

HUMIDITY TRANSMITTERS RHT-MOD DUCT SERIES



Humidity transmitters with temperature output for duct that use Modbus serial communication protocol

RHT-MOD Duct is a relative humidity transmitter with temperature output installed in air ventilation duct. Illuminated display ensures easy readability also from a distance. The RHT-MOD Duct has a screwless lid and an easily adjustable mounting flange that make the installation of the device easy.

RHT-MOD Duct series devices include:

- Separate Modbus output for each measurement parameter (rH and T)
- Offset feature enabling field calibration for each measurement parameter (rH and T)
- Mounting flange
- Clear backlit display



APPLICATIONS

RHT Duct series devices are commonly used to monitor and control:

- Relative humidity and temperature levels of incoming and return air in ventilation system

MODEL SUMMARY

	RHT-MOD Duct	
Description	Model	Product code
Relative humidity transmitter for duct with Modbus configuration and display	RHT-MOD Duct-D	302.002.006

HUMIDITY TRANSMITTERS

RHT-MOD DUCT 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: NTC10K
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: 120 x 96 x 45 mm
Probe: L=188 mm, d=12 mm

Mounting:

With flange, adjustable 40...155 mm

Weight:

150 g

Materials:

Case: ABS
Cover: PC
Probe: ABS

Protection standard:

IP54

Electrical connections:

4 spring loaded terminals

Power supply:

(24 V and GND)
0.2-1.5 mm² (12-24 AWG)

Modbus RTU:

A and B line
0.2-1.5 mm² (12-24 AWG)

Electrical

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

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: 2011/65/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 Duct-D	RHT	Relative humidity transmitter, analog configurations		
RHT-MOD		Relative humidity transmitter, Modbus configuration			
		Mounting			
		Duct	Duct mount		
				Display	
				-D	With display
				Without display	
Model	RHT-MOD	Duct		-D	