

Isolate and control the signal to a hydraulic control valve

APPLICATION A169

Type of Company: Oilfield Services

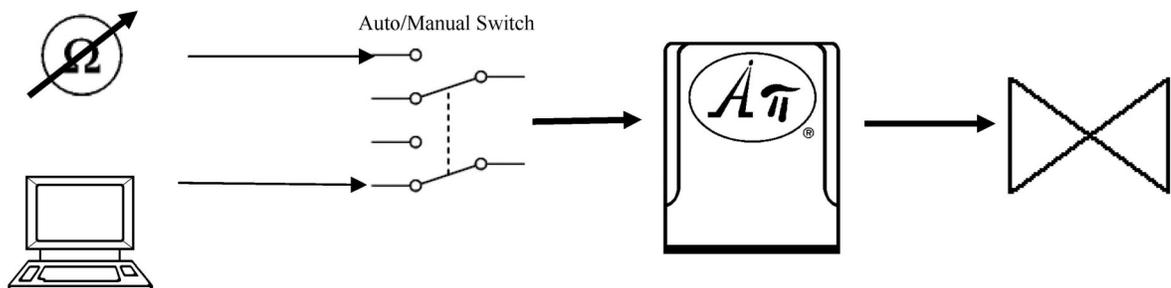
Location: Texas

This leading oilfield services company utilizes an older induced hydraulic fracturing system. Hydraulic fracturing is a process used in natural gas wells in the United States where water, sand and chemicals are pumped underground to break apart rock and release gas. Hydraulic fracturing enables access to shale reservoirs deep below the earth's surface where there would not otherwise be sufficient permeability or reservoir pressure to allow natural gas and oil to flow from the rock into the wellbore at economic rates.



The Engineering Issue

- The engineer has a requirement to upgrade the equipment by adding a PLC for automatic control and a potentiometer for manual control.
- Both the PLC and the potentiometer output a 0-10 VDC signal but the hydraulic control valve requires a 4-20 mA isolated input signal. The valve also requires input signal isolation.



The engineer used an API 4385 G. The API 4385 G accepts the 0-10 VDC control signal from either the PLC or the potentiometer and converts it to a 4-20 mA signal for the valve. The unit also provides full 3-way isolation so the end result is more accurate control of the valve.

Problem. Solved.