

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, T)
- Offset feature enabling field calibration for each measurement parameter (rH, T)
- One analog output for selected measurement: voltage (0/2-10 V) and current (4-20 mA)
- Optional relay output



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

	RHT	
Description	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: 0-100 %

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

Touchscreen

Size: 77.4 x 52.4 mm

Electrical connections:

Power supply:

5-screw terminal block

(24 V, GND)

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

Relay out:

SPDT Relay, 250 VAC / 30 VDC / 6 A

Adjustable switching point and hysteresis

One analog output for selected media:

0/2*-10 VDC, Load R minimum 1 kΩ

* (2-10 VDC display models only) or

4-20 mA, maximum load 500 Ω

Communication

Protocol: MODBUS over Serial Line

Transmission Mode: RTU

Interface: RS485

Byte format (11 bits) in RTU mode:

Coding System: 8-bit binary

Bits per Byte:

1 start bit

8 data bits, least significant bit sent

first

1 bit for parity

1 stop bit

Baud rate: selectable in configuration

Modbus address: 1-247 addresses selectable in configuration menu

Conformance

Meets requirements for CE marking:

EMC Directive 2014/30/EU

RoHS Directive 2002/95/EC

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:	Product Series			
RHT-MOD-1R-D	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-MOD	-1R	-D	