




## Kinematics [cycleDef = (cycle==5)]

 LinearVariables

 AngularVariables


 acc\_l: Acceleration, acc\_r: Acceleration

 spd\_l: real, spd\_r: real

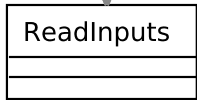
 ControllerConstants

 Constants

Inputs

 KinematicInterface

Outputs



exec

$\left[ \text{Accelerometer?acc\_l} / \text{Accelerometer?acc\_r} \right]$   
 $\left[ \text{WheelSpeed?spd\_l} / \text{WheelSpeed?spd\_r} \right]$

Update

```
entry aSpeed = sqrt((abs(acc_r.Y-acc_l.Y))/(2*ACC_DIST));  
ISpeed = WHL_RADIUS*(spd_l+spd_r)/2; dist =  
dist+ISpeed*STEP_SIZE*NCYCLES; theta =  
theta+aSpeed*STEP_SIZE*NCYCLES
```