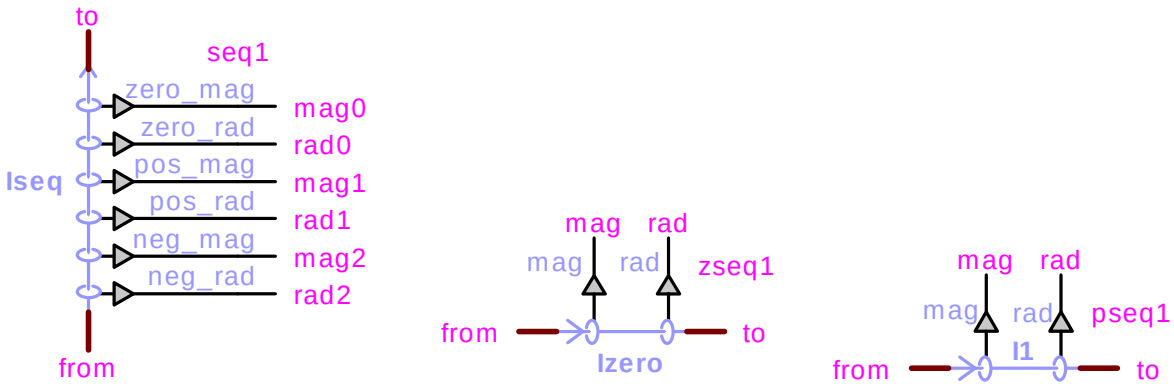
I sequences, I sequence zero and I sequence positive



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1 Description

The “I sequence” device calculates the zero, positive, and negative-sequence phasors of the measured 3-phase current. The “I sequence zero” and “I sequence positive” devices can be used for zero and positive sequence only. They constitute a variation of “I sequences” and are provided for convenience only. The following documentation is given only for the most generic device “I sequences”.

1.1 Pins for “I sequences”

This meter has eight pins:

pin	*type*	*description*	*units*
from	3-phase bus	3-phase "from" bus	
to	3-phase bus	3-phase "to" bus	
mag0	output pin	phasor magnitude of zero sequence current	A
rad0	output pin	phasor angle of zero sequence current	rad
mag1	output pin	phasor magnitude of positive sequence current	A
rad1	output pin	phasor angle of positive sequence current	rad
mag2	output pin	phasor magnitude of negative sequence current	A
rad2	output pin	phasor angle of negative sequence current	rad

1.2 Parameters

The following parameter must be defined:

parameter	*description*	*units*
freq	fundamental frequency of the probed current	Hz

1.3 Input

The bus pins may be connected in series with any 3-phase power device in a circuit.

1.4 Output

The value of the outputs are the magnitude and angle of the zero-, positive-, and negative-sequence phasors of the first harmonic of the measured 3-phase current. The transformation from 3-phase to sequences is calculated over a sliding time window of period equal to 1/freq. The phasor magnitudes are the peak amplitude, not the RMS value. The phasor angles are expressed in radians.