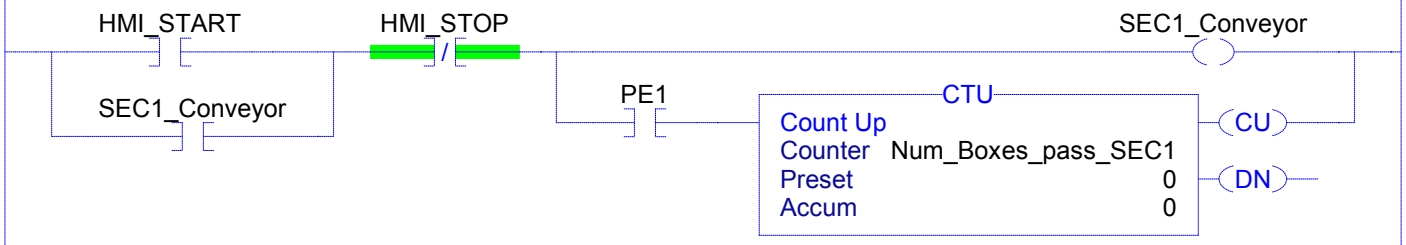
Final Exam
Due 5/17/16

SEC1 conveyor motor run and keep track of boxes pass by SEC1.

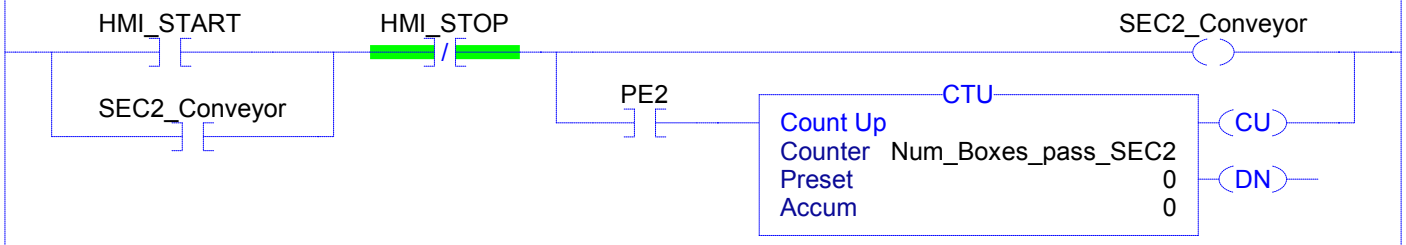
0



SEC2 conveyor motor run and keep track of boxes pass by SEC2

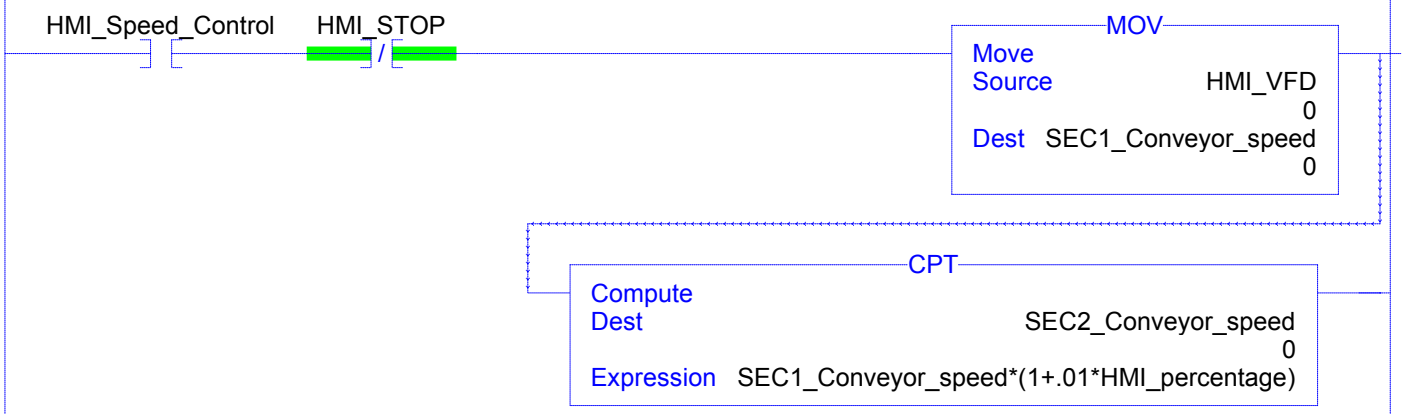
.

1



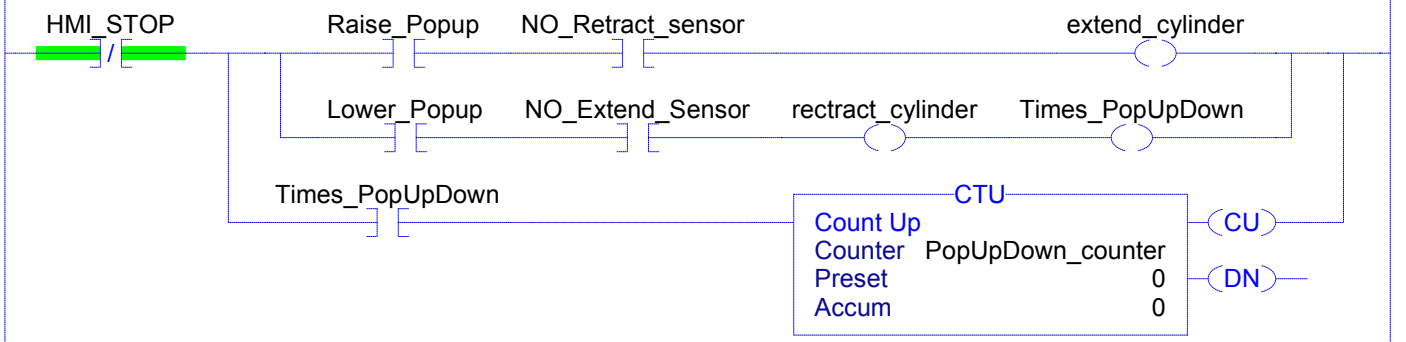
SEC 1 and SEC 2 calculate and set motor speeds

2



Popup stop raise and lower. PopUpDown_counter keep track of times it raise and lower.

3



Bar Code Scanner trigger bit and read glue pattern number

4

PE1 HMI_STOP Barcode_trigger_read_glue_num

FFL
FIFO Load
Source Glue_pattern_no
FIFO Glue_no_FIFO
Control FIFO_Array
Length 5
Position 0
EN DN EM

Set robot glue command bit and write robot glue patter number.
When finished, robot will send signal and FInish_section2 switch will be TRUE.

5

PE2 HMI_STOP

FFU
FIFO Unload
FIFO Gule_no_FIFU
Dest Write_glue_button_no
Control FIFO_Array
Length 5
Position 0
EU DN EM

Raise_Popup

Start_Glue

Finish_section2 Lower_Popup

Glue temperature control

6

HMI_STOP

PID
Proportional Integral Derivative
PID Temp_Control ...
Process Variable PV
Tieback 0
Control Variable CV
PID Master Loop 0
Inhold Bit 0
Inhold Value 0
Setpoint 175.0
Process Variable 0.0
Output % 0.0

MOV
Move
Source HMI_control_temp
0
Dest Temp_Control.SP
175.0

SEC2 Jam Fault Detection

7

PE2 HMI_STOP

TON
Timer On Delay
Timer PE2_Block
Preset 0
Accum 0
EN
DN

EQU
Equal
Source A PE2_Block.ACC
0
Source B 10000

Fault_Detection

Totabl Boxes glued

8

HMI_STOP Finish_section2

CTU
Count Up
Counter Total_Boxes_Glued
Preset 0
Accum 0
CU
DN

MOV
Move
Source Total_Boxes_Glued.ACC
0
Dest HMI_Display
0

System reset to initial state (i.e. after a fault condition)

9

Fault_Detection HMI_STOP (L) extend_cylinder (U) rectract_cylinder (U)

PE2_Block (RES) PopUpDown_counter (RES) Num_Boxes_pass_SEC1 (RES)

Num_Boxes_pass_SEC2 (RES) Total_Boxes_Glued (RES)

VFD1_stop (L) VFD2_stop (L)

FLL
Fill File
Source 0
Dest Glue_pattern_no
Length FIFO_Array.LEN

MOV
Move
Source 0
Dest HMI_Display
0

HMI_RESET VFD1_stop (U) VFD2_stop (U) HMI_STOP (U)

(End)