



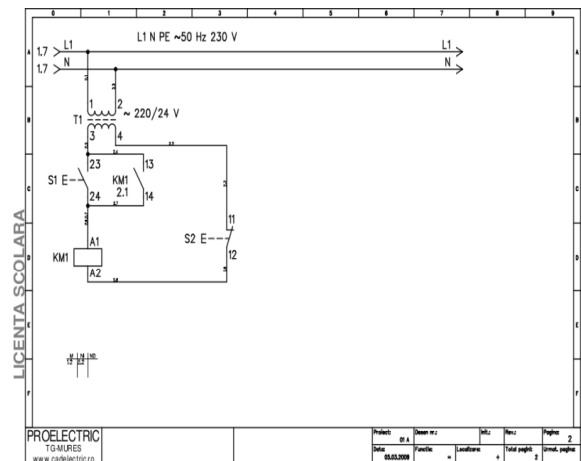
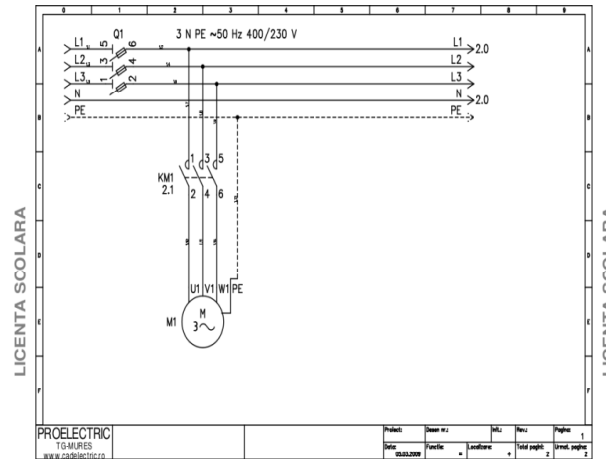
Starting of the induction machine

PRESENTATION OF THE PROJECTX-FINAL LEVEL 1.



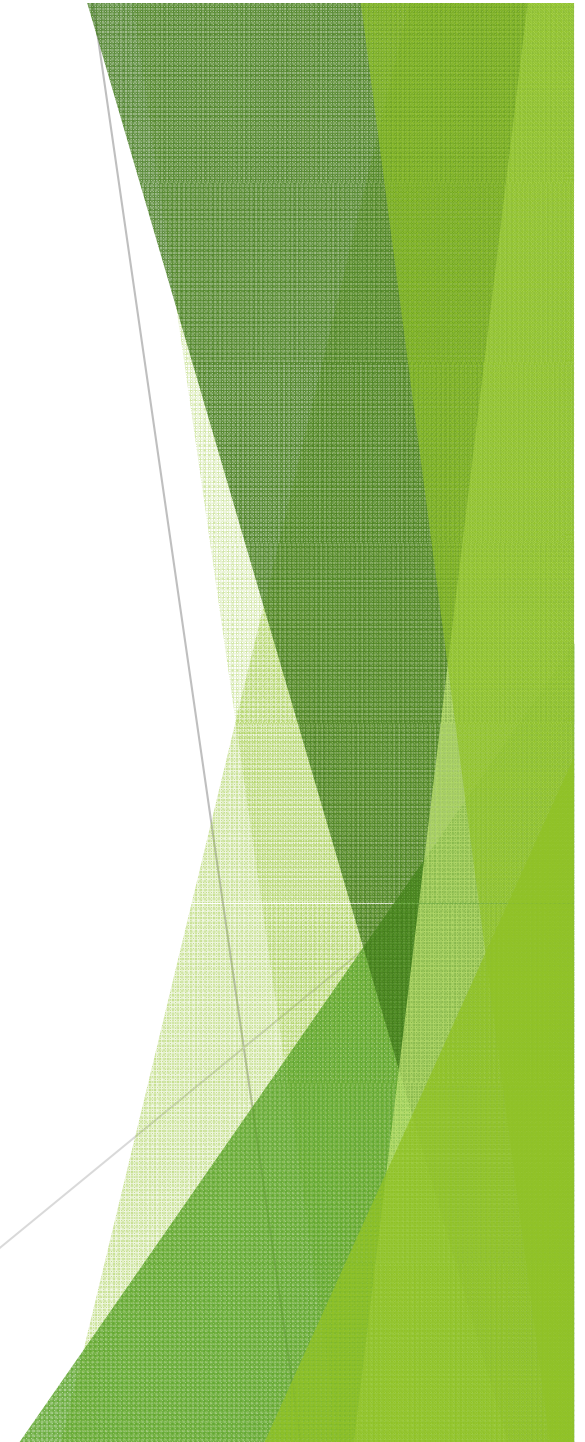
Learning Outcomes

- ▶ Analyse the electric schematic for starting an induction machine
- ▶ Identifying the symbols of the components of the schematic
- ▶ Analyse wired electric automations, identifying the different areas of their application and describing the types and characteristics of equipment and materials used in their construction



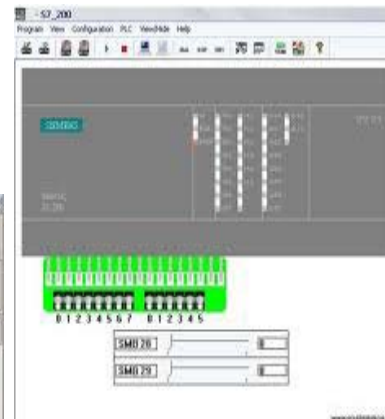
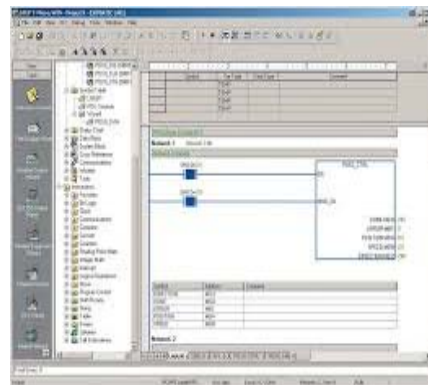
Learning Outcomes

- ▶ Perform electrical installations and electrical maintenance for industrial premises



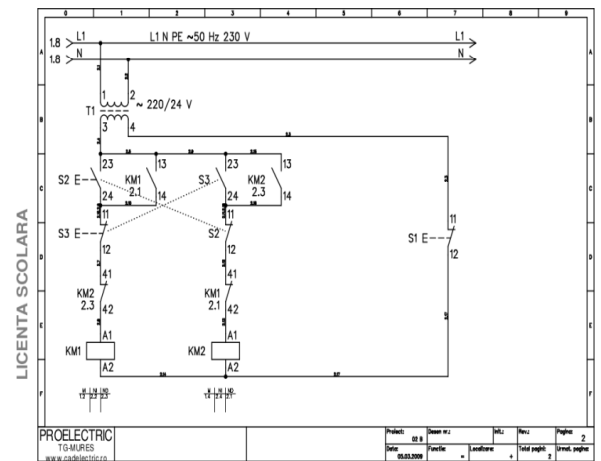
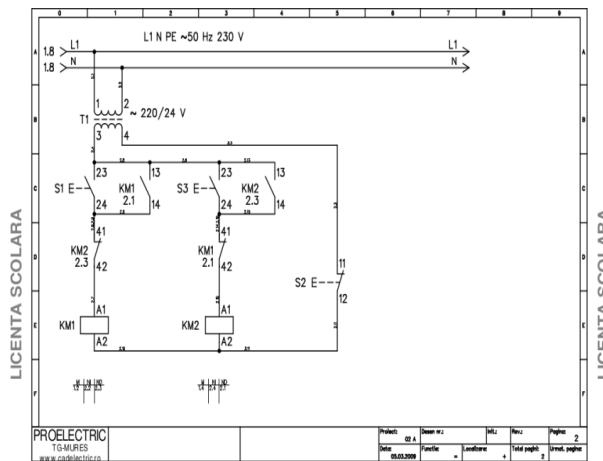
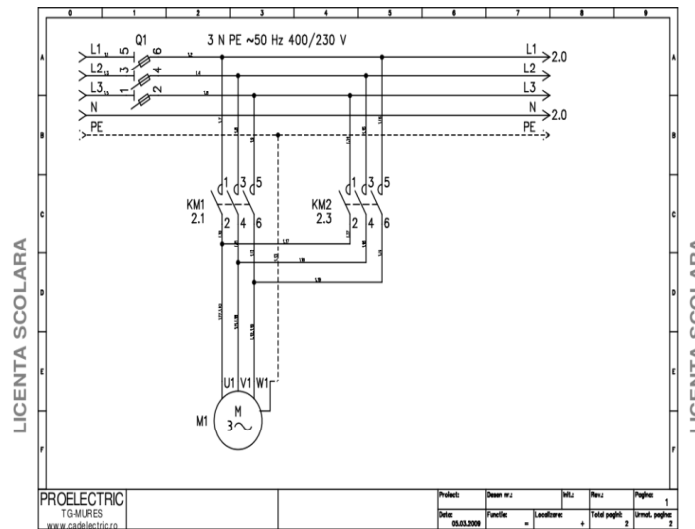
Learning Outcomes

- ▶ Install programmable automated systems
- ▶ Understanding the basis of PLC programming
- ▶ Write PLC program for sequential control systems



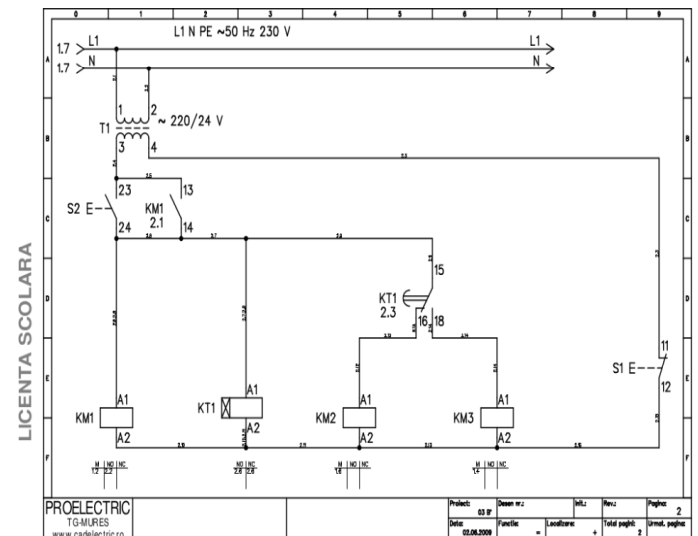
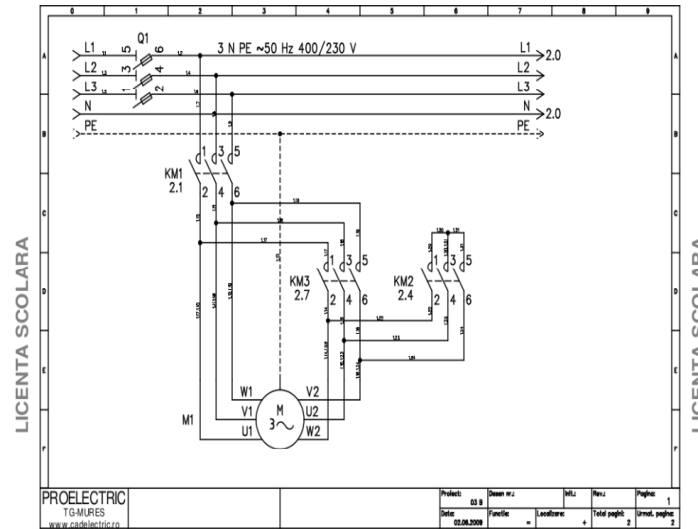
Brief description of the Practice

- ▶ The motor of one particular installation has to be started by direct connection to the industrial grid. After starting the motor has to be reversed.



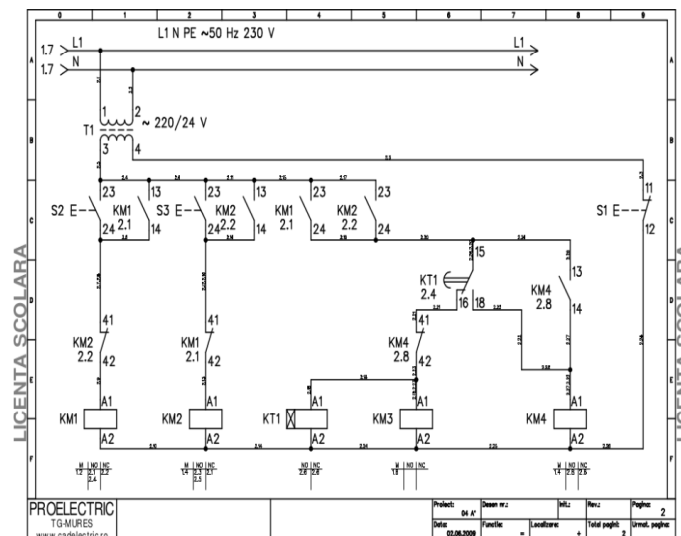
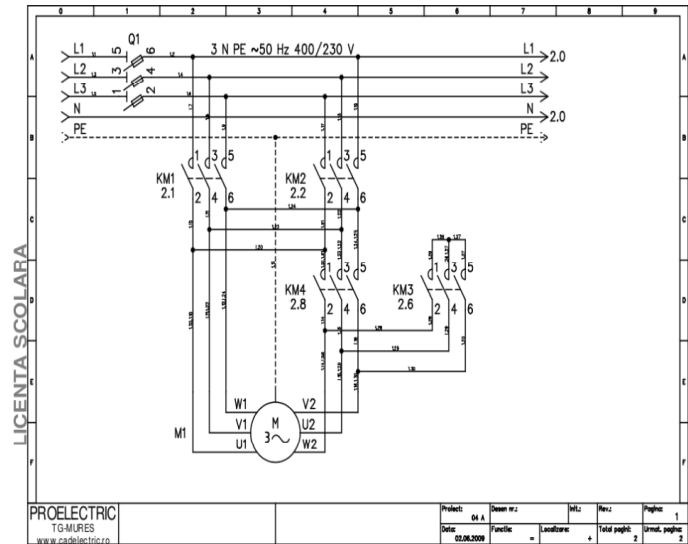
Brief description of the Practice

- ▶ The objective is to develop the cabled and programmable control schematic for starting the induction tri-phase motor



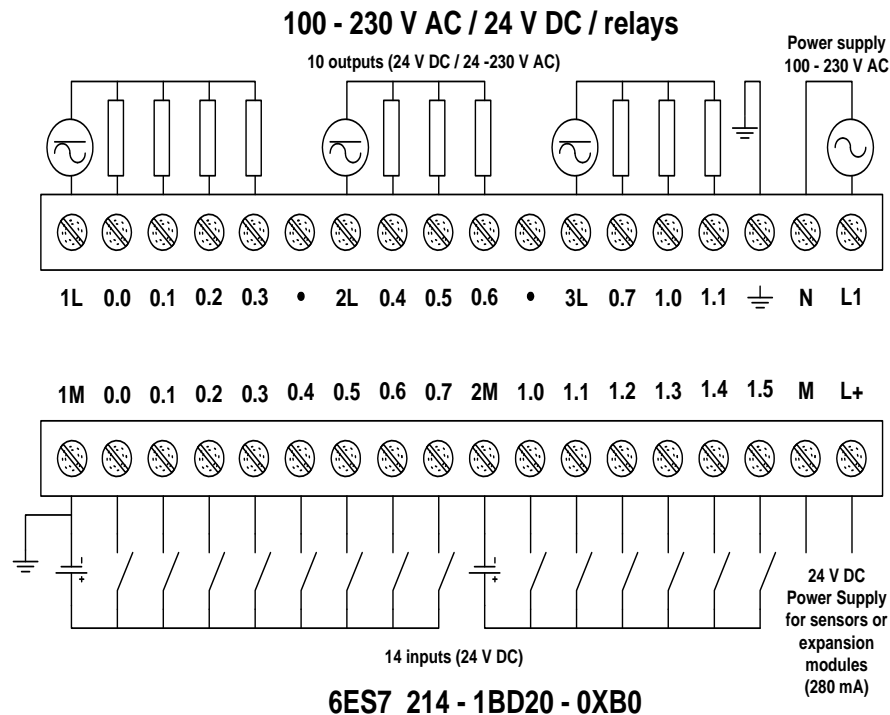
Brief description of the Practice

- ▶ The motor of a different installation has to be started by the method star-triangle. After starting, the motor has to be reversed.



Brief description of the Practice

- ▶ In a modern installation, the start of the induction motor has to be done by using a PLC



Steps or activities to be performed by the student

- ▶ Read the technical documentation
- ▶ Analyse the correctness of the schematic
- ▶ Start to make connections between the required electrical apparatus according the schematic - command part
- ▶ Check the correctness of each step of the implementation of the schematic - command part
- ▶ Start to make connections between the required electrical apparatus according the schematic - force part
- ▶ Check the correctness of each step of the implementation of the schematic - force part
- ▶ Connect the PLC in the schematic
 - ▶ Inputs
 - ▶ Outputs
- ▶ Check the correctness of the PLC connections
- ▶ Program PLC
- ▶ Check the correctness of the program
- ▶ Run the program with the command schematic on and the force schematic off
- ▶ Run the program with the command schematic on and the force schematic on
- ▶ Final documentation