

STH102

Temperature & Humidity sensor



USER MANUAL

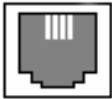
Technical Features

- For indoor usage
- Low cost digital temperature and humidity sensor element, fully calibrated, excellent long term stability, 12 bit resolution
- Calibration Certification
- Head's dimension 43 x 15 x 8 mm
- 2 m long UTP cable with connector RJ11
- Temperature sensor resolution 0.01 °C
- Humidity sensor resolution 0.05% RH
- Temperature measuring accuracy typical ± 0.3 °C
- Humidity measuring accuracy typical $\pm 2.0\%$ RH
- Operating temperature range -40°C to +85°C
- Operating humidity range 0 – 100% RH*, non-condensing
- Response time typical – 8 sec.
- Communication 1-Wire bus (Data, GND, +5V)

* Recommended humidity operating range is 20% to 80% RH (non-condensing) over -10 °C to 60 °C. Prolonged operation beyond these ranges may result in a shift of sensor reading, with slow recovery time.

Installation Instructions

The sensor has 4-wires which are connected to a compatible IP sensors controller.

 1 4 RJ11	1	GND(Green/White)
	2	1 wire Data(Green)
	3	GND(Brown/White)
	4	+5V(Brown)

All IP sensors controllers can support "1-Wire" sensors. On every sensor on the bus is assigned a unique serial number which is used to address the sensor during communication. Multiple sensors can be connected in two ways: directly connected (star topology) or "daisy chained" (linear topology). Many factors can determine the maximum length of the cable, including the sensor network topology, the number of sensors and ambient electromagnetic noise. Combined cable lengths to all sensors of 50 m using Cat 5e cable have been successful. However, due to the uniqueness of installation environments, results may vary. We recommend to do test in the desired environment before making a permanent installation. Cable capacitance generally limits the length. A linear (daisy chain) topology will minimize signal reflections, providing a more reliable connection and will allow longer cable length than a star topology. The 1-Wire bus is "single-ended" and has no intrinsic noise protection. If the cable is routed near power lines is susceptible to interference from fluorescent fixtures, motors or other noise sources. Keep the cable wiring short and avoid routing it near other electrical equipment.