

[illegible]

Coil status Discrete Output (1bit) R/W		
Modbus	Register Name	Description
Application control registers		
0x00001	Unit on	
0x00002	Overpressure mode	
0x00003	Boost mode	
0x00004	Away mode	
0x00005	Clear Alarms	Write 1 to clear alarm, reads always 0
0x00006	Reset filter timer	Write 1 to reset filter timer, reads always 0

Input status Discrete Input (1bit) Read only		
Modbus	Register Name	Description
Switch input registers		
1x00001	Fire alarm input	D1
1x00002	Boost input	D2
1x00003	Overpressure input	D3
1x00004	Extended operation input	D4
1x00005	Away input	D5
1x00006	Filter input	D6
1x00007	Heater interlock	D7

Alarm registers		
1x00010	Fire alarm	
1x00011	Rotor alarm	
1x00012	RFU	Readable, value has no meaning
1x00013	Freeze alarm	
1x00014	Low supply alarm	
1x00015	Low rotor temperature alarm	
1x00016	RFU	Readable, value has no meaning
1x00017	RFU	Readable, value has no meaning
1x00018	Temp. sensor open circuit alarm	
1x00019	Temp. sensor short circuit alarm	
1x00020	Pulser alarm	
1x00021	Supply fan alarm	
1x00022	Exhaust fan alarm	
1x00023	Supply filter alarm	
1x00024	Exhaust filter alarm	
1x00025	Filter timer alarm	
1x00026	Freeze protection B level	
1x00027	Freeze protection A level	
1x00028	Startup 1st phase	Damper open, exhaust fan running.
1x00029	Startup 2st phase	Supply fan running, temperature regulation start
1x00030	Heating	
1x00031	Recovery heat/cold	
1x00032	Cooling	
1x00033	CO2 boost	
1x00034	RH boost	
1x00035	Pump alarm - heating	X4 DI
1x00036	Pump alarm - cooling	X13 DI

Input register 16 bit integer register Read only					
Modbus	Register Name	Min	Max	Unit	Description
Common Identity register					
3x00001	Component ID				Always 10
Application control registers					
3x00002	Outdoor temperature (unit)				
3x00003	Supply air temperature (unit/duct)				
3x00004	Extract air temperature (unit)				
3x00005	Exhaust air temperature (unit)				
3x00006	Water temperature (coil)				
3x00007	Heat recovery temperature (unit)				
3x00008	Room temperature				
3x00009	RFU res. For outdoor temp radio.				Readable, value has no meaning
3x00010	RFU				Readable, value has no meaning
3x00011	RFU				Readable, value has no meaning
3x00012	Supply pressure			x0.1Pa	x0.1Pa
3x00013	Extract pressure			x0.1Pa	x0.1Pa
3x00014	RFU				Readable, value has no meaning
3x00015	RFU				Readable, value has no meaning
3x00016	RFU				Readable, value has no meaning
3x00017	RFU				Readable, value has no meaning
3x00018	Sensors open				Bit mask. Bit is set if sensor is required and open circuit. See also <i>Sensors shorted</i> .
3x00019	Sensors shorted				Bit mask. Bit is set if sensor is required and shorted. Bit0 = T1 ... Bit6 = T7.
3x00020	Filter days left				Number of days to filter change.
3x00021	Current weektimer program	0	5		0 = none, 1-5 = program 1-5
3x00022	RFU				Readable, value has no meaning
3x00023	Current supply fan step	0	3		0 = Off, 1 = Min, 2 = Std, 3 = Max
3x00024	Current exhaust fan step	0	3		0 = Off, 1 = Min, 2 = Std, 3 = Max
3x00025	Current supply fan power			%	
3x00026	Current exhaust fan power			%	
3x00027	Current supply fan speed			RPM	
3x00028	Current exhaust fan speed			RPM	
3x00029	Current heating power				In range 0-255
3x00030	Current heat/cold recovery power				In range 0-255
3x00031	Current cooling power				In range 0-255
3x00032	Supply fan control voltage	0	100	x0.1V	
3x00033	Exhaust fan control voltage	0	100	x0.1V	
3x00034	Changeover active	0	1		0 = Off, 1 = On
...					
3x00041	Quality sensor 1 - type				0 = None, 1 = RH, 2 = CO2, 3 = VOC
3x00042	Quality sensor 1 - value				RH: 0-10V=0-100 (%) CO2: 0-10V=0-2000 (PPM) VOC: 0-10V=0-2000 (PPM)
3x00043	Quality sensor 2 - type				0 = None, 1 = RH, 2 = CO2, 3 = VOC
3x00044	Quality sensor 2 - value				RH: 0-10V=0-100 (%) CO2: 0-10V=0-2000 (PPM) VOC: 0-10V=0-2000 (PPM)
3x00045	Quality sensor 3 - type				0 = None, 1 = RH, 2 = CO2, 3 = VOC
3x00046	Quality sensor 2 - value				RH: 0-10V=0-100 (%) CO2: 0-10V=0-2000 (PPM) VOC: 0-10V=0-2000 (PPM)

Holding register 16 bit integer register R/W					
Modbus	Register Name	Min	Max	Unit	Description
Application control registers					
4x00001	Temperature setpoint (economy)	15	39*	°C	* Comfort setpoint -1
4x00002	Temperature setpoint (comfort)	15	40*	°C	* or maxlimit (ref. to 4x00048)
4x00003	Supply fan speed, EC	0	100	%	
4x00004	Exhaust fan speed, EC	0	100	%	
4x00005	Min supply fan speed, EC	0	100	%	Fan speed when min speed used, for example away-mode
4x00006	Max supply fan speed, EC	0	100	%	Fan speed when mod speed used, for example boost
4x00007	RFU				Readable, value has no meaning
4x00008	RFU				Readable, value has no meaning
4x00009	RFU				Readable, value has no meaning
4x00010	RFU				Readable, value has no meaning
4x00011	RFU				Readable, value has no meaning
4x00012	Regulation mode	0	4		0: Supply, 1: Extract, 2: Room, 3: Extract S/W, 4: Room S/W
4x00013	Min supply temperature	15	19	°C	Used when Extraxt or Room regulation is set.
4x00014	Max supply temperature	20	40	°C	
4x00015	Supply cold limit A	2	10	°C	
4x00016	Supply cold limit B	5	12	°C	Must be greater than limit A above.
4x00017	Freeze protection limit	5	10	°C	
4x00018	RFU				Readable, value has no meaning
4x00019	SNC enabled	0	1		0 = no, 1 = yes
4x00020	SNC indoor-outdoor diff. limit	10	100	0.1°C	
4x00021	SNC exhaust high limit	18	24	°C	
4x00022	SNC exhaust low limit	19	26	°C	
4x00023	Standby temp evaluation enabled	0	1		0 = no, 1 = yes
4x00024	Interval	1	4	hours	
4x00025	Evaluation time	5	15	min	
4x00026	Min. operating time	30	120	min	
4x00027	Boost duration	10	240	min	
4x00028	Overpressure duration	10	60	min	
4x00029	Overpressure offset	5	*	%	*Max value of diff. between EC Min and EC Max
4x00030	Fire sensor type	0	2		0: None, 1: Normally open (NO), 2: Normally closed (NC)
4x00031	Fire mode	0	3		0: Fans off, 1: Exhaust fan only, 2: Supply fan only, 3: Both fans
4x00032	Forced fanspeed	0	100	%	Only used when 4x00031 > 0
4x00033	Supply pressure sensor type	0	10		0 = None, 1 = 0..100 Pa, 2 = 0..200 Pa, 3 = 0..300 Pa, 4 = 0..500 Pa, 5 = 0..700 Pa, 6 = 0..1000 Pa, 7 = 0..1250 Pa, 8 = 0..1500 Pa, 9 = 0..2000 Pa, 10 = 0..2500 Pa
4x00034	Exhaust pressure sensor type	0	10		
4x00035	RFU				Readable, value has no meaning
4x00036	RFU				Readable, value has no meaning
4x00037	Filter measurement, weekday	0	6		0 = Monday, 1 = Tuesday ... 6 = Sunday.
4x00038	Filter measurement, hour	0	23		
4x00039	Filter measurement, minute	0	59		
4x00040	Filter speed increase	5	50	%pts	5 to 50 = allowed power increase in %-units. Writing 5 or less equals 5.
4x00041	Filter measurement mode	0	3		0 = Off, 1 = Switch, 2 = Speed inc., 3 = Differential
4x00042	RFU				Readable, value has no meaning
4x00043	RFU				Readable, value has no meaning
4x00044	Filter change period	6	12	month	Filter timer in months. 0 = off, 6-12 time in months (30 days). Writing 5 or less equals 6.

4x00045	Alarm classes	0	8191	0=A, 1=B Bit mask: bit 0: - Not used - bit 1: Sensor open bit 2: Sensor shorted bit 3: Overheat protection bit 4: Freeze alarm bit 5: Supply temperature low bit 6: Rotor temperature low bit 7: Fan failure bit 8: Heat exchanger bit 9: Duct pressure deviation bit 10: Pump alarm bit 11: - Not used - bit 12: - Not used -
4x00046	Alarm relay output	0	8191	0=Off, 1=On Bit mask: bit 0: Fire bit 1: Sensor open bit 2: Sensor shorted bit 3: Overheat protection bit 4: Freeze alarm bit 5: Supply temperature low bit 6: Rotor temperature low bit 7: Fan failure bit 8: Heat exchanger bit 9: Duct pressure deviation bit 10: Pump alarm bit 11: Filter bit 12: Filter timer
4x00047	Alarm relay state, contact function (normal operation)	0	7	0=NO, 1=NC Bit mask: bit 0: A-relay state bit 1: B-relay state bit 2: Run-relay state
4x00048	Setpoint max limit (Comfort)	15	40 °C	Maximum selectable temperature setpoint.
4x00049	Eco. setpoint enabled	0	1	0 = no, 1 = yes
4x00050	RFU			Readable, value has no meaning
4x00051	RFU			Readable, value has no meaning
4x00052	Changeover type	1	3	0 = Temperature, 1 = Date, 2 = External input
4x00053	Supply temperature offset	-10	10 °K	
4x00054	Winter start	-40	40 °C	
4x00055	Summer start	-40	40 °C	
4x00056	Time constant	0	1000 h	
4x00057	Winter start date			1102 = 2 Nov, 930 = 30 Sep
4x00058	Summer start date			1102 = 2 Nov, 930 = 30 Sep
4x00059	RFU			Readable, value has no meaning
4x00060	RFU			Readable, value has no meaning
4x00061	Flow direction	0	1	0 = standard, 1 = opposite
4x00062	Damper opening time	30	120 sec	
4x00063	Preheater type	0	1	0 = None, 1 = Electric
4x00064	Preheater enabled	0	1	0 = no, 1 = yes
4x00065	Preheater temperature setpoint	-40	40 °C	
4x00066	Heater type	0	2	0 = None, 1 = Water, 2 = Electric
4x00067	Heater enabled	0	1	0 = no, 1 = yes
4x00068	Cooler type	0	1	0 = None, 1 = Water
4x00069	Cooler enabled	0	1	0 = no, 1 = yes
4x00070	RFU			Readable, value has no meaning
4x00071	RFU			Readable, value has no meaning
4x00072	RFU			Readable, value has no meaning
4x00073	RFU			Readable, value has no meaning
4x00074	RFU			Readable, value has no meaning
4x00075	RFU			Readable, value has no meaning

4x00076	RFU				Readable, value has no meaning
4x00077	RFU				Readable, value has no meaning
4x00078	RFU				Readable, value has no meaning
4x00079	RFU				Readable, value has no meaning
4x00080	RFU				Readable, value has no meaning
4x00081	Temp.sensor 1 calibration	-50	50	x0.1°C	Sensor calibration offset
4x00082	Temp.sensor 2 calibration	-50	50	x0.1°C	Sensor calibration offset
4x00083	Temp.sensor 3 calibration	-50	50	x0.1°C	Sensor calibration offset
4x00084	Temp.sensor 4 calibration	-50	50	x0.1°C	Sensor calibration offset
4x00085	Temp.sensor 5 calibration	-50	50	x0.1°C	Sensor calibration offset
4x00086	Temp.sensor 6 calibration	-50	50	x0.1°C	Sensor calibration offset
4x00087	Temp.sensor 7 calibration	-50	50	x0.1°C	Sensor calibration offset
4x00088	RFU				Readable, value has no meaning
4x00089	RFU				Readable, value has no meaning
4x00090	RFU				Readable, value has no meaning
4x00091	Quality sensor 1 limit				RH: 0-100 (%)
4x00092	Quality sensor 2 limit				CO2: 0-2000 (PPM)
4x00093	Quality sensor 3 limit				VOC: 0-2000 (PPM)
4x00094	RFU				Readable, value has no meaning
4x00095	RFU				Readable, value has no meaning
4x00096	RFU				Readable, value has no meaning
4x00097	RFU				Readable, value has no meaning
4x00098	RFU				Readable, value has no meaning
4x00099	RFU				Readable, value has no meaning
4x00100	RFU				Readable, value has no meaning
4x00101	RFU				Readable, value has no meaning
4x00102	RFU				Readable, value has no meaning
4x00103	RFU				Readable, value has no meaning
4x00104	RFU				Readable, value has no meaning
4x00105	RFU				Readable, value has no meaning
4x00106	RFU				Readable, value has no meaning
4x00107	RFU				Readable, value has no meaning
4x00108	RFU				Readable, value has no meaning
4x00109	RFU				Readable, value has no meaning
4x00110					
4x00111					
4x00112					
4x00113					
4x00114					
4x00115					
4x00116					
4x00117					
4x00118					
4x00119					
4x00120					
4x00121					
4x00122					
4x00123					
4x00124					
4x00125					
4x00126					
4x00127					
4x00128					
4x00129					
4x00130					
4x00131					
4x00132					
4x00133					
4x00134					

4x00135					
4x00136					
4x00137					
4x00138					
4x00139					
4x00140	Week shed. enabled	0	1		Zero = No, Non-zero = Yes. (Write 0/1)
4x00141	WT1 on hour	0	23		
4x00142	WT1 on minute	0	59		
4x00143	WT1 off hour	0	23		
4x00144	WT1 off minute	0	59		
4x00145	WT1 Weekdays	0	128		Bit mask: bit 0 = Monday, bit 6 = Sunday.
4x00146	WT1 Temp.mode	0	1		0 = Comfort, 1 = Economy
4x00147	WT1 Fan speed	1	4		0 = Standby, 1 = Min, 2 = Std, 3 = Max
4x00148	WT1 program enabled	0	1		0 = Disabled, 1 = Enabled
4x00149	RFU				Readable, value has no meaning
4x00150	RFU				Readable, value has no meaning
4x00151	WT2 on hour	0	23		
4x00152	WT2 on minute	0	59		
4x00153	WT2 off hour	0	23		
4x00154	WT2 off minute	0	59		
4x00155	WT2 Weekdays	0	128		Bit mask: bit 0 = Monday, bit 6 = Sunday.
4x00156	WT2 Temp.mode	0	1		0 = Comfort, 1 = Economy
4x00157	WT2 Fan speed	1	4		0 = Standby, 1 = Min, 2 = Std, 3 = Max
4x00158	WT2 program enabled	0	1		0 = Disabled, 1 = Enabled
4x00159	RFU				Readable, value has no meaning
4x00160	RFU				Readable, value has no meaning
4x00161	WT3 on hour	0	23		
4x00162	WT3 on minute	0	59		
4x00163	WT3 off hour	0	23		
4x00164	WT3 off minute	0	59		
4x00165	WT3 Weekdays	0	128		Bit mask: bit 0 = Monday, bit 6 = Sunday.
4x00166	WT3 Temp.mode	0	1		0 = Comfort, 1 = Economy
4x00167	WT3 Fan speed	1	4		0 = Standby, 1 = Min, 2 = Std, 3 = Max
4x00168	WT3 program enabled	0	1		0 = Disabled, 1 = Enabled
4x00169	RFU				Readable, value has no meaning
4x00170	RFU				Readable, value has no meaning
4x00171	WT4 on hour	0	23		
4x00172	WT4 on minute	0	59		
4x00173	WT4 off hour	0	23		
4x00174	WT4 off minute	0	59		
4x00175	WT4 Weekdays	0	128		Bit mask: bit 0 = Monday, bit 6 = Sunday.
4x00176	WT4 Temp.mode	0	1		0 = Comfort, 1 = Economy
4x00177	WT4 Fan speed	1	4		0 = Standby, 1 = Min, 2 = Std, 3 = Max
4x00178	WT4 program enabled	0	1		0 = Disabled, 1 = Enabled
4x00179	RFU				Readable, value has no meaning
4x00180	RFU				Readable, value has no meaning
4x00181	WT5 on hour	0	23		
4x00182	WT5 on minute	0	59		
4x00183	WT5 off hour	0	23		
4x00184	WT5 off minute	0	59		
4x00185	WT5 Weekdays	0	128		Bit mask: bit 0 = Monday, bit 6 = Sunday.
4x00186	WT5 Temp.mode	0	1		0 = Comfort, 1 = Economy
4x00187	WT5 Fan speed	1	4		0 = Standby, 1 = Min, 2 = Std, 3 = Max
4x00188	WT5 program enabled	0	1		0 = Disabled, 1 = Enabled
4x00189					
4x00190					
4x00191					
4x00192					
4x00193					

4x00194					
4x00195					
4x00196					
4x00197					
4x00198					
4x00199					
4x00200	Holiday shed. enabled	0	1		Zero = No, Non-zero = Yes. (Write 0/1)
4x00201	Prog.1 Start year				
4x00202	Prog.1 Start date				
4x00203	Prog.1 Start hour	0	23		
4x00204	Prog.1 Start minute	0	59		
4x00205	Prog.1 End year				
4x00206	Prog.1 End date				
4x00207	Prog.1 End hour	0	23		
4x00208	Prog.1 End minute	0	59		
4x00209	Prog.1 Temp.mode	0	1		0 = Comfort, 1 = Economy
4x00210	Prog.1 Fanspeed	1	4		0 = Standby, 1 = Min, 2 = Std, 3 = Max
4x00211	Prog.1 On / Off				Bit mask: Bit 0 = On/Off
...					
4x00221	Prog.2 Start year				
4x00222	Prog.2 Start date				
4x00223	Prog.2 Start hour	0	23		
4x00224	Prog.2 Start minute	0	59		
4x00225	Prog.2 End year				
4x00226	Prog.2 End date				
4x00227	Prog.2 End hour	0	23		
4x00228	Prog.2 End minute	0	59		
4x00229	Prog.2 Temp.mode	0	1		0 = Comfort, 1 = Economy
4x00230	Prog.2 Fanspeed	1	4		0 = Standby, 1 = Min, 2 = Std, 3 = Max
4x00231	Prog.2 On / Off				Bit mask: Bit 0 = On/Off
...					
4x00241	Prog.3 Start year				e.g.2019
4x00242	Prog.3 Start date				1102 = 2 Nov, 930 = 30 Sep
4x00243	Prog.3 Start hour	0	23		
4x00244	Prog.3 Start minute	0	59		
4x00245	Prog.3 End year				
4x00246	Prog.3 End date				
4x00247	Prog.3 End hour	0	23		
4x00248	Prog.3 End minute	0	59		
4x00249	Prog.3 Temp.mode	0	1		0 = Comfort, 1 = Economy
4x00250	Prog.3 Fanspeed	1	4		0 = Standby, 1 = Min, 2 = Std, 3 = Max
4x00251	Prog.3 On / Off				Bit mask: Bit 0 = On/Off
...					
4x00261	Prog.4 Start year				
4x00262	Prog.4 Start date				
4x00263	Prog.4 Start hour	0	23		
4x00264	Prog.4 Start minute	0	59		
4x00265	Prog.4 End year				
4x00266	Prog.4 End date				
4x00267	Prog.4 End hour	0	23		
4x00268	Prog.4 End minute	0	59		
4x00269	Prog.4 Temp.mode	0	1		0 = Comfort, 1 = Economy
4x00270	Prog.4 Fanspeed	1	4		0 = Standby, 1 = Min, 2 = Std, 3 = Max
4x00271	Prog.4 On / Off				Bit mask: Bit 0 = On/Off
...					
4x00281	Prog.5 Start year				
4x00282	Prog.5 Start date				
4x00283	Prog.5 Start hour	0	23		
4x00284	Prog.5 Start minute	0	59		
4x00285	Prog.5 End year				

4x00286	Prog.5 End date				
4x00287	Prog.5 End hour	0	23		
4x00288	Prog.5 End minute	0	59		
4x00289	Prog.5 Temp.mode	0	1		0 = Comfort, 1 = Economy
4x00290	Prog.5 Fanspeed	1	4		0 = Standby, 1 = Min, 2 = Std, 3 = Max
4x00291	Prog.5 On / Off				Bit mask: Bit 0 = On/Off
...					
4x00301	Prog.6 Start year				
4x00302	Prog.6 Start date				
4x00303	Prog.6 Start hour	0	23		
4x00304	Prog.6 Start minute	0	59		
4x00305	Prog.6 End year				
4x00306	Prog.6 End date				
4x00307	Prog.6 End hour	0	23		
4x00308	Prog.6 End minute	0	59		
4x00309	Prog.6 Temp.mode	0	1		0 = Comfort, 1 = Economy
4x00310	Prog.6 Fanspeed	1	4		0 = Standby, 1 = Min, 2 = Std, 3 = Max
4x00311	Prog.6 On / Off				Bit mask: Bit 0 = On/Off
...					
4x00321	Prog.7 Start year				
4x00322	Prog.7 Start date				
4x00323	Prog.7 Start hour	0	23		
4x00324	Prog.7 Start minute	0	59		
4x00325	Prog.7 End year				
4x00326	Prog.7 End date				
4x00327	Prog.7 End hour	0	23		
4x00328	Prog.7 End minute	0	59		
4x00329	Prog.7 Temp.mode	0	1		0 = Comfort, 1 = Economy
4x00330	Prog.7 Fanspeed	1	4		0 = Standby, 1 = Min, 2 = Std, 3 = Max
4x00331	Prog.7 On / Off				Bit mask: Bit 0 = On/Off
...					
4x00341	Prog.8 Start year				
4x00342	Prog.8 Start date				
4x00343	Prog.8 Start hour	0	23		
4x00344	Prog.8 Start minute	0	59		
4x00345	Prog.8 End year				
4x00346	Prog.8 End date				
4x00347	Prog.8 End hour	0	23		
4x00348	Prog.8 End minute	0	59		
4x00349	Prog.8 Temp.mode	0	1		0 = Comfort, 1 = Economy
4x00350	Prog.8 Fanspeed	1	4		0 = Standby, 1 = Min, 2 = Std, 3 = Max
4x00351	Prog.8 On / Off				Bit mask: Bit 0 = On/Off
...					
4x00361	Prog.9 Start year				
4x00362	Prog.9 Start date				
4x00363	Prog.9 Start hour	0	23		
4x00364	Prog.9 Start minute	0	59		
4x00365	Prog.9 End year				
4x00366	Prog.9 End date				
4x00367	Prog.9 End hour	0	23		
4x00368	Prog.9 End minute	0	59		
4x00369	Prog.9 Temp.mode	0	1		0 = Comfort, 1 = Economy
4x00370	Prog.9 Fanspeed	1	4		0 = Standby, 1 = Min, 2 = Std, 3 = Max
4x00371	Prog.9 On / Off				Bit mask: Bit 0 = On/Off
...					
4x00381	Prog.10 Start year				
4x00382	Prog.10 Start date				
4x00383	Prog.10 Start hour	0	23		
4x00384	Prog.10 Start minute	0	59		

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