

SIMPLE, MODULAR, AND EASY TO INTERLINK

ProLink: Systematic condition monitoring

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 for (pre)processing data in digital eco-systems and functions as an interface – both to the customer's machine control system and Schaeffler's cloud services.

ProLink uses proven SmartCheck technology for condition monitoring. Thanks to the high signal quality with a 24-bit resolution, the ProLink CMS can identify incipient damage even at a very early stage. This gives operators the earliest possible warning and can optimally integrate the relevant maintenance measures into their operating strategy.

The advantages for you at a glance: ProLink ...

- ... 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
- ... ensures transparency by providing the customer with a visualization of all the information relating to the machine's condition
- ... 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



Application examples: Paper machinery



Metal production and processing



Production facilities

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Schaeffler Technologies AG & Co. KG

Georg-Schäfer-Straße 30
97421 Schweinfurt
Germany

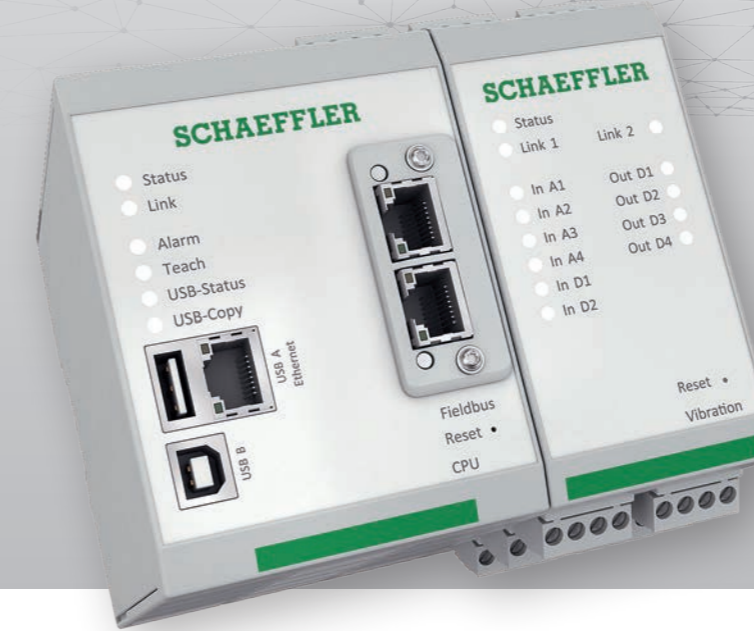
Phone +49 2407 9149-66

E-mail industrial-services@schaeffler.com

www.schaeffler.de/en

DIGITALIZATION

ProLink Systematic condition monitoring



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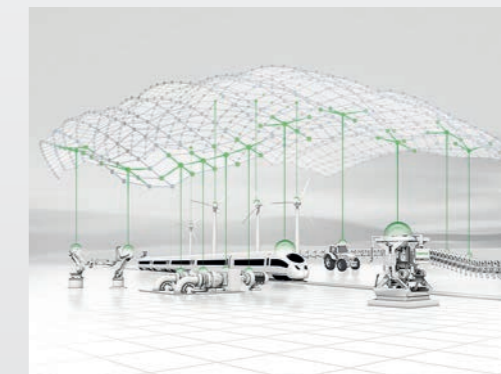
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SCHAEFFLER

ENHANCE AVAILABILITY AND INCREASE PRODUCTIVITY

Added value through digitalization



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**.

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.

SIMPLE, MODULAR, AND EASY TO INTERLINK

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 gear-boxes, fans, and pumps. Maintenance technicians therefore no longer require any knowledge of signal recording or vibration analysis. Information about the machine geometry, such as the installed bearing type or the number of fan blades, is all that is required.

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.

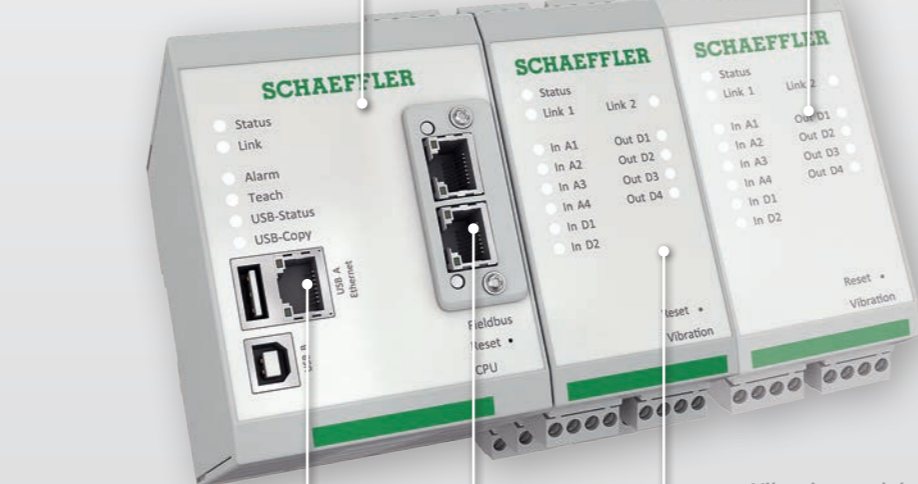
PROLINK CONDITION MONITORING SYSTEM

Setup and function

SmartWeb firmware

- Configuration assistant
- Automatic learning mode

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



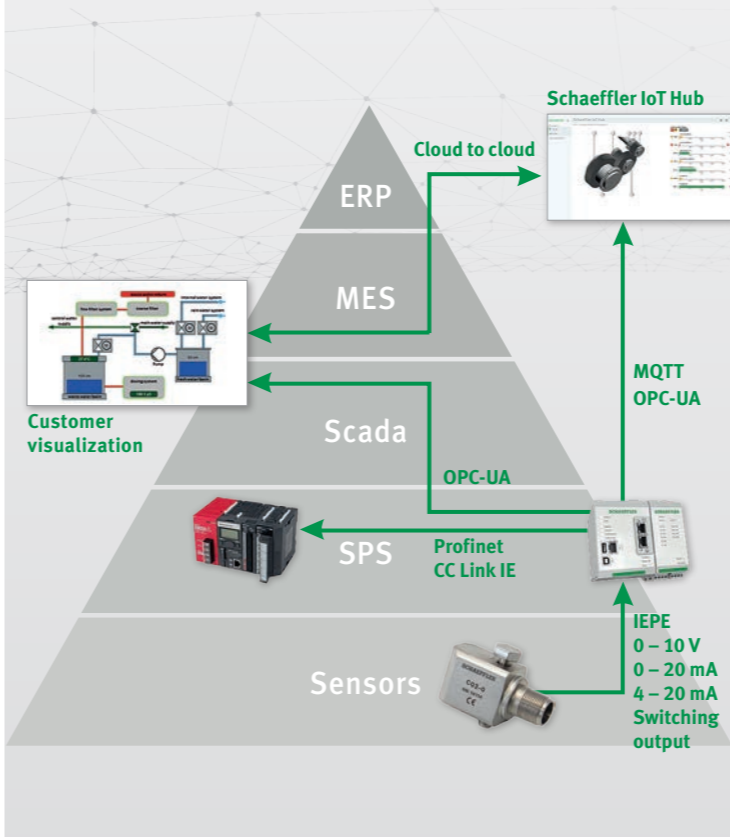
Cloud communication
Ethernet, OPC/UA,
MQTT, and web services

Field bus connection
Profinet, CC-Link IE,...

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

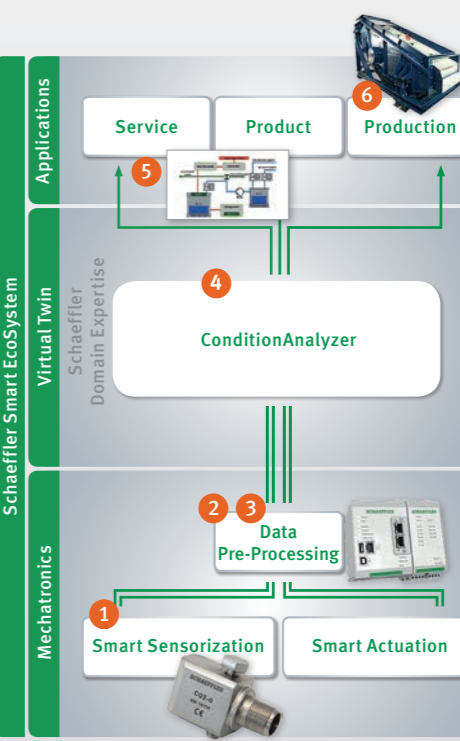


Simple, modular, and easy to inter-link: The ProLink system comprises a main processor module for signal processing as well as a range of signal recording modules, e.g. a vibration measurement module that can have 4 to 16 channels.

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. 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.

MONITORING OF BEARINGS AND SPRING FRACTURES IN VIBRATING SCREENS

Application example



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

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.