

PLC AC500 condition monitoring system CMS

Integrated or stand-alone



The AC500 condition monitoring module FM502 is a natural part of the AC500 platform and Automation Builder engineering suite, and can be used in different condition monitoring concepts, stand-alone or control integrated.

Due to the easy programming in PLC languages, it is usable for a variety of use cases and is especially suitable for plant, line and machine builders as easy extension of their offering.

If controller integrated

- it enables at very reasonable cost
- the best prediction horizon as it can measure online, when best measurement quality is given without scheduling production interruptions
- while continuously protecting the application in real time e.g. with the same or other sensor(s).
- Further inputs can be used as fast data logger e.g. precisely documenting process quality.

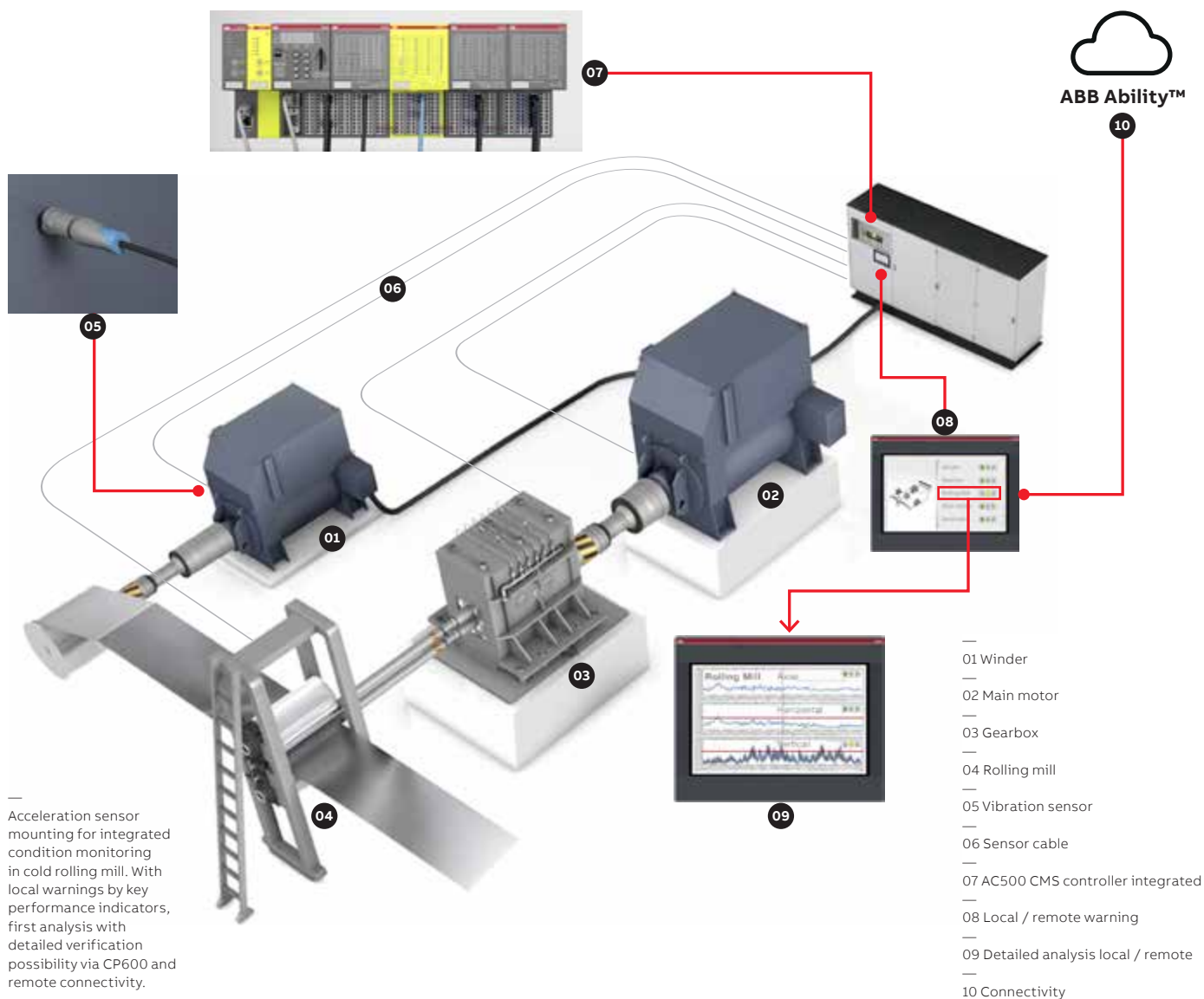
Therefore it is not only able to continually check the mechanical components but also gives fast protection for spontaneous and large failures even while measuring. The condition monitoring mode creates a database internally or externally for predictive maintenance. Automatic and user assisted responses can be enabled to prevent costly consequences including total failures.

As many as 16 vibration sensors + 2 encoder counters can be connected.

The recorded condition monitoring data can be stored in the CPU flash disk before communication or directly analyzed. Higher level indicators can be calculated and communicated to a local or remote HMI or database system.

Predictive performance for your process or machines

- Easy and cost saving integration of condition monitoring into the AC500 platform.
- Early detection of mechanical damages.
- Fast protection from spontaneous failures.
- Even complex C-code analytics can be used locally for meaningful own performance indicators.
- Leads to optimized planning of maintenance instead of fixed, scheduled service and spontaneous repair.
- No additional system or fixed software for diagnostics and visualization needed.
- Easy storage of the data, locally (4GB) or in remote servers and databases.
- Ideally suited also for retrofit of older equipment, as it can make use of mechanical reserves of still valuable equipment.



Example: Cold rolling mill in steel processing:

- One FM502-CMS module can execute differently configured measurements at the same time and can be reconfigured at runtime.
- Several critical and unique components can be protected and condition predicted: Motors, gearbox, process (cold rolling mill).
- Production quality can be logged in parallel in real time.
- Remote diagnostics expertise and detailed analysis and reports only in case of warnings.

Please watch our videos on our ABB PLC YouTube channel:



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