

Communication protocol

The sensors operate in a question-answer mode. The maximum response time is 50 ms.

Communication bus.....	RS-485
Range of addresses.....	“A” to “Z” (26 addresses) – addresses for the temp. sensor “a” to “z” (26 addresses) – addresses for the humidity sensor
Communication.....	ASCII, described below
Response time.....	max. 50 ms for a command
Max. delay between characters.....	max. 10 ms to type one character of a command
Speed.....	9600 baud
Data bits.....	8
Parity	none
Stop bits.....	1

Temperature reading

Function	Command syntax	Example
Temperature request	T<address>I	TAI
Answer from sensor (all OK)	*<address><temp><CR>	*A+025.51C
Answer from sensor (error)	*<address>Err<CR>	*AErr

<address> is a character from „A“ .. „Z“ with exception of „T“ ,

<CR> is the 0xD or 13 dec - end of line,

<temp> has the format *A+025.5C or *A+025.55C .

Humidity reading

Function	Command syntax	Example
Humidity request	T<address>I	TaI
Answer from sensor (all OK)	*<address><humidity><CR>	*a048.19%
Answer from sensor (error)	*<address>Err<CR>	*aErr

<address> is a character from „a“ .. „z“ with exception of „t“ ,

<CR> is the 0xD or 13 dec - end of line,

<humidity> has the format *a048.19% .

Device identification

Function	Command syntax	Example
Device type request	T<address>?	TA?
Answer from sensor (all OK)	*<address><Identificat><cr>	*ATHMP 2

<Identificat> HTemp-485 (temp. sensor)..... "THMP 2"

zHTemp-485 (humidity sensor)..... "HTMP 2"

Note: Number 2 gives the FW version of the sensor.

Sensor address setup

This function works only in case that the sensor has set the jumpers at the combination „Adr by SETUP“. If the address is set by jumpers manually, the sensor ignores the command.

At the RS-485 line must be just one sensor, to be set, otherwise there will be a collision.

Function	Command syntax	Example
Address change	T#<new address>	T#A
Answer from sensor (all OK)	*<new address>OK<CR>	*AOK
Answer from sensor (error)	*<old address>Err<CR>	*BErr

<address> is a character from „A“ .. „Z“ and „a“ .. „z“ with exception of „T“
<CR> is the 0xD or 13 dec - end of line,

Note: You are setting **HTemp-485** address, which uses two addresses (one for temperature sensor, second for humidity sensor). By this command you only set the address in this form: capital letter, second address (same letter, but small) is set automatically.

Notes

- If the device does not answer in the terminal mode, the cause must be the typing delay between the character. If you send the commands from the keyboard by typing them, because the delay between characters is too long then the sensor does not admit this kind of command. We recommend you to prepare the commands as sequences at „makro“ and send them at once. The following figures show where you can find the makro in the recommended software Hercules and Terminal.
- If you set the address with the command „T#A“, that contains in it the character „#“, is necessary to write two times this character, because this character is used very often in makro to insert decimal values of characters.

