



## RF Multi-Thread Ultrasonic Sensor – Gen 2

Tekelek's ultrasonic liquid level sensor provides accurate and reliable fuel level measurement.

### Applications

- Fuel Tanks – Oil, Kerosene
- Commercial or Domestic Water Tanks

### Benefits

- Monitor tank levels from comfort of your own home
- Screw on design (2", 1½" and 1¼" BSP Threads)
- Measurement resolution of 1 cm/0.39"
- Communication distance to receiver typically greater than 200m (150 ft USA variant)
- Mains powered receivers with display available with EU, UK, USA, AUS/NZ plug formats
- RMS Compatible for longer distances (PTSN, GSM Modem)
- Long lasting battery
- Minimum 1 year warranty
- CE Conformance and ROHS Compliant



# Specification

Characteristic	Transmitter
Dimensions	88mm (W) x 88mm (L) x 145mm (H) ±1mm / 3.4" (W) x 3.4"(L) x 5.7" (H) ±0.04"
Weight	143g/0.32lb
Housing Material	UV Stabilized Polypropylene
Operating temperature	-10°C to 60°C/14°F to 140°F( <b>Note 1</b> )
Storage Temperature	-20°C to 60°C / -4°F to +140°F( <b>Note 1</b> )
Altitude range	<2Km / 1.25 Miles above sea level
Environmental Protection	IP67 - Outdoors
Radio frequency	EU/UK/NZ/AUS: 433.92 MHz FM USA: 914.5 MHz FM
Radio output power	EU/UK/NZ/AUS: 5dBm +/- 2dBm USA: 0dBm +/- 2dBm
Ultrasonic range	>12cm to <3M / >4.7" to <118" ( <b>Note 2</b> )
Ultrasonic signal diversion	30° ( <b>Note 3</b> )
Material compatibility	( <b>Note 4</b> )
Power requirements	VARTA CR2430 3V Li-Manganese dioxide / Organic Electrolyte (fitted)
Battery life	> 5 Years
Humidity range	15% - 95%
Ultrasonic Resolution	±1cm/±0.39"
Accuracy	Typically ±2cm from 12cm to 3m / ±0.8" from 4.7" to 118"

## Accessories

Tank mounting options	Drill 60mm/2.4" hole and secure to tank using 2 x self tapping screws Screws directly into 1 ¼", 1 ½" or 2" BSP existing tank connection
Gasket (included)	Material EPDM, Ø88mm(3.46") x 4mm(.157") (H) ±1mm(0.039") Distance between hole centres 75mm (2.95")±1mm(0.039")
Screws (included)	No.8 X 19mm(0.74") Panhead Pozi-drive Stainless steel
Waveguide option	May be supplied with grub screws and Allen key to secure a 38mm(1.5") O.D. tube (not supplied) for tanks with internal structures that may give false echoes
Bund Switch option	Can be supplied with Bund switch for double skinned tanks – 3m (118")cable

**Note 1:** Storage and operation above 20°C / 68°F may reduce battery life.

**Note 2:** Based on a measurement to a flat liquid target of size 30cm2/4.6"2. Option to extend range to 5m (16.4ft) on some models.

**Note 3:** The maximum spatial diversion of the ultrasonic signal will be < 30° from the central axis of the transducer.

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

# Specification (contd.)

## Conformity

EU/UK/NZ/AUS variants meet the intent of Directive 89/336/EEC for Electromagnetic compatibility and the Low voltage directive 73/23/EEC 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. The transmitter has additionally been designed to meet the requirements of the ATEX directive 94/9/EC for potentially explosive atmospheres (note that the product is not certified as ATEX approved unless specifically required and ordered as such). USA variants compliant to FCC part 15 in UL approved test facility.

EN 55022,A1,A2	Limits and methods of measurement of radio disturbance characteristics of information technology equipment.
EN 61000	Electromagnetic compatibility
EN 55011	Industrial, scientific and medical (ISM) radio-frequency equipment
EN 60335-1	Safety of household and similar appliances
EN 300 220-3	Electromagnetic compatibility and Radio spectrum Matters (ERM) - Short Range Devices (SRD);
ETSI EN 301 489-3	Electromagnetic compatibility and Radio spectrum Matters (ERM); Electromagnetic Compatibility (EMC)
RoHs Compliance	Yes
FCC part 15 compliance	USA variant