

Fuel Level Sensor



Efficient Fuel Management for Businesses

For businesses that operate a fleet of vehicles - be it trucks, construction vehicles, oil tankers, fuel tanks or a fleet of ships. Fuel management is extremely important to avoid fuel loss and theft as well as leakage. Using fuel sensor to monitor fuel loss is a trend of a new technology era that helps businesses save tremendous costs as well as protect equipment and assets for businesses and improve the driver's responsibility.

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Effective Monitoring with GPS Device

Fuel monitoring was combined between capacitive sensors and itinerary monitoring GPS equipment program is very useful, can empower vehicle owners to monitor fuel consumption, the number of traveled kilometers per liter, the consumption of fuel accurately at any time via phone or laptop.

Capacitive sensors can provide many output types of signals accordingly with many domestic and international GPS standards such as RS232, RS485, Analog, Frequency.

Also capacitive sensors have high accuracy, certain consolidation, harsh environment, long service life and no technical maintenance required.



Features and Benefits

- High accuracy up to 99.5%.
- Automatically receive configuration after cutting, not having to bring the computer to the building.
- Shockproof mechanism, good and stable operation in each harsh environment.
- Suit with most fuels and size of the fuel tanks (length standard : 700,1000,1500mm; it can be cut short or be prolonged customizable up to 6000 mm).
- External protection mechanisms such as : Anti scale due to oil filter, damping, anti soil impact and harsh environment impact on sensors and signaling wire
- Smart noise filtering algorithm helps remove all external disturbances impact on the sensor.
- Wide application and suitable fitting with fuel tanks on tractors, construction machines and ships, on land or at sea and in many other industries
- The sensors are electrically insulated and protected, isolated from the outside environment, resist sudden change in voltage, shell welding.
- Software for managing, configuring and installing smart sensors on computers, helps sensors customized in every application.
- 12-month warranty. There is an error from manufacturer will change to a new product even after cutting.



Technical Specifications

PARAMETER	AF	RS232	RS485
Standard lengths (L), mm	700, 1000, 1500...up to 6000 mm	700, 1000, 1500...up to 6000 mm	700, 1000, 1500...up to 6000 mm
Measuring error, %	± 0.5 %	± 0.5 %	± 0.5 %
Output	Analog(0-9V), Frequency (500 - 2000Hz).	RS232	RS485
Baud rate, bit/sec	9600	2400, 4800, 9600, 19200, 38400, 57600, 115200.	2400, 4800, 9600, 19200, 38400, 57600, 115200.
DC input voltage, V	9-37	9-37	9-37
Maximum current consumption, mA	20	20	20
Ingress protection rating, IP	IP67	IP67	IP67
Operation temperature, °C	-40...+85	-40...+85	-40...+85
Maximum maximum level of allowed, %	100	100	100
Resolution, bit	12	12	12
Give the output value corresponding to the measurement's Min value.	Analog (0...8V); Frequency (500...1500 Hz)	0	0
Give the output value corresponding to the measurement Max value.	Analog (1...9V); Frequency (1000...2000 Hz)	4095	4095
Averaging time, s	0...255	0...255	0...255
Message interval, s	Continuity	1...60	1...60
Absolute error in a temperature measurement within the temperature measuring range, °C	±2	±2	±2
Average service life years	8	8	8

- The rise of fuel prices and road charges are the main reasons for business owners to invest in remote fuel measurement and monitoring solutions - it will help businesses save costs up to a great extent. improve the driving efficiency of the driver.



The Signals of the Ligo Sensor

The sensors include LIGO SP-AF, LIGO SP-RS232, LIGO SP-RS485. Very powerful, accurate, stable operation even in the harshest environments. Suitable for many types of fuel tanks.



LIGO SP-AF

LIGO SP-AF is a combination of two output signal lines : Analog and Frequency. The output signals can be customized via software on the computer and the configuration set from the manufacturer.

In addition, it can customize voltage levels (from 0 to 10V) and Frequency (from 500 to 2000Hz) with "Min" and "Max" levels to combine with an external device Each sensor is equipped and protected against harsh environments as well as external magnetic disturbances that affect the sensor. LIGO SP-AF sensor also meets IP67 standard which works well in the environment often exposed to water and mud.

LIGO SP-RS232 fuel level sensor is an upgrade to connect external device via protocol between two parties.

Therefore, the external device can receive and transmit data back to the sensor as well as any further operation inside the sensor for remote control. Each sensor is equipped and protected against harsh environments as well as external disturbances that affect the sensor. LIGO SP-RS232 sensor also meets IP 67 standard working well in the environment often exposed to water or mud.



LIGO SP- RS232

LIGO SP-RS485 fuel level sensor is the same as LIGO SP-RS232 fuel level sensor and it is able to travel further as well as suitable for many industry standards. Each sensor is equipped and protected against harsh environments as well as external disturbances that affect the sensor.

LIGO SP-RS485 sensor also meets IP 67 standard which works well in environment often exposed to water and mud



'Fuel monitoring and fuel level measurement Great solution for transport businesses'



Good Operation and Easy Installation

LIGO fuel level sensor is designed for the easiest installation. The feature of automatically recognizing configuration after cutting will be suitable and best in the market.

The installation does not need to carry the computer and can install the sensor to run stable and accurately.

Only define and cut the sensor according to the height of the fuel tank, then leave it in the air and provide a stable power source for the sensor, within 30s the sensor will automatically receive the length again after cutting.

Install the sensor into the fuel tank and then connect to the third-party terminal and perform a re-calibration of the number of liters according to the volume of the new fuel tank.

The entire installation process is simple, no more than one to three hours of work. If it is necessary, Sahana will provide training, guidance and support step by step to install the fastest and most stable operation.

Manufactured by : **SOJI ELECTRONICS**, Vietnam

