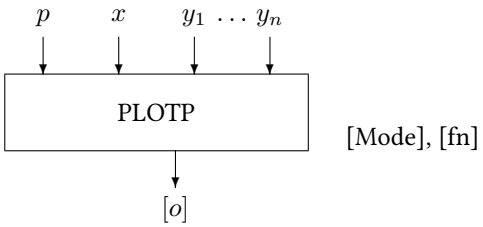
Block PLOTP

The PLOTP block generates a parametric graphical output of its connected input data via gnuplot.





Name	PLOTP
Function	fb0044
Inputs	3 . . . [20]
Outputs	0 . . . [1]
Parameters	0 . . . [1]
Strings	0 . . . [1]
Group	S

Inputs

1	Curve parameter p
2	Any signal x
3	Any signal y_1
n	Any signal y_{n-1}

Outputs

1	User defined block number (if available)

Parameters

1	Sort descending. If set to 1, each y column is sorted independently in descending order and the x axis is replaced by rank (0, 1, 2, ...). Useful for load duration curves.

Strings

1	File name fn of a gnuplot command file. If no file name is provided, a default file `insel.gnu` is generated with default gnuplot commands.

Description

The PLOTP block is nearly identical with the PLOT block. The only difference is that the PLOTP block has an additional input. The first input (the parameter input) is used to distinguish between several logical curves. As long as this input is constant, all data points are assumed to belong to the same curve. When the first input changes its value, a pen-up pen-down movement is simulated and a new curve drawn.

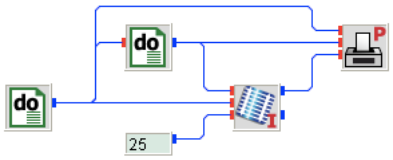
The second input becomes the x coordinate. All other inputs can take up y data.

Limitations

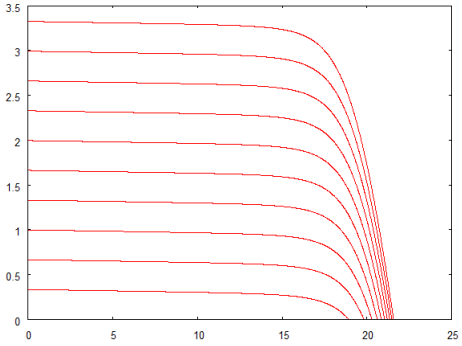
Only one PLOT block or one PLOTP block can be used in an INSEL model file.

plotp.vseit

This is an example how to plot a set of I-V curves of a photovoltaic module for different irradiance levels.



Two nested DO blocks vary the radiation of a PV module between 100 and 1000 Watt per square meter in steps of 100 Watt per square meter (outer DO loop) and voltage between 0 and 25 Volt in steps of 0.01 Volt (inner DO loop). A CONST block provides a module temperature of 25 degrees Celsius. A PVI block calculates the module current. Finally, the PLOTP block displays the I-V characteristics on screen.



See also

Block PLOT.