TFT100 General description

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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Contents

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.

Description	Voltage	Duration
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

Part name	Physical specification
Navigation indication	LED
Modem indication	LED
USB	Mini USB socket

GNSS	Internal GNSS antenna
GSM	Internal GSM antenna

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

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

Dimension drawing:

72,5 17,5*

73 59,5

900 ± 20

31,8 31,8

Navigate LED
Status LED

17,5 27,3
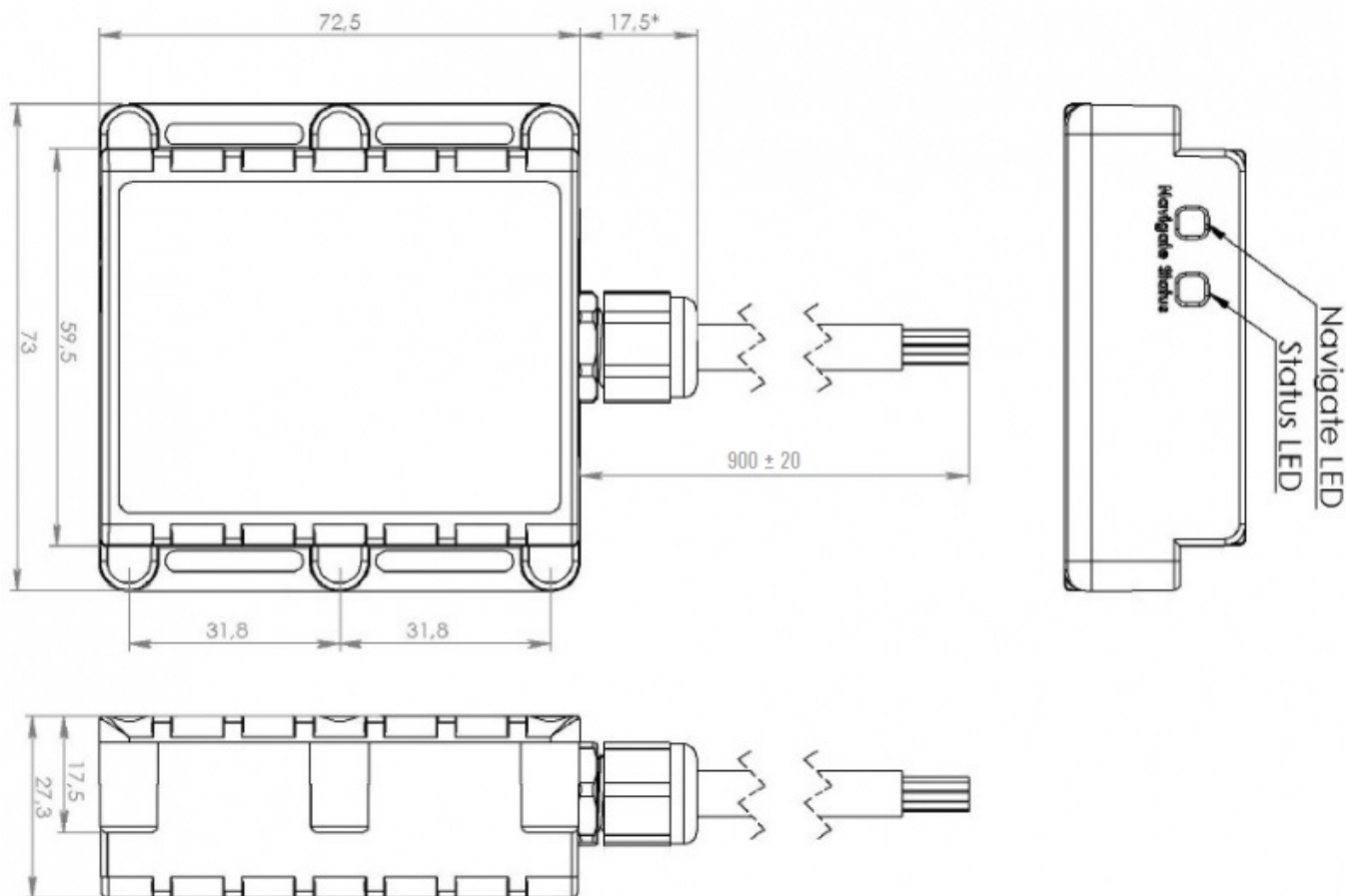
Technical information about internal battery

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