RDCZ9

RESIDENTIAL FAN
SPEED CONTROLLER

Modbus register map

MODBUS REGISTER MAP

INPUT REGISTERS

		Data type	Description	Raw data	Values	
1	Output value	unsigned integer	Output value in % Us	0—100	50 =	50 % Us
2	Output step	unsigned integer	Current step selected	0—9	8 =	step 8
3	Output Voltage	unsigned integer	Output voltage	0—2.300	1 .150 =	115,0 VAC
4	Minimum output value	unsigned integer	Minimum output value	0—2.300	1.035 =	103,5 VAC
5	Maximum output value	unsigned integer	Maximum output value	0—2.300	2.300 =	230,0 VAC
6	Input voltage	unsigned integer	Input voltage rating in VAC	110—230	230 =	230 VAC
7	Input frequency	unsigned integer	Input frequency in Hz	50—60	50 =	50 Hz
8	Output overwrite mode	unsigned integer	Overwrite mode active	0, 1	0 = 1 =	Manual Overwrite
9—10			Reserved, return 0			

Note: *The input registers can be read via the Modbus command: "Read input registers".*

HOLDING REGISTERS

		Data type	Description	Raw data	Values	Factory default values
1	Device slave address	unsigned integer	Modbus device address	1—247		1
2	Modbus baud rate	unsigned integer	Modbus communication baud rate	0—6	0 = 4.800 1 = 9.600 2 = 19.200 3 = 38.400 4 = 57.600 5 = 115.200 6 = 230.400	2
3	Modbus parity mode	unsigned integer	Modbus parity check mode	0—2	0 = 8N1 1 = 8E1 2 = 8O1	1
4	Device type	unsigned integer	Device type: Read only	3.010	RDCZ9 = 3.010	
5	HW version	unsigned integer	Hardware version of the device (read only)	XXXX	0x0110 = HW version 1.1	
6	FW version	unsigned integer	Firmware version of the device (read only)	XXXX	0x0510 = FW version 5.1	
7—8			Reserved, return 0			
9	Output steps		Number of output steps defined	0—9	0 = 1% per step 1 = 1 step 8 = 8 steps	0
10	Start step		Starting step	0—9	0 = step 0	0
11	Minimum output value	unsigned integer	Set minimum value of output signal	30—65	45 = 45 % Us	45
12	Maximum output value	unsigned integer	Set maximum value of output signal	75—100	80 = 80 % Us	100
13	Overwrite mode	unsigned integer	Selection of overwrite mode	0, 1	0 = Inactive 1 = Active	0

HOLDING REGISTERS

		Data type	Description	Raw data	Values		Factory default values
14	Overwrite value	unsigned integer	Output value in overwrite mode in percentage	30—100	50 =	50%	50
15	Kickstart	unsigned integer	Kickstart or softstart mode	0, 1	0 = 1 =	Softstart Kickstart	0
16	Kickstart time	unsigned integer	Time for kickstart to run on maximum output voltage	2—10	5 =	5 s	5
17	Run / Standby	unsigned integer	Selection of Run / Standby mode	0, 1	0 = 1 =	Run Standby	0
18	Start output value	unsigned integer	Start level output value when switched on	30—100	50 =	50 % Us	50
19			Reserved, returns 0				
20	Network Bus Termination Resistor (NBT)	unsigned integer	Set unit as first or last unit of the line by connecting network termination resistor	0, 1	0 = 1 =	Disconnected (NBT open) Connected (NBT connected)	0
21	Master / Slave mode	unsigned integer	Master or slave mode selection	0, 1	0 = 1 =	Slave mode Master mode	0
22	Temperature Setpoint	unsigned integer	Temperature setpoint value	0—700	200 =	20,0 °C	200
23	CO_2 setpoint	unsigned integer	CO_2 setpoint value	0—2.000	700 =	700 ppm	700
24	TVOC setpoint	unsigned integer	TVOC setpoint value	0—9.900	100 = 2.000 =	100 ppb 2.000 ppb	100
25	Pressure setpoint	unsigned integer	Pressure setpoint value	0—4.000	100 = 2.000 =	100 Pa 2.000 Pa	100

HOLDING REGISTERS

		Data type	Description	Raw data	Values		Factory default values
26	Relative humidity setpoint	unsigned integer	Relative humidity setpoint value	0—1.000	400 =	40,0 % rH	400
27			Reserved, returns 0				
28	Sensor range	unsigned integer	Connected sensor measurement range	50—500	50 = 50 = 100 =	5,0°C (T) 50 Pa (P) 10,0 % rH (rH)	
29	PI control	unsigned integer	Enable PI-control	0, 1	0 = 1 =	Disabled Enabled	0
30	PI control: Kp value	unsigned integer	Proportional gain for PI-control	0—50	20 =	2,0	20
31	PI control: Ki value	unsigned integer	Integration time for PI-control	0—50	20 =	0,2 s	20
32			Reserved, returns 0				
33	Display mode	unsigned integer	Shows either input or output values on the display during startup	0, 1	0 = 1 =	Input value Output value	0
34	Output overrule timer	unsigned integer	Time for output overwrite value in HR 14 to be stopped	10—120	10 = 120 =	10 min 120 min	10
35—40			Reserved, return 0				

Note: *The holding registers can be managed via the following Modbus commands: "Read Holding Registers", "Write Single Register" or "Write Multiple Registers".*

The free Sentera configuration and monitoring software 3SModbus can be downloaded via: https://www.sentera.eu/en/3SMCenter