

# AX-RHT-T3

RH & T Transmitter - Thimble

# AXIO



## Product Overview

The Axio AX-RHT-T3 is an RH&T Transmitter with a thimble mounted sensor that provides accurate Relative Humidity and Temperature measurements, with selectable current or voltage analogue outputs.

The units are extremely reliable, have excellent stability and a quick response time. The standard accuracy range is 3%.

Multiple material and finish options available for the thimble.

## Features

- 3% accuracy
- 24Vac/dc powered
- Different thimble material & finishes available
- 1.5 metre cable length (5 metre option available)
- 0-5/10Vdc and 4-20mA selectable output
- Sensor cable can be unplugged from the housing
- RAL colours and custom finishes available
- Can be mounted on a plate or directly in the surface

## Product Specifications

RH Accuracy	<b>RH:</b> ±3% typical <b>Temperature:</b> ±0.3°C typical
Sensor Type	Capacitive
Sensor Protection	PTFE filter
Long Term Stability	±1% RH at 50% RH in 5 years
Repeatability	±0.5% RH
Hysteresis	±1% of span max
Response Time	15 seconds @ 25°C, dependant on airflow
Supply Voltage	24Vac/dc (±15%)
Output (Voltage)	0-10Vdc or 0-5Vdc at 5mA maximum load
Output (Current)	4-20mA at 500 Ohms maximum load impedance
Output Range	<b>RH:</b> 0 to 95% <b>Temperature:</b> 0-70°C
Terminals	Rising clamp for 0.2-1.5mm <sup>2</sup> cable
Ambient Temperature Range	-10°C to 50°C, 0-95% RH
Dimensions/Weight/Protection	<b>Housing:</b> 105x112x55mm 140g, IP65 <b>Thimble:</b> 21x21x45mm (Thread 25mm)
Country of Origin	United Kingdom

## Order Codes

AX-RHT-T3	Thimble RH & T Sensor - 3% Accuracy - Plastic Thimble
-x	Thimble RH & T Sensor - 3% Accuracy - Plastic Thimble + Thermistor (See Overleaf)
-SS	Thimble RH & T Sensor - 3% Accuracy - Stainless Steel Thimble
-BR	Brass Thimble
-AL	Aluminium Thimble
-RAL	RAL Colour Thimble. Please Specify (MOQ Applies)
-PAN	Pantone Colour Thimble. Please Specify (MOQ Applies)

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## Sensor type selection

Replace part number suffix (-x) with one of the below thermistor types. Eg -T for Trend.

T	10K3A1 Trend	N1S	Ni1000 / 6180K
3K	3K3A1 Alerton	100	PT100a Serek
A	10K4A1 York, Andover	1K	PT1000a Cylon
H	20K6A1 Honeywell	J	2.2K Johnsons
D	30K3A1 Drayton	SAT1	Satchwell
50K	50K6 Priva	ST1	Staefa
N1K	Ni1000a Siemens	TAC	1K87A1 TAC

## Installation

The AX-RHT-T3 should be installed by suitably qualified technician in conjunction with any guidelines for the equipment it is to be connected to and any local regulations. Field wiring should be installed to satisfy the requirements set out by the manufacturer of the equipment that the module is being connected to. Anti-static precautions must be observed when handling these transmitters. The PCB contains circuitry that can be damaged by static discharge.

Transmitters should only be fitted to a system after airflow calibration has been carried out and preferably following full fan running of at least several days in order that the main contaminants have been removed from the system.

Select a location where dust & contaminants are at a minimum and which will give a representative sample of the prevailing air condition. The thimble will fit through a plate, or any aperture, with a hole diameter of 16.3mm and will affix with the provided black plastic nut.

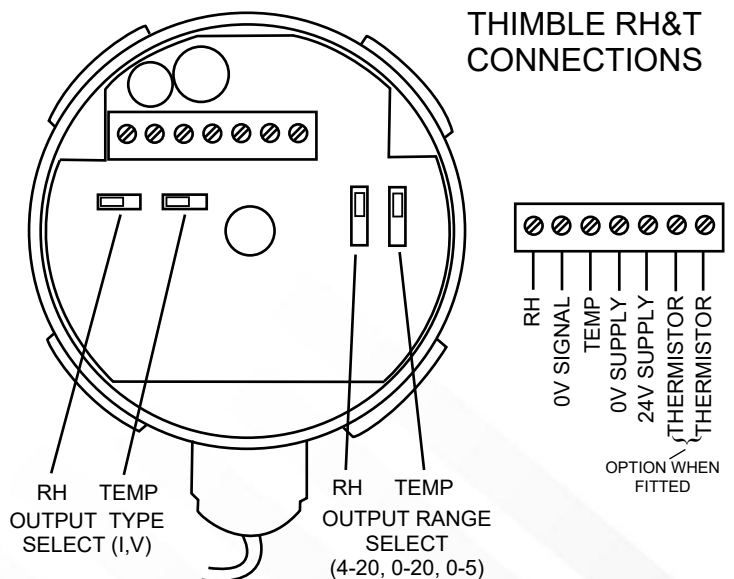
Mount the control box so that the cable can reach the unit without snagging, stretching or bending at sharp angles. Never cut the cable. Allow 3 minutes before checking functionality, and a further 30 minutes before pre-commissioning checks.

Chemical vapours at high concentration in combination with long exposure times will offset the sensor reading. This includes exposure during transportation before installation.

## Operation and connections

The transmitters should be connected to the controller using 0.5 to 1.5mm<sup>2</sup> cable. The units require a minimum of five wires for all operations. The use of shielded cable is optional but recommended for the highest noise immunity. Do not route signal wires in the same conduit with power cables as signal degradation may occur. Before applying power, ensure that the output is configured correctly. If using 0-10V or 0-5V output modes ensure that the load is of a suitably high impedance. If using 4-20mA output mode ensure the load has less than 500 Ohm impedance.

Remove power to the transmitter before changing between voltage and current output signal types. Use caution when changing jumper positions as not to damage the circuit board, any components or the sensing elements. The unit comes factory set for current output. To change the output signal to voltage, move the Output Type shorting jumper from position 'I' and place it in the 'V' position. Similarly, place the Output Range shorting jumper in the correct position for the required span (4-20mA, 0-20, 0-5V).



Every effort has been taken in the production of this data sheet to ensure accuracy. Axio do not accept responsibility for any damage, expense, injury, loss or consequential loss resulting from any errors or omissions. Axio has a policy of continuous improvement and reserves the right to change this specification without notice.