About
The Product —

INTRODUCTION

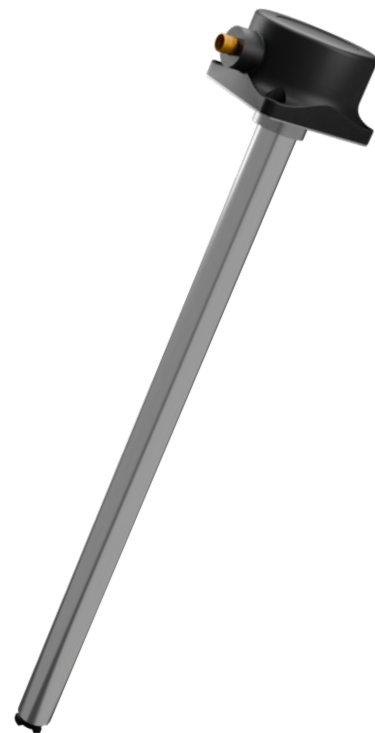The Tracer Black Fuel Level Sensor functions as a volumetric fuel sensor based on capacitance. When integrated with any GPS tracking system, this sensor accurately gauges fuel levels within tanks. Subsequently, it relays this data to a cloud-based application, enabling users to monitor fuel levels in real-time.

OPERATING PRINCIPLE

The sensor probe and the metal wall of the sensor constitute the two plates of a capacitor. Diesel fuel serves as the dielectric material between these sensor components. The capacitance generated is directly correlated with the diesel level between the plates. Tracer Black Fuel Level Sensor utilizes a uniquely designed capacitance change measurement circuit to detect alterations in fuel levels. The translation from capacitance to level is conducted based on the probe's calibration point.

TRACER FLS FEATURES AND BENEFITS

Compact probe size

A noise filtering mechanism is implemented to mitigate the influence of external disturbances on the sensor, minimizing their impact to the maximum extent possible.

The sensors are electrically insulated and shielded, safeguarding them from external elements and fluctuations in voltage, thereby maintaining stability against abrupt changes.

Adaptable to various sizes of fuel tanks, it can be trimmed to fit the height of the specific tank as needed.

Equipped with a shockproof mechanism, ensuring reliable and stable performance even in the harshest of environments.

SENSOR SPECIFICATION	
Item	**Performance Parameters**
Collection principle:	Capacitance
Length:	750mm, 1000mm, 2000mm, 3000mm
Electrical parameters:	DC: 8-36V (Over Voltage Protection, Reverse Voltage protection)
Power consumption:	0.286W/12V、0.571W/24V
Output Interface:	RS485 / Analog Out (0-5V)
IO Pin ESD protection:	+/-10kv
Transmission rate (bit/sec):	Default 9600 (configurable)
Detection of liquid type:	Diesel
Resolution:	Less than 1mm
Error in measurement:	+/- 1% moving in vehicle 0.2% in stationary tanks and vehicles
Temperature measuring range:	-40 to +60
Operating temperature:	-40C to +85C
Detector material:	Aluminum alloy
Protection class:	IP67
Angle sensor	3D Accelerometer
Temperature compensation	Built-In
Supported protocol:	Supports all the tracking device
Averaging Interval:	1-300 sec (configurable)
Digital Reading Range:	Maximum level measurement Value: 1-4095
Calibration Method:	Using Tracer Black CAL device and Bluetooth based Android App