TEK733 GSM 3G Ultrasonic Sensor

Our GSM Tank Sensor is a flexible and configurable battery-operated liquid level sensor with integrated GSM modem.

Applications

- Liquid level monitoring:
  - Fuel – Oil, Kerosene, Diesel
  - Lubricants
  - Additives
  - DEF / AdBlue
  - Coolants
  - Water
  - Waste Oil
  - Wastewater
  - Chemicals - **This product may not be suitable for monitoring of certain corrosive and hazardous chemicals. List of product compatible chemicals to be verified with a Rochester Sensors representative.*
- Fixed or portable tanks.
- Ensure continued supply.
- Optimise delivery or collections.
- Programmable alarms
  - Full alert
  - Empty alert
  - Spill alert
  - 24/7 monitoring

Benefits

- Accurate, reliable tank level monitoring.
- GPRS/SMS Communication
- Spot and continuous inventory management
- Programmable GPRS/SMS reporting interval.
- Remote configurability.
- Easy to install.
- CE Conformance and ROHS Compliant.

DS-5037-**07**

Rochester Sensors
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SPECIFICATION

Characteristic	Transmitter
Dimensions	101mm (W) x 93mm (L) x 150mm (H) ±1mm / 4" (W) x 3.7" (L) x 5.9" (H) ±0.04"
Weight	530g/1.17lbs including 4 x C size batteries - 290g/0.64lbs without batteries
Housing Material	UV Stabilized Polypropylene (compatible with Oil)
Operating Temperature	-20°C to 50°C / -4°F to 122°F **(Note 1)**
Storage Temperature	-22°C to 140°C / -7.6°F to 284°F **(Note 1)**
Altitude Range	<2Km/1.25miles above sea level
Environmental Protection	IP67 – Outdoors
Radio Frequency	850/900/1800/1900MHz@GSM (UC200T Module)
Gauge Type	Ultrasonic
Ultrasonic Range	>12cm to <4m / >4.7" to <157" **(Note 2)**
Ultrasonic Signal Diversion	30° **(Note 3)**
Ultrasonic Resolution	±1cm / 0.4"
Accuracy	Typically ±2cm from 12cm to 3m / ±0.78" from 4.7" to 118"
Material compatibility	**(Note 4)**
Power requirements	4 of Type C LR14 Alkaline 1.5V (fitted)
Battery life	> 5 Years **(Note 5)**
Humidity range	15% - 95%

Accessories	
SIM Card	Options available
Tank mounting options	Fit directly into 1 ¼", 1 ½" or 2" BSP existing tank connection
Bund switch option	Can be supplied with Bund switch for double skinned tanks – 3m / 118" cable

Conformity	
Complies with Directive 2004/108/EC for Electromagnetic compatibility and the Low voltage directive 2006/95/EC for product safety and the R&TTE directive 1999/5/EC for radio. Compliance was demonstrated to the following specifications as listed in the official journal of the European Communities.	
EN 55022,A1,A2	Limits and methods of measurement of radio disturbance characteristics of information technology equipment.
EN 61000-4-2/3	Electromagnetic compatibility
EN 301 489-1	ERM and EMC standard for radio equipment and services Part1
EN 301 489-7	Electro-magnetic Compatibility and Radio Spectrum Matters (ERM); Electro-magnetic Compatibility (EMC) Standard for Radio Equipment and Services; Part 7: Specific Conditions for Mobile and Portable Radio and Ancillary Equipment of Digital Cellular Radio Telecommunications Systems (GSM and DCS)
EN 301 511	Global System for Mobile Communications (GSM); Harmonized EN for Mobile Stations in the GSM 900 and GSM 1800 Bands Covering Essential Requirements Under Article 3.2 of the R&TTE Directive (1999/5/EC)
ETSI EN 301 489-3	Electromagnetic compatibility and Radio spectrum Matters (ERM); Electromagnetic Compatibility (EMC)
RoHs Compliance	Yes

Note 1: Storage and operation above 20°C/68°F may reduce battery life. Minimum distance measured is derated with temperatures <0°C / 32°F.

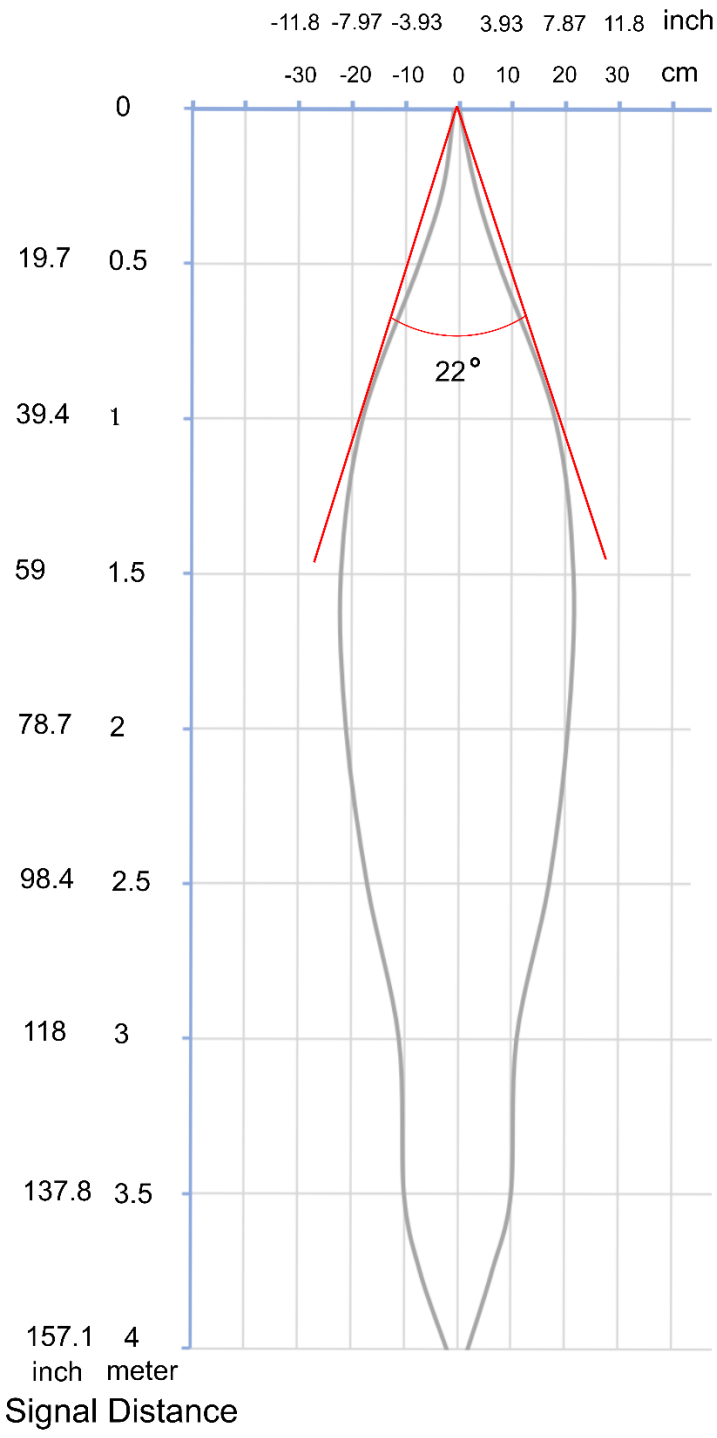
Note 2: Based on a measurement to a flat liquid target of size 30cm^2 / 4.7"^{2}

Note 3: The maximum spatial diversion of the ultrasonic signal will be < +/-15° from the central axis of the transducer.

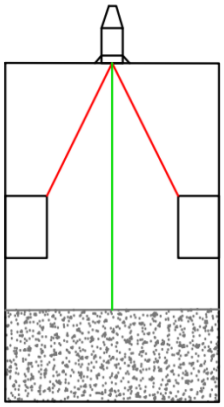
Note 4: Suitable for use in tanks for the storage of water diesel fuel, kerosene, gas oil types A2,C1,C2 and D as defined by BS2869.

Note 5: Based on 8 GPRS messages per month in standard configuration at a location with adequate GPRS coverage.

Signal Diversion



Signal Diversion



Find a position for the sensor which respects a clear path for the ultrasonic signal.