TELTONIKA

FMT100

Special and small waterproof tracker

Quick Manual
v1.2

Know your device
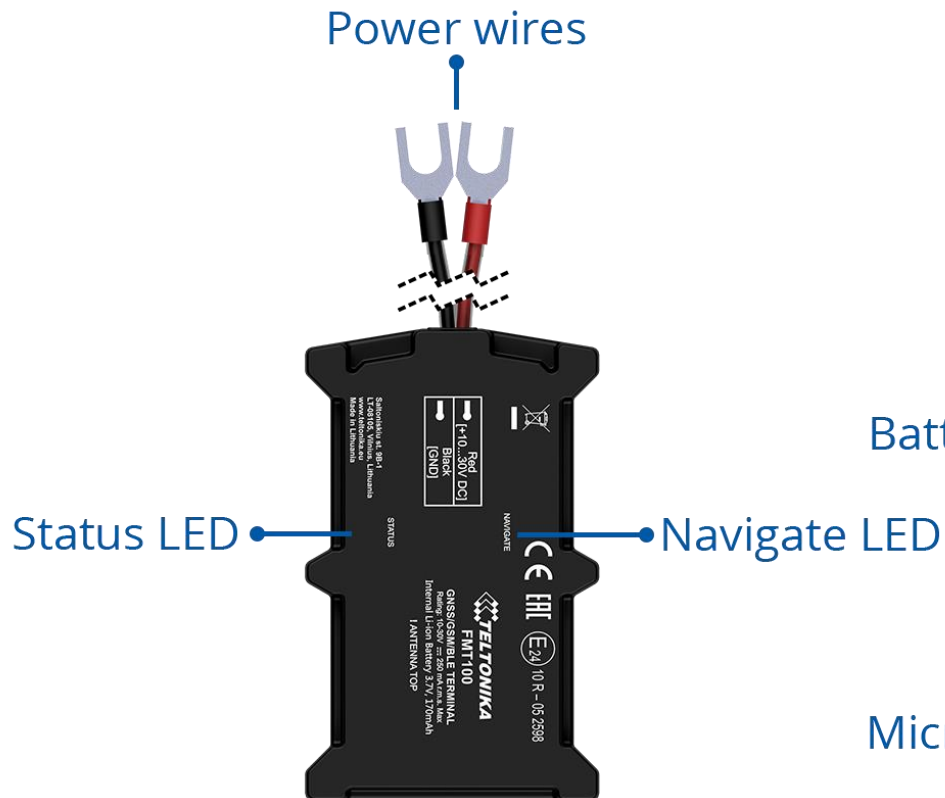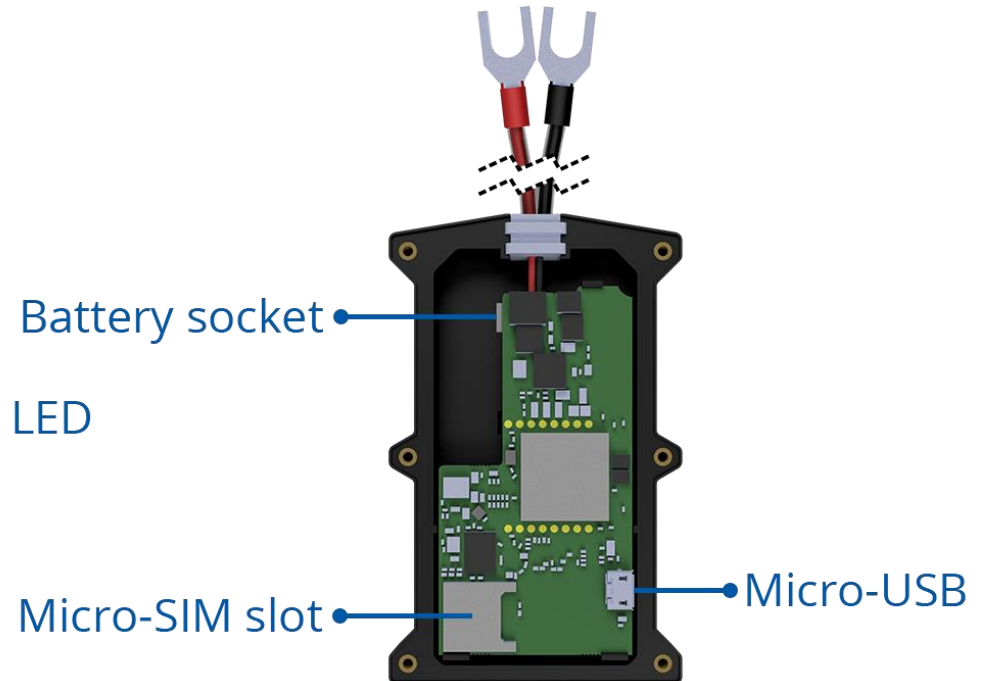
Figure 1 FMT100 device view

Pinout

Table 1 Pinout

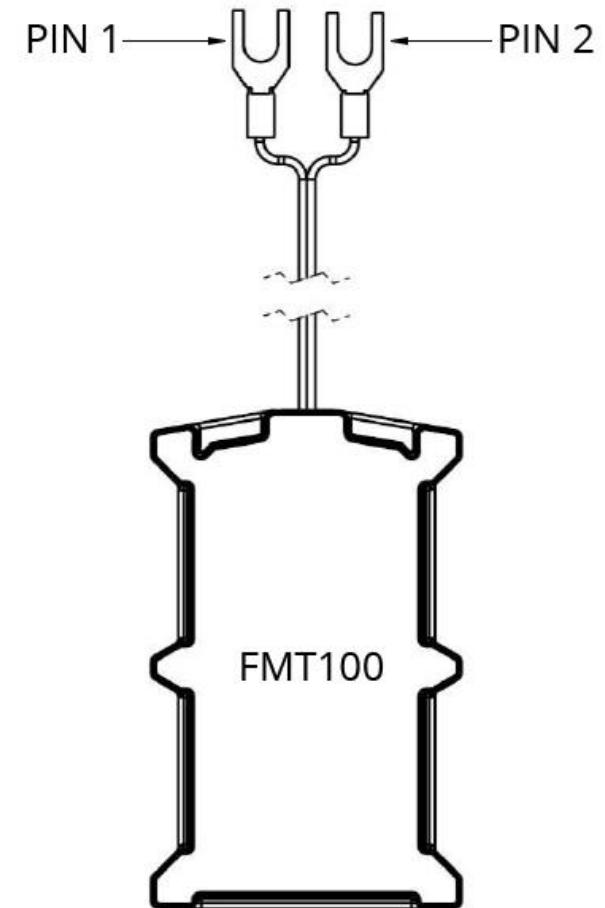| PIN NUMBER	PIN NAME	DESCRIPTION
1	**VCC** (10-30)V DC (+)	**(Red)** Power supply (+10-30 V DC)
2	**GND** (-)	**(Black)** Ground

Figure 2 FMT100 pinout

Mounting recommendations

- Device fastening
  - Locate the battery in your vehicle. If present remove the battery cover to access the battery.
  - There is a double sided tape on the back of the device (Figure 12 Double sided tape on the back), use it to attach the device on the battery, so that the GNSS antenna and LEDs indicators are facing up (Figure 13 Example of device mounting).

- Connecting power wire
  - Device power wire is designed to be directly connected to the positive terminal fastener of the vehicle battery (Figure 13 Example of device mounting).

- Connecting ground wire
  - Device ground wire is designed to be directly connected to the negative terminal fastener of the vehicle battery (Figure 13 Example of device mounting).
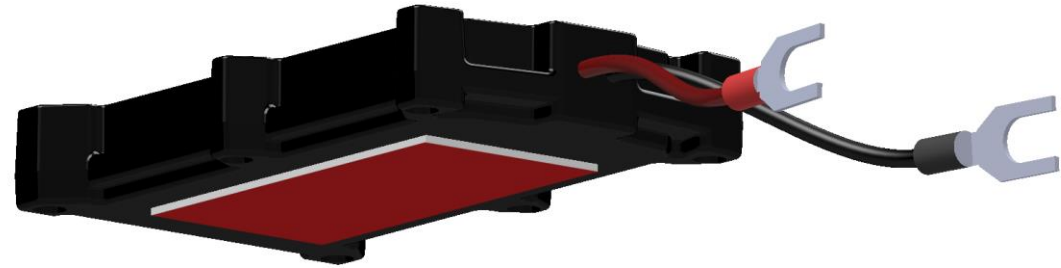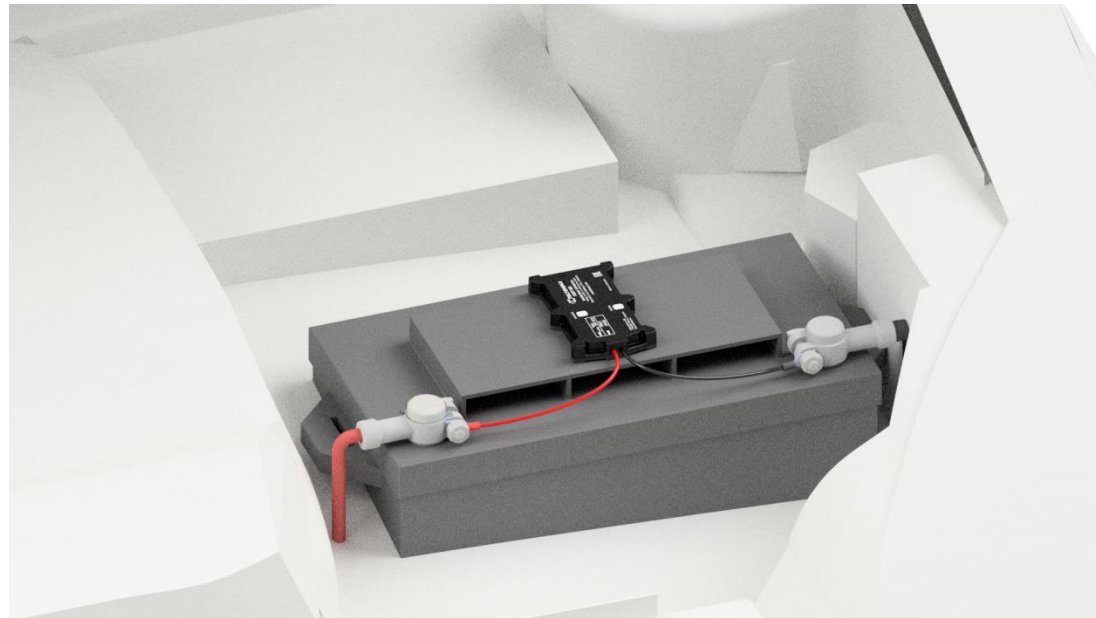

Figure 12 Double sided tape on the back

Figure 13 Example of device mounting

LED indications

Characteristics

Basic characteristics

Table 3 Navigation LED indications

BEHAVIOUR	MEANING
Permanently switched on	GNSS signal is not received
Blinking every second	Normal mode, GNSS is working
Off	GNSS is turned off because: Device is not working or Device is in sleep mode
Blinking fast constantly	Device firmware is being flashed

Table 4 Status LED indications

BEHAVIOUR	MEANING
Blinking every second	Normal mode
Blinking every two seconds	Sleep mode
Blinking fast for a short time	Modem activity
Off	Device is not working or Device is in boot mode

Table 5 Basic characteristics

MODULE	
Name	TM2500
Technology	GSM, GPRS, GNSS, BLUETOOTH
GNSS	
GNSS	GPS, GLONASS, GALILEO, BEIDOU, SBAS, QZSS, DGPS, AGPS
Receiver	33 channel
Tracking sensitivity	-161 dBM
Accuracy	< 3 m
Hot start	< 1 s
Warm start	< 25 s
Cold start	< 35 s
CELLULAR	
Technology	GSM
2G bands	Quad-band 850 / 900 / 1800 / 1900 MHz
Data transfer	GPRS Multi-Slot Class 12 (up to 240 kbps), GPRS Mobile Station Class B
Data support	SMS (text/data)

POWER

Input voltage range	10 - 30 V DC with overvoltage protection
Back-up battery	170 mAh Li-Po battery 3.7 V (0.63 Wh)
Power consumption	At 12V < 2,5 mA (Ultra Deep Sleep) At 12V < 5 mA (Deep Sleep) At 12V < 5,5 mA (Online Deep Sleep) At 12V < 6,5 mA (GPS Sleep) At 12V < 24 mA (nominal)

BLUETOOTH

Specification	4.0 + LE
Supported peripherals	Temperature and Humidity sensor, Headset, OBDII dongle, Inateck Barcode Scanner

INTERFACE

GNSS antenna	Internal High Gain
GSM antenna	Internal High Gain
USB	2.0 Micro-USB
LED indication	2 status LED lights
SIM	Micro-SIM
Memory	128MB internal flash memory

PHYSICAL SPECIFICATION

Dimensions	92,5 x 57,6 x 14 mm (L x W x H)
Weight	63 g

OPERATING ENVIRONMENT

Operating temperature (without battery)	-40 °C to +85 °C
Storage temperature (without battery)	-40 °C to +85 °C
Operating humidity	5% to 95% non-condensing
Ingress Protection Rating	IP65
Battery charge temperature	0 °C to +45 °C
Battery discharge temperature	-20 °C to +60 °C
Battery storage temperature	-20 °C to +45 °C for 1 month -20 °C to +35 °C for 6 months

FEATURES

Sensors	Accelerometer, gyroscope
Scenarios	Green Driving, Over Speeding detection, Jamming detection, GNSS Fuel Counter, Excessive Idling detection, Unplug detection, Towing detection, Crash detection, Auto Geofence, Manual Geofence, Trip
Sleep modes	GPS Sleep, Online Deep Sleep, Deep Sleep, Ultra Deep Sleep
Configuration and firmware update	FOTA Web, FOTA, Teltonika Configurator (USB, Bluetooth), FMBT mobile application (Configuration)
SMS	Configuration, Events, Debug
GPRS commands	Configuration, Debug
Time Synchronization	GPS, NITZ, NTP
Fuel monitoring	OBDII dongle
Ignition detection	Accelerometer, External Power Voltage, Engine RPM (OBDII dongle)

Electrical characteristics

Table 6 Electrical characteristics

CHARACTERISTIC DESCRIPTION	VALUE			
	MIN.	TYP.	MAX.	UNIT
SUPPLY VOLTAGE				
Supply Voltage (Recommended Operating Conditions)	+10		+30	V

Safety information

This message contains information on how to operate FMT100 safely. By following these requirements and recommendations, you will avoid dangerous situations. You must read these instructions carefully and follow them strictly before operating the device!

- The device uses a 10 V...30 V DC power supply. The nominal voltage is 12 V DC. The allowed range of voltage is 10 V...30 V DC.
- To avoid mechanical damage, it is advised to transport the device in an impact-proof package. Before usage, the device should be placed so that its LED indicators are visible. They show the status of device operation.
- Before unmounting the device from vehicle, ignition **MUST be OFF**.

Do not disassemble the device. If the device is damaged, the power supply cables are not _isolated_ or the isolation is damaged, DO NOT touch the device before unplugging the power supply.

All wireless data transferring devices produce interference that may affect other devices which are placed nearby.

The device must be connected only by qualified personnel.

The device must be firmly fastened in a predefined location.

The programming must be performed using a PC with autonomic power supply.

The device is susceptible to water and humidity if the device housing is not properly closed.

**Installation and/or handling during a lightning storm is prohibited.**

Risk of explosion if battery is replaced by an incorrect type. Dispose of used batteries according to the instructions.

Battery should not be disposed of with general household waste. Bring damaged or worn-out batteries to your local recycling center or dispose them to battery recycle bin found in stores.

Certification and Approvals

- **FMT100 CE / RED**
- **FMT100 EAC**
- **FMT100 REACH**
- **FMT100 IP Rating**
- **FMT100 Declaration of IMEI assignment**
- **FMT100 Declaration of device operation temperature**
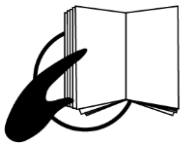
This sign on the package means that it is necessary to read the User's Manual before your start using the device. Full User's Manual version can be found in our Wiki.

This sign on the package means that all used electronic and electric equipment should not be mixed with general household waste.

Hereby, Teltonika declare under our sole responsibility that the above described product is in conformity with the relevant Community harmonization: European Directive 2014/53/EU (RED).

Warranty

TELTONIKA guarantees its products to be free of any manufacturing defects for a period of **24 months**. With additional agreement we can agree on a different warranty period, for more detailed information please contact our sales manager.

Contact us teltonika.lt/company/contacts

All batteries carry a reduced 6 month warranty period.

If a product should fail within this specific warranty time, the product can be:

- Repaired
- Replaced with a new product
- Replaced with an equivalent repaired product fulfilling the same functionality
- TELTONIKA can also repair products that are out of warranty at an agreed cost.

Warranty Disclaimer

TELTONIKA PRODUCTS ARE INTENDED TO BE USED BY PERSONS WITH TRAINING AND EXPERIENCE. ANY OTHER USE RENDERS THE LIMITED WARRANTIES EXPRESSED HEREIN AND ALL IMPLIED WARRANTIES NULL AND VOID AND SAME ARE HEREBY EXCLUDED. ALSO EXCLUDED FROM THIS LIMITED WARRANTY ARE ANY AND ALL INCIDENTAL OR CONSEQUENTIAL DAMAGES INCLUDING BUT NOT LIMITED TO, LOSS OF USE OR REVENUE, LOSS OF TIME, INCONVENIENCE OR ANY OTHER ECONOMIC LOSS.

More information can be found at teltonika.lt/warranty-repair