


PTW Arc Flash Evaluation

Arc Flash Evaluation Studies

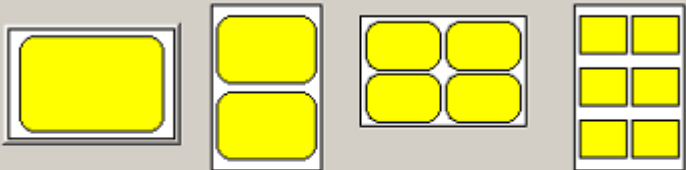
PTW Arc Flash Evaluation calculates the incident energy and arc flash boundary for each location in a power system. Arc Flash saves time by automatically determining trip times from the protective device settings and arcing fault current values. Incident energy and arc flash boundaries are calculated following the NFPA 70E and IEEE 1584 standards. Clothing requirements are specified from a user-defined clothing library. Clearing times can be automatically reduced based on current-limiting capabilities.

Benefits

- Design safer power systems while insuring compliance with NEC 110.16, OSHA, NFPA 70E and IEEE 1584 standards.
- Save time with the fully integrated Short Circuit, Over-Current Coordination, Equipment Evaluation and Arc Flash Evaluation modules working together with libraries of clothing levels, protective devices and bus ratings.
- Provide a safer working environment by specifying the proper level of clothing. Wearing inadequate clothing is dangerous for obvious reasons, but wearing too much clothing is dangerous due to limited mobility and visibility.
- Evaluate alternatives quickly and easily to establish an optimal design.

 WARNING	
Arc Flash and Shock Hazard	
Appropriate PPE Required	
306 inch	Flash Hazard Boundary
18.8	cal/cm ² Flash Hazard at 18 inches
Class 3	Cotton Undergarments and Coveralls
13800 VAC	Shock Hazard
60 inch	Limited Approach Boundary
26 inch	Restricted Approach Boundary
7 inch	Prohibited Approach Boundary
Bus Name: 003-HV SWGR	

Label Style



Compactible Labels

Avery® 6875 Avery® 6876 Avery® 6878 Avery® 6874

Interface Options

- Simple to use tabular interface for system design, PPE selection, and reviewing study results.
- Summary and detail view enables complete bus by bus examination of study data.
- Pre-populated library of protective clothing allows user-defined PPE additions.
- Bus and branch fault values are automatically read from the fault study, and protective device settings and trip times are read from the CAPTOR TCC drawings.
- Arc Flash labels are automatically produced to comply with NEC 110.16 labeling requirement. The labels can be printed to several standard size label sheets.

Bus Name	Protective Device Name	kV	Bus Bolted Fault (kA)	Prot Dev Bolted Fault (kA)	Arcing Fault (kA)	Trip/ Delay Time (sec.)	Breaker Opening Time (sec.)	Ground	Equip Type	Gap (mm)	Arc Flash Boundary (ft)	Working Distance (ft)	Incident Energy (cal/cm ²)	Required Protective FR Clothing Class
13 004-TX B PRI	R3	13.80	7.77	7.48	7.29	0.016	0.083	Yes	SWG	153	27	18	1.79	Class 0, Untreated Cotton
14 004-TX B PRI	F TX C	13.80	7.77	0.29	0.28	1.8	0.000	Yes	SWG	153	39	18	2.53	Class 1, FR Shirt & Pants

Arc Flash Calculation Data Sheet			
Bolted Short Circuit Fault	7.8 kA 3Phase	Trip/Delay	Breaker Open
Arcing Fault in Protective Device	7.3 kA 3Phase	0.016 s	0.083 s
Arc/Equipment Type	Switchgear	Gap: 153	Grounded
Arc Flash Boundary	27 inches	@ 1.2 cal/cm ² - 2nd Degree Burn Boundary of Bare Sk	
Working Distance (inches)	18 inches		21
Incident Energy (cal/cm ²)	1.79 cal/cm ²		1.24
PPE Clothing Class	Class 0 - Untreated Cotton		

Study Options

- User may select option to follow the NFPA 70E or IEEE 1584 standard.
- User may select English or Metric units to report study results.
- Fuses may be modeled as Current Limiting or Standard.
- Induction motors can be included, excluded, or included for a user-defined time.