



RHT-PROBE TEMPERATURE AND HUMIDITY SENSOR

MANUAL – V1.0x

INTRODUCTION

The RHT-Probe is a digital sensor for temperature and relative humidity compatible with N322-RHT and N323-RHT electronic thermostats.

The temperature and humidity sensor is protected by a polyamide capsule and has 3 or 6 meters long PVC cables.

SPECIFICATIONS

INPUT SENSOR: Humidity measurement

- Range:** 0 and 100 % (RH) (see Figure 1);
- Accuracy:** $\pm 3\%$ (typical, see Figure 1);
- Repeatability:** $\pm 0.1\%$ RH;
- Hysteresis:** $\pm 1\%$ RH;
- Linearity error:** $<< 1\%$ RH;
- Stability:** $< 1\%$ RH / year;
- Response time:** Around 8 s to reach 63 % of a fast input change. Valid at 25 °C and 1 m/s airflow.

INPUT SENSOR: Temperature

- Accuracy:** $\pm 0.5\text{ }^\circ\text{C}$ (typical, see Figure 1)
- Repeatability:** $\pm 0.1\text{ }^\circ\text{C}$
- Range:** -20 and 100 °C (-4 to 212 °F) (see Figure 1)
- Response time:** Up 30 seconds in slow moving air.

WARM-UP:..... 15 minutes

MEASUREMENT RESOLUTION:

- RH:**.....0.1 %
- T:**.....0.1 °C

OPERATING ENVIRONMENT:

Temperature.....-20 to 100 °C (-4 to 212 °F) (see Figure 1)

Relative Humidity.....0 to 100 % RH

HOUSING:

Protection: Sensor capsule IP40

Cable material: PVC

Cable length: 3 or 6 meters (not compatible with cable extensions).

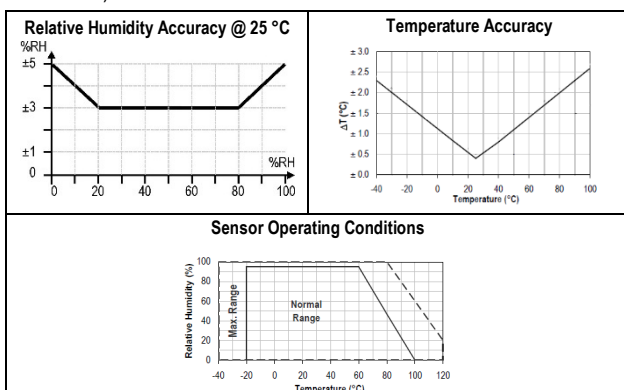


Figure 1 – Humidity and temperature accuracy

IMPORTANT

The sensor can be damaged or lose calibration if exposed to aggressive atmospheres with chemical agents. Hydrochloric Acid, Nitric Acid, Sulfuric Acid and Ammonia in high concentrations may damage the sensor. Acetone, Ethanol and Propylene Glycol may cause reversible measurement drifts.

Fine trimming in the indication of RH and temperature are available at the parameters **DFH** and **DFE** at the parameter's configuration level.

ELECTRICAL WIRING

The figure below indicates the sensor connection:

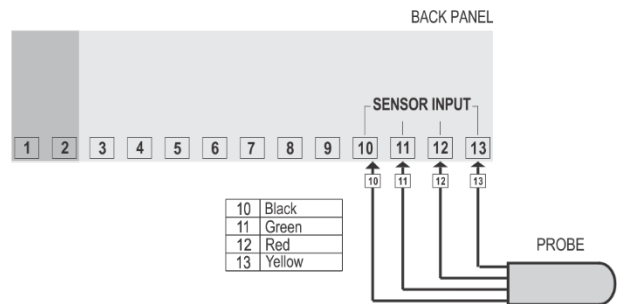


Figure 2 – Electrical connections

RECOMMENDATIONS FOR INSTALLATION

Humidity signal conductors must go through the plant system separately from output and power supply connectors. If possible, in grounded conduits.

WARRANTY

Warranty conditions are on our website www.novusautomation.com/warranty.