Oil Quality Sensor 2

The OQS 2 is the world's most advanced real-time oil condition sensor delivering a unique insight into the current status of your equipment.

Ordering Codes

OQS2	-		-		-	
		Box 1		Box 2		Box 3

Housing Material [Box 1]	
Code	**Description**
01	Stainless steel (AISI 304)

Connection [Box 2]	
Code	**Description**
A	G 1/2'' BSPP male

Seal [Box 3]	
Code	**Description**
V	FPM (Viton)

Easily fitted, the OQS 2 will continuously monitor, measure and report actual oil condition with absolute accuracy and reliability. A simple plug & play data interface fits into your existing display and monitoring systems.

It works with any oil type, mineral/synthetic, and can be fitted to any engine, gearbox, hydraulic or electrical transformer system while in full operation. The unique oil condition monitoring technology ensures any wear and/or contamination is instantly detected, measured and reported with an oil quality change sensitivity detection of 10ppm (0,01%) with an accuracy margin of +/-0,5%.

Simple to install and use, the OQS 2 provides unique insight into the condition of your equipment, helping you prevent unnecessary breakdowns, eliminate unnecessary maintenance and reduce your operating costs.

Key Features

- Detects any and all wear and contamination: water, acid, fuel, viscosity, different oil types, carbon, particles, etc.
- Integrated oil quality change sensitivity detection of 10ppm (0,01%) with an accuracy margin of +/-0,5%.
- Continuously analyzes oil condition on operating equipment and reports every two seconds.
- Proven around the world for use in even the most extreme industrial and commercial environments.
- Quick and easy to install on any equipment with plug & play integration with any existing data reporting and display systems.

Benefits

Every equipment operator knows that machine monitoring enables effective management and thus increased reliability, efficiencies and profits. Oil condition monitoring with Des-Case takes this to another level with greater insight into the real-time condition of your equipment, delivering significantly enhanced financial and operating benefits.

- Reduce maintenance costs
- Reduce breakdowns & damage
- Reduce oil sampling

Software

The included Windows (Versions 7, 8 & 10) based PC application, puts you in control of the configurations of the sensor and the display.

When used with OQS 2 you can access our constantly updated online database of specific oil type sensor configuration files and instantly program sensors to optimize performance and data quality.

When used with OQDs you can program condition alerts, remaining Oil life periods and download, display and analyze historical data.

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Specifications

GENERAL

- Ordering Code: OQS2-01-A-V

PHYSICAL

- Material: Stainless Steel: AISI304
- Weight: 0.4 lb (180 g)
- Connection: 32mm AF Hex Collar
- Torque: 25Nm
- Connection Thread: 1/2'' BSPP male

CONNECTIONS

- Connector: 6 pin Bulgin 4000 series

ELECTRICAL

- Power Supply: 9-30 V DC
- Consumption: 0.4W Average

DATA OUTPUT

- Digital Output: RS485, CANbus
- Protocols Supported: Modbus, CanOpen and J1939
- Analog Output: 4-20mA

OIL QUALITY DETECTION PARAMETERS

- Frequency: Every 2 seconds
- Output: Oil Condition, Oil Temperature (°F or °C)
- Sensitivity / Accuracy: 0,01%, +/-0,5%
- Elements: All wear and contamination

OIL TYPE

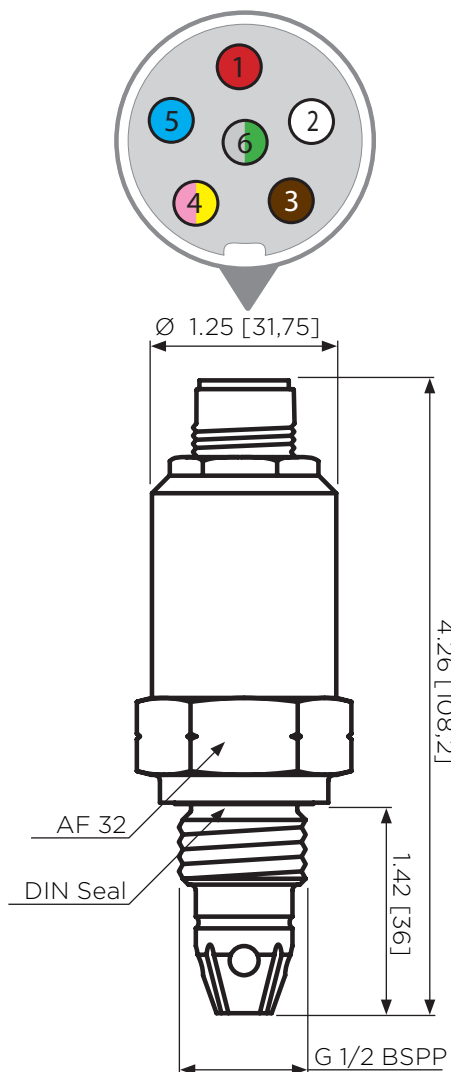- Configuration: Any mineral, semi-synthetic or synthetic oil, including fuels (diesel & bio-diesel)

ENVIRONMENTAL

- Fluid Pressure: up to 1015 psi (70 bar)
- Operating Temperature: -40°F to +248°F (-40°C to +120°C)
- Calibrated Temperature: -4°F to +248°F (-20°C to +120°C)
- Fluid Temperature: -40°F to +248°F (-40°C to +120°C)
- Storage Temperature: -67°F to +302°F (-55°C to +150°C)

- **STANDARDS & CERTIFICATIONS**
- Water & Dust: IP68 when connected
- Shock & 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 & Connection

Note: All dimensions are in inches/[mm]

Pin 1	Red	9-30 V DC
Pin 2	White	Oil Temperature - 4-20mA
Pin 3	Brown	Oil Condition - 4-20mA
Pin 4	Pink/Yellow	RS485A / CANL
Pin 5	Blue	Ground / 0V
Pin 6	Grey/Green	RS485B / CANH

Ø 1.25 [31,75]

4.26 [108,2]

1.42 [36]

AF 32

DIN Seal

G 1/2 BSPP

Oil Quality Display

Overview:

The Oil Quality Display is a simple yet powerful device which allows you to read the oil condition and temperature of the oil from a sensor without a PC.
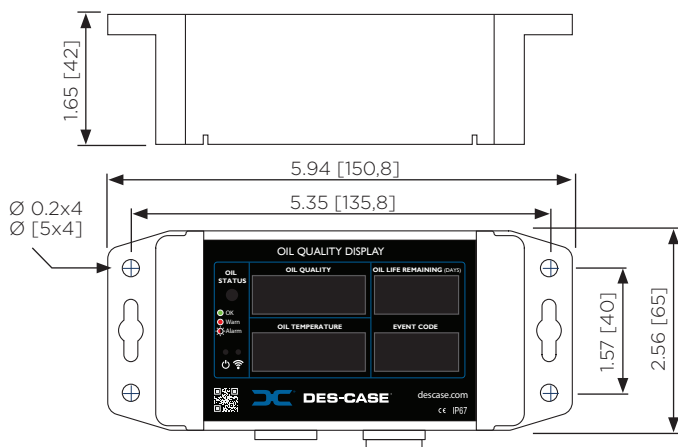
The OQD is IP67 rated (when connected). There is no need to worry about mounting the OQD in a dry location. Being manufactured from polycarbonate, the OQD can withstand most industrial environments without any damage. This enables you to set up the display on-site and provides an unique insight into oil condition and temperature readings as required. Oil life remaining (days) shows the calculated number of days oil life remaining based on current oil condition.

Key Features

- Configurable traffic light alert system provides simple visual oil quality reference.
- Continuously logs up to 280,000 records of oil condition data which can be downloaded for analysis.
- Displays oil condition, temperature, oil life remaining and event codes in real time.
- Proven around the world for use in even the most extreme industrial and commercial environments.
- The built-in WiFi allows for simple connection to mobile devices or other networks, enabling data sharing and streaming.
- Has undertaken rigorous independent testing to verify the outstanding performance in a wide variety of applications.

Dimensions
Note: All dimensions are in inches/[mm]

Specifications

GENERAL
- **Ordering Code:** OQD-S-1

PHYSICAL
- **Material:** Heat resistant polycarbonate
- **Weight:** 0.66 lb (300 g)

ELECTRICAL
- **Power Supply:** 9-30 V DC
- **Consumption:** 0.4W Average, continuous 200mA

DATA OUTPUT/INPUT
- **Analog Output:** 1 x 4-20mA
- **Digital Output:** 1xRS485: 9600 baud half duplex to sensor
  1xRS485: 115200 baud half duplex from display

DATA LOGGING
- **Logging interval:** 5 minutes
- **Battery backup:** 10 years
- **Real time clock:** Yes
- **Data download:** Via WiFi

ENVIRONMENTAL
- **Operating Temperature:** -22°F (-30°C) to 149°F (+65°C)

DISPLAY
- **Oil Quality:** TDN
- **Oil Temperature:** -4°F (-20°C) to 248°F (+120°C)
- **Oil life remaining:** days
- **Status Indicator:** LED

NETWORK
- **Supported WiFi bands:** 802.11b/g/n 2.4GHz
- **WiFi Security:** WPA1/WPA2
- **IP Addressing:** IPv4 DHCP or Static
- **Operating Modes:** Client or Hotspot
- **Integration Options:** JSON API

STANDARDS & CERTIFICATION
- **Water & Dust:** IP67 when connected
  BS EN 60529:1992+A2:2013
- **Shock & 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)
- EN 61000-6-2:2007 (Generic Immunity Standard for Industrial Environments)
  EN 300 328 v1.8.1. (Transferable Electromagnetic Compatibility for Wideband Data Transmission Equipment operating in the 2.4GHz ISM Band and using Wideband Modulation Techniques.)
- **Conformity:** CE & UKCA Marked, RoHS Compliant

Configurations

OIL QUALITY SENSOR

OQS2-01-A-V

OQC2-A-02 - 6.6ft (2 meter)
OQC2-A-10 - 32.8ft (10 meter)

OQC2-USB-01

- 4-20mA
- J1939
- CANbus
- Modbus
- Des-Case protocol

OIL QUALITY DISPLAY

OQD-S-1

- 4-20mA
- WiFi
- Des-Case protocol

OQC2-B-02 - 6.6ft (2 meter)
OQC2-B-10 - 32.8ft (10 meter)

OQC2-C-02 - 6.6ft (2 meter)

OQC2-CON-B

OQC2-USB-01

OQC2-USB-02

OQC2-A-02 - 6.6ft (2 meter)
OQC2-A-10 - 32.8ft (10 meter)