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

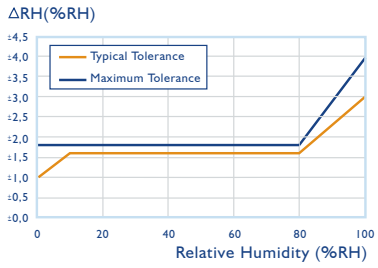
The RHT Climate transmitter incorporates high accuracy and stability sensors for relative humidity and temperature measurement and can transmit both signals through two analog outputs or RS485 Modbus RTU communication. The device allows complete parameters configuration through the USB interface, simulation of temperature and humidity, 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

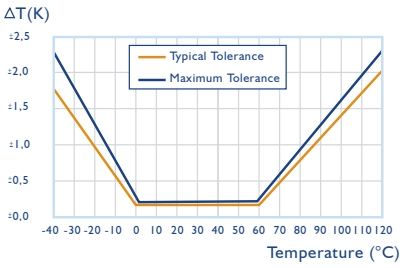
RHT Climate is suitable for general use in HVAC-R applications, that is, monitoring or climate control of environments or even environmental monitoring of industrial processes where robustness, accuracy and connectivity are required.

Accuracy of Measures and Operational Limits of Sensors

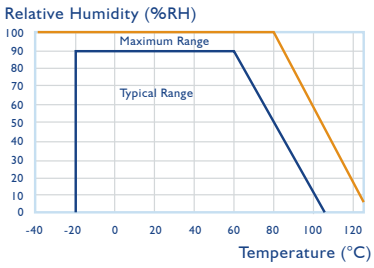
Relative Humidity Accuracy



Temperature Accuracy



Sensor Operation Conditions



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

- Dew Point Temperature
- Wet Bulb Temperature
- Absolute Humidity
- Frost Point Temperature
- Specific Enthalpy
- Partial Vapor Pressure
- Mixing Ratio

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We Measure, We Control, We Record

PLUG-IN Electronic GmbH • Am Sonnenlicht 5 • 82239 Alling • Tel.: +49 (0) 8141 3697-0 • info@plug-in.de • www.plug-in.de

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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
Measurement Resolution:	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:	Temperature:	± 0.2 K (0 °C to 60 °C)
	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 Vdc
	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

Part Number	USB	Two Analog Out	Alarm Digital Out	Stainless Steel Probe (mm)	LCD	RS485
8804000000	✓	✓	✓			
8804000101	✓	✓	✓		✓	✓
8804111000	✓	✓	✓	150 mm		
8804111001	✓	✓	✓	150 mm		✓
8804111101	✓	✓	✓	150 mm	✓	✓
8804121000	✓	✓	✓	250 mm		
8804121001	✓	✓	✓	250 mm		✓
8804121101	✓	✓	✓	250 mm	✓	✓
8804131000	✓	✓	✓	400 mm		
8804131001	✓	✓	✓	400 mm		✓
8804131101	✓	✓	✓	400 mm	✓	✓

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