4	L,2	221			Value of EXP2 DI4
InputOutput.Exp2DigIn5	L,2	222			Value of EXP2 DI5

Signal name	Type	Modbus address	BACnet	Default value	Description
InputOutput.Exp2DigIn6	L,2	223			Value of EXP2 DI6
InputOutput.Exp2DigIn7	L,2	224			Value of EXP2 DI7
InputOutput.Exp2DigIn8	L,2	225			Value of EXP2 DI8
HeatingSettings.Cor_Di1(0)	X,4	59			Connected signal on DI1: 0 = Disable 1 = HS1 pump A 2 = HS1 pump B 3 = HS2 pump A 4 = HS2 pump B 5 = HS3 pump A 6 = HS3 pump B 7 = CS1 pump A 8 = CS1 pump B 9 = HW1 pump 10 = HP1 pump 11 = Frequency 12 = Expansion vessel 13 = External alarm 14 = Boiler alarm 15 = External effect limit 16 = Water pulse 17 = Energy pulse 18 = CW1 pulse 19 = CW2 pulse 20 = Electric pulse 21 = CS1 start 22 = HB1 23 = HB2 24 = HB3 25 = HB4 26 = HB1 pump 27 = HB2 pump 28 = HB3 pump 29 = HB4 pump 30 = Transport pump 31 = HB external stop 32 = Pressure 33 = Extra circuit pump
HeatingSettings.Cor_Di2	X,4	60			Connected signal on DI2: (See signal list for DI1)
HeatingSettings.Cor_Di3	X,4	61			Connected signal on DI3: (See signal list for DI1)
HeatingSettings.Cor_Di4	X,4	62			Connected signal on DI4: (See signal list for DI1)
HeatingSettings.Cor_Di5	X,4	63			Connected signal on DI5: (See signal list for DI1)
HeatingSettings.Cor_Di6	X,4	64			Connected signal on DI6: (See signal list for DI1)
HeatingSettings.Cor_Di7	X,4	65			Connected signal on DI7: (See signal list for DI1)
HeatingSettings.Cor_Di8	X,4	66			Connected signal on DI8: (See signal list for DI1)
HeatingSettings.Cor_ExpDi(0)	X,4	284			Connected signal on EXP1 DI1:
HeatingSettings.Cor_ExpDi(1)	X,4	285			Connected signal on EXP1 DI2:
HeatingSettings.Cor_ExpDi(2)	X,4	286			Connected signal on EXP1 DI3:
HeatingSettings.Cor_ExpDi(3)	X,4	287			Connected signal on EXP1 DI4:



Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingSettings.Cor_ExpDi(4)	X,4	288			Connected signal on EXP1 DI5:
HeatingSettings.Cor_ExpDi(5)	X,4	289			Connected signal on EXP1 DI6:
HeatingSettings.Cor_ExpDi(6)	X,4	290			Connected signal on EXP1 DI7:
HeatingSettings.Cor_ExpDi(7)	X,4	291			Connected signal on EXP1 DI8:
HeatingSettings.Cor_ExpDi(12)	X,4	296			Connected signal on EXP2DI1:
HeatingSettings.Cor_ExpDi(13)	X,4	297			Connected signal on EXP2DI2:
HeatingSettings.Cor_ExpDi(14)	X,4	298			Connected signal on EXP2DI3:
HeatingSettings.Cor_ExpDi(15)	X,4	299			Connected signal on EXP2DI4:
HeatingSettings.Cor_ExpDi(16)	X,4	300			Connected signal on EXP2DI5:
HeatingSettings.Cor_ExpDi(17)	X,4	301			Connected signal on EXP2DI6:
HeatingSettings.Cor_ExpDi(18)	X,4	302			Connected signal on EXP2DI7:
HeatingSettings.Cor_ExpDi(19)	X,4	303			Connected signal on EXP2DI8:

### 4.3. Universal inputs

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingActual.Cor_AnalogInput5	R,4	47			The scaled and filtered value of UAI1
HeatingActual.Cor_AnalogInput6	R,4	48			The scaled and filtered value of UAI2
HeatingActual.Cor_AnalogInput7	R,4	49			The scaled and filtered value of UAI3
HeatingActual.Cor_AnalogInput8	R,4	50			The scaled and filtered value of UAI4
HeatingActual.Cor_ExpAnalogInput(4)	R,4	256			The scaled and filtered value of EXP1 UAI1
HeatingActual.Cor_ExpAnalogInput(5)	R,4	257			The scaled and filtered value of EXP1 UAI2
HeatingActual.Cor_ExpAnalogInput(6)	R,4	258			The scaled and filtered value of EXP1 UAI3
HeatingActual.Cor_ExpAnalogInput(7)	R,4	259			The scaled and filtered value of EXP1 UAI4
HeatingActual.Cor_ExpAnalogInput(12)	R,4	264			The scaled and filtered value of EXP2 UAI1
HeatingActual.Cor_ExpAnalogInput(13)	R,4	265			The scaled and filtered value of EXP2 UAI2
HeatingActual.Cor_ExpAnalogInput(14)	R,4	266			The scaled and filtered value of EXP2 UAI3
HeatingActual.Cor_ExpAnalogInput(15)		267			The scaled and filtered value of EXP2 UAI4

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingSettings.Cor_UAi1	X,4	55			Connected signal on UAI1: 0 = Disable 1 = Outdoor temp 2 = HS1 supply temperature 3 = HS2 supply temperature 4 = HS3 supply temperature 5 = CS1 supply temperature 6 = HW1 supply temperature 7 = HW2 supply temperature 8 = HP1 supply temperature 9 = HS1 room temperature 10 = HS2 room temperature 11 = HS3 room temperature 12 = CS1 room temperature1 = PT1000 13 = CS1 room temperature2 = 0...10 V 14 = HS1 return temperature 15 = HS2 return temperature 16 = HS3 return temperature 17 = CS1 return temperature 18 = HW1 return temperature 19 = HP1 return temperature 20 = Wind speed 21 = Differential pressure 22 = Boiler temperature (not used in v. 3.2) 23 = Boiler return temperature 24 = RH 25 = HP supply temperature 26 = HP return temperature 27 = CP supply temperature 28 = CP return temperature 29 = Extra sensor temp 1 30 = Extra sensor temp 2 31 = Extra sensor temp 3 32 = Extra sensor temp 4 33 = Extra sensor temp 5 34 = HB supply temp 35 = HB1 return temp 36 = HB2 return temp 37 = HB3 return temp 38 = HB4 return temp 39 = Extra circuit sensor 1 40 = Extra circuit sensor 2
HeatingSettings.Cor_UAi2	X,4	56			Connected signal on UAI2: (See signal list for UAI1)
HeatingSettings.Cor_UAi3	X,4	57			Connected signal on UAI3: (See signal list for UAI1)
HeatingSettings.Cor_UAi4	X,4	58			Connected signal on UAI4: (See signal list for UAI1)
HeatingSettings.Cor_ExpAi(4)	X,4	272			Connected signal on EXP1 UAI1: (See signal list for UAI1)
HeatingSettings.Cor_ExpAi(5)	X,4	273			Connected signal on EXP1 UAI2: (See signal list for UAI1)

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingSettings.Cor_ExpAi(6)	X,4	274			Connected signal on EXP1 UAI3: (See signal list for UAI1)
HeatingSettings.Cor_ExpAi(7)	X,4	275			Connected signal on EXP1 UAI4: (See signal list for UAI1)
HeatingSettings.Cor_ExpAi(12)	X,4	280			Connected signal on EXP2 UAI1: (See signal list for UAI1)
HeatingSettings.Cor_ExpAi(13)	X,4	281			Connected signal on EXP2 UAI2: (See signal list for UAI1)
HeatingSettings.Cor_ExpAi(14)	X,4	282			Connected signal on EXP2 UAI3: (See signal list for UAI1)
HeatingSettings.Cor_ExpAi(15)	X,4	283			Connected signal on EXP2 UAI4: (See signal list for UAI1)
QDig.DI9	L,2	27			Value of UDI1
QDig.DI10	L,2	28			Value of UDI2
QDig.DI11	L,2	29			Value of UDI3
QDig.DI12	L,2	30			Value of UDI4
InputOutput.Exp1DigIn9	L,2	207			Value of EXP1 UDI1
InputOutput.Exp1DigIn10	L,2	208			Value of EXP1 UDI2
InputOutput.Exp1DigIn11	L,2	209			Value of EXP1 UDI3
InputOutput.Exp1DigIn12	L,2	210			Value of EXP1 UDI4
InputOutput.Exp2DigIn9	L,2	226			Value of EXP2 UDI1
InputOutput.Exp2DigIn10	L,2	227			Value of EXP2 UDI2
InputOutput.Exp2DigIn11	L,2	228			Value of EXP2 UDI3
InputOutput.Exp2DigIn12	L,2	229			Value of EXP2 UDI4

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingSettings.Cor_UDi1	X,4	67			Connected signal on UDI1: 0 = Disable 1 = HS1 Pump A 2 = HS1 Pump B 3 = HS2 Pump A 4 = HS2 Pump B 5 = HS3 Pump A 6 = HS3 Pump B 7 = CS1 Pump A 8 = CS1 Pump B 9 = HW1 Pump 10 = HP1 Pump 11 = Frequency 12 = Expansion Vessel 13 = External Alarm 14 = Boiler Alarm 15 = External Effect limit 16 = Water Pulse 17 = Energy Pulse 18 = CW1 Pulse 19 = CW2 Pulse 20 = Electric Pulse 21 = CS1 Start 22 = HB1 23 = HB2 24 = HB3 25 = HB4 26 = HB1 Pump 27 = HB2 Pump 28 = HB3 Pump 29 = HB4 Pump 30 = Transport Pump 31 = HB External Stop 32 = Pressure 33 = Extra Circuit Pump
HeatingSettings.Cor_UDi2	X,4	68			Connected signal on UDI2: (See signal list for UDI1)
HeatingSettings.Cor_UDi3	X,4	69			Connected signal on UDI3: (See signal list for UDI1)
HeatingSettings.Cor_UDi4	X,4	70			Connected signal on UDI4: (See signal list for UDI1)
HeatingSettings.Cor_ExpDi(8)	X,4	292			Connected signal on EXP1 DI1: (See signal list for UDI1)
HeatingSettings.Cor_ExpDi(9)	X,4	293			Connected signal on EXP1 DI2: (See signal list for UDI1)
HeatingSettings.Cor_ExpDi(10)	X,4	294			Connected signal on EXP1 DI3: (See signal list for UDI1)
HeatingSettings.Cor_ExpDi(11)	X,4	295			Connected signal on EXP1 DI4: (See signal list for UDI1)
HeatingSettings.Cor_ExpDi(20)	X,4	304			Connected signal on EXP2 UDI1:(See signal list for UDI1)

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingSettings.Cor_ExpDi(21)	X,4	305			Connected signal on EXP2 UDI2: (See signal list for UDI1)
HeatingSettings.Cor_ExpDi(22)	X,4	306			Connected signal on EXP2 UDI3: (See signal list for UDI1)
HeatingSettings.Cor_ExpDi(23)	X,4	307			Connected signal on EXP2 UDI4: (See signal list for UDI1)

#### 4.4. Analogue outputs

Signal name	Type	Modbus address	BACnet	Default value	Description
QanaOut.AQ1	R,4	71			Value of AO1
QanaOut.AQ2	R,4	72			Value of AO2
QanaOut.AQ3	R,4	73			Value of AO3
QanaOut.AQ4	R,4	74			Value of AO4
QanaOut.AQ5	R,4	75			Value of AO5
InputOutput.Exp1AnaOut1	R,4	308			Value of EXP1 AO1
InputOutput.Exp1AnaOut2	R,4	309			Value of EXP1 AO2
InputOutput.Exp1AnaOut3	R,4	310			Value of EXP1 AO3
InputOutput.Exp1AnaOut4	R,4	311			Value of EXP1 AO4
InputOutput.Exp1AnaOut5	R,4	312			Value of EXP1 AO5
InputOutput.Exp2AnaOut1	R,4	313			Value of EXP2 AO1
InputOutput.Exp2AnaOut2	R,4	314			Value of EXP2 AO2
InputOutput.Exp2AnaOut3	R,4	315			Value of EXP2 AO3
InputOutput.Exp2AnaOut4	R,4	316			Value of EXP2 AO4
InputOutput.Exp2AnaOut5	R,4	317			Value of EXP2 AO5

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingSettings.Cor_Ao1(0)	X,4	76			Connected signal on AO1: 0=Not used 1=HS1 Actuator 2=HS2 Actuator 3=HS3 Actuator 4=CS1 Actuator 5=HW1 Actuator 6=HW2 Actuator 7=Pressure Act. 8=Sequence control of configured valve HS1-HP1 9=Boiler 1 (Vessel 1 = modulating control) 10=Boiler 2 (Vessel 2 = modulating control) 11=Boiler 3 (Vessel 3 = modulating control) 12 = Boiler 4 (Vessel 4 = modulating control) 13 = Boiler 1 return valve 14 = Boiler 2 return valve 15 = Boiler 3 return valve 16 = Boiler 4 return valve
HeatingSettings.Cor_Ao2	X,4	77			Connected signal on AO2: (See signal list for AO1)
HeatingSettings.Cor_Ao3	X,4	78			Connected signal on AO3: (See signal list for AIO)
HeatingSettings.Cor_Ao4	X,4	79			Connected signal on AO4: (See signal list for AO1)
HeatingSettings.Cor_Ao5	X,4	80			Connected signal on AO5: (See signal list for AO1)
HeatingSettings.Cor_ExpAo(0)	X,4	318			Connected signal on EXP1 AO1: (See signal list for AO1)
HeatingSettings.Cor_ExpAo(1)	X,4	319			Connected signal on EXP1 AO2: (See signal list for AO1)
HeatingSettings.Cor_ExpAo(2)	X,4	320			Connected signal on EXP1 AO3: (See signal list for AO1)
HeatingSettings.Cor_ExpAo(3)	X,4	321			Connected signal on EXP1 AO4: (See signal list for AO1)
HeatingSettings.Cor_ExpAo(4)	X,4	322			Connected signal on EXP1 AO5: (See signal list for AO1)
HeatingSettings.Cor_ExpAo(5)	X,4	323			Connected signal on EXP2 AO1: (See signal list for AO1)
HeatingSettings.Cor_ExpAo(6)	X,4	324			Connected signal on EXP2 AO2: (See signal list for AO1)
HeatingSettings.Cor_ExpAo(7)	X,4	325			Connected signal on EXP2 AO3: (See signal list for AO1)
HeatingSettings.Cor_ExpAo(8)	X,4	326			Connected signal on EXP2 AO4: (See signal list for AO1)
HeatingSettings.Cor_ExpAo(9)	X,4	327			Connected signal on EXP2 AO5: (See signal list for AO1)

## 4.5. Digital outputs

Signal name	Type	Modbus address	BACnet	Default value	Description
QDig.Dq1	L,2	31			Value of DO1
QDig.Dq2	L,2	32			Value of DO2
QDig.Dq3	L,2	33			Value of DO3
QDig.Dq4	L,2	34			Value of DO4
QDig.Dq5	L,2	35			Value of DO5
QDig.Dq6	L,2	36			Value of DO6
QDig.Dq7	L,2	37			Value of DO7
HeatingSettings.Cor_Do1(0)	X,4	81			<p>Connected signal on DO1:</p> <ul style="list-style-type: none"> <li>0=Not used</li> <li>1=HS1-PumpA</li> <li>2=HS1-PumpB</li> <li>3=HS2-PumpA</li> <li>4=HS2-PumpB</li> <li>5=HS3-PumpA</li> <li>6=HS3-PumpB</li> <li>7=Start pump A CS1</li> <li>8=Start pump B CS1</li> <li>9=HW1-Pump</li> <li>10=HP1-Pump</li> <li>11=Frequencer</li> <li>12=Start1 Boiler (not used in v. 3.2)</li> <li>13=Start2 Boiler (not used in v. 3.2)</li> <li>14=Sum alarm</li> <li>15=A-sum alarm</li> <li>16=B + C-sum alarm</li> <li>17=Timer1</li> <li>18=Timer2</li> <li>19=Timer3</li> <li>20=Timer4</li> <li>21=Timer5</li> <li>22=Inc HS1-Act.</li> <li>23=Dec HS1-Act.</li> <li>24=Inc HS2-Act.</li> <li>25=Dec HS2-Act.</li> <li>26=Inc HS3-Act.</li> <li>27=Dec HS3-Act.</li> <li>28=Inc CS1-Act.</li> <li>29=Dec CS1-Act.</li> <li>30=Inc HW1-Act.</li> <li>31=Dec HW1-Act.</li> <li>32=Inc HW2-Act.</li> <li>33=Dec HW2-Act.</li> <li>34=Bypass CS1-CV1</li> <li>35=Start Cooling Unit</li> <li>36=HB1 Start Low</li> <li>37=HB1 Start High</li> <li>38=HB2 Start Low</li> <li>39=HB2 Start High</li> </ul>

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingSettings.Cor_Do1(0)	X,4	81			40=HB3 Start Low 41=HB3 Start High 42=HB4 Start Low 43=HB4 Start High 44=HB1 Pump Start 45=HB2 Pump Start 46=HB3 Pump Start 47=HB4 Pump Start 48=Transport Pump Start 49=Extra Circuit Pump Start
HeatingSettings.Cor_Do2	X,4	82			Connected signal on DO2: (See signal list for DO1)
HeatingSettings.Cor_Do3	X,4	83			Connected signal on DO3: (See signal list for DO1)
HeatingSettings.Cor_Do4	X,4	84			Connected signal on DO4: (See signal list for DO1)
HeatingSettings.Cor_Do5	X,4	85			Connected signal on DO5: (See signal list for DO1)
HeatingSettings.Cor_Do6	X,4	86			Connected signal on DO6: (See signal list for DO1)
HeatingSettings.Cor_Do7	X,4	87			Connected signal on DO7: (See signal list for DO1)
InputOutput.Exp1DigOut1	L,2	211			Value of EXP1 DO1
InputOutput.Exp1DigOut2	L,2	212			Value of EXP1 DO2
InputOutput.Exp1DigOut3	L,2	213			Value of EXP1 DO3
InputOutput.Exp1DigOut4	L,2	214			Value of EXP1 DO4
InputOutput.Exp1DigOut5	L,2	215			Value of EXP1 DO5
InputOutput.Exp1DigOut6	L,2	216			Value of EXP1 DO6
InputOutput.Exp1DigOut7	L,2	217			Value of EXP1 DO7
InputOutput.Exp2DigOut1	L,2	230			Value of EXP2 DO1
InputOutput.Exp2DigOut2	L,2	231			Value of EXP2 DO2
InputOutput.Exp2DigOut3	L,2	232			Value of EXP2 DO3
InputOutput.Exp2DigOut4	L,2	233			Value of EXP2 DO4
InputOutput.Exp2DigOut5	L,2	234			Value of EXP2 DO5
InputOutput.Exp2DigOut6	L,2	235			Value of EXP2 DO6
InputOutput.Exp2DigOut7	L,2	236			Value of EXP2 DO7
HeatingSettings.Cor_ExpDo(0)	X,4	328			Connected signal on EXP1 DO1: (See signal list for DO1)
HeatingSettings.Cor_ExpDo(1)	X,4	329			Connected signal on EXP1 DO2: (See signal list for DO1)
HeatingSettings.Cor_ExpDo(2)	X,4	330			Connected signal on EXP1 DO3: (See signal list for DO1)
HeatingSettings.Cor_ExpDo(3)	X,4	331			Connected signal on EXP1 DO4: (See signal list for DO1)
HeatingSettings.Cor_ExpDo(4)	X,4	332			Connected signal on EXP1 DO5: (See signal list for DO1)
HeatingSettings.Cor_ExpDo(5)	X,4	333			Connected signal on EXP1 DO6: (See signal list for DO1)
HeatingSettings.Cor_ExpDo(6)	X,4	334			Connected signal on EXP1 DO7: (See signal list for DO1)
HeatingSettings.Cor_ExpDo(7)	X,4	335			Connected signal on EXP2 DO1: (See signal list for DO1)
HeatingSettings.Cor_ExpDo(8)	X,4	336			Connected signal on EXP2 DO2: (See signal list for DO1)
HeatingSettings.Cor_ExpDo(9)	X,4	337			Connected signal on EXP2 DO3: (See signal list for DO1)



<b>Signal name</b>	<b>Type</b>	<b>Modbus address</b>	<b>BACnet</b>	<b>Default value</b>	<b>Description</b>
HeatingSettings.Cor_ExpDo(10)	X,4	338			Connected signal on EXP2 DO4: (See signal list for DO1)
HeatingSettings.Cor_ExpDo(11)	X,4	339			Connected signal on EXP2 DO5: (See signal list for DO1)
HeatingSettings.Cor_ExpDo(12)	X,4	340			Connected signal on EXP2 DO6: (See signal list for DO1)
HeatingSettings.Cor_ExpDo(13)	X,4	341			Connected signal on EXP2 DO7: (See signal list for DO1)

# Chapter 6 Time Settings

## 5.1. HS1 Night Setback and Comfort Time

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingSettings.Cor_HS1NightSetbackOn	L,1	1		0	Night setback HS1: 0=Off,1=On
HeatingSettings.Cor_HS1NightSetback	R,3	70		5°C	Number of room-degrees night setback HS1
TimeDp.Posts(0).T1	R,3	71		7	Start time per 1 Monday comfort time HS1 (HH.MM)
TimeDp.Posts(0).T2	R,3	72		16	Stop time per 1 Monday comfort time HS1
TimeDp.Posts(0).T3	R,3	73		0	Start time per 2 Monday comfort time HS1
TimeDp.Posts(0).T4	R,3	74		0	Stop time per 2 Monday comfort time HS1
TimeDp.Posts(1).T1	R,3	75		7	Start time per 1 Tuesday comfort time HS1
TimeDp.Posts(1).T2	R,3	76		16	Stop time per 1 Tuesday comfort time HS1
TimeDp.Posts(1).T3	R,3	77		0	Start time per 2 Tuesday comfort time HS1
TimeDp.Posts(1).T4	R,3	78		0	Stop time per 2 Tuesday comfort time HS1
TimeDp.Posts(2).T1	R,3	79		7	Start time per 1 Wedn. comfort time HS1
TimeDp.Posts(2).T2	R,3	80		16	Stop time per 1 Wedn. comfort time HS1
TimeDp.Posts(2).T3	R,3	81		0	Start time per 2 Wedn. comfort time HS1
TimeDp.Posts(2).T4	R,3	82		0	Stop time per 2 Wedn. comfort time HS1
TimeDp.Posts(3).T1	R,3	83		7	Start time per 1 Thursday comfort time HS1
TimeDp.Posts(3).T2	R,3	84		16	Stop time per 1 Thursday comfort time HS1
TimeDp.Posts(3).T3	R,3	85		0	Start time per 2 Thursday comfort time HS1
TimeDp.Posts(3).T4	R,3	86		0	Stop time per 2 Thursday comfort time HS1
TimeDp.Posts(4).T1	R,3	87		7	Start time per 1 Friday comfort time HS1
TimeDp.Posts(4).T2	R,3	88		16	Stop time per 1 Friday comfort time HS1
TimeDp.Posts(4).T3	R,3	89		0	Start time per 2 Friday comfort time HS1
TimeDp.Posts(4).T4	R,3	90		0	Stop time per 2 Friday comfort time HS1
TimeDp.Posts(5).T1	R,3	91		0	Start time per 1 Saturday comfort time HS1
TimeDp.Posts(5).T2	R,3	92		0	Stop time per 1 Saturday comfort time HS1
TimeDp.Posts(5).T3	R,3	93		0	Start time per 2 Saturday comfort time HS1
TimeDp.Posts(5).T4	R,3	94		0	Stop time per 2 Saturday comfort time HS1
TimeDp.Posts(6).T1	R,3	95		0	Start time per 1 Sunday comfort time HS1
TimeDp.Posts(6).T2	R,3	96		0	Stop time per 1 Sunday comfort time HS1
TimeDp.Posts(6).T3	R,3	97		0	Start time per 2 Sunday comfort time HS1
TimeDp.Posts(6).T4	R,3	98		0	Stop time per 2 Sunday comfort time HS1
TimeDp.Posts(7).T1	R,3	99		0	Start time per 1 Holiday comfort time HS1
TimeDp.Posts(7).T2	R,3	100		0	Stop time per 1 Holiday comfort time HS1

Signal name	Type	Modbus address	BACnet	Default value	Description
TimeDp.Posts(7).T3	R,3	101		0	Start time per 2 Holiday comfort time HS1
TimeDp.Posts(7).T4	R,3	102		0	Stop time per 2 Holiday comfort time HS1

## 5.2. HS2 Night Setback and Comfort Time

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingSettings.Cor_HS2NightSetbackOn	L,1	2		0	Night setback HS2 0=off, 1=on
HeatingSettings.Cor_HS2NightSetback	R,3	103		5°C	Number of room-degrees night setback HS2
TimeDp.Posts(8).T1	R,3	104		7	Start time per 1 Monday comfort time HS2 (HH.MM)
TimeDp.Posts(8).T2	R,3	105		16	Stop time per 1 Monday comfort time HS2
TimeDp.Posts(8).T3	R,3	106		0	Start time per 2 Monday comfort time HS2
TimeDp.Posts(8).T4	R,3	107		0	Stop time per 2 Monday comfort time HS2
TimeDp.Posts(9).T1	R,3	108		7	Start time per 1 Tuesday comfort time HS2
TimeDp.Posts(9).T2	R,3	109		16	Stop time per 1 Tuesday comfort time HS2
TimeDp.Posts(9).T3	R,3	110		0	Start time per 2 Tuesday comfort time HS2
TimeDp.Posts(9).T4	R,3	111		0	Stop time per 2 Tuesday comfort time HS2
TimeDp.Posts(10).T1	R,3	112		7	Start time per 1 Wedn. comfort time HS2
TimeDp.Posts(10).T2	R,3	113		16	Stop time per 1 Wedn. comfort time HS2
TimeDp.Posts(10).T3	R,3	114		0	Start time per 2 Wedn. comfort time HS2
TimeDp.Posts(10).T4	R,3	115		0	Stop time per 2 Wedn. comfort time HS2
TimeDp.Posts(11).T1	R,3	116		7	Start time per 1 Thursday comfort time HS2
TimeDp.Posts(11).T2	R,3	117		16	Stop time per 1 Thursday comfort time HS2
TimeDp.Posts(11).T3	R,3	118		0	Start time per 2 Thursday comfort time HS2
TimeDp.Posts(11).T4	R,3	119		0	Stop time per 2 Thursday comfort time HS2
TimeDp.Posts(12).T1	R,3	120		7	Start time per 1 Friday comfort time HS2
TimeDp.Posts(12).T2	R,3	121		16	Stop time per 1 Friday comfort time HS2
TimeDp.Posts(12).T3	R,3	122		0	Start time per 2 Friday comfort time HS2
TimeDp.Posts(12).T4	R,3	123		0	Stop time per 2 Friday comfort time HS2
TimeDp.Posts(13).T1	R,3	124		0	Start time per 1 Saturday comfort time HS2
TimeDp.Posts(13).T2	R,3	125		0	Stop time per 1 Saturday comfort time HS2
TimeDp.Posts(13).T3	R,3	126		0	Start time per 2 Saturday comfort time HS2
TimeDp.Posts(13).T4	R,3	127		0	Stop time per 2 Saturday comfort time HS2
TimeDp.Posts(14).T1	R,3	128		0	Start time per 1 Sunday comfort time HS2
TimeDp.Posts(14).T2	R,3	129		0	Stop time per 1 Sunday comfort time HS2

Signal name	Type	Modbus address	BACnet	Default value	Description
TimeDp.Posts(14).T3	R,3	130		0	Start time per 2 Sunday comfort time HS2
TimeDp.Posts(14).T4	R,3	131		0	Stop time per 2 Sunday comfort time HS2
TimeDp.Posts(15).T1	R,3	132		0	Start time per 1 Holiday comfort time HS2
TimeDp.Posts(15).T2	R,3	133		0	Stop time per 1 Holiday comfort time HS2
TimeDp.Posts(15).T3	R,3	134		0	Start time per 2 Holiday comfort time HS2
TimeDp.Posts(15).T4	R,3	135		0	Stop time per 2 Holiday comfort time HS2

### 5.3. HS3 Night Setback and Comfort Time

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingSettings.Cor_HS3NightSetbackOn	L,1	3		0	Night setback HS3 0=off, 1=on
HeatingSettings.Cor_HS3NightSetback	R,3	136		5°C	Number of room-degrees night setback HS3
TimeDp.Posts(16).T1	R,3	137		7	Start time per 1 Monday comfort time HS3 (HH.MM)
TimeDp.Posts(16).T2	R,3	138		16	Stop time per 1 Monday comfort time HS3
TimeDp.Posts(16).T3	R,3	139		0	Start time per 2 Monday comfort time HS3
TimeDp.Posts(16).T4	R,3	140		0	Stop time per 2 Monday comfort time HS3
TimeDp.Posts(17).T1	R,3	141		7	Start time per 1 Tuesday comfort time HS3
TimeDp.Posts(17).T2	R,3	142		16	Stop time per 1 Tuesday comfort time HS3
TimeDp.Posts(17).T3	R,3	143		0	Start time per 2 Tuesday comfort time HS3
TimeDp.Posts(17).T4	R,3	144		0	Stop time per 2 Tuesday comfort time HS3
TimeDp.Posts(18).T1	R,3	145		7	Start time per 1 Wedn. comfort time HS3
TimeDp.Posts(18).T2	R,3	146		16	Stop time per 1 Wedn. comfort time HS3
TimeDp.Posts(18).T3	R,3	147		0	Start time per 2 Wedn. comfort time HS3
TimeDp.Posts(18).T4	R,3	148		0	Stop time per 2 Wedn. comfort time HS3
TimeDp.Posts(19).T1	R,3	149		7	Start time per 1 Thursday comfort time HS3
TimeDp.Posts(19).T2	R,3	150		16	Stop time per 1 Thursday comfort time HS3
TimeDp.Posts(19).T3	R,3	151		0	Start time per 2 Thursday comfort time HS3
TimeDp.Posts(19).T4	R,3	152		0	Stop time per 2 Thursday comfort time HS3
TimeDp.Posts(20).T1	R,3	153		7	Start time per 1 Friday comfort time HS3
TimeDp.Posts(20).T2	R,3	154		16	Stop time per 1 Friday comfort time HS3
TimeDp.Posts(20).T3	R,3	155		0	Start time per 2 Friday comfort time HS3
TimeDp.Posts(20).T4	R,3	156		0	Stop time per 2 Friday comfort time HS3
TimeDp.Posts(21).T1	R,3	157		0	Start time per 1 Saturday comfort time HS3
TimeDp.Posts(21).T2	R,3	158		0	Stop time per 1 Saturday comfort time HS3

Signal name	Type	Modbus address	BACnet	Default value	Description
TimeDp.Posts(21).T3	R,3	159		0	Start time per 2 Saturday comfort time HS3
TimeDp.Posts(21).T4	R,3	160		0	Stop time per 2 Saturday comfort time HS3
TimeDp.Posts(22).T1	R,3	161		0	Start time per 1 Sunday comfort time HS3
TimeDp.Posts(22).T2	R,3	162		0	Stop time per 1 Sunday comfort time HS3
TimeDp.Posts(22).T3	R,3	163		0	Start time per 2 Sunday comfort time HS3
TimeDp.Posts(22).T4	R,3	164		0	Stop time per 2 Sunday comfort time HS3
TimeDp.Posts(23).T1	R,3	165		0	Start time per 1 Holiday comfort time HS3
TimeDp.Posts(23).T2	R,3	166		0	Stop time per 1 Holiday comfort time HS3
TimeDp.Posts(23).T3	R,3	167		0	Start time per 2 Holiday comfort time HS3
TimeDp.Posts(23).T4	R,3	168		0	Stop time per 2 Holiday comfort time HS3

## 5.4. HWC1 Night Setback and Comfort Time

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingSettings.Cor_HW1NightSetbackOn	L,1	4		0	Night setback HW1 0=Off, 1=On
HeatingSettings.Cor_HW1NightSetback	R,3	169		5°C	Number of degrees night setback HW1
HeatingSettings.Cor_HW1PumpStop	L,1	5		0	Activate pump stop HW1 when night set-back on 0=Pump stop off, 1=pump stop on
TimeDp.Posts(24).T1	R,3	170		7	Start time per 1 Monday comfort time HS3 (HH.MM)
TimeDp.Posts(24).T2	R,3	171		16	Stop time per 1 Monday comfort time HW1
TimeDp.Posts(24).T3	R,3	172		0	Start time per 2 Monday comfort time HW1
TimeDp.Posts(24).T4	R,3	173		0	Stop time per 2 Monday comfort time HW1
TimeDp.Posts(25).T1	R,3	174		7	Start time per 1 Tuesday comfort time HW1
TimeDp.Posts(25).T2	R,3	175		16	Stop time per 1 Tuesday comfort time HW1
TimeDp.Posts(25).T3	R,3	176		0	Start time per 2 Tuesday comfort time HW1
TimeDp.Posts(25).T4	R,3	177		0	Stop time per 2 Tuesday comfort time HW1
TimeDp.Posts(26).T1	R,3	178		7	Start time per 1 Wedn. comfort time HW1
TimeDp.Posts(26).T2	R,3	179		16	Stop time per 1 Wedn. comfort time HW1
TimeDp.Posts(26).T3	R,3	180		0	Start time per 2 Wedn. comfort time HW1
TimeDp.Posts(26).T4	R,3	181		0	Stop time per 2 Wedn. comfort time HW1
TimeDp.Posts(27).T1	R,3	182		7	Start time per 1 Thursd. comfort time HW1
TimeDp.Posts(27).T2	R,3	183		16	Stop time per 1 Thursd. comfort time HW1
TimeDp.Posts(27).T3	R,3	184		0	Start time per 2 Thursd. comfort time HW1
TimeDp.Posts(27).T4	R,3	185		0	Stop time per 2 Thursd. comfort time HW1

Signal name	Type	Modbus address	BACnet	Default value	Description
TimeDp.Posts(28).T1	R,3	186		7	Start time per 1 Friday comfort time HW1
TimeDp.Posts(28).T2	R,3	187		16	Stop time per 1 Friday comfort time HW1
TimeDp.Posts(28).T3	R,3	188		0	Start time per 2 Friday comfort time HW1
TimeDp.Posts(28).T4	R,3	189		0	Stop time per 2 Friday comfort time HW1
TimeDp.Posts(29).T1	R,3	190		0	Start time per 1 Saturd. comfort time HW1
TimeDp.Posts(29).T2	R,3	191		0	Stop time per 1 Saturd. comfort time HW1
TimeDp.Posts(29).T3	R,3	192		0	Start time per 2 Saturd. comfort time HW1
TimeDp.Posts(29).T4	R,3	193		0	Stop time per 2 Saturd. comfort time HW1
TimeDp.Posts(30).T1	R,3	194		0	Start time per 1 Sunday comfort time HW1
TimeDp.Posts(30).T2	R,3	195		0	Stop time per 1 Sunday comfort time HW1
TimeDp.Posts(30).T3	R,3	196		0	Start time per 2 Sunday comfort time HW1
TimeDp.Posts(30).T4	R,3	197		0	Stop time per 2 Sunday comfort time HW1
TimeDp.Posts(31).T1	R,3	198		0	Start time per 1 Holiday comfort time HW1
TimeDp.Posts(31).T2	R,3	199		0	Stop time per 1 Holiday comfort time HW1
TimeDp.Posts(31).T3	R,3	200		0	Start time per 2 Holiday comfort time HW1
TimeDp.Posts(31).T4	R,3	201		0	Stop time per 2 Holiday comfort time HW1

## 5.5. HWC2 Night Setback and Comfort Time

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingSettings.Cor_HW2NightSetbackOn	L,1	6		0	Night setback HW2 0=Off, 1=On
HeatingSettings.Cor_HW2NightSetback	R,3	202		5°C	Number of degrees night setback HW2
TimeDp.Posts(32).T1	R,3	203		7	Start time per 1 Monday comfort time HS3 (HH.MM)
TimeDp.Posts(32).T2	R,3	204		16	Stop time per 1 Monday comfort time HW2
TimeDp.Posts(32).T3	R,3	205		0	Start time per 2 Monday comfort time HW2
TimeDp.Posts(32).T4	R,3	206		0	Stop time per 2 Monday comfort time HW2
TimeDp.Posts(33).T1	R,3	207		7	Start time per 1 Tuesday comfort time HW2
TimeDp.Posts(33).T2	R,3	208		16	Stop time per 1 Tuesday comfort time HW2
TimeDp.Posts(33).T3	R,3	209		0	Start time per 2 Tuesday comfort time HW2
TimeDp.Posts(33).T4	R,3	210		0	Stop time per 2 Tuesday comfort time HW2
TimeDp.Posts(34).T1	R,3	211		7	Start time per 1 Wedn. comfort time HW2
TimeDp.Posts(34).T2	R,3	212		16	Stop time per 1 Wedn. comfort time HW2
TimeDp.Posts(34).T3	R,3	213		0	Start time per 2 Wedn. comfort time HW2
TimeDp.Posts(34).T4	R,3	214		0	Stop time per 2 Wedn. comfort time HW2

Signal name	Type	Modbus address	BACnet	Default value	Description
TimeDp.Posts(35).T1	R,3	215		7	Start time per 1 Thursd. comfort time HW2
TimeDp.Posts(35).T2	R,3	216		16	Stop time per 1 Thursd. comfort time HW2
TimeDp.Posts(35).T3	R,3	217		0	Start time per 2 Thursd. comfort time HW2
TimeDp.Posts(35).T4	R,3	218		0	Stop time per 2 Thursd. comfort time HW2
TimeDp.Posts(36).T1	R,3	219		7	Start time per 1 Friday comfort time HW2
TimeDp.Posts(36).T2	R,3	220		16	Stop time per 1 Friday comfort time HW2
TimeDp.Posts(36).T3	R,3	221		0	Start time per 2 Friday comfort time HW2
TimeDp.Posts(36).T4	R,3	222		0	Stop time per 2 Friday comfort time HW2
TimeDp.Posts(37).T1	R,3	223		0	Start time per 1 Saturd. comfort time HW2
TimeDp.Posts(37).T2	R,3	224		0	Stop time per 1 Saturd. comfort time HW2
TimeDp.Posts(37).T3	R,3	225		0	Start time per 2 Saturd. comfort time HW2
TimeDp.Posts(37).T4	R,3	226		0	Stop time per 2 Saturd. comfort time HW2
TimeDp.Posts(38).T1	R,3	227		0	Start time per 1 Sunday comfort time HW2
TimeDp.Posts(38).T2	R,3	228		0	Stop time per 1 Sunday comfort time HW2
TimeDp.Posts(38).T3	R,3	229		0	Start time per 2 Sunday comfort time HW2
TimeDp.Posts(38).T4	R,3	230		0	Stop time per 2 Sunday comfort time HW2
TimeDp.Posts(39).T1	R,3	231		0	Start time per 1 Holiday comfort time HW2
TimeDp.Posts(39).T2	R,3	232		0	Stop time per 1 Holiday comfort time HW2
TimeDp.Posts(39).T3	R,3	233		0	Start time per 2 Holiday comfort time HW2
TimeDp.Posts(39).T4	R,3	234		0	Stop time per 2 Holiday comfort time HW2

## 5.6. CS1 Night Setback and Comfort Time

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingSettings.Cor_CS1NightSetbackOn	L,1	7		0	Night setback CS1 0=Off, 1=On
HeatingSettings.Cor_CS1NightSetback	R,3	556		5°C	Number of room-degrees night setback CS1
TimeDp.Posts(24).T1	R,3	557		7	Start time per 1 Monday comfort time CS1 (HH.MM)
TimeDp.Posts(24).T2	R,3	558		16	Stop time per 1 Monday comfort time CS1
TimeDp.Posts(24).T3	R,3	559		0	Start time per 2 Monday comfort time CS1
TimeDp.Posts(24).T4	R,3	560		0	Stop time per 2 Monday comfort time CS1
TimeDp.Posts(25).T1	R,3	561		7	Start time per 1 Tuesday comfort time CS1
TimeDp.Posts(25).T2	R,3	562		16	Stop time per 1 Tuesday comfort time CS1
TimeDp.Posts(25).T3	R,3	563		0	Start time per 2 Tuesday comfort time CS1
TimeDp.Posts(25).T4	R,3	564		0	Stop time per 2 Tuesday comfort time CS1
TimeDp.Posts(26).T1	R,3	565		7	Start time per 1 Wedn. comfort time CS1

Signal name	Type	Modbus address	BACnet	Default value	Description
TimeDp.Posts(26).T2	R,3	566		16	Stop time per 1 Wedn. comfort time CS1
TimeDp.Posts(26).T3	R,3	567		0	Start time per 2 Wedn. comfort time CS1
TimeDp.Posts(26).T4	R,3	568		0	Stop time per 2 Wedn. comfort time CS1
TimeDp.Posts(27).T1	R,3	569		7	Start time per 1 Thursday comfort time CS1
TimeDp.Posts(27).T2	R,3	570		16	Stop time per 1 Thursday comfort time CS1
TimeDp.Posts(27).T3	R,3	571		0	Start time per 2 Thursday comfort time CS1
TimeDp.Posts(27).T4	R,3	572		0	Stop time per 2 Thursday comfort time CS1
TimeDp.Posts(28).T1	R,3	573		7	Start time per 1 Friday comfort time CS1
TimeDp.Posts(28).T2	R,3	574		16	Stop time per 1 Friday comfort time CS1
TimeDp.Posts(28).T3	R,3	575		0	Start time per 2 Friday comfort time CS1
TimeDp.Posts(28).T4	R,3	576		0	Stop time per 2 Friday comfort time CS1
TimeDp.Posts(29).T1	R,3	577		0	Start time per 1 Saturday comfort time CS1
TimeDp.Posts(29).T2	R,3	578		0	Stop time per 1 Saturday comfort time CS1
TimeDp.Posts(29).T3	R,3	579		0	Start time per 2 Saturday comfort time CS1
TimeDp.Posts(29).T4	R,3	580		0	Stop time per 2 Saturday comfort time CS1
TimeDp.Posts(30).T1	R,3	581		0	Start time per 1 Sunday comfort time CS1
TimeDp.Posts(30).T2	R,3	582		0	Stop time per 1 Sunday comfort time CS1
TimeDp.Posts(30).T3	R,3	583		0	Start time per 2 Sunday comfort time CS1
TimeDp.Posts(30).T4	R,3	584		0	Stop time per 2 Sunday comfort time CS1
TimeDp.Posts(31).T1	R,3	585		0	Start time per 1 Holiday comfort time CS1
TimeDp.Posts(31).T2	R,3	586		0	Stop time per 1 Holiday comfort time CS1
TimeDp.Posts(31).T3	R,3	587		0	Start time per 2 Holiday comfort time CS1
TimeDp.Posts(31).T4	R,3	588		0	Stop time per 2 Holiday comfort time CS1

## 5.7. Timer output 1

Signal name	Type	Modbus address	BACnet	Default value	Description
TimeDp.Posts(40).T1	R,3	235		7	Start time period 1 Monday timer output 1 (HH.MM)
TimeDp.Posts(40).T2	R,3	236		16	Stop time period 1 Monday timer output 1
TimeDp.Posts(40).T3	R,3	237		0	Start time period 2 Monday timer output 1
TimeDp.Posts(40).T4	R,3	238		0	Stop time period 2 Monday timer output 1
TimeDp.Posts(41).T1	R,3	239		7	Start time period 1 Tuesday timer output 1
TimeDp.Posts(41).T2	R,3	240		16	Stop time period 1 Tuesday timer output 1
TimeDp.Posts(41).T3	R,3	241		0	Start time period 2 Tuesday timer output 1
TimeDp.Posts(41).T4	R,3	242		0	Stop time period 2 Tuesday timer output 1



Signal name	Type	Modbus address	BACnet	Default value	Description
TimeDp.Posts(42).T1	R,3	243		7	Start time period 1 Wednesd.timer output 1
TimeDp.Posts(42).T2	R,3	244		16	Stop time period 1 Wedn. timer output 1
TimeDp.Posts(42).T3	R,3	245		0	Start time period 2 Wedn. timer output 1
TimeDp.Posts(42).T4	R,3	246		0	Stop time period 2 Wedn. timer output 1
TimeDp.Posts(43).T1	R,3	247		7	Start time period 1 Thursday timer output 1
TimeDp.Posts(43).T2	R,3	248		16	Stop time period 1 Thursday timer output 1
TimeDp.Posts(43).T3	R,3	249		0	Start time period 2 Thursday timer output 1
TimeDp.Posts(43).T4	R,3	250		0	Stop time period 2 Thursday timer output 1
TimeDp.Posts(44).T1	R,3	251		7	Start time period 1 Friday timer output 1
TimeDp.Posts(44).T2	R,3	252		16	Stop time period 1 Friday timer output 1
TimeDp.Posts(44).T3	R,3	253		0	Start time period 2 Friday timer output 1
TimeDp.Posts(44).T4	R,3	254		0	Stop time period 2 Friday timer output 1
TimeDp.Posts(45).T1	R,3	255		0	Start time period 1 Saturday timer output 1
TimeDp.Posts(45).T2	R,3	256		0	Stop time period 1 Saturday timer output 1
TimeDp.Posts(45).T3	R,3	257		0	Start time period 2 Saturday timer output 1
TimeDp.Posts(45).T4	R,3	258		0	Stop time period 2 Saturday timer output 1
TimeDp.Posts(46).T1	R,3	259		0	Start time period 1 Sunday timer output 1
TimeDp.Posts(46).T2	R,3	260		0	Stop time period 1 Sunday timer output 1
TimeDp.Posts(46).T3	R,3	261		0	Start time period 2 Sunday timer output 1
TimeDp.Posts(46).T4	R,3	262		0	Stop time period 2 Sunday timer output 1
TimeDp.Posts(47).T1	R,3	263		0	Start time period 1 Holiday timer output 1
TimeDp.Posts(47).T2	R,3	264		0	Stop time period 1 Holiday timer output 1
TimeDp.Posts(47).T3	R,3	265		0	Start time period 2 Holiday timer output 1
TimeDp.Posts(47).T4	R,3	266		0	Stop time period 2 Holiday timer output 1

## 5.8. Timer output 2

Signal name	Type	Modbus address	BACnet	Default value	Description
TimeDp.Posts(48).T1	R,3	267		7	Start time period 1 Monday timer output 2 (HH.MM)
TimeDp.Posts(48).T2	R,3	268		16	Stop time period 1 Monday timer output 2
TimeDp.Posts(48).T3	R,3	269		0	Start time period 2 Monday timer output 2
TimeDp.Posts(48).T4	R,3	270		0	Stop time period 2 Monday timer output 2
TimeDp.Posts(49).T1	R,3	271		7	Start time period 1 Tuesday timer output 2
TimeDp.Posts(49).T2	R,3	272		16	Stop time period 1 Tuesday timer output 2

Signal name	Type	Modbus address	BACnet	Default value	Description
TimeDp.Posts(49).T3	R,3	273		0	Start time period 2 Tuesday timer output 2
TimeDp.Posts(49).T4	R,3	274		0	Stop time period 2 Tuesday timer output 2
TimeDp.Posts(50).T1	R,3	275		7	Start time period 1 Wedn. timer output 2
TimeDp.Posts(50).T2	R,3	276		16	Stop time period 1 Wedn. timer output 2
TimeDp.Posts(50).T3	R,3	277		0	Start time period 2 Wedn. timer output 2
TimeDp.Posts(50).T4	R,3	278		0	Stop time period 2 Wedn. timer output 2
TimeDp.Posts(51).T1	R,3	279		7	Start time period 1 Thursday timer output 2
TimeDp.Posts(51).T2	R,3	280		16	Stop time period 1 Thursday timer output 2
TimeDp.Posts(51).T3	R,3	281		0	Start time period 2 Thursday timer output 2
TimeDp.Posts(51).T4	R,3	282		0	Stop time period 2 Thursday timer output 2
TimeDp.Posts(52).T1	R,3	283		7	Start time period 1 Friday timer output 2
TimeDp.Posts(52).T2	R,3	284		16	Stop time period 1 Friday timer output 2
TimeDp.Posts(52).T3	R,3	285		0	Start time period 2 Friday timer output 2
TimeDp.Posts(52).T4	R,3	286		0	Stop time period 2 Friday timer output 2
TimeDp.Posts(53).T1	R,3	287		0	Start time period 1 Saturday timer output 2
TimeDp.Posts(53).T2	R,3	288		0	Stop time period 1 Saturday timer output 2
TimeDp.Posts(53).T3	R,3	289		0	Start time period 2 Saturday timer output 2
TimeDp.Posts(53).T4	R,3	290		0	Stop time period 2 Saturday timer output 2
TimeDp.Posts(54).T1	R,3	291		0	Start time period 1 Sunday timer output 2
TimeDp.Posts(54).T2	R,3	292		0	Stop time period 1 Sunday timer output 2
TimeDp.Posts(54).T3	R,3	293		0	Start time period 2 Sunday timer output 2
TimeDp.Posts(54).T4	R,3	294		0	Stop time period 2 Sunday timer output 2
TimeDp.Posts(55).T1	R,3	295		0	Start time period 1 Holiday timer output 2
TimeDp.Posts(55).T2	R,3	296		0	Stop time period 1 Holiday timer output 2
TimeDp.Posts(55).T3	R,3	297		0	Start time period 2 Holiday timer output 2
TimeDp.Posts(55).T4	R,3	298		0	Stop time period 2 Holiday timer output 2

### 5.9. Timer output 3

Signal name	Type	Modbus address	BACnet	Default value	Description
TimeDp.Posts(56).T1	R,3	299		7	Start time period 1 Monday timer output 3 (HH.MM)
TimeDp.Posts(56).T2	R,3	300		16	Stop time period 1 Monday timer output 3
TimeDp.Posts(56).T3	R,3	301		0	Start time period 2 Monday timer output 3
TimeDp.Posts(56).T4	R,3	302		0	Stop time period 2 Monday timer output 3

Signal name	Type	Modbus address	BACnet	Default value	Description
TimeDp.Posts(57).T1	R,3	303		7	Start time period 1 Tuesday timer output 3
TimeDp.Posts(57).T2	R,3	304		16	Stop time period 1 Tuesday timer output 3
TimeDp.Posts(57).T3	R,3	305		0	Start time period 2 Tuesday timer output 3
TimeDp.Posts(57).T4	R,3	306		0	Stop time period 2 Tuesday timer output 3
TimeDp.Posts(58).T1	R,3	307		7	Start time period 1 Wedn. timer output 3
TimeDp.Posts(58).T2	R,3	308		16	Stop time period 1 Wedn. timer output 3
TimeDp.Posts(58).T3	R,3	309		0	Start time period 2 Wedn. timer output 3
TimeDp.Posts(58).T4	R,3	310		0	Stop time period 2 Wedn. timer output 3
TimeDp.Posts(59).T1	R,3	311		7	Start time period 1 Thursday timer output 3
TimeDp.Posts(59).T2	R,3	312		16	Stop time period 1 Thursday timer output 3
TimeDp.Posts(59).T3	R,3	313		0	Start time period 2 Thursday timer output 3
TimeDp.Posts(59).T4	R,3	314		0	Stop time period 2 Thursday timer output 3
TimeDp.Posts(60).T1	R,3	315		7	Start time period 1 Friday timer output 3
TimeDp.Posts(60).T2	R,3	316		16	Stop time period 1 Friday timer output 3
TimeDp.Posts(60).T3	R,3	317		0	Start time period 2 Friday timer output 3
TimeDp.Posts(60).T4	R,3	318		0	Stop time period 2 Friday timer output 3
TimeDp.Posts(61).T1	R,3	319		0	Start time period 1 Saturday timer output 3
TimeDp.Posts(61).T2	R,3	320		0	Stop time period 1 Saturday timer output 3
TimeDp.Posts(61).T3	R,3	321		0	Start time period 2 Saturday timer output 3
TimeDp.Posts(61).T4	R,3	322		0	Stop time period 2 Saturday timer output 3
TimeDp.Posts(62).T1	R,3	323		0	Start time period 1 Sunday timer output 3
TimeDp.Posts(62).T2	R,3	324		0	Stop time period 1 Sunday timer output 3
TimeDp.Posts(62).T3	R,3	325		0	Start time period 2 Sunday timer output 3
TimeDp.Posts(62).T4	R,3	326		0	Stop time period 2 Sunday timer output 3
TimeDp.Posts(63).T1	R,3	327		0	Start time period 1 Holiday timer output 3
TimeDp.Posts(63).T2	R,3	328		0	Stop time period 1 Holiday timer output 3
TimeDp.Posts(63).T3	R,3	329		0	Start time period 2 Holiday timer output 3
TimeDp.Posts(63).T4	R,3	330		0	Stop time period 2 Holiday timer output 3

## 5.10. Timer output 4

Signal name	Type	Modbus address	BACnet	Default value	Description
TimeDp.Posts(64).T1	R,3	331		7	Start time period 1 Monday timer output 4 (HH.MM)
TimeDp.Posts(64).T2	R,3	332		16	Stop time period 1 Monday timer output 4

Signal name	Type	Modbus address	BACnet	Default value	Description
TimeDp.Posts(64).T3	R,3	333		0	Start time period 2 Monday timer output 4
TimeDp.Posts(64).T4	R,3	334		0	Stop time period 2 Monday timer output 4
TimeDp.Posts(65).T1	R,3	335		7	Start time period 1 Tuesday timer output 4
TimeDp.Posts(65).T2	R,3	336		16	Stop time period 1 Tuesday timer output 4
TimeDp.Posts(65).T3	R,3	337		0	Start time period 2 Tuesday timer output 4
TimeDp.Posts(65).T4	R,3	338		0	Stop time period 2 Tuesday timer output 4
TimeDp.Posts(66).T1	R,3	339		7	Start time period 1 Wedn. timer output 4
TimeDp.Posts(66).T2	R,3	340		16	Stop time period 1 Wedn. timer output 4
TimeDp.Posts(66).T3	R,3	341		0	Start time period 2 Wedn. timer output 4
TimeDp.Posts(66).T4	R,3	342		0	Stop time period 2 Wedn. timer output 4
TimeDp.Posts(67).T1	R,3	343		7	Start time period 1 Thursday timer output 4
TimeDp.Posts(67).T2	R,3	344		16	Stop time period 1 Thursday timer output 4
TimeDp.Posts(67).T3	R,3	345		0	Start time period 2 Thursday timer output 4
TimeDp.Posts(67).T4	R,3	346		0	Stop time period 2 Thursday timer output 4
TimeDp.Posts(68).T1	R,3	347		7	Start time period 1 Friday timer output 4
TimeDp.Posts(68).T2	R,3	348		16	Stop time period 1 Friday timer output 4
TimeDp.Posts(68).T3	R,3	349		0	Start time period 2 Friday timer output 4
TimeDp.Posts(68).T4	R,3	350		0	Stop time period 2 Friday timer output 4
TimeDp.Posts(69).T1	R,3	351		0	Start time period 1 Saturday timer output 4
TimeDp.Posts(69).T2	R,3	352		0	Stop time period 1 Saturday timer output 4
TimeDp.Posts(69).T3	R,3	353		0	Start time period 2 Saturday timer output 4
TimeDp.Posts(69).T4	R,3	354		0	Stop time period 2 Saturday timer output 4
TimeDp.Posts(70).T1	R,3	355		0	Start time period 1 Sunday timer output 4
TimeDp.Posts(70).T2	R,3	356		0	Stop time period 1 Sunday timer output 4
TimeDp.Posts(70).T3	R,3	357		0	Start time period 2 Sunday timer output 4
TimeDp.Posts(70).T4	R,3	358		0	Stop time period 2 Sunday timer output 4
TimeDp.Posts(71).T1	R,3	359		0	Start time period 1 Holiday timer output 4
TimeDp.Posts(71).T2	R,3	360		0	Stop time period 1 Holiday timer output 4
TimeDp.Posts(71).T3	R,3	361		0	Start time period 2 Holiday timer output 4
TimeDp.Posts(71).T4	R,3	362		0	Stop time period 2 Holiday timer output 4

## 5.11. Timer output 5

Signal name	Type	Modbus address	BACnet	Default value	Description
TimeDp.Posts(72).T1	R,3	363		7	Start time period 1 Monday timer output 5 (HH.MM)
TimeDp.Posts(72).T2	R,3	364		16	Stop time period 1 Monday timer output 5
TimeDp.Posts(72).T3	R,3	365		0	Start time period 2 Monday timer output 5
TimeDp.Posts(72).T4	R,3	366		0	Stop time period 2 Monday timer output 5
TimeDp.Posts(73).T1	R,3	367		7	Start time period 1 Tuesday timer output 5
TimeDp.Posts(73).T2	R,3	368		16	Stop time period 1 Tuesday timer output 5
TimeDp.Posts(73).T3	R,3	369		0	Start time period 2 Tuesday timer output 5
TimeDp.Posts(73).T4	R,3	370		0	Stop time period 2 Tuesday timer output 5
TimeDp.Posts(74).T1	R,3	371		7	Start time period 1 Wedn. timer output 5
TimeDp.Posts(74).T2	R,3	372		16	Stop time period 1 Wedn. timer output 5
TimeDp.Posts(74).T3	R,3	373		0	Start time period 2 Wedn. timer output 5
TimeDp.Posts(74).T4	R,3	374		0	Stop time period 2 Wedn. timer output 5
TimeDp.Posts(75).T1	R,3	375		7	Start time period 1 Thursday timer output 5
TimeDp.Posts(75).T2	R,3	376		16	Stop time period 1 Thursday timer output 5
TimeDp.Posts(75).T3	R,3	377		0	Start time period 2 Thursday timer output 5
TimeDp.Posts(75).T4	R,3	378		0	Stop time period 2 Thursday timer output 5
TimeDp.Posts(76).T1	R,3	379		7	Start time period 1 Friday timer output 5
TimeDp.Posts(76).T2	R,3	380		16	Stop time period 1 Friday timer output 5
TimeDp.Posts(76).T3	R,3	381		0	Start time period 2 Friday timer output 5
TimeDp.Posts(76).T4	R,3	382		0	Stop time period 2 Friday timer output 5
TimeDp.Posts(77).T1	R,3	383		0	Start time period 1 Saturday timer output 5
TimeDp.Posts(77).T2	R,3	384		0	Stop time period 1 Saturday timer output 5
TimeDp.Posts(77).T3	R,3	385		0	Start time period 2 Saturday timer output 5
TimeDp.Posts(77).T4	R,3	386		0	Stop time period 2 Saturday timer output 5
TimeDp.Posts(78).T1	R,3	387		0	Start time period 1 Sunday timer output 5
TimeDp.Posts(78).T2	R,3	388		0	Stop time period 1 Sunday timer output 5
TimeDp.Posts(78).T3	R,3	389		0	Start time period 2 Sunday timer output 5
TimeDp.Posts(78).T4	R,3	390		0	Stop time period 2 Sunday timer output 5
TimeDp.Posts(79).T1	R,3	391		0	Start time period 1 Holiday timer output 5
TimeDp.Posts(79).T2	R,3	392		0	Stop time period 1 Holiday timer output 5
TimeDp.Posts(79).T3	R,3	393		0	Start time period 2 Holiday timer output 5
TimeDp.Posts(79).T4	R,3	394		0	Stop time period 2 Holiday timer output 5

## 5.12. Holidays

Signal name	Type	Modbus address	BACnet	Default value	Description
TimeHp.Posts(0).FromDate	R,3	395		01.01	Start date holiday period 1 (MM.DD)
TimeHp.Posts(0).ToDate	R,3	396		01.01	End date holiday period 1 (MM.DD)
TimeHp.Posts(1).FromDate	R,3	397		01.01	Start date holiday period 2 (MM.DD)
TimeHp.Posts(1).ToDate	R,3	398		01.01	End date holiday period 2 (MM.DD)
TimeHp.Posts(2).FromDate	R,3	399		01.01	Start date holiday period 3 (MM.DD)
TimeHp.Posts(2).ToDate	R,3	400		01.01	End date holiday period 3 (MM.DD)
TimeHp.Posts(3).FromDate	R,3	401		01.01	Start date holiday period 4 (MM.DD)
TimeHp.Posts(3).ToDate	R,3	402		01.01	End date holiday period 4 (MM.DD)
TimeHp.Posts(4).FromDate	R,3	403		01.01	Start date holiday period 5 (MM.DD)
TimeHp.Posts(4).ToDate	R,3	404		01.01	End date holiday period 5 (MM.DD)
TimeHp.Posts(5).FromDate	R,3	405		01.01	Start date holiday period 6 (MM.DD)
TimeHp.Posts(5).ToDate	R,3	406		01.01	End date holiday period 6 (MM.DD)
TimeHp.Posts(6).FromDate	R,3	407		01.01	Start date holiday period 7 (MM.DD)
TimeHp.Posts(6).ToDate	R,3	408		01.01	End date holiday period 7 (MM.DD)
TimeHp.Posts(7).FromDate	R,3	409		01.01	Start date holiday period 8 (MM.DD)
TimeHp.Posts(7).ToDate	R,3	410		01.01	End date holiday period 8 (MM.DD)
TimeHp.Posts(8).FromDate	R,3	411		01.01	Start date holiday period 9 (MM.DD)
TimeHp.Posts(8).ToDate	R,3	412		01.01	End date holiday period 9 (MM.DD)
TimeHp.Posts(9).FromDate	R,3	413		01.01	Start date holiday period 10 (MM.DD)
TimeHp.Posts(9).ToDate	R,3	414		01.01	End date holiday period 10 (MM.DD)
TimeHp.Posts(10).FromDate	R,3	415		01.01	Start date holiday period 11 (MM.DD)
TimeHp.Posts(10).ToDate	R,3	416		01.01	End date holiday period 11 (MM.DD)
TimeHp.Posts(11).FromDate	R,3	417		01.01	Start date holiday period 12 (MM.DD)
TimeHp.Posts(11).ToDate	R,3	418		01.01	End date holiday period 12 (MM.DD)
TimeHp.Posts(12).FromDate	R,3	419		01.01	Start date holiday period 13 (MM.DD)
TimeHp.Posts(12).ToDate	R,3	420		01.01	End date holiday period 13 (MM.DD)
TimeHp.Posts(13).FromDate	R,3	421		01.01	Start date holiday period 14 (MM.DD)
TimeHp.Posts(13).ToDate	R,3	422		01.01	End date holiday period 14 (MM.DD)
TimeHp.Posts(14).FromDate	R,3	423		01.01	Start date holiday period 15 (MM.DD)
TimeHp.Posts(14).ToDate	R,3	424		01.01	End date holiday period 15 (MM.DD)
TimeHp.Posts(15).FromDate	R,3	425		01.01	Start date holiday period 16 (MM.DD)
TimeHp.Posts(15).ToDate	R,3	426		01.01	End date holiday period 16 (MM.DD)
TimeHp.Posts(16).FromDate	R,3	427		01.01	Start date holiday period 17 (MM.DD)
TimeHp.Posts(16).ToDate	R,3	428		01.01	End date holiday period 17 (MM.DD)
TimeHp.Posts(17).FromDate	R,3	429		01.01	Start date holiday period 18 (MM.DD)
TimeHp.Posts(17).ToDate	R,3	430		01.01	End date holiday period 18 (MM.DD)

Signal name	Type	Modbus address	BACnet	Default value	Description
TimeHp.Posts(18).FromDate	R,3	431		01.01	Start date holiday period 19 (MM.DD)
TimeHp.Posts(18).ToDate	R,3	432		01.01	End date holiday period 19 (MM.DD)
TimeHp.Posts(19).FromDate	R,3	433		01.01	Start date holiday period 20 (MM.DD)
TimeHp.Posts(19).ToDate	R,3	434		01.01	End date holiday period 20 (MM.DD)
TimeHp.Posts(20).FromDate	R,3	435		01.01	Start date holiday period 21 (MM.DD)
TimeHp.Posts(20).ToDate	R,3	436		01.01	End date holiday period 21 (MM.DD)
TimeHp.Posts(21).FromDate	R,3	437		01.01	Start date holiday period 22 (MM.DD)
TimeHp.Posts(21).ToDate	R,3	438		01.01	End date holiday period 22 (MM.DD)
TimeHp.Posts(22).FromDate	R,3	439		01.01	Start date holiday period 23 (MM.DD)
TimeHp.Posts(22).ToDate	R,3	440		01.01	End date holiday period 23 (MM.DD)
TimeHp.Posts(23).FromDate	R,3	441		01.01	Start date holiday period 24 (MM.DD)
TimeHp.Posts(23).ToDate	R,3	442		01.01	End date holiday period 24 (MM.DD)

### 5.13. Real Time Clock

Signal name	Type	Modbus address	BACnet	Default value	Description
QSystem.Sec	X,3	527			Real time clock: Second 0-59
QSystem.Minute	X,3	528			Real time clock: Minute 0-59
QSystem.Hour	X,3	529			Real time clock: Hour 0-23
QSystem.WDay	X,3	530			Real time clock: Day of Week 1-7, 1=Monday
QSystem.Week	X,3	531			Real time clock: Week number 1-53
QSystem.Date	X,3	532			Real time clock: Day of month 1-31
QSystem.Month	X,3	533			Real time clock: Month 1-12
QSystem.Year	X,3	534			Real time clock: Year 0-99

# Chapter 7 Settings

## 6.1. Control temp

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingSettings.Cor_HS1PID_PGain	R,3	443		100°C	P-band supply HS1 control
HeatingSettings.Cor_HS1PID_ITime	R,3	444		100 s	I-time supply HS1 control
HeatingSettings.Cor_HS2PID_PGain	R,3	445		100°C	P-band supply HS2 control
HeatingSettings.Cor_HS2PID_ITime	R,3	446		100 s	I-time supply HS2 control
HeatingSettings.Cor_HS3PID_PGain	R,3	447		100°C	P-band supply HS3 control
HeatingSettings.Cor_HS3PID_ITime	R,3	448		100 s	I-time supply HS3 control
HeatingSettings.Cor_HW1PID_PGain	R,3	449		25°C	P-band shutdown mode HWC1
HeatingSettings.Cor_HW1PID_ITime	R,3	450		75°C	I-time shutdown mode HWC1
HeatingSettings.Cor_HW2PID_PGain	R,3	451		25°C	P-band shutdown mode HWC2
HeatingSettings.Cor_HW2PID_ITime	R,3	452		75°C	I-time shutdown mode HWC2
HeatingSettings.Cor_HS1RetPID_Pgain	R,3	595		100°C	P-band HS1 Return temp
HeatingSettings.Cor_HS1RetPID_Itime	R,3	596		100 s	I-time HS1 Return temp
HeatingSettings.Cor_HS2RetPID_Pgain	R,3	597		100°C	P-band HS2 Return temp
HeatingSettings.Cor_HS2RetPID_ITime	R,3	598		100 s	I-time HS2 Return temp
HeatingSettings.Cor_CS1PID_Pgain	R,3	599		20°C	P-band supply CS1 control
HeatingSettings.Cor_CS1PID_ITime	R,3	600		60 s	I-time supply CS1 control
HeatingSettings.Cor_HBPID_Pgain	R,3	656		10°C	P-band shutdown mode HB
HeatingSettings.Cor_HBPID_Itime	R,3	657		5 s	I-time shutdown mode HB
HeatingSettings.Cor_HB1ReturnTempPband	R,3	727		10°C	P-band Return temp HB1 control
HeatingSettings.Cor_HB2ReturnTempPband	R,3	728		10°C	P-band Return temp HB2 control
HeatingSettings.Cor_HB3ReturnTempPband	R,3	729		10°C	P-band Return temp HB3 control
HeatingSettings.Cor_HB4ReturnTempPband	R,3	730		10°C	P-band Return temp HB4 control

## 6.2. Control pressure (DP)

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingSettings.Cor_DPPID_PGain	R,3	453		25 kPa	P-band pressure control DP
HeatingSettings.Cor_DPPID_ITime	R,3	454		100 s	I-time pressure control DP
HeatingSettings.Cor_DPPID_MinOutput	R,3	455		0 kPa	Min. output pressure control DP



### 6.3. Alarm limits

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingSettings.Cor_HS1MaxDiff(0)	R,3	456		20 °C	Max control deviation supply temp HS1
HeatingSettings.Cor_HS2MaxDiff	R,3	457		20 °C	Max control deviation supply temp HS2
HeatingSettings.Cor_HS3MaxDiff	R,3	458		20 °C	Max control deviation supply temp HS3
HeatingSettings.Cor_HW1MaxDiff	R,3	459		20 °C	Max control deviation supply temp HW1
HeatingSettings.Cor_HW2MaxDiff	R,3	460		20 °C	Max control deviation supply temp HW2
HeatingSettings.Cor_CS1MaxDiff	R,3	603		20 °C	Max Control deviation supply temp CS1
HeatingSettings.Cor_HW1HighTemp	R,3	461		65 °C	Scalding HWC1
HeatingSettings.Cor_HW2HighTemp	R,3	462		65 °C	Scalding HWC2
HeatingSettings.Cor_BoilerHighTemp	R,3	463		70 °C	High boiler temperature
HeatingSettings.Cor_BoilerLowTemp	R,3	464		30 °C	Low boiler temperature
HeatingSettings.Cor_WaterConsumptionMax	R,3	465		10000 l	High 24h water usage
HeatingSettings.Cor_WaterLowestConsumption YesterdayMax	R,3	466		10000 l	High 1h water usage
HeatingSettings.Cor_EnergyConsumptionMax	R,3	467		10000 kWh	High 24h energy usage
HeatingSettings.Cor_WaterPulseTimeMax	R,3	468		0 min	Max time between volume pulse
HeatingSettings.Cor_EnergyPulseTimeMax	R,3	469		0 min	Max time between energy pulse
HeatingSettings.Cor_CW1PulseTimeMax	R,3	470		0 min	Max time between cold water pulse 1
HeatingSettings.Cor_CW2PulseTimeMax	R,3	471		0 min	Max time between cold water pulse 2
HeatingSettings.Cor_LeakHighLimit	R,3	472		3 kW	Permitted leakage

### 6.4. Alarm delays

Signal name	Type	Modbus address	BACnet	Default value	Description
AlaData.AlaPt13_DelayValue	I,3	473		60 min	Alarm delay control deviation supply temp HS1
AlaData.AlaPt14_DelayValue	I,3	474		60 min	Alarm delay control deviation supply temp HS2
AlaData.AlaPt15_DelayValue	I,3	475		60 min	Alarm delay control deviation supply temp HS3
AlaData.AlaPt16_DelayValue	I,3	476		60 min	Alarm delay control deviation supply temp HWC1
AlaData.AlaPt17_DelayValue	I,3	477		60 min	Alarm delay control deviation supply temp HWC2
AlaData.AlaPt19_DelayValue	I,3	478		300 s	Alarm delay scalding HWC1
AlaData.AlaPt20_DelayValue	I,3	479		300 s	Alarm delay scalding HWC2
AlaData.AlaPt21_DelayValue	I,3	480		0 s	Alarm delay high boiler temp

<b>Signal name</b>	<b>Type</b>	<b>Modbus address</b>	<b>BACnet</b>	<b>Default value</b>	<b>Description</b>
AlaData.AlaPt22_DelayValue	I,3	481		0 s	Alarm delay low boiler temp
AlaData.AlaPt10_DelayValue	I,3	482		60 s	Alarm delay expansion vessel
AlaData.AlaPt11_DelayValue	I,3	483		0 s	Alarm delay external alarm

# Chapter 8 Manual/Auto

## 7.1. Manual/Auto

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingSettings.Cor_HS1PID_Select	X,3	484		2	Manual/Auto HS1: 0=Manual-Off 1=Manual-On 2=Auto
HeatingSettings.Cor_HS1PID_ManSet	R,3	485		0 %	HS1 Supply temp controller output if Manual-On mode
HeatingSettings.Cor_HS2PID_Select	X,3	486		2	Manual/Auto HS2: 0=Manual-Off 1=Manual-On 2=Auto
HeatingSettings.Cor_HS2PID_ManSet	R,3	487		0 %	HS2 Supply temp controller output if Manual-On mode
HeatingSettings.Cor_HS3PID_Select	X,3	488		2	Manual/Auto HS3: 0=Manual-Off 1=Manual-On 2=Auto
HeatingSettings.Cor_HS3PID_ManSet	R,3	489		0 %	HS3 Supply temp controller output if Manual-On mode
HeatingSettings.Cor_HW1PID_Select	X,3	490		2	Manual/Auto HWC1: 0=Manual-Off 1=Manual-On 2=Auto
HeatingSettings.Cor_HW1PID_ManSet	R,3	491		0 %	HWC1 Supply temp controller output if Manual-On mode
HeatingSettings.Cor_HW2PID_Select	X,3	492		2	Manual/Auto HWC2: 0=Manual-Off 1=Manual-On 2=Auto
HeatingSettings.Cor_HW2PID_ManSet	R,3	493		0 %	HWC2 Supply temp controller output if Manual-On mode
HeatingSettings.Cor_DPPID_Select	X,3	494		2	Manual/Auto Pressure control: 0=Manual-Off 1=Manual-On 2=Auto
HeatingSettings.Cor_DPPID_ManSet	R,3	495		0 %	Pressure controller output if Manual-On mode
HeatingSettings.Cor_HS1PumpAAutoMode(0)	X,3	497		2	Manual/Auto HS1 P1A: 0=Manual-Off 1=Manual-On 2=Auto

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingSettings.Cor_HS1PumpBAutoMode	X,3	498		2	Manual/Auto HS1 P1B: 0=Manual-Off 1=Manual-On 2=Auto
HeatingSettings.Cor_HS2PumpAAutoMode	X,3	499		2	Manual/Auto HS2 P1A: 0=Manual-Off 1=Manual-On 2=Auto
HeatingSettings.Cor_HS2PumpBAutoMode	X,3	500		2	Manual/Auto HS2 P1B: 0=Manual-Off 1=Manual-On 2=Auto
HeatingSettings.Cor_HS3PumpAAutoMode	X,3	501		2	Manual/Auto HS3 P1A: 0=Manual-Off 1=Manual-On 2=Auto
HeatingSettings.Cor_HS3PumpBAutoMode	X,3	502		2	Manual/Auto HS3 P1B: 0=Manual-Off 1=Manual-On 2=Auto
HeatingSettings.Cor_HW1PumpAutoMode	X,3	503		2	Manual/Auto HWC1: 0=Manual-Off 1=Manual-On 2=Auto
HeatingSettings.Cor_HP1PumpAutoMode	X,3	504		2	Manual/Auto HP1: 0=Manual-Off 1=Manual-On 2=Auto
HeatingSettings.Cor_FrequencerAutoMode	X,3	505		2	Manual/Auto Frequency converter: 0=Manual-Off 1=Manual-On 2=Auto
HeatingSettings.Cor_BoilerAutoMode	X,3	506		4	Manual/Auto boiler: 0=Manual-Off 1=Start 1 2=Start 2 3=Start 1 and Start 2 4=Auto
TimePro.TimeGroupStatusHS1	X,3	508		4	Manual/Auto Comfort time HS1: 0=Manual-Off 1=Manual-On 2=Forced Off 3=Forced On 4=Auto
TimePro.TimeGroupStatusHS2	X,3	509		4	Manual/Auto Comfort time HS2: 0=Manual-Off 1=Manual-On 2=Forced Off 3=Forced On 4=Auto

Signal name	Type	Modbus address	BACnet	Default value	Description
TimePro.TimeGroupStatusHS3	X,3	510		4	Manual/Auto Comfort time HS3: 0=Manual-Off 1=Manual-On 2=Forced Off 3=Forced On 4=Auto
TimePro.TimeGroupStatusHW1	X,3	511		4	Manual/Auto Comfort time HW1: 0=Manual-Off 1=Manual-On 2=Forced Off 3=Forced On 4=Auto
TimePro.TimeGroupStatusHW2	X,3	512		4	Manual/Auto Comfort time HW2: 0=Manual-Off 1=Manual-On 2=Forced Off 3=Forced On 4=Auto
TimePro.TimeGroupStatusCor_ExtraTimeGroup1	X,3	513		4	Manual/Auto Timer output 1: 0=Manual-Off 1=Manual-On 2=Forced Off 3=Forced On 4=Auto
TimePro.TimeGroupStatusCor_ExtraTimeGroup2	X,3	514		4	Manual/Auto Timer output 2: 0=Manual-Off 1=Manual-On 2=Forced Off 3=Forced On 4=Auto
TimePro.TimeGroupStatusCor_ExtraTimeGroup3	X,3	515		4	Manual/Auto Timer output 3: 0=Manual-Off 1=Manual-On 2=Forced Off 3=Forced On 4=Auto
TimePro.TimeGroupStatusCor_ExtraTimeGroup4	X,3	516		4	Manual/Auto Timer output 4: 0=Manual-Off 1=Manual-On 2=Forced Off 3=Forced On 4=Auto
TimePro.TimeGroupStatusCor_ExtraTimeGroup5	X,3	517		4	Manual/Auto Timer output 5: 0=Manual-Off 1=Manual-On 2=Forced Off 3=Forced On 4=Auto
HeatingSettings.Cor_HS1RetPID_Select	X,3	589		2	Manual/Auto HS1 Return temp: 0=Manual-Off 1=Manual-On 2=Auto

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingSettings.Cor_HS1RetPID_ManSet	R,3	590		0	HS1 Return temp controller output if Manual-On mode
HeatingSettings.Cor_HS2RetPID_Select	X,3	591		2	Manual/Auto HS2 Return temp: 0=Manual-Off 1=Manual-On 2=Auto
HeatingSettings.Cor_HS2RetPID_ManSet	R,3	592		0	HS2 Return temp controller output if Manual-On mode
HeatingSettings.Cor_CS1PID_Select	X,3	593		2	Manual/Auto CS1: 0=Manual-Off 1=Manual-On 2=Auto
HeatingSettings.Cor_CS1PID_ManSet	R,3	594		0	CS1 Supply temp controller output if Manual-On mode
HeatingSettings.Cor_CS1PumpAAutoMode	X,3	601		2	Manual/Auto CS1 P1A: 0=Manual-Off 1=Manual-On 2=Auto
HeatingSettings.Cor_CS1PumpBAutoMode	X,3	602		2	Manual/Auto CS1 P1B: 0=Manual-Off 1=Manual-On 2=Auto
TimePro.TimeGroupStatusCS1	X,3	616		4	Manual/Auto Comfort time CS1: 0=Manual-Off 1=Manual-On 2=Forced Off 3=Forced On 4=Auto
HeatingSettings.Cor_PowerLimitPID_Select	X,3	618		2	Manual/Auto HS1 power limit.: 0=Manual-Off 1=Manual-On 2=Auto
HeatingSettings.Cor_PowerLimitPID_ManSet	R,3	619		0	HS1 power limit controller output if Manual-On mode
HeatingSettings.Cor_CS1CoolUnitAutoMode	X,3	622		2	Manual/Auto CS1 Cool Unit: 0=Manual-Off 1=Manual-On 2=Auto
HeatingSettings.Cor_HBPID_Select	X,3	662		2	Manual/Auto HB: 0=Manual-Off 1=Manual-On 2=Auto
HeatingSettings.Cor_HBPID_ManSet	R,3	663		0	HB controller output if Manual-On mode
HeatingSettings.Cor_HB1ReturnTemp_Select	X,3	664		2	Return temperature valve HB1: 0= Manual-Off 1= Manual-On 2= Auto
HeatingSettings.Cor_HB1ReturnTemp_ManSet	R,3	665		0	HB1 return valve output if Manual-On mode

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingSettings.Cor_HB2ReturnTemp_Select	X,3	666		2	Return temperature valve HB2: (See list for HB1)
HeatingSettings.Cor_HB2ReturnTemp_ManSet	R,3	667		0	HB2 return valve output if Manual-On mode
HeatingSettings.Cor_HB3ReturnTemp_Select	X,3	668		2	Return temperature valve HB3: (See list for HB1)
HeatingSettings.Cor_HB3ReturnTemp_ManSet	R,3	669		0	HB3 return valve output if Manual-On mode
HeatingSettings.Cor_HB4ReturnTemp_Select	X,3	670		2	Return temperature valve HB4: (See list for HB1)
HeatingSettings.Cor_HB4ReturnTemp_ManSet	R,3	671		0	HB4 return valve output if Manual-On mode
HeatingSettings.Cor_HB1AutoMode(0)	X,3	718		3	Auto/Manual Boiler 1: 0=Off 1=Start1 2=Start1 &2 3=Auto
HeatingSettings.Cor_HB2AutoMode	X,3	719		3	Auto/Manual Boiler 2: 0=Off 1=Start1 2=Start1 &2 3=Auto
HeatingSettings.Cor_HB3AutoMode	X,3	720		3	Auto/Manual Boiler 3: 0=Off 1=Start1 2=Start1 &2 3=Auto
HeatingSettings.Cor_HB4AutoMode	X,3	721		3	Auto/Manual Boiler 4: 0=Off 1=Start1 2=Start1 &2 3=Auto
HeatingSettings.Cor_HBP1AutoMode	X,3	722		2	Auto/Manual Boiler pump 1: 0=Off 1=Manual 2=Auto
HeatingSettings.Cor_HBP2AutoMode	X,3	723		2	Auto/Manual Boiler pump 2: 0=Off 1=Manual 2=Auto
HeatingSettings.Cor_HBP3AutoMode	X,3	724		2	Auto/Manual Boiler pump 3: 0=Off 1=Manual 2=Auto
HeatingSettings.Cor_HBP4AutoMode	X,3	725		2	Auto/Manual Boiler pump 4: 0=Off 1=Manual 2=Auto

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingSettings.Cor_TPAutoMode	X,3	726		2	Auto/Manual Transport pump: 0=Off 1=Manual 2=Auto
HeatingSettings.Cor_ExtCircPumpAutoMode	X,3	733		2	Auto/Manual Extra circuit pump: 0= Manual-Off 1= Manual-On 2= Auto



# Chapter 9 Alarm status

## 8.1. Alarm status

Signal name	Type	Modbus address	BACnet	Default value	Description
AlaData.AlaPt1_Status	X,4	88			Malfunction P1A-HS1: 0=Not used 1=Normal 2=Blocked 3=Acknowledge 4=Not used 5=Cancelled 6=Not used 7=Alarm
AlaData.AlaPt2_Status	X,4	89			Malfunction P1B-HS1
AlaData.AlaPt3_Status	X,4	90			Malfunction P1A-HS2
AlaData.AlaPt4_Status	X,4	91			Malfunction P1B-HS2
AlaData.AlaPt5_Status	X,4	92			Malfunction P1A-HS3
AlaData.AlaPt6_Status	X,4	93			Malfunction P1B-HS3
AlaData.AlaPt7_Status	X,4	94			Malfunction P1-HWC1
AlaData.AlaPt8_Status	X,4	95			Malfunction P1-HP1
AlaData.AlaPt9_Status	X,4	96			Malfunction frequency converter
AlaData.AlaPt10_Status	X,4	97			Expansion vessel
AlaData.AlaPt11_Status	X,4	98			External alarm
AlaData.AlaPt12_Status	X,4	99			Boiler alarm
AlaData.AlaPt13_Status	X,4	100			Deviation HS1
AlaData.AlaPt14_Status	X,4	101			Deviation HS2
AlaData.AlaPt15_Status	X,4	102			Deviation HS3
AlaData.AlaPt16_Status	X,4	103			Deviation HWC1
AlaData.AlaPt17_Status	X,4	104			Deviation HWC2
AlaData.AlaPt18_Status	X,4	105			Sensor error outdoor temp
AlaData.AlaPt19_Status	X,4	106			High HWC1 temp
AlaData.AlaPt20_Status	X,4	107			High HWC2 temp
AlaData.AlaPt21_Status	X,4	108			High Boiler temp
AlaData.AlaPt22_Status	X,4	109			Low Boiler temp
AlaData.AlaPt23_Status	X,4	110			Pulse error volume
AlaData.AlaPt24_Status	X,4	111			Pulse error energy
AlaData.AlaPt25_Status	X,4	112			High cold water usage/day
AlaData.AlaPt26_Status	X,4	113			High energy usage
AlaData.AlaPt27_Status	X,4	114			High cold water usage/hour

Signal name	Type	Modbus address	BACnet	Default value	Description
AlaData.AlaPt28_Status	X,4	115			High leakage
AlaData.AlaPt29_Status	X,4	116			Malfunction P1A&B-HS1
AlaData.AlaPt30_Status	X,4	117			Malfunction P1A&B-HS2
AlaData.AlaPt31_Status	X,4	118			Malfunction P1A&B-HS3
AlaData.AlaPt32_Status	X,4	119			Pulse error CW1
AlaData.AlaPt33_Status	X,4	120			Pulse error CW2
AlaData.AlaPt34_Status	X,4	121			HS1 manual
AlaData.AlaPt35_Status	X,4	122			HS2 manual
AlaData.AlaPt36_Status	X,4	123			HS3 manual
AlaData.AlaPt37_Status	X,4	124			HWC1 manual
AlaData.AlaPt38_Status	X,4	125			HWC2 manual
AlaData.AlaPt39_Status	X,4	126			Pressure manual
AlaData.AlaPt40_Status	X,4	127			Boiler manual
AlaData.AlaPt41_Status	X,4	128			P1A-HS1 manual
AlaData.AlaPt42_Status	X,4	129			P1B-HS1 manual
AlaData.AlaPt43_Status	X,4	130			P1A-HS2 manual
AlaData.AlaPt44_Status	X,4	131			P1B-HS2 manual
AlaData.AlaPt45_Status	X,4	132			P1A-HS3 manual
AlaData.AlaPt46_Status	X,4	133			P1B-HS3 manual
AlaData.AlaPt47_Status	X,4	134			P1-HWC1 manual
AlaData.AlaPt48_Status	X,4	135			P1-HP1 manual
AlaData.AlaPt49_Status	X,4	136			P1-Freq. manual
AlaData.AlaPt50_Status	X,4	137			HS1 Supply Max
AlaData.AlaPt51_Status	X,4	138			HS2 Supply Max
AlaData.AlaPt52_Status	X,4	139			HS3 Supply Max
AlaData.AlaPt53_Status	X,4	140			HS1 Supply Min
AlaData.AlaPt54_Status	X,4	141			HS2 Supply Min
AlaData.AlaPt55_Status	X,4	142			HS3 Supply Min
AlaData.AlaPt56_Status	X,4	143			HS1 Return Max
AlaData.AlaPt57_Status	X,4	144			HS2 Return Max
AlaData.AlaPt58_Status	X,4	145			HS3 Return Max
AlaData.AlaPt59_Status	X,4	146			HS1Return Min
AlaData.AlaPt60_Status	X,4	147			HS2 Return Min
AlaData.AlaPt61_Status	X,4	148			HS3 Return Min
AlaData.AlaPt62_Status	X,4	149			HS1 Frost
AlaData.AlaPt63_Status	X,4	150			HS2 Frost
AlaData.AlaPt64_Status	X,4	151			HS3 Frost
AlaData.AlaPt65_Status	X,4	152			Internal battery error
AlaData.AlaPt66_Status	X,4	167			Low Boiler return temp
AlaData.AlaPt67_Status	X,4	168			Sensor error HS1 Supply

Signal name	Type	Modbus address	BACnet	Default value	Description
AlaData.AlaPt68_Status	X,4	169			Sensor error HS2 Supply
AlaData.AlaPt69_Status	X,4	170			Sensor error HS3 Supply
AlaData.AlaPt70_Status	X,4	171			Sensor error HW1 Supply
AlaData.AlaPt71_Status	X,4	172			Sensor error HW2 Supply
AlaData.AlaPt72_Status	X,4	173			Sensor error HP1 Supply
AlaData.AlaPt73_Status	X,4	174			Sensor error HS1 Room
AlaData.AlaPt74_Status	X,4	175			Sensor error HS2 Room
AlaData.AlaPt75_Status	X,4	176			Sensor error HS3 Room
AlaData.AlaPt76_Status	X,4	177			Sensor error HS1 Return
AlaData.AlaPt77_Status	X,4	178			Sensor error HS2 Return
AlaData.AlaPt78_Status	X,4	179			Sensor error HS3 Return
AlaData.AlaPt79_Status	X,4	180			Sensor error HP1 Return
AlaData.AlaPt80_Status	X,4	181			Sensor error Wind
AlaData.AlaPt81_Status	X,4	182			Sensor error Pressure
AlaData.AlaPt82_Status	X,4	183			Not used
AlaData.AlaPt83_Status	X,4	184			Sensor error Boiler Return
AlaData.AlaPt84_Status	X,4	185			Sensor error CS1 Supply
AlaData.AlaPt85_Status	X,4	186			Sensor error CS1 Return
AlaData.AlaPt86_Status	X,4	187			Sensor error HP Supply
AlaData.AlaPt87_Status	X,4	188			Sensor error HP Return
AlaData.AlaPt88_Status	X,4	189			Sensor error CP Supply
AlaData.AlaPt89_Status	X,4	190			Sensor error CP Return
AlaData.AlaPt90_Status	X,4	191			Sensor error Extra sensor 1
AlaData.AlaPt91_Status	X,4	192			Sensor error Extra sensor 2
AlaData.AlaPt92_Status	X,4	193			Sensor error Extra sensor 3
AlaData.AlaPt93_Status	X,4	194			Sensor error Extra sensor 4
AlaData.AlaPt94_Status	X,4	195			Sensor error Extra sensor 5
AlaData.AlaPt95_Status	X,4	196			Sensor error Boiler supply
AlaData.AlaPt96_Status	X,4	197			Sensor error Boiler1 Return
AlaData.AlaPt97_Status	X,4	198			Sensor error Boiler2 Return
AlaData.AlaPt98_Status	X,4	199			Sensor error Boiler3 Return
AlaData.AlaPt99_Status	X,4	200			Sensor error Boiler4 Return
AlaData.AlaPt100_Status	X,4	201			Sensor error 1 Extra Circuit
AlaData.AlaPt101_Status	X,4	202			Sensor error 2 Extra Circuit
AlaData.AlaPt102_Status	X,4	203			Sensor error CS1 Room PT1000
AlaData.AlaPt103_Status	X,4	204			Sensor error CS1 Room 0...10 V
AlaData.AlaPt106_Status	X,4	207			Deviation CS1
AlaData.AlaPt107_Status	X,4	208			CS1 manual
AlaData.AlaPt108_Status	X,4	209			CS1 Supply Max
AlaData.AlaPt109_Status	X,4	210			Not used

Signal name	Type	Modbus address	BACnet	Default value	Description
AlaData.AlaPt110_Status	X,4	211			CS1 Return Max
AlaData.AlaPt111_Status	X,4	212			CS1 Return Min
AlaData.AlaPt112_Status	X,4	213			Malfunction P1A-CS1
AlaData.AlaPt113_Status	X,4	214			Malfunction P1B-CS1
AlaData.AlaPt114_Status	X,4	215			Malfunction P1A&B-CS1
AlaData.AlaPt115_Status	X,4	216			P1A-CS1 manual
AlaData.AlaPt116_Status	X,4	217			P1B-CS1 manual
AlaData.AlaPt117_Status	X,4	218			Communication error Expansion unit 1
AlaData.AlaPt118_Status	X,4	219			Communication error Expansion unit 2
AlaData.AlaPt119_Status	X,4	220			Communication error M-bus DHM 1
AlaData.AlaPt120_Status	X,4	221			Communication error M-bus WM 1
AlaData.AlaPt121_Status	X,4	222			Communication error M-bus WM 2
AlaData.AlaPt122_Status	X,4	223			Low return temp HW1
AlaData.AlaPt123_Status	X,4	224			Pressure/Flow error
AlaData.AlaPt124_Status	X,4	225			Malfunction Boiler 1
AlaData.AlaPt125_Status	X,4	226			Malfunction Boiler 2
AlaData.AlaPt126_Status	X,4	227			Malfunction Boiler 3
AlaData.AlaPt127_Status	X,4	228			Malfunction Boiler 4
AlaData.AlaPt128_Status	X,4	229			Malfunction Boiler pump 1
AlaData.AlaPt129_Status	X,4	230			Malfunction Boiler pump 2
AlaData.AlaPt130_Status	X,4	231			Malfunction Boiler pump 3
AlaData.AlaPt131_Status	X,4	232			Malfunction Boiler pump 4
AlaData.AlaPt132_Status	X,4	233			Malfunction transport pump
AlaData.AlaPt133_Status	X,4	234			Boiler 1 manual
AlaData.AlaPt134_Status	X,4	235			Boiler 2 manual
AlaData.AlaPt135_Status	X,4	236			Boiler 3 manual
AlaData.AlaPt136_Status	X,4	237			Boiler 4 manual
AlaData.AlaPt137_Status	X,4	238			Boiler pump 1 Manual
AlaData.AlaPt138_Status	X,4	239			Boiler pump 2 Manual
AlaData.AlaPt139_Status	X,4	240			Boiler pump 3 Manual
AlaData.AlaPt140_Status	X,4	241			Boiler pump 4 Manual
AlaData.AlaPt141_Status	X,4	242			Transport pump Manual
AlaData.AlaPt142_Status	X,4	243			Malfunction P1-Ext.Circ.
AlaData.AlaPt143_Status	X,4	244			P1-Ext.Circ. manual
AlaData.AlaPt144_Status	X,4	245			HW1 blocked for HS Priority
AlaData.AlaPt145_Status	X,4	246			HW2 blocked for HS Priority
AlaData.AlaPt146_Status	X,4	247			HP1 blocked for HS Priority
AlaData.AlaPt147_Status	X,4	248			HS1 blocked for HW Priority
AlaData.AlaPt148_Status	X,4	249			HS2 blocked for HW Priority
AlaData.AlaPt149_Status	X,4	250			HS3 blocked for HW Priority

Signal name	Type	Modbus address	BACnet	Default value	Description
AlaData.AlaPt150_Status	X,4	251			Transport pump B manual
AlaData.AlaPt151_Status	X,4	422			Sensor error outdoor temp HS2
AlaData.AlaPt152_Status	X,4	423			Sensor error outdoor temp HS3
AlaData.AlaPt153_Status	X,4	424			Sensor error boiler 1 supply
AlaData.AlaPt154_Status	X,4	425			Sensor error boiler 2 supply
AlaData.AlaPt155_Status	X,4	426			Sensor error boiler 3 supply
AlaData.AlaPt156_Status	X,4	427			Sensor error boiler 4 supply
AlaData.AlaPt157_Status	X,4	428			Boiler 1 high supply temp
AlaData.AlaPt158_Status	X,4	429			Boiler 2 high supply temp
AlaData.AlaPt159_Status	X,4	430			Boiler 3 high supply temp
AlaData.AlaPt160_Status	X,4	431			Boiler 4 high supply temp

## 8.2. Alarm points

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingActual.Cor_AlaPt(1)	L,2	38	BV, 20038		Modbus Malfunction P1A-HS1: 0=No alarm 1=Alarm BACnet Malfunction P1A-HS1: 1=No alarm 2=Alarm
HeatingActual.Cor_AlaPt(2)	L,2	39	BV, 20039		Malfunction P1B-HS1
HeatingActual.Cor_AlaPt(3)	L,2	40	BV, 20040		Malfunction P1A-HS2
HeatingActual.Cor_AlaPt(4)	L,2	41	BV, 20041		Malfunction P1B-HS2
HeatingActual.Cor_AlaPt(5)	L,2	42			Malfunction P1A-HS3
HeatingActual.Cor_AlaPt(6)	L,2	43			Malfunction P1B-HS3
HeatingActual.Cor_AlaPt(7)	L,2	44	BV, 20044		Malfunction P1-HWC1
HeatingActual.Cor_AlaPt(8)	L,2	45	BV, 20045		Malfunction P1-HP1
HeatingActual.Cor_AlaPt(9)	L,2	46	BV, 20046		Malfunction frequency converter
HeatingActual.Cor_AlaPt(10)	L,2	47	BV, 20047		Expansion vessel
HeatingActual.Cor_AlaPt(11)	L,2	48	BV, 20048		External alarm
HeatingActual.Cor_AlaPt(12)	L,2	49	BV, 20049		Boiler alarm
HeatingActual.Cor_AlaPt(13)	L,2	50	BV, 20050		Deviation HS1
HeatingActual.Cor_AlaPt(14)	L,2	51	BV, 20051		Deviation HS2
HeatingActual.Cor_AlaPt(15)	L,2	52			Deviation HS3
HeatingActual.Cor_AlaPt(16)	L,2	53	BV, 20053		Deviation HWC1
HeatingActual.Cor_AlaPt(17)	L,2	54	BV, 20054		Deviation HWC2
HeatingActual.Cor_AlaPt(18)	L,2	55	BV, 20055		Sensor error outdoor temp
HeatingActual.Cor_AlaPt(19)	L,2	56	BV, 20056		High HWC1 temp
HeatingActual.Cor_AlaPt(20)	L,2	57	BV, 20057		High HWC2 temp
HeatingActual.Cor_AlaPt(21)	L,2	58	BV, 20058		High Boiler temp
HeatingActual.Cor_AlaPt(22)	L,2	59	BV, 20059		Low Boiler temp
HeatingActual.Cor_AlaPt(23)	L,2	60	BV, 20060		Pulse error volume
HeatingActual.Cor_AlaPt(24)	L,2	61	BV, 20061		Pulse error energy
HeatingActual.Cor_AlaPt(25)	L,2	62			High cold water usage/day
HeatingActual.Cor_AlaPt(26)	L,2	63	BV, 20063		High energy usage
HeatingActual.Cor_AlaPt(27)	L,2	64			High cold water usage/hour
HeatingActual.Cor_AlaPt(28)	L,2	65	BV, 20065		High leakage
HeatingActual.Cor_AlaPt(29)	L,2	66	BV, 20066		Malfunction P1A&B-HS1
HeatingActual.Cor_AlaPt(30)	L,2	67	BV, 20067		Malfunction P1A&B-HS2
HeatingActual.Cor_AlaPt(31)	L,2	68			Malfunction P1A&B-HS3
HeatingActual.Cor_AlaPt(32)	L,2	69	BV, 20069		Pulse error CW1

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingActual.Cor_AlaPt(33)	L,2	70	BV, 20070		Pulse error CW2
HeatingActual.Cor_AlaPt(34)	L,2	71			HS1 manual
HeatingActual.Cor_AlaPt(35)	L,2	72			HS2 manual
HeatingActual.Cor_AlaPt(36)	L,2	73			HS3 manual
HeatingActual.Cor_AlaPt(37)	L,2	74			HWC1 manual
HeatingActual.Cor_AlaPt(38)	L,2	75			HWC2 manual
HeatingActual.Cor_AlaPt(39)	L,2	76			Pressure manual
HeatingActual.Cor_AlaPt(40)	L,2	77			Boiler manual
HeatingActual.Cor_AlaPt(41)	L,2	78			P1A-HS1 manual
HeatingActual.Cor_AlaPt(42)	L,2	79			P1B-HS1 manual
HeatingActual.Cor_AlaPt(43)	L,2	80			P1A-HS2 manual
HeatingActual.Cor_AlaPt(44)	L,2	81			P1B-HS2 manual
HeatingActual.Cor_AlaPt(45)	L,2	82			P1A-HS3 manual
HeatingActual.Cor_AlaPt(46)	L,2	83			P1B-HS3 manual
HeatingActual.Cor_AlaPt(47)	L,2	84			P1-HWC1 manual
HeatingActual.Cor_AlaPt(48)	L,2	85			P1-HP1 manual
HeatingActual.Cor_AlaPt(49)	L,2	86			P1-Freq. manual
HeatingActual.Cor_AlaPt(50)	L,2	87	BV, 20087		HS1 Supply Max
HeatingActual.Cor_AlaPt(51)	L,2	88	BV, 20088		HS2 Supply Max
HeatingActual.Cor_AlaPt(52)	L,2	89			HS3 Supply Max
HeatingActual.Cor_AlaPt(53)	L,2	90	BV, 20090		HS1 Supply Min
HeatingActual.Cor_AlaPt(54)	L,2	91	BV, 20091		HS2 Supply Min
HeatingActual.Cor_AlaPt(55)	L,2	92			HS3 Supply Min
HeatingActual.Cor_AlaPt(56)	L,2	93	BV, 20093		HS1 Return Max
HeatingActual.Cor_AlaPt(57)	L,2	94	BV, 20094		HS2 Return Max
HeatingActual.Cor_AlaPt(58)	L,2	95			HS3 Return Max
HeatingActual.Cor_AlaPt(59)	L,2	96	BV, 20096		HS1Return Min
HeatingActual.Cor_AlaPt(60)	L,2	97	BV, 20097		HS2 Return Min
HeatingActual.Cor_AlaPt(61)	L,2	98			HS3 Return Min
HeatingActual.Cor_AlaPt(62)	L,2	99	BV, 20099		HS1 Frost
HeatingActual.Cor_AlaPt(63)	L,2	100	BV, 20100		HS2 Frost
HeatingActual.Cor_AlaPt(64)	L,2	101			HS3 Frost
HeatingActual.Cor_AlaPt(65)	L,2	102			Internal battery error
HeatingActual.Cor_AlaPt(66)	L,2	114	BV, 20114		Low Boiler return temp
HeatingActual.Cor_AlaPt(67)	L,2	115	BV, 20115		Sensor error HS1 Supply
HeatingActual.Cor_AlaPt(68)	L,2	116	BV, 20116		Sensor error HS2 Supply
HeatingActual.Cor_AlaPt(69)	L,2	117			Sensor error HS3 Supply
HeatingActual.Cor_AlaPt(70)	L,2	118	BV, 20118		Sensor error HW1 Supply
HeatingActual.Cor_AlaPt(71)	L,2	119	BV, 20119		Sensor error HW2 Supply
HeatingActual.Cor_AlaPt(72)	L,2	120	BV, 20120		Sensor error HP1 Supply

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingActual.Cor_AlaPt(73)	L,2	121	BV, 20121		Sensor error HS1 Room
HeatingActual.Cor_AlaPt(74)	L,2	122	BV, 20122		Sensor error HS2 Room
HeatingActual.Cor_AlaPt(75)	L,2	123			Sensor error HS3 Room
HeatingActual.Cor_AlaPt(76)	L,2	124	BV, 20124		Sensor error HS1 Return
HeatingActual.Cor_AlaPt(77)	L,2	125	BV, 20125		Sensor error HS2 Return
HeatingActual.Cor_AlaPt(78)	L,2	126			Sensor error HS3 Return
HeatingActual.Cor_AlaPt(79)	L,2	127	BV, 20127		Sensor error HP1 Return
HeatingActual.Cor_AlaPt(80)	L,2	128	BV, 20128		Sensor error Wind
HeatingActual.Cor_AlaPt(81)	L,2	129	BV, 20129		Sensor error Pressure
HeatingActual.Cor_AlaPt(82)	L,2	130			Sensor error Boiler temp
HeatingActual.Cor_AlaPt(83)	L,2	131	BV, 20131		Sensor error Boiler Return
HeatingActual.Cor_AlaPt(84)	L,2	132	BV, 20132		Sensor error CS1 Supply
HeatingActual.Cor_AlaPt(85)	L,2	133	BV, 20133		Sensor error CS1 Return
HeatingActual.Cor_AlaPt(86)	L,2	134	BV, 20134		Sensor error HP Supply
HeatingActual.Cor_AlaPt(87)	L,2	135	BV, 20135		Sensor error HP Return
HeatingActual.Cor_AlaPt(88)	L,2	136	BV, 20136		Sensor error CP Supply
HeatingActual.Cor_AlaPt(89)	L,2	137	BV, 20137		Sensor error CP Return
HeatingActual.Cor_AlaPt(90)	L,2	138	BV, 20138		Sensor error Extra sensor 1
HeatingActual.Cor_AlaPt(91)	L,2	139	BV, 20139		Sensor error Extra sensor 2
HeatingActual.Cor_AlaPt(92)	L,2	140	BV, 20140		Sensor error Extra sensor 3
HeatingActual.Cor_AlaPt(93)	L,2	141	BV, 20141		Sensor error Extra sensor 4
HeatingActual.Cor_AlaPt(94)	L,2	142	BV, 20142		Sensor error Extra sensor 5
HeatingActual.Cor_AlaPt(95)	L,2	143	BV, 20143		Sensor error Boiler supply
HeatingActual.Cor_AlaPt(96)	L,2	144	BV, 20144		Sensor error Boiler1 Return
HeatingActual.Cor_AlaPt(97)	L,2	145	BV, 20145		Sensor error Boiler2 Return
HeatingActual.Cor_AlaPt(98)	L,2	146	BV, 20146		Sensor error Boiler3 Return
HeatingActual.Cor_AlaPt(99)	L,2	147			Sensor error Boiler4 Return
HeatingActual.Cor_AlaPt(100)	L,2	148	BV, 20148		Sensor error 1 Extra Circuit
HeatingActual.Cor_AlaPt(101)	L,2	149	BV, 20149		Sensor error 2 Extra Circuit
HeatingActual.Cor_AlaPt(102)	L,2	150	BV, 20150		Sensor error CS1 Room PT1000
HeatingActual.Cor_AlaPt(103)	L,2	151	BV, 20151		Sensor error CS1 Room 0...10 V
HeatingActual.Cor_AlaPt(106)	L,2	154	BV, 20154		Deviation CS1
HeatingActual.Cor_AlaPt(107)	L,2	155			CS1 manual
HeatingActual.Cor_AlaPt(108)	L,2	156	BV, 20156		CS1 Supply Max
HeatingActual.Cor_AlaPt(109)	L,2	157			CS1 Supply Min
HeatingActual.Cor_AlaPt(110)	L,2	158	BV, 20158		CS1 Return Max
HeatingActual.Cor_AlaPt(111)	L,2	159	BV, 20159		CS1 Return Min
HeatingActual.Cor_AlaPt(112)	L,2	160	BV, 20160		Malfunction P1A-CS1
HeatingActual.Cor_AlaPt(113)	L,2	161	BV, 20161		Malfunction P1B-CS1
HeatingActual.Cor_AlaPt(114)	L,2	162	BV, 20162		Malfunction P1A&B-CS1



Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingActual.Cor_AlaPt(115)	L,2	163			P1A-CS1 manual
HeatingActual.Cor_AlaPt(116)	L,2	164			P1B-CS1 manual
HeatingActual.Cor_AlaPt(117)	L,2	165	BV, 20165		Communication error Expansion unit 1
HeatingActual.Cor_AlaPt(118)	L,2	166	BV, 20166		Communication error Expansion unit 2
HeatingActual.Cor_AlaPt(119)	L,2	167	BV, 20167		Communication error M-bus DHM 1
HeatingActual.Cor_AlaPt(120)	L,2	168	BV, 20168		Communication error M-bus WM 1
HeatingActual.Cor_AlaPt(121)	L,2	169	BV, 20169		Communication error M-bus WM 2
HeatingActual.Cor_AlaPt(122)	L,2	170	BV, 20170		Low return temp HW1
HeatingActual.Cor_AlaPt(123)	L,2	171	BV, 20171		Pressure/Flow error
HeatingActual.Cor_AlaPt(124)	L,2	172	BV, 20172		Malfunction Boiler 1
HeatingActual.Cor_AlaPt(125)	L,2	173	BV, 20173		Malfunction Boiler 1
HeatingActual.Cor_AlaPt(126)	L,2	174	BV, 20174		Malfunction Boiler 1
HeatingActual.Cor_AlaPt(127)	L,2	175			Malfunction Boiler 1
HeatingActual.Cor_AlaPt(128)	L,2	176	BV, 20176		Malfunction Boiler pump 1
HeatingActual.Cor_AlaPt(129)	L,2	177	BV, 20177		Malfunction Boiler pump 1
HeatingActual.Cor_AlaPt(130)	L,2	178	BV, 20178		Malfunction Boiler pump 1
HeatingActual.Cor_AlaPt(131)	L,2	179			Malfunction Boiler pump 1
HeatingActual.Cor_AlaPt(132)	L,2	180	BV, 20180		Malfunction transport pump
HeatingActual.Cor_AlaPt(133)	L,2	181			Boiler 1 manual
HeatingActual.Cor_AlaPt(134)	L,2	182			Boiler 1 manual
HeatingActual.Cor_AlaPt(135)	L,2	183			Boiler 1 manual
HeatingActual.Cor_AlaPt(136)	L,2	184			Boiler 1 manual
HeatingActual.Cor_AlaPt(137)	L,2	185			Boiler pump 1 Manual
HeatingActual.Cor_AlaPt(138)	L,2	186			Boiler pump 1 Manual
HeatingActual.Cor_AlaPt(139)	L,2	187			Boiler pump 1 Manual
HeatingActual.Cor_AlaPt(140)	L,2	188			Boiler pump 1 Manual
HeatingActual.Cor_AlaPt(141)	L,2	189			Transport pump Manual
HeatingActual.Cor_AlaPt(142)	L,2	190	BV, 20190		Malfunction P1-Ext.Circ.
HeatingActual.Cor_AlaPt(143)	L,2	191			P1-Ext.Circ. manual
HeatingActual.Cor_AlaPt(144)	L,2	192	BV, 20192		HW1 blocked for HS Priority
HeatingActual.Cor_AlaPt(145)	L,2	193	BV, 20193		HW2 blocked for HS Priority
HeatingActual.Cor_AlaPt(146)	L,2	194	BV, 20194		HP1 blocked for HS Priority
HeatingActual.Cor_AlaPt(147)	L,2	195	BV, 20195		HS1 blocked for HW Priority
HeatingActual.Cor_AlaPt(148)	L,2	196	BV, 20196		HS2 blocked for HW Priority
HeatingActual.Cor_AlaPt(149)	L,2	197			HS3 blocked for HW Priority
HeatingActual.Cor_AlaPt(150)	L,2	198			Malfunction transport pump B
HeatingActual.Cor_AlaPt(151)	L,2	273	BV, 20273		Transport pump B manual
HeatingActual.Cor_AlaPt(152)	L,2	274	BV, 20274		Sensor error outdoor temp HS2
HeatingActual.Cor_AlaPt(153)	L,2	275			Sensor error outdoor temp HS3
HeatingActual.Cor_AlaPt(154)	L,2	276	BV, 20276		Sensor error boiler 1 supply
HeatingActual.Cor_AlaPt(155)	L,2	277	BV, 20277		Sensor error boiler 2 supply

Signal name	Type	Modbus address	BACnet	Default value	Description
HeatingActual.Cor_AlaPt(156)	L,2	278	BV, 20278		Sensor error boiler 3 supply
HeatingActual.Cor_AlaPt(157)	L,2	279			Sensor error boiler 4 supply
HeatingActual.Cor_AlaPt(158)	L,2	280	BV, 20280		Boiler 1 high supply temp
HeatingActual.Cor_AlaPt(159)	L,2	281	BV, 20281		Boiler 2 high supply temp
HeatingActual.Cor_AlaPt(160)	L,2	282	BV, 20282		Boiler 3 high supply temp
HeatingActual.Cor_AlaPt(161)	L,2	283			Boiler 4 high supply temp

### 8.3. Alarm acknowledgment, blocking and unblocking

Signal name	Type	Modbus address	BACnet	Default value	Description
Alarms.AlaAcknow	X,3	518		255	Acknowledge external alarms by setting this signal to the alarm number that should be acknowledged.
Alarms.AlaBlock	X,3	519		255	Block external alarms by setting this signal to the alarm number that should be blocked.
Alarms.AlaUnBlock	X,3	520		255	Unblock external alarms by setting this signal to the alarm number that should be unblocked.
HeatingSettings.Cor_AlaAcknowAll	L,1	17	BV, 10017		Command to acknowledge all alarms

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