



**POWERFACTORY**

## PowerFactory 2021

Technical Reference

DigSILENT F46 Unbalance overcurrent Generic Relay

PF2021

**POWER SYSTEM SOLUTIONS**  
MADE IN GERMANY

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# 1 F46 Unbalance overcurrent

## 1.1 Intent

The *F46 Unbalance overcurrent* generic relay simulates a simple set of inverse/definite time negative sequence overcurrent elements.

## 1.2 Functionality

The *F46 Unbalance overcurrent* relay model simulates one negative sequence inverse time and two negative sequence definite time overcurrent elements. The output logic can be customized in the relay output logic block. Three relay input signals can be used to block the protective elements. Each protective element can be set to ignore the blocking input or to ignore the blocking input after that a user's definable time has expired after the element trip ("Blocking" tab page).

## 1.3 Inputs

- One 3 phase/single phase CT ("Ct" block, *StaCt* class).
- Three blocking signals (*iblock\_1* blocking the "I2>" element, *iblock\_2* blocking the "I2>>" element, and *iblock\_3* blocking the "I2>>>" element).

## 1.4 Available Units

### Measurement

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

### Protective elements

- One inverse/definite time negative sequence overcurrent element ("I2>" block, [*RelToc* class]).
- Two definite time negative sequence overcurrent elements ("I2>>" and "I2>>>" block [*Relloc* class]).

### Output logic

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

## 1.5 Outputs

- *yout* associated by default to any protective element trip.
- *y\_s* associated by default to any protective element start.
- *toc\_start* associate to the inverse time negative sequence element start signal.
- *ioc\_start* associate to a definite time negative sequence element start signal.

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