CATEGORY:
- ❑ Temperature
- ■ Pressure
- ❑ Flow
- ❑ Speed
- ❑ Weighing
- ❑ Other

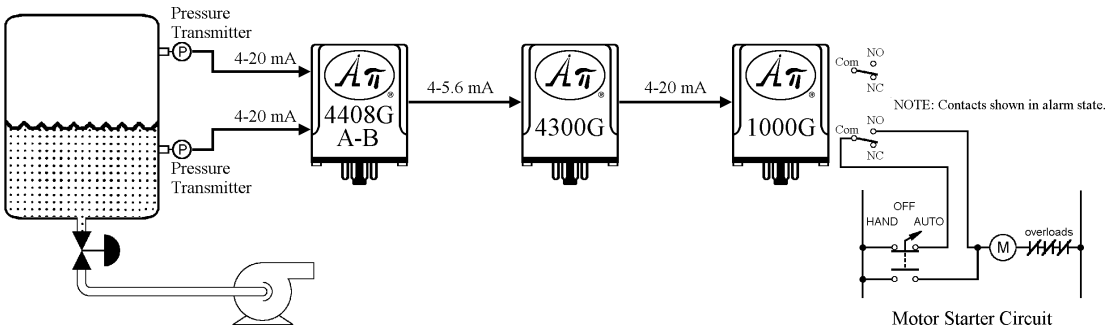
PHASE SEPARATOR WATER LEVEL CONTROL

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 4408G 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 4408G will be 4-5.6 mA. Expand the 4-5.6 mA signal to 4-20 mA with an Api 4300G Isolated DC to DC Transmitter module for better resolution and control.



Motor Starter Circuit

Use the output of the Api 4300G to drive an Api 1000G DC Input Single Alarm Trip module to provide a relay contact closure to operate a water removal pump. Adjust the setpoint of the Api 1000G 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 $2000V_{RMS}$ input, output, and power isolation.