

## TECHNICAL DATA

### T/LL400 Extended Temperature Range Oil Level Sensor

**FOZMULA**  
INNOVATION IN SENSORS



The **T/LL400 Oil Level Sensor** is an advanced capacitance sensor that continuously monitors oil level providing a configurable voltage output in the range 0-10 VDC.

Compact and robust this sensor is designed to provide accurate and repeatable level data for oil in relatively shallow, extended temperature range applications such as engine oil sumps or tanks.

## SPECIFICATION

### Liquid Types

Oils compatible with the construction materials, typically engine and hydraulic oils.

### Dimensions

**Length:** Min. 80 mm, Max. 300 mm.  
**Thread:** 1/2" BSPT, 1/2" BSPP, 1/4" NPTF, 1/2" NPTF, 3/8" NPTF, M14 x 1.5, M18 x 1.5

### Materials

**Header:** 316 stainless steel.  
**Stem:** 316 stainless steel.  
**Internal electrode:** PTFE coated stainless steel  
**End plug:** PTFE  
**Wetted Seals:** Fluorosilicone, Viton (FKM)  
**Connector enclosure:** 30% glass filled nylon  
**Leads:** GXL 18 wires sheathed in nylon 6 conduit with thermoplastic backshells and customer's choice of suitable connector.

### Electrical

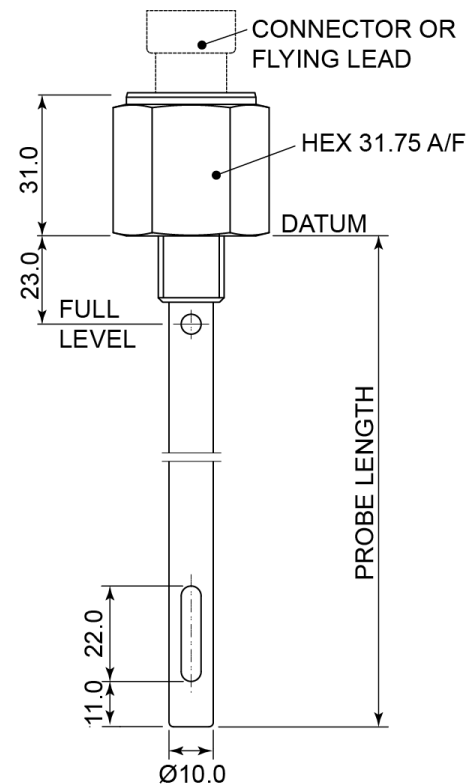
**Supply Voltage:** 9 - 36 VDC.  
**Supply Current:** 50 mA @ 12 VDC + output load.  
**Supply Protection:** Over voltage 80 VDC.  
Reverse polarity.  
**Signal Output:** Voltage source 0-5 VDC or 0-10 VDC, 10 mA max. source.  
**Output Protection:** Supply misconnection. Ground misconnection.  
**Connections:** 4 way Deutsch DTM 100 series or flying lead; 4-off 200 mm long harness comprising 18 AWG leads in conduit with backshells and customer's choice of suitable connector.

Red	Supply, V+
Black	Ground (0V)
Green	Signal, 0-5 or 0 - 10 VDC
White	Switch to ground

**Alarm Output:** Switch to ground. Max 100 mA.  
High or low level between 7% and 90% of gauge length.  
Default setting: low level alarm at 12% of gauge length, Minimum 11 mm distance from bottom.

### Environmental Ratings

Designed to meet:  
**Ingress:** Liquid side – IP68, Connector side - IP67.  
**Corrosion:** 168 hour salt mist test IEC 68-2-11.  
**Operating Temp:** -40 °C to 125 °C.  
**Max tank pressure:** 1 bar.  
**EMC:** Type approval in accordance with EN ISO 13766:2006.  
**Vibration:** 15.3 Grms BS EN 60068-2-4:1995.  
**Shock:** 500 m·s<sup>-2</sup>, 6 ms, BS EN 60068-2-27:1993.  
**Weight:** 0.15 Kg (Gauge Length, A = 300 mm).  
**Drop:** 1m to concrete on six box faces.



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