



Integration of Wireless BLE fuel level sensor and GEOTAB GO9

We all know that fuel usage monitoring is an important part of GPS fleet monitoring systems today. For several years, the MyGeotab platform of GEOTAB Company, a world leader in the field of telematics, has integrated the Fuel Management module, which provides data from various sources on vehicle fuel consumption, information on refueling, as well as important indicators on the condition of the engine. Our customers have long been convinced of the high accuracy of fuel data in the MyGeotab platform, which allows effective management of fuel costs in the fleet and leads to significant cost reduction and optimization of enterprise productivity.



Kvinto Plus
Smart Fleet Solutions

Key aspects where fuel data is used in the MyGeotab platform:

- ❖ Real-time tracking:
 - The platform allows you to track the location of vehicles in real time.
 - By analyzing the data, fleet managers can identify inefficient routes, excessive idling, and aggressive driving that increase fuel consumption.
- ❖ Fuel consumption metrics:
 - The platform collects fuel consumption data, including the amount of fuel used per trip or period.
 - Metrics such as fuel economy (liters per kilometer) help gauge the efficiency of vehicles.
- ❖ Idle detection:
 - Excessive idling uses up fuel and increases emissions.
 - The MyGEOTAB platform detects idle events and informs fleet managers.
 - Solving the idle problem can significantly reduce fuel costs.
- ❖ Route optimization:
 - Coordinate tracking helps optimize routes by taking factors such as traffic, road conditions and gas stations into account.
 - Efficient routes reduce mileage, travel time and fuel consumption.
- ❖ Maintenance Alert:
 - Regular maintenance (eg oil changes, tire rotations) improves fuel efficiency.
 - The MyGEOTAB platform sends maintenance reminders based on mileage or engine life.
- ❖ Fuel theft prevention:
 - Fuel theft is a common problem in transport companies.
 - The MyGEOTAB platform detects a sharp drop in fuel level, indicating possible theft.
- ❖ Geozones and refueling stations:
 - Geozones allow you to define virtual boundaries on the map.
 - Fleet managers can create geofences around gas stations.

In order to further increase the accuracy of data on the actual fuel consumption, specialists of the Kvinto-Plus Company provided the possibility of connecting the Wireless BLE fuel level sensor to the GEOTAB GO9 telematics device, which made it possible to integrate information from the Wireless BLE fuel level sensor into the MyGEOTAB platform.

How is the actual fuel consumption rate calculated on the MyGEOTAB platform?

Fuel consumption is calculated using a combination of fuel data reported by the engine, imported fuel card data and GPS-calculated distance traveled. The actual fuel consumption rate is then calculated as the amount of fuel used per trip for the distance traveled on that fuel (mpg or L/100 km).

Bluetooth™
4.0



Wireless BLE fuel level sensor.

Fuel level sensors are used to measure the level or volume of liquid in containers, including explosive ones, which must meet the requirements of the vehicle.

Fuel level sensors are used to issue the level:

- gasoline;
- diesel fuel;
- various lubricants;
- liquid additives;
- inert liquids to aluminum;

The parts of the fuel level sensor are made of aluminum and oil- and gasoline-resistant plastic. The case has an outer casing that can be sealed to prevent unauthorized access, and

an additional inner cover that protects the electronics unit, which is isolated by a sealing gasket. The measuring head of the sensor performs a linear conversion of the probe capacity into a digital code of the fuel level, processing of the received digital data with averaging of the measurement results, measuring the temperature of the head and outputting the data via the Bluetooth interface (wireless execution).

No wires

Term of continuous operation is up to 7 years from one battery

Strong, hermetic, shockproof protection

Settings from PC

Characteristics

| | | | |
|--|-----------------|--------------------------------------|---------------------|
| Operating mode (output signal) | digital | Probe length, mm | 20-4000 |
| Communication interface with the receiver | BLE | Material of the body | PA6 |
| Data transfer protocol | ModBus | The material of the probe | aluminum |
| Measurement error in the working area | no more than 1% | Protection class | IP67 |
| Temperature measurement error, °C | 1 | Working temperature, °C | -20...+50 |
| Data transfer period, sec. | from 2 to 6000 | Ambient temperature limit, °C | +50°C |
| Supply voltage, V. | 3,6 (built in) | Weight, net | no more than 0.5 kg |
| Protection against electric shock | III class | Dimensions in a box, LxWxH | 1000x100x100 |

How to connect Wireless BLE fuel level sensor

In order to use the wireless BLE fuel level sensor, you first need to register in the MyGeotab cloud fleet management platform. The fuel level sensor is mounted by engineers in the car tank and wirelessly starts transmitting data to the special GEOTAB IOX-BT device, which in turn integrates with the GEOTAB GO9 through the standard IOX expansion port on the GO device.



IOX Installation Instructions

! IMPORTANT: Professional installation (Certified Geotab® Installer or equivalent) is required for the safe and proper installation of this product (harness and/or IOX). The installer must have sufficient technical knowledge and expertise for the respective installation.

WARNING! Always read and follow all safety information, including Important Safety Information and Limitations of Use, before harness and/or IOX installation. Disconnect the GO device from the vehicle before installation and connect it post-installation. Failure to follow these instructions and warnings can result in loss of vehicle control and serious injury or vehicle damage.