



Temperature Sensor

Product Datasheet WT19-Ex

The WT19-Ex is a digital temperature sensor for tank containers and tank wagons. The WT19-Ex is a non-intrusive sensor used to monitor the temperature of a tank's content and sends the measured temperature values wirelessly to an IMT communication and location terminal (CLT/HCT), which in turn transmits the sensor data to the IMT platform back-end where it can be accessed remotely via our web application.

Additionally, the WT19-Ex has a large LCD display which shows the temperature in °C at all times and in °F for 5 seconds upon pressing a button underneath the display. The sensor not only transmits the temperature to the IMT communication and location terminal, but also stores the measured values in an internal buffer, which allows data to be read out locally via the IMT UD18 USB dongle. The sensor can be updated with new firmware wirelessly (OTA) via the IMT communication and location terminal, no matter where the container or wagon is, at any time of the day.

The WT19-Ex sensor is ATEX IIC certified and can therefore be used in the transportation of hazardous and non-hazardous liquids in all sectors: (Petro)Chemical, Pharmaceutical, Food, etc.

The WT19-Ex measures temperature with a wired PT1000 probe that is attached directly to the tank wall or placed inside an immersion sleeve. The WT19-Ex with the LCD display is mounted in the cladding of the tank container or rail wagon.

The WT19-Ex saves the temperature values to an internal memory with a capacity of 2 years.



The temperature values are displayed in the IMT web application and can also be accessed via IMT's open and free API, so it's easy to integrate the IMT solution into any pre-existing TMS (transportation management system). Status changes (e.g. exceeding temperature thresholds) are events and as such can serve as a trigger for alert notifications.

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INPUT AND DISPLAY

- **Temperature range:** -50 °C to +260 °C
- **Temperature sensor:** PT 1000 Class A probe
- **Fahrenheit button:** shows temperature in Fahrenheit for 5 seconds.
- **Accuracy:** +/- 0.3 °C
- **Calibration:** no calibration, IMT patented
- **Sample interval:** 1 minute
- **Cable length:** 1.5 m, other lengths available on request
- **Display:** 4 digit 7 segment LCD
- **Display resolution:** 0.1 °C
- **Battery life:** 10 years
- **RF transmitter:** 2.4 GHz RF transmitter for connection to CLT or HCT. Firmware is over-the-air reprogrammable via the CLT or HCT. ITSS IF2 ready



MECHANICAL DATA

- **Dimensions:** ø 130 x 50 mm
- **Weight:** 290 g
- **Enclosure:** durable glass filled nylon housing, polycarbonate front panel with customizable layout
- **Fitting:** 4 fixing holes for pop rivet fixing
- **Operation temperature:** -40 °C to +55 °C
- **Protection class:** IP69K rated front panel, IP67 rated casing, impact resistant LCD window, IP67 rated PT1000 probe

APPROVALS

- ATEX Z1 T4 certification
- Intrinsic safety explosion protection II 2G Ex ib IIC T4 Gb
- Certified operating temperature in ATEX: -40 °C to +55 °C
- Compliant with EN 60079-0: 2018
- Compliant with EN 60079-11: 2012
- DEKRA 20ATEX0015 X
- Directive 2014/34/EU



LOGGING DATA

- **Memory:** 8 MByte memory chip
- **Log capacity:** 2 years temperature logging
- **Logging interval:** 10 minutes
- **Uploading data:** logged data can be uploaded:
 - remotely via the IMT CLT or HCT
 - locally via IMT UD18 USB dongle

IMT IS THE WORLD LEADING INDEPENDENT TELEMATICS SOLUTION PARTNER FOR THE TANK CONTAINER AND RAIL WAGON INDUSTRY

Intermodal Telematics offers a full range of smart sensors and a web-based application with extensive functionality, for all involved parties like fleet owners, lessors and shippers. We provide a complete solution for asset management and product monitoring to increase control, efficiency, product quality and safety.

IMT is by far the biggest supplier of telematics technology for the tank container sector and a major player in the railway business. With our team of 50 hardware, firmware and software engineers and our own in-house assembly line, IMT assures you the best cutting edge telematics solutions with the highest quality. We set the standard in smart sensor technology.

IMT's sensors and platform:

- ✓ Improve operating efficiencies
- ✓ Secure quality of cargo
- ✓ Provide track history of all relevant data of each container / wagon;
location, temperature, pressure, full-empty, heating, load-unload, ...

GET IN TOUCH, WE WOULD LOVE TO HAVE AN OPEN DISCUSSION ABOUT WHAT WE CAN DO FOR YOU.



Intermodal Telematics BU

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