

PTW IEC_61363 Short Circuit Study

IEC_61363 Short Circuit Studies

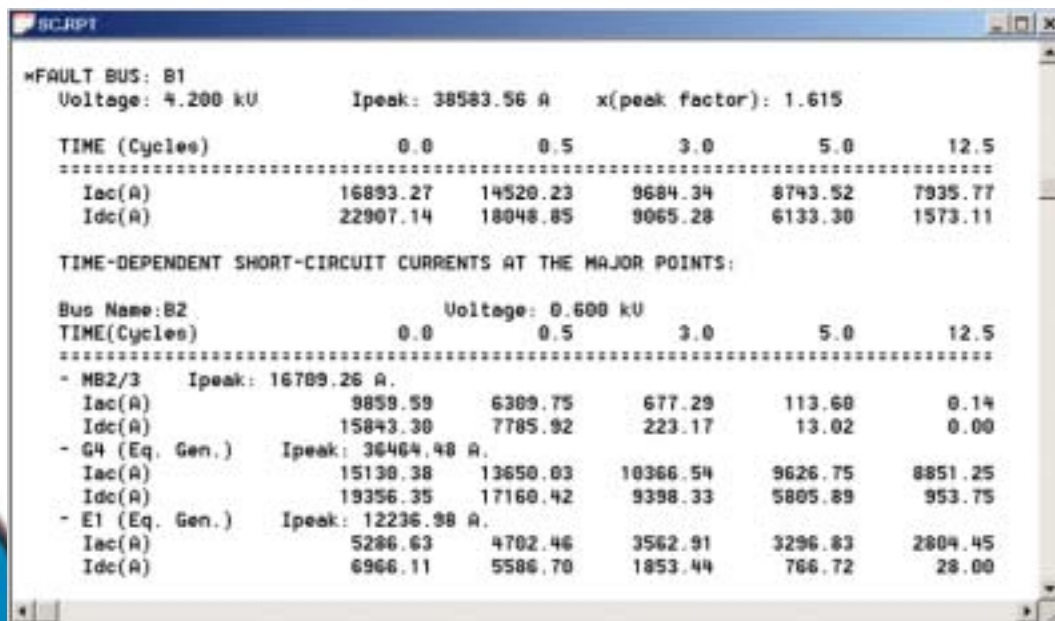
The IEC_61363 Short Circuit Study module calculates the current that flows in an electrical power system under abnormal conditions. These currents must be calculated in order to adequately specify electrical apparatus withstand and interrupt ratings and selectively coordinate time current characteristics of electrical protective devices.

The IEC_61363 Short Circuit study represents conditions that may affect typical marine or offshore installations more significantly than land-based systems, including more emphasis on generator and motor decay.

The calculation methods are intended for use on unmeshed three-phase a.c. systems operating at 50 Hz or 60Hz; having any system voltage specified in IEC 60092-201 table 2; having one or more different voltage levels; comprising generators, motors, transformers, reactors, cables and converter units; having their neutral point connected to the ship's hull through an impedance; or having their neutral point isolated from the ship's hull.

Benefits

- Save time by easily obtaining the short circuit magnitude at each point in the power system.
- Design safer systems by comparing the calculated fault current to the ratings of installed equipment.
- Increase design reliability by supporting proper selection of circuit protection equipment for protection and coordination.



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SCRIPT
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MFAULT BUS: B1
Voltage: 4.200 kV      Ipeak: 38583.56 A      x(peak factor): 1.615

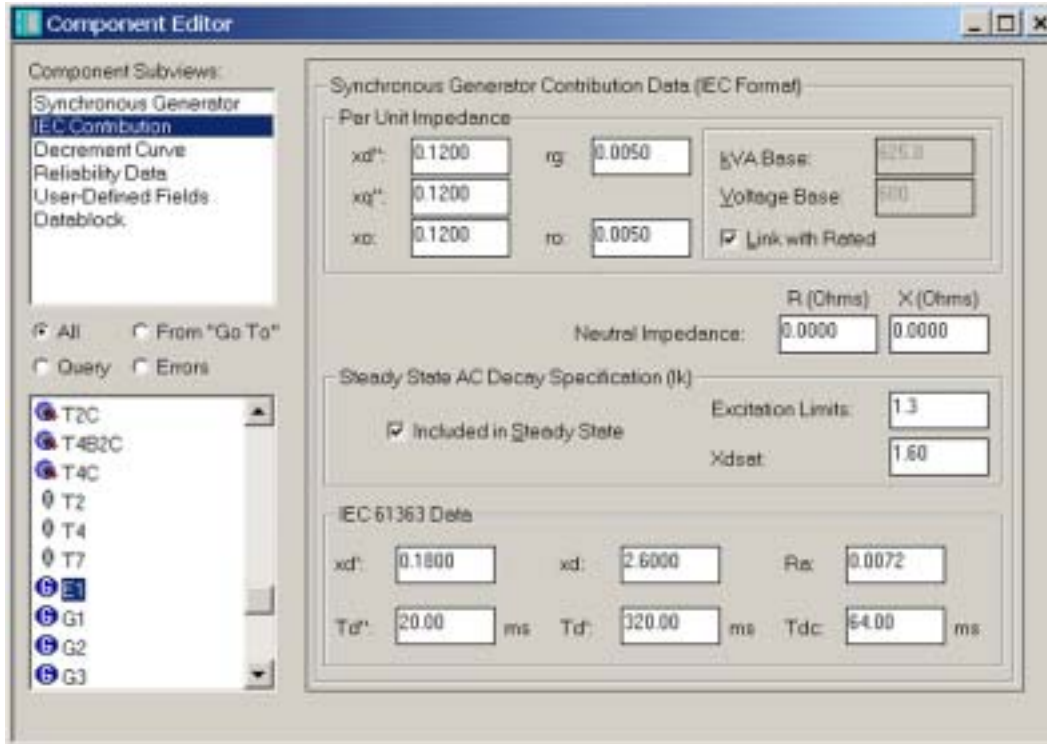
TIME (Cycles)        0.0      0.5      3.0      5.0      12.5
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Iac(A)               16893.27  14520.23  9684.34  8743.52  7935.77
Idc(A)               22907.14  18048.85  9065.28  6133.30  1573.11

TIME-DEPENDENT SHORT-CIRCUIT CURRENTS AT THE MAJOR POINTS:

Bus Name: B2          Voltage: 0.600 kV
TIME(Cycles)         0.0      0.5      3.0      5.0      12.5
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- MB2/3      Ipeak: 16789.26 A.
  Iac(A)      9859.59      6309.75      677.29      113.60      0.14
  Idc(A)      15843.30      7785.92      223.17      13.02      0.00
- G4 (Eq. Gen.) Ipeak: 36464.48 A.
  Iac(A)      15130.38      13650.03      10366.54      9626.75      8851.25
  Idc(A)      19356.35      17160.42      9398.33      5805.89      953.75
- E1 (Eq. Gen.) Ipeak: 12236.98 A.
  Iac(A)      5286.63      4702.46      3562.91      3296.83      2804.45
  Idc(A)      6966.11      5586.70      1853.44      766.72      28.00
  
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Interface Options

- Uses Existing IEC909 input data with minimum IEC363 specified data required.



- Study report options to include different levels of calculation detail.

