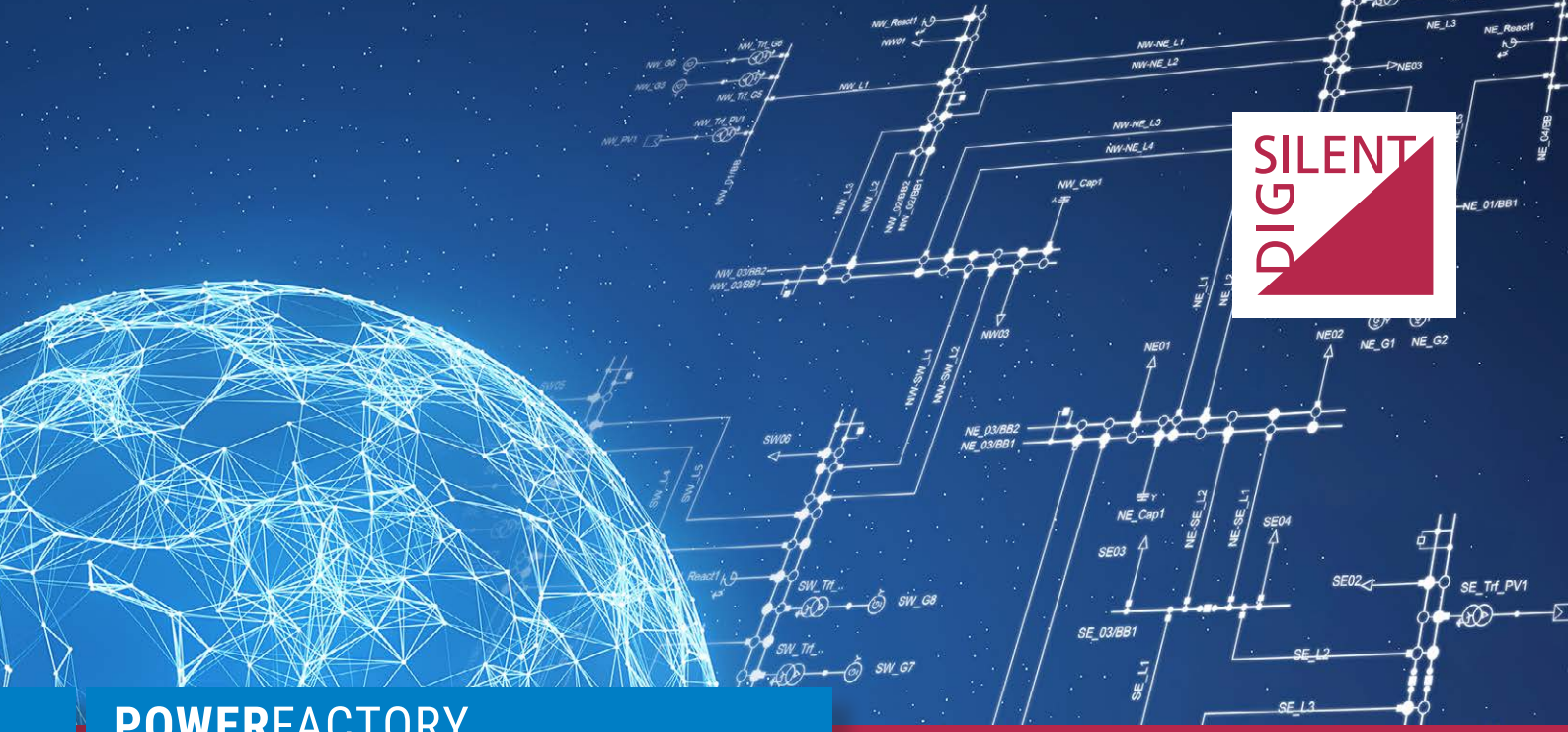

POWERFACTORY

PowerFactory 2021

Technical Reference

DIgSILENT F59 Overvoltage Generic Relay

PF2021

POWER SYSTEM SOLUTIONS

MADE IN GERMANY

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1 F59 Overvoltage

1.1 Intent

To simulate a set of phase over voltage protective element.

1.2 Functionality

The *F59 overvoltage* generic relay model simulates a set of phase-phase and phase-ground over voltage elements. In each group of elements (i.e. the phase-phase elements) one inverse/definite time and 3 definite time elements are available.

1.3 Inputs

- One 3 phase VT (”Phase Vt” block, *StaVt* class).

1.4 Available Units

Measurement

- One 3phase measurement element (”Measurement” block, *RMS Calculation* enabled, *Filter* disabled [RelMeasure class]).
- One 3phase delta measurement element (”Measurement delta” block, *RMS Calculation* enabled, *Filter* disabled [RelMeasure class]).

Protective elements

- One inverse/definite time phase-phase overvoltage element (”Upp>” block [*RelChar* class]).
- Three definite time phase-phase overvoltage elements (”Upp>>”, ”Upp>>>” and ”Upp>>>>” block [*RelUlim* class]).
- One inverse/definite time phase-ground overvoltage element (”Upn>” block [*RelChar* class]).
- Three definite time phase-ground overvoltage elements (”Upn>>”, ”Upn>>>” and ”Upn>>>>” block [*RelUlim* class]).

Output logic

- One relay trip element (”Output logic” block, *RelLogdip* class).

1.5 Outputs

- *yout* associated by default to any protective element trip.
- *yout1* associated by default to any phase-phase overvoltage protective element trip.
- *yout2* associated by default to any phase-ground overvoltage protective element trip.

The output logic can be configured in the ”Logic” tab page of the ”Output Logic” block.