GENESIS

FORGING THE FUTURE

FUEL CONTROLLER

EN

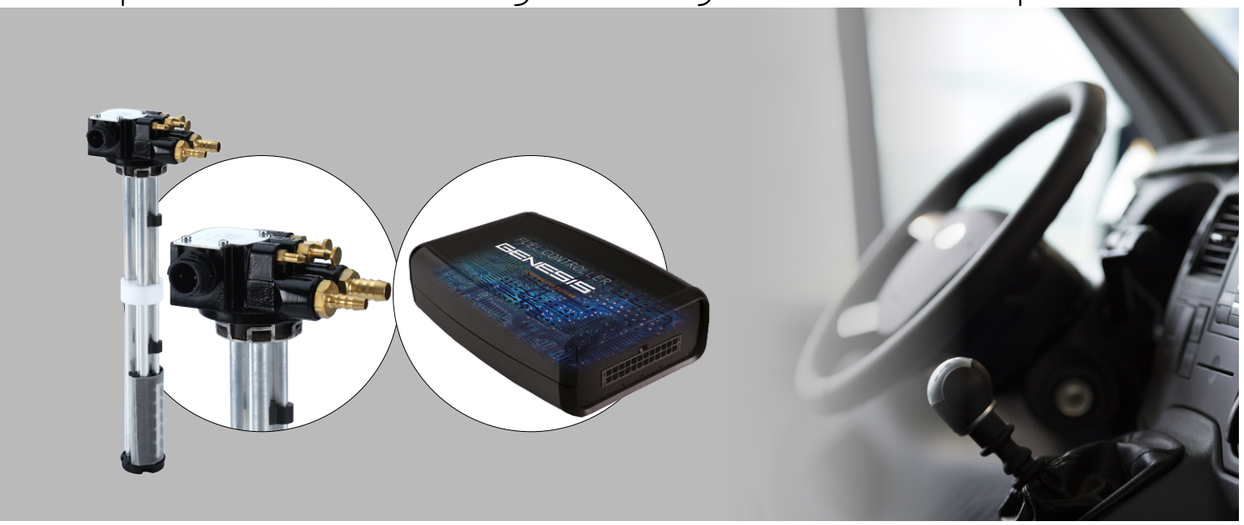
GENESIS
FORGING THE FUTURE

www.lagogenesis.it

FUEL CONTROLLER

The missing link in Fuel Management

Simple outside, extremely well-organised and complete inside!



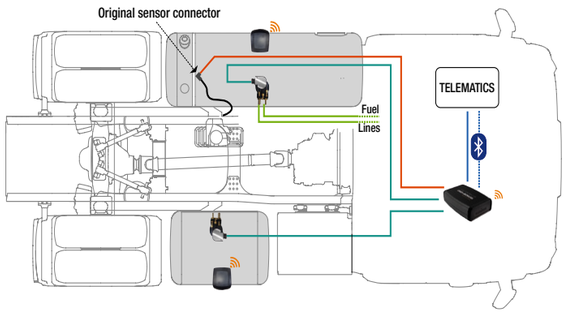
What is Fuel Controller:

Fuel Controller is a system which can be easily integrated into the technological infrastructure commonly available on industrial vehicles, as a sensor for precise detection of the quantity of diesel present in the tank. Fuel Controller is dedicated to both the vehicle's instruments and to various types of telematics systems, thus demonstrating an interesting integration for companies that offer Track & Trace services to transport and logistics sector operators. With minimum effort, Fuel Controller can be used to add functionalities to telematics, aligning their functionality to the most evolved needs dictated by the current context, where controlling fuel, consumption and the tank in general, are a top priority.

What makes up Fuel Controller:

Fuel Controller consists of a high-precision fuel sensor that is easily installed, and more importantly, does not require drilling a hole in the tank, since it simply replaces the vehicle's original sensor. The Fuel Controller sensor appears mechanically identical to the original sensor, but it adopts measurement systems with resolutions often hundreds of times higher than the original sensors', and measures along it's entire length, from to first to the last millimetre.

The special feature here is that the Fuel Control sensor uses its dedicated control unit to provide information for the onboard instruments (the level instrument in the cab), and data on the tank contents in litres to the onboard telematics. Telematics will in turn transmit the specific data to land servers, where it can be displayed, managed and aggregated with other data to generate quality information, useful for overall management of the fleet, vehicles and company operations at various levels.



Technical Specifications

FCS Sensor specifications

- 8 Bit CPU
- Technology: capacitive sensor based on the dielectric constant of automotive diesel (standard diesel currently in use)
- Resolution: 10 bits (1024 points)
- Completely static
- Operating temperature from -40 to + 85°C
- No dead spots, reading over its entire length
- Available with standard fittings for major vehicle brands
- Temperature Sensor
- Motion sensor / accelerometer

Fuel Controller specifications

- Power suply 12/14 Volt DC
- Power consumption 75 mA / 24 V
- Operating temperature -40...+85°C
- CPU 32 bit ARM® Processor
- Non volatile data memory 16 MB
- Bluetooth® 2.1 Module
- Radio Receiver Module 433MHz RX
- 1 CAN Bus Channel 2.0
- 1 RS232/RS485 Serial port
- 1 dedicated resistive output
- 1 secondary resistive output (optional)
- 2 open collector output: Imax 1A, Ron 0.5 Ω
- 1 analog output: 1-12V or 4-20mA
- 3 analog input: Rin 1MΩ, Vmax 100V
- 2 digital dedicated input (only for FCS Fuel Sensors)

Peripheral Options

- High resolution FCS sensor
- Powered external buzzer
- Wired Zipper
- Wireless ZipperPlus
- IGT input

ONE FOR ALL AND ALL FOR ONE

Genesis FUEL CONTROLLER and the entire Genesis Mach II system were created together to each operate autonomously or in synergy. Fuel Controller as a complete system includes the other tank protection systems, but this does not mean that the systems must be implemented in a specific order if done at separate times. For example, in the case of the ZIPPER electronic fuel cap, it is the Fuel Controller that takes care of receiving the cap opening events and the later aggregation of this data before transmitting it, along with the fuel volume data, to the onboard telematics system. The most commonly adopted configurations are shown in the table on the side.

ZIPPER PLUS M2 105 XL WIRED

82 45 18 010 ZIPPER PLUS M2 105 XL WIRED

Tank inlet protection package, with interfacing capacity to Fuel Controller via wire, which includes the Mach II Kockon XL 105 anti-theft device, complete with Zipper electronic fuel cap in WIRED version.
For vehicles: DAF, MAN, VOLVO, MERCEDES, IVECO and RENAULT

READY TO USE

ZIPPER PLUS M2 105 XL WIRELESS

82 45 18 012 ZIPPER PLUS M2 105 XL WIRELESS

Tank inlet protection package, with interfacing capacity to Fuel Controller via wire, which includes the Mach II Kockon XL 105 anti-theft device, complete with Zipper electronic fuel cap in WIRELESS version.
For vehicles: DAF, MAN, VOLVO, MERCEDES, IVECO and RENAULT

READY TO USE

ZIPPER PLUS M2 80 XL WIRED

82 45 18 011 ZIPPER PLUS M2 80 XL WIRED

Tank inlet protection package, with interfacing capacity to Fuel Controller via wire, which includes the Mach II Kockon XL 80 anti-theft device, complete with Zipper electronic fuel cap in WIRED version.
For vehicles: SCANIA

READY TO USE

ZIPPER PLUS M2 80 XL WIRELESS

82 45 18 013 ZIPPER PLUS M2 80 XL WIRELESS

Tank inlet protection package, with interfacing capacity to Fuel Controller via wire, which includes the Mach II Kockon XL 80 anti-theft device, complete with Zipper electronic fuel cap in WIRELESS version.
For vehicles: SCANIA

READY TO USE

For a complete overview of the available options see the TRANSFORM-ABLE documentation.

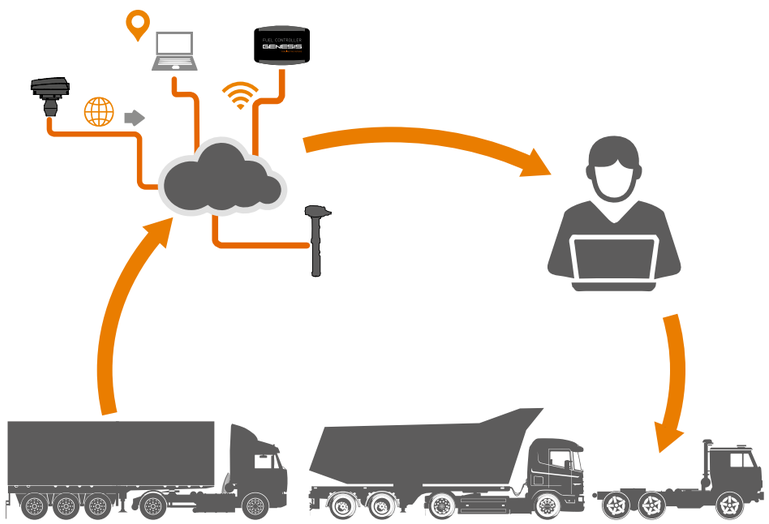
Each component is the accessory, peripheral device, upgrade or completion of every other component.
The best solution for any context undoubtedly exists among the various possible combinations.

INFORMATION FOR BETTER MANAGEMENT OF RESOURCES

Tools for converting volumes of data into simple, highly useful information that anyone can use.

Genesis makes web instruments available, specifically created for displaying all the information that results from the combination of Fuel Controller data with those of the onboard telematics system.

These solutions prove useful in cases where a specific telematic service does not provide a dedicated diesel protection web area to display the information that Fuel Controller generates.



Available data and benefits:

- Fuel content of your main tank in litres. Real time fuel log, connected to location provided by third party telematics box.
- Fuel content of your secondary tank in litres. Real time fuel log, connected to location provided by third party telematics box.
- Total fuel content onboard the vehicle, in litres. Real time fuel log, connected to location provided by third party telematics box.
- Real time graph of the fuel quantity, to monitor tanking operations, use of fuel, fuel theft/subtraction. All at individual tank level, total fuel level and location.
- Possibility to best manage vehicle traffic in order to travel without excessive fuel quantities by reducing the vehicle weight, thus consumption.

FC INSTSTALLER APP FOR ANDROID

Because each vehicle has its own features.

Obviously it is accurate, but also simple and effective

The complexity required by the numerous variables generated by vehicle brands, tank shapes, and various telematics is reduced simply by using your finger and browsing the screens of the FC INSTALLER App on Android Smartphone. With this small, pocket-sized and always updated instrument, Genesis provides the installer with the culmination of all the research and know-how that makes Fuel Controller Precise Simple and Effective. Thus the installer can configure every single installation of Fuel Controller by setting the variables for each specific vehicle in wire-less mode by using the integrated BlueTooth® functions.

FC installer app offers:

- Guided configurations for each major brand vehicle
- Database of the main tank shapes broken down by part number, capacity and application
- Instruments for calibration of non-standard tanks, which may often be present on special vehicles or equipment
- Fuel Controller firmware update utility, executable when Wifi is present or via mobile phone data
- Pairing utility for accessory wireless devices, such as the Genesis range ZIPPER fuel caps
- Diagnosis instruments for reading the Fuel Controller values and checking the operation of wireless peripherals in real time

71 09 55 002 FUEL CONTROLLER UNIVERSAL DATA HUB

71 09 55 003 FUEL CONTROLLER DAF D.I. DATA HUB

71 09 55 004 FUEL CONTROLLER CABLE LOOM SERIAL RS232

21 45 20 480 **FCS480-214520480** FUEL SENSOR
Recommended Applications:
IVECO - SCANIA

21 45 20 610 **FC S610-214520610** FUEL SENSOR
Recommended Applications:
DAF - MAN

21 45 20 625 **FCS625-214520625** FUEL SENSOR
Recommended Applications:
IVECO

21 45 20 643 **FCS643-214520643** FUEL SENSOR
Recommended Applications:
SCANIA

21 45 20 679 **FCS679-214520679** FUEL SENSOR
Recommended Applications:
VOLVO - RENAULT

21 45 20 690 **FCS690-214520690** FUEL SENSOR
Recommended Applications:
DAF - MAN - MERCEDES - RENAULT

For a complete list of wiring packages for specific protocols, fuel fittings by vehicle type and special sensor measurements, see our technical documentation on www.lagogenesis.it or contact us at info@lagogenesis.it

GENESIS

www.lagogenesis.it