RL coupled device

1 Available versions

Available versions are shown in Figure 1-1. This device can be multiphase, 1-phase or 3-phase. The multiphase version is the generic version.

Figure 1-1 Available versions

The “RL coupled device” is identical to the “PI device” in all its versions. The only difference is that the capacitance matrix is set to 0.

1.1 When changing phases

The rules are identical to the “PI device”.

1.2 The generic version of RL coupled

1.2.1 Parameters

This section is identical to the “PI device”, except now the capacitance data (C) is internally set to 0.

1.2.2 Generic rules

This section is identical to the “PI device”.

1.2.3 Netlist format

The Netlist format is related to the device version. It is similar to the “PI multiphase” device. The only difference is in the model code appearing at the end of the ParamsA attribute. It is 2 for signifying the absence of capacitance data.

1.3 Other versions

The standard library also provides modified symbol versions of “RL coupled”. These are conveniently available to the user and the user may create other versions using the “Symbol Editor”.

2 Steady-state model

This section is the same as in the “PI device”. The only difference is the absence of the capacitance matrix.

3 Initial conditions

Automatic initial conditions are found from the steady-state solution. Manual initial conditions can be provided for the self-inductance currents.

4 Frequency Scan model

Similar to the steady-state. The branch impedance is found at each frequency.

5 Time-domain model

The device is discretized according to the integration time-step and solved at each simulation time-point.