‘Motor Control Program

‘Last modified 01/01/24

‘[VARIABLES]

Os = 1, 20, 1 ‘Velocity changing output

TARGET\_ANGLE = 360

PERIOD = 10.0

A = 100

D = 60

‘[PROGRAMS]

PG 1

LB G1

‘ Main Program Loop

R1 = 0

WHILE R1 <= TARGET\_ANGLE

‘ Calculate velocity based on sine wave

R2 = 2 \* PI \* R1 / PERIOD

R3 = A \* SIN(R2)

‘ Adjust velocity for smooth start and stop

R4 = 1 - ABS(COS(R2))

R3 = R3 \* R4

‘ Output the calculated velocity to the motor

Os = R3

‘ Print or log the information

PRINT("Current Angle: " + R1 + ", Velocity: " + R3)

‘ Update angle for the next iteration

R1 = R1 + R3 \* (1 / 60) ‘ Assuming 60 Hz update rate

‘ Sleep for a short duration

H 0.1

WEND

‘ Reset the motor velocity to zero at the end

Os = 0

PRINT("Motor stopped.")

E