1. HARDWARE: Vehicle GPS-GSM/GPRS MODULES

GuardMagic VB8

Special GPS-GPRS vehicle module for fuel transportation companies (Road tanker monitoring). Multi tank support

For On-Line Monitoring System (Vehicle fleet monitoring systems, AVL, fuel trailer monitoring etc.). Universal communication protocol. Easy to installation and easy to use.

- GSM 850/900/1800/1900 GPRS;
- Two main operation mode (Standard, Packet);
- Internal memory (130 TH records) for data storing;
- Engine RPM monitoring;
- Immobilization function;
- Main fuel tanks monitoring function – up to THREE tanks (GuardMagic DLLS1 sensor with digital communication interface EIA-485);
- Cargo fuel tanks monitoring function – up to ELEVEN cargo tanks, cargo compartments (GuardMagic DLLS, GuardMagic DLLE sensor with digital communication interface EIA-485);
- two independent EIA-485 communication bus for fuel sensors (one for vehicle regular tanks, other for cargo tanks and advanced devices);
- temperature monitoring function (up to SEVEN sensors);
- GPS monitoring (geographical location, speed);
- Driver ID transmitting;
- Status signal transmitting: Crash, Panic, Event, Engine Overheat, Fuel Tank Empty (FTA), Attempt to Theft, Ignition, Car Alarm, GPS Alarm, Power Alarm.
- Available connection to: “Trailer Identification module (GuardMagic TRIM)”, “Lid sensor controller”, external fuel trailer controller, “data concentrator” etc.

Notes:
- Brief specification, see: “GPS-GPRS vehicle modules-Table”.
- Prices, see: “GuardMagic-prices1_-_main products”, point 1.2
2. HARDWARE: FUEL LEVEL SENSORS FOR FUEL CARGO TANKS (COMPARTMENTS)

GuardMagic DLLE1ct

Robust Explosive Proof Digital Fuel level sensor for standard and heavy application.
Operation only with GuardMagic JBB01 (intrinsically safe barrier).
Mobile objects and stationary objects application: Road Fuel Tankers, Fuel Storage etc. No moving parts.
- Multi sensors system;
- Communication interface: EIA-485;
- Operation liquids: oil, lube oil, transformer oil, fuel oil, diesel fuel, gasoline, kerosene;
- Ambient temperature: -40 … +80;
- Temperature of measurement liquids: -40 … +105;
- Resolution: 1024 or 4096 levels;
- Anti vandal casting aluminum cove (IK 10 protection);
- IP 67 protection;
- Strong mounting;
- Available sensor length: 1300mm, 1500mm, 1700mm, 2000mm, 2500mm, 3000mm.

GuardMagic JBB01

Die-cast anti vandal IP 65 protected “Junction Box” with internal two channels intrinsically safe barriers.
For fuel level sensor intrinsically safe connecting to EIA-485 communication bus in fuel trailer (cargo tanks, fuel storage etc.).
Independently support two fuel level sensors.
EIA-485 communication bus.
Support GuardMagic DLLS, Guardmagic DLLE fuel level sensors.

Notes:

• Prices, see: “GuardMagic-prices2-_fuel sensors”, point 1.2, point 1.4

3. HARDWARE: ADDITIONAL COMPONENT (for sensor connection in fuel trailer)

Notes:

• Prices, see: “GuardMagic-prices2-_fuel sensors”, point 6.1
### 3. HARDWARE: FUEL LEVEL SENSORS FOR VEHICLE REGULAR FUEL TANKS MONITORING

**GuardMagic DLLS1a**  
Robust Digital Fuel and Oil level sensor for standard and heavy application  
Mobile objects and stationary objects application: Trucks, Road Fuel Tankers, Special Machinery, Locomotives, Towboats, Fuel Storage, DG, Power Transformers etc. No moving parts.

- Multi sensors system;  
- Internal filter;  
- Communication interface: EIA-485;  
- Sensor serial connection;  
- Operation liquids: crude, oil, fuel oil, transformer oil, diesel fuel, gasoline, kerosene;  
- Ambient temperature: -40 … +80;  
- Temperature of measurement liquids: -40 …+ 105;  
- Resolution: 1024 or 4096 levels;  
- Anti vandal casting aluminum cover ( IK 10 protection) ;  
- IP 67 protection;  
- Strong mounting;  
- One cable with SuperSeal connector;  
- Available sensor length: 300 mm – 3000mm.

**GuardMagic DLLS1b**  
Robust Digital Fuel and Oil level sensor for standard and heavy application  
Mobile objects and stationary objects application: Trucks, Road Fuel Tankers, Special Machinery, Locomotives, Towboats, Fuel Storage, DG, Power Transformers etc. No moving parts.

- Multi sensors system;  
- Internal filter;  
- Communication interface: EIA-485;  
- Sensor serial connection;  
- Interface repeater;  
- Operation liquids: crude, oil, fuel oil, transformer oil, diesel fuel, gasoline, kerosene;  
- Ambient temperature: -40 … +80;  
- Temperature of measurement liquids: -40 …+ 105;  
- Resolution: 1024 or 4096 levels;  
- Anti vandal casting aluminum cover ( IK 10 protection) ;  
- IP 67 protection;  
- Strong mounting;  
- Two cables with SuperSeal connector;  
- Available sensor length: 300 mm – 3000mm.

**Notes:**

- Prices, see: “GuardMagic-prices2-_fuel sensors”, point 1.1
5. MAIN TECHNOLOGICAL TOOLS

GuardMagic VB6-VB8 programming tool
(Serial interface RS-232)
The technological complete set for programming and changes of adjustments of modules GuardMagic VB, by a personal computer.
(need only one)

GuardMagic DLLS-DLLE programming tool
The technological complete set for sensor programming and changes of adjustments of GuardMagic DLLS, GuardMagic DLLE fuel level sensors by a personal computer.
Set consist of: GuardMagic SCA (sensor connection adapter), AC/DC power adapter, connection cables, technological software;
(need only one)

6. MONITORING SERVICE (SOFTWARE): VEHICLE GPS-GPRS MONITORING

GPS WEB monitoring service
Coverage: All world
Service for vehicle WEB monitoring (vehicle monitoring via Internet).
Vehicle modules series GuardMagic VB.
Visualization on maps, reports generation