LAB 3

Mapping CO, PO, Domain, K1: CO1, PO2

CO1: Execute and practice PLC programming for specific task.
PO2: Ability to acquire in depth technical competency in specific engineering discipline.

Learning Outcomes:

At the end of this experiment, students should be able to:

a) Design and practice TIMER in ladder diagram programming.
b) Develop a basic program for simple task given.
c) Practice right safety procedure.

Instruction

1. Design ladder diagram for flow chart 1, 2, 3 and 4.
2. Demonstrate the result to the instructor for verification.
3. Write down the result and the conclusion.
SELECT MAN MODE AND PUSH START BUTTON

YELLOW LIGHT ON

TIMER = 5 SEC?

NO

YES

GREEN LIGHT ON AND YELLOW LIGHT OFF

PUSH STOP BUTTON

GREEN LIGHT OFF

Ladder diagram by using TIMER and internal relay.
SELECT MAN MODE AND PUSH START BUTTON

YELLOW LIGHT ON

TIMER = 5 SEC?

NO

YES

GREEN LIGHT ON AND YELLOW LIGHT OFF

PUSH STOP BUTTON

GREEN LIGHT OFF

Ladder diagram by using TIMER and SET / RSET.
SELECT MAN MODE AND PUSH START BUTTON

YELLOW LIGHT ON

TIMER = 5 SEC?

NO

YES

GREEN LIGHT ON AND YELLOW LIGHT OFF

PUSH STOP BUTTON

GREEN LIGHT OFF

Ladder diagram by using TIMER and KEEP.
Flow chart 4

SELECT MAN MODE AND PUSH START BUTTON

YELLOW LIGHT ON

TIMER = 5 SEC?

NO

YES

GREEN LIGHT ON

PUSH STOP BUTTON

GREEN & YELLOW LIGHT OFF AND RED LIGHT ON

Ladder diagram using TIMER and KEEP.
Discussion

1. Give an example where you can apply TIMER instruction in real application?