



rapport cyclique  
(par rapport au  
5 V du PWM)

**Block Parameters: Controlled PWM Voltage**

Controlled PWM Voltage

This block represents a Pulse-Width Modulated (PWM) voltage source across its PWM and REF ports that depends on the reference voltage Vref across its +ref and -ref ports. The duty cycle in percent is given by  $100 \cdot (V_{ref} - V_{min}) / (V_{max} - V_{min})$  where Vmin and Vmax are the minimum and maximum values for Vref. The output voltage is zero when the pulse is low, and is set equal to the Output voltage amplitude parameter when high.

At time zero, the pulse is initialized as high unless the duty cycle is set to zero or the Pulse delay time is greater than zero.

The Simulation mode can be set to PWM or Averaged. In PWM mode, the output is a PWM signal. In Averaged mode, the output is constant with value equal to the averaged PWM signal.

**Settings**

Parameters

PWM frequency:	50	Hz
Pulse delay time:	0	s
Pulse width offset:	0	s
Input value Vmin for 0% duty cycle:	0	V
Input value Vmax for 100% duty cycle:	5	V
Output voltage amplitude:	5	V
Simulation mode:	PWM	
Switching event type:	Asynchronous - Best for variable-step solvers	

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**PWM frequency:** fréquence du signal PWM

**Input value Vmin for 0% duty cycle:** Valeur de tension pour un rapport cyclique de 0%

**Input value Vmax for 100% duty cycle:** Valeur de tension pour un rapport cyclique de 100%

**Output voltage amplitude:** amplitude de la tension en sortie

- Lancer la simulation et observer la vitesse de rotation du moteur à l'aide du scope.
- Observer la réponse du moteur en modifiant le rapport cyclique.
- Modifier la fréquence du signal pour observer la réponse
- Modifier l'inductance du moteur