HIGHER TECHNICAL INSTITUTE

ELECTRICAL ENGINEERING COURSE
DIPLOMA PROJECT

DEVELOPMENT OF A PROGRAMMABLE LOGIC
CONTROLLER BASED PACKING MACHINE

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PERICLOS ANDREAS

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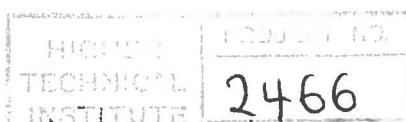# PROJECT REPORT

Project Submitted by
PERICLOS ANDREAS

DEVELOPMENT OF A PROGRAMMABLE LOGIC CONTROLLER BASED PACKING MACHINE

In partial fulfilment of the requirements of the award of the
Diploma of the Technician Engineer in Electrical Engineering of the
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CYPRUS

PROJECT SUPERVISOR: Mr. E. Michael
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Type of Project: Individual

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SUMMARY

TITLE: Development of a Programmable Logic Controller
           (PLC) Based Packing Machine

AUTHOR: Periclos Andreas

The report investigates the programming capabilities of a
"ladder language". It also examines the characteristics
and capabilities of Programmable Controllers. Then an
application program using the Programmable Controller for
the control of a cigarette packing machine is made.
Finally the program analysis, costing and comparison with
conventional methods are given.

The application program is based on the Allen-Bradley SLC
500 Programmable Controller's instruction techniques and
the P.L.C. of the H.T.I

INTRODUCTION

The main objective of this project is to develop an application program using the programmable controller for the control of a Cigarette packing machine.

For this reason a "ladder diagram" was constructed using the "ladder language".

This report also gives an overall description of the Programmable Logic Controller (PLC's) as far as their characteristics, capabilities and programming are concerned.

More particularly the whole project is' divided into six (6) chapters each one subdivided into subsections.

An introduction on PLC's is made in Chapter 1 where the definition, history, Advantages and disadvantages of PLC's are described.

Chapter 2 describes the components and modules that make up a PLC system. More over this chapter gives a brief idea about the internal operation of the PLC's.

Programming languages, and especially the Ladder diagram language are examined. In addition the basic PLC function are analysed.

These can be found in chapters 3 and 4.

Chapter 5 refers to the actual case study problem and to the explanation of the ladder PLC program rung by rung.

Chapter 6 provides costing and comparison with conventional methods.

The main purpose of this report is to provide a basic and outlined knowledge on PLC's and their applications. Moreover it intends to get the reader familiar by dealing with a certain application and giving the explanation of the Program and an overall costing of the system.