

## HUMIDITY TRANSMITTERS RHT SERIES

Wall mount relative humidity transmitters for building automation systems



RHT relative humidity transmitters are engineered for building automation systems in the HVAC/R industry. The RHT measures relative humidity (rH), and temperature (T). RHT devices are available with large touchscreen display making configuration of the device quick and easy.

### RHT series devices include:

- Separate field configurable output for each measurement parameter (rH, T).
- Proportional output options including: voltage (0-10 V, 2-10 V) and current (4-20 mA).
- Offset feature enabling field calibration for each measurement parameter (rH, T)

### RHT series device options offer:

- 2" x 3" touchscreen display
- Field configurable relay for any of the two parameters
- Modbus configuration



## APPLICATIONS

RHT series devices are commonly used to monitor:

- humidity and temperature levels in offices, public spaces, hospitals, meeting rooms and classrooms
- humidity and temperature in various commercial applications
- humidity and temperature in HVAC/R environment

## MODEL SUMMARY

	RHT	
Description	Model	Product code
Relative humidity transmitter for room	RHT	301.002.001
- with display	RHT-D	301.002.002
- with relay and display	RHT-1R-D	301.002.004
- with Modbus configuration and display	RHT-MOD-D	301.002.003
- with Modbus configuration, relay and display	RHT-MOD-1R-D	301.002.005

# HUMIDITY TRANSMITTERS

## RHT SERIES

### SPECIFICATIONS

#### Performance

##### Measurement ranges:

Temperature: 0...50 °C  
Relative humidity: 0-100 %

##### Accuracy:

Temperature: <0.5 °C  
Relative humidity:  
±2...3 % at 0...50 °C and 10-90 % rH  
Total error band includes accuracy, hysteresis and temperature effect over 5...50 °C and 10-90% rH.

#### Technical Specifications

##### Media compatibility:

Dry air or non-aggressive gases

##### Measuring units:

°C and % rH

##### Measuring element:

Temperature: Integrated

##### Relative humidity:

Thermoset polymer capacitive sensing element

##### Environment:

Operating temperature: 0...50 °C  
Storage temperature: -20...70 °C  
Humidity: 0 to 95 % rH, non condensing

#### Physical

##### Dimensions:

Case: 99 x 90 x 32 mm

##### Weight:

150 g

##### Mounting:

3 screw holes slotted, 3.8 mm

##### Materials:

Case: ABS

##### Protection standard:

IP20

##### Display (Optional)

Touchscreen

Size: 77.4 x 52.4 mm

##### Electrical connections:

Power supply:

5-screw terminal block  
(24 V, GND, rH, T, NC)  
0.2-1.5 mm<sup>2</sup> (12-24 AWG)

Relay out:

3-screw terminal block  
(NC, COM, NO)  
0.2-1.5 mm<sup>2</sup> (12-24 AWG)

#### Electrical

Input:

24 VAC or VDC, ±10 %  
Current consumption: max 90 mA (at 24 V) +  
10 mA for each voltage output or 20 mA for  
each current output

Temperature output signal:

0-10 V, R>1 kΩ  
2-10 V, R>1 kΩ (optional voltage output, display required)  
4-20 mA, R<500 Ω

Relative humidity output signal:

0-10 V, R>1 kΩ  
2-10 V, R>1 kΩ (optional voltage output, display required)  
4-20 mA, R<500 Ω

Relay out:

SPDT Relay, 250 VAC / 30 VDC / 6 A  
Adjustable switching point and hysteresis

#### Conformance

Meets requirements for CE marking:  
EMC Directive 2014/30/EU  
RoHS Directive 2011/65/EU  
LVD Directive 2014/35/EU  
WEEE Directive 2012/19/EU

COMPANY WITH  
MANAGEMENT SYSTEM  
CERTIFIED BY DNV GL  
= ISO 9001 = ISO 14001 =



### HOW TO GENERATE A MODEL?

Example: RHT-1R-D	Product Series			
	RHT	Relative humidity transmitter, analog configurations		
	RHT-MOD	Relative humidity transmitter, Modbus configuration		
		Mounting		
		Wall mount		
		Relay		
		-1R	With relay	
			Without relay	
			Display	
			-D	With Display
			Without Display	
Model	RHT	-1R	-D	



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