For the
VUTR units
(with a heat pump)

Name	Description	Data type	Pre-set value	Measurement units	Minimum value	Maximum value	Factor	ModBus	BMS- index	BMS- access
Gn_T_Setp	Temperature setpoint	Analog	22.0	°C	15.0	30.0	0.1	03 - Read Holding Register 06 - Write Holding Register	1	InputOutput
ai_OaTemp	Outside air temperature	Analog	-	°C	- 99.9	99.9	0.1	04 - Read Input Register	2	Output
ai_SaTemp	Supply air temperature	Analog	-	°C	- 99.9	99.9	0.1	04 - Read Input Register	3	Output
ai_ErTemp	Temperature downstream of the heat exchanger	Analog	-	°C	- 99.9	99.9	0.1	04 - Read Input Register	4	Output
ai_DfrTemp	Defrost sensor	Analog	-	°C	- 99.9	99.9	0.1	04 - Read Input Register	5	Output
ai_EaTemp	Air temperature in the exhaust air duct	Analog	-	°C	- 99.9	99.9	0.1	04 - Read Input Register	6	Output
Sv_SFSC	Supply fan speed control	Analog	-	%	0.0	999.9	0.1	04 - Read Input Register	7	Output
Sv_EFSC	Extract fan speed control	Analog	-	%	0.0	999.9	0.1	04 - Read Input Register	8	Output
ai_RmTemp	Room air temperature	Analog	-	°C	- 99.9	99.9	0.1	04 - Read Input Register	9	Output
Gn_OatLimHt_01	Gn01 Maximum outside temperature required to switch on heating	Analog	25.0	°C	- 50.0	50.0	0.1	03 - Read Holding Register 06 - Write Holding Register	10	InputOutput
Gn_OatLimCl_02	Gn02 Minimum outside temperature required to switch on cooling	Analog	15.0	°C	- 50.0	50.0	0.1	03 - Read Holding Register 06 - Write Holding Register	11	InputOutput
Eh_OatOnSp_01	H1. Outdoor air temperature setpoint required to turn on the electric heater	Analog	- 8.0	°C	- 50.0	50.0	0.1	03 - Read Holding Register 06 - Write Holding Register	12	InputOutput
Eh_OatOnSpSt2_02	H2. Outdoor air temperature setpoint required to activate the second stage of the electric heater	Analog	- 16.0	°C	- 50.0	50.0	0.1	03 - Read Holding Register 06 - Write Holding Register	13	InputOutput
Eh_OatOffSpDiff_03	H3 Outdoor temperature increase relative to the setpoint required to turn off the electric heater	Analog	3.0	°C	- 50.0	50.0	0.1	03 - Read Holding Register 06 - Write Holding Register	14	InputOutput
Er_DiffHeat_01	R1. On/off hysteresis of the heat exchanger in heating mode	Analog	1.0	°C	0.0	9.9	0.1	03 - Read Holding Register 06 - Write Holding Register	15	InputOutput
Er_DiffCool_02	R2 On/off hysteresis of the heat exchanger in cooling mode	Analog	1.0	°C	0.0	9.9	0.1	03 - Read Holding Register 06 - Write Holding Register	16	InputOutput
Ds_MinSatSp_01	T01 Supply air temperature setpoint for activating fan speed reduction	Analog	15.0	°C	0.0	25.0	0.1	03 - Read Holding Register 06 - Write Holding Register	17	InputOutput

Name	Description	Data type	Pre-set value	Measurement units	Minimum value	Maximum value	Factor	ModBus	BMS- index	BMS- access
Ds_SpdDecrDiff_02	T02 Supply air temperature decrease relative to the setpoint required for fan speed reduction	Analog	1.0	°C	1.0	10.0	0.1	03 - Read Holding Register 06 - Write Holding Register	18	InputOutput
Ds_SpdNormDiff_04	T04 Supply air temperature increase relative to the setpoint required for switching the fan to normal speed	Analog	10.0	°C	1.0	20.0	0.1	03 - Read Holding Register 06 - Write Holding Register	19	InputOutput
Cp_DiffHeat_02	C2 Temperature setpoint offset for switching on the compressor regulator in heating mode	Analog	1.0	°C	0.0	9.9	0.1	03 - Read Holding Register 06 - Write Holding Register	20	InputOutput
Cp_DiffCool_03	C3 Temperature setpoint offset for switching on the compressor regulator in cooling mode	Analog	1.0	°C	0.0	9.9	0.1	03 - Read Holding Register 06 - Write Holding Register	21	InputOutput
Cp_PBand_04	C4 Compressor control range	Analog	3.0	°C	0.1	50.0	0.1	03 - Read Holding Register 06 - Write Holding Register	22	InputOutput
Cp_DfrTempSp_13	C13 Air temperature setpoint for turning on defrosting	Analog	- 9.0	°C	- 30.0	0.0	0.1	03 - Read Holding Register 06 - Write Holding Register	23	InputOutput
Cp_DfrStpTempSp_15	Cp15 Air temperature setpoint for turning off defrosting	Analog	30.0	°C	0.0	50.0	0.1	03 - Read Holding Register 06 - Write Holding Register	24	InputOutput
Cp_DfrStpCompOff_17	Cp17 Air temperature setpoint for turning off the compressor in defrosting mode	Analog	30.0	°C	0.0	50.0	0.1	03 - Read Holding Register 06 - Write Holding Register	25	InputOutput
Cp_DfrStpCompOn_18	Cp18 Air temperature setpoint for turning on the compressor in defrosting mode	Analog	20.0	°C	0.0	50.0	0.1	03 - Read Holding Register 06 - Write Holding Register	26	InputOutput
ai_RmRh	Humidity in the room	Analog	-	%	- 99.9	99.9	0.1	04 - Read Input Register	27	Output
Dm_TSetp_01	Air temperature setpoint in the damper area	Analog	- 5.0	°C	- 9.9	0.0	0.1	03 - Read Holding Register 06 - Write Holding Register	29	InputOutput
Dm_PBand_02	P-band of the temperature regulator in the damper area	Analog	10.0	°C	0.1	50.0	0.1	03 - Read Holding Register 06 - Write Holding Register	30	InputOutput
Cp_MaxCondTemp_21	C21. Condenser temperature for increasing air exhaust	Analog	53.0	°C	20.0	90.0	0.1	03 - Read Holding Register 06 - Write Holding Register	31	InputOutput
Setpoint_for_LimMode	Outdoor air temperature setpoint for turning on the warm-up	Analog	10.0		0.0	15.0	0.1	03 - Read Holding Register 06 - Write Holding Register	32	InputOutput
AL_E01FireAlm	Alarm E01. Fire alarm	Boolean	-		0	1	-	02 - Read Discrete Input	1	Output
AL_E02Sn_OAT	Alarm E02. Outside air temp. sensor fail	Boolean	-		0	1	-	02 - Read Discrete Input	2	Output
AL_E03Sn_RMT	Room air temp. sensor fail	Boolean	-		0	1	-	02 - Read Discrete Input	3	Output
AL_E04Sn_SAT	Alarm E04. Supply air sensor fail	Boolean	-		0	1	-	02 - Read Discrete Input	4	Output

Name	Description	Data type	Pre-set value	Measurement units	Minimum value	Maximum value	Factor	ModBus	BMS- index	BMS- access
AL_E05Sn_DFR	Alarm E05. Defrost sensor fail	Boolean	-		0	1	-	02 - Read Discrete Input	5	Output
AL_E06Sn_ERT	Alarm E06. Extract air temp. sensor fail	Boolean	-		0	1	-	02 - Read Discrete Input	6	Output
AL_E07Sn_EAT	Alarm E07. Exhaust air temp. sensor fail	Boolean	-		0	1	-	02 - Read Discrete Input	7	Output
AL_E08FanFail	Alarm E08. Fan fail	Boolean	-		0	1	-	02 - Read Discrete Input	8	Output
AL_E09EfFail	Alarm E09. Extract fan fail	Boolean	-		0	1	-	02 - Read Discrete Input	9	Output
AL_E10PreHP	Alarm E10. High pressure. Pre-alarm	Boolean	-		0	1	-	02 - Read Discrete Input	10	Output
AL_E11HP	Alarm E11. High pressure. Main alarm	Boolean	-		0	1	-	02 - Read Discrete Input	11	Output
AL_E12TrmOffIn	Alarm E12. No connection with the room terminal	Boolean	-		0	1	-	02 - Read Discrete Input	12	Output
AL_E13Manu_Ai	Alarm E13. Analogue input in manual mode	Boolean	-		0	1	-	02 - Read Discrete Input	13	Output
AL_E14Manu_Ao	Alarm E14. Analogue output in manual mode	Boolean	-		0	1	-	02 - Read Discrete Input	14	Output
AL_E15Manu_Di	Alarm E15. Discrete input in manual mode	Boolean	-		0	1	-	02 - Read Discrete Input	15	Output
AL_E16Manu_Do	Alarm E16. Discrete output in manual mode	Boolean	-		0	1	-	02 - Read Discrete Input	16	Output
AL_E17LoTemp	Alarm E17. Low supply air temperature	Boolean	-		0	1	-	02 - Read Discrete Input	17	Output
AL_E18TCount	Alarm E18. Limiting value of the operation counter	Boolean	-		0	1	-	02 - Read Discrete Input	20	Output
AL_E19LoRmTemp	Alarm E19. Low room temperature	Boolean	-		0	1	-	02 - Read Discrete Input	29	Output
AL_E40PwrOff	Alarm E40. Power failure	Boolean	-		0	1	-	02 - Read Discrete Input	18	Output
ResetAlm	Alarm reset: 0 – no reset; 1 – reset	Boolean	-		0	1	-	01 - Read Coil 05 - Write Coil	28	InputOutput
Gn_En_Scheduler	Scheduled operation: 0 – off; 1 – on	Boolean	0		0	1	-	01 - Read Coil 05 - Write Coil	19	InputOutput
Sv_Damp	Air dampers: 0 – closed; 1 – open	Boolean	-		0	1	-	02 - Read Discrete Input	21	Output
Sv_Fans	Fans: 0 – off; 1 – on	Boolean	-		0	1	-	02 - Read Discrete Input	22	Output
Sv_ErUnit	Heat exchanger: 0 – off; 1 – on	Boolean	-		0	1	-	02 - Read Discrete Input	23	Output
Sv_Comp	Compressor: 0 – off; 1 – on	Boolean	-		0	1	-	02 - Read Discrete Input	24	Output
Sv_4WayVlv	Four way valve 0 – closed; 1 – open	Boolean	-		0	1	-	02 - Read Discrete Input	25	Output
Sv_ElHeater	Electric heater: 0 – off; 1 – on	Boolean	-		0	1	-	02 - Read Discrete Input	26	Output
Sv_ElHeater2	2nd stage of electric heater: 0 – off; 1 – on	Boolean	-		0	1	-	02 - Read Discrete Input	27	Output
Reset_Count	Reset of operation counter: 0 – no reset; 1 – reset	Boolean	-		0	1	-	01 - Read Coil 05 - Write Coil	30	InputOutput

Name	Description	Data type	Pre-set value	Measurement units	Minimum value	Maximum value	Factor	ModBus	BMS- index	BMS- access
Dm_RecircManu	Recirculation auto/fixed: 0 – fixed value; 1 – auto	Boolean	0		0	1	-	01 - Read Coil 05 - Write Coil	31	InputOutput
Recirc_Warming_up_ON	Recirculation warm-up mode enabled	Boolean	-		0	1	-	02 - Read Discrete Input	32	Output
RecircElheat_Warming_up_ON	Warm-up mode by recirculation and electric heating elements is on	Boolean	-		0	1	-	02 - Read Discrete Input	33	Output
HP_Warming_up_ON	Heat pump warm-up mode enabled	Boolean	-		0	1	-	02 - Read Discrete Input	34	Output
Cp_4WayVlvSwDel_19	Cp19 Switching delay of the 4-way valve	Integer	30	s	30	999	1	03 - Read Holding Register 06 - Write Holding Register	5002	InputOutput
Gn_StrSwitchModeDel_03	Gn03. Mode delay time by outside temperature	Integer	60	s	0	300	1	03 - Read Holding Register 06 - Write Holding Register	5003	InputOutput
Cp_DfrStpDelay_16	Cp16 Defrost interrupt delay upon reaching temperature set in menu item C15	Integer	10	min	1	30	1	03 - Read Holding Register 06 - Write Holding Register	5004	InputOutput
Ds_SpdDecrDel_03	T03. Fan speed reduction delay	Integer	8	min	0	300	1	03 - Read Holding Register 06 - Write Holding Register	5005	InputOutput
Ds_SpdNormDel_05	T05 Delay of switching to normal fan speed	Integer	10	min	0	300	1	03 - Read Holding Register 06 - Write Holding Register	5006	InputOutput
Ds_LoSatAlmDel_06	T06. Alarm delay by low supply air temperature	Integer	20	min	0	300	1	03 - Read Holding Register 06 - Write Holding Register	5007	InputOutput
Fa_Sfsc3_06	F6. Speed 3 output signal of the supply fan	Integer	100	%	40	100	1	03 - Read Holding Register 06 - Write Holding Register	5008	InputOutput
Cp_DfrDuration_14	Cp14 Maximum defrosting duration (minutes)	Integer	20	min	3	120	1	03 - Read Holding Register 06 - Write Holding Register	5009	InputOutput
Cp_DfrDuration_12	C12 Compressor operating time, which serves as the threshold for enabling unit defrost (hours)	Integer	3	h	1	9	1	03 - Read Holding Register 06 - Write Holding Register	5010	InputOutput
Cp_NHpRetAttempt_11	C11. Number of recovery attempts after high-pressure alarm until complete stop of the system	Integer	5		0	20	1	03 - Read Holding Register 06 - Write Holding Register	5011	InputOutput
Cp_MinTimeOnOn_10	C10 Minimum time between compressor starts	Integer	300	s	240	999	1	03 - Read Holding Register 06 - Write Holding Register	5012	InputOutput
Cp_MinTimeOff_09	C9 Minimum compressor downtime	Integer	180	s	180	999	1	03 - Read Holding Register 06 - Write Holding Register	5013	InputOutput
Cp_MinTimeOn_08	C8 Minimum compressor operating time	Integer	30	s	0	999	1	03 - Read Holding Register 06 - Write Holding Register	5014	InputOutput

Name	Description	Data type	Pre-set value	Measurement units	Minimum value	Maximum value	Factor	ModBus	BMS- index	BMS- access
Cp_OffPoint_07	C7 Compressor turn-off point	Integer	5	%	0	90	1	03 - Read Holding Register 06 - Write Holding Register	5015	InputOutput
Cp_OnPoint_06	C6. Compressor turn-on point	Integer	50	%	10	100	1	03 - Read Holding Register 06 - Write Holding Register	5016	InputOutput
Cp_ITime_05	C5. Integration time of compressor regulators	Integer	0	s	0	3600	1	03 - Read Holding Register 06 - Write Holding Register	5017	InputOutput
Er_MinTOff_04	R4. Minimum heat exchanger downtime	Integer	30	s	0	300	1	03 - Read Holding Register 06 - Write Holding Register	5018	InputOutput
Er_MinTOn_03	R3. Minimum heat exchanger operation time	Integer	180	s	0	999	1	03 - Read Holding Register 06 - Write Holding Register	5019	InputOutput
Fa_DelFanAlm_09	F9. Fan alarm delay if no status signal is detected	Integer	60	s	0	300	1	03 - Read Holding Register 06 - Write Holding Register	5020	InputOutput
Fa_DelFanOff_08	F8. Fan turn-off delay when the electric heater is used	Integer	120	s	0	300	1	03 - Read Holding Register 06 - Write Holding Register	5021	InputOutput
Fa_DelFanOn_07	F7. Fan turn-on delay	Integer	10	s	0	99	1	03 - Read Holding Register 06 - Write Holding Register	5022	InputOutput
Fa_Efsc1_01	F1. Speed 1 output signal of the extract fan	Integer	40	%	40	100	1	03 - Read Holding Register 06 - Write Holding Register	5023	InputOutput
Fa_Efsc2_03	F3. Speed 2 output signal of the extract fan	Integer	70	%	40	100	1	03 - Read Holding Register 06 - Write Holding Register	5024	InputOutput
Fa_Efsc3_05	F5. Speed 3 output signal of the extract fan	Integer	100	%	40	100	1	03 - Read Holding Register 06 - Write Holding Register	5025	InputOutput
Fa_Sfsc1_02	F2. Speed 1 output signal of the supply fan	Integer	40	%	40	100	1	03 - Read Holding Register 06 - Write Holding Register	5026	InputOutput
Fa_Sfsc2_04	F4. Speed 2 output signal of the supply fan	Integer	70	%	40	100	1	03 - Read Holding Register 06 - Write Holding Register	5027	InputOutput
Dm_ITime_03	Integration time of the temperature regulator in the damper area	Integer	120	s	1	999	1	03 - Read Holding Register 06 - Write Holding Register	5028	InputOutput
Ds_SysOffSp_10	T10. Unit turn-off setpoint	Integer	12	°C	0	20	1	03 - Read Holding Register 06 - Write Holding Register	5029	InputOutput
Ds_LimDurat_HP_09	T9. Time of warm-up by heat pump	Integer	90	s	60	300	1	03 - Read Holding Register 06 - Write Holding Register	5030	InputOutput

Name	Description	Data type	Pre-set value	Measurement units	Minimum value	Maximum value	Factor	ModBus	BMS- index	BMS- access
Ds_LimDurat_Recirc	Time of warm-up by recirculation	Integer	10	min	2	15	1	03 - Read Holding Register 06 - Write Holding Register	5031	InputOutput
ThrH_Counter	Operation counter value before filter replacement (thousand hours)	Integer	3		0	99	1	03 - Read Holding Register 06 - Write Holding Register	5032	InputOutput
ThrL_Counter	Operation counter value before filter replacement (hours)	Integer	0		0	999	1	03 - Read Holding Register 06 - Write Holding Register	5033	InputOutput
Cp_DelErCp_01	C1. Minimum compressor turn-on delay after heat exchanger start	Integer	180	s	0	999	1	03 - Read Holding Register 06 - Write Holding Register	5034	InputOutput
Gn_DispFanSpeed	Fan speed indication: 0 – the fans are switched off; 1 – low; 2 – medium ;3 – high	Integer	-		0	3	1	04 - Read Input Register	5035	Output
Gn_FanSpeed	Fan speed selection: 1 – low; 2 – medium; 3 – high; 4 – auto (control by humidity, see parameter CF9)	Integer	2		1	4	1	03 - Read Holding Register 06 - Write Holding Register	5036	InputOutput
Gn_OperMode	Operation mode selection: 0 – off ;1 – ventilation; 2 – heating 3 – cooling; 4 – AUTO; 5 – scheduled operation	Integer	0		0	5	1	03 - Read Holding Register 06 - Write Holding Register	5037	InputOutput
Gn_Rh_Setp	Humidity setpoint	Integer	50	%	10	70	1	03 - Read Holding Register 06 - Write Holding Register	5038	InputOutput
Modbus ID	1									
Baudrate	19200									
Stop bits	1									
Parity	N									
	The variable type Analog must be divided by 10 to get the correct value with tenths									VUTR TN v.1.3.01