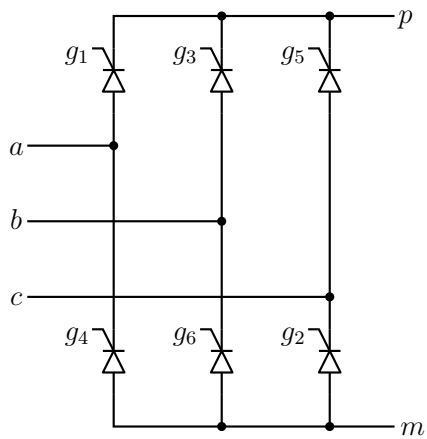


thyristor_bridge_3ph_3.gme



Attributes

mainnodes_anlg: a b c p m

main_var: g1

aux_var: g2 g3 g4 g5 g6

iparms:

+ flag_frequency=1

+ flag_period=0

rparms:

+ r_on=1m

+ r_off=100k

+ g_high=1.0

+ t_period=20m

+ frequency=50

+ cap=0.2n

outvar_anlg:

+ g1=var_of_g1

+ g2=var_of_g2

+ g3=var_of_g3

+ g4=var_of_g4

+ g5=var_of_g5

+ g6=var_of_g6

+ i_T1=i1_of_t1

+ i_T2=i1_of_t2

+ i_T3=i1_of_t3

+ i_T4=i1_of_t4

+ i_T5=i1_of_t5

+ i_T6=i1_of_t6

Description

`thyristor_bridge_3ph_3.gme` is a three-phase thyristor bridge as shown in the figure.

$R_{\text{on}}/R_{\text{off}}$ -type thyristors are used in the model. The gate signal `g1` is externally supplied, and `g2` to `g6` are internally generated such that `g2` lags `g1` by 60° , and so on. If a gate input is greater than `g_high/2`, it is considered to be high.

The other parameters have the following meaning:

flag_frequency: If this parameter is set to 1, the period of the gate signals is computed using the real parameter `frequency`.

flag_period: If this parameter is set to 1, the period of the gate signals is given by the real parameter `t_period`.

cap: Capacitance added between `a` and `m`, between `b` and `m`, and between `c` and `m`. It may help convergence of the Newton-Raphson process in some cases.

AC behaviour is not implemented.