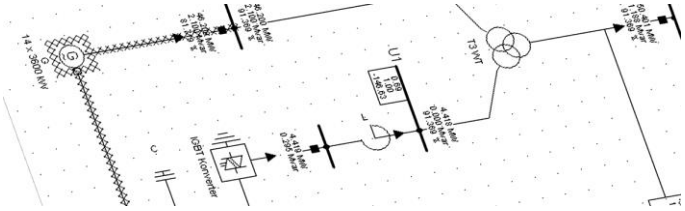

DIgSILENT Technical Documentation

# SEL 587
# PowerFactory
# Relay model description

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# 1 Model general description

The following functionalities are modelled:

- Differential element with 2nd,4th, 5th harmonic blocking, dual slope percentage restraint ("Differential" block)
- CT ratio/connection compensation ("Wd adapter" block located inside the "Wd-1 Meas" subrelay for the High side winding and located inside the "Wd-2 Meas" subrelay for the Low side winding)
- Unrestraint differential element ("Differential" block "Unrestrained diff threshold" setting)
- Separated overcurrent elements for high side and low side winding.
  - High side winding: it's represented by the "Wd1- OC" sub relay. It contains
    - 3 phase elements ("51P", "50P", "50PH" block)
    - 2 Negative sequence elements ("51Q", "50Q" block)
    - 3 Residual current elements ("51N", "50N", "50NH" block)
  - Low side winding: it's represented by the "Wd2- OC" sub relay. It contains
    - 3 phase elements ("51P", "50P", "50PH" block)
    - 2 Negative sequence elements ("51Q", "50Q" block)
    - 3 Residual current elements ("51N", "50N", "50NH" block)
- Any user defined SELogic control equation can be created inside the "output logic block" but that only the ending time variables are available. In any case a standard control equation is provided to trip the relay

# 2 Relay not supported features

The following features are not supported:

- Independent harmonic blocking (ability to block each phase independently)
- DC ratio blocking