

YASKAWA

Differential Water Pressure 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 differential water pressure. 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 regulate the motor speed required to maintain SETPOINT.

The controlled variable is sensed and conditioned by a transducer to provide the controlled variable signal. Yaskawa recommends a transducer such as the Mamac Systems Model PR-282, or equivalent, as shown in Figure 2 and the manufacturer’s bulletin.

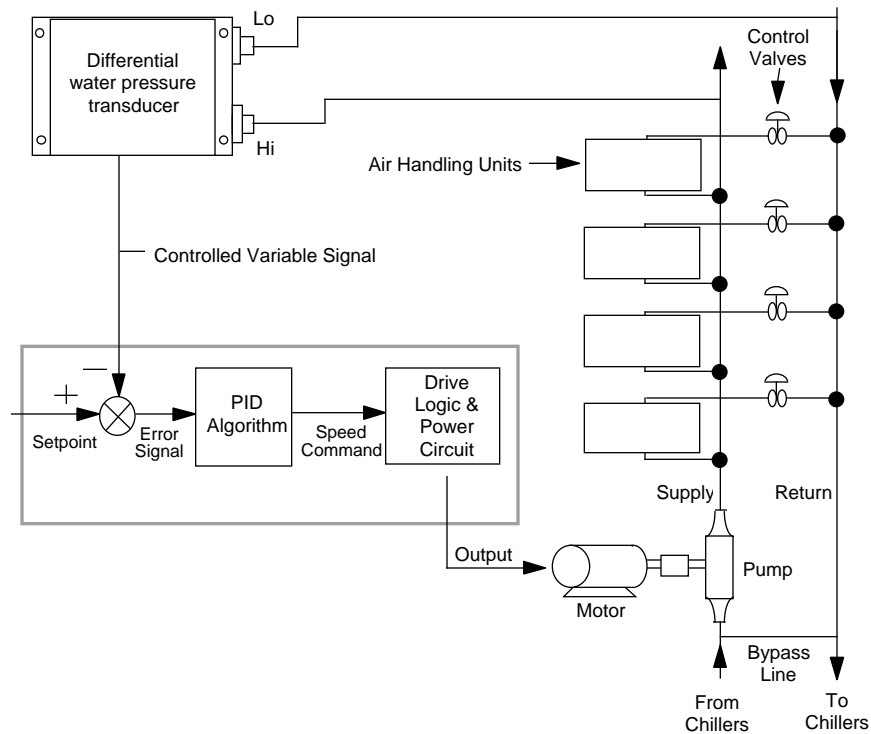


Figure 1



Differential Water Pressure PID Control

Suggested ordering example for this Application:

MAMAC Model PR-282-43B11A.
This example provides the following features:

- 4 - 20 mA Output
- 0 - 50 PSID Input
- 24 VAC Power Supply
- Direct Acting Output
- With output averaging
- With Output clipping

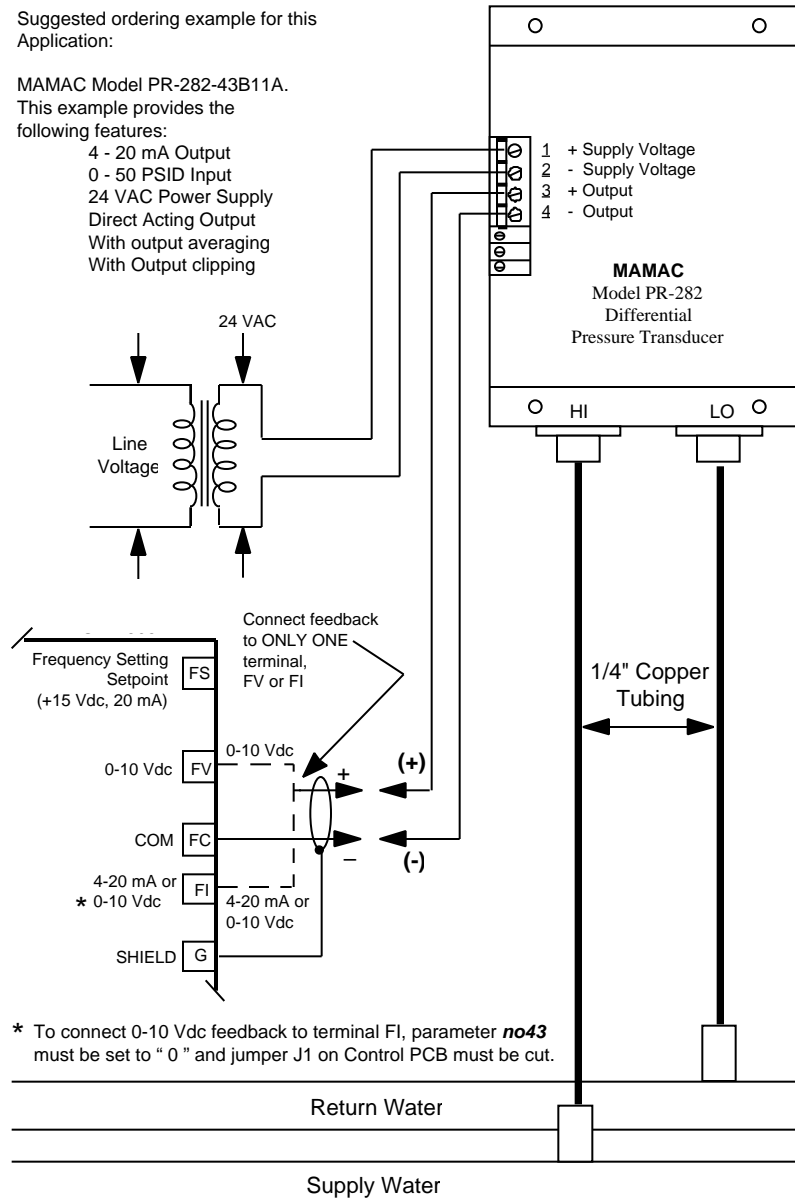


Figure 2