

# RHTClimate

#### **Relative Humidity and Temperature Transmitter**

The RHT Climate transmitter incorporates high accuracy



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

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, 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**

ΔRH(%RH)

=4,5
=4,0
=3,5
=3,0
=2,5
=2,0
=1,5
=1,0
=0,5

Relative Humidity (%RH)

Relative Humidity Accuracy

### 

The RHT Climate can be configured to display and retransmit the temperature and relative humidity values, or any of its psychrometric properties, calculated in real time:

Dew Point Temperature

±0,0

- Wet Bulb Temperature
- Absolute Humidity
- Frost Point Temperature

- Specific Enthalpy
- Partial Vapor Pressure
- Mixing Ratio







# **Technical specifications**

Sensor Measurement Range:  Temperature: -40,0 °C to 100,0 °C (DM models) -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  Temperature: 0,1 °C, 14 bits (65535 levels)  Relative Humidity: 0,1%, 12 bits (4095 levels)  Response Time: Temperature: up to 5 s @ 25 °C with slow moving air (1 m/s)  Relative Humidity: up to 4 s @ 25 °C with slow moving air (1 m/s)  Measurement Accuracy: Relative Humidity: ± 1.8 % RH to 23 °C (0 % to 90 % RH)  Sampling Interval: 3 seconds  Custom Calibration: Up to five temperature points and five points for relative humidity  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 70 mA +/- 10% @ 24 V 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		
Measurement Resolution:  Response Time:  Relative Humidity:  Response Time:  Relative Humidity:  Dew Point:  Response Time:  Response Time:  Relative Humidity:  Relative Humidity:  Dew Point:  Dew Dew With slow moving air (1 m/s)  Dew Point Slow working air (1 m/s)  Dew Co	Sensor Measurement Range:	
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Operating Temperature: -40 °C to 60 °C		
	ng Temperature:	
Connections: Internal terminals through cable glands	tions:	
Dimensions: 100.3 x 80.0 x 45.1 mm	ions:	
Enclosure: ABS+PC	ıre:	
Protection Rating: Enclosure: IP65	Protection Rating:	
Sensor probe: IP30, depending on the filter cap	on rialing.	
Communication Interface: USB type Micro-B 2.0 and RS485 (both in Modbus RTU)	inication Interface:	
Programming: NXperience software for Windows through USB	nming:	
Certifications: CE Mark / UKCA	ations:	

#### **Models**

Part Number	USB	Two Analog Out	Alarm Digital Out	Stainless Steel Probe (mm)	LCD	RS485
8804000000	✓	✓	✓			
8804000001	✓	✓	✓			✓
8804000101	✓	✓	✓		✓	✓
8804111000	✓	✓	✓	150 mm		
8804111001	✓	✓	✓	150 mm		✓
8804111101	✓	✓	✓	150 mm	✓	✓
8804121000	✓	✓	✓	250 mm		Z
8804121001	✓	✓	✓	250 mm		✓
8804121101	✓	✓	✓	250 mm	✓	<b>√</b> Ei
8804131000	✓	✓	✓	400 mm		u u
8804131001	✓	✓	✓	400 mm		
8804131101	✓	✓	✓	400 mm	✓	<b>→</b> 0330 <b>→</b> 0 000 000 000 000 000 000 000 000 000

