Index table for Modbus TCP - RD5 control system

Communication port: 502/TCP	
Modbus appliance address - arbitrary 1-255	
C ~ coil register, D ~ discrete register, I ~ input register, H ~ holding register	
Release date: 4th November 2021	
Attention:	**When multiple indexes are read/written during one relation, the gap between relations should be 5 s at least**
Adressing:	Extended **Coils ~ #000001 to #065536** **Discrete input ~ #100001 to #165536** **Input register ~ #300001 to #365536** **Holding register ~ #400001 to #465536**

Necessary setting

Set the parameter **3.15.1 Modbus TCP=YES** in the service setting of the ventialion unit

Recommended indexes:

For the control: according to the tab. 1, 2
For the monitoring: according to the tab. 7
Example of usage: according to the tab. 11

Control routine (tab.1)

Routine	Parameter	Note
Manual	H10700=0, H10701=0, H10702=0, H10703=0	Write 0 when Schedule or Temporary is changed into Manual The values of the required temperature, power, mode or zone are fixed untill any change by a user (could be done by CP-Touch controller, web site, or modbus)
Schedule (week program)	H10700=1, H10701=1, H10702=1, H10703=1	Write 1 when Manual is changed into Schedule The values of the required temperature, power, mode or zone change according to the adjusted schedule without any user's action. The setting of the schedule can be done by the CP-Touch controller or web site. When any change of the values is done by user during the schedulke operation, the "Temporary" routine is activated. The "temporary"lasts till next interval of the schedule comes.
Temporary	H10700=2 or H10701=2 or H10702=2 or H10703=2	Write 2 when original value is 0 or 2 and a control parameter is changed The "Temporary" routine is activated, when the "schedule" routine is chosen and any change of control parameter (req. tepmperature/power/mode/zone) is done by a user - from CP-Touch, website or modbus)

Recommendation:	When the AHU unit is controlled from a BMS system, it is better to run the MANUAL routine

Control parameters (tab.2)

Control	Parameter	Read	Write	Condition
Required mode (see the tab.3)	Manual H10701 = 0	H10705	H10709	-
	Schedule / Tempor. H10701 = 1 / 2	H10705	H10709	write H10701 = 2 required
Required power (see the tab.4)	Manual H10700 = 0	H10704	H10708	-
	Schedule / Tempor. H10700 = 1 / 2	H10704	H10708	write H10700 = 2 required
Required temperature (see the tab.5)	Manual H10702 = 0	H10706	H10710	-
	Schedule / Tempor. H10702 = 1 / 2	H10706	H10710	write H10702 = 2 required
Required zone (see the tab.6)	Manual H10703 = 0	H10707	H10711	-
	Schedule / Tempor. H10703 = 1 / 2	H10707	H10711	write H10703 = 2 required
Heating-Nonheat. season	-	I11401	H11401	0 = HS, 1 = NHS, 2 = T-TODA, 3 = T-TODA+

Parameter range: **Required mode (tab.3)**

Parametr	Mode title	Value	When the value can be used
H10705, H10709 and H10715	Off	0	No limitation
	Automat	1	C10508=0
	Ventilation	2	No limitation
	Circlation+ Ventilation	3	C10508=0, C10509=1
	Circulation	4	C10508=0, H11700=1
	Night precooling	5	I11401=1
	Disbalance	6	C10508=0
	Overpressure	7	C10508=0

Parameter range: **Required power (tab.4)**

Index - fan control	Fan control description	Index - power	Value	Value representation
H10510=0	Direct control	H10704, only read	0	Off
			12-100	Power 12..100%
		H10708, H10714, R/W	12-100	Power 12..100%
H10510=1	Constant flow	H10704, only only read	0	Off
			1..100	1..minimal flow according to the unit size, 100..maximal flow according to the unit size
		H10708, H10714, R/W	1..100	1..minimal flow according to the unit size, 100..maximal flow according to the unit size
H10510=2	Constant pressure	H10704, only read	0	Off
			1, 2	1~ power for NIGHT, 2~ power for DAY
		H10708, H10714, R/W	1, 2	1~ power for NIGHT, 2~ power for DAY
H10510=3	According to IN1 / IN2	H10704, only read	0	Off
			12-100	Power 12..100%
H10510=4	Constant flow for R_5 unit line	H10704, only read ----- H10708, H10714, R/W	0	Off
			10	Min - Ventilation
			11	Norm - Ventilation
			12	Max - Ventilation
			20	Min - Circulation
			21	Norm - Circulation
			22	Max - Circulation
			30	Min/Min (Circulation flow/ Ventilation flow)
			31	Min/Norm (Circulation flow/ Ventilation flow)
			32	Min/Max (Circulation flow/ Ventilation flow)
			33	Norm/Min (Circulation flow/ Ventilation flow)
			34	Norm/Norm (Circulation flow/ Ventilation flow)
			35	Norm/Max (Circulation flow/ Ventilation flow)
			36	Max/Min (Circulation flow/ Ventilation flow)
			37	Max/Norm (Circulation flow/ Ventilation flow)
			38	Max/Max (Circulation flow/ Ventilation flow)

Parameter range: **Required temperature (tab.5)**

Parameter	Meaning	Value	When the value can be used
H10706, H10710 and H10716	Set temperature: 10° až 40°C	100 - 400	When H10644 & H10651 ≠ 5, the value can be written
	Příklad: 23°C	230	When H10644 or H10651 = 5, the value can be read only

Parameter range: **Required zone (tab.6)**

Parameter	Meaning	Value	When the value can be used
H10707, H10711 and H10717	Both the zones are ventilated	0	Bez omezení
	Zone 1 is ventilated	1	H10511 = 1
	Zone 2 is ventilated	2	H10511 = 1

Parameters for monitoring (tab.7)

	Fan status	
M1 fan	H10200	When H10200 > 1000 the fan si running (1000 ~ 1V)
M2 fan	H10201	When H10201 > 1000 the fan si running (1000 ~ 1V)

	Heating status	
KK Output	C10200	Heating water pump runs, when C10200 = 1 (true)
YV1 Output	C10201	Hot water valve is open, when C00204 = 1 (true)
SE Output	C10215	HP is in the "heating", when C10215 = 1 (true)
SA2 Output	H10203	Heating (water or electric) is active, when H10203 > 0
DA1 Output	H10207	The heat pump is running, when H10207 > 0 (heating)

	Cooling status	
SC Output	C10216	HP is in the "cool", when C10216 = 1 (true)
DA1 Output	H10207	The heat pump is running, when H10207> 0 (cooling)

AHU unit status accordint to the forced modes (inputs/maintenace staus, etc.)

Parameter	Meaning	Value	When the value appears
	No forced mode	0	No input or maintenace mode is activated
	Start up	1	The AHU unit turns to one of the ventilation mode from the "off" mode
	Run-down	2	The AHU unit turns to the "off" mode from one of the ventilation mode
	D1 activated	3	D1 input is activated, the unit runs according to its setting
	D2 activated	4	D2 input is activated, the unit runs according to its setting
	D3 activated	5	D3 input is activated, the unit runs according to its setting
	D4 activated	6	D4 input is activated, the unit runs according to its setting
	IN1 activated	7	IN1 input is activated, the unit runs according to its setting
	IN2 activated	8	IN2 input is activated, the unit runs according to its setting

Forced mode - H10712 ------- only for reading	INk1/1 activated	9	INk1 input is activated on the board RD5kwith the address 1
	INk2/1 activated	10	INk2 input is activated on the board RD5kwith the address 1
	INk3/1 activated	11	INk3 input is activated on the board RD5kwith the address 1
	INk4/1 activated	12	INk4 input is activated on the board RD5kwith the address 1
	INk1/2 activated	13	INk1 input is activated on the board RD5kwith the address 2
	INk2/2 activated	14	INk2 input is activated on the board RD5kwith the address 2
	INk3/2 activated	15	INk3 input is activated on the board RD5kwith the address 2
	INk4/2 activated	16	INk4 input is activated on the board RD5kwith the address 2
	Heat pump defrosting	27	The used heat pump is in the defrosting regime
	Prewarming	28	The AHU unit turns to one of the ventilation mode from the "off" mode and warms up the interiour of the unit
	Learning mode	29	The unit is in the learning process
	Heat pump defrosting	30	The used heat pump is in the defrosting regime
	Periodic ventilation	32	The periodic ventilation in the R_5 when the Circulation is on

Ahu system temperatures

Temperature	Air type	Index
T-ODA	Outdoor air temperature	I10211
T-SUP	Supply air temperature	I10212
T-ETA	Extract air temperature	I10213
T-EHA	Exhaust air temperature	I10214
T-IDA	Indoor air temperature	I10215

Recommended indexes for the HWS -heat water storage

Control	Meaning	Read	Write
Req. temperature Tp1	Temper. in the upper part of the HWS - T1 sensor	H12925	H12925
Req. temperature Tp2	Temper. in the upper part of the HWS - T2 sensor	H12928	H12928
El. cartridge No.1 control	Control of the electric heating cartridges supplied from photovoltaic power plant(0~OFF, 1~ON)	H12914	H12914
El. cartridge No.2 control		H12915	H12915

Temperature	Index	Sensor position
T1	I10238	T1 - HWS upper part , the board RD5-RG is installed (ie. D10210=1)
T2	I10239	T2 - HWS middle part , the board RD5-RG is installed (ie. D10210=1)
T1	I10247	T1 - HWS upper part , the board RD5-TZ is installed (ie. D10212=1)
T2	I10248	T2 - HWS middle part , the board RD5-TZ is installed (ie. D10212=1)

Alarms and warnings (tab.9)

Index	Typ	Alarm / Warning	Range	Function
D11100	Unit overheat status	A	0/1	Inactive/Active
D11101	Orientation is not set	A	0/1	Inactive/Active
D11102	No heater is set	A	0/1	Inactive/Active
D11103	2nd Frost protection	A	0/1	Inactive/Active
D11104	STOP input is activated	A	0/1	Inactive/Active
D11105	Pressure gauge DP1 failure	A	0/1	Inactive/Active
D11106	Pressure gauge DP2 failure	A	0/1	Inactive/Active
D11107	TU1 temperature sensor failure	A	0/1	Inactive/Active
D11108	TU2 temperature sensor failure	A	0/1	Inactive/Active
D11109	TEa temperature sensor failure	A	0/1	Inactive/Active
D11110	TEb temperature sensor failure	A	0/1	Inactive/Active
D11111	TA2 temperature sensor failure	A	0/1	Inactive/Active
D11112	RD-IO communication failure	A	0/1	Inactive/Active
D11114	Volume flow disbalance	A	0/1	Inactive/Active
D11115	1. Frost protection	A	0/1	Inactive/Active
D11116	Indoor temp. sensor faillure	A	0/1	Inactive/Active
D11117	Heat Exchanger frost	U	0/1	Inactive/Active
D11118	Heat exchanger defrosting	U	0/1	Inactive/Active
D11119	Higher tariff	U	0/1	Inactive/Active
D11120	Insufficient volume flow	U	0/1	Inactive/Active
D11121	Insufficient power of the primary heater	U	0/1	Inactive/Active
D11122	The air filter is choked	U	0/1	Inactive/Active
D11123	Input alarm - IN1	U	0/1	Inactive/Active
D11124	Input alarm - IN2	U	0/1	Inactive/Active
D11125	Input alarm - INk1/1	U	0/1	Inactive/Active
D11126	Input alarm - INk2/1	U	0/1	Inactive/Active
D11127	Input alarm - INk3/1	U	0/1	Inactive/Active
D11128	Input alarm - INk4/1	U	0/1	Inactive/Active
D11129	Input alarm - INk1/2	U	0/1	Inactive/Active
D11130	Input alarm - INk2/2	U	0/1	Inactive/Active
D11131	Input alarm - INk3/2	U	0/1	Inactive/Active
D11132	Input alarm - INk4/2	U	0/1	Inactive/Active
D11140	Uncommissionned unit	U	0/1	Inactive/Active
D11141	The configuration file is missing	A	0/1	Inactive/Active
D11142	Alternate configuration file	A	0/1	Inactive/Active
D11143	Insufficient heater warm up	A	0/1	Inactive/Active
D11144	Disallowed heaters combination	A	0/1	Inactive/Active

D11145	Pressure gauge DP1 failure	A	0/1	Neaktivní/Aktivní
D11146	External pressure gauge failure	A	0/1	Neaktivní/Aktivní
D11147	RD5-K/1 board failure	A	0/1	Neaktivní/Aktivní
D11148	RD5-K/2 board failure	A	0/1	Neaktivní/Aktivní
D11149	HP defrosting	A	0/1	Neaktivní/Aktivní
D11150	TRk1 input failure - Modul 1	A	0/1	Inactive/Active
D11151	TRk2 input failure - Modul 1	A	0/1	Inactive/Active
D11152	TRk3 input failure - Modul 1	A	0/1	Inactive/Active
D11153	TRk4 input failure - Modul 1	A	0/1	Inactive/Active
D11154	TRk5 input failure - Modul 1	A	0/1	Inactive/Active
D11155	TRk1 input failure - Modul 2	A	0/1	Inactive/Active
D11156	TRk2 input failure - Modul 2	A	0/1	Inactive/Active
D11157	TRk3 input failure - Modul 2	A	0/1	Inactive/Active
D11158	TRk4 input failure - Modul 2	A	0/1	Inactive/Active
D11159	TRk5 input failure - Modul 2	U	0/1	Inactive/Active
D11160	Update is running	A	0/1	Neaktivní/Aktivní
D11162	Wrong cooler configuration	U	0/1	Neaktivní/Aktivní
D11165	Emergency mode active	A	0/1	Neaktivní/Aktivní
D11166	Frost protection-capilary	A	0/1	Neaktivní/Aktivní
D11167	Frost protection - config	U	0/1	Neaktivní/Aktivní
D11168	The learn process was not finished	A	0/1	Neaktivní/Aktivní
D11169	T-ODA temperature sensor failure	A	0/1	Neaktivní/Aktivní
D11170	T-ETA/T-IDA temperature sensor failure	U	0/1	Neaktivní/Aktivní
D11171	Cooler is not available	A	0/1	Neaktivní/Aktivní
D11172	Heater is not available	U	0/1	Neaktivní/Aktivní
D11173	Evaporation active	U	0/1	Neaktivní/Aktivní
D11174	Performance boost during heating	A	0/1	Neaktivní/Aktivní
D11175	Wrong volume flow settings	U	0/1	Neaktivní/Aktivní
D11183	Filter replace interval	U	0/1	Neaktivní/Aktivní
D11184	Filter test - configuration	U	0/1	Neaktivní/Aktivní

T-IDA, T-ODA values from BMS & maintenance(tab.10)

When a superior control system (BMS) includes an information about the temperature of the outdoor air (T-ODA) or indoor air (T-IDA), those values can be sent to the ventilation unit (HVAC) in order to be processes by the HVAC control system, so it is not necessary to install separate temperature sensor on the HVAC. Following indexes are designed to set the receiving T-ODA/t-IDA values form BMS. The values must be refreshed regularly; if T-ODA /T-IDA index is not refreshed in 90 s at the latest interval, the HVAC unit will generate the T-ODA/T-IDA sensor failure.

Registr	Parameter function	R/W	Range	Value representation
C10510	Adustmenent of the T-ODA source	R/W	0/1	0 ~ HVAC inbuilt sensor, 1 ~ value from BMS
H10213	Index for T-ODA writting from BMS	R/W	0..65535	65036 ~ -50,0°C ..65535 ~ -0,1°C, 1..1300 ~ 0,1..130,0°C
H10514	Adjustement of the T-IDA source	R/W	0..3	0 = CP, 1 = T-ETA, 2= TRKn, 3=BMS
H10214	Index for T-IDA writting from BMS	R/W	0..65535	65036 ~ -50,0°C ..65535 ~ -0,1°C, 1..1300 ~ 0,1..130,0°C
C10005	Reset of resetable alarms	W	0/1	When 1 is written, the reset of resetable alarms is done (e.g. D11105 - Pressure gauge failure, see the service documentation for more info)
C10007	Reset of the filter change interval	W	0/1	When 1 is written, the new date of the filter change is recorded - see the H10910

Examples of unit control (tab.11)

Case No.1 - the ventilation unit is controlled in the "manual" mode

Indexes H10700, H10701, H10702 and H10703 have the value 0

The change of the required temperature
1. read the value from the index H10706 (i.e. learn the current value of the required temperature)
2. the result is e.g. 225, i.e. required temperature is the 22,5°C (see the "Complete table")
3. If new required temperature should be e.g. 24°C, the value 240 should be written to the index H10710
4. Check the performed writting on the index H10706 - the value should be 240

The change of required mode
1. read the value from the index H10705 (i.e. learn the current required mode)
2. the result is e.g. 0, i.e. required mode is "OFF" (see the "Complete table")
3. If new required mode should be e.g. "Ventilation", the value 2 should be written to the index H10709
4. Check the performed writting on the index H10705 - the value should be 2

Case No.2 - the unit is controlled according to the "Schedule"

Indexes H10700, H10701, H10702 and H10703 have the value 1 or 2
(the value 2 means, that a manual change of some parameter (reqired mode, req.temperature, etc.) was done during the schedule operation.
This change of the chosen parameter is only temporary and it expires in the beginning of the nearest schedule interval.

The change of the required temperature
1. read the value from the index H10706 (i.e. learn the current value of the required temperature)
2. the result is e.g. 190, i.e. required temperature is the 19,0°C (see the "Complete table")
3. If new required temperature should be e.g. 21,5°C, the value 215 should be written to the index H10710
4. It is necessary to write the value 2 to the index H10702 - indication of the temporary change of the required temperature
5. Check the performed writting on the index H10706 - the value should be 240

The change of required mode

1. read the value from the index H10705 (i.e. learn the current required mode)
2. the result is e.g. 2, i.e. required mode is "Ventilation" (see the "Complete table")
3. If new required mode should be e.g. "Disbalance", the value 6 should be written to the index H10709
4. It is necessary to write the value 2 to the indexes H10701 - indication of the temporary change of the req.mode
5. Check the performed writting on the index H10705 - the value should be 2

Complete table

Registr	Parameter function	R/W	Range	Value representation
C10200	2.2.1 K-K Output	R	0/1	Off/On
C10201	2.2.2 YV1 Output	R	0/1	Off/On
C10202	2.2.3 YV2 Output	R	0/1	Off/On
C10203	2.2.5 SZ1 Output	R	0/1	Off/On
C10204	2.2.6 SZ2 Output	R	0/1	Off/On
C10205	2.2.4 SV Output	R	0/1	Off/On
C10206	2.2.7 EXT Output	R	0/1	Off/On
C10207	2.1.5 SDB Output	R	0/1	Off/On
C10208	2.2.10 SM Output	R	0/1	Off/On
C10215	2.3.1 SE Output	R	0/1	Off/On
C10216	2.3.2 SC Output	R	0/1	Off/On
C10217	2.3.3 OC1 Output	R	0/1	Off/On
C10220	2.10.1 Output R1- RD5-RG board	R	0/1	Off/On
C10221	2.10.2 Output R2- RD5-RG board	R	0/1	Off/On
C10222	2.10.3 Output R3- RD5-RG board	R	0/1	Off/On
C10223	2.10.4 Output R4- RD5-RG board	R	0/1	Off/On
C10224	2.10.5 Output R5- RD5-RG board	R	0/1	Off/On
C10225	2.10.6 Output R6- RD5-RG board	R	0/1	Off/On
C10226	2.10.7 Output R7- RD5-RG board	R	0/1	Off/On
C10227	2.10.8 Output R8- RD5-RG board	R	0/1	Off/On
C10228	2.10.9 Output R9- RD5-RG board	R	0/1	Off/On
C10229	2.10.10 Output EXT- RD5-RG board	R	0/1	Off/On
C10230	2.11.1 Output R1- RD5-TZ board	R	0/1	Off/On
C10231	2.11.2 Output R2- RD5-TZ board	R	0/1	Off/On
C10232	2.11.3 Output R3- RD5-TZ board	R	0/1	Off/On
C10233	2.11.4 Output R4- RD5-TZ board	R	0/1	Off/On
C10234	2.11.5 Output R5- RD5-TZ board	R	0/1	Off/On
C10235	2.11.6 Output R6- RD5-TZ board	R	0/1	Off/On
C10236	2.11.7 Output R7- RD5-TZ board	R	0/1	Off/On
C10237	2.11.8 Output R8- RD5-TZ board	R	0/1	Off/On
C10238	2.11.10 Output EXT- RD5-TZ board	R	0/1	Off/On
C10505	3.9.4 Condensate water - draw off	R/W	0/1	Off/On
C10506	3.2.14 M-SUP correction for all modes	R/W	0/1	Off/On
C10508	3.1.50 VAV box ventilation mode	R/W	0/1	No/Yes
C11000	3.1.3 The CP-Touch Inbuilt temp. sensor	R/W	0-1	0 = Int, 1 = Ext
C11402	3.15.5 Remote server access	R/W	0/1	No/Yes
C11403	3.15.10 Automatic update	R/W	0/1	No/Yes
C11404	3.15.11 Lock version checking	R/W	0/1	No/Yes
C11409	3.15.1 Modbus TCP	R/W	0/1	No/Yes
D10200	1.2.1 D1 Input	R	0/1	Off/On
D10201	1.2.2 D2 Input	R	0/1	Off/On
D10202	1.2.3 D3 Input	R	0/1	Off/On
D10203	1.2.4 D4 Input	R	0/1	Off/On
D10204	1.2.5 STP Input	R	0/1	Off/On
D10205	1.2.6 TR Input	R	0/1	Off/On
D10206	Communication with the RD4-IO board	R	0/1	No/Yes
D10207	1.3.1 DF Input	R	0/1	Off/On
D10208	Communication with th RD5k-1 board	R	0/1	No/Yes
D10209	Communication with th RD5k-1 board	R	0/1	No/Yes
D10211	1.10.1 D1 input/RD5-rg	R	0/1	Off/On
D10213	1.11.1 D1 input/RD5-TZ	R	0/1	Off/On
H10200	2.1.1 M1 Output	R	0-10000	Analog output: U = DATA/1000
H10201	2.1.2 M2 Output	R	0-10000	Analog output: U = DATA/1000
H10202	2.2.8 SA1 Output	R	0-10000	Analog output: U = DATA/1000
H10203	2.2.9 SA2 Output	R	0-10000	Analog output: U = DATA/1000
H10204	2.1.6 SC Output	R	0-10000	Analog output: U = DATA/1000
H10205	2.1.3 SB plus Output	R	0-65534	0-32768~dureation of the output activation [ms] (1x in control period, e.g. 60s), 65534= permanently activ
H10206	2.1.4 SB minus Output	R	0-65534	0-32768~dureation of the output activation [ms] (1x in control period, e.g. 60s), 65534= permanently activ
H10207	2.3.4 DA1 Output	R	0-10000	Analog output: U = DATA/1000
H10208	2.3.5 DA2 Output	R	0-10000	Analog output: U = DATA/1000
H10209	2.4.1 SAk1 Output	R	0-10000	Analog output: U = DATA/1000
H10210	2.4.2 SAk2 Output	R	0-10000	Analog output: U = DATA/1000
H10211	2.5.1 SAk2 Output	R	0-10000	Analog output: U = DATA/1000
H10212	2.5.2 SAk2 Output	R	0-10000	Analog output: U = DATA/1000

H10501	3.2.2 Supply fan (M-SUP)	R/W	0-2	Not set/ M1/M2
H10502	3.2.13 Ventilation interval	R/W	0-60	0-60 minute
H10503	3.5.1 Primary heater	R/W	0-5	0 = Non, 1 = Water heater- contact, 2 = Water heater- analog control, 3 = El. heater PWM, 4 = El. heater- contact, 5 = Heat pump
H10504	3.9.1 Preheater	R/W	0,1,2,3	None/Electric/Liquid
H10507	3.6.1 Cooler type	R/W	0-2	0 = None, 1 = Water, 2 = Heat pump
H10508	3.1.4 The T-ODA sensor position	R/W	0, 1	0 = Int, 1 = Ext
H10510	3.2.1 Way of fan control	R/W	0-3	0 = Direct, 1 = Constant flow, 2 = Constant pressure, 3 = IN1/2 follow
H10511	3.11.91 SZ1/SZ2 function	R/W	0,1,2	0 = Non, 1 = Zones, 2 = Dn
H10512	3.2.15 Filter check proces	R/W	0,1	0 = Contact, 1 = Period
H10513	3.2.3 M-SUP correction	R/W	0-65535	65486 ~ -50% ..65535 ~ -1%, 1..50 ~ 1..50%
H10514	3.1.2 The temp. sensor for the extract air control	R/W	0,1	0 = CP, 1 = T-ETA
H10515	3.1.1 The temperature control way	R/W	0,1,2,	0 = Indoor/Extract, 1 = Supply, 2= Auto
H10516	3.11.92 EXT function	R/W	0,1,2	0 = None, 1 = Circulation, 2 = Dn
H10517	3.5.4 Secondary heater	R/W	0,1,2,3	0 = Non, 1 = Water heater- contact, 2 = Water heater- analog control, 3 = El. heater PWM
H10519	3.10.1 GHE typ	R/W	0,1,2,3,4	0 = None, 1 = Direct, 2 = Liquid, 4 = Liquid circul.
H10526	3.2.17 TR input function	R/W	0,1,2	0 = Filtr, 1 = Thermostat, 2 = Load manag.
H10528	3.1.8 Sensor TRkn as T-IDA	R/W	0-9	0= TRk1/1, 1 = TRk1/2, 2 = TRk1/3, 3 = TRk1/4, 4 = TRk1/5, 5 = TRk2/1, 6 = TRk2/2, 7 = TRk2/3, 8 = TRk2/4, 9 = TRk2/5
H10529	3.15.20 Enable Emergency mode	R/W	0/1	Off/On
H10530	3.5.20 Blocking - capilary antifrost	R/W	0/1	No/Yes
H10600	3.11.11 D1 - function	R/W	0,1,2,3,4,5,6,7,8	0 = Off, 1 = On, 2 = On+Limit, 3 = 1. Frost protection, 4 = 2. Frost protection, 5 = Heat exchanger frost, 6 = Insufficient pow. 1st heater, 7 = Unit overheat status, 8 = Frost protection-capilary
H10601	3.11.12 D1 - priority	R/W	0-4	0-4
H10602	3.11.13 D1 - required mode			0 = Off, 1 = Automat, 2 = Ventilation, 3 = Circulation with Ventilation, 4 = Circulation, 5 = Night precooling, 6 = Disbalance, 7 = Overpressure
H10603	3.11.14 D1 - required power	R/W	12-100	12 - 100 %, 101 ~ No effect
H10604	3.11.15 D1 - required temperature	R/W	0-500	0-50°C, 501 ~ No effect
H10605	3.11.16 D1 - Delayed start	R/W	0-999	0-999s
H10606	3.11.17 D1 - Run-down	R/W	0-9999	0-9999s
H10607	3.11.51 D ventilation time limit [hours]	R/W	0-36000	Number of hours: No = DATA/3600
H10608	3.11.19 D1 - SZ1 output	R/W	0/1	Off/On
H10609	3.11.20 D1 - SZ2 output	R/W	0/1	Off/On
H10610	3.11.18 D1 - EXT output	R/W	0/1	Off/On
H10611	3.11.21 D2 - function	R/W	0,1,2,3,4,5,6,7,8	0 = Off, 1 = On, 2 = On+Limit, 3 = 1. Frost protection, 4 = 2. Frost protection, 5 = Heat exchanger frost, 6 = Insufficient pow. 1st heater, 7 = Unit overheat status, 8 = Frost protection-capilary
H10612	3.11.22 D2 - priority	R/W	0-4	0-4
H10613	3.11.23 D2 - required mode		0,1,2,3,4,5,6,7	0 = Off, 1 = Automat, 2 = Ventilation, 3 = Circulation with Ventilation, 4 = Circulation, 5 = Night precooling, 6 = Disbalance, 7 = Overpressure
H10614	3.11.24 D2 - required power	R/W	12-100	12 - 100 %, 101 ~ No effect
H10615	3.11.25 D2 - required temperature	R/W	0-500	0-50°C, 501 ~ No effect
H10616	3.11.26 D2 - Delayed start	R/W	0-999	0-999s
H10617	3.11.27 D2 - Run-down	R/W	0-9999	0-9999s
H10619	3.11.29 D2 - SZ1 output	R/W	0/1	Off/On
H10620	3.11.30 D2 - SZ2 output	R/W	0/1	Off/On
H10621	3.11.28 D2 - EXT output	R/W	0/1	Off/On
H10622	3.11.31 D3 - function	R/W	0,1,2,3,4,5,6,7,8	0 = Off, 1 = On, 2 = On+Limit, 3 = 1. Frost protection, 4 = 2. Frost protection, 5 = Heat exchanger frost, 6 = Insufficient pow. 1st heater, 7 = Unit overheat status, 8 = Frost protection-capilary
H10623	3.11.32 D3 - priority	R/W	0-4	0-4
H10624	3.11.33 D3 - required mode		0,1,2,3,4,5,6,7	0 = Off, 1 = Automat, 2 = Ventilation, 3 = Circulation with Ventilation, 4 = Circulation, 5 = Night precooling, 6 = Disbalance, 7 = Overpressure
H10625	3.11.34 D3 - required power	R/W	12-100	12 - 100 %, 101 ~ No effect
H10626	3.11.35 D3 - required temperature	R/W	0-500	0-50°C, 501 ~ No effect
H10627	3.11.36 D3 - Delayed start	R/W	0-999	0-999s
H10628	3.11.37 D3 - Run-down	R/W	0-9999	0-9999s
H10630	3.11.39 D3 - SZ1 output	R/W	0/1	Off/On
H10631	3.11.40 D3 - SZ2 output	R/W	0/1	Off/On
H10632	3.11.38 D3 - EXT output	R/W	0/1	Off/On
H10633	3.11.41 D4 - function	R/W	0,1,2,3,4,5,6,7,8	0 = Off, 1 = On, 2 = On+Limit, 3 = 1. Frost protection, 4 = 2. Frost protection, 5 = Heat exchanger frost, 6 = Insufficient pow. 1st heater, 7 = Unit overheat status, 8 = Frost protection-capilary
H10634	3.11.42 D4 - priority	R/W	0-4	0-4

H10635	3.11.43 D4 - required mode		0,1,2,3,4,5,6,7	0 = Off, 1 = Automat, 2 = Ventilation, 3 = Circulation with Ventilation, 4 = Circulation, 5 = Night precooling, 6 = Disbalance, 7 = Overpressure
H10636	3.11.44 D4 - required power	R/W	12-100	12 - 100 %, 101 ~ No effect
H10637	3.11.45 D4- required temperature	R/W	0-500	0-50°C, 501 ~ No effect
H10638	3.11.46 D4 - Delayed start	R/W	0-999	0-999s
H10639	3.11.47 D4 - Run-down	R/W	0-9999	0-9999s
H10641	3.11.49 D4 - SZ1 output	R/W	0/1	Off/On
H10642	3.11.50 D4 - SZ2 output	R/W	0/1	Off/On
H10643	3.11.48 D4 - EXT output	R/W	0/1	Off/On
H10644	3.11.61 IN1 - function	R/W	0,1,2,3,4,5,6,7,8,9,10	0 = Off, 1 = Contact- Ventilation, 2 = Analog- Ventilation , 3 = Contact- Disbalance, 4 = Contact- Heat gain, 5 = Temperature, 6 = Contact- Ventilation stop, 7 = Contact- Failure, 8 = Contact- Circul.+Ventilation, 9 = Night precooling, 10 = Contact- Overpressure
H10645	3.11.62 IN1 Lower voltage	R/W	0-10000	0-10 V
H10646	3.11.63 IN1 Lower power	R/W	0-100	0-100 %
H10647	3.11.64 IN1 Higher voltage	R/W	0-10000	0-10 V
H10648	3.11.65 IN1 Higher power	R/W	0-100	0-100 %
H10649	IN1 season limitation	R/W	0/1/2	0~No limitation, 1~ NHS limited, 2~ HS limited
H10651	3.11.71 IN2 Function	R/W	0,1,2,3,4,5,6,7,8,9,10	0 = Off, 1 = Contact- Ventilation, 2 = Analog- Ventilation , 3 = Contact- Disbalance, 4 = Contact- Heat gain, 5 = Temperature, 6 = Contact- Ventilation stop, 7 = Contact- Failure, 8 = Contact- Circul.+Ventilation, 9 = Night precooling, 10 = Contact- Overpressure, 11 = Analog- Ventilation/Stop
H10652	3.11.72 IN2 Lower voltage	R/W	0-10000	0-10 V
H10653	3.11.73 IN2 Lower power	R/W	0-100	0-100 %
H10654	3.11.74 IN2 Higher voltage	R/W	0-10000	0-10 V
H10655	3.11.75 IN2 Higher power	R/W	0-100	0-100 %
H10656	IN2 season limitation	R/W	0/1/2	0~No limitation, 1~ NHS limited, 2~ HS limited
H10700	Power - control mode	R/W	0/1/2	0= Manual, 1 = Schedule, 2 = Temporary
H10701	Running mode - control mode	R/W	0/1/2	0= Manual, 1 = Schedule, 2 = Temporary
H10702	Temperature - control mode	R/W	0/1/2	0= Manual, 1 = Schedule, 2 = Temporary
H10703	Zone - control mode	R/W	0/1/2	0= Manual, 1 = Schedule, 2 = Temporary
H10704	Required power	R	0-100	according to the "Power" table
H10705	Required mode	R	0,1,2,3,4,5,6,7	0 = Off, 1 = Automat, 2 = Ventilation, 3 =
H10706	Required temper.	R	100-400	10-40°C
H10707	Required zone	R	0,1,2	0 = SZ1, 1 = SZ2, 2 = SZ1+SZ2
H10708	Power - Latest manual setting	R/w	0-100	according to the "Power" table
H10709	Running mode - Latest manual setting	R/W	0,1,2,3,4,5,6,7	0 = Off, 1 = Automat, 2 = Ventilation, 3 = Circul.+Ventilation, 4 = Circulation, 5 = Night precooling, 6 = Disbalance, 7 = Overpressure
H10710	Temperature - Latest manual setting	R/W	100-400	10-40°C
H10711	Zone - Latest manual setting	R/W	0,1,2	0 = SZ1, 1 = SZ2, 2 = SZ1+SZ2
H10712	Forced mode	R/W	0-26	0= None, 1 = Start-up, 2 = Run-down, 3 = Input D1, 4 = Input D2, 5 = Input D3, 6 = Input D4, 7 = Input IN1, 8 = Input IN2, 9 Input K1 IN1, 10 Input K1 IN2, 11 = Input K1 IN3, 12 = Input K1 IN4, 13 = K2 IN1, 14 = K2 IN2, 15 = K2 IN3, 16 = Input K2 IN4, 17 = K1 TR1, 18 = K1 TR2, 19 = K1 TR3, 20 = Input K1 TR4, 21 = Input K1 TR5, 22 = Input K2 TR1, 23 = Input K2 TR2, 24 = Input K2 TR3, 25 = Input K2 TR4, 26 = Input K2 TR5
H10900	Language setting	R/W	0 - 5	0=CZ, 1=DE, 2=EN, 3=LV, 4=PL, 5=HU
H10910	3.2.16 Period for filters replacement [day]	R/W	0-365	0-365 days
H11004	3.11.06 CP1 sensor correction	R/W	-30 - +30	65506 ~ -3°C ..65535 ~ -0,1°C, 1..30 ~ 0,1..3,0°C
H11005	3.1.5 CP-Touch for T-IDA meassurement	R/W	1-4	1-4
H11200	3.6.2 Cooler position	R/W	0,1	0 = Indoor, 1 = External
H11201	3.6.51 P gain - cooler	R/W	0-2000	0-2000
H11202	3.6.52 I gain - cooler	R/W	0-2000	0-2000
H11203	3.6.53 D gain - cooler	R/W	0-2000	0-2000
H11204	3.6.54 Control interval - cooler	R/W	1-300	1-300s
H11205	3.6.55 Starting voltage - cooler	R/W	0-5000	0-5V
H11207	3.6.3 Temperature difference - cooling	R/W	0-150	0-15°C
H11300	3.5.2 Primary heater position	R/W	0,1	0 = Internal, 1 = External
H11301	3.5.51 P gain - primary heater	R/W	0-2000	0-2000
H11302	3.5.52 I gain - primary heater	R/W	0-2000	0-2000
H11303	3.5.53 D gain - primary heater	R/W	0-2000	0-2000
H11304	3.5.54 Control interval - primary heater	R/W	1-300	1-300s
H11305	3.5.55 Starting voltage - Prim.heater	R/W	0-5000	0-5V
H11315	3.5.6 The heating water pump exercise	R/W	0/1	Off/On
H11316	3.5.7 T SUP_Max	R/W	250-500	25-50°C
H11317	3.5.8. Temper.difference - heating	R/W	0-150	0-15°C
H11318	T-hysteresis for indoor temperature	R/W	0-30	0-3°C
H11319	3.5.11 T-hyst_SUP	R/W	0-50	0-5°C
H11320	3.5.13 Prim/Sec. pass over time	R/W	0-30	0-30min
H11321	3.5.10 T-ODA for heater warming up	R/W	0..65535	65336 ~ -20,0°C ..65535 ~ -0,1°C, 1..50 ~ 0,1..5,0°C
H11400	Time zone	R/W	0..60	see the table below
H11401	HS/NHS switching	R/W	0,1,2,3	0 = HS, 1 = NHS, 2 = T-TODA, 3 = T-TODA+
H11402	Temperature TS/NTS	R/W	0-300	0-30°C

H11403	3.10.2 GHE lower temperature	R/W	0..65535	65436 ~ -10,0°C ..65535 ~ -0,1°C, 1..200 ~ 0,1..20,0°C
H11404	3.10.3 GHE higher temperature	R/W	0..65535	65436 ~ -10,0°C ..65535 ~ -0,1°C, 1..200 ~ 0,1..20,0°C
H11407	3.11.01 TU1 correction	R/W	0..65535	65506 ~ -3,0°C ..65535 ~ -0,1°C, 1..30 ~ 0,1..3,0°C
H11408	3.11.02 TU2 correction	R/W	0..65535	65506 ~ -3,0°C ..65535 ~ -0,1°C, 1..30 ~ 0,1..3,0°C
H11409	3.11.03 TEa correction	R/W	0..65535	65506 ~ -3,0°C ..65535 ~ -0,1°C, 1..30 ~ 0,1..3,0°C
H11410	3.11.04 TEb correction	R/W	0..65535	65506 ~ -3,0°C ..65535 ~ -0,1°C, 1..30 ~ 0,1..3,0°C
H11411	3.11.05 TA2 correction	R/W	0..65535	65506 ~ -3,0°C ..65535 ~ -0,1°C, 1..30 ~ 0,1..3,0°C
H11422	3.8.1 T_win_dif	R/W	0..65535	65336 ~ -20,0°C ..65535 ~ -0,1°C, 1..200 ~ 0,1..20,0°C
H11423	3.8.2 T_win_ max	R/W	0..65535	65236 ~ -30,0°C ..65436 ~ -10,0°C,
H11424	3.8.3 T_win_ min	R/W	0..65535	65336 ~ -20,0°C ..65535 ~ -0,1°C, 1..100 ~ 0,1..10,0°C
H11425	3.8.4 T_sum_dif	R/W	0..65535	65336 ~ -20,0°C ..65535 ~ -0,1°C, 1..200 ~ 0,1..20,0°C
H11426	3.8.5 T_sum_ max	R/W	0-500	0-50°C
H11427	3.8.6 T_sum_ min	R/W	100-400	10-40°C
H11428	3.15.6 Refresh period length	R/W	0-60	0-60min
H11428	3.15.6 Refresh period length	R/W	0-60	0-60min
H11429	3.2.12 Test. interval for night cooling	R/W	10-600	10-600min
H11430	3.2.18 SA2 voltage when TR is on	R/W	0-10000	0-10,0V
H11431	T-ODA averaging time window	R/W	0 - 13	0~1 hour., 1~3 hrs.,2~6 hrs.,3~12 hrs., 4~1 day, 5~2 days, 13~10 days
H11432	3.8.10 T-ODA - min. ventilation interval reduction	R/W	0..65535	65336 ~ -20,0°C ..65535 ~ -0,1°C, 1..100 ~ 0,1..10,0°C
H11433	3.8.11 T-ODA - max. ventilation interval reduction	R/W	0..65535	65236 ~ -30,0°C ..65535 ~ -0,1%, 0 ~ 0,0°C
H11434	3.8.12 Maximal ventilation interval reduction	R/W	0-100	0-100%
H11501	3.9.2 T-EHA frost limit	R/W	0..65535	65436 ~ -10,0°C ..65535 ~ -0,1°C, 1..70 ~ 0,1..7,0°C
H11502	3.9.3 T-ODA for defrosting	R/W	0..65535	65436 ~ -10,0°C ..65535 ~ -0,1°C, 1..100 ~ 0,1..10,0°C
H11503	3.9.51 P gain - preheater	R/W	0-2000	0-2000
H11504	3.9.52 I gain - preheater	R/W	0-2000	0-2000
H11505	3.9.53 D gain - preheater	R/W	0-2000	0-2000
H11506	3.9.54 Control interval - preheater	R/W	1-300	1-300s
H11507	3.9.55 Start voltage -preh.	R/W	0-2000	0-10V
H11600	3.2.51 P gain , Const.flow - M1	R/W	0-2000	0-2000
H11601	3.2.52 I gain , Const. flow - M1	R/W	0-2000	0-2000
H11602	3.2.53 D gain , Const.flow - M1	R/W	0-2000	0-2000
H11603	3.2.54 Control interval - M1	R/W	1-300	1-300s
H11604	3.2.55 P gain , Const.flow - M2	R/W	0-2000	0-2000
H11605	3.2.56 I gain , Const. flow - M2	R/W	0-2000	0-2000
H11606	3.2.57 D gain , Const.flow - M2	R/W	0-2000	0-2000
H11607	3.2.58 Control interval - M2	R/W	1-300	1-300s
H11608	3.2.61 P gain Const.press - M1	R/W	0-2000	0-2000
H11609	3.2.62 I gain Const.press - M1	R/W	0-2000	0-2000
H11610	3.2.63 D gain Const.press - M1	R/W	0-2000	0-2000
H11611	3.2.64 Control interval press - M1	R/W	1-300	1-300s
H11612	3.2.65 P gain Const.press - M2	R/W	0-2000	0-2000
H11613	3.2.66 I gain Const.press - M2	R/W	0-2000	0-2000
H11614	3.2.67 D gain Const.press - M2	R/W	0-2000	0-2000
H11615	3.2.68 Control interval press. - M2	R/W	1-300	1-300s
H11616	3.2.4 Limitation of the minimum	R/W	12-100	12-100%
H11617	3.2.5 Limitation of the maximum	R/W	12-100	12-100%
H11618	3.2.6 Constant pressure	R/W	0,1,2	0 = Msup, 1 = Meta, 2 = Msup + Meta
H11619	3.2.7 IN1 Constant pressure - day	R/W	0-10000	0-10V
H11620	3.2.8 IN1 Constant pressure - night	R/W	0-10000	0-10V
H11621	3.2.9 IN2 Constant pressure - day	R/W	0-10000	0-10V
H11622	3.2.10 IN2 Const.press - night	R/W	0-10000	0-10V
H11700	3.4.1 Circulation damper	R/W	0/1	No/Yes
H11701	3.4.2 SC control	R/W	0,1,2	0 = Off/On, 1 = Eco, 2 = Comfort
H11702	3.4.51 P gain - Circul. Damper	R/W	0-2000	0-2000
H11703	3.4.52 I gain - Circul. damper	R/W	0-2000	0-2000
H11704	3.4.53 D gain - Circul. damper	R/W	0-2000	0-2000
H11705	3.4.54 Control interval - Circul. damper	R/W	1-300	1-300s
H11800	3.3.5 Bypass	R/W	0/1	No/Yes
H11801	3.3.1 Heat Exchanger type	R/W	0,1	Plate/Rotate
H11802	3.3.12 BPS - defrost	R/W	0/1	No/Yes
H11803	3.3.10 BPS - control interval	R/W	0-60	0-60s
H11804	3.3.11 BPS - multiplyer	R/W	1-50	1-50s
H11805	3.3.25 Starting voltage - rotary recuperator	R/W	0-5000	0-5V
H11806	3.3.21 U ROT_Max	R/W	4000-10000	4-10V
H11807	3.3.22 P gain - rotary recuperator	R/W	0-2000	0-2000
H11808	3.3.23 I gain - rotary recuperator	R/W	0-2000	0-2000
H11809	3.3.24 D gain - rotary recuperator	R/W	0-2000	0-2000
H11810	3.3.26 Control interval - rotary recuperator	R/W	1-300	1-300s
H11811	3.3.27 Urot - clearing run	R/W	0-10000	0-10V
H11900	3.5.5 Secondary heater position	R/W	0,1	0 = Indoor, 1 = External
H11901	3.5.56 P gain - secondary heater	R/W	0-2000	0-2000

H11902	3.5.57 I gain - secondary heater	R/W	0-2000	0-2000
H11903	3.5.58 D gain - secondary heater	R/W	0-2000	0-2000
H11904	3.5.59 Control interval - sec.heater	R/W	1-300	1-300s
H11905	3.5.60 Starting voltage - Sec.heater	R/W	0-5000	0-5V
H11907	3.5.9 T bivalence	R/W	0..65535	65236 ~ -30,0°C ..653836 ~ -15,0°C
H12100	3.7.1 HP control type	R/W	1,2,3,4	1 = 0-10V, 2 = 10-0V, 3 = 1. Req. Temp. direct, 4 = TP bands
H12101	3.7.5 HP - Minimal run time	R/W	0-180	0-180 min
H12102	3.7.4 HP - Minimal rest time	R/W	0-180	0-180 min
H12103	3.7.2 TCD min	R/W	3-20	0,3 - 2°C
H12104	3.7.3 TCD max	R/W	10 - 20	1 - 2°C
H12105	3.7.6 Homogenizing	R/W	0/1	No/Yes
H12106	3.7.9. Action when DF	R/W	0,1,2	0 = No action 1 = Reduction, 2 = Unit stop
H12107	3.7.10 Reduction when DF	R/W	0-100	0-100%
H12400	3.12.51 INk1 Function	R/W	0,1,2,3,4,5,6,7,8,9,10	0 = Off, 1 = Contact- Ventilation, 2 = Analog-Ventilation , 3 = Contact- Disbalance, 4 = Contact-Heat gain, 5 = Temperature, 6 = Contact- Ventilation stop, 7 = Contact- Failure, 8 = Contact-Circul.+Ventilation, 9 = Night precooling, 10 = Contact-Overpressure, 11 = Analog- Ventilation/Stop
H12401	3.12.52 INk1 Lower voltage	R/W	0-10000	0-10 V
H12402	3.12.53 INk1 Low performance	R/W	0-100	0-100 %
H12403	3.12.54 INk1 Higher voltage	R/W	0-10000	0-10 V
H12404	3.12.55 INk1 High performance	R/W	0-100	0-100 %
H12405	3.12.56 INk1 Limitation	R/W	0,1,2	0 = No limit, 1 = NTS, 2 = TS
H12406	3.12.57 INk1 zone	R/W	0,1,2	0 = Not assigned, 1 = SAK1, 2 = SAK2
H12407	3.12.61 INk1 Function	R/W	0,1,2,3,4,5,6,7,8,9,10	0 = Off, 1 = Contact- Ventilation, 2 = Analog-Ventilation , 3 = Contact- Disbalance, 4 = Contact-Heat gain, 5 = Temperature, 6 = Contact- Ventilation stop, 7 = Contact- Failure, 8 = Contact-Circul.+Ventilation, 9 = Night precooling, 10 = Contact-Overpressure, 11 = Analog- Ventilation/Stop
H12408	3.12.62 INk1 Lower voltage	R/W	0-10000	0-10 V
H12409	3.12.63 INk1 Low performance	R/W	0-100	0-100 %
H12410	3.12.64 INk1 Higher voltage	R/W	0-10000	0-10 V
H12411	3.12.65 INk1 High performance	R/W	0-100	0-100 %
H12412	3.12.66 INk1 Limitation	R/W	0,1,2	0 = No limit, 1 = NTS, 2 = TS
H12413	3.12.67 INk1 zone	R/W	0,1,2	0 = Not assigned, 1 = SAK1, 2 = SAK2
H12414	3.12.71 INk1 Function	R/W	0,1,2,3,4,5,6,7,8,9,10	0 = Off, 1 = Contact- Ventilation, 2 = Analog-Ventilation , 3 = Contact- Disbalance, 4 = Contact-Heat gain, 5 = Temperature, 6 = Contact- Ventilation stop, 7 = Contact- Failure, 8 = Contact-Circul.+Ventilation, 9 = Night precooling, 10 = Contact-Overpressure, 11 = Analog- Ventilation/Stop
H12415	3.12.72 INk1 Lower voltage	R/W	0-10000	0-10 V
H12416	3.12.73 INk1 Low performance	R/W	0-100	0-100 %
H12417	3.12.74 INk1 Higher voltage	R/W	0-10000	0-10 V
H12418	3.12.75 INk1 High performance	R/W	0-100	0-100 %
H12419	3.12.76 INk1 Limitation	R/W	0,1,2	0 = No limit, 1 = NTS, 2 = TS
H12420	3.12.77 INk1 zone	R/W	0,1,2	0 = Not assigned, 1 = SAK1, 2 = SAK2
H12421	3.12.81 INk1 Function	R/W	0,1,2,3,4,5,6,7,8,9,10	0 = Off, 1 = Contact- Ventilation, 2 = Analog-Ventilation , 3 = Contact- Disbalance, 4 = Contact-Heat gain, 5 = Temperature, 6 = Contact- Ventilation stop, 7 = Contact- Failure, 8 = Contact-Circul.+Ventilation, 9 = Night precooling, 10 = Contact-Overpressure, 11 = Analog- Ventilation/Stop
H12422	3.12.82 INk1 Lower voltage	R/W	0-10000	0-10 V
H12423	3.12.83 INk1 Low performance	R/W	0-100	0-100 %
H12424	3.12.84 INk1 Higher voltage	R/W	0-10000	0-10 V
H12425	3.12.85 INk1 High performance	R/W	0-100	0-100 %
H12426	3.12.86 INk1 Limitation	R/W	0,1,2	0 = No limit, 1 = NTS, 2 = TS
H12427	3.12.87 INk1 zone	R/W	0,1,2	0 = Not assigned, 1 = SAK1, 2 = SAK2
H12428	3.12.01 TRk1 Function	R/W	0/1	Off/On
H12429	3.12.02 TRk1 Lower difference	R/W	10-100	1-10°C
H12430	3.12.03 TRk1 Low performance	R/W	0-90	0-90%
H12431	3.12.04 TRk1 Higher difference	R/W	50-200	5-20°C
H12432	3.12.05 TRk1 High performance	R/W	12-100	12-100%
H12434	3.12.06 TRk1 zone	R/W	0,1,2	0 = Not assigned, 1 = SAK1, 2 = SAK2
H12435	3.12.11 TRk2 Function	R/W	0/1	Off/On
H12436	3.12.12 TRk2 Lower difference	R/W	10-100	1-10°C
H12437	3.12.13 TRk2 Low performance	R/W	0-90	0-90%
H12438	3.12.14 TRk2 Higher difference	R/W	50-200	5-20°C
H12439	3.12.15 TRk2 High performance	R/W	12-100	12-100%
H12441	3.12.16 TRk2 zone	R/W	0,1,2	0 = Not assigned, 1 = SAK1, 2 = SAK2
H12442	3.12.21 TRk3 Function	R/W	0/1	Off/On
H12443	3.12.22 TRk3 Lower difference	R/W	10-100	1-10°C
H12444	3.12.23 TRk3 Low performance	R/W	0-90	0-90%
H12445	3.12.24 TRk3 Higher difference	R/W	50-200	5-20°C
H12446	3.12.25 TRk3 High performance	R/W	12-100	12-100%
H12448	3.12.26 TRk3 zone	R/W	0,1,2	0 = Not assigned, 1 = SAK1, 2 = SAK2
H12449	3.12.31 TRk4 Function	R/W	0/1	Off/On

H12450	3.12.32 TRk4 Lower difference	R/W	10-100	1-10°C
H12451	3.12.33 TRk4 Low performance	R/W	0-90	0-90%
H12452	3.12.34 TRk4 Higher difference	R/W	50-200	5-20°C
H12453	3.12.35 TRk4 High performance	R/W	12-100	12-100%
H12455	3.12.36 TRk4 zone	R/W	0,1,2	0 = Not assigned, 1 = SAK1, 2 = SAK2
H12456	3.12.41 TRk5 Function	R/W	0/1	Off/On
H12457	3.12.42 TRk5 Lower difference	R/W	10-100	1-10°C
H12458	3.12.43 TRk5 Low performance	R/W	0-90	0-90%
H12459	3.12.44 TRk5 Higher difference	R/W	50-200	5-20°C
H12460	3.12.45 TRk5 High performance	R/W	12-100	12-100%
H12462	3.12.46 TRk5 zone	R/W	0,1,2	0 = Not assigned, 1 = SAK1, 2 = SAK2
H12500	3.13.51 INk1 Function	R/W	0,1,2,3,4,5,6,7,8,9,10	0 = Off, 1 = Contact- Ventilation, 2 = Analog-Ventilation , 3 = Contact- Disbalance, 4 = Contact-Heat gain, 5 = Temperature, 6 = Contact- Ventilation stop, 7 = Contact- Failure, 8 = Contact-Circul.+Ventilation, 9 = Night precooling, 10 = Contact-Overpressure, 11 = Analog- Ventilation/Stop
H12501	3.13.52 INk1 Lower voltage	R/W	0-10000	0-10 V
H12502	3.13.53 INk1 Low performance	R/W	0-100	0-100 %
H12503	3.13.54 INk1 Higher voltage	R/W	0-10000	0-10 V
H12504	3.13.55 INk1 High performance	R/W	0-100	0-100 %
H12505	3.13.56 INk1 Limitation	R/W	0,1,2	0 = No limit, 1 = NTS, 2 = TS
H12506	3.13.57 INk1 zone	R/W	0,1,2	0 = Not assigned, 1 = SAK1, 2 = SAK2
H12507	3.13.61 INk1 Function	R/W	0,1,2,3,4,5,6,7,8,9,10	0 = Off, 1 = Contact- Ventilation, 2 = Analog-Ventilation , 3 = Contact- Disbalance, 4 = Contact-Heat gain, 5 = Temperature, 6 = Contact- Ventilation stop, 7 = Contact- Failure, 8 = Contact-Circul.+Ventilation, 9 = Night precooling, 10 = Contact-Overpressure, 11 = Analog- Ventilation/Stop
H12508	3.13.62 INk1 Lower voltage	R/W	0-10000	0-10 V
H12509	3.13.63 INk1 Low performance	R/W	0-100	0-100 %
H12510	3.13.64 INk1 Higher voltage	R/W	0-10000	0-10 V
H12511	3.13.65 INk1 High performance	R/W	0-100	0-100 %
H12512	3.13.66 INk1 Limitation	R/W	0,1,2	0 = No limit, 1 = NTS, 2 = TS
H12513	3.13.67 INk1 zone	R/W	0,1,2	0 = Not assigned, 1 = SAK1, 2 = SAK2
H12514	3.13.71 INk1 Function	R/W	0,1,2,3,4,5,6,7,8,9,10	0 = Off, 1 = Contact- Ventilation, 2 = Analog-Ventilation , 3 = Contact- Disbalance, 4 = Contact-Heat gain, 5 = Temperature, 6 = Contact- Ventilation stop, 7 = Contact- Failure, 8 = Contact-Circul.+Ventilation, 9 = Night precooling, 10 = Contact-Overpressure, 11 = Analog- Ventilation/Stop
H12515	3.13.72 INk1 Lower voltage	R/W	0-10000	0-10 V
H12516	3.13.73 INk1 Low performance	R/W	0-100	0-100 %
H12517	3.13.74 INk1 Higher voltage	R/W	0-10000	0-10 V
H12518	3.13.75 INk1 High performance	R/W	0-100	0-100 %
H12519	3.13.76 INk1 Limitation	R/W	0,1,2	0 = No limit, 1 = NTS, 2 = TS
H12520	3.13.77 INk1 zone	R/W	0,1,2	0 = Not assigned, 1 = SAK1, 2 = SAK2
H12521	3.13.81 INk1 Function	R/W	0,1,2,3,4,5,6,7,8,9,10	0 = Off, 1 = Contact- Ventilation, 2 = Analog-Ventilation , 3 = Contact- Disbalance, 4 = Contact-Heat gain, 5 = Temperature, 6 = Contact- Ventilation stop, 7 = Contact- Failure, 8 = Contact-Circul.+Ventilation, 9 = Night precooling, 10 = Contact-Overpressure, 11 = Analog- Ventilation/Stop
H12522	3.13.82 INk1 Lower voltage	R/W	0-10000	0-10 V
H12523	3.13.83 INk1 Low performance	R/W	0-100	0-100 %
H12524	3.13.84 INk1 Higher voltage	R/W	0-10000	0-10 V
H12525	3.13.85 INk1 High performance	R/W	0-100	0-100 %
H12526	3.13.86 INk1 Limitation	R/W	0,1,2	0 = No limit, 1 = NTS, 2 = TS
H12527	3.13.87 INk1 zone	R/W	0,1,2	0 = Not assigned, 1 = SAK1, 2 = SAK2
H12528	3.13.01 TRk1 Function	R/W	0/1	Off/On
H12529	3.13.02 TRk1 Lower difference	R/W	10-100	1-10°C
H12530	3.13.03 TRk1 Low performance	R/W	0-90	0-90%
H12531	3.13.04 TRk1 Higher difference	R/W	50-200	5-20°C
H12532	3.13.05 TRk1 High performance	R/W	12-100	12-100%
H12534	3.13.06 TRk1 zone	R/W	0,1,2	0 = Not assigned, 1 = SAK1, 2 = SAK2
H12535	3.13.11 TRk2 Function	R/W	0/1	Off/On
H12536	3.13.12 TRk2 Lower difference	R/W	10-100	1-10°C
H12537	3.13.13 TRk2 Low performance	R/W	0-90	0-90%
H12538	3.13.14 TRk2 Higher difference	R/W	50-200	5-20°C
H12539	3.13.15 TRk2 High performance	R/W	12-100	12-100%
H12541	3.13.16 TRk2 zone	R/W	0,1,2	0 = Not assigned, 1 = SAK1, 2 = SAK2
H12542	3.13.21 TRk3 Function	R/W	0/1	Off/On
H12543	3.13.22 TRk3 Lower difference	R/W	10-100	1-10°C
H12544	3.12.23 TRk3 Low performance	R/W	0-90	0-90%
H12545	3.13.24 TRk3 Higher difference	R/W	50-200	5-20°C
H12546	3.13.25 TRk3 High performance	R/W	12-100	12-100%
H12548	3.13.26 TRk3 zone	R/W	0,1,2	0 = Not assigned, 1 = SAK1, 2 = SAK2
H12549	3.13.31 TRk4 Function	R/W	0/1	Off/On
H12550	3.13.32 TRk4 Lower difference	R/W	10-100	1-10°C
H12551	3.13.33 TRk4 Low performance	R/W	0-90	0-90%
H12552	3.13.34 TRk4 Higher difference	R/W	50-200	5-20°C

H12553	3.13.35 TRk4 High performance	R/W	12-100	12-100%
H12555	3.13.36 TRk4 zone	R/W	0,1,2	0 = Not assigned, 1 = SAK1, 2 = SAK2
H12556	3.13.41 TRk5 Function	R/W	0/1	Off/On
H12557	3.13.42 TRk5 Lower difference	R/W	10-100	1-10°C
H12558	3.13.43 TRk5 Low performance	R/W	0-90	0-90%
H12559	3.13.44 TRk5 Higher difference	R/W	50-200	5-20°C
H12560	3.13.45 TRk5 High performance	R/W	12-100	12-100%
H12562	3.13.46 TRk5 zone	R/W	0,1,2	0 = Not assigned, 1 = SAK1, 2 = SAK2
H12811	3.15.21 Powerlevel for Emerg.mode	R/W	0-100	0-100%
H12925	Required temperature for the heat water storage - the sensor T1	R/W	200-700	20-70°C
H12928	Required temperature for the heat water storage - the sensor T2	R/W	200-700	20-70°C
I10200	1.1.1 TU1 Input	R	0..65535	65036 ~ -50,0°C ..65535 ~ -0,1°C, 1..1300 ~ 0,1..130,0°C
I10201	1.1.2 TU2 Input	R	0..65535	
I10202	1.2.7 TEa Input	R	0..65535	
I10203	1.2.8 TEb Input	R	0..65535	
I10204	1.2.9 TA2 Input	R	0..65535	
I10205	1.2.10 IN1 Input	R	0-10000	Analog setting: U = DATA/1000, Contact
I10206	1.2.11 IN2 Input	R	0-10000	setting: switched off ~ 3350 to 3450, switched on ~
I10207	CP Touch temper.	R	0..65535	65036 ~ -50,0°C ..65535 ~ -0,1°C, 1..1300 ~ 0,1..130,0°C
I10208	1.3.2 DP1 Input	R	0-1000	Analog output: U = DATA/1000
I10209	1.3.3 DP2 Input	R	0-1000	Analog output: U = DATA/1000
I10210	1.3.3 DP3 Input	R	0-1000	Analog output: U = DATA/1000
I10211	1.6.1 T-ODA	R	0..65535	65036 ~ -50,0°C ..65535 ~ -0,1°C, 1..1300 ~ 0,1..130,0°C
I10212	1.6.2 T-SUP	R	0..65535	
I10213	1.6.3 T-ETA	R	0..65535	
I10214	1.6.4 T-EHA	R	0..65535	
I10215	1.6.5 T-IDA	R	0..65535	
I10216	1.4.6 INk1 - modul adr.2	R	0-1000	Analog output: U = DATA/1000
I10217	1.4.7 INk2 - modul adr.2	R	0-1000	Analog output: U = DATA/1000
I10218	1.4.8 INk3 - modul adr.2	R	0-1000	Analog output: U = DATA/1000
I10219	1.4.9 INk4 - modul adr.2	R	0-1000	Analog output: U = DATA/1000
I10220	1.4.1 TRk1 - modul adr.2	R	0..65535	65036 ~ -50,0°C ..65535 ~ -0,1°C, 1..1300 ~ 0,1..130,0°C
I10221	1.4.2 TRk2 - modul adr.2	R	0..65535	
I10222	1.4.3 TRk3 - modul adr.2	R	0..65535	
I10223	1.4.4 TRk4 - modul adr.2	R	0..65535	
I10224	1.4.5 TRk5 - modul adr.2	R	0..65535	
I10225	1.5.6 INk1 - modul adr.3	R	0-1000	Analog output: U = DATA/1000
I10226	1.5.7 INk2 - modul adr.3	R	0-1000	Analog output: U = DATA/1000
I10227	1.5.8 INk3 - modul adr.3	R	0-1000	Analog output: U = DATA/1000
I10228	1.5.9 INk4 - modul adr.3	R	0-1000	Analog output: U = DATA/1000
I10229	1.5.1 TRk1 - modul adr.3	R	0..65535	65036 ~ -50,0°C ..65535 ~ -0,1°C, 1..1300 ~ 0,1..130,0°C
I10230	1.5.2 TRk2 - modul adr.3	R	0..65535	
I10231	1.5.3 TRk3 - modul adr.3	R	0..65535	
I10232	1.5.4 TRk4 - modul adr.3	R	0..65535	
I10233	1.5.5 TRk5 - modul adr.3	R	0..65535	
I10234	EXT.CP temp.	R	0..65535	
I10236	1.10.9 Input IN1 / RD5-RG (if D10210=1)	R	0-10000	Analog setting: U = DATA/1000, Contact setting:
I10237	1.10.10 Input IN2 / RD5-RG (if D10210=1)	R	0-10000	switched off ~ 3350 to 3450, switched on ~ up to 20
I10238	1.10.2 Input T1 / RD5-RG (if D10210=1)	R	0..65535	65036 ~ -50,0°C ..65535 ~ -0,1°C, 1..1300 ~ 0,1..130,0°C
I10239	1.10.3 Input T2 / RD5-RG (if D10210=1)	R	0..65535	
I10240	1.10.4 Input T3 / RD5-RG (if D10210=1)	R	0..65535	
I10241	1.10.5 Input T4 / RD5-RG (if D10210=1)	R	0..65535	
I10242	1.10.6 Input T5 / RD5-RG (if D10210=1)	R	0..65535	
I10243	1.10.7 Input T6 / RD5-RG (if D10210=1)	R	0..65535	
I10244	1.10.8 Input T7s / RD5-RG (if D10210=1)	R	0..65535	65036 ~ -50,0°C ..65535 ~ -0,1°C, 1..1800 ~ 0,1..180,0°C
I10245	1.11.9 Input IN1 / RD5-TZ (if D10212=1)	R	0-10000	Analog setting: U = DATA/1000, Contact setting:
I10246	1.11.10 Input IN2 / RD5-TZ (if D10212=1)	R	0-10000	switched off ~ 3350 to 3450, switched on ~ up to 20
I10247	1.11.2 Input T1 / RD5-TZ (if D10212=1)	R	0..65535	65036 ~ -50,0°C ..65535 ~ -0,1°C, 1..1300 ~ 0,1..130,0°C
I10248	1.11.3 Input T2 / RD5-TZ (if D10212=1)	R	0..65535	
I10249	1.11.4 Input T3 / RD5-TZ (if D10212=1)	R	0..65535	
I10250	1.11.5 Input T4 / RD5-TZ (if D10212=1)	R	0..65535	
I10251	1.11.6 Input T5 / RD5-TZ (if D10212=1)	R	0..65535	
I10252	1.11.7 Input T6 / RD5-TZ (if D10212=1)	R	0..65535	
I10253	1.11.8 Input T7s / RD5-TZ (if D10212=1)	R	0..65535	65036 ~ -50,0°C ..65535 ~ -0,1°C, 1..1800 ~ 0,1..180,0°C
I11401	Current season	R	0/1	0 = TS, 1 = NTS
I11420	Average temperature T-ODA	R	0..65535	65036 ~ -50,0°C ..65535 ~ -0,1°C, 1..1800 ~ 0,1..180,0°C
I11600	4.1.1 Required volume flow SUP	R	0..65535	0 ~ 0 m3/h ... 15000 ~ 15000 m3/h
I11601	4.1.4 Required volume flow ETA	R		
I11602	4.1.2 Current volume flow - SUP	R		
I11603	4.1.5 Current volume flow - ETA	R		
I11604	4.1.7 Required volume flow ODA (only for R_5)	R		
I11605	4.1.8 Current volume flow ODA (only for R_5)	R		

Time zones (tab.13)

Locality	Time shift	H11400

Midway	-11 hours	0
Honolulu	-10 hours	1
Anchorage	-9 hours	2
Vancouver	-8 hours	3
Denver	-7 hours	4
Edmonton	-7 hours	5
Chicago	-6 hours	6
Guatemala	-6 hours	7
Easter Island *	-5 hours	8
New York	-5 hours	9
Caracas	-4:30 hours	10
Santo Domingo	-4 hours	11
St. John's	-3:30 hours	12
Buenos Aires	-3 hours	13
Córdoba – Argentina	-3 hours	14
Montevideo *	-2 hours	15
Dublin	0 hours	16
Lisbon	0 hours	17
London	0 hours	18
Reykjavik	0 hours	19
Berlin	+1 hour	20
Bratislava	+1 hour	21
Brussels	+1 hour	22
Budapest	+1 hour	23
Copenhagen	+1 hour	24
Ljubljana	+1 hour	25
Prague	+1 hour	26
Rome	+1 hour	27
Sarajevo	+1 hour	28
Warsaw	+1 hour	29
Zürich	+1 hour	30
Bucharest	+2 hours	31
Helsinki	+2 hours	32
Istanbul	+2 hours	33
Jerusalem	+2 hours	34
Kiev	+2 hours	35
Riga	+2 hours	36
Sofia	+2 hours	37
Moscow	+3 hours	38
Nairobi	+3 hours	39
Tehran	+3:30 hours	40
Dubai	+4 hours	41
Kabul	+4:30 hours	42
Tashkent	+5 hours	43
Kolkata	+5:30 hours	44
Kathmandu	+5:45 hours	45
Dhaka	+6 hours	46
Omsk	+6 hours	47
Bangkok	+7 hours	48
Hong Kong	+8 hours	49
Taipei	+8 hours	50
Seoul	+9 hours	51
Tokyo	+9 hours	52
Darwin	+9:30 hours	53
Brisbane	+10 hours	54
Vladivostok	+10 hours	55
Adelaide *	+10:30 hours	56
Srednekolymsk	+11 hours	57
Sydney *	+11 hours	58
Majuro	+12 hours	59
Auckland *	+13 hours	60