

APPLICATION NEWSLETTER

TESTING PRESSURE SWITCHES

Several features incorporated into the design of the 350 Smart Digital Manometer simplify the testing of pressure switches and other pressure relief devices such as rupture disks. One of these features is selectable damping or in this case, response rate. Smart Manometers have response rates as fast as 0.1 seconds and can capture rapidly changing pressure signals. The problem that arises, however, is that although the internal microprocessor of a Smart Manometer can keep up with fast changes in pressure, the human eye cannot follow changes in a flickering display.

To address this problem the 350 Smart Manometer has a MIN / MAX capture. With this feature, the minimum and maximum pressures sensed by the smart manometer are captured by the

microprocessor at its fastest speed and shown on a separate line of the display. Captured values are held until the operating mode is changed or the MIN / MAX is re-zeroed. The test set-up is shown at the right.

The Smart Manometer is adjusted for a damp rate (response time) of 0.1 seconds. Then it is connected through a tee to the pressure switch and a pressure source. Finally the Smart Manometer is put in the MIN / MAX mode to make the measurement. To run the test, pressure is applied through the tee to the Smart Manometer and the pressure switch under test until the switch activates. The MAX display reading indicates the maximum pressure measured before the switch activated.

