



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. In addition to these measured values, RHT-MOD Duct calculates various parameters such as dew point, mixing ratio, enthalpy and absolute humidity. 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 all measured and calculated parameters (relative humidity, temperature, dew point, mixing ratio, enthalpy and absolute humidity).
- Offset feature enabling field calibration for measurement parameters 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: -30...80 °C, sensor
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 95.5 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
Mounting flange: LLPDP

Protection standard:

IP54

Electrical connections:

4 spring loaded terminals

Power supply:

(24 V and GND)
0.2-1.5 mm² (16-24 AWG)

Modbus RTU:

A and B line
0.2-1.5 mm² (16-24 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:	UKCA:
EMC:	2014/30/EU	S.I. 2016/1091
RoHS:	2011/65/EU	S.I. 2012/3032
WEEE:	2012/19/EU	S.I. 2013/3113

COMPANY WITH
MANAGEMENT SYSTEM
CERTIFIED BY DNV
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	