

HUMIDITY TRANSMITTERS RHT-MOD Series

Wall mount humidity transmitters for building automation systems that use Modbus serial communication protocol



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

RHT-MOD series devices include:

- Separate field configurable Modbus output for each measurement parameter (rH and T)
- One analog output for selected measurement: voltage (0/2–10 V) and current (4–20 mA)
- Optional relay output

The versatility of the RHT series air quality transmitters ensures that the right product for your application is available.



APPLICATIONS

RHT-MOD 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 with Modbus configuration and display | RHT-MOD-D | 301.002.003 |
| - with relay | RHT-MOD-1R-D | 301.002.005 |

HUMIDITY TRANSMITTERS

RHT-MOD Series

SPECIFICATIONS

Performance

Measurement ranges:

Temperature: 0...50 °C
Relative humidity: 0–90 %

Accuracy:

Temperature: <0.5 °C
Relative humidity: ±4 % max @0...50 °C and 0–90 % 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: Pt1000
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

Touchscreen

Size: 77.4 x 52.4 mm

Electrical connections:

Power supply:
5-screw terminal block (24 V, GND)
12–24 AWG (0.2–1.5 mm²)

Relay out:
3-screw terminal block (NC, COM, NO)
12–24 AWG (0.2–1.5 mm²)

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

Relay out:

SPDT Relay, 250 VAC / 30 VDC / 6 A

Communication

Modbus RTU, over RS485

One analog output for selected media:
0/2–10 VDC, Load R minimum 1 kohm or 4–20 mA, maximum load 500 ohm

Conformance

Meets requirements for CE marking:
EMC Directive: 2014/30/EU
RoHS Directive: 2002/95/EC
WEEE Directive: 2012/19/EU



How to generate a model?

| Example: RHT-MOD-1R-D | Product Series | | | |
|--------------------------|---|--|----|--|
| | RHT | Relative humidity transmitter, analog configurations | | |
| RHT-MOD | Relative humidity transmitter, Modbus configuration | | | |
| | Mounting | | | |
| | | Wall mount | | |
| | Duct | Duct mount | | |
| | Relay (only for wall mount model) | | | |
| | -1R | With relay | | |
| | | Without relay | | |
| | Display | | | |
| | -D | With display | | |
| | | Without display | | |
| Model | RHT-MOD | -1R | -D | |