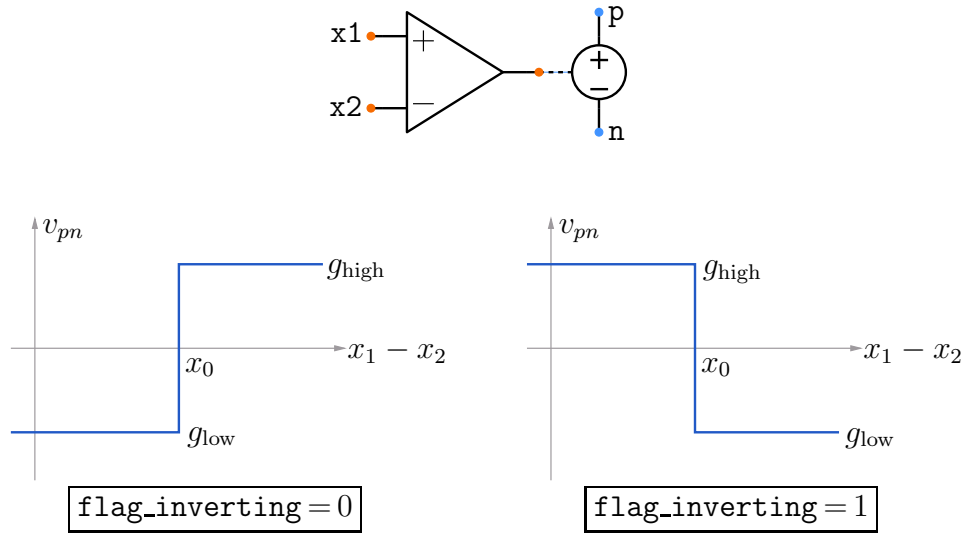


cmprtr_1.gme



Attributes

```
mainnodes_anlg: p n
main_var: x1 x2
iparms: flag_inverting=0
rparms:
+ g_low=0
+ g_high=1
+ x0=0
+ delt_min=1.0e-6
+ delt_nrml=1.0e-3
```

Description

cmprtr_1.gme is a comparator with general variables `x1` and `x2` as inputs. The output of the comparator is made available in the form of a voltage (see figure).

Consider `flag_inverting` equal to 0. If $(x_1 - x_2) > x_0$, the voltage $(v(p) - v(n))$ is equal to `g_high`; else, it is `g_low`. With `flag_inverting` equal to 1, the opposite situation holds, as shown in the figure.

The parameters `delt_min` and `delt_nrml`, are used for controlling the simulator time steps. Additional time points are forced, depending on the values of `delt_min` and `delt_nrml`, when `x1` and `x2` are close to each other. This feature allows accurate simulation without having to make the average time step very small. Generally, `delt_nrml` should be made equal to the

typical simulator time step (`delt_const`) while `delt_min` should be made much smaller (say, by a factor of 10 or 100).

AC behaviour is not implemented.