



## Feature Highlights

- Predictive oil condition monitoring reduces maintenance costs and extends service intervals
- Early detection of wear and contamination minimizes unplanned downtime
- Supports ESG goals through reduced oil consumption and parts replacement
- Continuous real-time oil analysis with 0.01% sensitivity (100ppm detection)
- Molecular-level sensing enables accurate tracking of oil degradation and equipment health
- Compatible with mineral and synthetic oils across diverse equipment and environments

## Extend Oil Use | Reduce Maintenance Reduce Breakdowns | Detect Contaminations

The Tan Delta sensor delivers high-quality real-time oil condition analysis. This enables multiple operating benefits including reduced maintenance costs, improved reliability, reduced oil wastage, and extended equipment life. Our unique FSH™ core technology analyzes oil condition holistically, detecting, measuring, and tracking contamination or wear with 0.01% sensitivity (100ppm). Other sensor systems typically monitor specific parameters while ignoring others. This real-time oil analysis capability is achieved through continuous analysis of the electrochemical properties of the oil at a molecular level. Tan Delta sensor data provides high-confidence insight into real-time equipment health and maintenance status. Reliable maintenance forecasting based on actual equipment need enables optimized maintenance intervals and reduced cost, supported by continuous monitoring that detects unexpected anomalies or contamination. The Tan Delta sensor works with any oil type and integrates easily into critical equipment, providing continuous oil condition monitoring across diverse operating environments.

# Specifications

## Product Information

Name	SENSE1 Kit
Product No.	SE1-###-###

## Kit Contents

Sensor	Tan Delta OQS (or OQL long-nosed version)
Configuration Cable	CAB-J - For use with TD Config software to configure the sensor
USB Drive	Configuration Software (TD Config), and User Documentation
Quick Start Guide	Configuration and installation guide

## Physical - Sensor

Material	Stainless Steel AISI304
Dimensions	102 x 36 mm (L x W) <i>Standard Sensor</i> 129 x 36 mm (L x W) <i>Long-Nosed Sensor</i>
Weight	190 g <i>Standard Sensor</i> 225g <i>Long-Nosed Sensor</i>
Connection	32 mm AF Hex Collar
Torque	25 Nm

## Available Threads *(Alternative threads available upon request.)*

Thread Type	Seal	Order Code
1/2 in BSPP	1/2 in Dowty	OQS-BS1
1/2 in NPT	N/A	OQS-NP1
7/8-14 UNF	O Ring Viton 18.6 x 2.4 mm	OQS-UN1
M18	M18 Dowty	OQS-M18
1/2 in BSPP Long-Nosed Sensor	1/2 in Dowty	OQL-BS1

## Connectors

Sensor	6-Pin Bulgin PXP4013/06P/PC
Cable J	6-way Bulgin Female USB

## Electrical

Supply	+9-30 V DC
Consumption	0.75 W Maximum

## Data Output/Input

Digital output	RS485, CANbus
Protocols supported	Modbus, CanOpen and J1939
Analog output	4-20 mA

## Oil Quality Detection Parameters

Output	Tan Delta Number (TDN) Oil Temperature (C or F)
Sensitivity	0.01%
Elements	All wear and contamination

## Oil type

Configuration	
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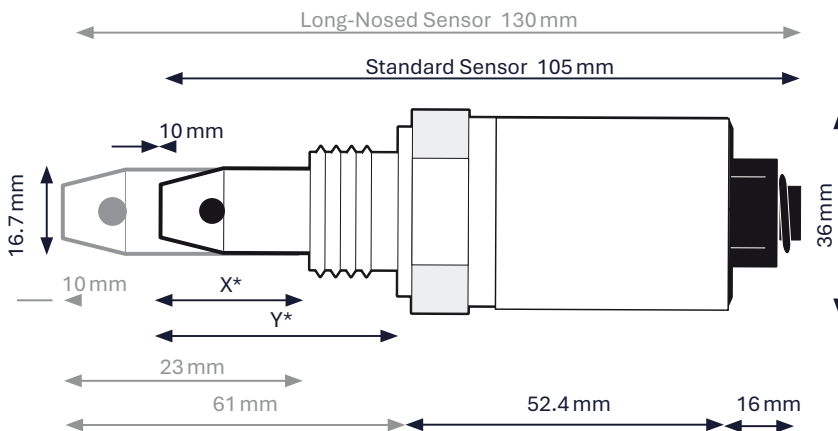
## Environmental

Operating temperature	-40 °C (-40 °F) to +120 °C (+248 °F)
Calibrated temperature	-20 °C (-4 °F) to +120 °C (+248 °F)
Fluid temperature	-40 °C (-40 °F) to +120 °C (+248 °F)
Fluid pressure	Up to 70 bar (1015 psi)
Storage temperature	-55 °C (-67 °F) to +150 °C (+302 °F)

## Standards and Certification

Water and dust	IP68 when connected
Shock and vibration	
EMC	EN 61000-6-4:2007 (Generic Emissions Standard for Industrial Environments) EN 61000-6-2:2005 (Generic Immunity Standard for Industrial Environments)
Conformity	CE Marked RoHS Compliant

## Dimensions & Connections



## Sensor Pin Out

1	+9-30 V DC
2	Oil Temperature 4-20 mA
3	Oil Condition 4-20 mA
4	Ground / 0V
5	
6	RS485B-CANH

\*X and Y dependent on Model. Refer to the User Guide.