

Press Release

Schaeffler Expands OPTIME Portfolio: FAG OPTIME E-CM Monitors Electrically Driven Units

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- Electrical condition monitoring of three-phase motors with FAG OPTIME E-CM
- More comprehensive insight into the condition of production systems
- Easy installation and AI-supported data evaluation

The Schaeffler OPTIME ecosystem is a leading solution for condition monitoring and smart lubrication of machinery. Sensor technology and software combined with the expertise of a globally leading bearing manufacturer characterize this offering from the Motion Technology company.

With the FAG OPTIME E-CM (Electrical Condition Monitoring, E-CM), Schaeffler is now expanding its portfolio to include electrical condition monitoring of three-phase motors – such as those commonly used in compressors, rotary pumps, fans, blowers, grinding machines, and in large quantities in all industrial sectors. Schaeffler is thus taking the next step towards trouble-free production processes.

Additional perspective for condition monitoring

"Electrical condition monitoring adds an essential perspective to the existing OPTIME ecosystem and enables maintenance teams to detect both mechanical and electrical malfunctions at an early stage," says Dr. Philipp Jussen, Head of Schaeffler Industrial Lifetime Solutions Europe.

The existing OPTIME sensors are specialized in detecting vibrations that indicate premature wear and possible mechanical malfunctions. FAG OPTIME E-CM rounds off the product family by monitoring and evaluating electrical currents and voltage of the electrical drive. "As a result, our customers can now prevent unplanned downtimes in production environments even better", explains Dr. Philipp Jussen.

For example, FAG OPTIME E-CM enables early detection of insulation faults and damage, cable defects, static and dynamic eccentricity, broken rotor bars, voltage fluctuations, and overcurrents. Customers benefit from improved system transparency, resulting in higher plant availability, proactive maintenance planning, and thus lower costs and personnel expenditure. This is especially true for systems that work in hard-to-reach environments, as the sensors are attached to the cables in the control cabinet.

Easy Installation – AI-Supported Data Analysis in the Schaeffler Cloud

The technical installation is straightforward for electrical personnel. The system consists of a measuring unit and the sensors for current detection, which are attached to the live cables of the generators in question. Both are located in the control cabinets that are easily accessible for maintenance staff.

Either current transformers (split-core) or Rogowski coils (wound coils that are placed around a conductor and record the temporal change of a current flow) may be used as sensors. The distance between the sensor and the measuring unit in the control cabinet can be up to ten meters and is bridged by cable. Additionally, the three-phase voltage signals of the electrical motor are connected to the main unit.

The measuring unit sends the data obtained by FAG OPTIME E-CM directly and wirelessly via a protected LTE data connection to the Schaeffler Cloud for analysis. In addition to its decades of experience as a manufacturer and developer of rolling bearings, Schaeffler uses modern machine learning technologies and artificial intelligence to find patterns in the data and derive recommendations for maintenance teams.

Standalone installation or integration into existing OPTIME ecosystem

Maintenance managers receive notifications via their dashboards on the PC or via app when irregularities occur. In addition, the collected data can be used to document and improve existing processes. FAG OPTIME E-CM can be integrated into an existing system or set up as the first OPTIME solution.

With the now even more comprehensive OPTIME ecosystem, complex production environments with many different units can be monitored and maintained easily, efficiently, cost-effectively and reliably. FAG OPTIME E-CM is launching end of February 2026 in Europe and some Asian countries and will gradually be available globally.

More information on the FAG OPTIME E-CM: [medias](#).

Schaeffler Group – We pioneer motion: The Schaeffler Group has been driving forward groundbreaking inventions and developments in the field of motion technology for 80 years. With innovative technologies, products, and services for electric mobility, CO₂-efficient drives, chassis solutions and renewable energies, the company is a reliable partner for making motion more efficient, intelligent, and sustainable – over the entire life cycle. Schaeffler describes its comprehensive range of products and services by means of eight product families: From bearing solutions and all types of linear guidance systems through to repair and monitoring services. Schaeffler is with around 110,000 employees and more than 250 locations in 55 countries, one of the world's largest family-owned companies and one of Germany's most innovative companies.

FAG OPTIME E-CM: The system consists of a measuring unit and the sensors for current detection. (Image: Schaeffler)

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The FAG OPTIME E-CM measuring unit can be easily integrated into a control cabinet. (Image: Schaeffler (Craft Bildwerk))

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