# RHT *Climate*

## Relative Humidity and Temperature Transmitter

- ✓ High accuracy readings
- ✓ Wide backlight display
- ✓ Configurable analog outputs
- ✓ Settings via USB or keypad
- ✓ Alarm output and built-in buzzer

The RHT Climate transmitter incorporates high accuracy and stability sensors for relative humidity and temperature measurement and can transmit both signals through two analog outputs or RS485 Modbus RTU communication. The device allows complete parameters configuration through the USB interface, simulation of temperature and humidity and forcing the retransmission signals, or even diagnostics through NXperience software. RHT Climate has models with or without display for wall or duct mount, with various probe lengths.

## Typical Applications

RHT Climate is suitable for general use in HVAC-R applications, that is, monitoring or climate control of environments or even environmental monitoring of industrial processes where robustness, accuracy and connectivity are required.

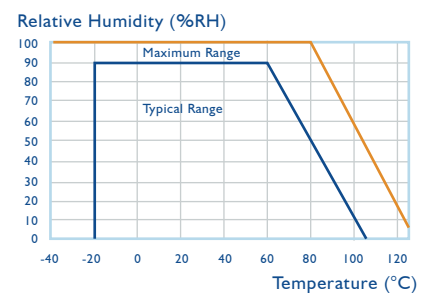## Accuracy of Measures and Operational Limits of Sensors

### Relative Humidity Accuracy
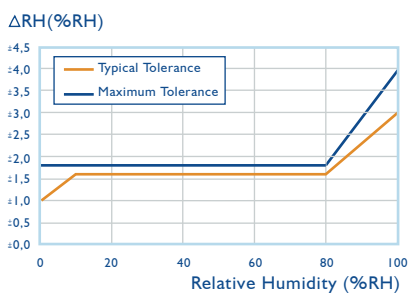


### Temperature Accuracy
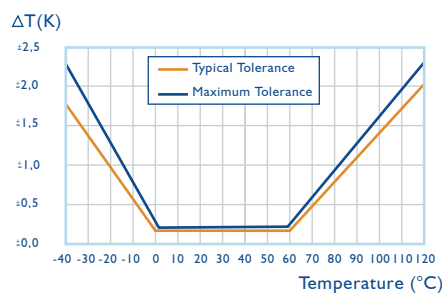


### Sensor Operation Conditions



The RHT Climate can be configured to display and retransmit the temper... or any of its psychrometric properties, calculated in real time:

- Dew Point Temperature
- Wet Bulb Temperature
- Absolute Humidity
- Frost Point Temperature

- Spe...
- ...
- ...

# RHT Climate
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## Technical specifications

| | | |
|---|---|---|
| Sensor Measurement Range: | Temperature: | -40,0 °C to 100,0 °C (DM models)<br>-40,0 °C to 60,0 °C (WM models) |
| | Relative Humidity: | 0.0 to 100.0 %RH (non-condensing) |
| | Dew Point: | -90,0 °C to 100,0 °C |
| Measurement Resolution: | Temperature: | 0,1 °C, 14 bits (65535 levels) |
| | Relative Humidity: | 0,1 %, 12 bits (4095 levels) |
| Response Time: | Temperature: | up to 5 sec @ 25 °C with slow moving air (1 m/s) |
| | Relative Humidity: | up to 4 sec @ 25 °C with slow moving air (1 m/s) |
| Measurement Accuracy: | Temperature: | ±0,2 °C (0 °C to +60 °C) |
| | Relative Humidity: | ±1,8 %RH @ +23 °C (0 %RH to 90 %RH) |
| Sampling Interval: | 3 seconds | |
| Analog Outputs: | Two 0-10 V or 4-20 mA outputs configurable by software or keyboard | |
| Power Supply: | By Connectors: | 12 Vdc to 30 Vdc; maximum consumption 70mA +/- 10% @ 24Vdc |
| | By USB: | 4.75 Vdc to 5.25 Vdc |
| Display: | Wide backlight LCD with three variables of 4 ½ digits | |
| Keys: | 3 keys with tactile feedback for navigation and adjustment of parameters | |
| Alarms: | Two digital outputs and one embedded buzzer | |
| Operating Temperature: | -40 ° C to 60 ° C | |
| Connections: | Internal terminals through cable glands | |
| Dimensions: | 100.3 x 80.0 x 45.1 mm | |
| Enclosure: | ABS+PC | |
| Protection Rating: | Enclosure: | IP65 |
| | Sensor probe: | IP30, depending on the filter cap |
| Communication Interface: | USB type Micro-B 2.0 and RS485 (both in Modbus RTU) | |
| Programming: | NXperience software for Windows through USB | |

## Models

| | |
|---|---|
| 8804000000 | TRANSMITTER RHT Climate WM |
| 8804000010 | TRANSMITTER RHT Climate WM-L |
| 8804000101 | TRANSMITTER RHT Climate WM-485-LCD |
| 8804000111 | TRANSMITTER RHT Climate WM-485-LCD-L |
| 8804111000 | TRANSMITTER RHT Climate DM-150S STAINLESS STEEL PROBE |
| 8804111001 | TRANSMITTER RHT Climate DM-150S-485 STAINLESS STEEL PROBE |
| 8804111101 | TRANSMITTER RHT Climate DM-150S-485-LCD STAINLESS STEEL PROBE |
| 8804121000 | TRANSMITTER RHT Climate DM-250S STAINLESS STEEL PROBE |
| 8804121001 | TRANSMITTER RHT Climate DM-250S-485 STAINLESS STEEL PROBE |
| 8804121101 | TRANSMITTER RHT Climate DM-250S-485-LCD STAINLESS STEEL PROBE |
| 8804131000 | TRANSMITTER RHT Climate DM-400S STAINLESS STEEL PROBE |
| 8804131001 | TRANSMITTER RHT Climate DM-400S-485 STAINLESS STEEL PROBE |
| 8804131101 | TRANSMITTER RHT Climate DM-400S-485-LCD STAINLESS STEEL PROBE |

## novus
We Measure, We Control, We Record