# EZLogix Auto-tuned PID Loops

What is PID?

PID is one of the most popular control algorithms used in the industry to control the variables involved in an industrial manufacturing process for the proper operation of the process. PID stands for Proportional, Integral and Derivative control algorithm. With a proper choice of P, I, and D settings, a user can maintain a process value very close to the setpoint. In addition, if the setpoint changes, the PID algorithm can quickly bring the process back under control. EZLogix supports up to 8 auto-tuned PID loops. For each loop you have to define several parameters, as shown below in the PID Setup window. You may change most of these parameters during run time, using EZLogix Designer Pro in online mode.
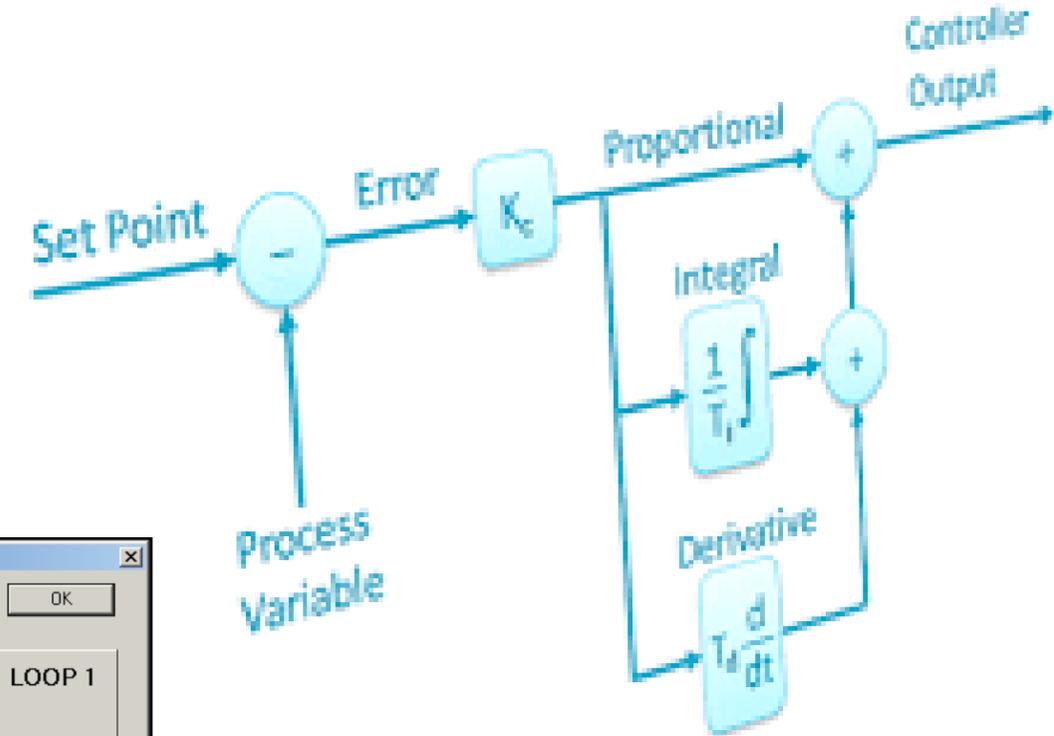
PID Loop Auto Tuning

To achieve a stable and responsive process control, it is very important to select the proper PID parameters. Experienced users can estimate good starting values for these parameters and later tweak them to optimize the PID loop performance. This is called as the manual tuning of the process. Whereas, those who want help in estimating the starting values of the parameters like P, I, and D coefficients, EZLogix provides an Autotune feature.

PID Monitor

You can use the PID Monitor function to monitor and make real-time changes to your PID Loop. In order to use it, you must be connected to the PLC and select Main Menu > EZLogix > PID Monitor. A PID Monitor window will show up. Here you can change the current values of the parameters by entering a value in the New Value field. Once all of the parameters are defined, press the Apply button and then the Start Monitoring button at the bottom, to begin monitoring your PID Loop. A graph will begin to appear as shown in the image below.