Power Consumption Data Collection System

Park Industries®
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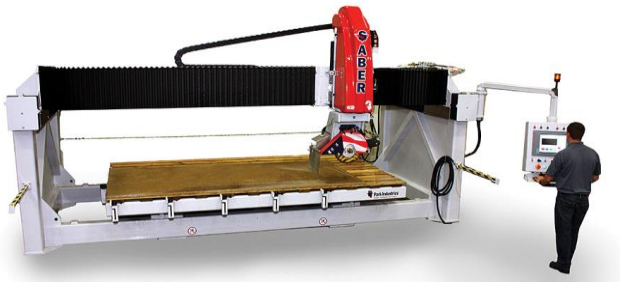
Project Summary

Park Industries requested that a team of engineering students from the University of St. Thomas design a system to allow for power consumption data to be collected from Park Industries' Saber CNC Saw machines. The data would then be stored and used for analytics to aid Park Industries take a more predictive approach in the maintenance services they provide to their customers.

Design Goal

Take an inexpensive, Commercial Off The Shelf (COTS) energy monitoring device and repurpose it to obtain adequate functionality to collect power consumption data from the Saber CNC Saw. Use the energy monitoring device to collect power consumption data from Park Industries' Saber CNC Saw machines. Write software to gain access to the power consumption data and store the data within a database. Provide the groundwork to allow for the data collection system to be integrated with software controlling the Saber CNC Saw.



Park Industries Saber CNC Saw

Design Constraints

- Ability to operate and collect data on a 480 Volts, 3 phase system.
- Ability for the system to collect data in a normal stone working environment (Vibration, dust, water splashing).
- An equipment price point lower than $1,000 USD.
- Long term storage of power consumption data within a MySQL database.
- Ability for data to be transferred to Park Industries.
- Ability for developed software to be integrated with Park Industries' machine controller Software.
- Ability for Data Collection software to run upon startup of the Saber CNC Saw.

TED Electricity Monitor