

PTW A_Fault®

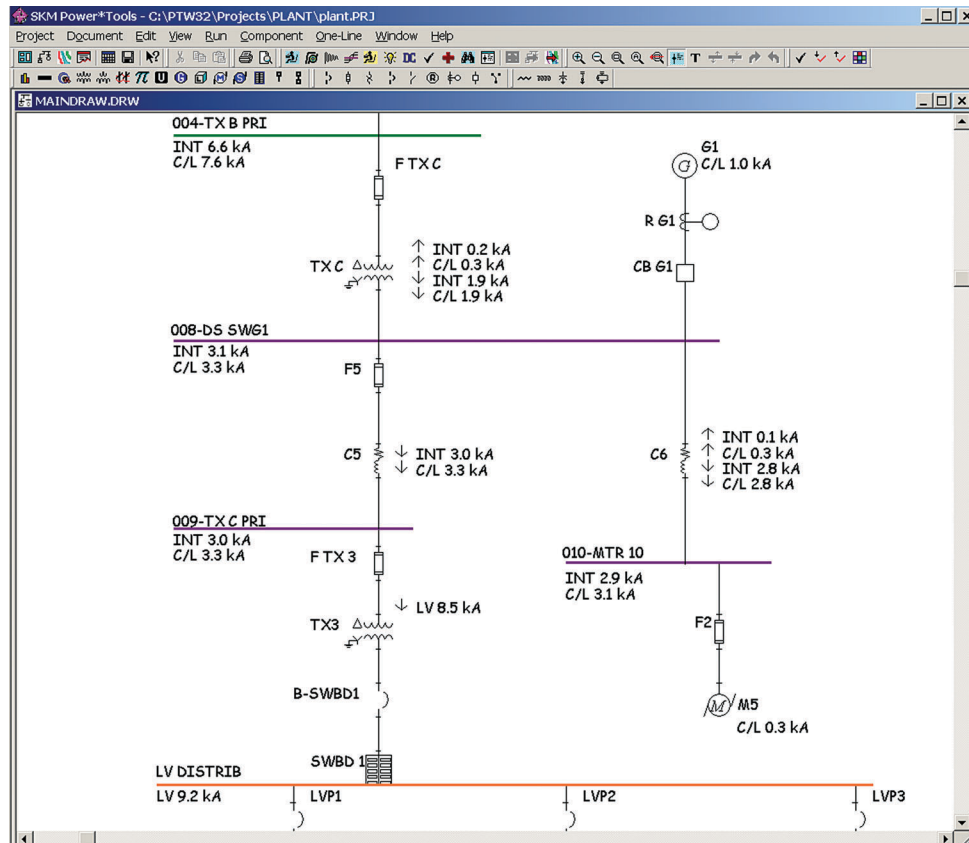
ANSI Fault Analysis

A_FAULT provides fault calculations in full compliance with the ANSI C37 standards. It offers separate solutions for low, medium and high voltage systems and for symmetrical, momentary and interrupting calculations as defined in the standards.

For medium and high voltage systems, the momentary and interrupting values may be calculated using either the E/X or E/Z methods permitted by the standards. Both ac and dc decrement curves required by the total current rated standard (C37.5) and the symmetrical rated standard (C37.010) are used by the program.

Benefits

- Design safer power systems by calculating equipment ratings per ANSI standards.
- Save time by automatically applying ANSI C37 and IEEE 141 multiplying factors to generators and motors.
- Increase efficiency with custom data reporting featuring X/R, E/X or E/Z methods and values for the application of low, medium, and high voltage breakers.
- Communicate effectively with quality reports.



Features

- Reports three-phase, single-line to ground, line to line, and double line to ground fault values.
- Reports values for both total current and symmetrical rated breakers.
- Models transformer primary and secondary taps and off nominal rated voltages.
- Use either ac/dc, dc only, interpolated or no ac decay options.
- Reports calculated remote/local status for each generator.
- Interrupting study reports total and symmetrical 2, 3, 5 and 8 cycle values.
- Complies with ANSI standards and IEEE recommended procedures.
- Provides separate network solutions for reporting X/R values.
- Momentary and interrupting studies can report E/X or E/Z values.
- Low voltage study complies with ANSI C37.13.
- Momentary and interrupting studies comply with ANSI C37.010 and C37.5.
- Custom reports using datablocks or crystal reports.
- Interrupting study reports total and symmetrical 2, 3, 5, and 8 cycle values.
- Display study results on the one-line.

Low Voltage 3 Phase and Unbalanced Report											
Fault Location Bus Name	Bus Voltage		Fault kA	Duty MVA	X/R	--Asym kA-- Max RMS Avg RMS		Sequence Impedance pu	Equivalent R +jX		
001-UTILITY CO	69,000	3 Phase:	4.61	551.1	28.28	7.44	6.12	Z1: 0.1815	3.7061	4.7448	
		SLG:	3.71	255.7	4.74	4.59	--	Z2: 0.1806	--	--	
		LL:	4.00	276.2	--	--	--	Z0: 0.3263	--	--	
LLG Gnd Return kA	3.038	LLG:	4.66	321.4	--	--	--				

---Low Voltage Summary---														---Momentary Duty Summary---				---Interrupting Duty Summary---			
Fault Location Bus Name	Bus Voltage	3 Phase Amps	X/R 3Ph	SLG Amps	X/R SLG	3 Phase Amps	X/R 3 Ph	SLG Amps	X/R SLG	3 Phase Amps	X/R 3Ph	SLG Amps	X/R SLG								
001-UTILITY C	69,000	4,611	28.27	3,706	4.74	7,435	28.28	4,587	4.75	4,548	28.53	3,681	4.78								
002-TX A PRI	69,000	1,811	18.46	1,159	10.21	2,814	18.50	1,671	10.22	1,706	19.13	1,132	10.40								
003-HV SWGR	13,800	7,798	12.19	8,295	9.76	11,505	12.23	11,849	9.79	6,767	12.25	7,534	9.93								
004-TX B PRI	13,800	7,613	5.78	7,979	4.53	9,815	5.80	9,749	4.54	6,632	6.24	7,278	4.81								

Three Phase Interrupting Duty Report											
013-D5 SWG2	E/Z:	13.886 KA at	-83.65 DEG	(100.05KVA)	X/R	12.87					
	VOLTAGE:	4160	EQUIV IMPEDANCE	=	0.0191	+J	0.1719	OHMS			
	CONTRIBUTIONS:	M4	2.220 KA			ANG:	-88.09				
	C7		011-TX3 SEC	11.673 KA			ANG:	-82.81			
GENERATOR NAME		-- AT BUS	-- KA	VOLTS PU	LOCAL/REMOTE						
	U1		6.002	0.91	R						
	G1		0.327	0.69	L						
	G2		1.386	0.33	L						
	G3		0.616	0.33	L						
TOTAL REMOTE:			6.002KA	NACD RATIO:		0.4323					
		SYM2	SYM3	SYM5	SYM8						
MULT. FACT:	1.000	1.000	1.000	1.001							
DUTY (KA) :	13.886	13.886	13.886	14.044							
		TOT2	TOT3	TOT5	TOT8						
MULT. FACT:	1.285	1.103	1.018	1.001							
DUTY (KA) :	17.842	15.318	14.134	13.896							