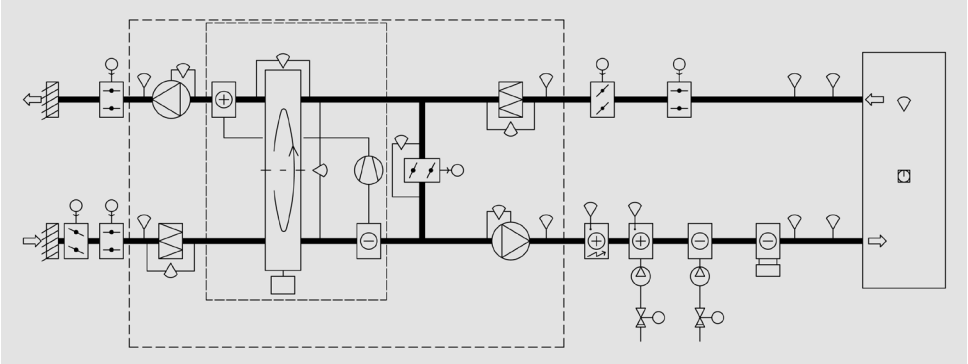
PRODUKT

Air handling with focus on LCC



Climatix™
Modbus communication, slave mode
Reference addresses for standard IV Produkt AHU application v3.42

Table of contents

1 About this document

1.1 Revision history

Version	Date	Software version	Changes
.01	2011-04-20		First edition
.02	2011-10-17		Addresses for Home series added
.03	2013-12-13	v2.14	Addresses for Quick menu, Home HS and Energy Analyzer added
.04	2014-12-10	v3.10, v3.14	Release (software version) added to addresses.
.05	2015-08-18		Addresses for Use of internal Modbus and Energy Watch added. Text revision of existing addresses. Examples of useful addresses added.
.06	2016-05-27		Updates for Energy Watch input register, page 29, and image AHU in general examples page 6.
.07	2017-09-28	v3.24-v3.42	Updates for ThermoCooler and more addresses added in general
.08	2017-11-07		Various minor corrections
.09	2017-12-04		Various minor corrections
.10	2017-12-08		Updated image Examples of useful Modbus addresses (3x0356, 3x0370)
.11	2017-12-29 2018-01-17		Various minor corrections

1.2 Before you start

Validity

This document applies to the following product:

Name	Type (ASN)	Version
IVP AHU application	POL63x.00/AHU	v3.x

This document is a supplement to the general integration guide for Climatix Modbus communication, slave mode. That document must be read first and all general information such as document conventions, important information on safety, trademarks, copyright etc. are valid for this document as well.

This document only contains the uniqe information for the product mentioned above. All general engineering information such as mounting modules, communication settings etc. are described in the integration guide.

Prerequisite

User has read the general Modbus integration guide for Climatix, CB1J3960en.

1.3 Reference documents

Further information

The following documents contain additional information on the products described in this manual:

Document	Order no.
Data sheet “Communication module Modbus”	CB1Q3934en
Basic documentation “Modbus communication module”	CB1P3934en
Integration Guide “Modbus communication, slave mode”	CB1J3960en
Basic documentation “Standard Application AHU”	CB1P3977en

2 Application

2.1 General information

What are standard applications?

Standard applications for Climatix comprise predefined monitoring and control functions for a particular plant type. Features:

- OEM customers receive standard applications as a set of loadable files. They can be loaded in the controller via SD card.
- An HMI operator unit allows for assigning inputs and outputs to the respective plant as well as select, configure and parameterize the required functions.

Standard application AHU v3.x

Standard application AHU v3.x is available at this time. It contains all common functions to control and monitor air conditioning units (**A**ir **H**andling **U**nits).
The following diagram provides an example of selectable measured values and control equipment.

Modbus registers

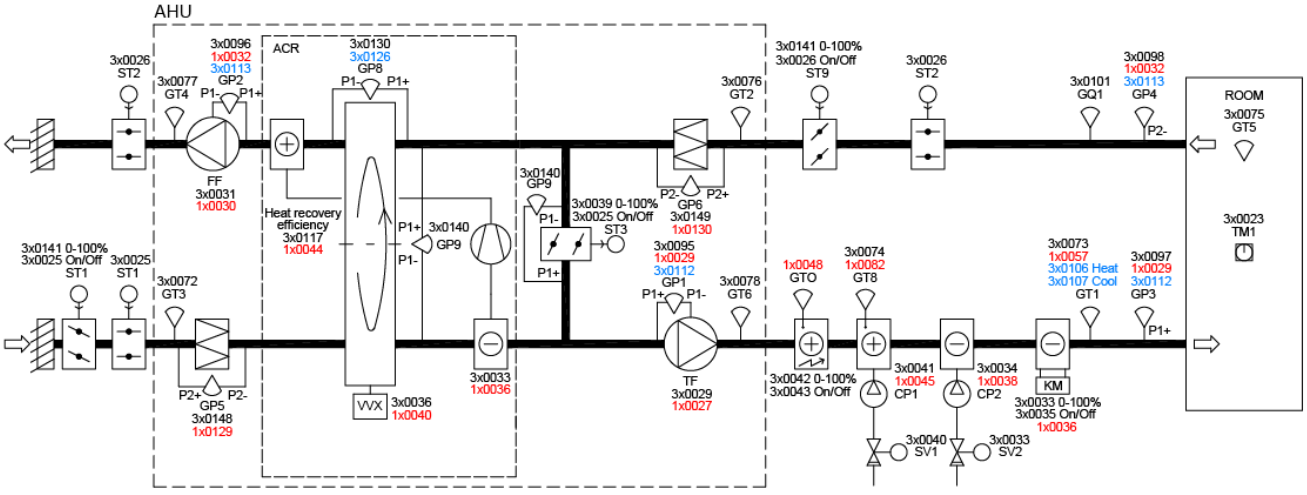
The set of loadable files mentioned above also includes a mapping file for integration in a higher building automation and control system via communications module. The Climatix controller automatically assumes the Modbus registers required for integration as per the plant data points and functions configured and parameterized previously.

The following tables list the predefined Modbus registers supporting standard application AHU v3.x to ensure standardized and simple integration.

Examples of useful Modbus addresses

Click on the image title (link) for a full size pdf or see IV Produkt homepage. The pdf can be downloaded, then it possible to copy Modbus addresses etc.

Modbus addresses for AHU in general, examples



Status and alarm

3x0017	Actual operating mode
3x0018	Actual fan step
3x0019	Manual operation (terminal service switch)
3x0023	External control (Dig.Input, timer switch)
3x0001 /bit6	0=Winter (Supply air temp. control) 1=Summer (Room/Exhaust temp. control)
1x0001	Alarm class Danger (A)
1x0002	Alarm class Critical (A)
1x0003	Alarm class Low (B)
1x0004	Alarm class Warning (C)

Black	Value/Status
Green	Setpoint/Command
Red	Alarm
Blue	Actual setpoint-value

Setpoints

4x0005	BMS control unit (overide internal time switch program)
4x0022	Setpoint heating
4x0021	Deadzone (creats cooling setpoint, Ex 21°C + 2°C = 23°C)
4x0032	Supply temp. compensation (Exhaust/Supply alternative)
4x0050	Supply fan setpoint step 1 (low) TF (%, Pa, l/s)
4x0051	Supply fan step 2 (normal) TF (%, Pa, l/s)
4x0052	Supply fan step 3 (high) TF (%, Pa, l/s)
4x0054	Exhaust fan setpoint step 1 (low) FF (%, Pa, l/s)
4x0055	Exhaust fan step 2 (normal) FF (%, Pa, l/s)
4x0056	Exhaust fan step 3 (high) FF (%, Pa, l/s)
4x0059	Setpoint air quality, CO^2
0x0001	Alarm reset
0x0015	Fire Alarm
0x0011	Emergency stop input

Energy Watch

3x0178	SFP-Value
3x0356	Heat recovery Actual rec. power (kW)
3x0358	Heat recovery day (kWh)
3x0360	Heat recovery month (kWh)
3x0362	Heat recovery year (MWh)
3x0364	Heat recovery last year (MWh)
3x0368	Heat recovery last month (kWh)
3x0370	Added heat Actual Power (kW)
3x0372	Added heat Energy today (kWh)
3x0374	Added heat Energy month (kWh)
3x0376	Added heat Energy year (MWh)
3x0378	Added heat Energy last year (MWh)
3x0382	Added heat Energy last month (MWh)
3x0384	Fans Actual Power (kW)
3x0386	Fans Energy added today (kWh)
3x0388	Fans Energy added month (kWh)
3x0390	Fans Energy added year (MWh)
3x0392	Fans Energy added last year (MWh)
3x0396	Fans Energy added last month (kWh)

Modbus addresses for Counter-flow, Plate- and Run-around coil heat exchangers, examples

Counter-flow heat exchanger

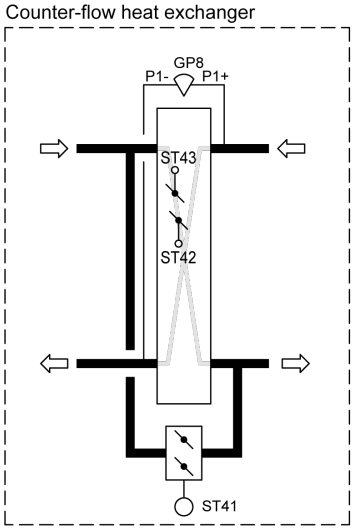
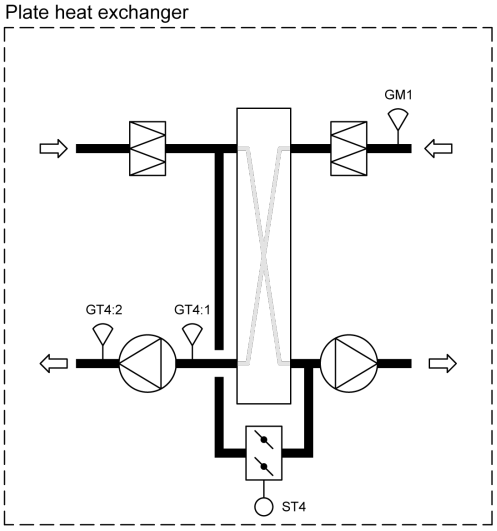
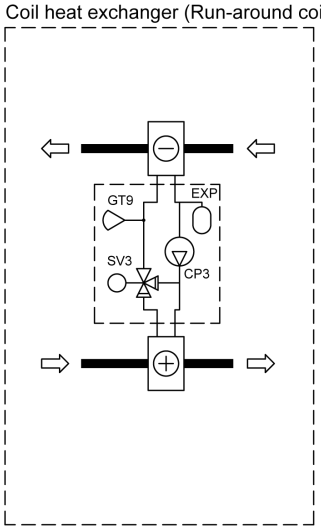


Plate heat exchanger



Coil heat exchanger (Run-around coil)



ST41	3x0036	Heat recovery output signal
ST42	3x0131	Heat recovery output signal defrost damper (factor 10)
ST43	3x0132	Heat recovery output signal defrost damper (factor 10)
GP8	3x0130	Act.pressure over Counterflow heat exchanger
	3x0129	Defrost Active
	3x0126	Normal pressure calculated (factor 10)
	3x0127	Actual start pressure defrost (factor 10)
	3x0128	Actual stop pressure defrost (factor 10)

ST4	3x0036	Heat recovery output signal
GM1	3x0090	Room humidity relative (%)
GT4:1	4x0148	Cold corner
GT4:2	3x0077	Extract air temperature

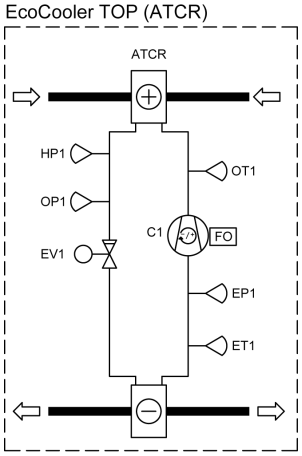
SV3	3x0036	Heat recovery output signal
CP3	3x0037	Heat recovery (pump) command
GT9	3x0079	Heat recovery water temperature
CP3	1x0041	Heat recovery pump alarm

Black	Value/Status
Red	Alarm

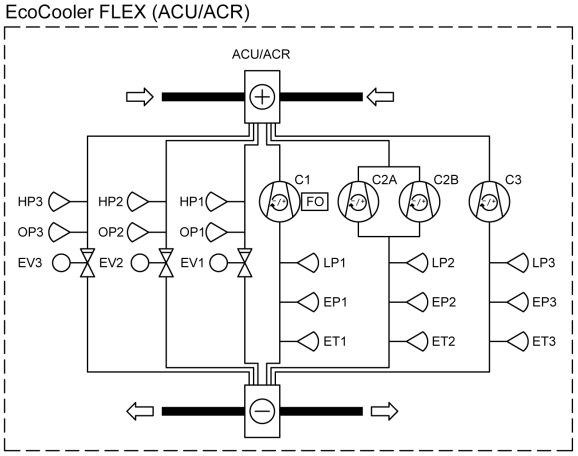
2016-05-23

Modbus Addresses for EcoCooler and ZON, examples

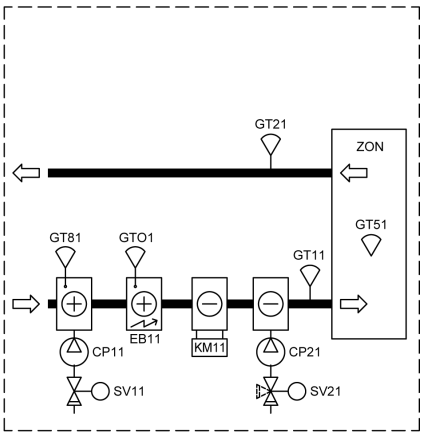
EcoCooler TOP (ATCR)



EcoCooler FLEX (ACU/ACR)



ZON



ATCR 04, 16 and 21

	3x0033	Cooling output signal
	3x0231	Carel Inverter signal output C1
ET1	3x0233	Carel Suction Temp C1
OT1	3x0234	Carel Evaporation temp C1
EP1	3x0235	Carel Low pressure C1
Calc.	3x0236	Carel Superheat C1
OP1	3x0237	Carel High pressure C1 (ATCR 04)
EV1	3x0238	Carel Exp. C1 valve output signal
Calc	3x0239	Carel Condensing temp C1
	1x0142	Carel Compressor 1

ATCR 06 and 10

	3x0033	Cooling output signal
	3x0269	Danfoss VSD actual cooling output signal
OP1	3x0260	Danfoss VSD High pressure
EP1	3x0261	Danfoss VSD Low pressure
EP1	3x0262	Danfoss VSD Compressor 1 command
OT1	3x0268	Danfoss VSD Discharge temp
Calc.	3x0271	Danfoss VSD Evaporation temp
Calc.	3x0273	Danfoss VSD Superheat
	1x0177	Communication modbus alarm Danfoss
	1x0173	Cooler Alarm (High Pressure)

ACU/ACR

3x0033 Cooling output signal
3x0231 Carel Inverter signal output C1

ACU/ACR 060-300 One circuit
ACU/ACR 360-600 Two circuits
ACU/ACR 740-980 Three circuits

	Circ. 1	Circ. 2(A)	Circ. 3	Circ. 2B	
ET1, 2, 3	3x0233	3x0240	3x0247		Carel Suction Temp
Calc.	3x0234	3x0241	3x0248		Carel Evaporation temp
EP1, 2, 3	3x0235	3x0242	3x0249		Carel Low pressure
Calc.	3x0236	3x0243	3x0250		Carel Superheat
OP1, 2, 3	3x0237	3x0244	3x0251		Carel High pressure
EV1, 2, 3	3x0238	3x0245	3x0252		Carel Exp. valve output signal
Calc.	3x0239	3x0246	3x0253		Carel Condensing temp
C1, 2A, 3, 2B	3x0254	3x0255	3x0256	3x0257	Carel Compressor command
C1, 2A, 3, 2B	1x0142	1x0152	1x0162	1x0172	Carel Compressor

Black	Value/Status
Red	Alarm
Green	Setpoint/Command

ZON

	4x0033	Extra Sequence setpoint
	4x0120	Extra Sequence deadzone
GT11	3x0080	Supply temp Extra sequence
GT21/GT51	3x0083	Room/Exhaust temp Extra sequence
GT81	3x0081	Heating 2 frost temp
GT81	1x0090	Heating 2 frost temp
SV11	3x0047	Heating 2 output signal
CP11	3x0048	Heating 2 pump command
CP11	1x0053	Heating 2 pump alarm
EB11	3x0049	El heating 2 output sign
EB11	3x0050	El heating 2 command
EB11	1x0056	El heating 2 alarm
KM11/SV21	3x0044	Coolig 2 output signal
KM11	3x0046	Coolig 2 DX command
KM11	1x0049	Cooling 2 DX alarm
CP21	3x0045	Coolig 2 pump command
CP21	1x0051	Cooling 2 pump alarm

3 Reference Modbus addresses

3.1 General

Purpose

This section describes the reference addresses used in the specific application, see chapter 1.2 "Before you start".

Modbus data formats

Modbus type	Description	Reference	Datatype
Coil status	Read/Write Discrete output	0x	1bit
Input states	Read Discrete input	1x	1bit
Input register	Read Input register	3x	16bit, 32bit signed or unsigned word
Holding register	Read/Write Output register	4x	16bit signed or unsigned word

Addresses used

All reference addresses from 0001-0125 for on-board and -1000 for module are generated and can be accessed even if not listed. As a result, multiple coils/registers can be forced/reset even if there is a gap between two reference addresses.

⚠ Do not read/write any addresses above 0125/1000. Doing so causes an exception and communication fails.

All address types starts with 1, and due to that some Master devices starts with 0 it's in that case necessary to subtract all addresses in this document with 1.

Presentation

Values and states are presented as follows:

- 16 bit real values are presented in their actual value/unit. E.g. °C, %, Pa, l/s (Normally Signed Word).
- 16 bit states are presented as a number, see the reference address description (Unsigned Word). Texts for each state are represented in the last column separated with * *(Example Off*On = 0 = Off and 1 = On)*
- 1 bit status are presented as 0 = Off and 1 = On.
- 1 bit alarms are presented as 0 = Normal and 1 = Alarm.

Alarms and status are presented both as input states and as input registers.

Examples

A real value is 215, and presented by a 16 bit register binary as:
MSB 11010111 LSB.

The 16 bit register "BMS override time program" is used and set binary to state 6:
MSB 00000110 LSB.

Decimals

When Modbus uses a 16 bit register to handle real values, a factor is needed for decimals. E.g. factor 10 for 1 decimal, factor 100 for 2 decimals, etc.

Example 1: Present values

The present supply air temperature is 20.6 °C and is multiplied by 10 in the Climatix controller. It is presented as 206 at Modbus and must be divided by 10 in the master device to return to 20.6 °C.

Example 2: Setpoints

To set the temperature setpoint 21.5°C at the master device, multiply it by 10 to present it as 215 at Modbus. The Climatix controller then divides by 10 to return to 21.5 °C.

Override I/Os

Inputs that are possible to override via Modbus is marked with (I/O), theese must first be setup to be overridden via communication, see Integration guide.

3.2 Coil status

Table of coil states

Adress	Description	Values /Units	Remarks	Release
0x0001	Alarm acknowledge	0-1	Off*On	
0x0002	Enable communicationtest	0-1	No*Yes	
0x0003	Communicationtest puls	0-1	0*1	
0x0004	Fire damper test	0-1	Passive*Active	
0x0007	Energy meter reset partial	0-1	Passive*Active	
0x0008	Energy Watch Heat recovery (reset trip meter puls)	0-1	Off*On	v3.14.xx
0x0009	Energy Watch Additional heat (reset trip meter puls)	0-1	Off*On	v3.14.xx
0x0010	Energy Watch Fans (reset trip meter puls)	0-1	Off*On	v3.14.xx
0x0011	Emergency stop input	0-1	Off*On, (I/O)	
0x0012	External control input 1	0-1	Off*On, (I/O)	
0x0013	External control input 2	0-1	Off*On, (I/O)	
0x0014	Summer/Winter changeover input	0-1	Winter*Summer, (I/O)	
0x0015	Fire alarm input	0-1	OK*Alarm, (I/O)	
0x0016	Fire alarm 2 input	0-1	OK*Alarm, (I/O)	v3.10.xx

3.3 Input states

Table of input states

Address	Description	Values /Units	Remarks
Present value			
1x0001	Alarm class Danger alarm (A) status	0-1	Normal*Alarm
1x0002	Alarm class Critical alarm (A) status	0-1	Normal*Alarm
1x0003	Alarm class Low alarm (B) status	0-1	Normal*Alarm
1x0004	Alarm class Warning alarm (C) status	0-1	Normal*Alarm
1x0005	Manual mode	0-1	Auto*Manual
1x0006	Communicationtest puls	0-1	0*1
1x0011	Emergency stop input	0-1	Off*On
1x0012	External control input 1	0-1	Off*On
1x0013	External control input 2	0-1	Off*On
1x0014	Summer/Winter changeover input	0-1	Winter*Summer
1x0015	Auxiliary input	0-1	Off*On
Alarm value			
1x0020	Outside air damper feedback	0-1	OK*Alarm
1x0021	Extract air damper feedback	0-1	OK*Alarm
1x0022	Fire damper closed	0-1	OK*Alarm
1x0023	Fire damper opened	0-1	OK*Alarm
1x0024	Fire damper no move	0-1	OK*Alarm
1x0026	Fan alarm	0-1	OK*Alarm
1x0027	Supply fan alarm	0-1	OK*Alarm
1x0028	Supply fan feedback	0-1	OK*Alarm
1x0029	Supply fan deviation alarm	0-1	OK*Alarm
1x0030	Exhaust fan alarm	0-1	OK*Alarm

Input states, *continued*

Table of input states, *cont.*

Address	Description	Values /Units	Remarks	Release
1x0031	Exhaust fan feedback	0-1	OK*Alarm	
1x0032	Exhaust fan deviation alarm	0-1	OK*Alarm	
1x0033	Fan operating hours alarm	0-1	OK*Alarm	
1x0034	Fire fan feedback	0-1	OK*Alarm	
1x0036	Cooling DX alarm	0-1	OK*Alarm	
1x0037	Cooling DX feedback	0-1	OK*Alarm	
1x0038	Cooling pump alarm	0-1	OK*Alarm	
1x0039	Cooling pump feedback	0-1	OK*Alarm	
1x0040	Heat recovery alarm	0-1	OK*Alarm	
1x0041	Heat recovery pump alarm	0-1	OK*Alarm	
1x0042	Heat recovery pump feedback	0-1	OK*Alarm	
1x0043	Heat recovery frost monitor	0-1	OK*Alarm	
1x0044	Heat recovery efficiency alarm	0-1	OK*Alarm	
1x0045	Heating pump alarm	0-1	OK*Alarm	
1x0046	Heating pump feedback	0-1	OK*Alarm	
1x0047	Heating frost monitor	0-1	OK*Alarm	
1x0048	Electrical heating alarm	0-1	OK*Alarm	
1x0049	Cooling 2 DX alarm	0-1	OK*Alarm	
1x0050	Cooling 2 DX feedback	0-1	OK*Alarm	
1x0051	Cooling 2 pump alarm	0-1	OK*Alarm	
1x0052	Cooling 2 pump feedback	0-1	OK*Alarm	
1x0053	Heating 2 pump alarm	0-1	OK*Alarm	
1x0054	Heating 2 pump feedback	0-1	OK*Alarm	
1x0055	Heating 2 frost monitor	0-1	OK*Alarm	
1x0056	Electrical heating 2 alarm	0-1	OK*Alarm	
1x0057	Supply temperature deviation	0-1	OK*Alarm	
1x0058	Room temperature deviation	0-1	OK*Alarm	
1x0062	Humidifier feedback	0-1	OK*Alarm	
1x0063	Humidity pump alarm	0-1	OK*Alarm	
1x0064	Humidity pump feedback	0-1	OK*Alarm	
1x0065	Supply hum deviation	0-1	OK*Alarm	
1x0066	Room/Return hum deviation	0-1	OK*Alarm	
1x0067	Dew point	0-1	OK*Alarm	
1x0070	Filter alarm	0-1	OK*Alarm	
1x0071	Supply filter alarm	0-1	OK*Alarm (pressure switch)	
1x0072	Exhaust filter alarm	0-1	OK*Alarm (pressure switch)	
1x0073	Fire alarm	0-1	OK*Alarm	
1x0074	Supply temperature fire alarm	0-1	OK*Alarm	
1x0075	Exhaust temperature fire alarm	0-1	OK*Alarm	
1x0076	Auxiliary alarm	0-1	OK*Alarm	
1x0077	Manual mode	0-1	OK*Alarm	
1x0078	Modbus comm alarm	0-1	OK*Alarm	
1x0079	Processbus comm alarm	0-1	OK*Alarm	Removed after v3.42.xx

Input states, *continued*

Table of input states, *cont.*

Address	Description	Values /Units	Remarks	Release
1x0080	Outside air temperature	0-1	OK*Alarm	
1x0081	Supply air temperature	0-1	OK*Alarm	
1x0082	Heating frost temperature	0-1	OK*Alarm	
1x0083	Room temperature	0-1	OK*Alarm	
1x0084	Room temperature 2	0-1	OK*Alarm	
1x0085	Exhaust air temperature	0-1	OK*Alarm	
1x0086	Extract air temperature	0-1	OK*Alarm	
1x0087	Heat recovery supply air temperature	0-1	OK*Alarm	
1x0088	Heat recovery water temperature	0-1	OK*Alarm	
1x0089	Supply air temperature 2	0-1	OK*Alarm	
1x0090	Heating 2 frost temperature	0-1	OK*Alarm	
1x0091	Auxiliary temperature	0-1	OK*Alarm	
1x0092	Outside air humidity relative	0-1	OK*Alarm	
1x0093	Supply air humidity relative	0-1	OK*Alarm	
1x0094	Room/Return humidity relative	0-1	OK*Alarm	
1x0095	Supply air flow	0-1	OK*Alarm	
1x0096	Exhaust air flow	0-1	OK*Alarm	
1x0097	Supply air pressure	0-1	OK*Alarm	
1x0098	Exhaust air pressure	0-1	OK*Alarm	
1x0099	Heat recovery frost pressure	0-1	OK*Alarm	
1x0100	Air quality	0-1	OK*Alarm	
1x0101	External setpoint	0-1	OK*Alarm	
1x0102	Room unit 1	0-1	OK*Alarm	
1x0103	Room unit 2	0-1	OK*Alarm	
1x0104	Room/Return air temperature 2	0-1	OK*Alarm	
1x0105	Heatpump Exhaust temp	0-1	OK*Alarm	
1x0111	Zone controller	0-1	OK*Alarm	
1x0112	Aux active signal	0-1	OK*Alarm	v2.04.xx
1x0113	Pressure balance	0-1	OK*Alarm	v2.04.xx
1x0114	Volume supply air	0-1	OK*Alarm	v2.04.xx
1x0115	Return air mode	0-1	OK*Alarm	v2.04.xx
1x0116	Forcegroup 1 temp	0-1	OK*Alarm	v2.04.xx
1x0117	Forcegroup 1 Co2	0-1	OK*Alarm	v2.04.xx
1x0118	Forcegroup 2 temp	0-1	OK*Alarm	v2.04.xx
1x0119	FlexoPool pool temp	0-1	OK*Alarm	
1x0120	Forcegroup 2 Co2	0-1	OK*Alarm	v2.04.xx
1x0121	High pressure heat recovery	0-1	OK*Alarm	v2.04.xx
1x0122	External signal Home	0-1	OK*Alarm	v2.14.xx
1x0123	Aux Temp 1	0-1	OK*Alarm	v2.14.xx
1x0124	Aux Alarm 1	0-1	OK*Alarm	v2.14.xx
1x0125	Aux Alarm 2	0-1	OK*Alarm	v2.14.xx
1x0126	Aux Alarm 3	0-1	OK*Alarm	v2.14.xx
1x0127	Aux Alarm 4	0-1	OK*Alarm	v2.14.xx
1x0128	Aux Alarm 5	0-1	OK*Alarm	v2.14.xx
1x0129	Supply filter alarm	0-1	OK*Alarm (pressure sensor)	v2.14.xx
1x0130	Exhaust filter alarm	0-1	OK*Alarm (pressure sensor)	v2.14.xx
1x0131	Heat recovery cold corner	0-1	OK*Alarm	v2.14.xx

Input states, *continued*

Table of input states, *cont.*

Address	Description	Values /Units	Remarks	Release
1x0132	Fire Alarm 2	0-1	OK*Alarm	v3.10.xx
1x0133	FlexoPool Emergency heating	0-1	OK*Alarm	v3.10.xx
1x0134	Air quality 2	0-1	OK*Alarm	v3.10.xx
1x0135	Air quality 3	0-1	OK*Alarm	v3.10.xx
1x0136	Air quality 4	0-1	OK*Alarm	v3.10.xx
1x0137	External setpoint Supply fan	0-1	OK*Alarm	v3.10.xx
1x0138	External setpoint Exhaust fan	0-1	OK*Alarm	v3.10.xx
1x0139	Exhaust filter Fire Alarm	0-1	OK*Alarm	v3.10.xx
1x0140	Supply filter Fire Alarm	0-1	OK*Alarm	v3.10.xx
1x0141	Carel General Alarm	0-1	OK*Alarm	v3.10.xx
1x0142	Carel Compressor 1	0-1	OK*Alarm	v3.10.xx
1x0143	Carel Motor expansion valve 1	0-1	OK*Alarm	v3.10.xx
1x0144	Carel Low pressure C1	0-1	OK*Alarm	v3.10.xx
1x0145	Carel Suction Temp C1	0-1	OK*Alarm	v3.10.xx
1x0146	Carel High pressure C1	0-1	OK*Alarm	v3.10.xx
1x0147	Carel Low super heat C1	0-1	OK*Alarm	v3.10.xx
1x0148	Carel Low temp evaporation C1	0-1	OK*Alarm	v3.10.xx
1x0149	Carel MOP C1	0-1	OK*Alarm	v3.10.xx
1x0150	Carel EVD communication C1	0-1	OK*Alarm	v3.10.xx
1x0151	Carel Low suction temp C1	0-1	OK*Alarm	v3.10.xx
1x0152	Carel Compressor 2A	0-1	OK*Alarm	v3.10.xx
1x0153	Carel Motor expansion valve 2	0-1	OK*Alarm	v3.10.xx
1x0154	Carel Low pressure C2	0-1	OK*Alarm	v3.10.xx
1x0155	Carel Suction Temp C2	0-1	OK*Alarm	v3.10.xx
1x0156	Carel High pressure C2	0-1	OK*Alarm	v3.10.xx
1x0157	Carel Low super heat C2	0-1	OK*Alarm	v3.10.xx
1x0158	Carel Low temp evaporation C2	0-1	OK*Alarm	v3.10.xx
1x0159	Carel MOP C2	0-1	OK*Alarm	v3.10.xx
1x0160	Carel EVD communication C2	0-1	OK*Alarm	v3.10.xx
1x0161	Carel Low suction temp C2	0-1	OK*Alarm	v3.10.xx
1x0162	Carel Compressor 3	0-1	OK*Alarm	v3.10.xx
1x0163	Carel Motor expansion valve 3	0-1	OK*Alarm	v3.10.xx
1x0164	Carel Low pressure C3	0-1	OK*Alarm	v3.10.xx
1x0165	Carel Suction Temp C3	0-1	OK*Alarm	v3.10.xx
1x0166	Carel High pressure C3	0-1	OK*Alarm	v3.10.xx
1x0167	Carel Low super heat C3	0-1	OK*Alarm	v3.10.xx
1x0168	Carel Low temp evaporation C3	0-1	OK*Alarm	v3.10.xx
1x0169	Carel MOP C3	0-1	OK*Alarm	v3.10.xx
1x0170	Carel EVD communication C3	0-1	OK*Alarm	v3.10.xx
1x0171	Carel Low suction temp C3	0-1	OK*Alarm	v3.10.xx
1x0172	Carel Compressor 2B	0-1	OK*Alarm	v3.10.xx
1x0173	Danfoss VSD Cooler	0-1	OK*Alarm	v3.10.xx
1x0174	Modbus Local manual mode Fans	0-1	OK*Alarm	v3.10.xx
1x0175	Modbus Carel	0-1	OK*Alarm	v3.10.xx
1x0176	Modbus Energy meter	0-1	OK*Alarm	v3.10.xx
1x0177	Modbus Danfoss	0-1	OK*Alarm	v3.10.xx
1x0178	Modbus Exhaust fan	0-1	OK*Alarm	v3.10.xx
1x0179	Modbus Supply fan	0-1	OK*Alarm	v3.10.xx
1x0180	Modbus sensor	0-1	OK*Alarm	v3.10.xx
1x0181	Energy Watch Alarm Heat Diff	0-1	OK*Alarm	v3.14.xx

Input states, *continued*

Table of input states, *cont.*

Address	Description	Values /Units	Remarks	Release
1x0182	Air Quality 2 Sensors	0-1	OK*Alarm	v3.42.xx
1x0183	Aux Temp 2	0-1	OK*Alarm	v3.24.xx
1x0184	Aux Temp 3	0-1	OK*Alarm	v3.24.xx
1x0185	Aux Temp 4	0-1	OK*Alarm	v3.24.xx
1x0186	Aux Temp 5	0-1	OK*Alarm	v3.24.xx
1x0187	Aux Temp 6	0-1	OK*Alarm	v3.24.xx
1x0188	Room 1 Temp	0-1	OK*Alarm	v3.40.xx
1x0189	Room 2 Temp	0-1	OK*Alarm	v3.40.xx
1x0190	Room 3 Temp	0-1	OK*Alarm	v3.40.xx
1x0191	Room 4 Temp	0-1	OK*Alarm	v3.40.xx
1x0192	Room 5 Temp	0-1	OK*Alarm	v3.40.xx
1x0193	Room 6 Temp	0-1	OK*Alarm	v3.40.xx
1x0194	Room 1 Air Quality	0-1	OK*Alarm	v3.40.xx
1x0195	Room 2 Air Quality	0-1	OK*Alarm	v3.40.xx
1x0196	Room 3 Air Quality	0-1	OK*Alarm	v3.40.xx
1x0197	Room 4 Air Quality	0-1	OK*Alarm	v3.40.xx
1x0198	Room 5 Air Quality	0-1	OK*Alarm	v3.40.xx
1x0199	Room 6 Air Quality	0-1	OK*Alarm	v3.40.xx
1x0200	Room 1 Humidity	0-1	OK*Alarm	v3.40.xx
1x0201	Room 2 Humidity	0-1	OK*Alarm	v3.40.xx
1x0202	Room 3 Humidity	0-1	OK*Alarm	v3.40.xx
1x0203	Room 4 Humidity	0-1	OK*Alarm	v3.40.xx
1x0204	Room 5 Humidity	0-1	OK*Alarm	v3.40.xx
1x0205	Room 6 Humidity	0-1	OK*Alarm	v3.40.xx
1x0206	Room 7 Temp	0-1	OK*Alarm	v3.40.xx
1x0207	Room 7 Air Quality	0-1	OK*Alarm	v3.40.xx
1x0208	Room 7 Humidity	0-1	OK*Alarm	v3.40.xx

3.4 Input register

Input register table

Address	Description	Values /Units	Remarks
	Unsigned Word		
3x0001	General status (Word 1)	0-65535	0-1 for each bit or counted binary to a decimal number
Bit0	- Alarm class danger (A)		
Bit1	- Alarm class critical (A)		
Bit2	- Alarm class low (B)		
Bit3	- Alarm class warning (C)		
Bit4	-		
Bit5	- Manual control active		
Bit6	- Summer mode		
Bit7	- Communication test puls		
Bit8	- Preheating, heating register		
Bit9	- Preheating, extra heating register		
Bit10	-		
Bit11	- Actual control mode temp, room		
Bit12	- Actual control mode temp, exhaust		
Bit13	- Actual control mode temp, supply		
Bit14	- Actual control mode humidity, room/Ret		
Bit15	- Actual control mode humidity, supply		
3x0002	General status (Word 2)	0-65535	0-1 for each bit or counted binary to a decimal number
Bit0	-		
Bit1	-		
Bit2	-		
Bit3	-		
Bit4	-		
Bit5	-		
Bit6	- Cooling recovery (MECH) active		
Bit7	-		
Bit8	-		
Bit9	-		
Bit10	-		
Bit11	-		
Bit12	-		
Bit13	-		
Bit14	-		
Bit15	-		
3x0003	General status (Word 3)	0-65535	0-1 for each bit or counted binary to a decimal number
Bit0	-		
Bit1	-		
Bit2	-		
Bit3	-		
Bit4	-		
Bit5	-		
Bit6	-		
Bit7	-		
Bit8	-		
Bit9	-		
Bit10	-		
Bit11	-		
Bit12	-		
Bit13	-		
Bit14	-		
Bit15	-		

Input register, *continued*

Input register table, *cont.*

Address	Description	Values /Units	Remarks
3x0004	General status (Word 4)	0-65535	0-1 for each bit or counted binary to a decimal number
Bit0	-		
Bit1	-		
Bit2	-		
Bit3	-		
Bit4	-		
Bit5	-		
Bit6	-		
Bit7	-		
Bit8	-		
Bit9	-		
Bit10	-		
Bit11	-		
Bit12	-		
Bit13	-		
Bit14	-		
Bit15	-		
3x0005	Digital inputs (Word 1)	0-65535	0-1 for each bit or counted binary to a decimal number
Bit0	- Emergency stop		
Bit1	- External control 1		
Bit2	- External control 2		
Bit3	- Summer/winter changeover		
Bit4	- Alarm acknowledge		
Bit5	-		
Bit6	-		
Bit7	-		
Bit8	- Aux input		
Bit9	-		
Bit10	-		
Bit11	-		
Bit12	-		
Bit13	-		
Bit14	-		
Bit15	-		
3x0006	Digital inputs (Word 2)	0-65535	0-1 for each bit or counted binary to a decimal number
Bit0	- Dampers open		
Bit1	- Fire dampers open		
Bit2	- Fire dampers closed		
Bit3	-		
Bit4	- Supply fan feedback		
Bit5	- Exhaust fan feedback		
Bit6	-		
Bit7	-		
Bit8	-		
Bit9	-		
Bit10	-		
Bit11	- Fire dampers 2 open		
Bit12	- Fire dampers 2 closed		
Bit13	-		
Bit14	-		
Bit15	-		

Input register, *continued*

Input register table, *cont.*

Address	Description	Values /Units	Remarks
3x0007	Digital inputs (Word 3)	0-65535	0-1 for each bit or counted binary to a decimal number
Bit0	-		
Bit1	-		
Bit2	-		
Bit3	-		
Bit4	-		
Bit5	-		
Bit6	-		
Bit7	-		
Bit8	-		
Bit9	-		
Bit10	-		
Bit11	-		
Bit12	-		
Bit13	-		
Bit14	-		
Bit15	-		
3x0008	Digital inputs (Word 4)	0-65535	0-1 for each bit or counted binary to a decimal number
Bit0	-		
Bit1	-		
Bit2	-		
Bit3	-		
Bit4	-		
Bit5	-		
Bit6	-		
Bit7	-		
Bit8	-		
Bit9	-		
Bit10	-		
Bit11	-		
Bit12	-		
Bit13	-		
Bit14	-		
Bit15	-		
3x0009	Digital outputs (Word 1)	0-65535	0-1 for each bit or counted binary to a decimal number
Bit0	- Supply damper		
Bit1	- Extract damper		
Bit2	- Fire damper		
Bit3	- Fire damper 2		
Bit4	- Supply fan, running		
Bit5	- Supply fan, off		
Bit6	- Supply fan, stage 1		
Bit7	- Supply fan, stage 2		
Bit8	- Supply fan, stage 3		
Bit9	- Exhaust fan, running		
Bit10	- Exhaust fan, off		
Bit11	- Exhaust fan, stage 1		
Bit12	- Exhaust fan, stage 2		
Bit13	- Exhaust fan, stage 3		
Bit14	-		
Bit15	-		

Input register, *continued*

Input register table, *cont.*

Address	Description	Values /Units	Remarks
3x0010	Digital outputs (Word 2)	0-65535	0-1 for each bit or counted binary to a decimal number
Bit0	- Cooling pump		
Bit1	- Cooling DX, off		
Bit2	- Cooling DX, stage 1		
Bit3	- Cooling DX, stage 2		
Bit4	- Cooling DX, stage 3		
Bit5	-		
Bit6	- Heating recovery pump/command		
Bit7	-		
Bit8	- Heating pump		
Bit9	-		
Bit10	- Electrical heating, off		
Bit11	- Electrical heating, stage 1		
Bit12	- Electrical heating, stage 2		
Bit13	- Electrical heating, stage 3		
Bit14	-		
Bit15	-		
3x0011	Digital outputs (Word 3)	0-65535	0-1 for each bit or counted binary to a decimal number
Bit0	- Extra cooling (2) pump		
Bit1	- Extra cooling (2) DX, off		
Bit2	- Extra cooling (2) DX, stage 1		
Bit3	- Extra cooling (2) DX, stage 2		
Bit4	- Extra cooling (2) DX, stage 3		
Bit5	-		
Bit6	- Extra heating (2) pump		
Bit7	-		
Bit8	- Extra electrical heating (2), off		
Bit9	- Extra electrical heating (2), stage 1		
Bit10	- Extra electrical heating (2), stage 2		
Bit11	- Extra electrical heating (2), stage 3		
Bit12	-		
Bit13	- Humidity command		
Bit14	- Humidity pump		
Bit15	-		
3x0012	Digital outputs (Word 4)	0-65535	0-1 for each bit or counted binary to a decimal number
Bit0	- Aux TSP command		
Bit1	- Aux operation mode indication		
Bit2	-		
Bit3	-		
Bit4	-		
Bit5	-		
Bit6	-		
Bit7	-		
Bit8	- Alarm output, high (and low)		
Bit9	- Alarm output, low		
Bit10	-		
Bit11	-		
Bit12	-		
Bit13	-		
Bit14	-		
Bit15	-		

Input register, *continued*

Input register table, *cont.*

Address	Description	Values /Units	Remarks
3x0013	Alarms (Word 1)	0-65535	0-1 for each bit or counted binary to a decimal number
Bit0	- Dampers		
Bit1	- Fire dampers		
Bit2	- Fire dampers 2		
Bit3	- Supply fan		
Bit4	- Exhaust fan		
Bit5	- Fan operating hours		
Bit6	- Fire fan		
Bit7	-		
Bit8	- Cooling		
Bit9	-		
Bit10	- Heating recovery		
Bit11	- Heating recovery pump		
Bit12	- Heating recovery frost		
Bit13	- Heating recovery efficiency		
Bit14	- Heating recovery damper		
Bit15	-		
3x0014	Alarms (Word 2)	0-65535	0-1 for each bit or counted binary to a decimal number
Bit0	- Heating pump		
Bit1	- Heating frost		
Bit2	- Electrical heating		
Bit3	-		
Bit4	- Extra cooling (2)		
Bit5	-		
Bit6	- Extra heating (2)		
Bit7	- Extra heating (2) frost		
Bit8	- Extra electrical heating (2)		
Bit9	-		
Bit10	- Humidity pump		
Bit11	- Humidity command		
Bit12	-		
Bit13	- Fire alarm		
Bit14	-		
Bit15	- Filter alarm		
3x0015	Alarms (Word 3)	0-65535	0-1 for each bit or counted binary to a decimal number
Bit0	- Out temperature		
Bit1	- Supply temperature		
Bit2	- Heating frost temperature		
Bit3	- Room1 temperature		
Bit4	- Room2 temperature		
Bit5	- Exhaust temperature (Return)		
Bit6	- Extract temperature		
Bit7	- Heating recovery supply temperature		
Bit8	- Heating recovery water temperature		
Bit9	- Extra supply temperature (2)		
Bit10	- Extra heati (2) frost temp/Heatpump Extr		
Bit11	- Auxiliary temperature		
Bit12	- Extra room/return temperature (2)		
Bit13	- Room units		
Bit14	- Supply temperature deviation		
Bit15	- Room/Exhaust temperature deviation		

Input register, *continued*

Input register table, *cont.*

Address	Description	Values /Units	Remarks	Release
3x0016	Alarms (Word 4)	0-65535	0-1 for each bit or counted binary to a decimal number	
Bit0	- Supply pressure/flow and deviation			
Bit1	- Exhaust pressflow and deviation			
Bit2	-			
Bit3	- Outside humidity			
Bit4	- Supply humidity and deviation			
Bit5	- Room/Ret humidity and deviation			
Bit6	- Dewpoint			
Bit7	-			
Bit8	- Air quality			
Bit9	- External setpoint			
Bit10	- Auxiliary alarm			
Bit11	-			
Bit12	- Manual control			
Bit13	-			
Bit14	- Communication test			
Bit15	- Modbus master, Processbus, Zone controller			
	Present value, Unsigned Word			
3x0017	Actual operating mode 0 = Off 1 = On/Comfort 2 = Economy 3 = Na 4 = Osstp 5 = Nightcooling 6 = Unoccupied (Temperature start) 7 = Nightkick (Test temperature) 8 = Firedamper test 9 = Fire 10 = Stop 11 = Overrun 12 = Startup	0-12	Off*On/Comfort*Economy*Na* Osstp*Nightcooling*Unoccupied (Temperature start)*Nightkick (Test temperature)*Firedamper test* Fire*Stop*Overrun*Startup	
3x0018	Actual fan step	0-3	Off*Stage1*Stage2*Stage3	
3x0019	Manual operation (steps)	0-4	Auto*Off*Stage 1*Stage 2* Stage 3	
		0-1	Auto*Off	v2.14.xx
3x0020	Manual operation (steps/temperature)	0-7	Auto*Off*Eco St1*Comf St1* Eco St2*Comf St2*Eco St3* Comf St3	
		0-1	Auto*Off	v2.14.xx
			Only one of Manual operation is used depending on configuration	
3x0021	Actual time switch program (steps)	0-3	Off*Stage1*Stage2*Stage3	
3x0022	Actual time switch program (steps/temperature)	0-6	Off*Eco St1*Comf St1*Eco St2* Comf St2*Eco St3*Comf St3	
			Only one of TSP is used depending on configuration	
3x0023	Actual Opmode ext ctrl	0-4	Auto*Off*Stage 1*Stage 2*Stage 3	
3x0024	Fire damper state	0-3	NotDefined*Closed*Moving* Opened	

Input register, *continued*

Input register table, *cont.*

Address	Description	Values /Units	Remarks
3x0025	Outside air damper command	0-1	Off*On
3x0026	Extract air damper command	0-1	Off*On
3x0027	Fire damper command	0-1	Off*On
3x0028	Supply fan command	1-4	Off*Stage1*Stage2*Stage3
3x0029	Supply fan output signal	0 - 100%	
3x0030	Exhaust fan command	1-4	Off*Stage1*Stage2*Stage3
3x0031	Exhaust fan output signal	0 - 100%	
3x0032	Fire fan command	0-1	Off*On
3x0033	Cooling output signal	0 - 100%	
3x0034	Cooling pump command	0-1	Off*On
3x0035	Cooling DX command	1-4	Off*Stage1*Stage2*Stage3
3x0036	Heat recovery output signal	0 - 100%	
3x0037	Heat recovery (pump) command	0-1	Off*On
3x0038	Heat recovery damper output signal	0 - 100%	
3x0039	Heat recovery damper recovery value	0 - 100%	
3x0040	Heating output signal	0 - 100%	
3x0041	Heating pump command	0-1	Off*On
3x0042	Electrical heating output signal	0 - 100%	
3x0043	Electrical heating command	1-4	Off*Stage1*Stage2*Stage3
3x0044	Cooling 2 output signal	0 - 100%	
3x0045	Cooling 2 pump command	0-1	Off*On
3x0046	Cooling 2 DX command	1-4	Off*Stage1*Stage2*Stage3
3x0047	Heating 2 output signal	0 - 100%	
3x0048	Heating 2 pump command	0-1	Off*On
3x0049	Electrical heating 2 output signal	0 - 100%	
3x0050	Electrical heating 2 command	1-4	Off*Stage1*Stage2*Stage3
3x0052	Humidifier output signal	0 - 100%	
3x0053	Humidifier command	0-1	Off*On
3x0054	Humidifier pump command	0-1	Off*On
3x0055	Actual dehumidity value	0 - 100%	
3x0056	FlexoPool damper output signal	0 - 100%	
3x0057	Auxiliary operation mode output	0-1	Off*On
3x0058	Auxiliary time switch program output	0-1	Off*On
3x0059	Auxiliary analog output fan	0 - 100%	
3x0060	Alarm output 1	0-1	Normal*Alarm
3x0061	Alarm output 2	0-1	Normal*Alarm
3x0064	Actual airquality comp	0 - 100%	
3x0065	Actual fan cooling value	0 - 100%	
3x0066	Actual fan heating value	0 - 100%	
3x0067	Actual fan comp temperature	0 - 100%	
3x0068	Actual fan comp hum	0 - 100%	
3x0069	Actual summer comp fan	0 - 100%	
3x0070	Actual winter comp fan	0 - 100%	

Input register, *continued*

Input register table, *cont.*

Address	Description	Values /Units	Remarks
	Present value, Signed Word		
3x0072	Outside air temperature	-x.y - +x.y °C	(factor 10)
3x0073	Supply air temperature	-x.y - +x.y °C	(factor 10)
3x0074	Heating frost temperature	-x.y - +x.y °C	(factor 10)
3x0075	Actual room temperature	-x.y - +x.y °C	(factor 10)
3x0076	Exhaust air temperature	-x.y - +x.y °C	(factor 10)
3x0077	Extract air temperature	-x.y - +x.y °C	(factor 10)
3x0078	Heat recovery supply air temp	-x.y - +x.y °C	(factor 10)
3x0079	Heat recovery water temperature	-x.y - +x.y °C	(factor 10)
3x0080	Supply air temperature 2	-x.y - +x.y °C	(factor 10)
3x0081	Heating 2 frost temperature	-x.y - +x.y °C	(factor 10)
3x0082	Auxiliary temperature	-x.y - +x.y °C	(factor 10)
3x0083	Room/Return temperature 2	-x.y - +x.y °C	(factor 10)
3x0084	Outside air hum relative	0 - x %rH	
3x0085	Outside air hum absolute	-x.y - +x.y g/kg	(factor 10)
3x0086	Outside air enthalpy	-x.y - +x.y kJ/kg	(factor 10)
3x0087	Supply air hum relative	0 - x %rH	
3x0088	Supply air hum absolute	-x.y - +x.y g/kg	(factor 10)
3x0089	Supply air enthalpy	-x.y - +x.y kJ/kg	(factor 10)
3x0090	Room/return humidity relative	0 - x %rH	
3x0091	Room/return humidity absolute	-x.y - +x.y g/kg	(factor 10)
3x0092	Room/return enthalpy	-x.y - +x.y kJ/kg	(factor 10)
3x0093	Dew point	-x.y - +x.y °C	(factor 10)
3x0095	Supply air flow	0 - x l/s	Unsigned word
3x0096	Exhaust air flow	0 - x l/s	Unsigned word
3x0097	Supply air pressure	0 - x Pa	Unsigned word
3x0098	Exhaust air pressure	0 - x Pa	Unsigned word
3x0099	Heat recovery frost pressure	0 - x Pa	
3x0101	Air quality	0 - x ppm	
3x0102	External setpoint	-x.y - +x.y °C	(factor 10)
3x0104	Actual heating setpoint, Main (depending on actual controlmode)	-x.y - +x.y °C	(factor 10)
3x0105	Actual cooling setpoint, Main (depending on actual controlmode)	-x.y - +x.y °C	(factor 10)
3x0106	Actual supply heating setpoint (when use of cascade control)	-x.y - +x.y °C	(factor 10)
3x0107	Actual supply cooling setpoint (when use of cascade control)	-x.y - +x.y °C	(factor 10)
3x0108	Actual humidity setpoint, Main (depending on actual controlmode)	x.y - x.y	(factor 10) %r.H. or g/kg
3x0109	Actual dehumity setpoint, Main (depending on actual controlmode)	x.y - x.y	(factor 10) %r.H. or g/kg
3x0110	Actual supply humidity setpoint (when use of cascade control)	x.y - x.y	(factor 10) %r.H. or g/kg
3x0111	Actual supply dehumidity setpoint (when use of cascade control)	x.y - x.y	(factor 10) %r.H. or g/kg
3x0112	Actual Supply fan setpoint	0 - x	%, Pa, l/s, 3m/s or 3m/h Unsigned word

Input register, *continued*

Input register table, *cont.*

Address	Description	Values /Units	Remarks	Release
3x0113	Actual exhaust fan setpoint	0 - x	%, Pa, l/s, 3m/s or 3m/h Unsigned word	
3x0115	Actual summer comp temperature	-x.y - +x.y °C	(factor 10)	
3x0116	Actual winter comp temperature	-x.y - +x.y °C	(factor 10)	
3x0117	Heat recovery efficiency	0 - 100%		
3x0118	Cooling recovery (MECH) active	0 - 1	Passive*Active	
3x0119	FlexoPool pool temperature	-x.y - +x.y °C	(factor 10)	
3x0120	EM24 Energy actual power	0 - +x.y W	Unsigned word	v3.40.xx
3x0121	EM24 Energy average power	0 - +x.y W	Unsigned word	v3.40.xx
3x0122	EM24 Energy operating hours	0 - +x.y h	Unsigned word	v3.40.xx
3x0123	EM24 Energy partial	0 - +x.y kWh	Unsigned word	v3.40.xx
3x0124	EM24 Energy total	0 - +x.y kWh	Unsigned word	v3.40.xx
3x0125	Aux active signal	0 - 100%	(factor 10)	v2.04.xx
3x0126	Home Normal Pressure calculated	0 - x Pa	(factor 10)	v2.04.xx
3x0127	Home Actual start pressure defrost	0 - x Pa	(factor 10)	v2.04.xx
3x0128	Home Actual stop pressure defrost	0 - x Pa	(factor 10)	v2.04.xx
3x0129	Home Defrosting active	0 - 1	off – active (factor 10)	v2.04.xx
3x0130	Home Actual pressure over VVX	0 - x Pa	(factor 10)	v2.04.xx
3x0131	Heat recovery output signal S1	0 - 100%	(factor 10)	v2.04.xx
3x0132	Heat recovery output signal S2	0 - 100%	(factor 10)	v2.04.xx
3x0133	Return air mode	0 - 1	off – on (factor 10)	v2.04.xx
3x0134	Forcegroup 1 temp	-x.y - +x.y °C	(factor 10)	v2.04.xx
3x0135	Forcegroup 1 Co2	-x.yy - +x.yy ppm	(factor 10)	v2.04.xx
3x0136	Forcegroup 1 Damper output signal	0 - 100%	(factor 10)	v2.04.xx
3x0137	Forcegroup 2 temp	-x.y - +x.y °C	(factor 10)	v2.04.xx
3x0138	Forcegroup 2 Co2	-x.yy - +x.yy ppm	(factor 10)	v2.04.xx
3x0139	Forcegroup 2 Damper output signal	0 - 100%	(factor 10)	v2.04.xx
3x0140	Pressure balance	0 - x Pa	(factor 10)	v2.04.xx
3x0141	Pressure balance Damper output signal	0 - 100%	(factor 10)	v2.04.xx
3x0142	Aux operation mode indication 2	0 - 1	off – on (factor 10)	v2.04.xx
3x0143	Volume supply air	0 – x Mm³	(factor 10)	v2.04.xx
3x0144	External signal Home	0 - 100%	(factor 10)	v2.14.xx
3x0145	Aux Temp1	-x.y - +x.y °C	(factor 10)	v2.14.xx
3x0146	Aux Temp1 Output	0 - 1	off – on (factor 10)	v2.14.xx
3x0147	Sensible Effect	x.y - +x.y kW	(factor 10)	v2.14.xx
3x0148	Supply filter alarm	0 - x Pa	(factor 10)	v2.14.xx
3x0149	Exhaust filter alarm	0 - x Pa	(factor 10)	v2.14.xx
3x0150	Manual switch Continuous run	0-3	No*Stage 1*Stage 2*Stage 3	v2.14.xx
3x0151	Manual switch Continuous run	0-6	No*Eco St1*Comf St1* Eco St2*Comf St2*Eco St3* Comf St3	v2.14.xx
			Only one of Manual switch is used depending on configuration	
3x0152	Home Defrost min damper setpoint	0 - 100%	(factor 10)	v2.14.xx
3x0153	Home Defrost reduce damper set-point	0 - 100%	(factor 10)	v2.14.xx
3x0154	Home Defrost Outside air temp X1	-x.y - +x.y °C	(factor 10)	v2.14.xx
3x0155	Home Defrost Outside air temp X2	-x.y - +x.y °C	(factor 10)	v2.14.xx
3x0156	Home Defrost Damper position Y1	0 - 100%	(factor 10)	v2.14.xx
3x0157	Home Defrost Damper position Y2	0 - 100%	(factor 10)	v2.14.xx

Input register, *continued*

Input register table, *cont.*

Address	Description	Values /Units	Remarks	Release
3x0158	Heat Recovery Dewpoint outdoor temp active	-x.y - +x.y °C	(factor 10)	v2.14.xx
3x0159	Heat Recovery Dewpoint deadzone	-x.y - +x.y °C	(factor 10)	v2.14.xx
3x0160	Heat Recovery Dewpoint	-x.y - +x.y °C	(factor 10)	v2.14.xx
3x0161	Heat Recovery actual dew point setpoint	-x.y - +x.y °C	(factor 10)	v2.14.xx
	Unsigned long 32bit, each address also uses the next/following address			
3x0162	EM24 Energy actual power	x.y - +x.y W	(factor 10) 32-bit	v2.14.xx
3x0164	EM24 Energy average power	x.y - +x.y W	(factor 10) 32-bit	v2.14.xx
3x0166	EM24 Energy operating hours	x.y - +x.y h	(factor 10) 32-bit	v2.14.xx
3x0168	EM24 Energy partial	x.y - +x.y kWh	(factor 10) 32-bit	v2.14.xx
3x0170	EM24 Energy total	x.y - +x.y kWh	(factor 10) 32-bit	v2.14.xx
	Present value, Signed Word			
3x0172	Extra heating group Actual summer comp temperature	-x.y - +x.y °C	(factor 10)	v3.10.xx
3x0173	Extra heating group Actual winter comp temperature	-x.y - +x.y °C	(factor 10)	v3.10.xx
3x0174	FlexoPool HeatPump command	0 -1	Off*On Unsigned word	v3.10.xx
3x0175	FlexoPool HeatPump block	0- 2	Off*On*Block Unsigned word	v3.10.xx
3x0176	Actual damper comp. humidity	0 -100%rF	(factor 10)	v3.10.xx
3x0177	FlexoPool Damper heating	0 -100%	(factor 10)	v3.10.xx
3x0178	SFP present value	0 - x	kW/(m3/s) (factor 10)	v3.10.xx
3x0179	Air quality 2	0 - x ppm		v3.10.xx
3x0180	Air quality 3	0 - x ppm		v3.10.xx
3x0181	Air quality 4	0 - x ppm		v3.10.xx
3x0182	External actual supply fan setpoint	0 - x	(factor 10) %, Pa or l/s	v3.10.xx
3x0183	External actual exhaust fan setpoint	0 - x	(factor 10) %, Pa or l/s	v3.10.xx
3x0184	Heating frost protection Actual setpoint	-x.y - +x.y °C	(factor 10)	v3.10.xx
3x0185	Extra heating frost protection actual setpoint	-x.y - +x.y °C	(factor 10)	v3.10.xx
3x0186	Room temperature	-x.y - +x.y °C	(factor 10)	v3.10.xx
3x0187	Room temperature 2	-x.y - +x.y °C	(factor 10)	v3.10.xx

Input register, *continued*

Address	Description	Values /Units	Remarks	Release
		Present value, Unsigned Word		
3x0188	Supply air flow m3/s	0 – x.y m3/s	Unsigned word (factor 100)	v3.15.xx
3x0189	Return air flow m3/s	0 – x.y m3/s	Unsigned word (factor 100)	v3.15.xx-
3x0191	Supply air flow m3/h	0 - x.yy m3/h	Unsigned long (32-bit)(factor 1)	v3.15.xx-
3x0193	Return air flow m3/h	0 – x.yy m3/h	Unsigned long (32-bit)(factor 1)	v3.15.xx-
3x0188	*Supply air flow m3/h*	*0-x m3/h*	*Unsigned word*	*v3.10.xx-v3.14.xx*
3x0189	*Supply air flow m3/s*	*0-x m3/s*	*Unsigned word*	*v3.10.xx-v3.14.xx*
3x0190	*Return air flow m3/h*	*0-x m3/h*	*Unsigned word*	*v3.10.xx-v3.14.xx*
3x0191	*Return air flow m3/s*	*0-x m3/s*	*Unsigned word*	*v3.10.xx-v3.14.xx*
3x0197	Actual air quality comp 2	0 – x ppm	Unsigned word	v3.24.xx
		Present value, Signed Word		
3x0198	Air quality 2 sensor 1	-x.y - +x.y ppm	(factor 10)	v3.24.xx

Addresses with italic text only applies on some versions

Address	Description	Values /Units	Remarks	Release
		Present value, Unsigned Word		
3x0199	Actual operating status	0-16	0 = NU 1 = Configuration 2 = Fire Alarm 3 = Alarm Class 0 4 = Emergency Stop 5 = Alarm Class 1 6 = FireDampTest 7 = External Control 8 = BMS 9 = Manual Operation Mode 10 = Room Unit Operation Mode 11 = Time switch program 12 = Boost 13 = Night Heating/Cooling 14 = Night Cooling 15 = Test 16 = Service	
3x0200	Actual room unit mode	0-4	Auto*Comfort*Standby*Economy*Off	

Input register, *continued*

Address	Description	Values /Units	Remarks	Release
	Present value, Signed Word			
3x0210	Actual room unit setpoint	-x.y - +x.y K/°C	(factor 10)	
3x0211	Room unit 1 temperature	-x.y - +x.y °C	(factor 10)	
3x0212	Room unit 2 temperature	-x.y - +x.y °C	(factor 10)	
3x0215	Actual heating setpoint 2, Main (depending on actual controlmode)	-x.y - +x.y °C	(factor 10)	
3x0216	Actual cooling setpoint 2, Main (depending on actual controlmode)	-x.y - +x.y °C	(factor 10)	
3x0217	Actual supply heating setpoint 2 (when use of cascade control)	-x.y - +x.y °C	(factor 10)	
3x0218	Actual supply cooling setpoint 2 (when use of cascade control)	-x.y - +x.y °C	(factor 10)	
3x0219	Actual control mode 2	0-2	Room*Exhaust*Supply Unsigned word	
3x0221	Heat Pump extract temperature	-x.y - +x.y °C	(factor 10)	

	Present value, Signed Word			
3x0230	Carel_ACUACR Ain Cooling Demand	0 -100%	(factor 10)	v3.10.xx
3x0231	Carel ACUACR Inverter signal output C1	0 -100%	(factor 10)	v3.10.xx
3x0232	Carel unit status	0-9	Unsigned word 0 = Waiting 1 = Unit On 2 = Off by ALARM 3 = Off by NET 4 = Off by BMS 5 = Off by SCHEDULE 6 = Off by DIN 7 = Off by KEY 8 = Manual 9 = Not	v3.10.xx
3x0233	Carel ACUACR Suction Temp C1	-x.y - +x.y °C	(factor 10)	v3.10.xx
3x0234	Carel ACUACR Evaporation temp C1	-x.y - +x.y °C	(factor 10)	v3.10.xx
3x0235	Carel ACUACR Low pressure C1	x.y - +x.y Bar	(factor 10)	v3.10.xx
3x0236	Carel ACUACR Superheat C1	-x.y - +x.y K	(factor 10)	v3.10.xx
3x0237	Carel ACUACR High pressure C1	x.y - +x.y Bar	(factor 10)	v3.10.xx
3x0238	Carel ACUACR Circuit 1 Expansion valve 1 output signal	0 -100%	(factor 10)	v3.10.xx
3x0239	Carel ACUACR Condensing temp C1	-x.y - +x.y °C	(factor 10)	v3.10.xx
3x0240	Carel ACUACR Suction Temp C2	-x.y - +x.y °C	(factor 10)	v3.10.xx
3x0241	Carel ACUACR Evaporation temp C2	-x.y - +x.y °C	(factor 10)	v3.10.xx
3x0242	Carel ACUACR Low pressure C2	x.y - +x.y Bar	(factor 10)	v3.10.xx
3x0243	Carel ACUACR Superheat C2	-x.y - +x.y K	(factor 10)	v3.10.xx
3x0244	Carel ACUACR High pressure C2	x.y - +x.y Bar	(factor 10)	v3.10.xx
3x0245	Carel ACUACR Circuit 2 Expansion valve 2 output signal	0 -100%	(factor 10)	v3.10.xx
3x0246	Carel ACUACR Condensing temp C2	-x.y - +x.y °C	(factor 10)	v3.10.xx
3x0247	Carel ACUACR Suction Temp C3	-x.y - +x.y °C	(factor 10)	v3.10.xx

3x0248	Carel ACUACR Evaporation temp_C3	-x.y - +x.y °C	(factor 10)	v3.10.xx
3x0249	Carel ACUACR Low pressure C3	x.y - +x.y Bar	(factor 10)	v3.10.xx
3x0250	Carel ACUACR Superheat C3	-x.y - +x.y K	(factor 10)	v3.10.xx
3x0251	Carel ACUACR High pressure C3	x.y - +x.y Bar	(factor 10)	v3.10.xx
3x0252	Carel ACUACR Circuit 3 Expansion valve 3 output signal	0 -100%	(factor 10)	v3.10.xx
3x0253	Carel ACUACR Condensing temp C3	-x.y - +x.y °C	(factor 10)	v3.10.xx
	Present value, Unsigned Word			
3x0254	Carel ACUACR Compressor 1 command	0 -1	Off*On	v3.10.xx
3x0255	Carel ACUACR Compressor 2A command	0 -1	Off*On	v3.10.xx
3x0256	Carel ACUACR Compressor 3 command	0 -1	Off*On	v3.10.xx
3x0257	Carel ACUACR Compressor 2B command	0 -1	Off*On	v3.10.xx
3x0258	Carel ACUACR Compressor number	0-4	None*Comp1*Comp2 *Comp3*Comp4	v3.10.xx

	Present value, Signed Word			
3x0260	Danfoss VSD High pressure	x.y - +x.y Bar	(factor 10)	v3.10.xx
3x0261	Danfoss VSD Low pressure	x.y - +x.y Bar	(factor 10)	v3.10.xx
	Present value, Unsigned Word			
3x0262	Danfoss VSD Compressor 1 command	0 -1	Off*On	v3.10.xx
3x0263	Danfoss VSD Actual status	0-31	0 = Normal 3 = Crankhouse heating 4 = Control Start-up 5 = Control oil return 6 = Restart time 28 = Derating active 29 = Safe mode active 30 = Alarm active 31 = Alarm trip lock active Other values between are not in use	v3.10.xx

3x0264	Danfoss VSD Alarm	0-32	0 = No alarm 1 = Peripherals error 2 = Out of envelope 3 = Over current 4 = DC link voltage high 5 = Drive temp high 6 = Supply Voltage Low 7 = Discharge Temperature High 8 = Discharge Temperature Invalid 9 = OEM Communication Timeout 10 = MOC Safety 11 = DC Link Voltage Low 12 = Suction Pressure Invalid 13 = Condenser Pressure Invalid 14 = Condenser Pressure Low 15 = Defrosting Timeout 16 = Restart too frequently 32 = Internal Error Other values between are not in use	v3.10.xx
3x0265	Danfoss VSD Safe mode	0-4	0 = Ok 1 = EEV indoor failure 2 = EEV outdoor failure 3 = Ambient temperature invalid 4 = Ambient temperature not updated	v3.10.xx

Input register table, *cont.*

Address	Description	Values /Units	Remarks	Release
		Present value, Signed Word		
3x0266	Danfoss VSD Derating status	0-7	0 = No 1 = Drive temperature high 2 = Discharge temp high 3 = Suction pressure low 5 = Condenser pressure low 6 = Condenser pressure high 7 = Output power limit Other values between are not in use	v3.10.xx
		Present value, Signed Word		
3x0267	Danfoss VSD Compressor frequency	0 – x.y Hz	(factor 10)	v3.10.xx
3x0268	Danfoss VSD Discharge temp	-x.y - +x.y °C	(factor 10)	v3.10.xx
3x0269	Danfoss VSD Actual cooling output	0 -100%	(factor 10)	v3.10.xx
3x0270	Danfoss VSD Suction Temp	-x.y - +x.y °C	(factor 10)	v3.10.xx
3x0271	Danfoss VSD Evaporation temp	-x.y - +x.y °C	(factor 10)	v3.10.xx
3x0272	Danfoss VSD Actual superheat reference setpoint	-x.y - +x.y K	(factor 10)	v3.10.xx
3x0273	Danfoss VSD Superheat	-x.y - +x.y K	(factor 10)	v3.10.xx
3x0274	Danfoss VSD Expansion valve output signal	0 -100%	(factor 10)	v3.10.xx
3x0275	Danfoss VSD Inverter temp	-x.y - +x.y °C	(factor 10)	v3.10.xx
3x0276	Danfoss VSD Supply voltage	0 – x.y V	(factor 10)	v3.10.xx
3x0277	Danfoss VSD Compressor power	0 – x.y kW	(factor 10)	v3.10.xx
3x0278	Danfoss VSD DC link voltage	0 – x.y V	(factor 10)	v3.10.xx
3x0279	Danfoss VSD Phase A current	0 – x.y A	(factor 10)	v3.10.xx
3x0280	Danfoss VSD Phase B current	0 – x.y A	(factor 10)	v3.10.xx
3x0281	Danfoss VSD Phase C current	0 – x.y A	(factor 10)	v3.10.xx

Input register table, *cont.*

Address	Description	Values /Units	Remarks	Release
3x0285	Danfoss/Ziehl Supply fan 1 Alarm Warning number	0 - x	Unsigned word	v3.10.xx
3x0286	Danfoss Supply fan 1 Warning	0-1	Ok*Fault Unsigned word	v3.10.xx
	Present value, Signed Word			
3x0287	Danfoss/Ziehl Supply fan 1 Current	0 – x.y A	(factor 10)	v3.10.xx
3x0288	Danfoss Supply fan 1 Energy	0 – x.y kWh	(factor 10)	v3.10.xx
3x0289	Danfoss/Ziehl Supply fan 1 Motor voltage	0 – x.y V	(factor 10)	v3.10.xx
3x0290	Danfoss Supply fan 1 Operating hours	0 – x h	(factor 10)	v3.10.xx
3x0291	Danfoss Supply fan 1 Output frequency	0 – x.y Hz	(factor 10)	v3.10.xx
3x0292	Danfoss/Ziehl Supply fan 1 Power	0 – x.y kW	(factor 10)	v3.10.xx
3x0293	Ziehl Supply fan 1 Speed	0 – x.y rpm	(factor 10)	v3.10.xx
3x0294	Danfoss/Ziehl Supply fan 1 Heat sink temp	-x.y - +x.y °C	(factor 10)	v3.10.xx
3x0295	Danfoss Supply fan 2 Alarm Warning number	0 – x	Unsigned word	v3.10.xx
3x0296	Danfoss Supply fan 2 Warning	0-1	Ok*Fault Unsigned word	v3.10.xx
3x0297	Danfoss Supply fan 2 Current	0 – x.y A	(factor 10)	v3.10.xx
3x0298	Danfoss Supply fan 2 Energy	0 – x.y kWh	(factor 10)	v3.10.xx
3x0299	Danfoss Supply fan 2 Motor voltage	0 – x.y V	(factor 10)	v3.10.xx
3x0300	Danfoss Supply fan 2 Operating hours	0 – x h	(factor 10)	v3.10.xx
3x0301	Danfoss Supply fan 2 Output frequency	0 – x.y Hz	(factor 10)	v3.10.xx
3x0302	Danfoss Supply fan 2 Power	0 – x.y kW	(factor 10)	v3.10.xx
3x0303	Danfoss Supply fan 2 Speed	0 – x.y rpm	(factor 10)	v3.10.xx
3x0304	Danfoss Supply fan 2 Heat sink temp	-x.y - +x.y °C	(factor 10)	v3.10.xx
3x0305	Danfoss/Ziehl Supply fan 1 DC link voltage	0 – x.y V	(factor 10)	v3.40.xx
3x0306	Ebm Supply fan Alarm	0-12	Unsigned word 0 = Nu 1 = Mains Over Volt 2 = Mains Under Volt 3 = DC-link Under Volt 4 = DC link Over Volt 5 = Internal Electronics 6 = Locked 7 = Hall Sensor 8 = Overheat 9 = Communication Error 10 = Power Overheat 11 = Phase Fail 12 = Normal	v3.10.xx

3x0307	Ebm Supply fan Warning	0-11	Unsigned word 0 = Nu 1 = Open circuit at input 2 = Actual speed less than low limit 3 = Brake operation 4 = Low DC-link voltage 5 = High electronics temp 6 = High motor temp 7 = High output stage temp 8 = Mesh power limitation 9 = High line impedance 10 = Mesh current limitation 11 = Normal	v3.10.xx
3x0308	Ebm Supply fan DC link current	0 - x.y A	(factor 10)	v3.10.xx
3x0309	Ebm Supply fan DC link voltage	0 - x.y V	(factor 10)	v3.10.xx
3x0310	Ebm Supply fan Speed	0 - x.y rpm	(factor 10)	v3.10.xx
3x0311	Ebm Supply fan Max speed	0 - x.y rpm	(factor 10)	v3.10.xx
3x0312	Ebm Supply fan Power module temp	-x.y - +x.y °C	(factor 10)	v3.10.xx
3x0313	Ebm Supply fan Motor temp	-x.y - +x.y °C	(factor 10)	v3.10.xx– v3.37.xx
3x0314	Ebm Supply fan Electronics temp	-x.y - +x.y °C	(factor 10)	v3.10.xx– v3.37.xx
3x0315	Ebm Supply fan Power	0 - x.y W	(factor 10)	v3.10.xx
3x0316	Ebm Supply fan Motor run time	0-32767 h,min	(factor 10)	v3.10.xx
3x0317	Ebm Supply fan Motor run time HH	0-32767 h	(factor 10)	v3.10.xx
3x0318	Ebm Supply fan Motor run time MM	0-59 min	(factor 10)	v3.10.xx

Input register, *continued* Exhaust Fan

Input register table, *cont.*

Address	Description	Values /Units	Remarks	Release
3x0321	Danfoss/Ziehl Exhaust fan 1 Alarm Warning number	0 - x	Unsigned word	v3.10.xx
3x0322	Danfoss Exhaust fan 1 Warning	0-1	Ok*Fault Unsigned word	v3.10.xx
	Present value, Signed Word			
3x0323	Danfoss/Ziehl Exhaust fan 1 Current	0 – x.y A	(factor 10)	v3.10.xx
3x0324	Danfoss Exhaust fan 1 Energy	0 – x.y kWh	(factor 10)	v3.10.xx
3x0325	Danfoss/Ziehl Exhaust fan 1 Motor voltage	0 – x.y V	(factor 10)	v3.10.xx
3x0326	Danfoss Exhaust fan 1 Operating hours	0 – x h	(factor 10)	v3.10.xx
3x0327	Danfoss Exhaust fan 1 Output frequency	0 – x.y Hz	(factor 10)	v3.10.xx
3x0328	Danfoss/Ziehl Exhaust fan 1 Power	0 – x.y kW	(factor 10)	v3.10.xx
3x0329	Ziehl Exhaust fan 1 Speed	0 – x.y rpm	(factor 10)	v3.10.xx
3x0330	Danfoss/Ziehl Exhaust fan 1 Heat sink temp	-x.y - +x.y °C	(factor 10)	v3.10.xx
3x0331	Danfoss/Ziehl Exhaust fan 1 DC link voltage	0 – x.y V	(factor 10)	v3.40.xx
3x0332	Danfoss Exhaust fan 2 Alarm Warning number	0 – x	Unsigned word	v3.10.xx
3x0333	Danfoss Exhaust fan 2 Warning	0-1	Ok*Fault Unsigned word	v3.10.xx
3x0334	Danfoss Exhaust fan 2 Current	0 – x.y A	(factor 10)	v3.10.xx
3x0335	Danfoss Exhaust fan 2 Energy	0 – x.y kWh	(factor 10)	v3.10.xx
3x0336	Danfoss Exhaust fan 2 Motor voltage	0 – x.y V	(factor 10)	v3.10.xx
3x0337	Danfoss Exhaust fan 2 Operating hours	0 – x h	(factor 10)	v3.10.xx
3x0338	Danfoss Exhaust fan 2 Output frequency	0 – x.y Hz	(factor 10)	v3.10.xx
3x0339	Danfoss Exhaust fan 2 Power	0 – x.y kW	(factor 10)	v3.10.xx
3x0340	Danfoss Exhaust fan 2 Speed	0 – x.y rpm	(factor 10)	v3.10.xx
3x0341	Danfoss Exhaust fan 2 Heat sink temp	-x.y - +x.y °C	(factor 10)	v3.10.xx
3x0343	Ebm Exhaust fan Alarm	0-12	Unsigned word 0 = Nu 1 = Mains Over Volt 2 = Mains Under Volt 3 = DC-link Under Volt 4 = DC link Over Volt 5 = Internal Electronics 6 = Locked 7 = Hall Sensor 8 = Overheat 9 = Communication Error 10 = Power Overheat 11 = Phase Fail 12 = Normal	v3.10.xx

3x0344	Ebm Exhaust fan Warning	0-11	Unsigned word 0 = Nu 1 = Open circuit at input 2 = Actual speed less than low limit 3 = Brake operation 4 = Low DC-link voltage 5 = High electronics temp 6 = High motor temp 7 = High output stage temp 8 = Mesh power limitation 9 = High line impedance 10 = Mesh current limitation 11 = Normal		v3.10.xx
3x0345	Ebm Exhaust fan DC link current		0 – x.y A	(factor 10)	v3.10.xx
3x0346	Ebm Exhaust fan DC link voltage		0 – x.y V	(factor 10)	v3.10.xx
3x0347	Ebm Exhaust fan Speed		0 – x.y rpm	(factor 10)	v3.10.xx
3x0348	Ebm Exhaust fan Max speed		0 – x.y rpm	(factor 10)	v3.10.xx
3x0349	Ebm Exhaust fan Power module temp		-x.y - +x.y °C	(factor 10)	v3.10.xx
3x0350	Ebm Exhaust fan Motor temp		-x.y - +x.y °C	(factor 10)	v3.10.xx– v3.37.xx
3x0351	Ebm Exhaust fan Electronics temp		-x.y - +x.y °C	(factor 10)	v3.10.xx– v3.37.xx
3x0352	Ebm Exhaust fan Power		0 – x.y W	(factor 10)	v3.10.xx
3x0353	Ebm Exhaust fan Motor run time		0-32767 h, min	(factor 10)	v3.10.xx
3x0354	Ebm Exhaust fan Motor run time HH		0-32767 h	(factor 10)	v3.10.xx
3x0355	Ebm Exhaust fan Motor run time MM		0-59 min	(factor 10)	v3.10.xx

Input register table, *cont.*

Address	Description	Values /Units	Remarks	Release
	Unsigned long 32bit, each address also uses next/following address			
3x0356	Heat recovery Actual rec. power	0 – x.yy kW	(factor 100)	v3.14.xx
3x0358	Heat recovery Rec. energy today	0 – x kWh		v3.14.xx
3x0360	Heat recovery Rec. energy month	0 – x kWh		v3.14.xx
3x0362	Heat recovery Rec. energy year	0 – x.yy MWh	(factor 100)	v3.14.xx
3x0364	Heat recovery Rec. energy last year	0 – x.yy MWh	(factor 100)	v3.14.xx
3x0366	Heat recovery Rec. energy trip meter	0 – x.yy MWh	(factor 100)	v3.14.xx
3x0368	Heat recovery Rec. energy last month	0 – x kWh		v3.26.xx
3x0370	Added heat Actual power	0 – x.yy kW	(factor 100)	v3.14.xx
3x0372	Added heat Energy today	0 – x kWh		v3.14.xx
3x0374	Added heat Energy month	0 – x kWh		v3.14.xx
3x0376	Added heat Energy year	0 – x.yy MWh	(factor 100)	v3.14.xx
3x0378	Added heat Energy last year	0 – x.yy MWh	(factor 100)	v3.14.xx
3x0380	Added heat Energy trip meter	0 – x.yy MWh	(factor 100)	v3.14.xx
3x0382	Added heat Energy last month	0 – x kWh		v3.26.xx
3x0384	Fans Actual Power	0 – x.yy kW	(factor 100)	v3.14.xx
3x0386	Fans Energy added today	0 – x kWh		v3.14.xx
3x0388	Fans Energy added month	0 – x kWh		v3.14.xx
3x0390	Fans Energy added year	0 – x.yy MWh	(factor 100)	v3.14.xx
3x0392	Fans Energy added last year	0 – x.yy MWh	(factor 100)	v3.14.xx
3x0394	Fans Energy added trip meter	0 – x.yy MWh	(factor 100)	v3.14.xx
3x0396	Fans Energy added last month	0 – x kWh		v3.26.xx
3x0400	Supply fan actual setpoint	0 - x.y	Pa, l/s, %, 3m/s or 3m/h depending on configuration (factor 100)	v3.40.xx
3x0402	Exhaust fan actual setpoint	0 – x.y	Pa, l/s, %, 3m/s or 3m/h depending on configuration (factor 100)	v3.40.xx

Rev 06: Corrected addresses (even number), added addresses for "last month".

Input register, *continued*

Input register table, *cont.*

Address	Description	Values /Units	Remarks	Release
		Present value, Signed Word		
3x0405	Aux Temp 2	-x.y - +x.y K/°C	(factor 10)	v3.24.xx
3x0406	Aux Temp 3	-x.y - +x.y °C	(factor 10)	v3.24.xx
3x0407	Aux Temp 4	-x.y - +x.y °C	(factor 10)	v3.24.xx
3x0408	Aux Temp 5	-x.y - +x.y °C	(factor 10)	v3.24.xx
3x0409	Aux Temp 6	-x.y - +x.y °C	(factor 10)	v3.24.xx

Input register table, *cont.*

Address	Description	Values /Units	Remarks	Release
3x0410	Carel ACUACR Discharge temp.	-x.y - +x.y °C	(factor 10)	v3.40.xx
3x0411	Carel ACUACR Licuid line temp	-x.y - +x.y °C	(factor 10)	v3.40.xx
3x0412	Carel ACUACR Sub cooling	-x.y - +x.y °C	(factor 10)	v3.40.xx
3x0413	Alarm Danfoss Omf 10	0-65535	0-1 for each bit or counted binary to a decimal number	v3.40.xx
Bit0	- Break Check			
Bit1	- Pwr. Card temp			
Bit2	- Earth Fault			
Bit3	- Ctrl. Card temp			
Bit4	- Ctrl. Word TO			
Bit5	- Over current			
Bit6	- Torque limit			
Bit7	- Motor th over			
Bit8	- Motor ETR over			
Bit9	- Inverter overld			
Bit10	- DC under volt			
Bit11	- DC over volt			
Bit12	- Short Circuit			
Bit13	- Inrush fault			
Bit14	- Mains ph. loss			
Bit15	- "AMA Not OK"			
3x0414	Alarms Danfoss Omf 11	0-65535	0-1 for each bit or counted binary to a decimal number	v3.40.xx
Bit0	- Live zero error			
Bit1	- Internal fault			
Bit2	- Break overload			
Bit3	- U phase loss			
Bit4	- V phase loss			
Bit5	- W phase loss			
Bit6	- Fieldbus fault			
Bit7	- 24V supply low			
Bit8	- Mains failure			
Bit9	- 1.8V supply low			
Bit10	- Brake resistor			
Bit11	- Brake IGBT			
Bit12	- Option Change			
Bit13	- Drive initialised			
Bit14	- Safe stop			
Bit15	- Mech. brake low			
3x0415	Alarms Danfoss Omf 20	0-65535	0-1 for each bit or counted binary to a decimal number	v3.40.xx
Bit0	- ServiceTrip, Read/Write			
Bit1	- ServiceTrip, (**reserved**)			
Bit2	- ServiceTrip, Typecode/Sparepart			
Bit3	- ServiceTrip, (**reserved**)			
Bit4	- ServiceTrip, (**reserved**)			
Bit5	- No flow			
Bit6	- Dry pump			
Bit7	- End of curve			
Bit8	- Broken belt			
Bit9	- Discharge high			
Bit10	- Start failed			
Bit11	- Speed limit			
Bit12	- External Interlock			
Bit13	- Illegal Option Combi.			
Bit14	- No Safety Option			
Bit15	-			

3x0416 Bit0 Bit1 Bit2 Bit3 Bit4 Bit5 Bit6 Bit7 Bit8 Bit9 Bit10 Bit11 Bit12 Bit13 Bit14 Bit15	Alarms Danfoss Omf 21 - - KTY error - Fans error - ECB error - - - - - - Current limit - - - - Encoder loss - PTC thermistor - Dangerous failure	0-65535	0-1 for each bit or counted binary to a decimal number	v3.40.xx
3x0417	Carel ACUACR Discharge temp. C2	-x.y - +x.y °C	(factor 10)	v3.40.xx
3x0418	Carel ACUACR Liquid line temp C2	-x.y - +x.y °C	(factor 10)	v3.40.xx
3x0419	Carel ACUACR Sub cooling C2	-x.y - +x.y °C	(factor 10)	v3.40.xx
3x0420	Carel ACUACR Discharge temp. C3	-x.y - +x.y °C	(factor 10)	v3.40.xx
3x0421	Carel ACUACR Liquid line temp C3	-x.y - +x.y °C	(factor 10)	v3.40.xx
3x0422	Carel ACUACR Sub cooling C3	-x.y - +x.y °C	(factor 10)	v3.40.xx
3x0423	Carel ACUACR Power. Elc. Compressor	-x.y - +x.y kW	(factor 10)	v3.40.xx
3x0424	Carel ACUACR Power Heating	-x.y - +x.y kW	(factor 10)	v3.40.xx
3x0425	Carel ACUACR Power Cooling	-x.y - +x.y kW	(factor 10)	v3.40.xx
3x0426 Bit0 Bit1 Bit2 Bit3 Bit4 Bit5 Bit6 Bit7 Bit8 Bit9 Bit10 Bit11 Bit12 Bit13 Bit14 Bit15	Carel_ACUACR Alarm register 5. - Alarm electric coil - Alarm sump temp sensor Compressor 1 - Alarm discharge temp sensor Compressor 1 - Alarm discharge temp sensor Compressor 2 - Alarm discharge temp sensor Compressor 3 - Alarm liquid temp sensor Compressor 1 - Alarm liquid temp sensor Compressor 2 - Alarm liquid temp sensor Compressor 3 - - - - - - - -	0-65535	0-1 for each bit or counted binary to a decimal number	v3.40.xx

Input register, *continued*

Input register table, *cont.*

Address	Description	Values /Units	Remarks	Release
3x0427	Min exhaust temp output	0-100 %		3.40.xx
3x0430	Temp. room 1	-x.y - +x.y °C	(factor 10)	v3.40.xx
3x0431	Temp. room 2	-x.y - +x.y °C	(factor 10)	v3.40.xx
3x0432	Temp. room 3	-x.y - +x.y °C	(factor 10)	v3.40.xx
3x0433	Temp. room 4	-x.y - +x.y °C	(factor 10)	v3.40.xx
3x0434	Temp. room 5	-x.y - +x.y °C	(factor 10)	v3.40.xx
3x0435	Temp. room 6	-x.y - +x.y °C	(factor 10)	v3.40.xx
3x0436	Air quality room 1	-x.y - +x.y ppm		v3.40.xx
3x0437	Air quality room 2	-x.y - +x.y ppm		v3.40.xx
3x0438	Air quality room 3	-x.y - +x.y ppm		v3.40.xx
3x0439	Air quality room 4	-x.y - +x.y ppm		v3.40.xx
3x0440	Air quality room 5	-x.y - +x.y ppm		v3.40.xx
3x0441	Air quality room 6	-x.y - +x.y ppm		v3.40.xx
3x0442	Humidity room 1	-x.y - +x.y %r.H.		v3.40.xx
3x0443	Humidity room 2	-x.y - +x.y %r.H.		v3.40.xx
3x0444	Humidity room 3	-x.y - +x.y %r.H.		v3.40.xx
3x0445	Humidity room 4	-x.y - +x.y %r.H.		v3.40.xx
3x0446	Humidity room 5	-x.y - +x.y %r.H.		v3.40.xx
3x0447	Humidity room 6	-x.y - +x.y %r.H.		v3.40.xx
3x0450	Temp Today	-x.y - +x.y °C	(factor 10)	v3.40.xx
3x0451	Temp This month	-x.y - +x.y °C	(factor 10)	v3.40.xx
3x0452	Temp Last month	-x.y - +x.y °C	(factor 10)	v3.40.xx
3x0455	TCHP Calc. Heatrec. temp.	-x.y - +x.y °C	(factor 10)	v3.40.xx
3x0460	Temp. room 7	-x.y - +x.y °C	(factor 10)	v3.40.xx
3x0461	Air quality room 7	-x.y - +x.y ppm		v3.40.xx
3x0462	Humidity room 7	-x.y - +x.y %r.H.		v3.40.xx

3.5 Holding register

Holding register table

Address	Description	Values /Units	Remarks	Release
	Unsigned Word			
4x0001	Control bits	0-65535		
Bit0	- Emergency stop input			
Bit1	- External control input 1			
Bit2	- External control input 2			
Bit3	- Su/Wi changeover input			
Bit4	-		I/O	
Bit5	-		I/O	
Bit6	-		I/O	
Bit7	- Fire alarm input		I/O	
Bit8	-			
Bit9	-			
Bit10	-			
Bit11	-		I/O	
Bit12	-			
Bit13	-			
Bit14	-			
Bit15	- Communicationtest puls			
	Present value, Unsigned Word			
4x0005	BMS control/overide time switch program (steps)	0-4	Auto*Off*Stage 1*Stage 2*Stage 3	
4x0006	BMS control/overide time switch program (steps/temperature)	0-7	Auto*Off*Eco St1*Comf St1*Eco St2*Comf St2*Eco St3*Comf St3	
			Only one of BMS control is used depending on configuration	
4x0007	BMS control/overide time switch program Auxiliary output	0-2	Auto*Off*On	
4x0011	External control, off delay	0 - x h		
4x0012	External control, fan step	0-4	Auto*Off*1Step*2Step*3Step	
4x0013	Roomunit presence time	0-23 h		
	Present value, Signed Word			
4x0020	Comfort temperature setpoint	-x.y - +x.y °C	(factor 10)	
4x0021	Comfort temperature deadzone	-x.y - +x.y °C	(factor 10)	
4x0022	Comfort heating setpoint	-x.y - +x.y °C	(factor 10)	
4x0023	Comfort cooling setpoint	-x.y - +x.y °C	(factor 10)	
4x0024	Economy temperature setpoint	-x.y - +x.y °C	(factor 10)	
4x0025	Economy temperature deadzone	-x.y - +x.y °C	(factor 10)	
4x0026	Economy heating setpoint	-x.y - +x.y °C	(factor 10)	
4x0027	Economy cooling setpoint	-x.y - +x.y °C	(factor 10)	
			Different setpoint combinations are used depending on configuration	
4x0028	Exhaust air temp setpoint 1, HOTC	-x.y - +x.y °C	(factor 10)	
4x0029	Exhaust air temp setpoint 2, HOTC	-x.y - +x.y °C	(factor 10)	
4x0030	Supply temp delta 1, HOTC	-x.y - +x.y °C	(factor 10)	
4x0031	Supply temp delta 2, HOTC	-x.y - +x.y °C	(factor 10)	
4x0032	Summer/winter changeover supply temp compensation	-x.y - +x.y °C	(factor 10)	

Holding register, *continued*

Holding register table, *cont.*

Address	Description	Values /Units	Remarks	Release
4x0033	Extra Sequence setpoint	-x.y - +x.y °C	(factor 10)	
4x0034	Supply temperature min setpoint (Pure room/exhaust control)	-x.y - +x.y °C	(factor 10)	
4x0035	Supply temperature max setpoint (Pure room/exhaust control)	-x.y - +x.y °C	(factor 10)	
4x0036	Supply temperature min setpoint (Cascade room/exhaust control)	-x.y - +x.y °C	(factor 10) Low limit	
4x0037	Supply temperature max setpoint (Cascade room/exhaust control)	-x.y - +x.y °C	(factor 10) High limit	
4x0039	Humidity setpoint relative	0 - x	%r.H. or g/kg	
4x0040	Humidity deadz relative	0 - x	%r.H. or g/kg	
4x0041	Humidity setpoint relative	0 - x	%r.H. or g/kg	
4x0042	Dehumidity setpoint relative	0 - x	%r.H. or g/kg	
4x0043	Humidity setpoint absolute	0 - x.y	(factor 10) %r.H. or g/kg depending on configuration	
4x0044	Humidity deadz absolute	0 - x.y	(factor 10) %r.H. or g/kg	
4x0045	Humidity setpoint absolute	0 - x.y	(factor 10) %r.H. or g/kg	
4x0046	Dehumidity setpoint absolute	0 - x.y	(factor 10) %r.H. or g/kg	
			Different setpoint combinations are used depending on configuration	
4x0047	Supply humidity max setpoint (Pure room/exhaust control)	0 - x.y	(factor 10) %r.H. or g/kg	
4x0048	Supply humidity min setpoint (Cascade room/exhaust control)	0 - x.y	(factor 10) %r.H. or g/kg	
4x0049	Supply humidity max setpoint (Cascade room/exhaust control)	0 - x.y	(factor 10) %r.H. or g/kg	
Present value, Unsigned Word				
4x0050	Supply fan step 1 setpoint	0 - x	%, Pa or l/s depending on configuration	
4x0051	Supply fan step 2 setpoint	0 - x	%, Pa or l/s	
4x0052	Supply fan step 3 setpoint	0 - x	%, Pa or l/s	
4x0053	Supply fan max force setpoint	0 - x	%, Pa or l/s	
4x0054	Exhaust fan step 1 setpoint	0 - x	%, Pa or l/s depending on configuration	
4x0055	Exhaust fan step 2 setpoint	0 - x	%, Pa or l/s	
4x0056	Exhaust fan step 3 setpoint	0 - x	%, Pa or l/s	
4x0057	Exhaust fan max force setpoint	0 - x	%, Pa or l/s	
Present value, Signed Word				
4x0059	Air quality setpoint	0 – x ppm		
Tracking value, Signed Word				
4x0060	Outside air temperature	-x.y - +x.y °C	(factor 10)	
4x0061	Room humidity relative	0 -100 %r.H.	(factor 10)	
4x0062	Room temperature	-x.y - +x.y °C	(factor 10)	
4x0063	Room temperature 2	-x.y - +x.y °C	(factor 10)	
4x0064	External setpoint	-x.y - +x.y °C	(factor 10)	
Present value, Unsigned Word				
4x0065	Manual switch Continuous run	0-3	No*Stage 1*Stage 2*Stage 3	v2.14.xx
4x0066	Manual switch Continuous run	0-6	No*Eco St1*Comf St1*Eco St2* Comf St2*Eco St3*Comf St3	v2.14.xx
			Only one of Manual operation is used	

Holding register, *continued*

Holding register table, *cont.*

Address	Description	Values /Units	Remarks	Release
	Present value, Signed Word			
4x0069	FlexoPool pool temperature	-x.y - +x.y °C	(factor 10)	
4x0070	Night cooling min out temp	-x.y - +x.y °C	(factor 10)	
4x0071	Night cooling on delta	-x.y - +x.y °C	(factor 10)	
4x0072	Night cooling room hysterese	-x.y - +x.y °C	(factor 10)	
4x0073	Night cooling room setpoint	-x.y - +x.y °C	(factor 10)	
4x0074	Temp start heating start	-x.y - +x.y °C	(factor 10)	
4x0075	Temp start heating setpoint	-x.y - +x.y °C	(factor 10)	
4x0076	Temp start cooling start	-x.y - +x.y °C	(factor 10)	
4x0077	Temp start cooling setpoint	-x.y - +x.y °C	(factor 10)	
4x0078	Boost comp time	0 - x min		
4x0079	Boost room temp setpoint	-x.y - +x.y °C	(factor 10)	
4x0080	Boost start heating	-x.y - +x.y °C	(factor 10)	
4x0081	Boost start cooling	-x.y - +x.y °C	(factor 10)	
4x0082	Draught cooling max deviation	-x.y - +x.y °C	(factor 10)	
4x0083	Draught heating max deviation	-x.y - +x.y °C	(factor 10)	
4x0084	Su compensation temp delta	-x.y - +x.y K	(factor 10)	
4x0085	Wi compensation temp delta	-x.y - +x.y K	(factor 10)	
4x0086	Cooling disable outside temp	-x.y - +x.y °C	(factor 10)	
4x0087	Heat recovery frost setpoint	-x.y - +x.y °C	(factor 10)	
4x0088	Heat recovery frost setpoint st1	-x.y - +x.y °C	(factor 10)	
4x0089	Heat recovery frost setpoint st2	-x.y - +x.y °C	(factor 10)	
4x0090	Max speed defrost	-x.y - +x.y %	(factor 10)	
4x0091	Min fresh air	0 - 100%		
4x0092	Heating frost setpoint	-x.y - +x.y °C	(factor 10)	
4x0093	Heating standby setpoint	-x.y - +x.y °C	(factor 10)	
4x0094	Preheating outside temp X1	-x.y - +x.y °C	(factor 10)	
4x0095	Preheating outside temp X2	-x.y - +x.y °C	(factor 10)	
4x0096	Preheating pos Y1	0 - 100%		
4x0097	Preheating pos Y2	0 - 100%		
4x0098	Cooling 2 disable outside temp	-x.y - +x.y °C	(factor 10)	
4x0099	Heating 2 frost setpoint	-x.y - +x.y °C	(factor 10)	
4x0100	Heating 2 Standby setpoint	-x.y - +x.y °C	(factor 10)	
4x0101	Preheating 2 outside temp X1	-x.y - +x.y °C	(factor 10)	
4x0102	Preheating 2 outside temp X2	-x.y - +x.y °C	(factor 10)	
4x0103	Preheating 2 pos Y1	0 - 100%		
4x0104	Preheating 2 pos Y2	0 - 100%		
4x0105	Dew point deadzone	-x.y - +x.y °C	(factor 10)	
4x0106	Fan cooling deadzone	-x.y - +x.y °C	(factor 10)	
4x0107	Fan heating deadzone	-x.y - +x.y °C	(factor 10)	
4x0108	Fan compensation humidity	0 - x.y %rH		
4x0109	Fan compensation temperature	-x.y - +x.y °C	(factor 10)	
4x0110	Fan slave offset	0 - x l/s	(factor 10)	
4x0111	Max deviation supply temp	0 - x.y °C	(factor 10)	
4x0112	Max deviation room temp	0 - x.y °C	(factor 10)	
4x0113	Max deviation supply humidity	0 - x.y	(factor 10) %rH or g/kg depending on configuration	
4x0114	Max deviation room humidity	0 - x.y	(factor 10) %rH or g/kg	

Holding register, *continued*

Holding register table, *cont.*

Address	Description	Values /Units	Remarks	Release
4x0115	Max deviation supply fan	0 - x	%, Pa or l/s depending on configuration	
4x0116	Max deviation exhaust fan	0 - x	%, Pa or l/s	
4x0117	FlexoPool Dehumidity setpoint 1	0 - x.y %rH		
4x0118	FlexoPool Dehumidity setpoint 2	0 - x.y %rH		
4x0119	FlexoPool min pool diff	-x.y - +x.y °C	(factor 10)	
4x0120	Extra/Zone Sequence deadzone	-x.y - +x.y °C	(factor 10)	
4x0121	Extra/Zone Summer/winter changeover supply temp compensation	-x.y - +x.y °C	(factor 10)	
4x0122	Extra/Zone Supply temperature min setpoint (Cascade room/exhaust control)	-x.y - +x.y °C	(factor 10) Low limit	
4x0123	Extra/Zone Supply temperature max setpoint (Cascade room/exhaust control)	-x.y - +x.y °C	(factor 10) High limit	
4x0124	Extra/Zone Draught cooling max deviation	-x.y - +x.y °C	(factor 10)	
4x0125	Extra/Zone Draught heating max deviation	-x.y - +x.y °C	(factor 10)	
4x0126	Home Cycle time dampers	0 - x.y min	(factor 10)	v2.04.xx
4x0127	Home Size constant P0	0 - x.y	(factor 10) constant	v2.04.xx
4x0128	Home Size constant P1	0 - x.y	(factor 10) constant	v2.04.xx
4x0129	Home Size constant P2	0 - x.y	(factor 10) constant	v2.04.xx
4x0130	Home Min time defrost	0 - x.y min	(factor 10)	v2.04.xx
4x0131	Home Stop time defrost	0 - x.y min	(factor 10)	v2.04.xx
4x0132	Home Outtemp reduced heat rec	-x.y - +x.y °C	(factor 10)	v2.04.xx
4x0133	Home Outtemp block defrost	-x.y - +x.y °C	(factor 10)	v2.04.xx
4x0134	Home Start setpoint defrost	0 – 100%	(factor 10)	v2.04.xx
4x0135	Home Stop setpoint defrost	0 – 100%	(factor 10)	v2.04.xx
4x0136	Home Defrost Damper setpoint	0 - 100%	(factor 10)	v2.04.xx
4x0137	Forcegroup 1 Co2 setpoint	0 – x ppm	(factor 10)	v2.04.xx
4x0138	Forcegroup 1 Temp setpoint	-x.y - +x.y °C	(factor 10)	v2.04.xx
4x0139	Forcegroup 2 Co2 setpoint	0 – x ppm	(factor 10)	v2.04.xx
4x0140	Forcegroup 2 Temp setpoint	-x.y - +x.y °C	(factor 10)	v2.04.xx
4x0141	Pressure balance setpoint	-x.y - +x.y Pa	(factor 10)	v2.04.xx
4x0142	Home Defrost Min damper set-point	0 - 100%	(factor 10)	v2.14.xx
4x0143	Home Defrost Reduce damper setpoint	0 - 100%	(factor 10)	v2.14.xx
4x0144	Home Defrost Outside air temp X1 setpoint	-x.y - +x.y °C	(factor 10)	v2.14.xx
4x0145	Home Defrost Outside air temp X2 setpoint	-x.y - +x.y °C	(factor 10)	v2.14.xx
4x0146	Home Defrost Damper position Y1 setpoint	0 - 100%	(factor 10)	v2.14.xx
4x0147	Home Defrost Damper position Y2 setpoint	0 - 100%	(factor 10)	v2.14.xx
4x0148	Heat recovery cold corner temperature	-x.y - +x.y °C	(factor 10)	v2.14.xx
4x0149	Heat Recovery Dewpoint out-door temp active setpoint	-x.y - +x.y °C	(factor 10)	v2.14.xx
4x0150	Heat Recovery Dewpoint dead-zone	0 - 100%	(factor 10)	v2.14.xx

Holding register, *continued*

Holding register table, *cont.*

Address	Description	Values /Units	Remarks	Release
4x0151	Summer comp temperature end	-x.y - +x.y °C	(factor 10)	v3.10.xx
4x0152	Summer comp temperature start	-x.y - +x.y °C	(factor 10)	v3.10.xx
4x0153	Winter comp temperature end	-x.y - +x.y °C	(factor 10)	v3.10.xx
4x0154	Winter comp temperature start	-x.y - +x.y °C	(factor 10)	v3.10.xx
4x0155	Extra heating group Summer comp temperature delta	-x.y - +x.y °C	(factor 10)	v3.10.xx
4x0156	Extra heating group Summer comp temperature end	-x.y - +x.y °C	(factor 10)	v3.10.xx
4x0157	Extra heating group Summer comp temperature start	-x.y - +x.y °C	(factor 10)	v3.10.xx
4x0158	Extra heating group Winter comp temperature delta	-x.y - +x.y °C	(factor 10)	v3.10.xx
4x0159	Extra heating group Winter comp temperature end	-x.y - +x.y °C	(factor 10)	v3.10.xx
4x0160	Extra heating group Winter comp temperature start	-x.y - +x.y °C	(factor 10)	v3.10.xx
4x0161	Damper comp. humidity Setp.	0 - 100 %rH	(factor 10)	v3.10.xx
4x0162	Flexo Pool HP Min Start value	0 – 100 %	(factor 10)	v3.40.xx
4x0163	External setpoint supply fan	0 – x	%, Pa or l/s (factor 10) main or comp. depending on config	v3.10.xx
4x0164	External setpoint exhaust fan	0 – x	%, Pa or l/s (factor 10) main or comp. depending on config	v3.10.xx
4x0165	Danfoss VSD Setpoint max high pressure	0 – x.y Bar	(factor 10)	v3.10.xx
4x0166	Air quality 2 setpoint	-x.y - +x.y ppm		v3.40.xx
4x0167	Setpoint Air qual.1 start	-x.y - +x.y ppm		v3.40.xx
4x0168	Start unit Air qual.1	-x.y - +x.y ppm		v3.40.xx
4x0169	Setpoint Air qual.2 start	-x.y - +x.y ppm		v3.40.xx
4x0170	Start unit Air qual.2	-x.y - +x.y ppm		v3.40.xx
4x0171	Supply fan step 1 setpoint	0 – x.yy	(factor 100) 32-bit unsigned	v3.40.xx
4x0173	Supply fan step 2 setpoint	0 – x.yy	(factor 100) 32-bit unsigned	v3.40.xx
4x0175	Supply fan step 3 setpoint	0 – x.yy	(factor 100) 32-bit unsigned	v3.40.xx
4x0177	Supply fan max force	0 – x.yy	(factor 100) 32-bit unsigned	v3.40.xx
4x0179	Exhaust fan step 1 setpoint	0 – x.yy	(factor 100) 32-bit unsigned	v3.40.xx
4x0181	Exhaust fan step 2 setpoint	0 – x.yy	(factor 100) 32-bit unsigned	v3.40.xx
4x0183	Exhaust fan step 3 setpoint	0 – x.yy	(factor 100) 32-bit unsigned	v3.40.xx
4x0185	Exhaust fan max force	0 – x.yy	(factor 100) 32-bit unsigned	v3.40.xx

Address	Description	Values /Units	Remarks	Release
4x0187	External setpoint Supply fan	0 – x.yy	%, Pa, l/s, 3m/s or 3m/h (factor 100) 32-bit unsigned main or comp. depending on config	v3.40.xx
4x0189	External setpoint Exhaust.fan	0 – x.yy	%, Pa, l/s, 3m/s or 3m/h (factor 100) 32-bit unsigned main or comp. depending on config	v3.40.xx
4x0191	Setpoint. Min exhaust temp.	-x.y - +x.y °C	(factor 10)	v.3.40.xx
4x0192	Min exhaust temp Max comp. Heat recovery	0 - 100 %	(factor 10)	v.3.40.xx
4x0194	Outs air temp summer	-x.y - +x.y °C	(factor 10)	v.3.40.xx
4x0195	Outs air temp winter	-x.y - +x.y °C	(factor 10)	v.3.40.xx
4x0196	Su/Wi time constant	-x.y - +x.y °C	(factor 10)	v.3.40.xx
4x0197	THCP Power Electric before SupplyFan	0 - +x.y kW	(factor 10)	v.3.40.xx

Holding register, *continued*

Holding register table, *cont.*

Address	Description	Values /Units	Remarks
	Loop and cascade controller settings		
	X Controller Gain	-x.yy - +x.yy	(factor 100), Signed Word
	X Controller Integral	0 - x sec	Unsigned Word
	X Controller Differential	0 - x sec	Unsigned Word
4x0201	Cooling Gain	-x.yy - +x.yy	(factor 100), Signed Word
4x0202	Cooling	0 - x sec	Integral
4x0203	Cooling	0 - x sec	Differential
4x0204	Heat recovery Gain	-x.yy - +x.yy	(factor 100), Signed Word
4x0205	Heat recovery	0 - x sec	Integral
4x0206	Heat recovery	0 - x sec	Differential
4x0207	Heat recovery frost protection Gain	-x.yy - +x.yy	(factor 100), Signed Word
4x0208	Heat recovery frost protection	0 - x sec	Integral
4x0209	Heat recovery frost protection	0 - x sec	Differential
4x0210	Heat recovery frost pressure Gain	-x.yy - +x.yy	(factor 100), Signed Word
4x0211	Heat recovery frost pressure	0 - x sec	Integral
4x0212	Heat recovery frost pressure	0 - x sec	Differential
4x0213	Heat recovery damper Gain	-x.yy - +x.yy	(factor 100), Signed Word
4x0214	Heat recovery damper	0 - x sec	Integral
4x0215	Heat recovery damper	0 - x sec	Differential
4x0216	Heating Gain	-x.yy - +x.yy	(factor 100), Signed Word
4x0217	Heating	0 - x sec	Integral
4x0218	Heating	0 - x sec	Differential
4x0219	Heating frost protection Gain	-x.yy - +x.yy	(factor 100), Signed Word
4x0220	Heating frost protection	0 - x sec	Integral
4x0221	Heating frost protection	0 - x sec	Differential
4x0222	Electrical heating Gain	-x.yy - +x.yy	(factor 100), Signed Word
4x0223	Electrical heating	0 - x sec	Integral
4x0224	Electrical heating	0 - x sec	Differential
4x0225	Cooling 2 Gain	-x.yy - +x.yy	(factor 100), Signed Word
4x0226	Cooling 2	0 - x sec	Integral
4x0227	Cooling 2	0 - x sec	Differential
4x0228	Heating 2 Gain	-x.yy - +x.yy	(factor 100), Signed Word
4x0229	Heating 2	0 - x sec	Integral
4x0230	Heating 2	0 - x sec	Differential
4x0231	Heating 2 frost protection Gain	-x.yy - +x.yy	(factor 100), Signed Word
4x0232	Heating 2 frost protection	0 - x sec	Integral
4x0233	Heating 2 frost protection	0 - x sec	Differential
4x0234	Electrical Heating 2 Gain	-x.yy - +x.yy	(factor 100), Signed Word
4x0235	Electrical Heating 2	0 - x sec	Integral
4x0236	Electrical Heating 2	0 - x sec	Differential
4x0237	Min supply temperature Gain	-x.yy - +x.yy	(factor 100), Signed Word
4x0238	Min supply temperature	0 - x sec	Integral
4x0239	Min supply temperature	0 - x sec	Differential
4x0240	Max supply temperature Gain	-x.yy - +x.yy	(factor 100), Signed Word
4x0241	Max supply temperature	0 - x sec	Integral
4x0242	Max supply temperature	0 - x sec	Differential

Holding register, *continued*

Holding register table, *cont.*

Address	Description	Values /Units	Remarks	Release
4x0243	Fan cooling Gain	-x.yy - +x.yy	(factor 100), Signed Word	
4x0244	Fan cooling	0 - x sec	Integral	
4x0245	Fan cooling	0 - x sec	Differential	
4x0246	Fan heating Gain	-x.yy - +x.yy	Gain	
4x0247	Fan heating	0 - x sec	Integral	
4x0248	Fan heating	0 - x sec	Differential	
4x0249	Fan compensation temperature Gain	-x.yy - +x.yy	(factor 100), Signed Word	
4x0250	Fan compensation temperature	0 - x sec	Integral	
4x0251	Fan compensation temperature	0 - x sec	Differential	
4x0252	Fan compensation humidity Gain	-x.yy - +x.yy	(factor 100), Signed Word	
4x0253	Fan compensation humidity	0 - x sec	Integral	
4x0254	Fan compensation humidity	0 - x sec	Differential	
4x0255	Supply fan Gain	-x.yy - +x.yy	(factor 100), Signed Word	
4x0256	Supply fan	0 - x sec	Integral	
4x0257	Supply fan	0 - x sec	Differential	
4x0258	Exhaust fan Gain	-x.yy - +x.yy	(factor 100), Signed Word	
4x0259	Exhaust fan	0 - x sec	Integral	
4x0260	Exhaust fan	0 - x sec	Differential	
4x0261	Humidification Gain	-x.yy - +x.yy	(factor 100), Signed Word	
4x0262	Humidification	0 - x sec	Integral	
4x0263	Humidification	0 - x sec	Differential	
4x0264	Max supply humidit Gain y	-x.yy - +x.yy	(factor 100), Signed Word	
4x0265	Max supply humidity	0 - x sec	Integral	
4x0266	Max supply humidty	0 - x sec	Differential	
4x0267	Dehumidification Gain	-x.yy - +x.yy	Gain	
4x0268	Dehumidification	0 - x sec	Integral	
4x0269	Dehumidification	0 - x sec	Differential	
4x0270	Air quality Gain	-x.yy - +x.yy	(factor 100), Signed Word	
4x0271	Air quality	0 - x sec	Integral	
4x0272	Air quality	0 - x sec	Differential	
4x0273	Cascade controller temperature Gain	-x.yy - +x.yy	(factor 100), Signed Word	
4x0274	Cascade controller temperature	0 - x sec	Integral	
4x0275	Cascade controller humidity Gain	-x.yy - +x.yy	(factor 100), Signed Word	
4x0276	Cascade controller humidity	0 - x sec	Integral	
4x0277	Extra/Zone Cascade controller temperature Gain	-x.yy - +x.yy	(factor 100), Signed Word	
4x0278	Extra/Zone Cascade controller temperature	0 - x sec	Integral	
4x0279	Forcegroup 1 Temp Gain	-x.yy - +x.yy	(factor 100), Signed Word	v2.04.xx
4x0280	Forcegroup 1 Temp	0 - x sec	Integral	v2.04.xx
4x0281	Forcegroup 1 Temp	0 - x sec	Differential	v2.04.xx
4x0282	Forcegroup 1 Co2 Gain	-x.yy - +x.yy	(factor 100), Signed Word	v2.04.xx
4x0283	Forcegroup 1 Co2	0 - x sec	Integral	v2.04.xx
4x0284	Forcegroup 1 Co2	0 - x sec	Differential	v2.04.xx

Address	Description	Values /Units	Remarks	Release
4x0285	Forcegroup 2 Temp Gain	-x.yy - +x.yy	(factor 100), Signed Word	v2.04.xx
4x0286	Forcegroup 2 Temp	0 - x sec	Integral	v2.04.xx
4x0287	Forcegroup 2 Temp	0 - x sec	Differential	v2.04.xx
4x0288	Forcegroup 2 Co2 Gain	-x.yy - +x.yy	(factor 100), Signed Word	v2.04.xx
4x0289	Forcegroup 2 Co2	0 - x sec	Integral	v2.04.xx

Holding register, *continued*

Holding register table, *cont.*

Address	Description	Values /Units	Remarks	Release
4x0290	Heat Pump frost protection air Gain	-x.yy - +x.yy	(factor 100), Signed Word	
4x0291	Heat Pump frost protection air	0 - x sec	Integral	
4x0292	Heat Pump frost protection air	0 - x sec	Differential	
4x0293	Heat Pump frost protection water Gain	-x.yy - +x.yy	(factor 100), Signed Word	
4x0294	Heat Pump frost protection water	0 - x sec	Integral	
4x0295	Heat Pump frost protection water	0 - x sec	Differential	
4x0296	Forcegroup 2 Co2	-x.yy - +x.yy	Differential	v2.04.xx
4x0297	Pressure balance Gain	-x.yy - +x.yy	(factor 100), Signed Word	v2.04.xx
4x0298	Pressure balance	0 - x sec	Integral	v2.04.xx
4x0299	Pressure balance	0 - x sec	Differential	v2.04.xx
Present value, Signed Word				
4x0300	Aux Temp Setpoint 1	-x.y - +x.y °C	(factor 10)	v2.14.xx
4x0301	Aux Temp Setpoint 2	-x.y - +x.y °C	(factor 10)	v2.14.xx
4x0302	Heat recovery Min output signal via out temp	0 - 100%	(factor 10)	v2.14.xx
4x0303	Flow stop cooling	0 - x l/s	(factor 10)	v2.14.xx
4x0304	Flow start cooling	0 - x l/s	(factor 10)	v2.14.xx
4x0305	Aux Temp 1	-x.y - +x.y °C	(factor 10)	v2.14.xx
Loop and cascade controller settings				
	X Controller Gain	-x.yy - +x.yy	(factor 100), Signed Word	
	X Controller Integral	0 - x sec	Unsigned Word	
	X Controller Differential	0 - x sec	Unsigned Word	
4x0306	Heat Recovery Dewpoint Gain	-x.yy - +x.yy	(factor 100), Signed Word	v2.14.xx
4x0307	Heat Recovery Dewpoint	0 - x sec	Integral	v2.14.xx
4x0308	Heat Recovery Dewpoint	0 - x sec	Differential	v2.14.xx
Tracking value, Signed Word				
4x0309	Heat recovery cold corner temperature	-x.y - +x.y °C	(factor 10)	v2.14.xx
4x0310	Out Temp Force Heat recovery	-x.y - +x.y °C	(factor 10)	v2.40.xx
Present value, Unsigned Word				
4x0311	FlexoPool Force min run time	0 – 999 min		
Present value, Signed Word				

Address	Description	Values /Units	Remarks	Release
4x0312	FlexoPool Force economy start	0 - x.y %rH	(factor 10)	
4x0313	FlexoPool Force comfort diff	0 - x.y %rH	(factor 10)	
4x0314	FlexoPool Force hysterese	0 - x.y %rH	(factor 10)	
4x0315	FlexoPool Min fresh air	0 - 100%		
4x0316	FlexoPool Low fresh air	0 - 100%		
4x0317	FlexoPool Outtemp Dehumidity setp 1	-x.y - +x.y °C	(factor 10)	
4x0318	FlexoPool Outtemp Dehumidity setp 2	-x.y - +x.y °C	(factor 10)	
4x0319	FlexoPool Heat Pump frost protection air setpoint	-x.y - +x.y °C	(factor 10)	
4x0320	FlexoPool Heat Pump frost protection water setpoint	-x.y - +x.y °C	(factor 10)	
4x0321	Flexopool Economy min fresh air	0 - 100%		v3.10.xx

Holding register, *continued*

Holding register table, *cont.*

Address	Description	Values /Units	Remarks	Release
	Loop and cascade controller settings			
	X Controller Gain	-x.yy - +x.yy	(factor 100), Signed Word	
	X Controller Integral	0 - x sec	Unsigned Word	
	X Controller Differential	0 - x sec	Unsigned Word	
4x0322	Damper compensation humidity	-x.yy - +x.yy	(factor 100), Signed Word	v3.10.xx
4x0323	Damper compensation humidity	0 - x sec	Integral	v3.10.xx
4x0324	Damper compensation humidity	0 - x sec	Differential	v3.10.xx
4x0325	Danfoss VSD High pressure	-x.yy - +x.yy	(factor 100), Signed Word	v3.10.xx
4x0326	Danfoss VSD High pressure	0 - x sec	Integral	v3.10.xx
4x0327	Danfoss VSD High pressure	0 - x sec	Differential	v3.10.xx
Present value, Signed Word				
4x0328	Energy Watch Flowfact GT1	0 - 100%	(factor 100)	v3.14.xx
4x0329	Energy Watch Flow min Alarm blocked	0 – 100 l/s	(factor 100)	v3.14.xx
4x0330	Air quality 2	-x.yy - +x.yy	(factor 100), Signed Word	v3.40.xx
4x0331	Air quality 2	0 - x sec	Integral	v3.40.xx
4x0332	Air quality 2	0 - x sec	Differential	v3.40.xx
4x0333	Aux.Temp. 2	-x.y - +x.y °C	(factor 10)	v3.40.xx
4x0334	Aux.Temp. 3	-x.y - +x.y °C	(factor 10)	v3.40.xx
4x0335	Aux.Temp. 4	-x.y - +x.y °C	(factor 10)	v3.40.xx
4x0336	Aux.Temp. 5	-x.y - +x.y °C	(factor 10)	v3.40.xx
4x0337	Aux.Temp. 6	-x.y - +x.y °C	(factor 10)	v3.40.xx
4x0340	Min.exh.temp.Control.	-x.yy - +x.yy	(factor 100), Signed Word	v3.40.xx
4x0341	Min.exh.temp.Control	0 - x sec	Integral	v3.40.xx
4x0342	Min.exh.temp.Control	0 - x sec	Differential	v3.40.xx
4x0350	Room 1 fan comp.	-x.yy - +x.yy	(factor 100), Signed Word	v3.40.xx
4x0351	Room 1 fan comp.	0 - x sec	Integral	v3.40.xx
4x0352	Room 1 fan comp.	0 - x sec	Differential	v3.40.xx

Address	Description	Values /Units	Remarks	Release
4x0353	Room 2 fan comp.	-x.yy - +x.yy	(factor 100), Signed Word	v3.40.xx
4x0354	Room 2 fan comp.	0 - x sec	Integral	v3.40.xx
4x0355	Room 2 fan comp.	0 - x sec	Differential	v3.40.xx
4x0356	Room 3 fan comp.	-x.yy - +x.yy	(factor 100), Signed Word	v3.40.xx
4x0357	Room 3 fan comp.	0 - x sec	Integral	v3.40.xx
4x0358	Room 3 fan comp.	0 - x sec	Differential	v3.40.xx
4x0359	Room 4 fan comp.	-x.yy - +x.yy	(factor 100), Signed Word	v3.40.xx
4x0360	Room 4 fan comp.	0 - x sec	Integral	v3.40.xx
4x0361	Room 4 fan comp.	0 - x sec	Differential	v3.40.xx
4x0362	Room 5 fan comp.	-x.yy - +x.yy	(factor 100), Signed Word	v3.40.xx
4x0363	Room 5 fan comp.	0 - x sec	Integral	v3.40.xx
4x0364	Room 5 fan comp.	0 - x sec	Differential	v3.40.xx
4x0365	Room 6 fan comp.	-x.yy - +x.yy	(factor 100), Signed Word	v3.40.xx
4x0366	Room 6 fan comp.	0 - x sec	Integral	v3.40.xx
4x0367	Room 6 fan comp.	0 - x sec	Differential	v3.40.xx
4x0368	Air quality room	-x.yy - +x.yy	(factor 100), Signed Word)	v3.40.xx
4x0369	Air quality room	0 - x sec	Integral	v3.40.xx
4x0370	Air quality room	0 - x sec	Differential	v3.40.xx
4x0371	Room Humidity	-x.yy - +x.yy	(factor 100), Signed Word	v3.40.xx
4x0372	Room Humidity	0 - x sec	Integral	v3.40.xx
4x0373	Room Humidity	0 - x sec	Differential	v3.40.xx
4x0374	Room 7 fan comp.	-x.yy - +x.yy	Gain (factor100)	v3.40.xx
4x0375	Room 7 fan comp.	0 - x sec	Integral	v3.40.xx
4x0376	Room 7 fan comp.	0 - x sec	Differential	v3.40.xx
4x0400	Room 1 temp setpoint	-x.y - +x.y °C	(factor 10)	v2.40.xx
4x0401	Room 2 temp setpoint	-x.y - +x.y °C	(factor 10)	v2.40.xx
4x0402	Room 3 temp setpoint	-x.y - +x.y °C	(factor 10)	v2.40.xx
4x0403	Room 4 temp setpoint	-x.y - +x.y °C	(factor 10)	v2.40.xx
4x0404	Room 5 temp setpoint	-x.y - +x.y °C	(factor 10)	v2.40.xx
4x0405	Room 6 temp setpoint	-x.y - +x.y °C	(factor 10)	v2.40.xx
4x0406	Air Quality Setpoint	-x.y - +x.y ppm		v2.40.xx
4x0407	Room Humidity Setpoint	-x.y - +x.y %r.H.		v2.40.xx
4x0408	Disable low room temp.	-x.y - +x.y°C	(factor 10)	v2.40.xx
4x0409	Air quality room setpoint if disabled	-x.y - +x.y ppm		v2.40.xx
4x0410	Air quality room setpoint Hysteresis	-x.y - +x.y ppm		v2.40.xx
4x0411	Room 7 temp setpoint	-x.y - +x.y °C	(factor 10)	v2.40.xx

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Air handling with the focus on LCC

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