TTJ Temperature sensor

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One of the implemented features for fleet management devices is a 1-Wire data protocol, which enables the connection of temperature sensors. It is a perfect accessory for temperature monitoring.

TTJ IS A SOLUTION FOR FLEET MANAGEMENT TRACKER IN FOLLOWING CASES:

1. Thermostatic controls – maintain temperature near a desired set point.
2. Thermally sensitive system – receive alerts when temperature enters or leaves pre-defined value.
3. Consumer products – be assured that the goods which you are delivering will maintain high quality.

Description

The TTJ Temperature sensor provides 9-bit Celsius temperature measurements and has an alarm function with nonvolatile user-programmable upper and lower trigger points. The TTJ communicates over a 1-Wire bus that by definition requires only one data line (and ground) for communication with a central microprocessor. It has an operating temperature range of –55°C to +125°C and is accurate to ±0,5°C over the range of –10°C to +85°C. In addition, the TTJ can derive power directly from the data line ("parasite power"), eliminating the need for an external power supply. Each TTJ has a unique 64-bit serial code, which allows multiple TTJ sensors to function on the same 1-Wire bus. Thus, it is simple to use one microprocessor to control many TTJs distributed over a large area. Applications that can benefit from this feature include HVAC environmental controls, temperature monitoring systems inside buildings, equipment, or machinery, and process monitoring and control systems.

TTJ technical characteristics

- Supported by [FMB110](#), [FMB120](#), [FMB122](#), [FMB125](#), [FMU125](#), [FMM125](#), [FMC125](#), [FMB130](#), [FMU130](#), [FMC130](#), [FMM130](#), [FMB140](#), [FMB202](#), [FMB204](#), [FMB640](#), [FMC640](#), [FMM640](#)
- Unique 1-Wire® Interface Requires Only One Port Pin for Communication.
- Each Device has a Unique 64-Bit Serial Code Stored in an On-Board ROM.
- Multidrop Capability Simplifies Distributed Temperature Sensing Applications.
- Requires No External Components.
- Can Be Powered From Data Line. Power Supply Range is 3.0 V to 5.5 V.
- Measures Temperatures from -55° C to +125° C (-67° F to +257° F) ±0.5° C Accuracy from -10° C to +85° C.
- 9-Bit Thermometer Resolution.
- Converts Temperature in 750 ms (max).
- User-Definable Nonvolatile (NV) alarm settings.
- Alarm Search Command Identifies and Addresses Devices Whose Temperature is Outside Programmed Limits (Temperature Alarm Condition).

- Applications Include Thermostatic Controls, Industrial Systems, Consumer Products, Thermometers, or Any Thermally Sensitive System.
- Recommendations for cabling: max. cable length 15 meters, category – CAT5. Length over 20 meters increases measuring precision error.

TTJ sensor pin-out and connection diagrams:
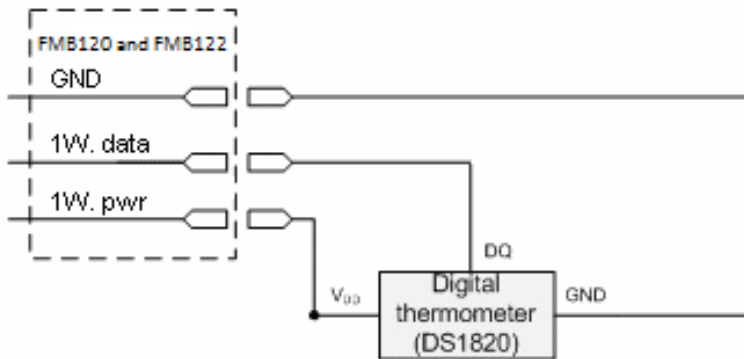
Configuration
On the FMB unit, TTJ sensor parameters are configured as I/O element parameters: *Dallas temperature* and *Dallas temperature ID*.

The configuration procedure is as other I/O element (for example: [FMB120_I/O_settings](#))

External links

https://teltonika-gps.com/product/ttj