

API-Cecom Group *n'fo*

Technical & Application Note C192

Application: Monitor vacuum on a CNC machine
Type Of company: Parts manufacturer
Location: Minnesota

Problem: The customer is an metal parts manufacturer. Milling machines were first invented to mass produce interchangeable parts. Although the first machines were crude, these machines assisted man in maintaining accuracy and uniformity while duplicating parts that could not be manufactured with the use of a file. Development and improvements of the milling machine and components continued, which resulted in the development of computerized machines to alleviate errors and provide better quality in the finished product. CNC stands for **computer numeric controlled**. It refers to any machine tool (i.e. mill, lathe, drill press, etc.) which uses a computer to electronically control the motion of one or more axes on the machine. CNC machine tools use software programs to provide the instructions necessary to control the axis motions, spindle speeds, tool changes and so on.

Note: For additional information on this process see http://en.wikipedia.org/wiki/Numerical_control

The customer uses a vacuum system to hold the material onto the machine work table so the vacuum system must be operating properly before the machine starts operating. The engineer wants a visual indication for the operator and a signal to the computer to ensure that the vacuum is at the proper level.

Solution: The customer purchased an F16ADA30INHGVAC. The gauge is set up as a Lo/Lo alarm so that if both LED's on the front face are green the vacuum is at the proper level. The LCD display can also be used if the operator desires. The relay operates to send a signal to the PLC so that the machine cannot operate if the vacuum level is not at the proper level.

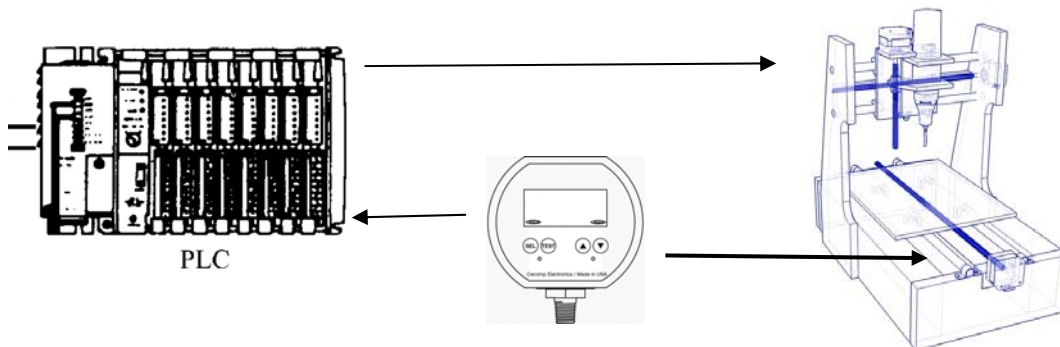



F16ADA

Digital Pressure Gauge
With Alarms



Photo by S zillayali



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