

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

| Description | RHT | |
|--|--------------|--------------|
| | 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 mm² (12-24 AWG)

Relay out:

3-screw terminal block
(NC, COM, NO)
0.2-1.5 mm² (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 | |