

# Use Case: Fast Fourier Transformation of any signal

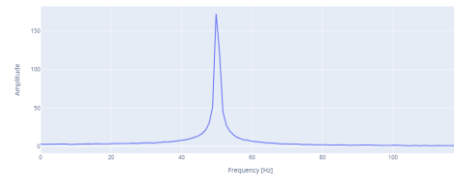
## CHALLENGE

Fast Fourier Transform (FFT) is widely used signal analyzing tool. Analyzing current, speed or torque in a frequency domain may give insights how the system is performing

## APPROACH

Drive functionality is extended with a Crealizer™ application, which calculates FFT from a chosen signal.

FFT is calculated periodically in real-time. Chosen frequencies and their amplitudes are given as an output in the parameter interface.



## BENEFIT AND METRIC

- **Easy setup:** Install the Crealizer™ FFT application on UCU. Select the signal to do FFT on. Select the frequencies you want to monitor. That's it
- **Access to high frequency data:** Signal is sampled at high frequency range – beyond what a fieldbus could do. This unlocks insights that were previously not possible

## ALTERNATIVE SOLUTIONS

- **Low sampling rate:** Data can be read from a drive and send to another system, where FFT is calculated
- **Extra equipment:** Install dedicated measurement system. Sensors, data acquisition and processing. This will cost extra – why not use the drive-as-a-sensor. It's already there