TeraCom-TSH202

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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 °C to +60 °C |
| * 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

| 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 \rightarrow Select Device \rightarrow Select Logs & Messages \rightarrow Select the record interval \rightarrow 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)