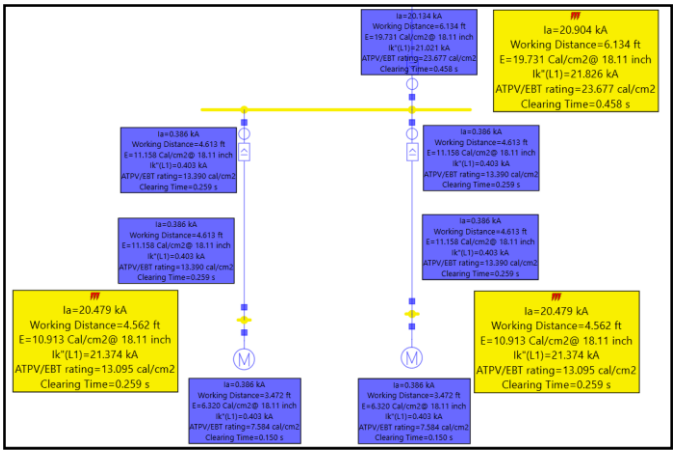
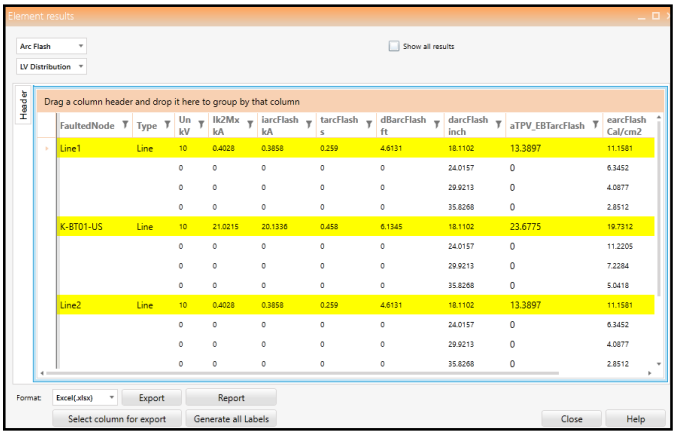
Arc Flash Analysis

Arc Flash module in NEPLAN offers the user to analyze and assess the high risk of arc flash in power system. Arc Flash calculation is completely integrated and based on NEPLAN® short circuit and overcurrent protection modules. It calculates the incident energy for reduced and unreduced arcing currents in function of the working distance and automatically determines the Arcing Fault Clearing Time. It also determines individual arcing current contributions.

General Characteristics

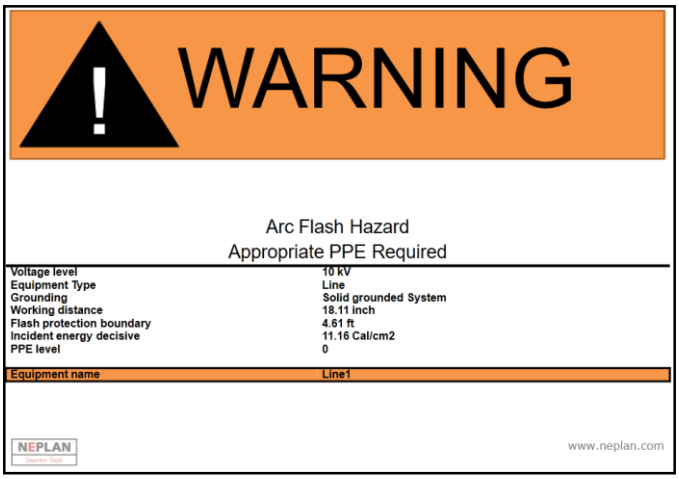
- Arc Flash Standards:
  - IEEE 1584-2018
  - IEEE 1584-2013
  - NFPA 70E-2018
  - ISSA 2011
  - DC IEEE 2012
  - DC NFPA 2015
- Application of LEE method for system parameters which fall outside the range of the model defined in IEEE 1584
- Supports IEEE/ANSI and IEC short circuit calculations for symmetrical and unsymmetrical faults
- Option to specify if the low voltage circuit-breakers is fused or not as per IEEE C37.13





NEPLAN features

- Individual parameter setting to determine the incident energy
- Multiple arc flash simulations in one-run
- Reduced fault contribution of motors and generators is taken into consideration
- Default values of working distances and conductor gap defined as per standards can be used
- Fault clearing time can be obtained from the time-current characteristic of the protection device or can be entered manually
- Option to specify if the low voltage circuit-breakers is fused or not as per IEEE C37.13
- Grounding of the nodes can be automatically determined as per the grounding configuration of the upstream elements such as transformers



Results

- Upon calculation, results are automatically displayed on the single line diagram while their content and graphical information can be customized
- Display of results is node oriented and can be inserted at any node or element
- Result visualization and processing is easier due to the following visualization functions:
  - Overloaded pieces of equipments (current transformers, voltage transformers, circuit-breakers, etc.) are highlighted
  - Output list is sorted by voltage levels
- Arcing current, incident energy, arcing fault clearing time, Personal Protective Equipment (PPE) category and all appropriate results are displayed
- Display of results in tabular format which can be exported to WORD/EXCEL

Warning Labels

- A flexible report can be printed out which includes the hazard classes and all required results ensuring workplace safety
- Option to include a user-defined WORD template to create this warning label
- These warning labels include all the necessary information such as:
  - Voltage level
  - Equipment type
  - Arc flash protection boundary
  - Working distance
  - Grounding type
  - Decisive incident energy
  - Personal Protection Equipment (PPE) level
  - Arc flash hazard category class