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

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 and10–90% 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)
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

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

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
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-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	