

## about GuardMagic DLLS1

### 1 INTRODUCTION

**GuardMagic DLLS1** series of fuel level sensor is a Universal Fuel and Oil level sensor with digital communication interface for standard and heavy application.

**GuardMagic DLLS1** sensor detects the level of the fuel (or oil) in the fuel tank of the motor vehicle, or motor fuel storage/transportation tank and sends the information about current level in the form of digital code with 10 or 12 bit resolution to the external device.

**GuardMagic DLLS1** sensors utilize the capacitive technology to produce accurate liquid level measurement mainly of: crude, oil, fuel oil, transformer oil, diesel fuel, petrol (gasoline), kerosene, jet fuel.

**GuardMagic DLLS1** is solid-state devices with no moving parts.

**GuardMagic DLLS1** has a digital communication interface – EIA-485 (old name - RS 485).

**GuardMagic DLLS1** has die cast aluminum “head” for anti vandal protection, reinforced construction and strong mounting.

Digital Fuel Level Sensor **GuardMagic DLLS1** is intended for use (construction) in fuel monitoring and fuel control systems (transport and stationary).

**GuardMagic DLLS1** allows build “multi tanks” system (sensor serial connection).

Sensors length can be from 300 and up to 2500mm.

Sensors length marks as: GuardMagic DLLS1-XXXX (“XXX” means the length of the probe in mm).

**GuardMagic DLLS1** sensors will add many additional service function in transport control and transport monitoring system.

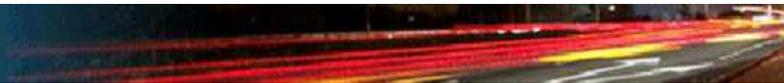
**GuardMagic DLLS1** can be installed:

- in any type of motor vehicles;
- tractors;
- construction and building machinery;
- combines and agricultural machines;
- road fuel tankers;
- diesel-electric locomotives;
- stationary diesel-electric generator;
- fuel storages;
- power transformers;
- etc.

**GuardMagic DLLS1** has a EIA-485 digital output interface;

**GuardMagic DLLS1** digital fuel sensors are universal and consequently are adjusted on concrete depth of fuel tank. The sensor’s tube only should be cut according for the depth of fuel tank and then adjust it.





## 2 SENSORS VERSION

Series of GuardMagic DLLS1 fuel and oil level sensors consist of three version of sensors:

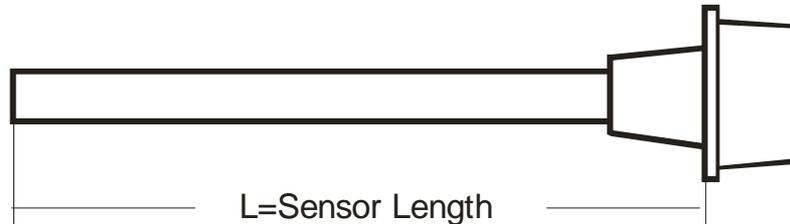
- GuardMagic DLLS1a,
- GuardMagic DLLS1b,
- GuardMagic DLLS1ct.

Sensor Version:	GuardMagic DLLS1a (GM2.211-11)	GuardMagic DLLS1b (GM2.211-12)	GuardMagic DLLS1ct (GM2.211-21)
About Connection	One connection cable with connector	Two connection cables with connector.	One connection cable without connector. Cable length 2,5m.
Sensors Photos:			
Notes:		For serial sensor connection without additional junction box Retransmit EIA-485 communication bus.	For connection to additional junction box (for example: GuardMagic JBB01). As usual for road tankers.
Full Sensor Name	GuardMagic DLLS1a-XXX	GuardMagic DLLS1b-XXX	GuardMagic DLLS1ct-XXX
	"XXX" means the length of the probe in mm		



### 3 SENSORS LENGTH

#### 3.1 SENSOR LENGTH



#### 3.2 STANDARD SENSORS LENGTH

Type of length range	Sensor length		
	GuardMagic DLLS1a	GuardMagic DLLS1b	GuardMagic DLLS1ct
L1	300 mm	300 mm	
	<b>500 mm</b>	<b>500 mm</b>	
L2	700 mm	700 mm	
	<b>1000mm</b>	<b>1000mm</b>	
L3	1300mm	1300mm	<b>1300mm</b>
L4	<b>1500mm</b>	<b>1500mm</b>	<b>1500mm</b>
	<b>1700mm</b>	<b>1700mm</b>	<b>1700mm</b>
L5	<b>1980mm</b>	<b>1980mm</b>	<b>1980mm</b>
L6	<b>2500mm</b>	<b>2500mm</b>	<b>2500mm</b>

Notes:

- 1) In bold - basic sensor length.
- 2) Sensors length marks as: GuardMagic DLLS1-**XXX** ("XXX" means the length of the probe in mm).
- 3) In installation procedure sensor can be cut up to the previous value of length (up to about 30%).