

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, 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: 119 x 100 x 44.7 mm

Probe: L=188 mm, d=12 mm

Mounting:

With flange, adjustable 0...188 mm

Weight:

150 g

Materials:

Case: ABS

Cover: PC

Probe: ABS

Mounting flange: LLPDP

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		
			Wall mount	
Duct		Duct mount		
			Relay (only for wall mount model)	
		-1R	With relay	
			Without relay	
			Display	
		-D	With display	
			Without display	
Model		RHT	Duct	