



HUMIDITY TRANSMITTERS RHT DUCT SERIES

Duct mount relative humidity transmitters for building automation systems

RHT 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 has a screwless lid and an easily adjustable mounting flange that make the installation of the device easy.

RHT Duct series devices include:

- Separate output for each measurement parameter (rH, T).
- Offset feature enabling field calibration for each measurement parameter (rH, T)
- Mounting flange

RHT Duct series device options offer:

- Clear backlit display
- Modbus configuration
- 4-20 mA proportional output



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

| Description | RHT Duct | | RHT Duct with mA output | |
|---|----------------|--------------|-------------------------|--------------|
| | Model | Product code | Model | Product code |
| Relative humidity transmitter for duct | RHT Duct | 302.002.001 | RHT-Duct-A | 302.008.005 |
| - with display | RHT Duct-D | 302.002.002 | RHT Duct-A-D | 302.008.006 |
| - with Modbus configuration and display | RHT-MOD Duct-D | 302.002.006 | | |

HUMIDITY TRANSMITTERS

RHT 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

(24 V, GND, rH, T)

0.2-1.5 mm² (12-24 AWG)

A-model:

6 spring loaded terminals

(24 V, GND, Voltage_rH, Voltage_T,

mA_rH, mA_T)

0.2-1.5 mm² (12-24 AWG)

Electrical

Supply voltage: 24 VAC or VDC ±10 %

Current consumption: max 90 mA (at 24 V) + 35 mA for each voltage output

Output signals:

0/2...5/10 VDC, Load R minimum 1 kΩ

Only A-model:

4...20mA, Load R maximum 500 Ω, minimum 20 Ω

Zero/Span output calibrated within ±0.08mA

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 Duct-D | RHT | Relative humidity transmitter, analog configurations | | |
| RHT-MOD | | Relative humidity transmitter, Modbus configuration | | | |
| | | Mounting | | | |
| Duct | | Duct mount | | | |
| | | Output | | | |
| | | | Voltage output | | |
| | | -A | Voltage and current output | | |
| | | | Display | | |
| | | -D | With display | | |
| | | | Without display | | |
| Model | RHT | Duct | | -D | |