SIMPLE, MODULAR, AND EASY TO INTERLINK

ProLink: Systematic condition monitoring

ENHANCE AVAILABILITY AND INCREASE PRODUCTIVITY

The digital revolution and the linking of components and systems increase the efficiency of machines and equipment. Schaeffler is shaping the field of digital transformation with a clear vision and specific solutions.

Schaeffler’s Smart EcoSystem offers a standardized hard and software infrastructure from components equipped with sensors through to digital services and business models:

• You can reliably and precisely gather important data for controlling processes and machine monitoring with our sensors and mechatronic products.
• ProLink allows you to use Schaeffler’s unique domain expertise in the form of digital services to automatically generate relevant information from the collected data and to receive specific recommended actions.
• Benefit from our various digital solutions for industrial applications and use these solutions in a targeted manner to control processes, maximize availability, and optimize product quality.

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ProLink: Systematic condition monitoring

The advantages for you at a glance:

• ... is flexible thanks to its modular, scalable design and can, for example, be expanded to include additional measurement modules
• ... supports all of the leading field bus protocols and can therefore be easily integrated into every customer’s infrastructure
• ... enables predictive maintenance and maximum machine availability thanks to the high signal quality
• ... simplifies the use of digital services and Industry 4.0 solutions due to a cloud-compatible gateway function with signal processing

The ProLink multi-channel condition monitoring system has a modular structure and monitors the condition of machines and plants by means of vibration measurement. ProLink forms the central component of our ProLink condition monitoring system and allows for easy integration into every customer’s infrastructure.

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ProLink uses proven SmartCheck technology for condition monitoring. Thanks to the high signal quality and a 24-bit resolution, the ProLink CMS can identify even the smallest damages at an early stage. This gives operators the earliest possible warning and can optimally integrate into the relevant preventive maintenance measures.

Every care has been taken to ensure the correctness of the information contained in this publication but no liability can be accepted for any errors or omissions. We reserve the right to make technical changes.
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Configuration and integration into the cloud

The configuration of the ProLink CMS is remarkably simple: ProLink is the only system on the market that provides intelligent templates for monitoring rolling bearings, motors and gearboxes, fans, and pumps. Maintenance technicians no longer spend time learning machine geometry or mapping vibration data. The ProLink configuration process is essentially intuitive: simple configuration assistant in a web browser and a self-learning test phase in operation. After a brief guided configuration process via web browser and a self-learning test phase in operation, the system then provides high-quality and frequency-selective detection of bearing and gearbox damage, imbalance, collisions, and cavitation.

Customers can also use the integrated cloud interface to utilize digital services from Schaeffler, such as the ConditionAnalyzer. The ConditionAnalyzer offers extensive analyses and provides plain text notifications about damage that it has analyzed.

A web-based assistant provides support in the configuration of the ProLink condition monitoring system.

Prolink Condition Monitoring System

Setup and function

SmartWeb firmware

• Configuration assistant
• Automatic learning mode

Cloud communication

Ethernet, OPC/UA, MQTT, and web services

Field bus connection

Profinet, CC-Link IE, ...

Additional modules

ProLink can be individually expanded to include additional measurement modules for a range of different applications.

Vibration module with recording of speed data

Extremely high signal quality (24 bit)

High-quality signal processing

Condition Monitoring, Installed in a Switch Cabinet

Unique connectivity

Simple, modular, and easy to interlink: The ProLink system comprises a main processor module for signal processing as well as a range of signal recording modules, e.g. a vibration measurement module with 4 to 16 channels. An outstanding feature is the universal integration into the customer’s infrastructure with the help of a field bus module. The customer can choose between Profinet, CC-Link IE, and OPC/UA. The CMS service providers and system integrators in particular can thus operate multiple control systems on the market with a single CMS hardware system. OPC/UA and MQTT can also be used for cloud communication.

Condition monitoring, installed in a switch cabinet

Schaeffler’s sensors record the vibrations on the end of the vibrating screen’s shaft.

1. Schaeffler’s sensors record the vibrations on the end of the vibrating screen’s shaft.

2. ProLink analyses the overall vibration condition according to DIN ISO 10816 and application-specific characteristic values regarding the monitoring of bearings and spring fractures.

3. An alarm is triggered in the control room or in the machine control system if the permissible vibration values are exceeded.

4. The ConditionAnalyzer provides further analysis via Schaeffler’s IoT Hub interface.

5. It also provides plain text notifications about damage that it has analyzed for direct visualization by the customer.

6. The costs incurred by the stoppage of a vibrating screen amounting to several thousand euros per hour can thus be reliably prevented.

Application example

ProLink and the ConditionAnalyzer digital service can prevent planned downtimes in production-critical equipment such as vibrating screens.

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