# Chapter 11 - PID Controllers

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## Outline

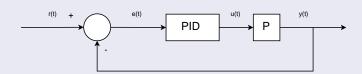
First section

### What is a PID controller?

#### **Definition**

A **Proportional Integral Derivitaive controller** is a loop feedback controller with continious time equation:

$$u(t) = \underbrace{K_p e(t)}_{\text{Proportional Action}} + \underbrace{K_i \int_0^t e(\tau) d\tau}_{\text{Integral Action}} + \underbrace{K_d \frac{de(t)}{dt}}_{\text{Derivative Action}}$$



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