

## Monitor plants and processes, visualize and analyze states

# CONDITION MONITORING TOOLKIT

Imagine knowing at an early stage which machine or component in your plant could cause problems in the near future. It is possible, however, many existing plants do not have the technical prerequisites for condition monitoring, even though this can prevent unplanned downtime and unnecessary costs. Until now, the retrofitting of plants has often failed due to the high effort and the associated costs for the permanent monitoring of relevant machine and process parameters.

Here, the CMTK system represents a new and easy-to-implement solution with an excellent cost-benefit ratio. With the flexible CMTK system, you quickly gain deeper insights into the actual condition of your machines and systems and can, therefore, detect deviations and problems at an early stage. All components are perfectly matched to each other. High acquisition costs without added value are a thing of the past, because the CMTK is a complete system without hidden costs or cumbersome subscription models.

### Features

- Unified retrofit solution for machine and process monitoring
- High flexibility through the connection of up to four arbitrary IO-Link sensors
- Plug-and-play commissioning of the system and visualization of the data
- Output of warning messages when adjustable limit values are exceeded
- Self-sufficient system with data storage – independent of cloud and machine control
- Remote monitoring from any location thanks to network integration





**CMTK – simple, flexible, effective**

The CMTK consists of three components: software, base unit and up to four arbitrary IO-Link sensors.

CMTK	BAV002N
Description	Base unit and software

Please order your sensors, connection and network cables and power supplies individually at [www.balluff.com](http://www.balluff.com)

Software	The software makes it possible to automatically visualize and evaluate the collected data on site. In the process, the dashboard is automatically created and configured using existing sensor data – saving time and effort when commissioning the system. The web-based software enables the data to be displayed on various end devices, so that the information is quickly and easily available in the company's automation world. Limit values and trend analyses can be set up and configured quickly and easily. Automated monitoring of these values is also possible, and notifications can be sent by e-mail. The data obtained can be used, for example, to detect deviations at an early stage, control the timing of repairs and optimize maintenance intervals. The data can, of course, be saved and archived for later analysis.
Base unit	The base unit is the central element of the CMTK. This is where the sensors are connected directly. At the same time, it is the connection point to the networks and systems where this data is further used. The base unit does not require a connection to the machine control system. This means that existing structures and processes remain untouched and there are no undesirable interactions due to the querying and evaluation of the additional data. An internet or cloud connection is not required in daily operation. This means there is no risk of data falling into the hands of third parties or incurring annoying usage fees.
Sensors	The system impresses with its high flexibility in sensor selection. All IO-Link sensors available on the market can be used with the CMTK. The application possibilities of the CMTK are thus virtually unlimited. Ideal here are sensors that are easy to integrate and operate, and can record several measured variables at one point, and communicate the acquired data quickly and easily. These are, for example: <ul style="list-style-type: none"> <li>■ Vibration and temperature sensors for monitoring motors and drives</li> <li>■ Pressure and flow sensors for monitoring pumps and compressors</li> <li>■ Temperature and/or humidity sensors for monitoring control cabinets</li> <li>■ Capacitive sensors or ultrasonic sensors for detecting fill levels</li> </ul>

**Application examples**

The application possibilities and requirements for condition monitoring of machines are versatile. Take advantage of our experience in the field of sensor technology, industrial networking and IO-Link and contact us.

