DSTHM-2

Modbus register map

MODBUS REGISTER MAP

INPUT REGISTERS

		Data type	Description	Raw data range	Values
1	Temperature reading	signed integer	Actual temperature level	-300—700	500 = 50,0°C
2	Output value 1 (T)	unsigned integer	Output value 1 (T)	0—1.000	0 = 0 % 1.000 = 100 %
3	Temperature alert flag	unsigned integer	Flag indicates that measured Temperature is outside set alert values. Set to '1' when the measured value is outside the Temperature alert values defined by holding registers 13 and 14	0—1	0 = Temperature measurement OK 1 = Temperature measurement too low / high
4	Temperature range limit flag	unsigned integer	Flag indicates that measured temperature is outside set range limit values. Set to '1' when the measured temperature is outside limit range values defined by holding registers 11 and 12	0—1	0 = Temperature range OK 1 = Temperature range too low / high
5	Humidity, temperature sensor fault	unsigned integer	Flag that shows if the communication with temperature & humidity sensor is lost	0—1	0 = No 1 = Yes
6—9			Reserved, return 0		
10	Relative humidity level	unsigned integer	Actual relative humidity level	0—1.000	1.000 = 100 % rH
11	Output value 2 (rH)	unsigned integer	Output value 2 (rH)	0—1.000	0 = 0 % 1.000 = 100 %
12	Relative humidity alert flag	unsigned integer	Flag indicates that measured Relative humidity is outside set alert values. Set to '1' when the measured value is outside the Relative humidity alert values defined by holding registers 21 and 22	0—1	0 = Relative humidity measurement OK 1 = Relative humidity measurement too low / high
13	Relative humidity range limit flag	unsigned integer	Flag indicates that measured Relative humidity is outside set range limit values. Set to '1' when the measured Relative humidity is outside limit range values defined by holding registers 19 and 20	0—1	0 = Relative humidity range OK 1 = Relative humidity range too low/high

INPUT REGISTERS

		Data type	Description	Raw data range	Values
14	Humidity, temperature sensor fault	unsigned integer	Flag that shows if the communication with temperature & humidity sensor is lost	0—1	0 = No 1 = Yes
15	Dew point level	signed integer	Calculated dew point	-700—700	200 = 20,0°C
16—20			Reserved, return 0		

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

HOLDING REGISTERS

		Data type	Description	Raw data range	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	unsigned integer	Parity check mode	0—2	0 = 8N1 1 = 8E1 2 = 8O1		1
4	Device type	unsigned integer	Device type. Read only	1.634	1.634 = DSTHM-2		
5	HW version	unsigned integer	Hardware version of the device. Read only	XXXX	0x0100 = HW version 1.0		
6	FW version	unsigned integer	Firmware version of the device. Read only	XXXX	0x0210 = FW version 2.1		
7—8			Reserved, returns 0				
9	Modbus network resistor termination (NBT)	unsigned integer	Set device as end device of the line / or not by connecting NBT	0—1	0 = NBT disconnected 1 = NBT connected		0
10	Modbus registers reset	unsigned integer	Resets Modbus Holding registers to default values. When finished this register is automatically reset to '0'	0—1	0 = Idle 1 = Reset Modbus Registers		0
11	Minimum temperature range	unsigned integer	Minimum value of temperature range, cannot be set higher than maximum temperature range minus 5°C	-300—(Max - 50)	100 = 10,0°C		0
12	Maximum temperature range	unsigned integer	Maximum value of temperature range, cannot be set less than minimum temperature range plus 5°C	(Min + 50)—700	500 = 50,0°C		500
13	Minimum temperature alert	unsigned integer	Minimum temperature alarm value	Min. temperature range—Max. temperature alarm	500 = 50,0°C		0

HOLDING REGISTERS

		Data type	Description	Raw data range	Values		Factory default values
14	Maximum temperature alert	unsigned integer	Maximum temperature alarm value	Min. temperature alarm— Max. temperature range	500 =	50,0°C	500
15—18			Reserved, return 0				
19	Minimum relative humidity range	unsigned integer	Minimum value of relative humidity range, cannot be set higher than maximum relative humidity range minus 5%	0—(Max - 50)	200 =	20,0 % rH	0
20	Maximum relative humidity range	unsigned integer	Maximum value of relative humidity range, cannot be set less than minimum relative humidity range plus 5%	(Min + 50)—1000	850 =	85 % rH	1.000
21	Minimum relative humidity alert	unsigned integer	Minimum relative humidity alarm value	Min. relative humidity range— Max. relative humidity alarm	200 =	20,0 % rH	0
22	Maximum relative humidity alert	unsigned integer	Maximum relative humidity alarm value	Min. relative humidity alarm— Max. relative humidity range	850 =	85 % rH	1.000
23—60			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*