

YASKAWA

Temperature Control. PID functions are incorporated into the Yaskawa AC Drive. The PID algorithm is the “brain” of a closed control loop, responsible for maintaining SETPOINT and reducing loop error.

This gives the drive the capability to regulate a controlled variable such as output water temperature. Regulation is accomplished by comparing a feedback signal to a SETPOINT signal. The SETPOINT signal can be programmed into the drive, or can be provided by an analog input to the drive.

The PID algorithm then performs the necessary calculations on the difference between the two signals(Error Signal), in order to compensate for load changes, and output the motor speed required to maintain SETPOINT.

The controlled variable is sensed and controlled by a transducer to provide the controlled variable signal. Yaskawa recommends a transducer such as the Mamac Systems Model TE-213, or equivalent. See Figure 2 and the manufacturer’s bulletin.

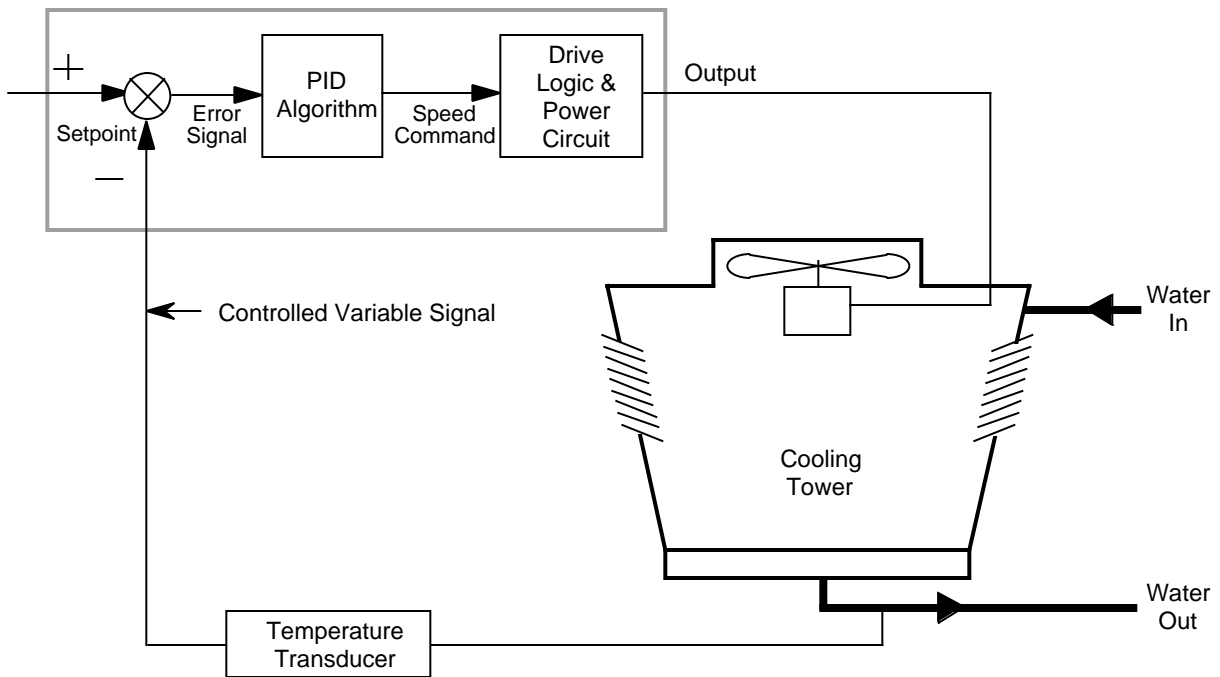


Figure 1

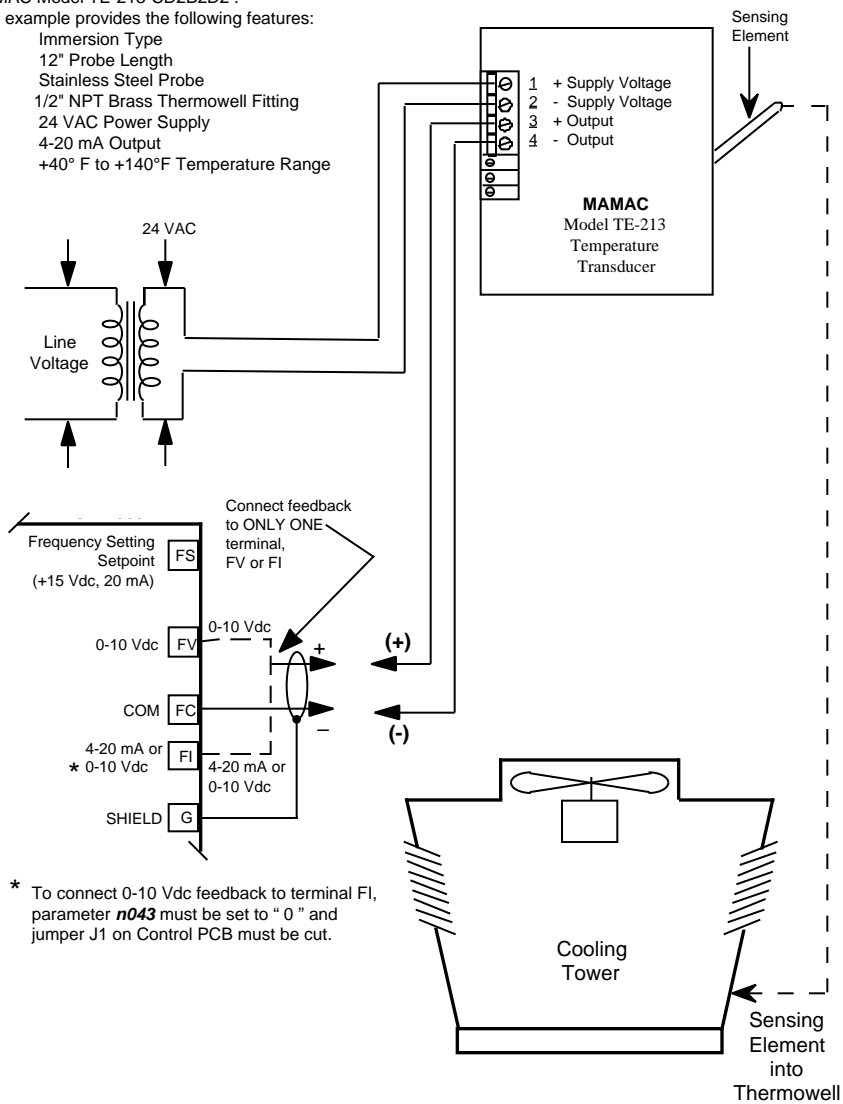


Suggested ordering example for this Application:

MAMAC Model TE-213-CD2B2D2 .

This example provides the following features:

- Immersion Type
- 12" Probe Length
- Stainless Steel Probe
- 1/2" NPT Brass Thermowell Fitting
- 24 VAC Power Supply
- 4-20 mA Output
- +40° F to +140°F Temperature Range



* To connect 0-10 Vdc feedback to terminal FI, parameter **n043** must be set to "0" and jumper J1 on Control PCB must be cut.

Figure 2