$$OUTPUT_{PID} = K_P \left[E + K_I \sum \left(E\Delta t \right) + K_D \frac{\Delta PV}{\Delta t} \right]$$

$$\begin{cases} OUTPUT_{PID} & = controller\_output \\ K_P & ganancia\_proportional \\ K_I & ganancia\_integral \\ K_D & ganancia\_derivativa \\ E & = error\left(SP - PV \right) \\ PV & = process\_variable \\ & (feedback\_from\_sensor) \end{cases}$$

$$K_I \sum \left(E\Delta t \right) = K_I E_1 T + K_I E_2 T + K_I E_3 T$$

$$K_D \frac{\Delta PV}{\Delta t}$$