

**Higher Technical Institute**  
**ELECTRICAL ENGINEERING DEPARTMENT**  
DIPLOMA PROJECT  
**INDUSTRIAL CONTROLLERS AND THEIR  
APPLICATIONS**

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**JUNE 98**

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# **INDUSTRIAL CONTROLLERS AND THEIR APPLICATIONS**

**PROJECT REPORT SUBMITTED TO THE  
ELECTRICAL ENGINEERING DEPARTMENT OF  
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## **Introduction to pneumatics**

Pneumatics has for some considerable time been used for carrying out the simplest mechanical tasks, but in more recent times has played a more important role in the development of pneumatic technology for automation. In the majority of applications compressed air is used for one or more of the following functions:

- The use of sensors to determine status of processes
- Information processing
- Switching of actuators by means of final control elements
- Carrying out work

Before the 1950s pneumatics was most commonly working as a medium in the form of stored energy. During the 1950s the sensing and processing roles developed in parallel with working requirements. This development enabled working operations to be controlled using sensors for the measurement of machine states and conditions. The development of sensors, processors and actuators has led to the introduction of pneumatic systems.

In parallel with the introduction of total systems, the individual elements have further developed with changes in material, manufacturing and design process.