

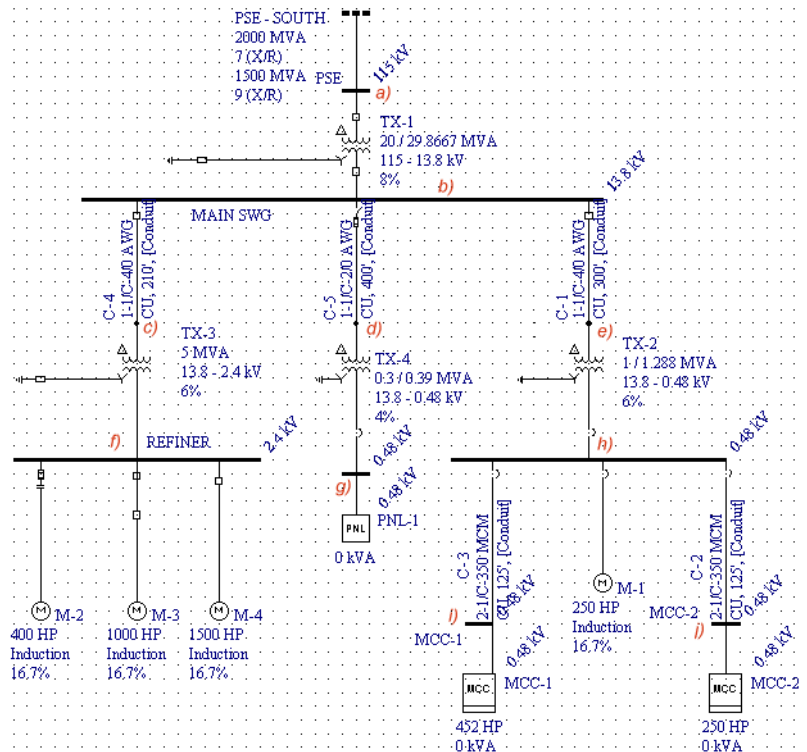
Summary

- One-line diagram

This is used to document and model the entire plant electrical system. We can help you create this model via field verification and we can import your models from SKM Power Tools, EasyPower, and more.

- Results and recommendations

Our experience with power system studies allows us to recommend system or settings changes that will better protect your employees and your equipment. Let us help you protect lives and save money.



Short-circuit analysis

- Utility data

This can include the service transformer KVA, X/R ratio, minimum and maximum available fault current, protective devices, and service length.

- Short-circuit data/results

The one-line diagram model, utility data, and the information for all cabling lengths, conduit types, number of conductors, transformers, and motors allows for the calculation of the available fault current at any location in the electrical system.

- Equipment evaluation

Knowing the available fault current at each location allows for the equipment duty rating to be scrutinized. Many projects have predesigned systems installed with no attention for the available fault current at the installation site. This can be extremely dangerous during a fault condition.

Protective device coordination study

Coordination data/results •

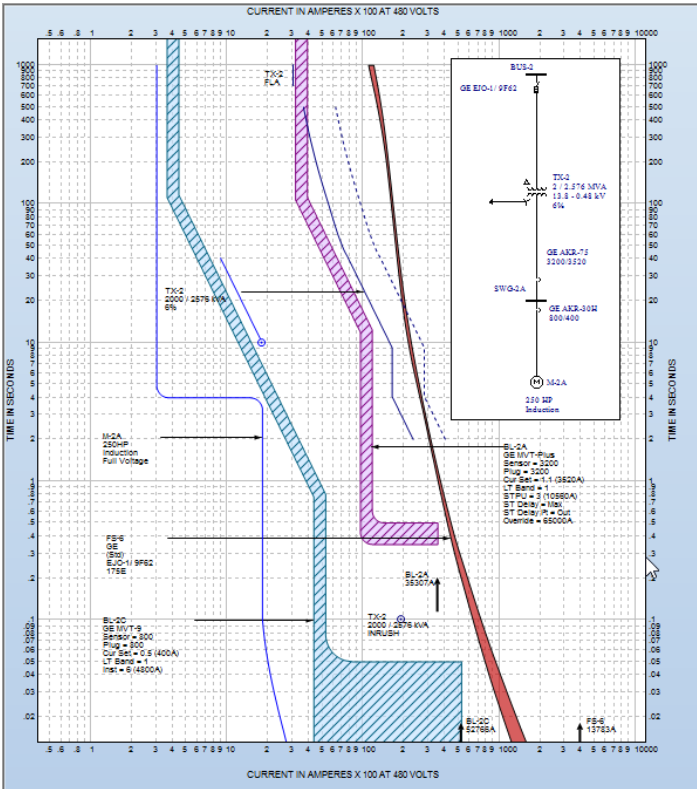
The information for all the protective devices allows for modeling of the tripping characteristics which allows for finer tuning of the electrical system.

Time-current curves •

Time-current curves are used to graphically illustrate the operating (tripping) current conditions of motor protectors, circuit breakers, fuses, as well as transformer damage curves.

Recommended protective device settings •

After assuring all protective devices are appropriately rated, the coordination of the adjustable devices can limit the extent of power outages within the plant during a fault.




Arc flash hazard analysis

• Incident energy analysis results

By combining all the information above, the incident energy at each fault location can be determined. These values should never be assumed because many counter-intuitive results are found when an entire system is modeled. It is common for panels further from the source to have increased incident energy levels.

• Incident energy analysis recommendations

Knowledge of the dangers in each location allows a plant to better protect its


WARNING

Arc Flash and Shock Hazard
Appropriate PPE Required

4' - 4"	Flash Hazard Boundary
5.7	cal/cm ² Flash Hazard at 18.0 Inches
2	PPE Level
	Arc-rated shirt and arc-rated pants or arc-rated coverall
0.48	kV Shock Hazard when cover is removed
3' - 6"	Limited Approach
1' - 0"	Restricted Approach - Class 00 Voltage Gloves

Equipment Name: CONTROL PANEL (Fed by: BL-1)
 Analysis Date: July 2, 2018
 Analysis By: Prokuma Incorporated

employees by posting notices, providing PPE, implementation of administrative controls, and changing protective devices or settings.

- Arc flash label data

The label above shows the required data notifying employees of the dangers as well as the date of the analysis. An analysis should be conducted any time the plant's electrical system changes, the utility undergoes changes directly affecting the plant, or periodically in intervals not longer than 5 years.

Call for a quote: 1 812-461-1681 or email questions to sales@prokuma.com