

# TFT100 General description

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Small, professional and waterproof tracker for e-forklifts and e-scooters with internal high gain GNSS/GSM antennas, Bluetooth® wireless technology, high capacity internal Li-Ion battery and 10-97 V power supply range for integration variety.

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## Package contents

The TFT100 device is supplied to the customer in a cardboard box containing all the equipment that is necessary for operation. The package contains:

- TFT100 device;
- Power supply and communication cable;
- Integrated Li-ion battery 3.7 V, 1800 mAh for TFT100 device;
- USB cable (optional).

## Basic characteristics

GSM / GPRS / GNSS features:

- Teltonika [TM2500](#) quad band module (GSM 850 / 900 / 1800 / 1900 MHz);
- GPRS Multi-Slot class 12 (up to 85.6 kbps);
- SMS (text, data);
- Integrated GNSS receiver;
- Up to -165 dBm GNSS receiver sensitivity.

Hardware features:

- 128 MB internal Flash memory;
- Built-in movement sensor;
- Integrated Li-ion battery 3.7 V, 1800 mAh for TFT100 device;
- Internal High Gain GSM antenna;
- Internal High Gain GNSS antenna.

Interface features:

- Power supply: 10 ... 97 V;
- USB port;
- 1 x AIN1/DIN1;
- 1 x AIN2/DIN2;
- 1 x DOUT1/DIN3 (selectable in configurator);
- 1 x DOUT2/DIN4 (selectable in configurator);
- CAN / RS485 / RS232 / UART communication wires (depending on chosen TFT100 modification);
- 1-Wire®;
- 2 LED's indicating device status.

#### Special features:

- High Quality track even in high density urban canyon;
- Ready for harsh environment;
- Any element event triggers (external sensor, input, speed, temperature, etc.);
- Highly configurable data acquisition and sending;
- Multiple Geo-fence areas;
- Sleep mode;
- Deep sleep mode;
- Configurable scenarios available;
- Real-time process monitoring;
- Authorized number list for remote access;
- Firmware update over GPRS, BT or USB port;
- Configuration update over GPRS, SMS or USB port;
- TCP/IP or UDP/IP protocol support;
- >500 000 record storing;
- Overvoltage protection;
- Bosch CAN Powertrain & Askoll CAN protocol support.

<b>Description</b>	<b>Voltage</b>	<b>Duration</b>
Normal operation	+10 ... +97 V	Unlimited
Protection turns on, device turns off	98.43 V	Unlimited
Maximum voltage	< 98 V	Unlimited
Maximum voltage impulse	135 V	10 ms

## Technical features

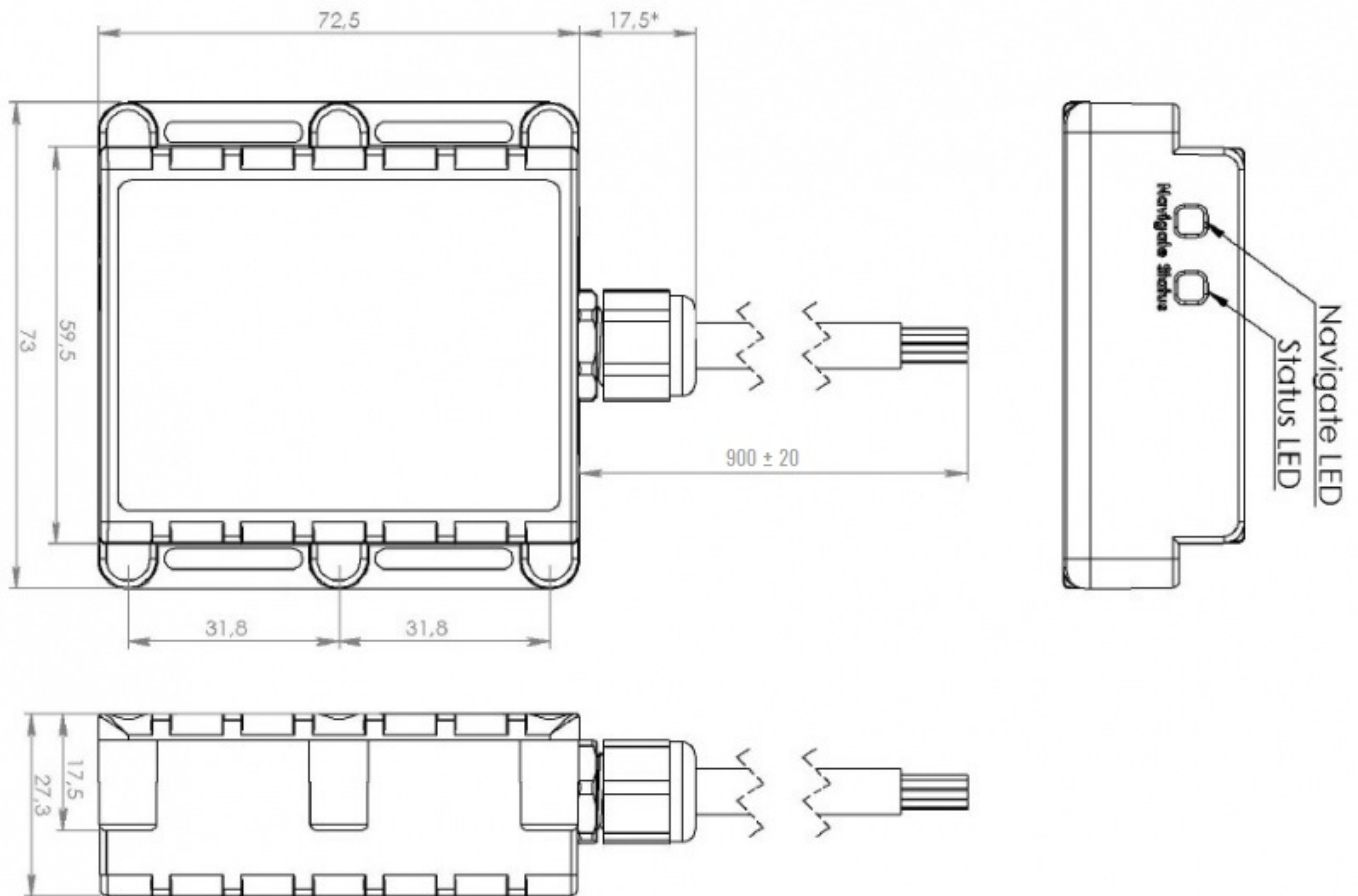
<b>Part name</b>	<b>Physical specification</b>
Navigation indication	LED
Modem indication	LED
USB	Mini USB socket

GNSS Internal GNSS antenna  
 GSM Internal GSM antenna

Technical details		Description					
Dimensions	72,5 x 73 x 27,3 mm (L x W x H)						
Weight (full assembly)	169 g						
Current consumption:	<b>TFT100-22</b>	<b>12V</b>	<b>48V</b>	<b>97V</b>	<b>DOUT</b>	<b>1-Wire</b>	<b>Interface (CAN/RS4/RS2/UART)</b>
	<b>GPRS ON (data sending 1 sec)</b>	68.8mA	18mA	11.2mA	ON	ON	ON
	<b>GPRS ON (data sending 30 sec)</b>	39.4mA	11.8mA	7.88mA	ON	ON	ON
	<b>GPRS OFF</b>	33.4mA	10.8mA	7.45mA	ON	ON	ON
	<b>GPS Sleep, GPRS OFF</b>	19.5mA	6.47mA	6.29mA	ON	ON	ON
	<b>Online Deep Sleep, GPRS OFF</b>	12.1mA	4.57mA	4.48mA	ON	ON	ON
	<b>Deep Sleep, GPRS OFF</b>	11.9mA	4.5mA	4.44mA	ON	ON	ON
	<b>Ultra Deep Sleep, GPRS OFF</b>	7.97mA	3.48mA	3.92mA	<b>OFF</b>	<b>OFF</b>	<b>OFF</b>

<b>TFT100-22, 3.7V 1800 mAh internal Li-ion battery</b>	Average current consumption	Approximate battery life
<b>GPRS ON, data sending 1s</b>	130mA	14h
<b>GPRS ON, data sending 30s</b>	85.6mA	21h
<b>GPRS OFF</b>	76.7mA	24h
<b>GPS sleep mode, GPRS OFF</b>	41.4mA	43h
<b>Online Deep Sleep mode, GPRS OFF</b>	24.9mA	72h
<b>Deep Sleep mode, GPRS OFF</b>	24.3mA	74h
<b>Ultra Deep Sleep mode, GPRS OFF</b>	14.2mA	127h

Dimension drawing:



## Technical information about internal battery

Internal back-up battery	Battery voltage (V)	Nominal capacity (mAh)	Power (Wh)	Charging temperature (°C)
Li-ion rechargeable battery	3.6 V (nominal)	1800	6.66	0 ~ 45

Batteries are covered by 6 month warranty support.

**⚠ CAUTION: 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 into general household waste.

**⚠** Bring damaged or worn-out batteries to your local recycling center or dispose them into a battery recycle bin commonly found in supermarkets.

## Absolute maximum ratings

Characteristic description	Value		
	Min.	Typ.	Max. Unit
Supply Voltage (Absolute Maximum Ratings)	+10		+97 V

Digital Input 1/2 Voltage (if AIN is configured to 15 V) (Absolute Maximum Ratings, DIN state 0->1)	+2.5	+15 V
Digital Input 1/2 Voltage (if AIN is configured to 150 V) (Absolute Maximum Ratings, DIN state 0->1)	+9	+150 V
Analog Input 1/2 Voltage (if AIN is configured to 15 V) (Absolute Maximum Ratings)	0	+15 V
Analog Input 1/2 Voltage (if AIN is configured to 150 V) (Absolute Maximum Ratings)	0	+150 V
Digital Output 1/2 and Digital Input 3/4 Voltage (Absolute Maximum Ratings)	0	+150 V
Digital Output 1/2 and Digital Input 3/4 Current (Absolute Maximum Ratings)	0	300 mA