

Absolute Process Instruments, Inc.

Manufacturer of Quality Signal Conditioners Transmitters & Isolators

Application Notes

- General Info
- Temperature
- Pressure
- Flow
- Speed
- Weighing
- Process

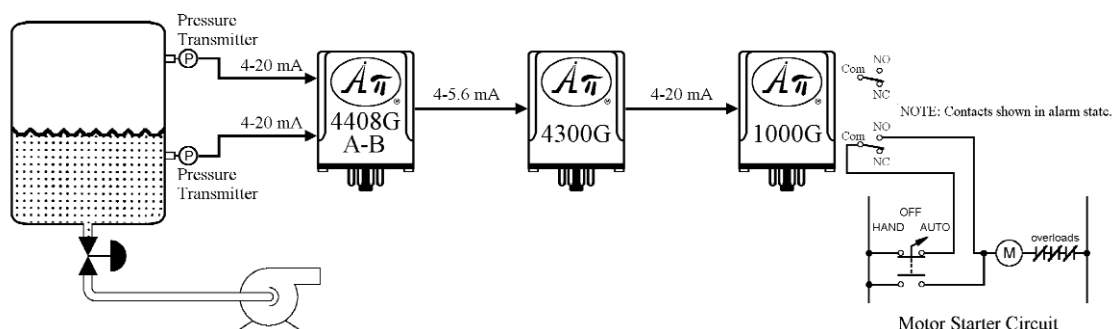
Phase Separator Water Level Control

PROBLEM

A phase separator is equipped with 2 pressure sensors, one located above the water level and one below. During operation the maximum pressure differential is 10%. It is necessary to maintain the water level so that there is a 1% pressure differential between the sensors.

SOLUTION

Use an **API 4408 G A-B Math Function** module to obtain the pressure differential between the transmitters. With a pressure differential of 0-10%, the output of the **API 4408 G** will be 4-5.6 mA. Expand the 4-5.6 mA signal to 4-20 mA with an **API 4300 G Isolated DC to DC Transmitter** module for better resolution and control.



Use the output of the **API 4300G** to drive an **API 1000 G DC Input Single Alarm Trip** module to provide a relay contact closure to operate a water removal pump. Adjust the setpoint of the **API 1000 G** to maintain the differential pressure at 1%. The second set of isolated relay output contacts can be wired to an annunciator panel or other monitoring system as desired. The standard heavy-duty relay contacts are rated 7A @ 240VAC (resistive) and can directly control most devices.

Did You Know...?

Api isolated transmitters have 2000 VRMS input, output, and power isolation.

FREE APPLICATION ASSISTANCE
 Call **Customer Service**
800-942-0315