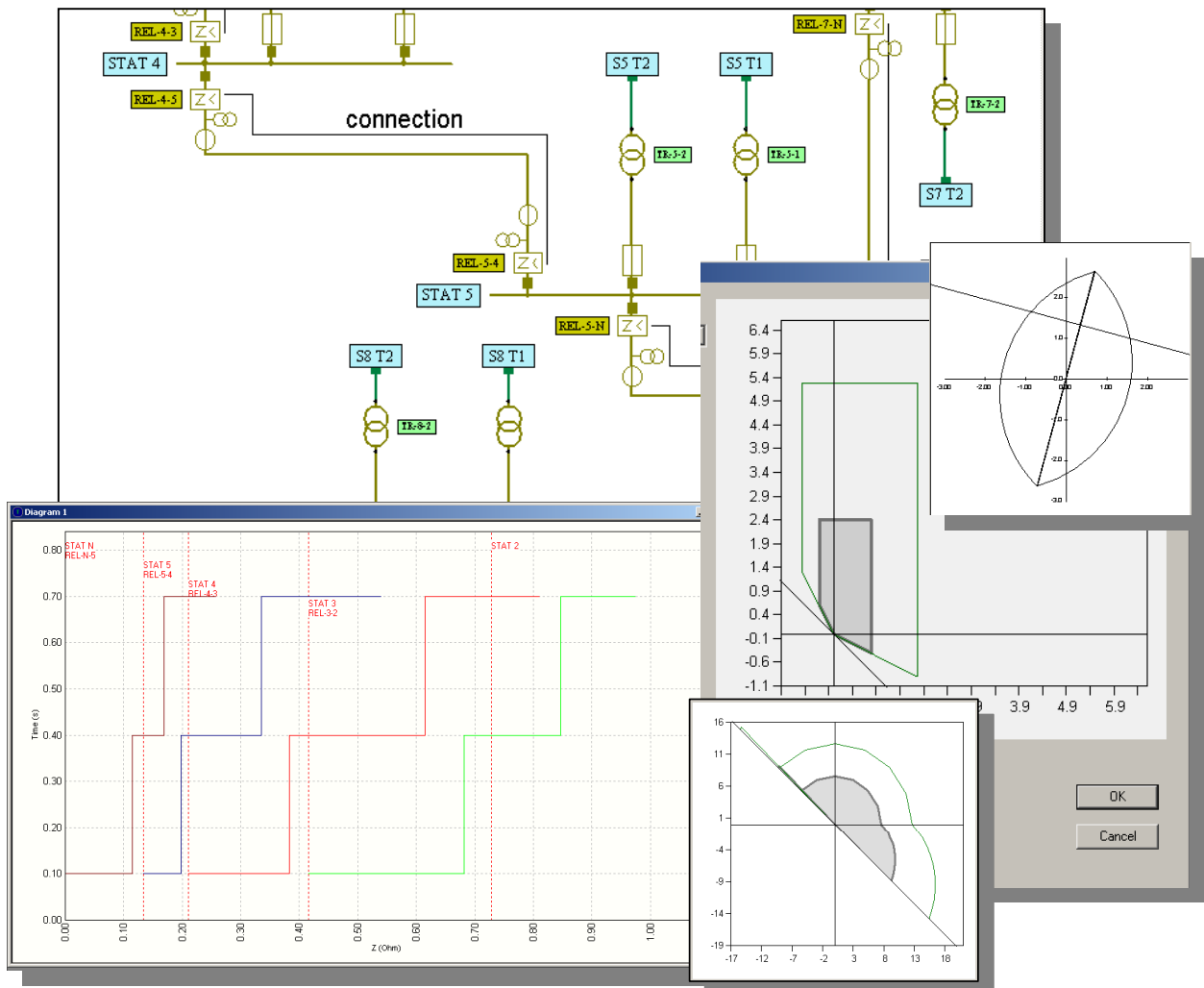


- All types of distance protection relays (irrespective of the manufacturer) can be entered.
- Relays up to 4 impedance zones, 1 over reach zone, 1 backward zone and 1 auto-reclosure zone for line-line and line-earth faults can be defined.
- Start-up characteristics: Over current, angle dependent under impedance, R/X-characteristic, directional/bi-directional end time.
- Processes analog and binary signals and sends out binary signals during dynamic simulation. Binary signals can be: Blocking, Enable, Intertripping, Range Extension, External Starting, Auto-reclosure Blocking, etc, e.g. POTT (Permissive over-reach transfer tripping) and PUTT (Permissive under-reach transfer tripping) can be simulated.
- Interaction between distance protection relay with any other relay type can be defined for dynamic simulation.
- Relay can be modeled within Matlab/Simulink or with NEPLAN function blocks for dynamic simulation.
- Input of any R/X-Characteristic: MHO, Circle, Polygone, Lens, etc. or defined by functions
- Modules for over current, power swing, pole slip.
- Interface to relay test devices. Import/Export of RIO-Format (Relay Interface by Omicron).
- Simulation of fault clearing procedure in meshed networks based on the short circuit module. It involves also over current protection.



- Automatic setting of the relays considering several methodologies (selectable).
- Mutual impedances and capacitances of the positive and zero sequence systems as well as the loading state of the network and infeeds are considered for calculating network impedances.
- Impedance/Reactance of the positive sequence system or the loop impedances are calculated for any short circuit type. Compensation factors due to zero sequence system impedance and mutual coupling are considered in calculating the loop impedances.
- Automatic and user-defined creation of selective tripping schedule.
- Tripping time will be displayed in the single line diagram and in tables after a short circuit calculation.
- All fault types, plus sliding faults of the short circuit module are allowed for.
- Fault location finding. Fault location will be displayed in the single line diagram or listed according to the previously measured impedance value. Tolerance will be considered.
- Interactive change of relay setting parameters and characteristics.

- Display of all calculated impedances with the relay characteristics
- Impedances can be entered/displayed in primary or secondary values. CT and VT are considered.

