PARTICLE SENSOR

Continuous Monitoring of Particles Concentration

Particles found in hydraulic fluids and lubricants adversely affect the quality of oil and can cause severe damage of the components of the engine system in the long-term. The PARTICLE SENSOR is specifically designed to provide the real-time monitoring of the oil condition in order to immediately detect possible contamination with insoluble or metal particles. The continuous assessment of the oil for particles presence enables a quick and efficient response to the occurring changes in particles concentration.

Technical Features:

- Measuring range: 4, 6, 14, 21 µm
- Cleanliness classes according to: ISO 4406:99 and SAE AS4059
- Voltage: 9 - 33 VDC
- Fluid pressure: up to 420 bar
- Fluid flow rate: 50 - 400 ml/min
- Temperature: -20°C to +85°C
- Protection class: IP 67
- Interface: RS232/ CAN; 4 – 20 mA
- Data memory: 3000 data records
- Fluid compatibility: mineral oils (e.g. HLP), ester oils (e.g. HEES/ HETG)

The PARTICLE SENSOR is equipped with an optical particle monitor that facilitates the monitoring process and counting of the detected particles. The practical design of the sensor's display with an arrow navigation system helps to make any necessary adjustments for an accurate assessment.
The measuring method of the sensor is based on a so-called light extinction principle which enables classification of particles within a measuring cell according to their size and quantity employing the laser technology. The obtained results are displayed in accordance with ISO 4406:99 and SAE AS 4059 respectively.
The PARTICLE SENSOR enables one to detect and to evaluate small-size particles starting from the size channel 4 µm upwards. Therefore, through the continuous analysis of the oil in use, the beginning of abrasion and friction processes can get recognized at an early stage prior to the substantial damage of the machine components.
Two sensor connections on opposite sides make the installation process in the off-line circuit to the system convenient. As the sensor is applicable to fluid pressures of up to 420 bar, it can be installed directly into the pressure line.
The integrated memory unit for data recording allows storing information for a prolonged period of time. And through the connection of the sensor to the special display unit DATALOGGER, the obtained values are directly displayed.

Martechnic GmbH · Adlerhorst 4 · 22459 Hamburg · Germany
Phone: +49(40) 853 128-0 · Fax: +49(40) 853 128-16 · e-mai: info@martechnic.com · www.martechnic.com