

## TECHNICAL DATA

**FOZMULA**  
INNOVATION IN SENSORS

### T/LL130 Liquid Level Sensor



The **Model T/LL130** series is designed for use in water, coolant or fuel/oil tanks and provides a factory set variable resistive, voltage or PWM (Pulse Width Modulated) output suitable for driving industry standard fuel gauges or connecting into PLCs.

The device has no moving parts and can be mounted at any angle above horizontal as long as it covers the whole depth of the tank. The unit cannot be inverted. An optional manual calibration feature is available.

## SPECIFICATION

### Liquid Types

Liquids compatible with the construction materials, typically diesel, kerosene, petrol, water.

Not suitable for fuels which contain Toluene.

### Dimensions

**Probe Length:** Min. 200 mm, Max. 1000 mm mobile / 2000 mm static  
**Threads:** ½" BSPT, 1" BSPT, ½" NPT  
**Optional Flange:** Fozmula F/T1 SAE 5 Hole

### Electrical

**Supply Voltage:** 9-34 VDC  
**Supply Current:** 30 mA  
**Supply Protection:** Over-voltage 80 VDC for 2 minutes.  
 Reverse polarity.  
**Signal Output:** Resistance range; 0-250 Ω or 250-0 Ω, 2 Ω steps, 0.4 W max.  
 Voltage source range; 0-5 V or 5-0 V, 20 mV steps, 10 mA max.  
 PWM 8 kHz on a 5 VDC rail.  
**Alarm Output:** Switch to ground. Max 100 mA. High or low level.  
 Default setting is 12.5% of full level.  
 Minimum 30 mm from sensor end.  
**Connections:** 4 Way Delphi Packard Metri-Pack 150 Series.  
**Mating Connector:** Fozmula C/K1 (Delphi Packard Metri-Pack 150)  
 To fit 0.8-1.0 mm<sup>2</sup> conductor, Ø1.6-2.15 mm sleeve.

### Performance

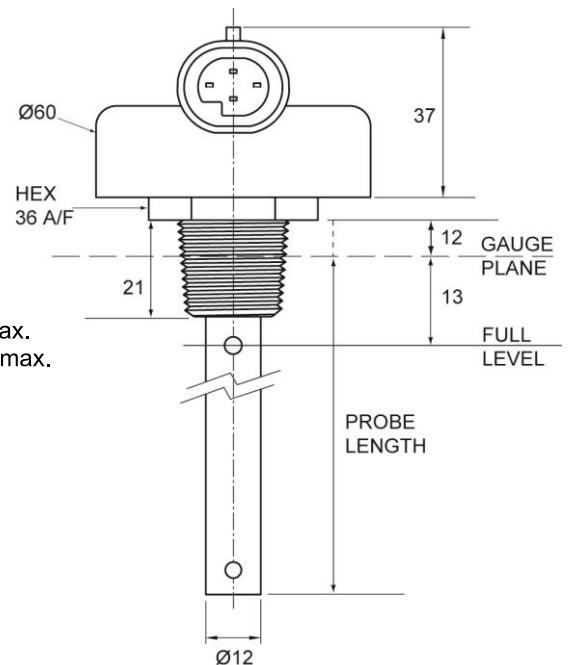
**Accuracy:** ±2% of depth @ 20 °C

### Materials

**Enclosure:** 30% glass filled nylon  
**Internal Electrode:** PTFE  
**Sensor Tube:** 316 stainless steel  
**Internal Spacers:** Polypropylene  
**End plug:** PTFE  
**Wetted Seals:** Viton (FKM)

### Environmental Ratings

**Sealing:** IP67 with mating connector  
**Max Pressure:** 1 bar  
**Operating Temp:** -20 °C to +85 °C  
**Shock:** 50 g, 6.3 ms  
**Vibration:** 15.3 Grms BS EN 60068-2-64:1993  
**Weight:** 300 g (1 m long sensor)



| Model   | Output    | User Calibration |
|---------|-----------|------------------|
| T/LL130 | Resistive | No               |
| T/LL131 | Voltage   | No               |
| T/LL132 | PWM       | No               |
| T/LL133 | Resistive | Yes              |
| T/LL134 | Voltage   | Yes              |
| T/LL135 | PWM       | Yes              |