MODBUS-RTU (TCP/IP port 502) data list

ADDRESS (offset)	FUNCTION	REGISTER QTY.	READ WRITE	DATA NAME	RANGE	SPECIFICATION
0	6	1	W	RESET	1	Important: after reset Wifi connection will be lost
Read and write single data register						
1	3/6	1	R/W	Day of the week	0÷6	0 = Mo, 1 = Tu, ……
2	3/6	1	R/W	Hour	0÷23	
3	3/6	1	R/W	Minutes	0÷59	
4	3/6	1	R/W	GHE mode	0÷3	0 = OFF, 1 = ON, 2 = AUTO, 3 = AUTO+R (with regeneration)
5	3/6	1	R/W	GHE comfort	0÷2	0 = cooling, 1 = heating, 2 = auto mode depends on the temp. To
6	3/6	1	R/W	Temp. To for winter mode of GHE	0÷10 [°C]	below this temperature GHE mode is "heating"
7	3/6	1	R/W	Temp. To for summer mode of GHE	15÷25 [°C]	above this temperature GHE mode is "cooling"
8	3/6	1	R/W	Start of the regeneration – SUMMER	22, 23, 0÷5	Start between 22.00 and 5.00
9	3/6	1	R/W	End of the regeneration – SUMMER	23, 0÷6	Finish hour of the summer regeneration and must be between 23.00 a 6.00 and additionally must be greater then start hour.
10	3/6	1	R/W	Start of the regeneration – WINTER	6÷21	Start between 6.00 and 21.00
11	3/6	1	R/W	End of the regeneration – WINTER	7÷22	Finish hour of the winter regeneration and must be between 7.00 a 22.00 and additionally must be greater then start hour.
12	3/6	1	R/W	BYPASS mode	0÷2	0 = OFF, 1 = ON, 2 = AUTO
13	3/6	1	R/W	BYPASS temp. outside (To)	5÷40 [°C]	above this temperature, BYPASS is ON (Toutside >)
14	3/6	1	R/W	BYPASS temp. inside (Te)	15÷40 [°C]	above this temperature, BYPASS is ON (Textract >)
15	3/6	1	R/W	BYPASS correction Te	-5÷5 [°C]	Correction Te at night time 22.00 and 6.00
16	3/6	1	R/W	Digital Input WE5 mode	0÷6	0 = inactive, 1 = ventilation, 2 = fire install., 3 = security install. 4 = hygrostat, 5 = thermostat, 6 = USER
17	3/6	1	R/W	Heater mode	0÷3	0 = OFF, 1 = Electric, 2 = Water, 3 = Freon cooler
18	3/6	1	R/W	Supply air temp. TS	15÷50 [°C]	Heater / Cooler temperature in supply air
19	3/6	1	R/W	Kp – gain factor PI	1÷100 [%]	parameter of the control algorithm
20	3/6	1	R/W	Ti – integration time PI	10÷990 [sec]	parameter of the control algorithm (step every 10^{th})
21	3	1	R	Output signal Uh (heater)	---	Heater / cooler output level 0÷100 [%]
22	3/6	1	R/W	Limitation TE	15÷31 [°C]	Lomitation temperature of the supply air depending on the temperature of the extract air (inside temp.) Range 15÷30 [°C] additionally value 31 is like OFF – no limitation.
23	3/6	1	R/W	Night correction TE	-5÷0 [°C]	Correction extract (inside) air temperature at night time 22.00 a 6.00
24	3/6	1	R/W	Ventilation time	0, 15, 30, 45, 60 [min]	Manually ventilation time. Value 0 means finish, stop, break….
25	3/6	1	R/W	DEFROST mode	0÷2	0 = OFF, 1 = preheater, 2 = temperature / time procedure
26	3/6	1	R/W	DEFROST time	1÷20 [min]	Defrost time, Extract fan = MAX and Supply fan = STOP
27	3/6	1	R/W	Normal work time	10÷720[min]	During this time the defrost procedure is suspended
28	3/6	1	R/W	Temp. Tph (preheater)	-20÷0 [°C]	Defrost temperature for time/temp and preheater. Range -10÷0 [°C]
29	3/6	1	R/W	Speed I gear	MIN÷IIgear	Range between MINIMUM=30% and value of the II gear
30	3/6	1	R/W	Speed II gear	Igear÷IIIgear	as above
31	3/6	1	R/W	Speed III gear	IIgear÷IVgear	as above
32	3/6	1	R/W	Speed IV gear	IIIgear÷Vgear	as above
33	3/6	1	R/W	Speed V gear	IVgear÷MAX	Range between IV gear and MAX=100%
34	3/6	1	R/W	Speed in manual mode	0÷100 [%]	
35	3	1	R	Speed SUPPLY	---	Speed of the supply air fan 0÷100 [%]
36	3	1	R	Speed EXTRACT	---	as above
37	3/6	1	R/W	Fans speed mode	0, 2	0=MANUAL, 2=AUTO (schedule work)
38	3	1	R	Filters control mode	---	0 = diff.pressure sensor, 1 = time 180days, 2 = presostat
39	3	1	R	Clinliness of the filters	---	Time controll – remaining days 0÷180, reaction level 0÷100 [%] for sensor
40	3	1	R	Work time		0÷999 [days]
41	3	1	R	GHE relay	---	0 = OFF, 1 = ON
42	3	1	R	BYPASS relay	---	0 = OFF, 1 = ON
43	3	1	R	Digital input WE5	---	0 = OFF, 1 = ON
44	3	1	R	Temp. To (output)	---	Value (x10) -500 ÷ +600 [°C]
45	3	1	R	Temp. Tg (GHE)	---	as above
46	3	1	R	Temp. Te (extract)	---	as above
47	3	1	R	Temp. Ts (supply)	---	as above
48	3	1	R	Temp. Tx (exhaust)	---	reserved value
49	3	1	R	Connection status	---	0 = OK., 1 = connection error with relay module
50	3	1	R	LCD backlight level	---	0÷100 [%]
51	3/6	1	R/W	Overpressure dPo/ I gear	-26÷ +26[%]	under/overpressure for I gear while GHE=OFF
52	3/6	1	R/W	Overpressure dPo/ II gear	-26÷ +26[%]	as above
53	3/6	1	R/W	Overpressure dPo/ III gear	-26÷ +26[%]	as above
54	3/6	1	R/W	Overpressure dPo/ IV gear	-26÷ +26[%]	as above
55	3/6	1	R/W	Overpressure dPo/ V gear	-26÷ +26[%]	as above
56	3/6	1	R/W	Overpressure dPg/ I gear	-26÷ +26[%]	under/overpressure for I gear while GHE=ON
57	3/6	1	R/W	Overpressure dPg/ II gear	-26÷ +26[%]	as above
58	3/6	1	R/W	Overpressure dPg/III gear	-26÷ +26[%]	as above
59	3/6	1	R/W	Overpressure dPg/IV gear	-26÷ +26[%]	as above
60	3/6	1	R/W	Overpressure dPg/ V gear	-26÷ +26[%]	as above
Read and write multiple registers						
61	3/16	6	R/W	Schedule for Monday		Compressed data in format 1hour=4bits (1/2 byte) then 1 register consists schedule for 4 hours. Range for 1hour is 0÷5 (value of the gear) eg. register 61 -> consists of data for 0.00 - 1.00 - 2.00 - 3.00 hour register 62 -> consists of data for 4.00 – 5.00 – 6.00 – 7.00 hour …….. etc register 66 -> consists of data for 20.00 – 21.00 – 22.00 – 23.00 hour eg. register 66 = $0x3054_{HEX}$ means -> 20.00=3gear, 21.00=0=STOP, 22.00=5gear, 23.00=4gear
67	3/16	6	R/W	Schedule for Tu		as above
73	3/16	6	R/W	Schedule for We		as above
79	3/16	6	R/W	Schedule for Th		as above
85	3/16	6	R/W	Schedule for Fr		as above
91	3/16	6	R/W	Schedule for Sa		as above
97	3/16	6	R/W	Schedule for Su		as above

* - some programs interpret different address (offset) of registers eg.
Program "*Radzio!ModbusMasterSimulator*" for the first register sets value **offset = 0**, to read eg. "day of the week" You should to set offset = 1…….etc
Program "*CAS Modbus Scanner*" for the first register sets value **offset = 1**. to read eg. "day of the week" You should to set offset = 2…….etc

** - register = 2 bytes

Function No. 3 (0x03 $_{HEX}$) = Read Holding Registers
No 6 (0x06 $_{HEX}$) = Write Single Register
No 16 (0x10 $_{HEX}$) = Write Multiple Registers

W = write
R = read

Important !!! – The MODBUS protocol requires a controller ID number. This number depends on the password (CODE) to access the website.
An example of how to calculate the ID number:

a) password (CODE) to website must have 6 letters, eg. "**secret**"
b) rplace all characters with values from the ASCII code table -> s=115, e=101, c=99, r=114, e=101, t=116
c) sum up all the values -> 115+101+99+114+101+116=646
d) divide this value by 6 -> 646/6=107,66666…
e) the ID number will be the integer part of the division **ID=107**