



1 TECHNICAL DATA

1.1 GENERAL DATA

Operation principle	<ul style="list-style-type: none"> capacitive
Power voltage *	<ul style="list-style-type: none"> 10 V
Input power current	<ul style="list-style-type: none"> < 0,07A
Power line**	<ul style="list-style-type: none"> galvanically isolated
Data line**	<ul style="list-style-type: none"> galvanically isolated
Resolution (digital scale of gradation)	<ul style="list-style-type: none"> 1024 or 4096 User programmable
Ratio error of level detection	<ul style="list-style-type: none"> +/-1
Communication interface	<ul style="list-style-type: none"> EIA-485 (RS-485 name is out-dated) semiduplex
Communication speed	<ul style="list-style-type: none"> 19200 38400 57600 User programmable
Sensor response time, not more:	<ul style="list-style-type: none"> 20 msec
Ready for operation after power On:	<ul style="list-style-type: none"> 30 sec

*- powered from GuardMagic JBB-01(Intrinsically Safe Barrier). Guardmagic JBB01 operation voltage 11...36V.

** - connected to GuardMagic JBB-01 (Intrinsically Safe Barrier).

1.2 ELECTRICAL INTRINSICALLY PARAMETER

Maximum input voltage	<ul style="list-style-type: none"> 10,5
Maximum input current	<ul style="list-style-type: none"> 0,07A
Maximum internal capacity	<ul style="list-style-type: none"> 10 uF
Maximum internal inductance	<ul style="list-style-type: none"> 0,5mH

1.3 FUNCTIONALITY SPECIFICATION

Sensor serial connection	<ul style="list-style-type: none"> YES, by JBB01 module
Operation mode in communication bus	<ul style="list-style-type: none"> Stand alone (Master) Net mode User programmable
Net address area in communication bus (in Net mode)	<ul style="list-style-type: none"> 1... 32 User programmable
Periodicity of data sending in master mode (automatic mode)	<ul style="list-style-type: none"> 1...255 sec User programmable
Internal data filter	<ul style="list-style-type: none"> YES User programmable
Internal data filter remote On/Off	<ul style="list-style-type: none"> YES
Self testing	<ul style="list-style-type: none"> YES
Information about malfunction	<ul style="list-style-type: none"> YES
Sensor programming	<ul style="list-style-type: none"> User programming by PC

1.4 PHISICAL CONNECTION SPECIFICATION

cables	<ul style="list-style-type: none"> One ; 3 meters without connector
Oil, petrol, water, UF resistance	<ul style="list-style-type: none"> YES

1.5 PROTECTION, OPERATION, STORAGE

PROTECTION	
Ingress protection	• IP 65
IK protection	• IK10
OPERATION AND STORAGE	
Operation mode	• continuous
Working pressure	• atmospheric
Ambient operation temperature	• -40 ... +80 C
Measurement liquid temperature	• -40 ... +105 C
Storage temperature	• -40 ... +85 C
Humidity (operating and storage)	• 5% ... 97%
Other	• absence salt and aggressive steam

1.6 PHYSICAL SPECIFICATION

OPERATION AND STORAGE	
Anti vandal protection	• YES
Head material	• die cast aluminum
Tube material	• aluminum
Head size (without gland)	• diameter: 86mm • height: 29mm
Main tube diameter	• 25mm
Mounting holes in head	• 6,3 mm , 6 holes
Mounting	• 6 self drilling screws 5,5 mm (DIN 7504) , or • 6 bolts 6mm
Sensor length (mm)	• 1300 mm - min. • 3000 mm - max. factory order; see paragraph 4
Weight	• Depend of sensor length

- **GuardMagic DLLE1** fuel level sensor is not measurement-inspection or verifying equipment

1.7 GUARDMAGIC JBB-01 SPECIFICATION

JBB-01 MAIN TECHNICAL SPECIFICATION	
General:	
Input power voltage (DC):	• 11 ...36 V
Pick input power voltage	• 40 V
Signal communication interface	• EIA-485
Nominal output current	• 0,07 A
Qty. of outputs to hazardous area	• 2
Enclosure material	• Die-cast aluminum
Output intrinsically parameters:	
Open-circuit voltage, U0	• 10V
Short-circuit current, I0	• 0,6 A
Maximum external capacitance, C0	• 15,0 uF
Maximum external inductance, L0	• 1,0 mH
Operation condition:	
Operation area	• Non-hazardous
Operation pressure	• atmospheric
Operation and storage temperature	• -40 ... +80 Celsius

- For more detail: see GuardMagic JBB01 user and installation manual.



1.8 FUEL TYPE FOR OPERATION

- 1) fuel level sensor primarily intended for level measurement of carbon fuels and oils:
 - crude,
 - factories grade: oil, fuel oil, transformer oil, diesel fuel, petrol, kerosene, jet fuel.
- 2) fuel level sensors are **strictly prohibited** to use in any liquids which are not the carbon fuels or oil or contain: BIOFUEL, METHANOL, ETHANOL, UREA and similar aggressive components in pure form or as additives.
- 3) Prohibits use the sensor in:
 - oils containing additives or metal particles;
 - used engine oil;
 - dirty oil or mix of used carbon fluids.
- 4) fuel level sensor not operate in water