POWERFACTORY

PowerFactory 2021

Technical Reference

AC/DC Connector
ElmConnectacdc

PF2021

Please visit our homepage at:
https://www.digsilent.de

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1 General Description

The *AC/DC Connector* element in *PowerFactory* is used for connecting an AC node to a DC node. It is a purely EMT single-phase model.

It is possible to define a resistance and an inductance, in which case the AC/DC connector is equivalent to a series reactor connected between an AC and a DC node.

The equations describing the model are:

$$u_{AC} - u_{DC} = R \cdot i_{AC} + L \cdot \frac{di_{AC}}{dt} \tag{1}$$

$$i_{AC} = -i_{DC} \tag{2}$$

where the currents i_{AC} and i_{DC} are both defined positive if entering the AC or DC node.