

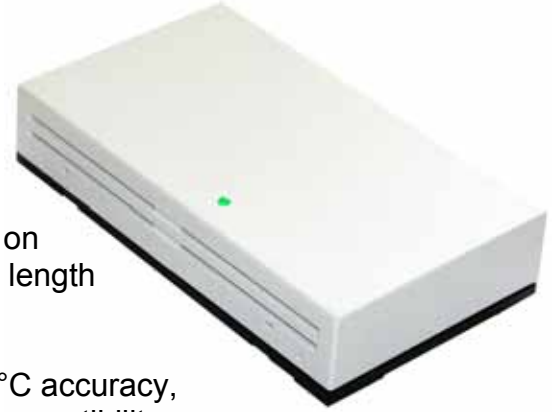
# HTemp-485

## RS-485 humidity and temperature sensor

An RS-485 temperature and humidity sensor with a simple text communication protocol. The sensor has a minimal power consumption and can be powered from a non-stabilize power supply.

The measured temperature is sent (in °C or % of humidity) using a simple text protocol. You can connect up to 32 sensors on a 4-wire bus containing a RS-485 line and a power source. The length of the bus can be up to 1000 meters.

HTemp-485 uses an integrated temperature sensor with  $\pm 0.75^{\circ}\text{C}$  accuracy, Humidity is measured using a polymer sensor. For **Temp-485** compatibility reasons, the humidity and temperature values are read as two independent measurements (each with different address) over RS-485 bus. So each H-Temp device has two different RS-485 communication addresses. The module is equipped with LED indicating that measurement is in progress.

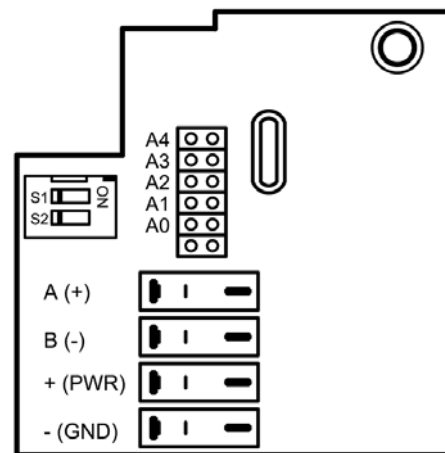
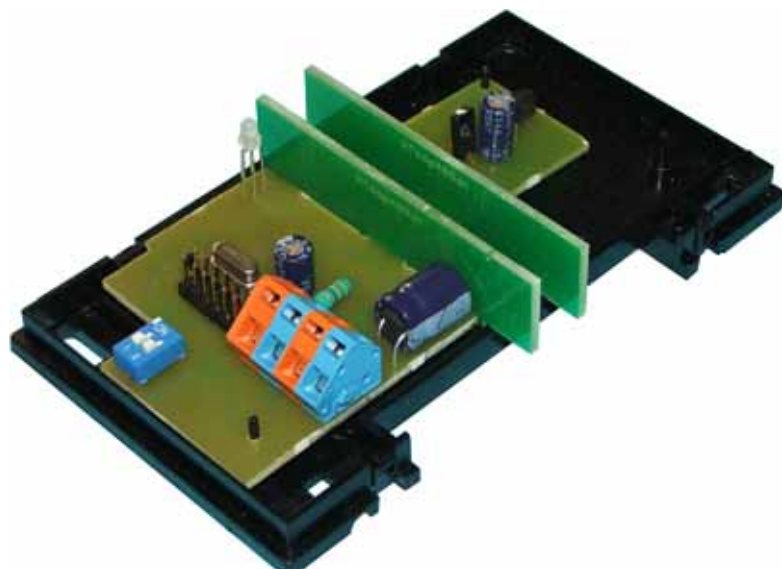


### Applications

- Wide temperature measuring systems
- Industry measurement and regulation
- Measuring temperature of storage, industrial or residential premises.
- When connected to a Poseidon device – measurements in technological premises and data transfer over Ethernet network

### Basic features

- Relative humidity measurement from 0% to 100%
- Temperature measurement form  $-10^{\circ}\text{C}$  up to  $+85^{\circ}\text{C}$
- The address can be set using jumpers or terminal SETUP mode
- Each sensor is calibrated
- RS-485 communication
- LED indication
- Simple communications protocol
- Easy wall mounting
- Minimum power consumption, no need for voltage regulation
- The sensors are designed for the Poseidon SNMP thermometer device
- Temperature measurement is separated from the electronic circuits
- DIP switch selectable RS-485 termination
- The cables can be led on the wall and connected from the side or from the bottom of the box
- The “wago” connectors make the cable connection much easier



### HTemp-485 – parameters

Temperature range.....	-10°C up to +80°C
Accuracy .....	+/- 0,75 °C in range from -10°C to +85°C
Temperature measurement resolution .....	0,01°C
Temperature sensor.....	DS18B20
Humidity range,.....	0% to 100%
Humidity measurement accuracy.....	± 2% in range form 0% to 90% (15°C to 30°C)
Operating temperature.....	0°C to 50°C
Humidity measurement resolution.....	0,01%
Humidity sensor .....	Polymer sensor
Temperature sensor address setup.....	Jumper or SETUP mode
Humidity sensor address setup.....	Only in setup mode SETUP
<b>Power source</b> .....	+8V to +18V DC, polarity reversing protection
Power consumption.....	Typ. 6 to 10 mA,
RS-485 termination .....	Optional, always equipped with 10 kΩ resistors defining idle state of the line
Wire connection .....	WAGO connection block, max. wire diameter:1,0 mm

### LED indication

The module is equipped with a LED indication:

- Power source connected (LED blinks red twice)  
- if RS-485 address change enabled, LED blinks red twice, green twice
- Temperature reading in progress (LED blinks green for approx 0.3 sec on every reading)
- Humidity reading in progress (LED blinks green for approx 0.3 sec on every reading)
- SETUP mode activated (LED is lit while the device is in SETUP mode)

### Communication protocol

The sensor works in question-answer mode. Response time is max. 50ms.

Communication bus .....	RS-485 / 9600 / 8N1
Response time.....	max. 50 ms for each command
Address range.....	“0” to “9” (10), “A” to “Z” (26), “a” to “z” (26) = 62 addresses 2 independent addresses for temperature and humidity measurement