Corrigo E Heating

List of network variables for EXOline and Modbus communication

Covers all versions of Corrigo E Heating from revision 2.1-1-00

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Chapter 1 Corrigo E with Modbus and EXOline communication

Introduction

Corrigo E heating is a pre-programmed application controller for control of a heating system. The Corrigo controller can be used either stand-alone or integrated in an existing EXO project. In both cases, it is configured via the display or by using the configuration tool E tool© on a PC.

This document describes all signals that are accessible via EXOline and Modbus. 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

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 E 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 E 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 uses the same port for communication via Modbus and via EXOline. When attempting to communicate with a Modbus-activated unit by using E tool© or other EXOline communication, the input port will 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.).

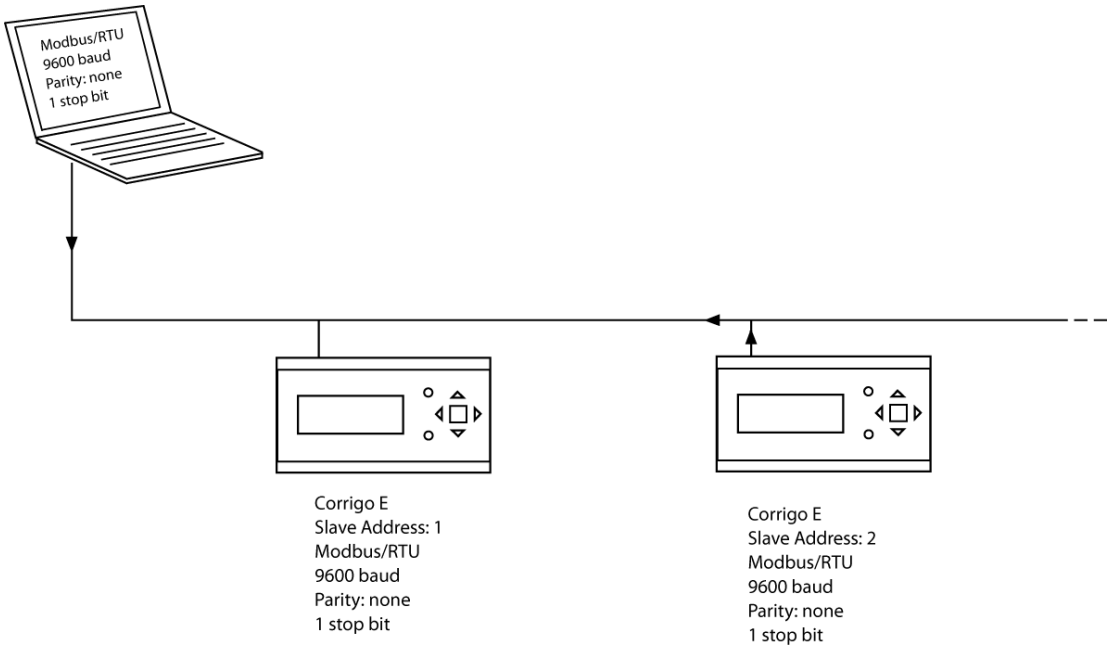
For Modbus, the bottom layer can be RS485, RS422 or RS232.

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.

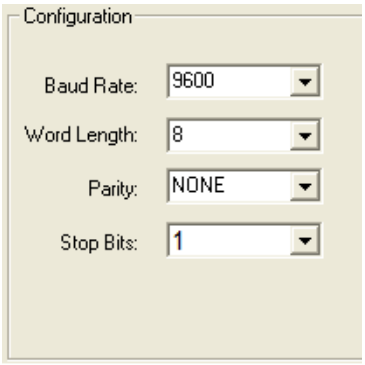


Chapter 2 System integration using Modbus

Configuration

The communication parameters for the Modbus line is 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.

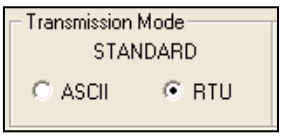
The default configuration values of a Corrigo controller are shown in the figure below.



Corrigo 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 display or E tool©.

Transmission mode

Corrigo 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.

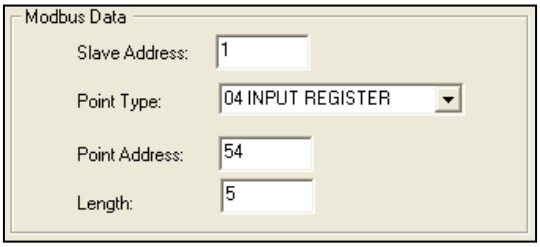


Writing values

To override the Corrigo 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.



Chapter 3 **Actual/Setpoint**

2.1. General

Signal name	Type	Modbus address	Default value	Description
HeatingActual.Cor_Outdoor temp.(0)	R,4	1		Outdoor temperature
HeatingActual.Cor_Outdoor temp.(0)	R,3	507		Outdoor temperature (can be modified if not connected to a physical analogue input)
HeatingActual.Cor_HPSupplyTemp	R,4	358		Heating primary supply temperature
HeatingActual.Cor_HPReturnTemp	R,4	359		Heating primary return temperature
HeatingActual.Cor_CPSupplyTemp	R,4	360		Cooling primary supply temperature
HeatingActual.Cor_CPReturnTemp	R,4	361		Cooling primary return temperature
HeatingActual.Cor_ExtraSensor1	R,4	362		Additional sensor 1
HeatingActual.Cor_ExtraSensor2	R,4	363		Additional sensor 2
HeatingActual.Cor_ExtraSensor3	R,4	364		Additional sensor 3
HeatingActual.Cor_ExtraSensor4	R,4	365		Additional sensor 4
HeatingActual.Cor_ExtraSensor5	R,4	366		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

2.2. Heating system 1 (HS1)

Signal name	Type	Modbus address	Default value	Description
HeatingActual.Cor_HS1PID_Input	R,4	2		Supply temperature HS1
HeatingActual.Cor_HS1PID_SetP	R,4	3		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	67°C	Setpoint for first curve point for outdoor compensated setpoint HS1
HeatingSettings.Cor_HS1Curve_Y2	I,3	10	63°C	Setpoint for second curve point for outdoor compensated setpoint HS1
HeatingSettings.Cor_HS1Curve_Y3	I,3	11	59°C	Setpoint for third curve point for outdoor compensated setpoint HS1
HeatingSettings.Cor_HS1Curve_Y4	I,3	12	55°C	Setpoint for fourth curve point for outdoor compensated setpoint HS1
HeatingSettings.Cor_HS1Curve_Y5	I,3	13	53°C	Setpoint for fifth curve point for outdoor compensated setpoint HS1
HeatingSettings.Cor_HS1Curve_Y6	I,3	14	43°C	Setpoint for sixth curve point for outdoor compensated setpoint HS1
HeatingSettings.Cor_HS1Curve_Y7	I,3	15	35°C	Setpoint for seventh curve point for outdoor compensated setpoint HS1
HeatingSettings.Cor_HS1Curve_Y8	I,3	16	25°C	Setpoint for eighth curve point for outdoor compensated setpoint HS1
Heating1.Cor_HS1ParallelTransfer	R,3	535	0 °C	Parallel transfer of setpoint curve HS1
HeatingActual.Cor_HS1RoomTemp	R,4	4		Room temperature HS1
HeatingSettings.Cor_HS1RoomSetP	R,3	17	21°C	Setpoint room temperature HS1
HeatingActual.Cor_HS1ReturnTemp	R,4	5		Return temperature HS1
HeatingActual.Cor_HS1PumpARun(0)	L,2	11		Is set if running pump HS1 P1A
HeatingActual.Cor_HS1PumpBRun	L,2	12		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

Signal name	Type	Modbus address	Default value	Description
HeatingActual.Cor_HS1CV1(0)	R,4	153		Control signal HS1 CV (0…10 V)
HeatingActual.Cor_HS1PID_Output	R,4	160		Controller output HS1 (0…100 %)
HeatingActual.Cor_HS1RetPID_Output	R,4	346		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		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		Controller input HS1 power limit (kW)
HeatingActual.Cor_PowerLimitPID_SetP	R,4	355		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		Actual difference between HP and HS1 return
HeatingActual.Cor_HS1RetPID_Output	R,4	413		Controller output HS1 Return temp (0…100 %)
HeatingSettings.Cor_HS1RetPID_SetPoint	R,3	731	3°C	HS1 Max Delta-T HP/HS

2.3. Heating system 2 (HS2)

Signal name	Type	Modbus address	Default value	Description
HeatingActual.Cor_HS2PID_Input	R,4	6		Supply temperature HS2
HeatingActual.Cor_HS2PID_SetP	R,4	7		Outdoor compensated setpoint supply temperature HS2
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

Signal name	Type	Modbus address	Default value	Description
HeatingSettings.Cor_HS2Curve_Y1	I,3	26	67°C	Setpoint for first curve point for outdoor compensated setpoint HS2
HeatingSettings.Cor_HS2Curve_Y2	I,3	27	63°C	Setpoint for second curve point for outdoor compensated setpoint HS2
HeatingSettings.Cor_HS2Curve_Y3	I,3	28	59°C	Setpoint for third curve point for outdoor compensated setpoint HS2
HeatingSettings.Cor_HS2Curve_Y4	I,3	29	55°C	Setpoint for fourth curve point for outdoor compensated setpoint HS2
HeatingSettings.Cor_HS2Curve_Y5	I,3	30	53°C	Setpoint for fifth curve point for outdoor compensated setpoint HS2
HeatingSettings.Cor_HS2Curve_Y6	I,3	31	43°C	Setpoint for sixth curve point for outdoor compensated setpoint HS2
HeatingSettings.Cor_HS2Curve_Y7	I,3	32	35°C	Setpoint for seventh curve point for outdoor compensated setpoint HS2
HeatingSettings.Cor_HS2Curve_Y8	I,3	33	25°C	Setpoint for eighth curve point for outdoor compensated setpoint HS2
HeatingSettings.Cor_HS2ParallelTransfer	R,3	536	0 °C	Parallel transfer of setpoint curve HS2
HeatingActual.Cor_HS2RoomTemp	R,4	8		Room temperature HS2
HeatingSettings.Cor_HS2RoomSetP	R,3	34	21°C	Setpoint room temperature HS2
HeatingActual.Cor_HS2ReturnTemp	R,4	9		Return temperature HS2
HeatingActual.Cor_HS2PumpARun	L,2	13		Is set if running pump HS2 P1A
HeatingActual.Cor_HS2PumpBRun	L,2	14		Is set if running pump HS2 P1B
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)
HeatingActual.Cor_HS2RetPID_Output	R,4	347		Controller output HS2 Return temp. (0...100 %)
HeatingActual.Cor_HS2PID_Output	R,4	161		Controller output HS2 (0...100 %)
HeatingSettings.Cor_HS2PumpDayLimit(0)	R,3	522	17°C	Outdoor temp for pump stop day HS2
HeatingSettings.Cor_HS2PumpNightLimit(0)	R,3	525	17°C	Outdoor temp for pump stop night HS2
HeatingActual.Cor_HS2OptActualStartTime	X,4	351		Start Optimizer, Time until start HS2
HeatingActual.Cor_HS2RetPID_Input	R,4	411		Actual difference between HP and HS2 return
HeatingActual.Cor_HS2RetPID_Output	R,4	414		Controller output HS2 Return temp (0...100 %)
HeatingSettings.Cor_HS2RetPID_SetPoint	R,3	732	3°C	HS2 Max Delta-T HP/HS

2.4. Heating system 3 (HS3)

Signal name	Type	Modbus address	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
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
Heating1. Cor_HS3ParallelTransfer	R,3	537	0 °C	Parallel transfer of setpoint curve HS3
HeatingActual.Cor_HS3RoomTemp	R,4	12		Room temperature HS3
HeatingSettings.Cor_HS3RoomSetP	R,3	51	21°C	Setpoint room temperature HS3
HeatingActual.Cor_HS3ReturnTemp	R,4	13		Return temperature HS3
HeatingActual.Cor_HS3PumpARun	L,2	15		Is set if running pump HS3 P1A
HeatingActual.Cor_HS3PumpBRun	L,2	16		Is set if running pump HS3 P1B
HeatingActual.Cor_HS3PumpAStart	L,2	107		Start signal pump HS3 P1A
HeatingActual.Cor_HS3PumpBStart	L,2	108		Start signal pump HS3 P1B

Signal name	Type	Modbus address	Default value	Description
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 %)
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
HeatingActual.Cor_HS3OptActualStartTime	X,4	352		Start Optimizer, Time until start HS3

2.5. Hot water 1 (HWC1)

Signal name	Type	Modbus address	Default value	Description
HeatingActual.Cor_HW1SupplyTemp	R,4	14		Supply temperature HWC1
HeatingSettings.Cor_HW1Setpoint	R,3	52	55°C	Setpoint supply HWC1
HeatingActual. Cor_HW1PumpRun	L,2	17		Is set if running pump HW1
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		Controller output HW1 (0...100 %)

2.6. Hot water 2 (HWC2)

Signal name	Type	Modbus address	Default value	Description
HeatingActual.Cor_HW2SupplyTemp	R,4	15		Supply temperature HWC2
HeatingSettings.Cor_HW2Setpoint	R,3	53	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		Controller output HWC2 (0...100 %)

2.7. Primary tap hot water (HP1)

Signal name	Type	Modbus address	Default value	Description
HeatingActual.Cor_HP1SupplyTemp	R,4	16		Supply temperature HP1
HeatingActual.Cor_HP1ReturnTemp	R,4	17		Return temperature HP1
HeatingActual.Cor_HP1PumpRun	L,2	18		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
HeatingSettings.Cor_HP1StopTemp	R,3	55	55°C	Stop temperature for stop of load pump HP1 on supply temperature

Signal name	Type	Modbus address	Default value	Description
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	Default value	Description
HeatingActual.Cor_BoilerTemp	R,4	18		Boiler temperature (version 3.1 or earlier)
HeatingActual.Cor_BoilerReturnTemp	R,4	356		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		Run indication Boiler 1
HeatingActual.Cor_HB2Run	L,2	243		Run indication Boiler 2
HeatingActual.Cor_HB3Run	L,2	244		Run indication Boiler 3
HeatingActual.Cor_HB4Run	L,2	245		Run indication Boiler 4
HeatingActual.Cor_HB1PumpRun	L,2	246		Run indication Boiler 1 pump
HeatingActual.Cor_HB2PumpRun	L,2	247		Run indication Boiler 2 pump
HeatingActual.Cor_HB3PumpRun	L,2	248		Run indication Boiler 3 pump
HeatingActual.Cor_HB4PumpRun	L,2	249		Run indication Boiler 4 pump
HeatingActual.Cor_TPRun	L,2	250		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

Signal name	Type	Modbus address	Default value	Description
HeatingActual.Cor_HBPumpExercising	L,2	255		Boiler pump exercising
HeatingActual.Cor_HB1StartLow(0)	L,2	256		Start boiler 1, low effect
HeatingActual.Cor_HB1StartHigh	L,2	257		Start boiler 1, high effect
HeatingActual.Cor_HB2StartLow	L,2	258		Start boiler 2, low effect
HeatingActual.Cor_HB2StartHigh	L,2	259		Start boiler 2, high effect
HeatingActual.Cor_HB3StartLow	L,2	260		Start boiler 3, low effect
HeatingActual.Cor_HB3StartHigh	L,2	261		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
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

Signal name	Type	Modbus address	Default value	Description
HeatingActual.Cor_HB1ReturnTemp_Output	R,4	389		Controller output HB1, return temp valve (0…100 %)
HeatingActual.Cor_HB2ReturnTemp_Output	R,4	390		Controller output HB2, return temp valve (0…100 %)
HeatingActual.Cor_HB3ReturnTemp_Output	R,4	391		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		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	40	Setpoint return temp. HB1
HeatingSettings.Cor_HB2ReturnTempSetP	R,3	637	40	Setpoint return temp. HB2
HeatingSettings.Cor_HB3ReturnTempSetP	R,3	638	40	Setpoint return temp. HB3
HeatingSettings.Cor_HB4ReturnTempSetP	R,3	639	40	Setpoint return temp. HB4
HeatingSettings.Cor_HBSetPointHSdepending	R,3	640	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	18	Transport pump start limit
HeatingSettings.Cor_TPHyst	R,3	643	1	Hysteresis for stopping the transport pump
HeatingSettings.Cor_HB1SD1	R,3	644	5	HB1 switch difference 1
HeatingSettings.Cor_HB2SD1	R,3	645	5	HB2 switch difference 1
HeatingSettings.Cor_HB3SD1	R,3	646	5	HB3 switch difference 1
HeatingSettings.Cor_HB4SD1	R,3	647	5	HB4 switch difference 1
HeatingSettings.Cor_HB1SD2	R,3	648	5	HB1 switch difference 2
HeatingSettings.Cor_HB2SD2	R,3	649	5	HB2 switch difference 2
HeatingSettings.Cor_HB3SD2	R,3	650	5	HB3 switch difference 2
HeatingSettings.Cor_HB4SD2	R,3	651	5	HB4 switch difference 2
HeatingSettings.Cor_HB1OffsetSD2	R,3	652	3	HB1 offset switch diff. 2
HeatingSettings.Cor_HB2OffsetSD2	R,3	653	3	HB2 offset switch diff. 2

Signal name	Type	Modbus address	Default value	Description
HeatingSettings.Cor_HB3OffsetSD2	R,3	654	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)
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

Signal name	Type	Modbus address	Default value	Description
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
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

Signal name	Type	Modbus address	Default value	Description
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		Boiler supply temperature
HeatingActual.Cor_HB1ReturnTemp(0)	R,4	395		Return temperature boiler 1
HeatingActual.Cor_HB2ReturnTemp	R,4	396		Return temperature boiler 2
HeatingActual.Cor_HB3ReturnTemp	R,4	397		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)
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		HB Actual setpoint (HS-dependent or outdoor compensated)
HeatingActual.Cor_HBPID_Input	R,4	412		Supply temperature HB

2.9. Extra circuit

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

2.10. Cooling system (CS1)

Signal name	Type	Modbus address	Default value	Description
HeatingActual.Cor_CS1PID_Input	R,4	342		Supply temperature CS1
HeatingActual.Cor_CS1PID_SetP	R,4	343		Setpoint supply temperature CS1 dew point compensated
HeatingActual.Cor_CS1RoomTemp	R,4	344		Room temperature CS1
HeatingActual.Cor_CS1ReturnTemp	R,4	345		Return temperature CS1
HeatingActual.Cor_CS1PID_Output	R,4	348		Controller output CS1 (0...100 %)
HeatingActual.Cor_CS1CV1	R,4	349		Control signal CS1 CV (0...10 V)
HeatingActual.Cor_RH	R,4	357		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		Is set if running pump CS1 P1A
HeatingActual.Cor_CS1PumpBRun	L,2	241		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

Signal name	Type	Modbus address	Default value	Description
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
HeatingSettings.Cor_CS1RoomSetP	I,3	555	21 °C	Setpoint room temperature CS1
HeatingActual.Cor_DewPointTemp_Output	R,4	415		Calculated dewpoint temp.

2.11. Difference pressure control (DP)

Signal name	Type	Modbus address	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 Frequncer (0...10 V)
HeatingActual.Cor_DPPID_Output	R,4	165		Controller output Frequencer (0...100 %)

2.12. Wind speed

Signal name	Type	Modbus address	Default value	Description
HeatingActual.Cor_Windspeed	R,4	20		Wind speed (m/s)
HeatingSettings.Cor_WindScale	R,3	61	1m/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	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	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	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	Default value	Description
HeatingActual.Cor_ElectricConsumptionMWh	R,3	69		Energy total (MWh)

3.5. Leakage monitoring

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

3.6. District heat meter M-Bus

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

3.7. Water meter 1 M-Bus

Signal name	Type	Modbus address	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	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**

4.1. Analogue inputs

Signal name	Type	Modbus address	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
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)

Signal name	Type	Modbus address	Default value	Description
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
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	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

Signal name	Type	Modbus address	Default value	Description
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
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)

Signal name	Type	Modbus address	Default value	Description
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:
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	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 UAI2
HeatingActual.Cor_ExpAnalogInput(13)	R,4	265		The scaled and filtered value of EXP2 UAI3
HeatingActual.Cor_ExpAnalogInput(14)	R,4	266		The scaled and filtered value of EXP2 UAI4
HeatingActual.Cor_ExpAnalogInput(15)		267		The scaled and filtered value of EXP2 UAI5

Signal name	Type	Modbus address	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)
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)

Signal name	Type	Modbus address	Default value	Description
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	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)
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)

Signal name	Type	Modbus address	Default value	Description
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	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
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)

Signal name	Type	Modbus address	Default value	Description
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	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

Signal name	Type	Modbus address	Default value	Description
HeatingSettings.Cor_Do1(0)	X,4	81		Connected signal on DO1: 0=Not used 1=HS1-PumpA 2=HS1-PumpB 3=HS2-PumpA 4=HS2-PumpB 5=HS3-PumpA 6=HS3-PumpB 7=Start pump A CS1 8=Start pump B CS1 9=HW1-Pump 10=HP1-Pump 11=Frequencer 12=Start1 Boiler (not used in v. 3.2) 13=Start2 Boiler (not used in v. 3.2) 14=Sum alarm 15=A-sum alarm 16=B + C-sum alarm 17=Timer1 18=Timer2 19=Timer3 20=Timer4 21=Timer5 22=Inc HS1-Act. 23=Dec HS1-Act. 24=Inc HS2-Act. 25=Dec HS2-Act. 26=Inc HS3-Act. 27=Dec HS3-Act. 28=Inc CS1-Act. 29=Dec CS1-Act. 30=Inc HW1-Act. 31=Dec HW1-Act. 32=Inc HW2-Act. 33=Dec HW2-Act. 34=Bypass CS1-CV1 35=Start Cooling Unit 36=HB1 Start Low 37=HB1 Start High 38=HB2 Start Low 39=HB2 Start High
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)

Signal name	Type	Modbus address	Default value	Description
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)
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	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
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	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
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	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
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	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
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	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
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	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
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	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
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	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
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	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
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	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
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	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	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)
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)

Signal name	Type	Modbus address	Default value	Description
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	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	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	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	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 puls 1
HeatingSettings.Cor_CW2PulseTimeMax	R,3	471	0 min	Max time between cold water puls 2
HeatingSettings.Cor_LeakHighLimit	R,3	472	3 kW	Permitted leakage

6.4. Alarm delays

Signal name	Type	Modbus address	Default value	Description
AlaData.AlaPt13_DelayValue	I,3I,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
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	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_DPPID_MinOutput	R,3	496	0 %	Minimum pressure controller output

Signal name	Type	Modbus address	Default value	Description
HeatingSettings.Cor_HS1PumpAAutoMode(0)	X,3	497	2	Manual/Auto HS1 P1A: 0=Manual-Off 1=Manual-On 2=Auto
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

Signal name	Type	Modbus address	Default value	Description
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
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

Signal name	Type	Modbus address	Default value	Description
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
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

Signal name	Type	Modbus address	Default value	Description
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
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

Signal name	Type	Modbus address	Default value	Description
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
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	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
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

Signal name	Type	Modbus address	Default value	Description
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
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

Signal name	Type	Modbus address	Default value	Description
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		Sensor error Boiler temp
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		CS1 Supply Min
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

Signal name	Type	Modbus address	Default value	Description
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

8.2. Alarm points

Signal name	Type	Modbus address	Default value	Description
HeatingActual.Cor_AlaPt(1)	L,2	38		Malfunction P1A-HS1: 0=No alarm 1=Alarm
HeatingActual.Cor_AlaPt(2)	L,2	39		Malfunction P1B-HS1
HeatingActual.Cor_AlaPt(3)	L,2	40		Malfunction P1A-HS2
HeatingActual.Cor_AlaPt(4)	L,2	41		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		Malfunction P1-HWC1
HeatingActual.Cor_AlaPt(8)	L,2	45		Malfunction P1-HP1
HeatingActual.Cor_AlaPt(9)	L,2	46		Malfunction frequency converter
HeatingActual.Cor_AlaPt(10)	L,2	47		Expansion vessel
HeatingActual.Cor_AlaPt(11)	L,2	48		External alarm
HeatingActual.Cor_AlaPt(12)	L,2	49		Boiler alarm
HeatingActual.Cor_AlaPt(13)	L,2	50		Deviation HS1
HeatingActual.Cor_AlaPt(14)	L,2	51		Deviation HS2
HeatingActual.Cor_AlaPt(15)	L,2	52		Deviation HS3
HeatingActual.Cor_AlaPt(16)	L,2	53		Deviation HWC1
HeatingActual.Cor_AlaPt(17)	L,2	54		Deviation HWC2
HeatingActual.Cor_AlaPt(18)	L,2	55		Sensor error outdoor temp
HeatingActual.Cor_AlaPt(19)	L,2	56		High HWC1 temp
HeatingActual.Cor_AlaPt(20)	L,2	57		High HWC2 temp
HeatingActual.Cor_AlaPt(21)	L,2	58		High Boiler temp
HeatingActual.Cor_AlaPt(22)	L,2	59		Low Boiler temp
HeatingActual.Cor_AlaPt(23)	L,2	60		Pulse error volume
HeatingActual.Cor_AlaPt(24)	L,2	61		Pulse error energy
HeatingActual.Cor_AlaPt(25)	L,2	62		High cold water usage/day
HeatingActual.Cor_AlaPt(26)	L,2	63		High energy usage
HeatingActual.Cor_AlaPt(27)	L,2	64		High cold water usage/hour
HeatingActual.Cor_AlaPt(28)	L,2	65		High leakage
HeatingActual.Cor_AlaPt(29)	L,2	66		Malfunction P1A&B-HS1
HeatingActual.Cor_AlaPt(30)	L,2	67		Malfunction P1A&B-HS2
HeatingActual.Cor_AlaPt(31)	L,2	68		Malfunction P1A&B-HS3
HeatingActual.Cor_AlaPt(32)	L,2	69		Pulse error CW1
HeatingActual.Cor_AlaPt(33)	L,2	70		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

Signal name	Type	Modbus address	Default value	Description
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		HS1 Supply Max
HeatingActual.Cor_AlaPt(51)	L,2	88		HS2 Supply Max
HeatingActual.Cor_AlaPt(52)	L,2	89		HS3 Supply Max
HeatingActual.Cor_AlaPt(53)	L,2	90		HS1 Supply Min
HeatingActual.Cor_AlaPt(54)	L,2	91		HS2 Supply Min
HeatingActual.Cor_AlaPt(55)	L,2	92		HS3 Supply Min
HeatingActual.Cor_AlaPt(56)	L,2	93		HS1 Return Max
HeatingActual.Cor_AlaPt(57)	L,2	94		HS2 Return Max
HeatingActual.Cor_AlaPt(58)	L,2	95		HS3 Return Max
HeatingActual.Cor_AlaPt(59)	L,2	96		HS1Return Min
HeatingActual.Cor_AlaPt(60)	L,2	97		HS2 Return Min
HeatingActual.Cor_AlaPt(61)	L,2	98		HS3 Return Min
HeatingActual.Cor_AlaPt(62)	L,2	99		HS1 Frost
HeatingActual.Cor_AlaPt(63)	L,2	100		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		Low Boiler return temp
HeatingActual.Cor_AlaPt(67)	L,2	115		Sensor error HS1 Supply
HeatingActual.Cor_AlaPt(68)	L,2	116		Sensor error HS2 Supply
HeatingActual.Cor_AlaPt(69)	L,2	117		Sensor error HS3 Supply
HeatingActual.Cor_AlaPt(70)	L,2	118		Sensor error HW1 Supply
HeatingActual.Cor_AlaPt(71)	L,2	119		Sensor error HW2 Supply
HeatingActual.Cor_AlaPt(72)	L,2	120		Sensor error HP1 Supply
HeatingActual.Cor_AlaPt(73)	L,2	121		Sensor error HS1 Room
HeatingActual.Cor_AlaPt(74)	L,2	122		Sensor error HS2 Room
HeatingActual.Cor_AlaPt(75)	L,2	123		Sensor error HS3 Room
HeatingActual.Cor_AlaPt(76)	L,2	124		Sensor error HS1 Return
HeatingActual.Cor_AlaPt(77)	L,2	125		Sensor error HS2 Return
HeatingActual.Cor_AlaPt(78)	L,2	126		Sensor error HS3 Return
HeatingActual.Cor_AlaPt(79)	L,2	127		Sensor error HP1 Return
HeatingActual.Cor_AlaPt(80)	L,2	128		Sensor error Wind
HeatingActual.Cor_AlaPt(81)	L,2	129		Sensor error Pressure

Signal name	Type	Modbus address	Default value	Description
HeatingActual.Cor_AlaPt(82)	L,2	130		Sensor error Boiler temp
HeatingActual.Cor_AlaPt(83)	L,2	131		Sensor error Boiler Return
HeatingActual.Cor_AlaPt(84)	L,2	132		Sensor error CS1 Supply
HeatingActual.Cor_AlaPt(85)	L,2	133		Sensor error CS1 Return
HeatingActual.Cor_AlaPt(86)	L,2	134		Sensor error HP Supply
HeatingActual.Cor_AlaPt(87)	L,2	135		Sensor error HP Return
HeatingActual.Cor_AlaPt(88)	L,2	136		Sensor error CP Supply
HeatingActual.Cor_AlaPt(89)	L,2	137		Sensor error CP Return
HeatingActual.Cor_AlaPt(90)	L,2	138		Sensor error Extra sensor 1
HeatingActual.Cor_AlaPt(91)	L,2	139		Sensor error Extra sensor 2
HeatingActual.Cor_AlaPt(92)	L,2	140		Sensor error Extra sensor 3
HeatingActual.Cor_AlaPt(93)	L,2	141		Sensor error Extra sensor 4
HeatingActual.Cor_AlaPt(94)	L,2	142		Sensor error Extra sensor 5
HeatingActual.Cor_AlaPt(95)	L,2	143		Sensor error Boiler supply
HeatingActual.Cor_AlaPt(96)	L,2	144		Sensor error Boiler1 Return
HeatingActual.Cor_AlaPt(97)	L,2	145		Sensor error Boiler2 Return
HeatingActual.Cor_AlaPt(98)	L,2	146		Sensor error Boiler3 Return
HeatingActual.Cor_AlaPt(99)	L,2	147		Sensor error Boiler4 Return
HeatingActual.Cor_AlaPt(100)	L,2	148		Sensor error 1 Extra Circuit
HeatingActual.Cor_AlaPt(101)	L,2	149		Sensor error 2 Extra Circuit
HeatingActual.Cor_AlaPt(102)	L,2	150		Sensor error CS1 Room PT1000
HeatingActual.Cor_AlaPt(103)	L,2	151		Sensor error CS1 Room 0...10 V
HeatingActual.Cor_AlaPt(106)	L,2	154		Deviation CS1
HeatingActual.Cor_AlaPt(107)	L,2	155		CS1 manual
HeatingActual.Cor_AlaPt(108)	L,2	156		CS1 Supply Max
HeatingActual.Cor_AlaPt(109)	L,2	157		CS1 Supply Min
HeatingActual.Cor_AlaPt(110)	L,2	158		CS1 Return Max
HeatingActual.Cor_AlaPt(111)	L,2	159		CS1 Return Min
HeatingActual.Cor_AlaPt(112)	L,2	160		Malfunction P1A-CS1
HeatingActual.Cor_AlaPt(113)	L,2	161		Malfunction P1B-CS1
HeatingActual.Cor_AlaPt(114)	L,2	162		Malfunction P1A&B-CS1
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		Communication error Expansion unit 1
HeatingActual.Cor_AlaPt(118)	L,2	166		Communication error Expansion unit 2
HeatingActual.Cor_AlaPt(119)	L,2	167		Communication error M-bus DHM 1
HeatingActual.Cor_AlaPt(120)	L,2	168		Communication error M-bus WM 1
HeatingActual.Cor_AlaPt(121)	L,2	169		Communication error M-bus WM 2
HeatingActual.Cor_AlaPt(122)	L,2	170		Low return temp HW1
HeatingActual.Cor_AlaPt(123)	L,2	171		Pressure/Flow error
HeatingActual.Cor_AlaPt(124)	L,2	172		Malfunction Boiler 1
HeatingActual.Cor_AlaPt(125)	L,2	173		Malfunction Boiler 1
HeatingActual.Cor_AlaPt(126)	L,2	174		Malfunction Boiler 1

Signal name	Type	Modbus address	Default value	Description
HeatingActual.Cor_AlaPt(127)	L,2	175		Malfunction Boiler 1
HeatingActual.Cor_AlaPt(128)	L,2	176		Malfunction Boiler pump 1
HeatingActual.Cor_AlaPt(129)	L,2	177		Malfunction Boiler pump 1
HeatingActual.Cor_AlaPt(130)	L,2	178		Malfunction Boiler pump 1
HeatingActual.Cor_AlaPt(131)	L,2	179		Malfunction Boiler pump 1
HeatingActual.Cor_AlaPt(132)	L,2	180		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		Malfunction P1-Ext.Circ.
HeatingActual.Cor_AlaPt(143)	L,2	191		P1-Ext.Circ. manual
HeatingActual.Cor_AlaPt(144)	L,2	192		HW1 blocked for HS Priority
HeatingActual.Cor_AlaPt(145)	L,2	193		HW2 blocked for HS Priority
HeatingActual.Cor_AlaPt(146)	L,2	194		HP1 blocked for HS Priority
HeatingActual.Cor_AlaPt(147)	L,2	195		HS1 blocked for HW Priority
HeatingActual.Cor_AlaPt(148)	L,2	196		HS2 blocked for HW Priority
HeatingActual.Cor_AlaPt(149)	L,2	197		HS3 blocked for HW Priority

8.3. Alarm acknowledgment, blocking and unblocking

Signal name	Type	Modbus address	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.

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