Robotina d.o.o.
OIC Hrpelje 38
SI-6240 Kozina
Slovenia

1. Modbus TCP/IP

Unit ID: 1

Supported Modbus TCP/IP function codes:

- Read Holding Registers (0x03)
- Write Single Register (0x06)
- Write Multiple Registres (0x10)

1.1. Holding Registers

Variable	PLC variable	Address	Access	Data type	Description
Sensors (si=sensor index 0..120; 0=unassigned (new) sensor)					
Index	si	10 * si + 0	RW	I16	Sensor index (si); when changed sensor will be moved to new index, but only if new space is empty
Status	th_status[si]	10 * si + 1	RO	I16	Temperature sensor status 0 = no sensor, 1 = OK, 2 = Error, no response
Temperature	th_temperature[si]	10 * si + 2	RO	I16	Measured temperature in 0.1 °C (234 = 23,4 °C)
Humidity	th_humidity[si]	10 * si + 3	RW	I16	Measured relative humidity in 0.1 %RH (654 = 65,4 %RH)
Alarm Temperature HI	th_temperature_alarm_hi[si]	10 * si + 4	RW	I16	Measured temperature over set high limit 0 = idle 1 = alarm
Alarm Temperature LO	th_temperature_alarm_lo[si]	10 * si + 5	RW	I16	Measured temperature below set low limit 0 = idle 1 = alarm

Variable	PLC variable	Address	Access	Data type	Description
Alarm Humidity HI	th_humidity_alarm_hi[si]	10 * si + 6	RW	I16	Measured humidity over set high limit 0 = idle 1 = alarm
Alarm Humidity LO	th_humidity_alarm_lo[si]	10 * si + 7	RO	I16	Measured humidity below set low limit 0 = idle 1 = alarm
Spare	0	10 * si + 8	RO	I16	0
Spare	0	10 * si + 9	RO	I16	0
Statistics					
Sensors count	th_count_all	1210	RO	I16	The number of all sensors that are configured
Sensors OK	th_count_ok	1211	RO	I16	The number of all sensors communicating correctly
Sensors Error	th_count_err	1212	RO	I16	Number of all sensors not responding (not communicating)
Sensors Alarm	th_count_alarm	1213	RO	I16	The number of all sensors that are in alarm (temperature or humidity outside the set limits; if the limits are set)
Average temperature	th_temperature_avg	1214	RO	I16	Average temperature of all sensors communicating properly
Minimal temperature	th_temperature_min	1215	RO	I16	The minimum temperature of all sensors communicating properly
Maximal temperature	th_temperature_max	1216	RO	I16	The maximum temperature of all sensors that communicate correctly
Average humidity	th_humidity_avg	1217	RO	I16	Average relative humidity of all sensors communicating correctly

Variable	PLC variable	Address	Access	Data type	Description
Minimal humidity	th_humidity_min	1218	RO	I16	Minimum relative humidity of all sensors communicating properly
Maximal humidity	th_humidity_max	1219	RO	I16	Maximum relative humidity of all sensors communicating correctly
Spare	0	1220-1229	RO	i16	0
General settings					
Temperature HI Limit	th_temperature_alarm_hi_limit	1230	RW	I16	Limit for temperature HI alarm in 0.1 °C (500 = 50,0 °C); 0 = No temperature HI alarm
Temperature HI Clear	th_temperature_alarm_hi_clear	1231	RW	I16	Limit for clear of temperature HI alarm in 0.1 °C (450 = 45,0 °C), must be lower than Temperature HI Limit; 0 = No auto clear of temperature HI alarm
Temperature LO Limit	th_temperature_alarm_lo_limit	1232	RW	I16	Limit for temperature LO alarm in 0.1 °C (50 = 5,0 °C); 0 = No temperature LO alarm
Temperature LO Clear	th_temperature_alarm_lo_clear	1233	RW	I16	Limit for clear of temperature LO alarm in 0.1 °C (100 = 10,0 °C), must be higher than Temperature LO Limit; 0 = No auto clear of temperature LO alarm
Humidity HI Limit	th_humidity_alarm_hi_limit	1234	RW	I16	Limit for humidity HI alarm in 0.1 %RH (500 = 50,0 %RH); 0 = No humidity HI alarm

Variable	PLC variable	Address	Access	Data type	Description
Humidity HI Clear	th_humidity_alarm_hi_clear	1235	RW	I16	Limit for clear of humidity HI alarm in 0.1 %RH (450 = 45,0 %RH), must be lower than Humidity HI Limit; 0 = No auto clear of humidity HI alarm
Humidity LO Limit	th_humidity_alarm_lo_limit	1236	RW	I16	Limit for humidity LO alarm in 0.1 %RH (50 = 5,0 %RH); 0 = No humidity LO alarm
Humidity LO Clear	th_humidity_alarm_lo_clear	1237	RW	I16	Limit for clear of humidity LO alarm in 0.1 %RH (100 = 10,0 %RH), must be higher than humidity LO Limit; 0 = No auto clear of humidity LO alarm
Spare	0	1238	RO	I16	0
Spare	0	1239	RO	I16	0