

Hi,

As I known, SLG kA to calculated by formula is

$$MVA(SLG) = \sqrt{3} * KVA(LL) * I(SLG)$$

$$\text{Hence, } I(SLG) = 3000 / (1.732 * 230) = 7.53 \text{ kA}$$

Please advise how to get the 22.678kA by calculated

B.R.

The equation you are using to calculate the SLG contribution is incorrect. Following is an example of how to calculate the SLG contribution from the source.

The screenshot shows the 'Component Editor - Scenario[Base Project]' window. On the left, the 'Component Subviews' list includes 'Utility', 'Harmonic Impedance', 'Reliability Data', 'Optimal Power Flow', 'User-Defined Fields', and 'Datablock'. Below this is the 'Scenario Manager...' button and a list of components: BUS-0001, BUS-0002, BUS-0003, BUS-0026, CBL-0001, CBL-0002, XF2-0001, UTIL-0001 (selected), MTRI-0001, and PD-0001. The 'Expand' and 'Shrink' buttons are at the bottom of the list.

The main configuration area for 'UTIL-0001' is shown on the right. It includes fields for 'Name' (UTIL-0001), 'In Service' (checked), and 'Complete' (dropdown). The 'Initial Operating Conditions' section has 'Voltage' (1.000 pu) and 'Angle' (0.00 Degrees). The 'Enter MVA/kVA/Amps' radio button is selected, and the 'Update...' button is present.

The 'Utility Contribution' section shows 'Three Phase' (300.0 MVA) and 'Line to Ground' (100.0 MVA) contributions, both with an 'X/R' ratio of 8.000.

The 'Per Unit Contribution' section is highlighted with a red box. It contains the following data:

			R	X
Base/Rated MVA:	100.0	Positive	0.041345	0.330759
Base/Rated Voltage (L-L):	4160	Zero	0.041345	0.330759

The 'Bus Connection' section shows 'Bus: BUS-0001' and a 'Connection...' button.

Utility per unit impedance on a 100 MVA base.

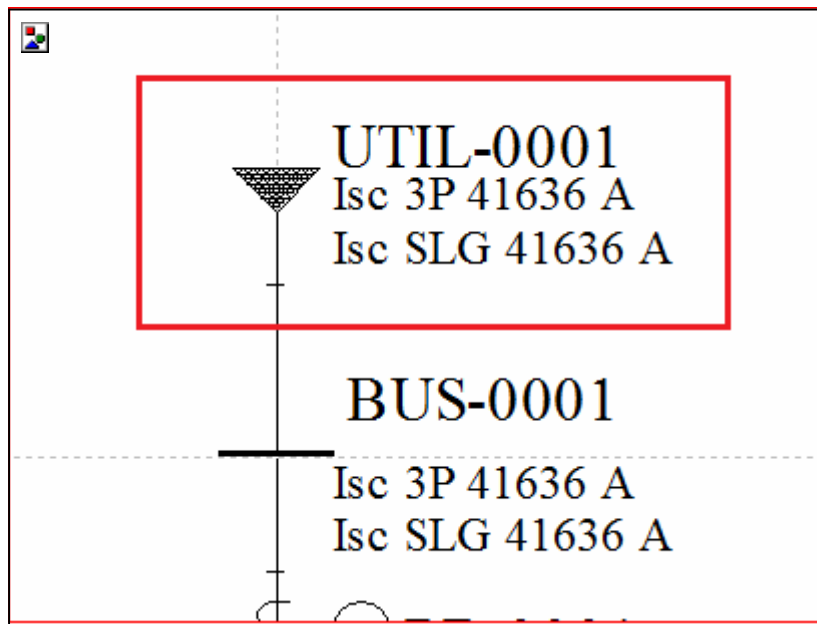
$$\text{Positive sequence} = 0.041345 + j0.330759 = Z1 = Z2$$

Zero sequence = $0.041345 + j0.330759 = Z_0$

Base current at the Utility Bus is $\{ 100\text{MVA}/(1.732)(4160 \text{ V})\} = 13878.61224 \text{ A}$

$\text{SLG} = \{3/(Z_1+Z_2+Z_0)\} = \{3/[3(0.041345 + j0.330759)]\} = (0.3721 - j2.9768) \text{ pu}$

$\text{SLG} = (13878.61224 \text{ A})(0.3721 - j2.9768) = 41635.87 \text{ A}$



Best regards,