# 3 Phase Induction Motor Control – Controller

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### Purpose:

This project provides a controller for managing two 3-phase induction motors using a keypad and LCD. It allows users to set operation times for both motors with a configurable interval gap and supports task resumption after power loss.



## **User Steps**

#### step-1



• set motor 1 time enter the time in minutes



- after entering numeric value
- press # to set and A to clear
- automatically navigates next



- set motor 2 time enter the time in minutes similar to motor 1
- after entering numeric value
- press # to set and A to clear
- press B to previous option & press C to next (automatically navigates to next no need to press manually)

#### step-3



- set gap (two motors gap one motor will start with on delay with chosen time)
- after entering numeric value
- press # to set and A to clear
- press B to previous option & press c to next (automatically navigates to next no need to press manually)

#### step 4



- cycle repeat has choice of (1-5)
- after entering numeric value
- press # to set and A to clear
- press D to start the motor

else, press B to previous option & press c to next (automatically navigates to next no need to press manually)

#### process execution-1



- motor 1 on
- motor 2 off in initial condition
- status running



• on the top it displays number of desired cycles remaining out of total cycles and the timer running beside it

process execution-2

```
Cycle: 1/19c03:50
M1: ON##----
M2: ON----
Status: Running...
```

- motor 1 on
- motor 2 on (on delay)
- status running
- on the top it displays number of desired cycles remaining out of total cycles and the timer running beside it

process execution-3

```
Cycle: 1/19c00:55
M1: OF########
M2: ON######---
Status: Running...
```

- motor 1 off
- motor 2 on (on delay)
- status running
- on the top it displays number of desired cycles remaining out of total cycles and the timer running beside it

#### process execution-4



• All cycles done message after executing the task

#### **Exceptional Cases:**

- Motor1, Motor2 limited minimum 2 to Maximum 60 numerical only.
- Gap Interval and cycles to be Minimum 1 to Maximum 5 Only.



- Press A to clear the Input and re-enter the Value.
- Press \* to Emergency stop, Stops all the current and next actions.



• Press A to Resume and B to skip and reconfigure.