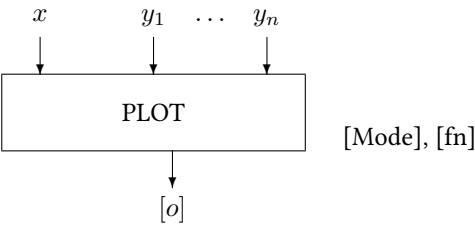


Block PLOT

The PLOT block generates graphical output of its connected input data via gnuplot.



Name	PLOT
Function	fb0044
Inputs	2...[20]
Outputs	0...[1]
Parameters	0...[1]
Strings	0...[1]
Group	S

Inputs

- 1 Any signal x
- 2 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 **PLOT** block uses the open-source software gnuplot to generate graphical output of x - y data. As long as a model is executed the block collects all connected data and writes them to a temporary file named `insel.gpl` (gnuplot data).

Many parameters can be set in the graphical interface, e.g. title, labels, ranges, units, axis (y_1 or y_2), colors. By default, the plot will be displayed in a window, but it can also be exported to PNG, PDF, SVG,

Once the plot is displayed, it is possible to zoom and pan with arrows, mouse or + - keys. The window can be closed with the mouse or by pressing `q`.

According to the Gnuplot documentation, here are the available commands:

```
<B1> doubleclick    send mouse coordinates to clipboard (pm win wxt x11)
<B2>                annotate the graph using 'mouseformat' (see keys '1', '2')
                    or draw labels if 'set mouse labels is on'
<Ctrl-B2>          remove label close to pointer if 'set mouse labels' is on
<B3>                mark zoom region (only for 2d-plots and maps)
<B1-Motion>         change view (rotation); use <Ctrl> to rotate the axes only
<B2-Motion>         change view (scaling); use <Ctrl> to scale the axes only
<Shift-B2-Motion>   vertical motion -- change xyplane
<B3-Motion>         change view (azimuth)
<wheel-up>          scroll up (in +Y direction)
<wheel-down>        scroll down
<shift-wheel-up>    scroll left (in -X direction)
<shift-wheel-down>  scroll right
<Control-WheelUp>   zoom in on mouse position
<Control-WheelDown> zoom out on mouse position
<Shift-Control-WheelUp> pinch on x
<Shift-Control-WheelDown> expand on x

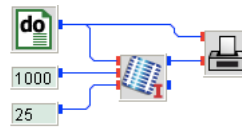
q                  * close this plot window

a                  'builtin-autoscale' (set autoscale keepfix; replot)
b                  'builtin-toggle-border'
e                  'builtin-replot'
g                  'builtin-toggle-grid'
h                  'builtin-help'
i                  'builtin-invert-plot-visibility'
l                  'builtin-toggle-log' y logscale for plots, z and cb for splots
L                  'builtin-nearest-log' toggle logscale of axis nearest cursor
m                  'builtin-toggle-mouse'
r                  'builtin-toggle-ruler'
V                  'builtin-set-plots-invisible'
v                  'builtin-set-plots-visible'
1                  'builtin-previous-mouse-format'
2                  'builtin-next-mouse-format'
5                  'builtin-toggle-polar-distance'
6                  'builtin-toggle-verbose'
7                  'builtin-toggle-ratio'
n                  'builtin-zoom-next' go to next zoom in the zoom stack
p                  'builtin-zoom-previous' go to previous zoom in the zoom stack
u                  'builtin-unzoom'
```

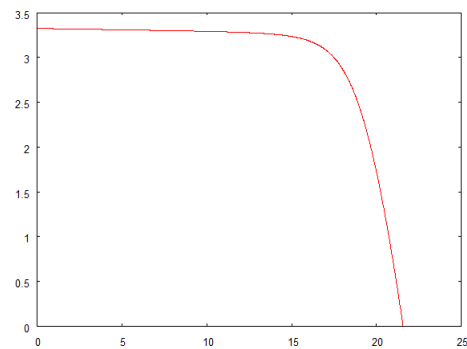
+	'builtin-zoom-in' zoom in
=	'builtin-zoom-in' zoom in
-	'builtin-zoom-out' zoom out
Right	'scroll right in 2d, rotate right in 3d'; <Shift> faster
Up	'scroll up in 2d, rotate up in 3d'; <Shift> faster
Left	'scroll left in 2d, rotate left in 3d'; <Shift> faster
Down	'scroll down in 2d, rotate down in 3d'; <Shift> faster
<	'rotate azimuth left in 3d'; <ctrl> faster
>	'rotate azimuth right in 3d'; <ctrl> faster
Escape	'builtin-cancel-zoom' cancel zoom region

Limitations Only one **PLOT** or **PLOTP** block can be used per INSEL model.

plot.vseit



A **DO** block varies the voltage of a PV module between 0 and 25 Volt in steps of 0.01 Volt. Two **CONST** blocks provide solar radiation of 1000 Watt per square meter and a module temperature of 25 degrees Celsius, i. e., Standard Test Conditions. A **PVI** block calculates the module current. Finally, the **PLOT** block displays the I - V characteristic on screen.



See also Block **PLOTP**.