



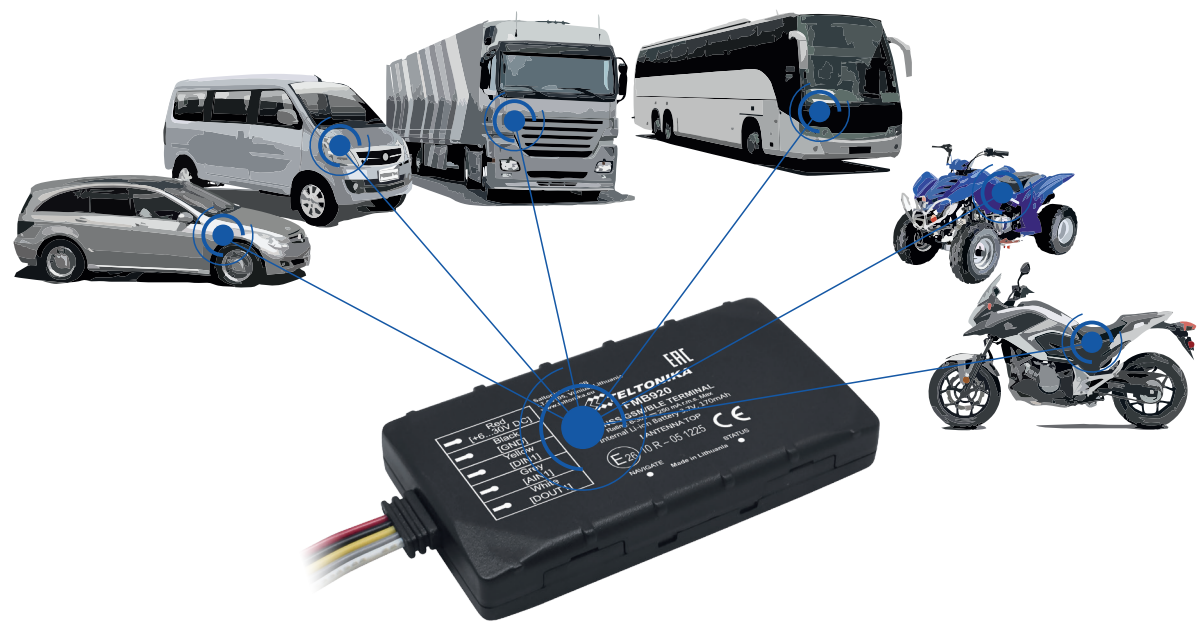
# Ferguson. **CarAssistant**

## User Manual

# *Ferguson Car Assistant*

### *FMB920*

pl\_v1.2



 **Treesat.io Friendly™**

 **FERGUSON**

# ATTENTION!



Before installation, read these instructions.

Making any construction changes or unauthorized repairs is forbidden and will void the warranty.

All switching operations should be making without power supply connected.

For security reasons, the module should be installed by qualified specialists.

## 1. DECSRIPTION

Ferguson Car Assistant is an alarm system consisting of a small electronic device and a free application for smartphone. The module is installed in your car and connected to the power supply. It is provided with a permanent, remote connection to the server and application over the mobile network. Thanks to it, the user receives a number of functions, e.g. a theft alarm with a map or an accident detection system informing about a possible collision. If the car is not used, our specially designed device goes into sleep mode, saving the battery. The map and navigation also help you find your car left in the parking or in a foreign city.

Ferguson Car Assistant is an easy-to-use, real-time tracking GPS position monitor with GNSS and GSM connectivity, which is able to collect device coordinates and other useful data for transmission through the GSM network to the server.

This device is perfectly suited for applications in which it is required to acquire locations of vehicles: fleet management, car rentals, taxi companies, passenger cars, etc..

## 2. STARTING

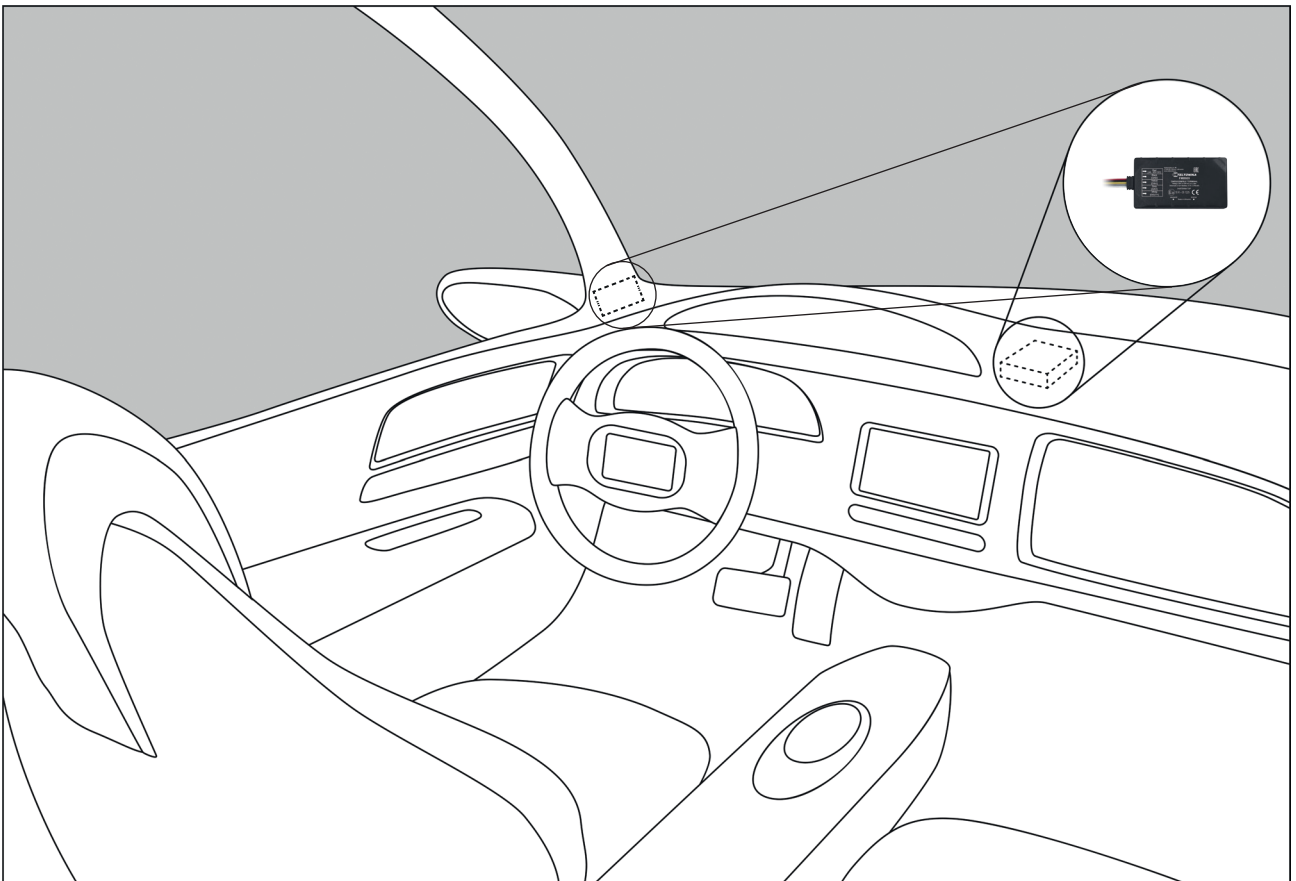
1. Read the user manual;
  2. Install the application and register your account;
  3. Add your device by entering device data into the application;
  4. Order the connection of the device to a qualified specialist;
- A list of authorized installers can be found at [www.car-assistant.pl](http://www.car-assistant.pl);
5. Check the status of the device by observing the LEDs on the device;
  6. The device is ready to work.

## 3. DEVICE INSTALLATION IN THE VEHICLE

When mounting the device in a vehicle, remember to avoid critical locations that can suppress the GSM and GPS signal. The best place to assemble the device is its installation under elements made of plastic, for example: armchairs, upholstery, bollard, etc. Recommended, example location of the device is shown in the figure below.

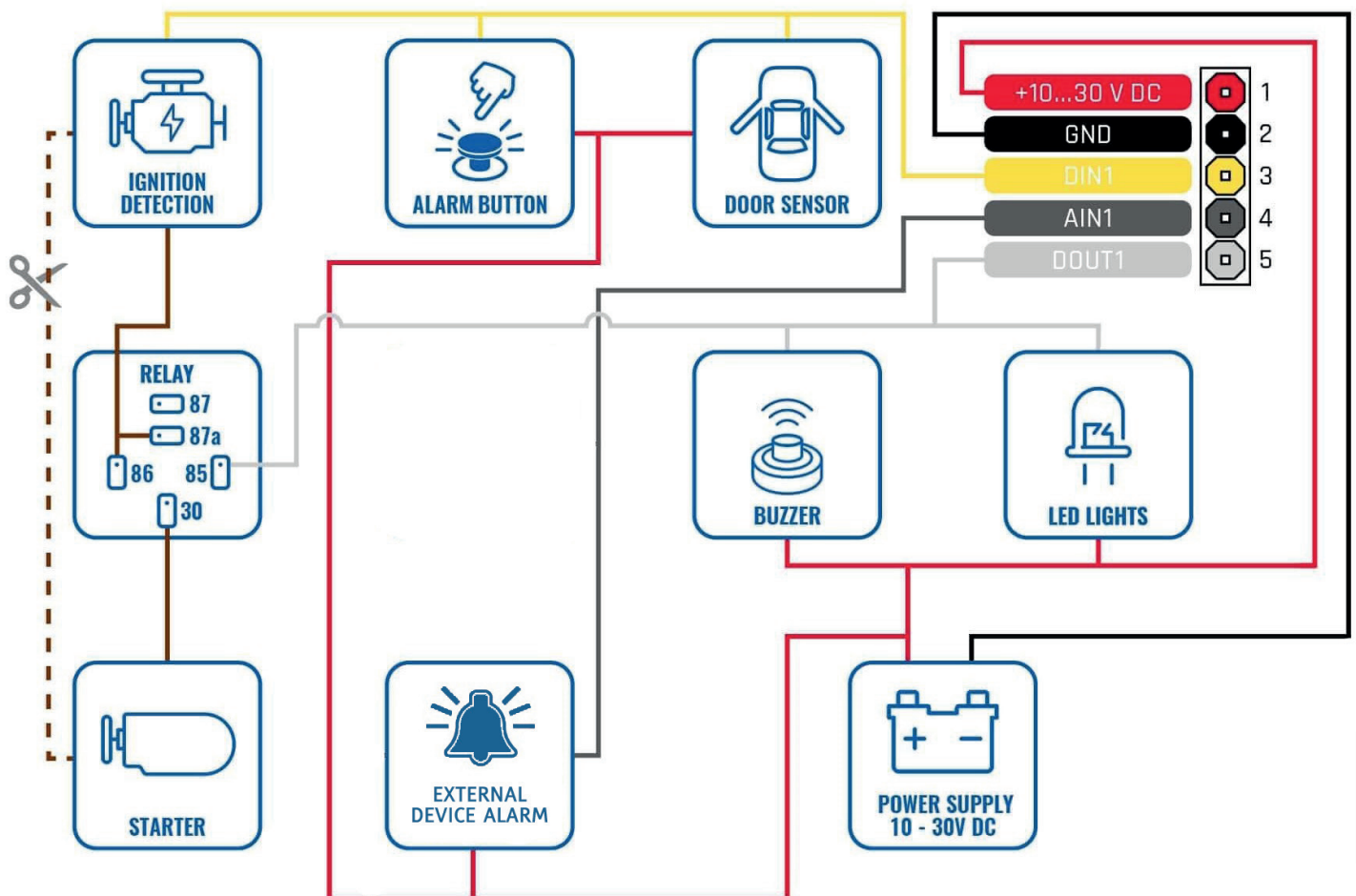


**Attention! The FMB920 module is mounted horizontally, labeled up!**



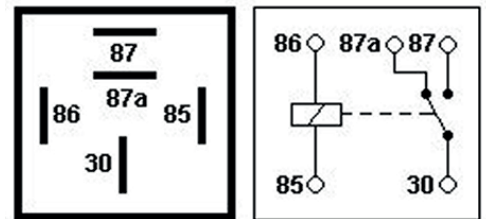
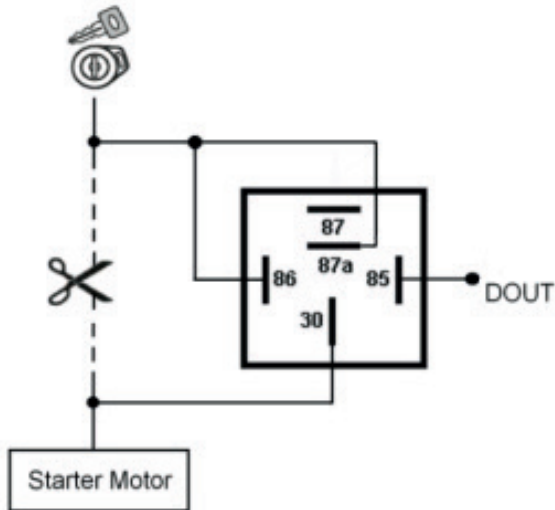
## 4. CONNECTION AND DESCRIPTION OF CABLES

Color	Purpose	Installation Guidelines
Red	Device supply	Connect to power supply
Black	GND	Connect to GND
Yellow	Ignition switch (DIN1)	Ignition signal (does not disappear during start-up)
Grey	AIN1	voltage input (an external signal can be connected voltage from 6V to 30V)
White	DOUT1	(blocking / unblocking) NO, GND control, max 300 mA



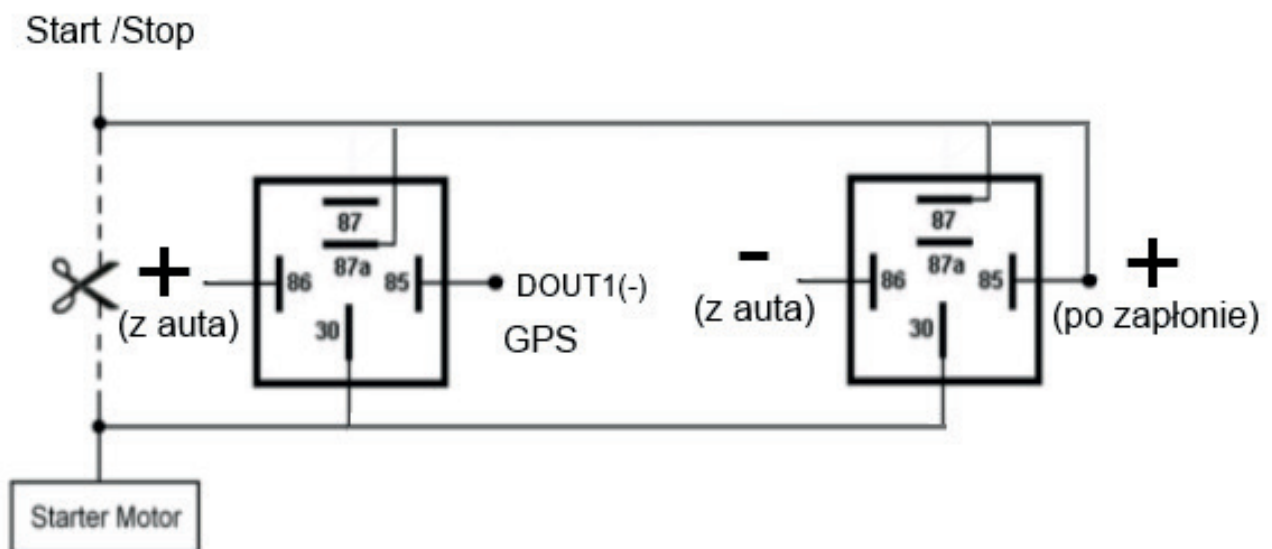
Overview drawing shows the capabilities of the device.

## CUT OFF IGNITION CONNECTING SCHEME FOR CARS WITHOUT THE KEYLESS GO SYSTEM



Description of the relay pins

## CUT OFF IGNITION CONNECTING SCHEME FOR CARS WITH THE KEYLESS GO SYSTEM



## 5. CHECKING OPERATIONS



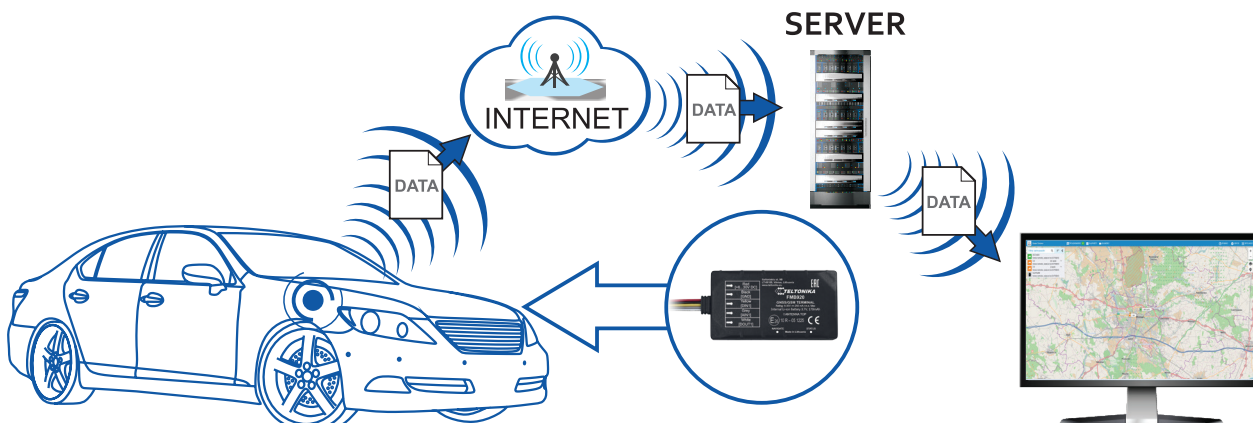
After connecting the device, check its proper operation by observing the LEDs:

Behavior of the LEDs diode "Status" (GSM):

- The diode blinks every second - normal operation, the GSM signal has been stabilized.
- The diode blinks every two seconds - GSM is in a deep sleep mode.
- The diode blinks quickly for a short time - GSM sends data to the server.
- The diode blinks continuously - the device is updated.
- Diode is off - GSM modem is faulty.

Behavior of the LEDs diode "Navigate" (GPS):

- The diode is lit with continuous light - no GPS signal, the module is looking for satellites.
- The diode blinks every second - normal operation, the GPS signal has been stabilized.
- The diode is off - the GPS module is turned off or the GPS is in deep sleep mode or the GPS antenna has a short-circuit.



## 6. AVAILABLE FUNCTIONS DEPENDING ON CHOOSSED PACKAGE

FUNCTIONS	PACKAGE	PINS	Car Assistance	Fleet Manager Lite	Fleet Manager
Current speed		✓	✓	✓	✓
Navigating to the car		✓	✓	✓	✓
Ignition on / off		✓	✓	✓	✓
Mapping the route		✓	✓	✓	✓
Battery voltage			✓		✓
Voltage alarm			✓		✓
Power failure alarm - sabotage			✓		✓
Distinction of private / business travel			✓		
Report on private / business driving					✓
Over speeding alarm			✓		
Theft alarm			✓		
Accident alarm (e-CALL)			✓		
A reminder about the review			✓		
Reminder about end of insurance policy			✓		
Counter of traveled kilometers			✓		
Possibility of cut off the ignition **			✓		
Route history				from 4 months	from 12 months
Measurement of the driver's work time				✓	✓
Creating POI					✓
POI report route for a vehicle					✓
POI report route for a place					✓
Temperature reports *					✓
Integration with the transport exchange					✓
Messenger *					✓
Live camera image *					✓

\* Additional devices are required.

\*\* Additional devices are required. The cut off of the ignition is a blockade to restart the car. So it will work only when the vehicle is turned off. The applicable law prohibits switching off the ignition of a running vehicle. Need to contact to activate the service. with [helpdesk@treesat.io](mailto:helpdesk@treesat.io). Paid service.

Fleet Manager Lite and Fleet Manager are applications available on:  
<https://fm.treesat.io>

## 7. SPECYFIKACJA TECHNICZNA

### GSM

- Quad-band 900/1800 MHz; 850/1900 MHz
- GPRS Multi-Slot Class 12 (up to 240 kbps)
- GPRS Mobile Station Class B
- SMS (text/data)

### GNSS

- Tracking: 33/ 99 acquisition channels
- -165 dBm sensitivity
- Hot start <1s
- Warm Start < 25s
- Cold start < 35s
- NMEA-183 protocol
- GPS, GLONASS, GALILEO, BEIDOU, SBAS, QZSS, DGPS
- Accuracy < 3m

### INTERFACE

- 1 Digital Input
- 1 Analog Input
- 1 Digital Open-collector Output (connecting external relays, LED, buzzers etc.)
- Built in accelerometer
- Power supply (+6...+30) V DC with overvoltage protection
- Internal High Gain GNSS antenna
- Internal High Gain GSM antenna
- Dimensions: L(79mm)xW(43mm)xH(12mm)
- 2 Status LEDs
- Internal back up battery
- Working temperature: -40 °C to +85 °C
- Humidity: 5% to 95%
- IP54



## 6. APPLICATION

All applications (PINS, CarAssistant, Fleet Manager Lite and Fleet Manager) communicate with the same server. By registering a new account in one of the above-mentioned systems, the User creates a universal account that allows logging in to each of them after purchasing the appropriate package.

### Download CAR ASSISTANT APP

The Car Assistant application for the Google Android system can be downloaded from the Google Play store, while the Apple iOS version from the Apple iTunes Store. Find the application in the store by scanning the following QR codes.



### Download PINS APP

The PINS application for the Google Android system can be downloaded from the Google Play store, while the Apple iOS version from the Apple iTunes Store. Find the application in the store by scanning the following QR codes



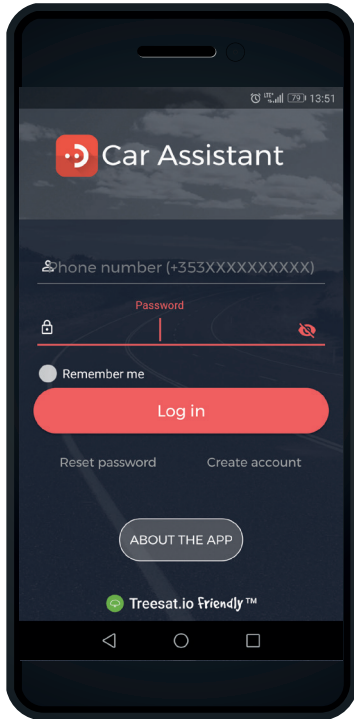
### Requirements

For proper operation of the application it is necessary to have a mobile device (smartphone, tablet) with the Google Android operating system version 4.0 or higher or an Apple brand mobile device with the Apple iOS operating system version 9.0 or higher.



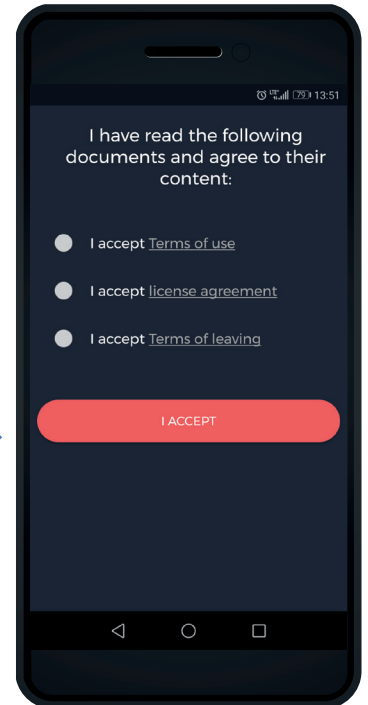
# CarAssistant

## CarAssistant App



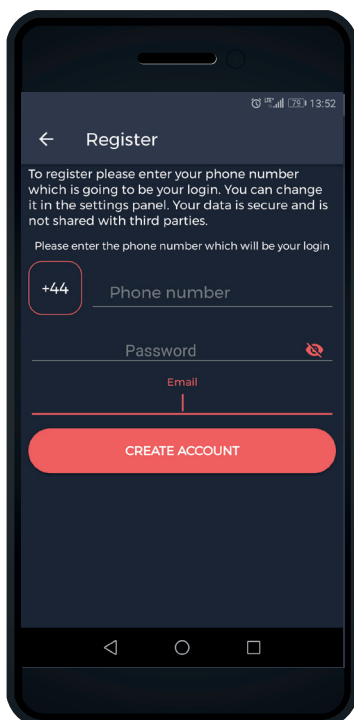
### Starting the application

To set up a new account, user should run the Car Assistant applications. On the log in screen, under the log in button, there is "Create account" option, which allows user to create a new account.



### Acceptance of conditions

Before creating an account, read and accept the documents: the regulations, the license agreement, an withdrawal agreement.

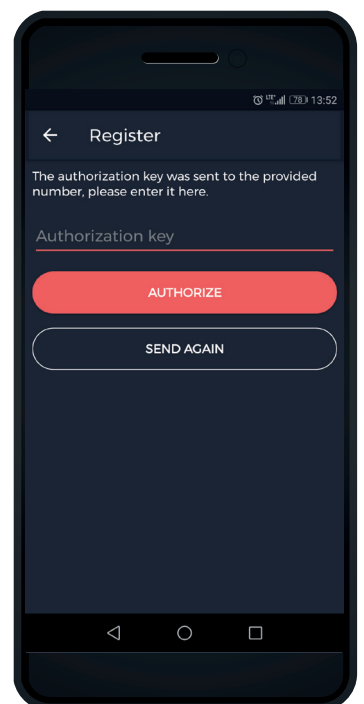


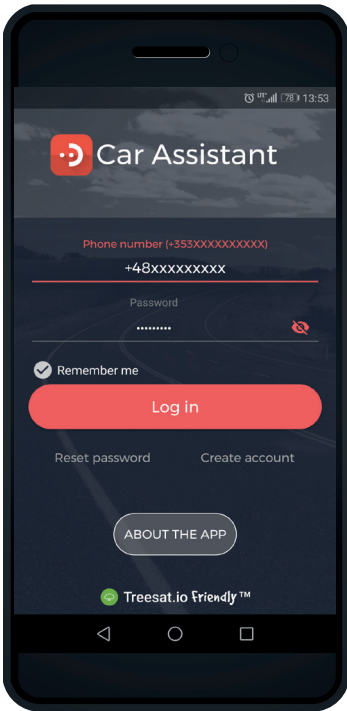
### Creating login and password

The next step in setting up an account is entering the phone number, password and email address. Keep in mind that before the phone number, select the country code. The account password is any string of characters entered by the user. The password must be at least 6 characters long.

### Authorization

To confirm the account you have set up the phone number provided (login) with SMS is sent a key authorization. The key should be entered in application in the field "Authorization key". "Activate" button starts the procedure of creating an account.





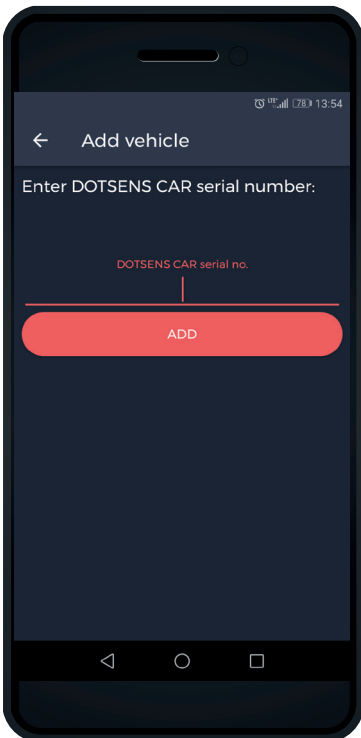
▶ After starting the application on the start screen, enter the login (prefix + phone number, e.g. +48111222333) and password provided during account creation. The Car Assistant application allows the user to remember login details.



▶ After logging in correctly, the main application screen is displayed.

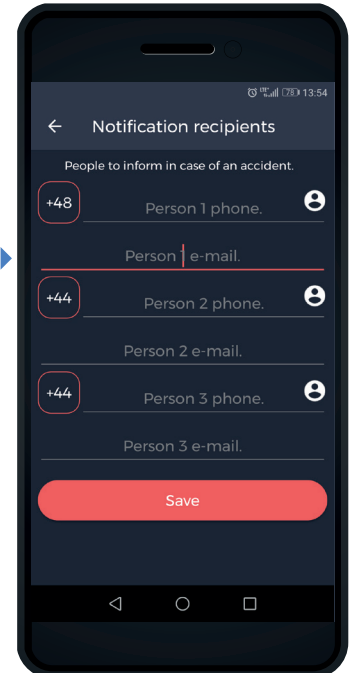
After leaving the application on the main screen of the phone, the application works in the background.

## Device adding



▶ Step 1  
Enter the serial number of the device. The serial number is located on the module housing. The entered serial number must be confirmed by ADD button.

▶ Step 2  
Enter contact person who is suppose to be notified about an accident. Enter the phone number or select from the contact list the person who will be notified of a potential accident and the e-mail address to which the notification should be sent. The application allows you to enter 3 phone numbers and 3 e-mail addresses to which notification will be sent. Contacts can be completed after the device has been correctly added (Profile, Notification people).



## Add the device and reset password

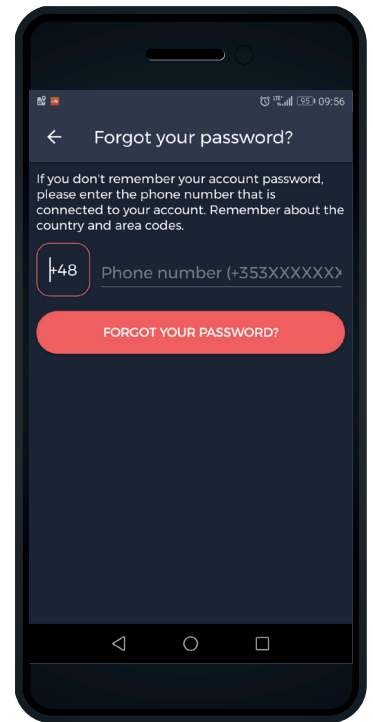


### Step 3

After correct add of the device, the Car Assistant application will display the screen shown. The user can enter other data about the car, e.g. car registration number, set reminders, e.g. technical examination, insurance policy date. It should be remembered that the lack of car data makes it impossible to use reminders and alarms.

### Password reset

The application allows you to give a new password. In order to do this, the user must enter login (prefix + phone number) and confirm with the button. Car Assistant will display a screen in which the user should enter the code received through SMS and enter a new password (string containing at least 6 characters)



## Main screen

The car section displays the name, photo, current speed and battery voltage. In addition, in the car section you can set the speed limit and enable / disable alarms. In the upper left corner of the car section there is an icon that allows you to view the user profile.

The name of the car and data edition

A photo of the car

Battery voltage

Current speed

Private/Business travel

Alarm switch

Speed limit

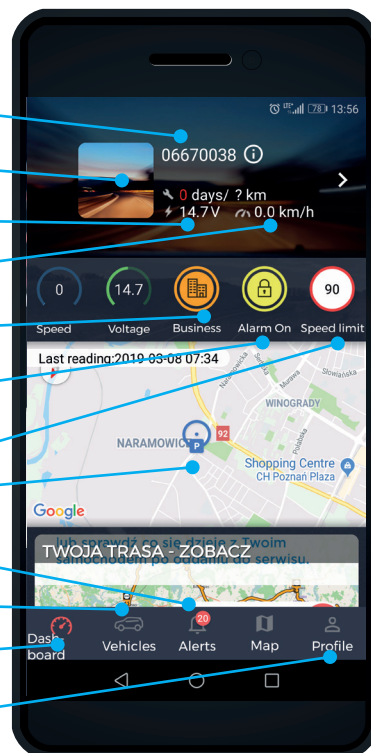
Location of the car

List of notifications

List of cars

Main screen

User profile



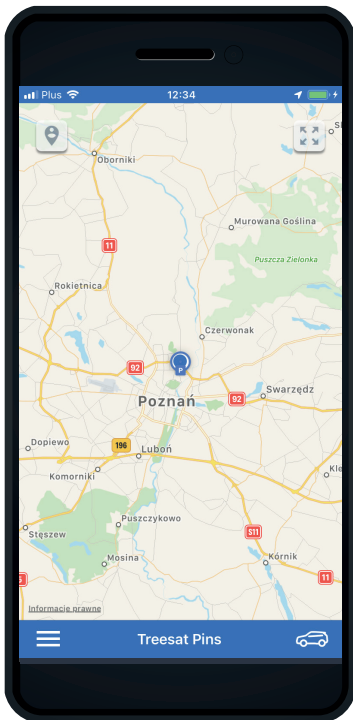
## PINS APP

Treesat PINS allows quick access to the position of your car. Using the map, you can easily check how many kilometers the driver is from the destination or set a route to the lost car in the parking lot.

Treesat PINS functions:

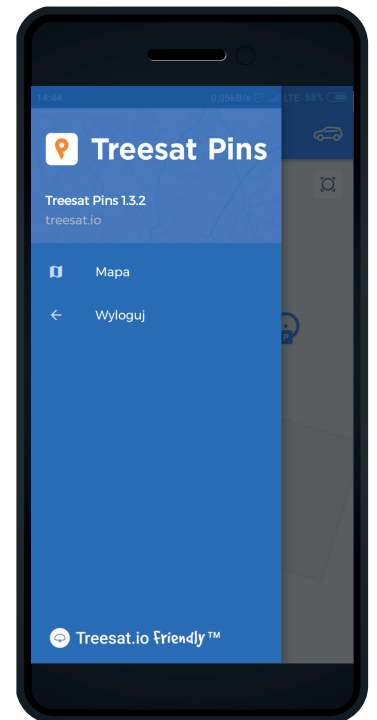
- User-friendly interface,
- Information about your cars (stop, driving, speed),
- Car location,
- Tracking the position of cars,
- Integration with Google's navigation,
- Route from your location to the selected car

*The procedure for creating an account, logging in and password recovery looks the same as it the CarAssistant app.*



◀ The main screen shows the current position of the car and the current speed.

From the side menu it is possible to go to the map screen display, add another car for tracking and the option to log out from the application. ▶



# 7. MARKING

## About User Manual

Ferguson Sp. z o.o. has made every effort to provide the most current information about this product. Ferguson Sp. z o.o. does not grant any guarantee as to the contents of the present instruction manual and disclaims any implied guarantees concerning market value or suitability for specific purposes. The information contained herein is an instruction intended to enable the correct usage and maintenance of the receiver. Ferguson Sp. z o.o. reserves itself the right to introduce amendments, changes or translations of the instruction manual without prior notification thereof. For this reason, we recommend you regularly visit our website in order to obtain the latest information.

Ferguson Sp. z o.o. does not take responsibility for damages caused by improper use of the Ferguson CarAssistance system. Warranty for accessories (such as power supplies, brackets, cables) and consumables (such as batteries and accumulators) is 6 months for both consumers and businesses from the date of purchase.

After expiry of any package (annual / monthly), the user must purchase any package within 30 days on the website [www.car-assistant.pl](http://www.car-assistant.pl). If you do not buy any of the packages, the SIM card is deactivated. Re-activation of the device will result in the user incurring the replacement costs of the SIM and its re-activation.



Risk of electric shock - do not open. This notice warns the user not to open the receiver housing. The housing may be opened solely by authorized service technicians.



The logo informs that the receiver conforms to the terms and conditions of Directive 2014/30/EU concerning observance by Member States of provisions regulating electromagnetic compatibility, and to the terms and conditions of Directives 2014/35/EU concerning observance by Member States of provisions regulating low voltage electricity and safety with relation to the handling and operation of electrical equipment.



When this crossed-out wheeled bin symbol is attached to a product it means that the product is covered by the European Directive 2012/19/UE. Please inform yourself about the local separate collection system for electrical and electronic products.

Please act according to your local rules and do not dispose of your old products with your normal household waste. Correct disposal of your old product helps to prevent potential negative consequences for the environment and human health.



When this logo is attached to a product, it means a financial contribution has been paid to the associated national recovery and recycling system.



This mark tells you that the device is following The Directive on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment 2011/65/EU (commonly referred to as the Restriction of Hazardous Substances Directive or RoHS)



**Ferguson.**CarAssistant

**[www.car-assistant.pl](http://www.car-assistant.pl)**

helpdesk@treesat.io

Ferguson Sp. z o.o.  
ul. Dworska 1  
61-619 Poznań