

Breaker Rating V9.11 Maintenance Update

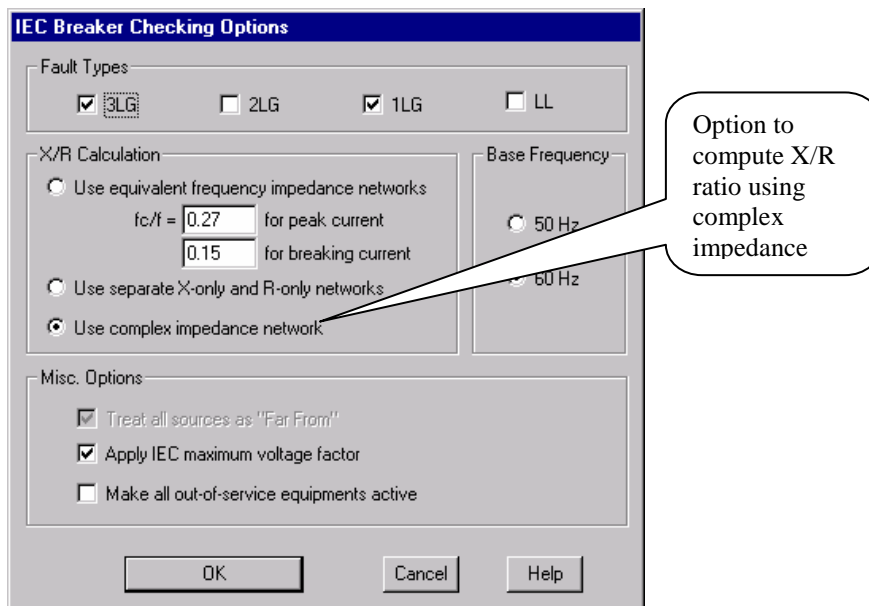
Please find enclosed the installation CD for *ASPEN Breaker Rating*TM version 9.11. This maintenance release has some new features. It also contains fixes for all known bugs to date.

You can run the setup program, `\bkr\setup.exe`, on this CD to create a new installation or to update existing *Breaker Rating V9* installations.

Please write (support@aspeninc.com in English or scayres@aspeninc.com in Spanish or Portuguese) or call us (650-347-3997) if you have questions.

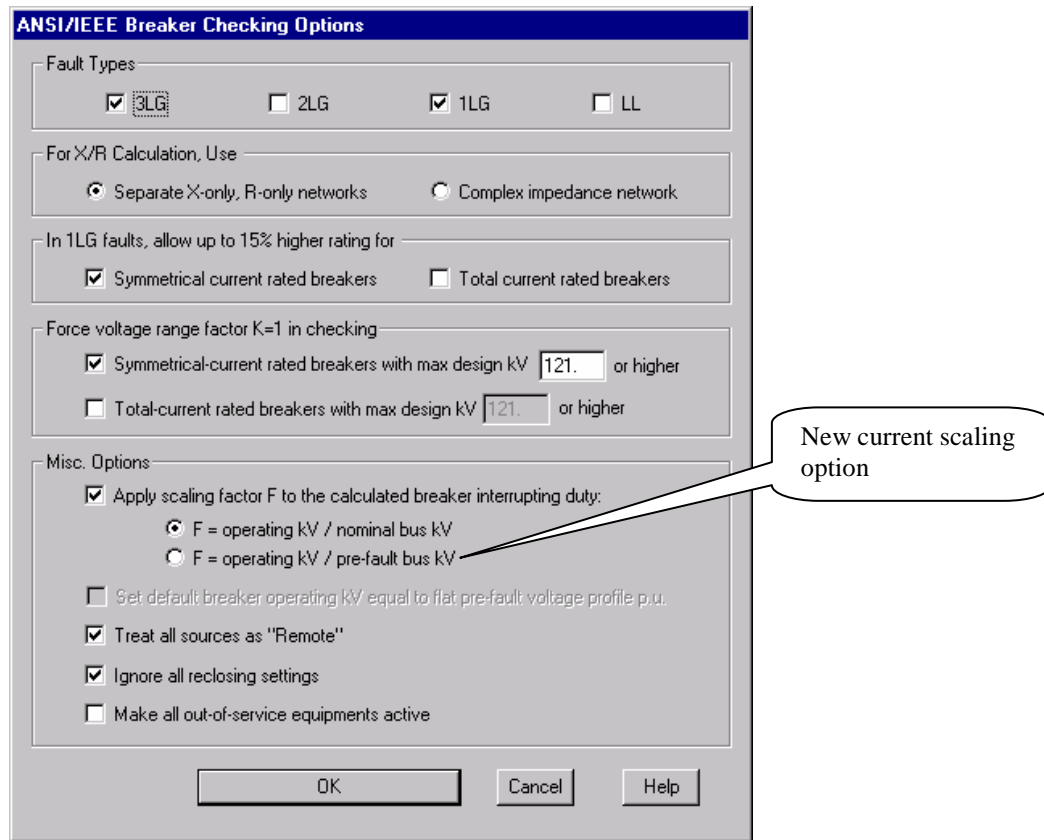
New Features between Version 9.9 and 9.11

- **New method for X/R calculation in IEC breaker checking options screen:** Select this option if you want to use the complex impedance network for computing the X/R ratio. In previous versions, this option was available only for the ANSI/IEEE checking method.



- **New checking report flag W7:** The program raises this flag when it encounters a breaker with no in-service equipment in the protected device list.
- **Additional fields in CSV checking report:** The report now contains extra data fields for breaker nameplate data. These fields are useful for building advanced checking report and doing advanced studies using the CSV file. The Breaker Rating Comparison Program has been updated to include the extra data field in comparison report.

- **New fault current scaling option:** The new scaling factor allows the breaker to be checked at the user-specified “Operating kV” for each breaker. This option works with all pre-fault voltage profile selections available in the Breaker Rating Module.



New Features between Version 9.10 and 9.11

- **More accurate checking logic:** the program no longer checks breaker capability in faults with outage that are un-related to any of the equipment that breaker protects.
- **Display warning message** when user makes simultaneous selection of non-1.0 pu flat bus pre-fault option and 'Scale breaker current" option.

Bugs Fixes

- Fixed a bug in the logic for computing ANSI X/R ratio around buses with shunts (capacitor banks, reactors or grounding zigzag transformers) and loads. The bug resulted in incorrect X/R only when: 1) The shunt admittance (G or G0) and succptance (B or B0) are both non-zero; 2) The load MVAR and MW are both non-zero.
- Fixed a bug in the logic for computing the X/R ratio when the checking option “Using complex impedance network” is selected. The program did

not take into account zero- and negative-sequence Thevenin impedances in the computation. As a result the program did not always give correct total breaker fault current duty for 1LG and LLG faults.

- Fixed a bug in the Breaker Rating Comparison Program. The comparison failed in some cases when fuse-checking is selected in the report.
- Fixed a bug in printing breaker data section of the checking report.