

AX-RHT-S

Room RH & T Transmitter

AXIO



Product Overview

The AX-RHT-S is a range of Room Relative Humidity & Temperature Transmitters. An integrated LCD display is available as an option. The analogue outputs are selectable for current or voltage. Wiring is simplified with connections all made on the back-plate, and a plug-in electronics housing.

Options for this range of sensors include the addition of various passive temperature sensors for most BMS systems.

Features

- 2.5% Accuracy as standard, 2% option available
- Optional 2-Line LCD display
- 0-5/10Vdc and 4-20mA selectable output
- Optional passive thermistor output for temperature

Product Specifications

| | |
|------------------------------|---|
| RH Accuracy | ±2.5% typical (20 to 80% RH at 25°C), ±2.0% option |
| Temperature Accuracy | ±0.3°C typical |
| Sensor Type / Protection | Capacitive / PTFE filter |
| Long Term Stability | ±1% RH at 50% RH in 5 years |
| Repeatability / Hysteresis | ±0.5% RH / ±1% of span max |
| Response Time | 15 seconds @ 25°C, but dependant on airflow |
| Supply Voltage | 24Vac/dc (±15%) (24Vdc only with 4-20mA output selected) |
| Output (Voltage) | 0-10Vdc, 0-5Vdc at 10mA maximum load |
| Output (Current) | 4-20mA at 500 Ohms maximum load (use on 24Vdc supply only) |
| Output Range - RH | 0 to 100% RH Non Condensing |
| Output Range - Temperature | -10°C to +40°C |
| Display option | 3 digit, 2 line, 6mm character height LCD display of RH and Temperature |
| Terminals | Rising clamp 0.5-1.5mm ² cable |
| Ambient Temperature Range | -10°C to 50°C, 0-95% RH |
| Enclosure: | Cool white. ABS UL94-5VA compliant |
| Dimensions, Weight & Ingress | 87 x 82 x 27mm, 75g, IP20 |
| Country of Origin | United Kingdom |

Order Codes

| | |
|------------|--|
| AX-RHT-S | Room RH & T Transmitter - 2 x analogue outputs, 2.5% accuracy |
| AX-RHT-SD | Room RH & T Transmitter with Display - 2 x analogue outputs, 2.5% accuracy |
| AX-RHT-S2 | Room RH & T Transmitter - 2 x analogue outputs, 2.0% accuracy |
| AX-RHT-SD2 | Room RH & T Transmitter with Display - 2 x analogue outputs, 2.0% accuracy |
| -x | Additional passive thermistor output. See Page 2 for options |

© Copyright Annicom. All Rights Reserved

Annicom Ltd

Unit 21, Highview, Bordon, Hampshire. GU35 0AX

Tel: +44 (0)1420 487788 Fax: +44 (0)1420 487799

Email: sales@annicom.com Website: www.annicom.com

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 range of sensors 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 sensor 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.

The unit should not be mounted where temperatures will exceed the ambient temperature range specified.

Allow 3 minutes after applying power before checking functionality, and allow a further 30 minutes before carrying out pre-commissioning checks.

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

Connections

Connections should be made using 0.5 to 1.5mm² cable. A minimum of four wires are required (Power, 0V supply Common, RH output, Temperature output) 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 transmitter output is configured correctly for the unit being supplied. 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.

Setup

Remove power to the transmitter before changing between voltage and current output signal type. Use caution when changing jumper positions so as not to damage the circuit board, any components or the sensing elements. The unit is factory set for current output. To change the output signal to voltage move the 2-position jumpers from 'I' position to the 'V' position. Place the 3-position jumpers in the correct position for the required span (4-20mA, 0-10V or 0-5V).

All units:

Ensure that the supply voltage is within the specified tolerances.

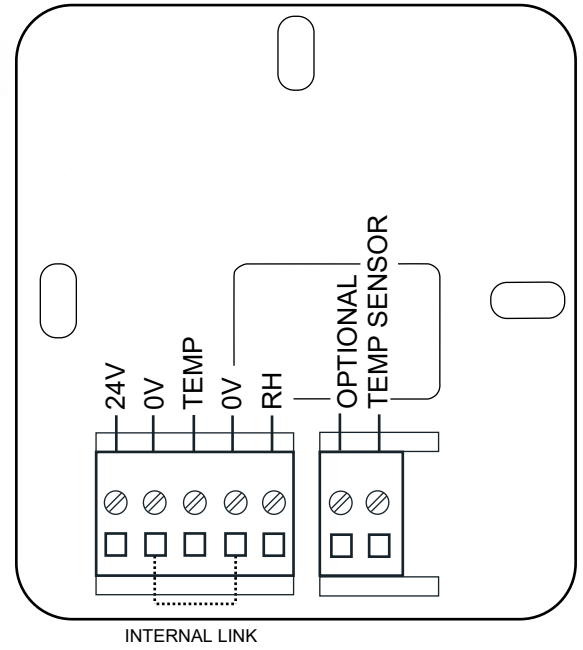
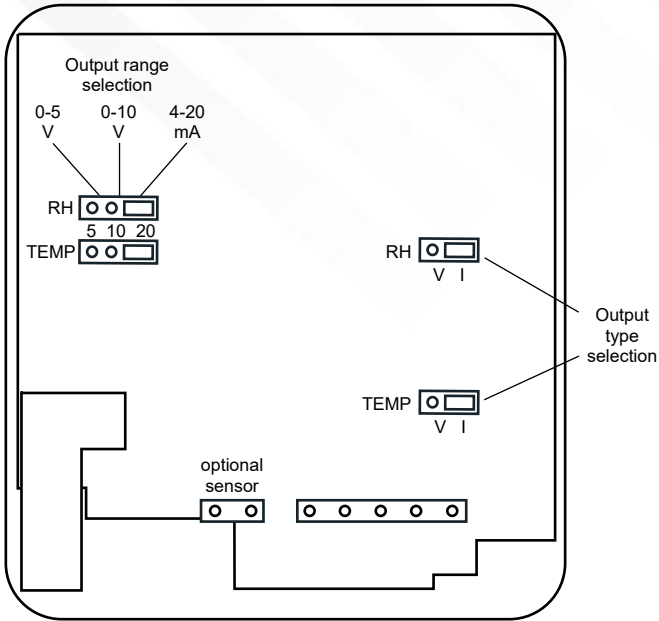
Display

In normal operation the top line of the display will show the relative humidity level as a percentage. The bottom line will show the temperature in °C.

If the display shows 'Inh' check the jumper and supply voltage settings. Note that current output is only permitted with 24Vdc supply.

If the display show 'Err' then the sensor is faulty.

Connections and setup



Dimensions

