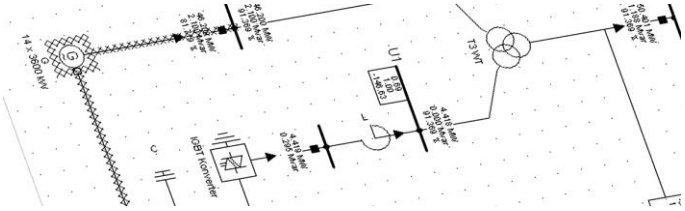

DIgSILENT Technical Documentation

Schweitzer SEL 451
Power Factory
Relay model description

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1 Model general description

The following functionalities are modelled:

- 4 definite time directional overcurrent elements for phase, residual ground and negative sequence quantities: 12 protective elements ("67P1","67P2", "67P3", "67P4", "67G1","67G2", "67G3", "67G4" , "67Q1","67Q2", "67Q3", "67Q4" block)
- 4 instantaneous overcurrent elements for phase, residual ground and negative sequence quantities: they are represented by the starting signals of the definite time directional overcurrent elements. Separated signals are provided but the relay final output stage.
- 6 inverse time overcurrent elements for phase, residual ground, positive sequence and negative sequence quantities: 24 protective elements are available but only 6 of them can be enabled at the same time (the "51S1I", "51S2I", "51S3I", "51S4I", "51S5I", "51S6I" blocks for the phase quantities, the "51S1I1", "51S2I1", "51S3I1", "51S4I1", "51S5I1", "51S6I1" blocks for the positive sequence quantities, the "51S1I2", "51S2I2", "51S3I2", "51S4I2", "51S5I2", "51S6I2" blocks for the negative sequence quantities, the "51S1I0", "51S2I0", "51S3I0", "51S4I0", "51S5I0", "51S6I0" blocks for the residual ground quantities)
- Reclosing feature: 3 protective elements are available ("Phase reclosing", "Ground reclosing", "Neg. Sequence reclosing" block). Please configure the "Tab page" of the reclosing blocks to set the reclosing/lockup logic.

2 Relay not supported features

The following features are not supported:

- High impedance fault detection
- Dual circuit breaker failure
- Synchronism check element