Rochester Sensors
Engineering Innovative Solutions™

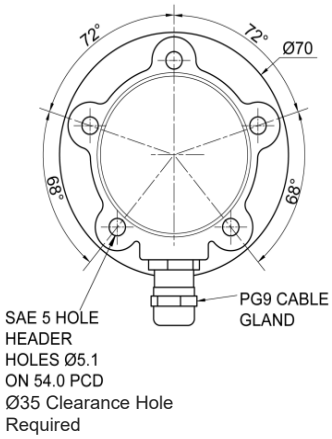
T/LL35X Liquid Level Sensor

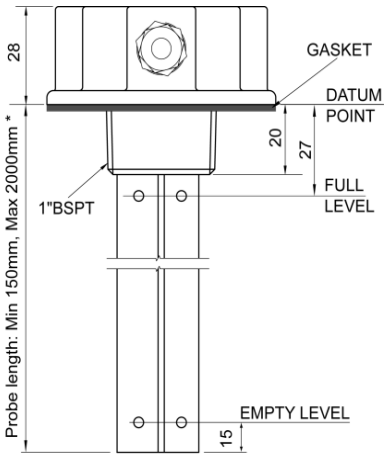
The **T/LL35X** series is a range of highly advanced sensors for continuously measuring the contents of a tank. The unique feature of the T/LL35X is that it auto compensates when a liquid with a different dielectric constant is used. For example, if it is used in a tank of conventional diesel, then the user can refill with bio-diesel and the sensor will correct the output level automatically.
Options include a high/low level alarm point, fitment of any suitable connector and compensation for non-linear shaped tanks.

SPECIFICATION

Liquid Types
Diesel, Biodiesel, HVO, Kerosene, Petrol, Water or any liquid which is compatible with the materials of construction.

Construction
Housing: Die-cast Aluminium & Stainless-Steel
Sensor tube: Anodised Aluminium
Wetted Materials: PTFE, Flurosilicone FVMQ, Aluminium & Stainless-Steel
Gasket: NBR N70C181





* Up to 1000mm in mobile applications or up to 2000mm in static applications.

Dimensions
Probe length: Min 150 mm
Max 2000 mm static applications &
1000 mm on mobile applications

Electrical
Supply voltage: 9-32 VDC with 80 V over voltage protection
Supply current: 15 mA@12 VDC + output load
Connections: 430 mm long 18 AWG XLPE flying leads#

Outputs
Resistive: Any values between 3-501 Ω or 501-3 Ω (3 Ω Steps)
Resolution: 3 Ω
Max dissipation: 250 mW
Current:
Resolution: 0-20 mA, 4-20 mA
Max load: 20 µA
Voltage: 250 Ω (Including interconnecting cable resistance)
12 VDC system: Any values between 0-5 V/5-0 V
24 VDC system: Any values between 0-10 V/10-0 V
Resolution: 10 mV
Max Load: 10 mA source (dependent on minimum supply voltage)
Accuracy: ±2.0% of probe length @ 20 °C (+68 °F) in diesel
(For probes lengths 300 mm and above)

Model Variant Table	
Model No	**Output**
T/LL350	Resistive
T/LL351	Voltage
T/LL352	Current
T/LL353	Resistive + alarm
T/LL354	Voltage + alarm
T/LL355	Current + alarm

Environmental Ratings
Operating Temperature: -40 °C to +85 °C (-40°F to +185 °F)
Sealing: IP67
Weight: 300 g (10 oz) (1000 mm long unit)
Max tank pressure: 0.75 bar (10 psi)
EMC: Type approval in accordance with EN ISO 13766:2006
Vibration: 500 mm sensor type tested to 1.88 grms to BS EN 60068-2-64:1993*
Shock: 500 ms^{-2}, 11 ms to BS EN 60068-2-27:1993

* Vibration Testing	
Frequency	**G2/Hz**
10	0.005
150	0.020
220	0.010
350	0.002

Options
Alarm: One position at either high level (switch to ground above level) or low level (switch to ground below level).
Switch point can be set between 7% and 90% of measuring range (hysteresis 5%).
Max load: 100 mA.
Custom empty/full points: Specific empty and full levels can be provided within the allowable measurement range of the probe.
Non-linear Tanks: Compensation for non-linear tank shapes available.

 # Connections: Any suitable customer specified connector can be fitted. Terminated wire ends should be fitted with suitably sealed connectors to maintain specified IP rating.
₸: Due to 3 Ω resolution, accuracy of resistive output variants is specified accuracy ±3 Ω.