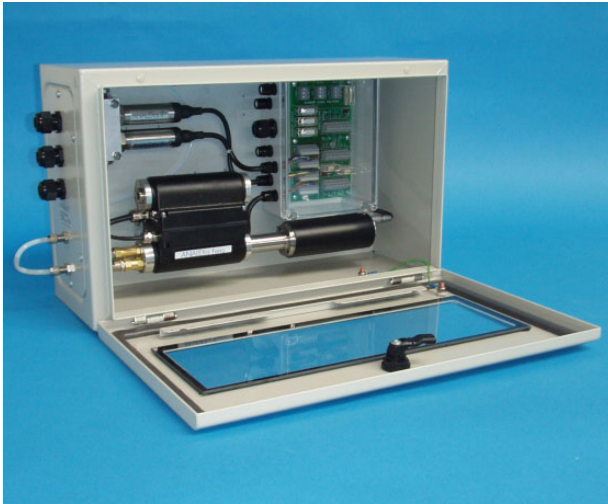


ANALEXrs Online Sensor Suite

The ANALEXrs suite of instruments has been designed to accomplish the three primary objectives of oil analysis

- Ensure lubricant condition
- Control contamination
- Detect and analyse wear debris



Replicating this on a single sensor is impossible for the foreseeable future and as such the sensor suite has been developed to offer real-time monitoring on critical plant such as a wind turbine gearbox. Using its own piston pump the sensor suite makes frequent inspections of remote oil and machine health a feasible option. The risk of sampling error is eliminated and data from the sensors can be streamed via any network system, allowing remote monitoring and more effective maintenance planning. It goes beyond the normal protection systems; it addresses the root cause of lubricant and machine failure.

Designed for mounting into the lubrication system of a machine, the suite reports metallic ferrous wear debris, the condition of the oil, including contamination and the Moisture content of the oil. Housed in a robust box it includes the following three sensors;

Total Ferrous Sensor (Piston Version)
Moisture Sensor
Oil Condition Sensor

Options Include

FG-K16521-KW – Standard Sensor Suite

FG-K16567-KW – Heated Sensor Suite

Features:

Can be used in Remote Locations where continuous monitoring is not always possible by engineers.

Monitors the presence of wear debris materials that signal a changing wear rate and hence the need for intervention.

Monitors the presence of contaminants and moisture that may cause change in the oil condition

Rugged design for most applications

Benefits:

Allows the engineer to proactively monitor critical fluids allowing early maintenance intervention to prevent failure

Controlling the wear rate ensures longer service life

Increases the surveillance level of the machine between oil samples to offer greater confidence to the maintenance engineer

Low cost of purchase and ownership

Immediate benefit in terms of protection and proactive monitoring

Minimal annual servicing costs

Minimal installation costs

Financial benefits example: Wind Turbine gearbox

As wind turbines become larger and more complex, the power produced from them increases but so can the maintenance costs. There have been many well publicized failure events which have been very costly to the owners, manufacturers and to the general perception of wind as a renewable energy source. One such event was the failure of all 30 2MW turbines installed at Scroby sands in the UK. All failures occurred within one year of installation. Using data provided from a gearbox manufacturer, the total cost of removing, overhauling and reinstalling a gear box can be up to €450,000*. This can be due to the turbines inaccessibility, crane rental, man hours used and loss of earnings on the turbine. If sensor equipment detects a potentially serious problem before it becomes too advanced and the repair could happen without the need for a crane then the repair bill could cost less than half that. If a sensor detected oil contamination such as water in the oil or oxidation which could lead to a serious failure then the turbine could be saved by just replacing the oil this could be a €450,000 saving.

* Data taken from "the industrial gearbox life cycle and the total cost of ownership" by Gary Bills – Hansen Transmissions – BGA Gears 2006 Seminar

Specifications

Ambient operating temperature:	0 to 70°C (32 - 158°F)
Ambient operating temperature Heated version:	-20°C to 70°C
Analogue Communication Interfaces:	4-20mA
Detection:	0-2000 parts per million [ppm] Un-combined ferrous debris by weight, Oil Quality Units – Index Scale, 0-100% Relative Humidity, -20 – 120°C Temperature
Digital Communication Interfaces:	RS232, RS485, CAN Bus, Wireless LAN 802.11b
Fluid Compatibility:	Petroleum, synthetic oils – not ester based.
IP rating:	IP65
Max system fluid pressure:	10 Bar
Maximum fluid viscosity:	350 cst @40°C
Permitted Fluid temperatures :	10 to 70°C (50 – 158°F)
Power consumption :	0.8 A
Power Input:	18 – 30V DC
Weight:	15kg

Want to know more?

Contact Kittiwake here marketing@kpteknika.co.id for Indonesia