

THE FACTORY AUTOMATION COMPANY

FANUC

AI Servo Monitor

Detect abnormalities and
predict failures



AI Servo Monitor is a software that visualises anomalies of drive systems for servos and spindles through machine learning. It can analyse daily processing data and display the results in intuitive graphs.

Users can easily monitor abnormalities on the machine, that is equipped with a FANUC CNC. Together with data collected by MT-LINKi, AI Servo Monitor analyses the recorded production data of each drive system.

AI Servo Monitor

How does it work?

- With AI Servo Monitor, artificial intelligence comes into play during the creation of a baseline model using data while the machine is in normal running state. This procedure is called the “Learning Process”.
- Each component in the frequency spectrum converted from time series of torque is described as a model through machine learning.
- The difference between this model and actual time series is then converted to a unified anomaly score.
- On the Web user interface of AI Servo Monitor users get notifications as soon as this value exceeds or falls below predefined thresholds.



Key features

- Condition monitoring of mechanical elements of an axes
- No need for additional sensors as data comes directly from the machine servo motor allowing a failure prediction system to be easily created
- Monitoring of the anomaly score in intuitive graphs (Web UI)
- Automatic creation of a baseline model through machine learning

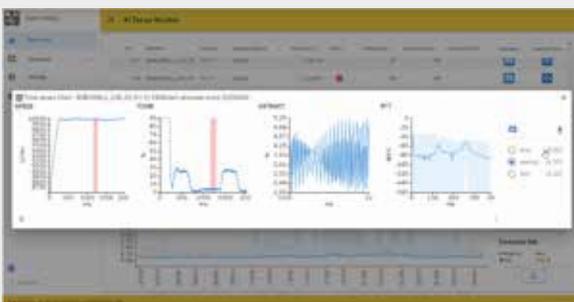
Key benefits

- Designed to prevent unexpected down time and enhance the reliability of FANUC servo & spindle motors as well as mechanical components of the machine
- Enables visibility to support condition based maintenance
- Machine availability is improved due to the early detection and notification of potential equipment failures
- Reduced costs in service intervention due to improved notifications



Main View

The result of analysed waveform data using anomaly and variance detection are displayed. The graphical interface shows the aggregated analysis result and values for each day.



Raw Data Chart Text

The raw data chart shows the waveform of the collected data used for the analysis. Not only raw data but also the individual spectral components of the measured torque signal are displayed in an FFT diagram.