

Condition based monitoring of assets

An industrial asset, such as a motor, pump, fan etc., will need maintenance. Maintenance intervals can be adjusted based on how old the asset is, how the asset is used, if issues has occurred etc. With IoT sensors, the state of the asset can dictate when maintenance is needed. This is called condition based monitoring or predictive maintenance, and are proven to be the most efficient way to maintain assets. Correct maintenance prolongs the life time of assets, reduce energy consumption, and prevents over maintenance of assets.

Challenge

- If maintenance is done at regular calendar or hour count intervals, some assets will fail before the scheduled maintenance. Other assets will be taken out of production to perform maintenance without needing the maintenance.
- Data provided from asset vendors or automation systems are often not sufficient to determine if maintenance is needed.
- Assets of the same type, but with different age, model and make, may have different capabilities to provide data that shows the state of the asset.

Solution

- Vibration, temperature and current sensors, are all great tools to understand if an asset needs maintenance.
- With sensors that monitor continuously it is easy to understand what the normal state of an asset is.
- Sensors detect irregular operation of an asset when sensor data such as vibration, temperature or current consumption are higher than normal.
- Maintenance operators will then focus their efforts on assets with irregular behaviour



instead of spending their valuable time on every asset in the production line.

What you get

- A Neuron Vibration sensor monitors both vibrations and surface temperature of an asset. With magnet mounting, it is easy and quick to install the sensor to start gathering data.
- A Neuron Ampere sensor continuously measures current consumption by an asset or a circuit. Comparing current consumption at similar conditions will be of great help to understand if an asset is struggling to do its tasks, indicating it needs maintenance.
- Alerts on irregular behaviour of the asset can be provided to maintenance operators on e-mail, SMS or push warnings for them to prioritize their job on assets that need their care.
- Less maintenance, and correct maintenance leads to higher productivity and a more efficient maintenance staff.
- Data from Neuron IoT sensors can be provided to any software for further analysis or storage by using API integrations from the Neuron Cloud.

Products in use

- Neuron Vibration
- Neuron Amper