



THE MOST RELIABLE HARDWARE



OMNICOMM
FUEL MONITORING FOR
TELEMATICS SOLUTIONS

PRODUCT CATALOGUE

WWW.OMNICOMM-WORLD.COM
INFO@OMNICOMM-WORLD.COM

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OMNICOMM

is international hi-tech industrial company, one of the leading developers and manufacturers of fleet management and fuel monitoring systems for various fleet management needs. Omnicomm has one of the leading Research and Development centers in Eastern Europe. Production facilities are located in Russia and European Union. The company is well known for over 18 years of expertise in fleet management with a strong focus on fuel monitoring.

Omicomm flagship products are highly accurate LLS fuel level sensors. More than 800,000 fuel level sensors have been sold from the date of company's foundation.

Omicomm products can be used as a component and easily integrated to transport monitoring systems from various manufacturers.

The company has proved to be a reliable partner implementing wide number of projects for clients representing various industries.

We serve customers in more than 108 countries on 5 continents. Emphasizing quality of our service we keep improving customer support. Technological leadership is assured by innovative production approach of manufacturer combined with highly qualified R&D.



THE KEY TO OUR SUCCESS IS HIGH QUALITY PRODUCTS AND SERVICES.



OMNICOMM IS THE DEVELOPER AND MANUFACTURER OF ALL THE COMPANY'S BRAND PRODUCT LINE.

Our equipment:

- can be easily integrated into any fleet management system that is used in such industries as construction, agriculture, mining, timber, oil & gas, road building and many others
- allows real-time monitoring of fuel consumption, identifying vehicle location and measuring wide range of other parameters

OMNICOMM LLS

is a fuel level sensor installed in a fuel tank and connected to onboard equipment of any vehicle monitoring system. LLS fuel level sensor controls in real time the fuel level in the tank, transmitting information to monitoring system.



LLS 30160

Length of probe – 700-3000 mm

Digital fuel level sensor model LLS 30160 is dedicated to connection the GPS/GSM tracker or remote terminal unit (RTU) via serial input RS 232/EIA485.

The probe can be trimmed (cut in the field) according the exact depth (height) of the fuel tank.

Level data output	serial RS232/EIA-485
Digital scale	0-4095 points
Mode of operation	continuous
Baud rate, bit/sec	2400-115200
Power supply, VDC	7-75
Data lines	galvanically insulated
Power lines	galvanically insulated
Reverse polarity	protected
Rated power, W max	0.4
Resolution, mm	±1.0
Main inaccuracy, %	±1.0
Internal data filtration, points length	0-120
Ingress protection rating	IP57
Operation temperature, °C	-40...+80
Pigtail length, m	0.7
Connector	sealed FCI type 6 ways

Application:

- Road vehicles
- Buses
- Heavy equipment
- Diesel generators
- Construction machines



LLS-AF 20310

Length of probe – 700-1500 mm

Digital fuel level sensor model LLS-AF 20310 is designed for fast and simple connection to the GPS/GSM tracker or remote terminal unit (RTU) with analog voltage input.

The probe can be trimmed (cut in the field) according the exact depth (height) of the fuel tank.

Level data output analog, V	0-20
Mode of operation	continuous
Pulsing of output voltage max, %	0.15
Power supply, VDC	7-45
Data lines	galvanically insulated
Power lines	galvanically insulated
Rated power, W	regular 0.6 max 0.9
Reverse polarity	protected
Resolution, mm	±1.0
Main inaccuracy, %	±1.0
Internal data filtration, points length	0-120
Operation temperature, °C	-40...+80
Pigtail length, m	0.7
Ingress protection rating	IP57
Connector	sealed FCI type 4 ways

Application:

- Road vehicles
- Buses
- Heavy equipment
- Diesel generators
- Construction machines



Omnicom is developer and manufacturer of all the company's brand product line



LLS 20230

Length of probe – 1500-6000 mm

Digital fuel level sensor model LLS 20230 is dedicated to connecting the GPS/GSM tracker or remote terminal unit (RTU) via serial input RS 232/EIA485.

The probe can be trimmed (cut in the field) according the exact depth (height) of the fuel tank.

Level data output	serial RS232/EIA-485
Power supply, VDC (from BIS 20240)	8.5-10.5
Digital scale	0-4095 points
Data lines	gallvanically insulated
Power lines	gallvanically insulated
Rated power, W	max 0.4
Reverse polarity	protected
Baud rate, bit/sec	1200-115200
Mode of operation	continuous
Resolution, mm	±1.0
Main inaccuracy, %	±1.0
Discrimination	0-1023-4095 points
Internal data filtration, points length	0-120
Operation temperature, °C	40..+80
Ingress protection rating	IP57
Pigtail length, m	0.7
Connector	sealed FCI type 6 ways



Note!

Supplied in a set with BIS 20240 intrinsically safe barrier (power supply) and a set of connection cables with FCI type connectors.

Application:

- Storage fuel tanks (above ground and under ground)
- Mobile fuel tanks (refueller tanker-trucks)



BIS 20240

BIS 20240 Intrinsically safe barrier (Zener diodes safety barrier) applied to be used with LLS 20230 fuel level sensors if the place of installation could be defined as the Potential Explosive Zone and equipment should meet the IEC 60079-0-98 and 60079-11-99 requirements.

Operation temperature, °C	-40...+60
Ingress protection rating	IP57
Dimensions, mm	115x64x55
Weight, kg	1.5
Power supply, V	11-50
Approval	GOST-R
Marking	[Exia]IIB

Output intrinsically parameters

Open-circuit voltage, U0, V	10.5
Short-circuit current, I0, A	0.45
Maximum external capacitance, C0, uF	15.0
Maximum external inductance, L0, mH	1.0

Application:

- Potentially explosive areas where applicable due to standards and technical regulations:
- Storage tanks
 - Tanker -trucks

Omnicom is technology partner of KAMAZ-Master team, 12-fold Dakar race winner. Fuel control equipment was selected by the team in a series of off-road races and is installed on all KAMAZ-Master racing trucks.



OMNICOMM LLD

Liquid level display indicator

Liquid level display indicator is an indicator of fuel, which displays the current amount of fuel in the first, second, (if any) and a total of two tanks of a vehicle by reading the testimony of a digital level sensor LLS. LLD indicator can quickly and accurately determine the amount of fuel in the tank.



BR15

Galvanic insulation unit

Galvanic insulation unit BR15 is intended for connecting vehicle monitoring systems and telematics devices using fuel level sensors LLS 30160, LLS 20230 and power protection BIS 20240 to battery. Galvanic insulation unit BR15 provides protection against input overvoltage and short-circuit protection.

Power supply, V DC	8-45
Power, W	no more 2
Physical level	EIA485*
Baud rate, bit/sec	1200-115200
Mode of operation	continuous
Operation temperature, °C	-40...+70
Ingress protection rating	IP41
Displays volume	four digits
Dimensions without connected cables, mm	137x61x23
Weight, g	<200

* The error in fuel data determining the LLS sensor is 1%, the LLD indicator allows you to display the measured value of up to 1 liter. Can read values from 2 various LLS 30160 or LLS 20230 sensors by EIA485.

Application:

Fuel storage tanks · Road vehicles · Diesel generators · Construction machine

Input voltage, V	10 to 32
Output voltage	11.5 ± 0.3
Maximal output power, W	15
Maximal output current, A	1.25
Efficiency, %	>80
Maximal input voltage, VDC	90, any polarity
Isolation voltage, V	1000
Operating temperature, °C	-40...+60
Ingress protection rating	IP41
Dimensions, mm	111x84.5x31



Kamaz-master goes for OMNICOMM



Application:

· Road vehicles
· Heavy equipment
· Construction machines



WHY KAMAZ-MASTER GOES FOR OMNICOMM EQUIPMENT?

100 LITERS OF FUEL "IN RESERVE" ADDS ABOUT 83 KG WEIGHT TO A RACING TRUCK

While preparing for the race it is very important to accurately calculate the required amount of fuel in the tank.

During the race it is no less important to monitor fuel consumption and to know its exact amount in the tank. Every liter of fuel adds weight to the truck, so it makes no sense to take fuel "in reserve".

In KAMAZ-master's long-term practice of participation in rally-raids there were cases when the race organizers were late in informing the participants about changes in road surface. In Dakar 2005 with a total route of 600 km the crew ran out of fuel within just 50 km of finish line. Original fuel calculations were made for hard route surface, but the organizers

changed the route and selected soft shifting sand due to the heat. As a result the team finished only 18th.

Especially for the team Omnicomm developed a new, advanced multi-function LLD display, installed in the truck cabin. LLD display allows the crew to receive real-time information about the amount of fuel remained, control consumption and monitor the amount of fuel left until refueling.

Every extra liter in the tank overloads the truck, and it's of great importance to calculate fuel consumption for the whole route taking into account all modes of engine operation and different coatings during all rally.



DALCON is intended to collect and process level data from 2xLLS sensors for further transmission the common data to the single input of GSM/GPRS; SAT communication device. Generates digital codes (RS232) or analog (0 – 5 V) output signals according to the total volume of the fuel in 2 fuel tanks. In some cases DALCON required to be installed, if 2 x LLS 30160 sensors are fitted on the long (more, than 1500 mm length) fuel tank to increase the accuracy of the fuel level detection.

Power supply, VDC	10 - 50
Supply current, mA	no more than 30
Inputs	1x RS232 + 2x EIA485
Outputs	1x RS232 + 2x analog (0-2,5V; 0-5V)
Signal 1 analog output	
• output resistance - no more than 100 Ohm	
• minimum voltage - no more than 30 mV	
• maximum voltage - no less than 4,97 V	
Signal 2 analog output	
• output resistance - no more than 600 Ohm	
• output voltage - 2,5 V	

Application:

- Road vehicle
- Construction machine
- Diesel generators
- Mining truck
- Railway locomotives
- Farming machines



We are always happy to offer you customized training courses and study materials that will help your personnel of various technical proficiency levels to perfect their skills.



Temperature Sensor DT14V

The DT14V temperature sensor is intended for measuring the temperature of the vehicle's surface, blocks, and units.

Power supply, VDC	16 - 32
Temperature measurement range, °C	from -40 to +130
Absolute measurement error, °C	± 2
Ingress protection rating	IP42
Range of operating temperatures, °C	from -20 to +80
Output – unified voltage signal, V	from 0.8 to 14.4

UNU

Reusable tool (in set with power supply and cables). Dedicated connection adaptor for sensor calibration and tuning PC.

Application:

UNU is the reusable tool intended to connect LLS series fuel level sensors, DALCON, to USB port of PC (laptop) during the tuning and calibration procedure.

General features

UNU consists of the main module, set of cables with connectors and power adaptor 100 - 240 VAC to 15 VDC. One pack of ABRO sealant included in standard set.

EASE OF INSTALLATION

One

Drill a hole in the fuel tank

Two

Cut sensor LLS to fit the tank

Three

Put the sensor inside

Four

Calibrate the tank





Flat metal cap with rubber seal

Cover and seal the fitting area of LLS sensor after it was removed from the place of installation.



Riveter Hand tool

Riveter is the hand tool for fitting LLS sensors on the fuel tank by help of rivets, if the thickness of the tank less than 3 mm. Supplied in set with M5 nut.

Reliable lever system
Ergonomic handles
Dimensions 290x100 mm
Weight 590 g



Bimetal hole saw

Intended to drill installation holes in fuel tanks and reservoirs.

Set consists of 35mm hole saw and holder. Applies in process of assembly Omnicomm Fuel Level Sensors LLS 30160, LLS 20230 and LLS-AF 20310.



ABRO sealant

The ABRO is used as sealant during sensor installation works.

The ABRO take any form and successfully withstand compressive, tensile and shear; it is not destroyed under the influence of motor oil, water and antifreeze. Also ABRO sealant has good resistance to fuels and oils.



You Tube

This video shows step by step how to install Omnicomm fuel level sensor.





Galooli uses Omnicomm's LLS sensors as part of the remote performance monitoring solution. Yishai Duke, Galooli's marketing manager, says: "By using reliable data from Omnicomm fuel level sensors we are capable to provide our clients with real consumption rates, constant fuel level, fuel drains and eliminate false fuel invoicing". Telematics vendor Galooli successfully applied Omnicomm LLS fuel level sensors for fuel consumption monitoring in diesel generators installed with remote GSM cellular receivers in Uganda, Tanzania, and Nigeria. Fuel monitoring solution implementation in East Africa showed that fuel lost for false invoicing and fuel theft can reach 30-40% of fuel expense.



Lamborghini

Lamborghini tractors are equipped with Omnicomm LLS fuel level sensors straight on the conveyor belt Trattori Lamborghini plant in Bulgaria. According to Trattori Lamborghini representative, Omnicomm LLS fuel level sensors application on tractors provides more effective fuel monitoring. It is a competitive advantage of Lamborghini tractors compared to other vehicle manufacturers.



CABLE 40130

Sensor's pigtail elongation cable. Dedicated to LLS 30160 sensors connection. FCI connector on one side, 6 flying leads on the other side. Wires are protected by plastic corrugated conduit.

* Included in sensor package



CABLE 40131

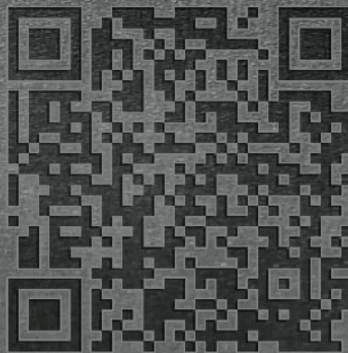
Sensor's pigtail extender cable. Dedicated to LLS-AF 20310 sensors connection. FCI connector on one side, 4 flying leads on the other side. Wires are protected by plastic corrugated conduit.

* Included in sensor package

KTZ-15

Dedicated to LLS 20230 sensors and BIS 20240 connection. FCI connector on the one side, FCI connector on another side. Wires are protected by metal-plastic corrugated conduit.





68/70 Building 1. Butyrski Val str.127055. Moscow, Russia
+7 495 108 04 23