

OM-Finland Oy

Machine Health Monitoring

Advanced Metal & Moisture in oil detection

Reducing down times and remarkable cost savings



CONTINUOUS PARTICLE DETECTOR CPD-Sensor

CPD-sensor detects, alerts and counts the presence of all conductive **metal particles** in non-conductive fluid systems. CPD detects **water** in oil and gives moisture in oil alerts.



METAL PARTICLES

- No false alarms from air bubbles & oil colour or non metal debris
- High reliability in harsh environment
- Detected debris size 130um or above

WATER AND MOISTURE

- Moisture content 200ppm and upwards detected
- Accuracy is insensitive for fluid flow changes
- Pre-settable threshold for alarms

TYPICAL APPLICATIONS:

Diesel engines; marine, emergency power etc. Gear boxes; process industry, mining, wind turbines Marine thrusters; azimuth, VSP etc. Turbine bearings; hydro power, gas &steam turbines



DIFFERENCE COMPARED TO OTHER TYPE OF PARTICLE DETECTORS

CPD sensor can operate in fully automatic or in manual mode. Manual mode enables operator to pick up the debris for further metal classification and analysis.

CPD sensor operates both with engine and gear/bearing applications without any modifications. This enables user to monitor complex mobile and stationary power train systems with multi sensor network.

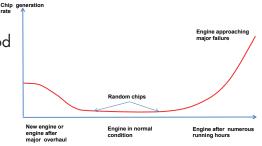
Sensor has three independent parallel channels. Detection of several particle burst hitting sensor simultaneously is sensed with the three channels. Alarm setting is simple for rapid variations of particle amounts in oil. CPD has display for time derivative of particle trend curve (debris rate/time).

CPD has two sensors in one unit, metal debris detector and water-in-oil sensing.

			Project Name -		
OM-Finland Oy	Engine 1 - 84 67		Om	Engine 1 sensor Auto ON	Gear 1 sensor Auto OFF
SENSORS	CUMULATIVE 50 CHIP NUMBER 84 chips 34		OM-Finland Oy SENSORS	CH1 CH1 REGEN	CH1 CH1 REGEN
SETTINGS	84 chips 34 RESET COUNT 17		SETTINGS	CH2 CH2 REGEN	CH2 CH2 REGEN
TRENDS	Time interval: 02/26/2018 06/28/2018	10/27/2018 02/26/2019	S.	CH3 CH3 REGEN	CH3 CH3 REGEN
	1 year - 10:13:04 - 8760:00:	0:00 02/26/2019 10:13:04 🛨	TRENDS	Engine 2 sensor Manu ON	Gear 2 sensor Auto ON
ALARMS	CHIP DETEC-		ALARMS	CH1 CH1 REGEN	CH1 CH1 REGEN
HELP (2)	2 chips/min 2 Time interval: 0		OHJE 🕗	CH2 CH2 REGEN	CH2 CH2 REGEN
26/2/2019	10 min v 02/26 02/26 10:03 10:06	02/26 02/26 10:09 10:13	28/11/2016 13:05:51	CH3 O REGEN	CH3 CH3 REGEN
10:03:16 Powered by Metecno Oy	OM-Finland Ov info@omfinland.fi	www.omfinland.fi	Powered by Metecno Oy	OM-Finland Oy SÄHKÖPOSTIO	SOITE OSOITE

MACHNERY MONITORING ALARMS

- Metal and Water trends from selected period
- Cumulative amount of debris, pre-settable threshold
- Debris rate/time, pre-settable threshold
- Water content ppm, pre-settable threshold



KEY FEATURES & BENEFITS

- Accurate real-time In-line and On-line monitoring via flow sensor.
- No false alarms from air bubbles & oil colour
- Continuous operation regardless of random debris
- Standard grid space 0,2 mm, 0,5 mm and 0,75 mm
- Water in oil detection range 200 ppm...2000 ppm water in oil
- Fluid flow rate 3...300 l/min
- Operating voltage 24V DC
- Selectable data interfaces, Modbus RTU, Profibus, EtherCAT or Ethernet
- IoT connectivity, LoRa, MS Azure etc.
- Stand alone system option with PC or touch screen panel PC HMI
- Sensor is suitable for all types of engine and gear oils and hydraulic fluids



OM-Finland Oy was founded 2014 in Tampere. OM-Finland develops and sells its patent protected machine health monitoring solutions for several industries.

By monitoring machinery oil, OM-Finland's CPD sensor provides customers real-time awareness for machinery condition and help in preventive maintenance.

As a result of CPD sensors continuing and false alarm free detection, OM-Finland's customers have one problem less to solve.