KIT | SENSE1

TANDELTA
Oil Condition Monitoring

Extend oil use | **Reduce maintenance** | **Reduce breakdowns** | **Detect contamination**

PRODUCT DESCRIPTION

The SENSE1 Kit provides unparalleled real-time oil condition analysis, so you can predict and prevent breakdowns while reduce oil consumption by up to 30%.

Powered by our unique Full Spectrum Holistic (FSH ™) core technology the sensor analyses oil at the molecular level, detecting and tracking contamination and wear with unparalleled accuracy. It continuously measures the oil's electro-chemical properties with 62% more sensitivity than dielectric oil sensors. This enables precise detection of all forms of oil wear and contamination, including oxidation, fuel dilution, coolant leakage, and wear metals down to 50 ppm*.

This groundbreaking capability can provide instant, actionable insights into equipment health. Compatible with all oil types, the SENSE1 Kit integrates seamlessly into assets and equipment across industry, reducing maintenance costs, extending equipment life, minimizing oil waste, and enhancing reliability.

**Detection of 50 ppm of copper particles independently verified by TUV SUD.*

WHAT'S IN THE BOX?

The SENSE1 Kit includes:

- Tan Delta **OQS** Sensor
- Universal Configuration Cable (**CAB-J**)
- USB containing **TD Config** configuration software
- Quick Start Guide

KEY FEATURES & BENEFITS

- **COMPREHENSIVE ANALYSIS**
  Our unique FSH™ core technology detects contamination and wear at the molecular level.
- **REAL-TIME INSIGHTS**
  Continuously monitors and analyses oil, 24/7, instantly alerting to any detected issues.
- **ACCURACY & PRECISION**
  Our unique technology is on average 62x more sensitive than dielectric sensing, and is proven to detect contaminants down to 50 ppm.
- **VERSATILE & SIMPLE**
  Works with any oil type and fits seamlessly into assets and equipment across industry.
- **PROTECT ASSETS**
  Predict and prevent catastrophic failures with detailed real-time monitoring.
- **MINIMIZE DOWNTIME**
  Extend equipment life, extend oil-change intervals and reduce oil consumption by up to 30 %.

TECHNICAL DATA

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) *Standard Sensor* 129 x 36 mm (L x W) *Long-Nosed Sensor*
Weight	190 g *Standard Sensor* 225g *Long-Nosed Sensor*
Connection	32 mm AF Hex Collar
Torque	25 Nm

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

Thread Type	Seal	Order Code
½ in BSPP	1/2 in Dowty	OQS-BS1
½ 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	Any mineral, semi-synthetic or synthetic oil, including fuels (diesel & bio-diesel)

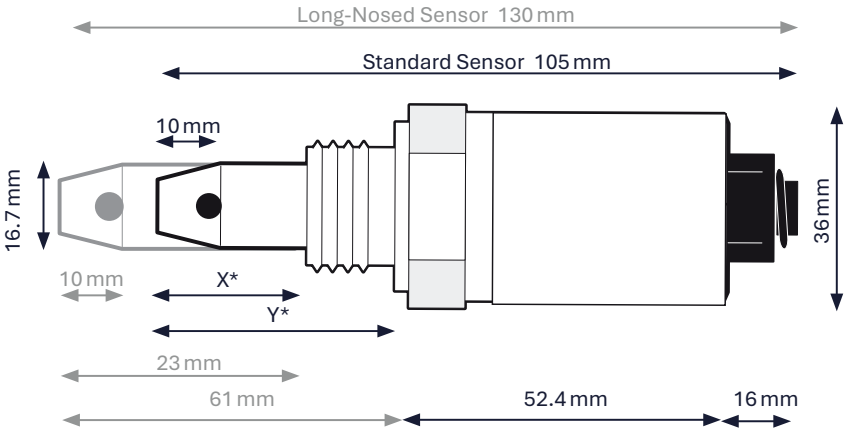
Environmental

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	BS EN 60068-2-30 (Test Db - Cyc.Hum.) BS EN 60068-2-6 (Test Fc - Sine Vib.) BS EN 60068-2-27 (Test Ea - Mech. Shock)
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 AND 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	32 mm AF Hex Collar
6	RS485B-CANH

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

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