Protocol Description

Thermolog sends data using the Modbus proto protocol. Below is a description of the protocol.

Readable registers 0x04 – 30000						
Address	**Hex Address**	**Parameter**	**Organization**	**Example Value**	**Accuracy**	**Example**
30000	0x00	Temperature	int32	152	%0.1f	15.2 °C
30002	0x02	Humidity	int32	457	%0.1f	45.7 %
30004	0x04	Version	uint32	20201	%d.%02d.%02d	2.02.01
30006	0x06	Serial	uint32	7EF8E955	%08X	0x7EF8E955
30008	0x08	ID 1	uint32	05D3FF31	%08X	05D3FF3138385534431343450
30010	0x0A	ID 2	uint32	38385534	%08X	
30012	0x0C	ID 3	uint32	43134350	%08X	
30014	0x0E	Position Record Memory	uint32	34897	%d	34897

Readable/Writable registers 0x03 – 40000									
Address	**Hex Address**	**Parameter**	**Organization**	**Example Value**	**Accuracy**	**Example**	**Val. Min**	**Val.Max**	**Default**
40000	0x00	Correct Temperature	int32	-12	%0.1f	-1.2	-100	100	0
40002	0x02	Correct Humidity	int32	25	%0.1f	2.5	-100	100	0
40004	0x04	Low Temp. Alarm	int32	-25	%0.1f	-2.5	-1200	1200	-1.5

Readable/Writable registers 0x03 – 40000									
Address	**Hex Address**	**Parameter**	**Organization**	**Example Value**	**Accuracy**	**Example**	**Val. Min**	**Val.Max**	**Default**
40006	0x06	High Temp. Alarm	int32	20	%0.1f	3.0	-1200	1200	3.6
40008	0x08	State Alarm	int32	0	%d	0	0	2	0
40010	0x0A	Modbus Address	uint32	1	%d	1	1	247	1
40012	0x0C	RS485 Baudrate	uint32	9600	%d	9600	1200	921600	9600
40014	0x0E	RS485 Parity	uint32	0	%d	0	0	2	0
40016	0x10	RS485 Length Bit	uint32	8	%d	8	8	9	8
40018	0x12	RS485 Stop bit	uint32	1	%d	1	0	3	1
40020	0x14	Show Type	uint32	1	%d	1	1	6	1
40022	0x16	Correct Time	int32	-13	%0.1f	-13	-120	120	-11
40024	0x18	Light	uint32	-	%d	-	0	15	0
40026	0x1A	Year	uint32	1022	%d	1022	2022	2099	-
40028	0x1C	Month	uint32	9	%d	9	1	12	-
40030	0x1E	Day	uint32	3	%d	3	1	29/30/31	-
40032	0x20	Hour	uint32	15	%d	15	0	23	-
40034	0x22	Minute	uint32	12	%d	12	0	59	-
40036	0x24	Second	uint32	33	%d	33	0	59	-

Correct temperature - each temperature reading is corrected by this value	
Correct Humidity - each humidity reading is corrected for this value	
Low Temp. Alarm - when the temperature is lower than this value, the alarm will be triggered	
High Temp. Alarm - when the temperature is higher than this value, the alarm will be triggered	
State Alarm - there are three alarm states	
ALARM_NONE	0

ALARMYELLOW	1
ALARMRED	2
Show type - determines how the temperature, humidity and time are shown on the LED display	
Correct time - after the end of the day, the time was adjusted by this value	
Light - brightness level of the LED display. For value 0 - the automatic brightness function is enabled.	
Identification Device – ID1+ID2+ID3 - unique value for each device	
Position Record Memory - position in the internal memory organization of the device for archiving the measured temperatures	

Communication over Modbus

Name	Function	Value
RS485 Baudrate	From 1200 to 921600	9600
RS485 Parity	None	0
	Odd	1
	Even	2
RS485 Length Bit	Normal	8
	Extend	9
RS485 Stop bit	0.5	0
	0	1
	1.5	2
	2	3

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