TeraCom-TSH202

TeraCom TSH202
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Introduction

TeraCom TSH202 is humidity and temperature sensors with a 1-Wire interface. The device integrates basic elements plus signals processing, and provides a fully calibrated digital output. A unique capacitive element is used for measuring relative humidity while the temperature is measured by a band gap sensor. Both sensors are seamlessly coupled to a 12-bit analog to digital converter. This results in superior signal quality and fast response time.

Applications

- Server room and data centers monitoring.
- Environmental quality monitoring and assessment.
- Humidity and temperature monitoring in building management systems.
- Humidity and temperature monitoring for mobile operator facilities, vineyards, greenhouses, etc.

Technical parameters

NAME	DESCRIPTION
Interface	1-Wire Interface
Wiring	White = 1-wire signal, **Red** = 1-wire power, **Black** = Ground
* Operating temperature	-20 ºC to +60 ºC
* Operating humidity	10 to 90%RH
Tolerance typ.	±3.0 %RH (20 to 80 %RH), ±0.4 °C (-10 to +60°C)
Tolerance max.	±5.0 %RH (10 to 90) %RH, ±1.0 °C (-20 to +60°C)
Power supply/consumption	4.0 to 5.5 VDC, 5 mA
Dimensions	45 x 16 x 10
Cable length	1 m

* Recommended 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

- TSH202 will be connected with FM devices via 1-wire interface.
- To connect the 1-wire TSH202 sensor you have to make sure to connect 3 PINs of the sensor to the PINs of your device correctly.

FMB120-2x6 socket pinout

FMC130-2x6 socket pinout

Connections

We tested TSH202 sensor with FMB120 & FMC130 devices and connections will be as per following

sequence.

TSH202 wire color	Connections
Red	+VDD (+4.0 to +5.5V) 1-wire power of FM device
White	1-wire signal of FM device
Black	Ground of FM device

Configuration

1. Use **Firmware ver.03.27.13.Rev.480.e** and above.
2. Use **Teltonika.Configurator_1.7.30_E.THS202_R.4** and above.

With FMB120:

https://wiki.teltonika-gps.com/view/File:TSH202-FMB120.mp4

With FMC130:

https://wiki.teltonika-gps.com/view/File:TSH202-FMC130.mp4

**** The used Firmware is tested with TSH202v3 model.***

Demonstration in Flespi platform

Flespi: Open Flespi application → Select Device → Select Logs & Messages → Select the record interval → Tap to see all information.

With FMB120:

https://wiki.teltonika-gps.com/view/File:FMB120_TSH202-server.mp4

With FMC130:

https://wiki.teltonika-gps.com/view/File:FMC130_TSH202-server.mp4

Downloads

Manual & Documentation

1-Wire humidity and temperature sensor TSH202 brochure(v1.10)