

# TANDELTA

## Oil Quality Display

### Displays 20/20 vision of your oil condition

The Tan Delta Oil Quality Display is the perfect partner for the Tan Delta Oil Quality Sensor. Engineered to deliver outstanding performance, the robust IP67 rated enclosure delivers a straight forward and effective way to display the real time condition of your oil. Ideal for the majority of commercial and industrial environments.



#### Key Features

##### Flexible Installation

Can be used stand alone or simply connected to a wide variety of control and display systems.

##### Ease of Use

With the intuitive traffic light display the real time monitoring of your oil condition has never been easier.

##### Fully Certified

The Tan Delta Oil Quality Display is fully certified to International standards to work in the majority of commercial and industrial applications.

##### Robust and Rugged

The rugged polycarbonate IP67 rated enclosure with membrane keypad and high quality industrial connectors make this unit very reliable.

##### Independantly Tested

Has undertaken rigourous independant testing to verify the outstanding performance in a wide variety of applications.

#### Key Benefits



##### Accuracy

Over 60 times more sensitive than other sensor technology giving instant access to more accurate data relating to the condition of your oil.



##### Early Warning

Instant alerts from the easy to read display unit help to ensure reliability of critical plant equipment.



##### Continuous 'Always On' Monitoring

Enjoy the peace of mind knowing that all of your critical equipment is being monitored 24 hours a day, 7 days a week, 365 days a year.



##### Minimise Wastage

Dramatically reduce service costs by only making oil changes when they are actually required and not based on historical schedules.

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## Oil Quality Display

### Product Features

#### Physical

**Material:** Polycarbonate

**Dimensions:** 120mm x 66mm x 42mm (L x W x H)

**Weight:** 300g

**Colour:** Grey

**Keypad:** Polyester

**Mounting:** Integrated Flanges

#### Power

9-30 V DC

Average power consumption 0.4W

Power consumption 30mA continuous

#### Analog Output

4-20mA

#### Digital Output

RS232: 9600 baud bi-directional

RS485: 9600 baud half duplex

Modbus protocol supported on RS232/RS485

CANbus: CANopen protocol

#### Environmental

**Protection:** IP67 when connected

**Operating Temperature:** -20 °C to +120 °C

#### Display

20 Segment Tri-Colour LED

13 Green LEDs

4 Amber LEDs

3 Green LEDs

Power LED

Oil/Temp Selection Button

Calibration Button

Oil/Temp Selection LEDs

#### Measuring Range

**Temperature Range:** -20 °C to +120 °C

**Oil Quality:** 0 to 20

#### Compatibility

Tan Delta Oil Quality Sensor

Tan Delta Oil Quality Software

All Tan Delta Accessories



### Tan Delta Accessories

#### Standard Cables

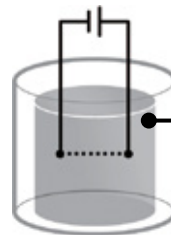
Sensor	→ Bare Ends (5 metres)	OQC-01-A-05-0
Sensor	→ Display Unit (5 metres)	OQC-01-A-05-B
Display Unit	→ Bare Ends (5 metres)	OQC-01-A-05-0

#### Programming Accessories

USB Cable	OQA-PC-1
Display and Calibration Software	OQA-PC-2

### How it Works

Traditionally, dielectric sensors are used to measure the capacitance of the oil, which changes as the oil becomes damaged...



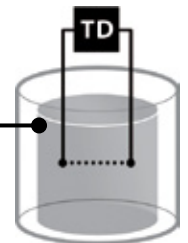
#### Dielectric Sensor

An a.c. electric voltage is applied across two electrodes, the change in current flowing indicates whether or not the oil is seriously degraded

#### Tan Delta Oil Quality Sensor (OQS)

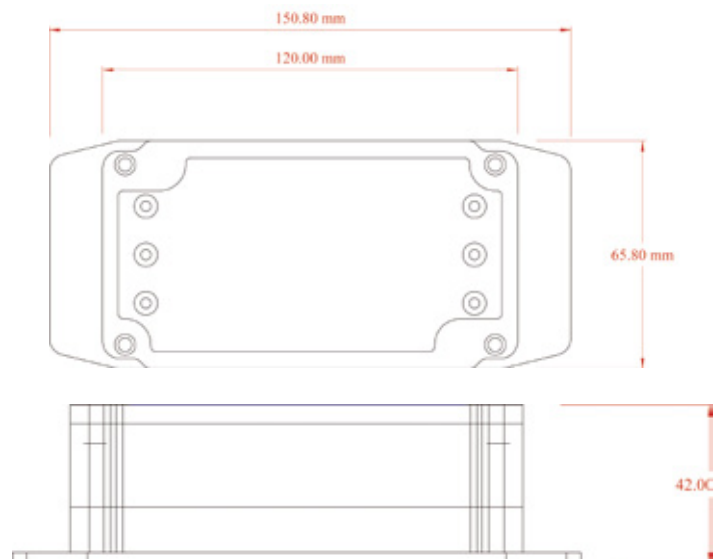
This device works in a similar way to the dielectric sensor but measures both the capacitance and the conductance (a combined measure known as permittivity) of the oil.

*The combined data provides a reading that is, on average, up to 60 times more sensitive to the change in quality of the oil*



As a result of the increased sensitivity, the Tan Delta OQS can detect the very early stages of deterioration or damage to oil, allowing timely planning of any intervention that may be needed.

### Mechanical Drawing



### Ordering information

Standard Display Unit = OQD-A-1

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TANDELTA



**Tan Delta Systems Ltd**  
AMP Technology Centre  
Brunel Way  
Rotherham  
S60 5WG  
United Kingdom

**T:** +44 (0)845 094 8710  
**F:** +44 (0)845 838 6711  
**E:** [info@tandeltasystems.com](mailto:info@tandeltasystems.com)  
**W:** [www.tandeltasystems.com](http://www.tandeltasystems.com)  
Company No. 06362470