HIGHER TECHNICAL INSTITUTE

ELECTRICAL ENGINEERING DEPARTMENT

DIPLOMA PROJECT

DESIGN OF THE ELECTRICAL SERVICE OF A SHOWROOM

E. 1187

BY: CONSTANTINOU ANDREAS

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Chapter 5 : Cable of EAC meter and distribution board

Introduction

A show room connected with a block of offices and workshops, is the structure of a typical company located in Cyprus. System of supply is T.T, and single phase 240 volts rms, 50 hertz or three phase 415 volts, 50 hertz is available.
The prospective short circuit current is expected to be 5 KA at 0.5 power factor and Ze=1Ω. For the storage heaters the supply will be separated from the rest of the installation and will be controlled by a timer which will operate at off-peak periods.

Protection against direct contact will be provided using residual current devices (RCD'S) which will be allocated for fixed equipment (100ma) because usually leakage currents are created (due to fact that they are affected by moisture) and rcd with less rating will be tripped very frequently and for the rest of the circuits (30 ma rcd).

The design consists of the following circuits:

- Twelve lighting circuits
- Five ring circuits
- Storage heater circuits

Scale: 1:100