

Main_Program [OB1]

Main_Program Properties

General

Name	Main_Program	Number	1	Type	OB
Language	LAD	Numbering	Manual		

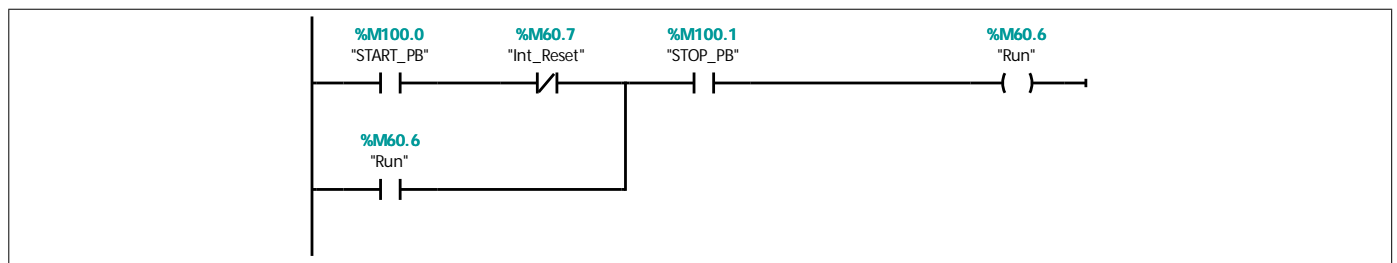
Information

Title	"Main Program Sweep (Cycle)"	Author		Comment	Example 9.3 Engine Inverter with shift register-based sequence. Copyright (c) 2013 Dogwood Valley Press, LLC
Family		Version	0.1	User-defined ID	

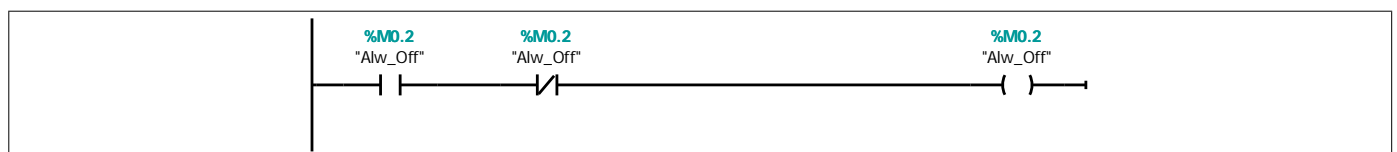
Name	Data type	Default value
▼ Temp		
OB1_EV_CLASS	Byte	
OB1_SCAN_1	Byte	
OB1_PRIORITY	Byte	
OB1_OB_NUMBR	Byte	
OB1_RESERVED_1	Byte	
OB1_RESERVED_2	Byte	
OB1_PREV_CYCLE	Int	
OB1_MIN_CYCLE	Int	
OB1_MAX_CYCLE	Int	
OB1_DATE_TIME	Date_And_Time	
Constant		

Network 1: Start/stop/pause.

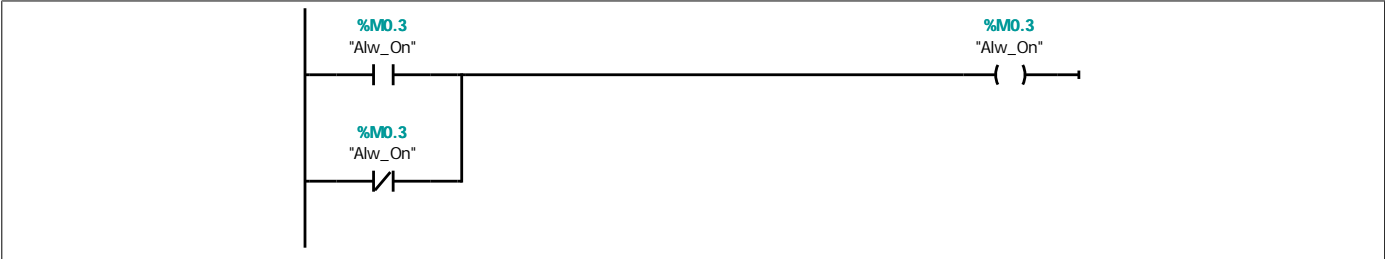
Start prevented if reset in progress.



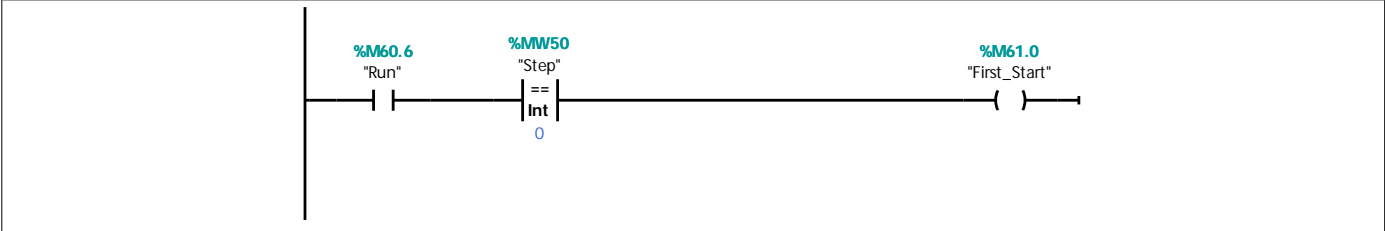
Network 2: Always Off Logic



Network 3: Always On Logic

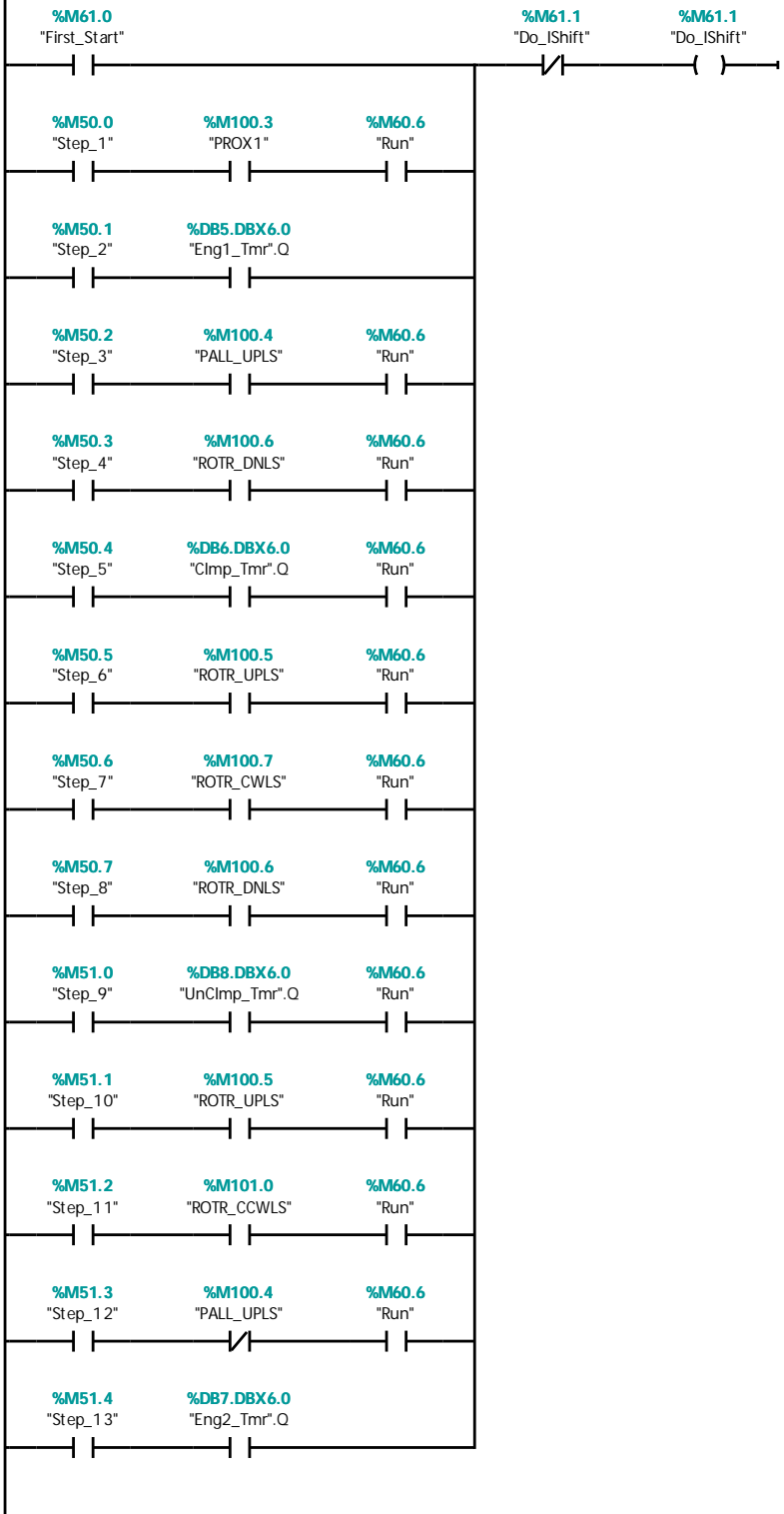


Network 4: First Start - run and no step-in-progress bit set

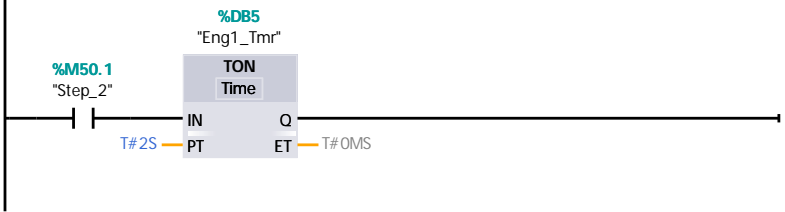


Network 5: All transition conditions.

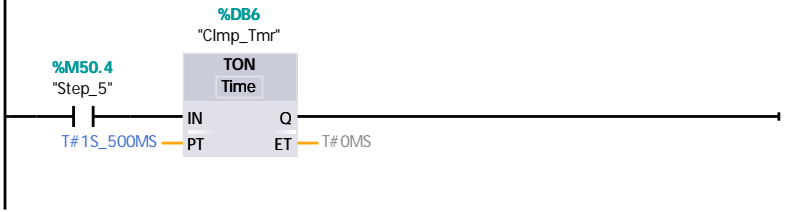
Any one causes shift.



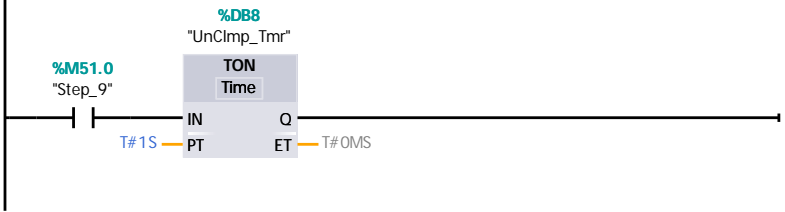
Network 6: Timers for transitions



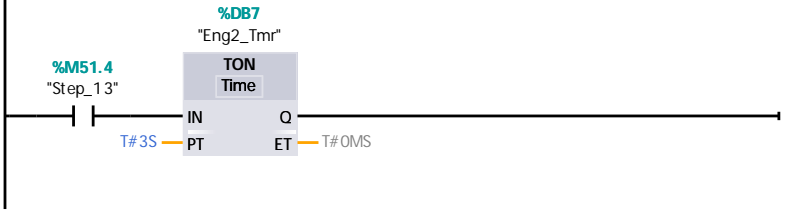
Network 7:



Network 8:



Network 9:

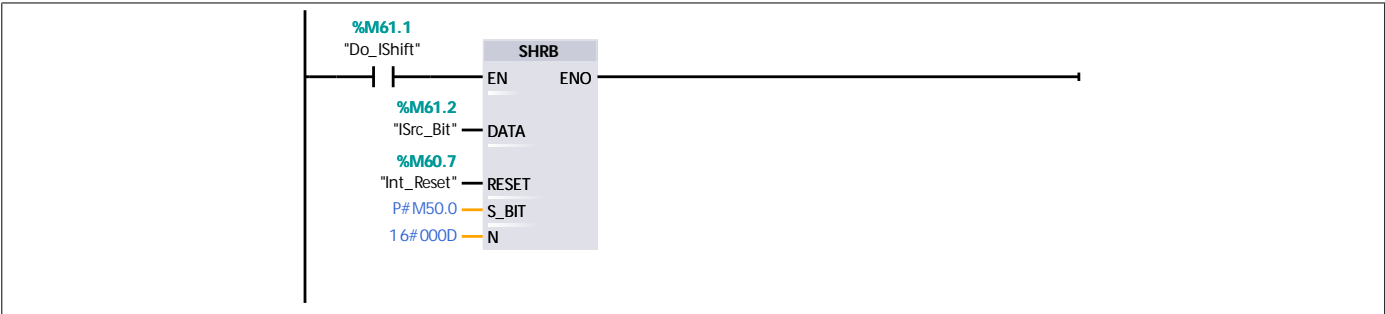


Network 10: Bit shifted into register.

First start and last step are only "1" shifted in

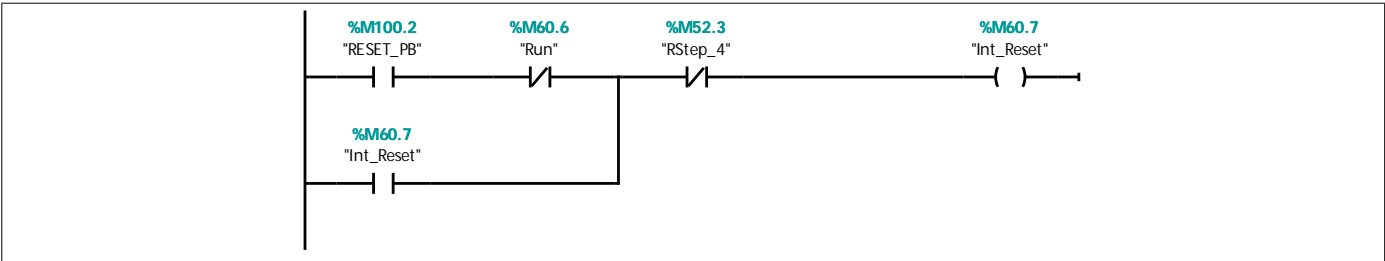


Network 11: Shift Register



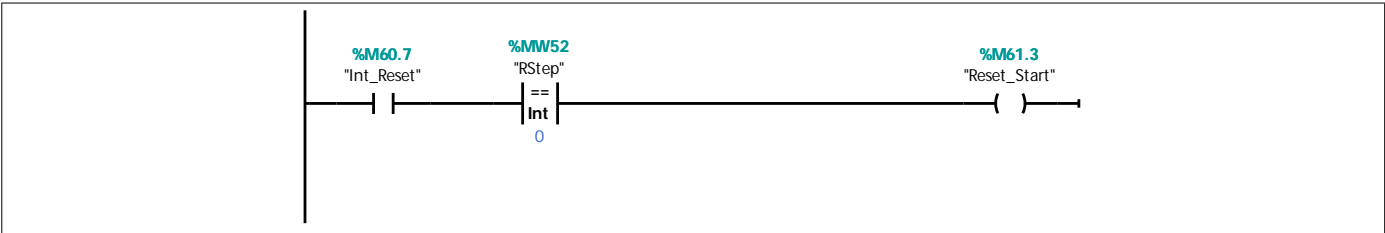
Network 12: Start/stop for reset operation.

Reset pb starts, reset step 4 stops it.



Network 13: Reset start

Reset start - in reset and not step-in-progress bits set



Network 14: All reset transition conditions.

Any one causes shift.

%M51.4
"Step_13"

%M110.1
"ENG2_RET"



Network 19: Rotating mechanism up/down control.

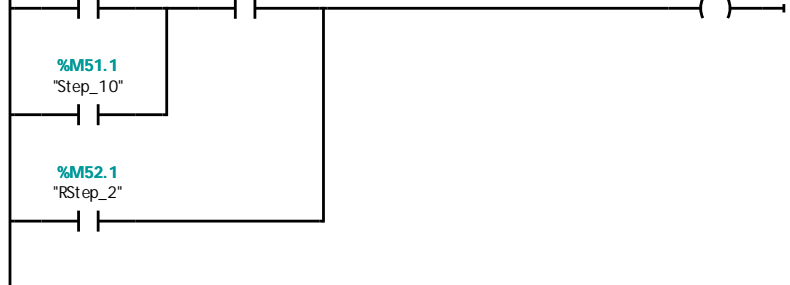
%M50.5
"Step_6"

%M60.6
"Run"

%M110.2
"ROTR_UP"

%M51.1
"Step_10"

%M52.1
"RStep_2"



Network 20:

%M50.3
"Step_4"

%M60.6
"Run"

%M110.3
"ROTR_DOWN"

%M50.7
"Step_8"



Network 21: Rotation Control

%M50.6
"Step_7"

%M60.6
"Run"

%M110.4
"ROTAT_CW"



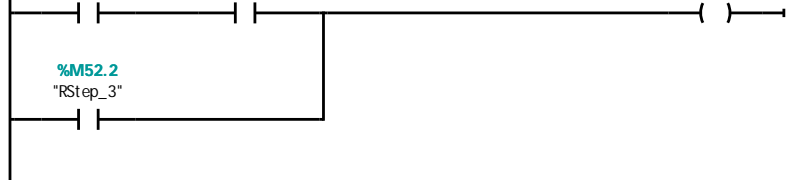
Network 22:

%M51.2
"Step_11"

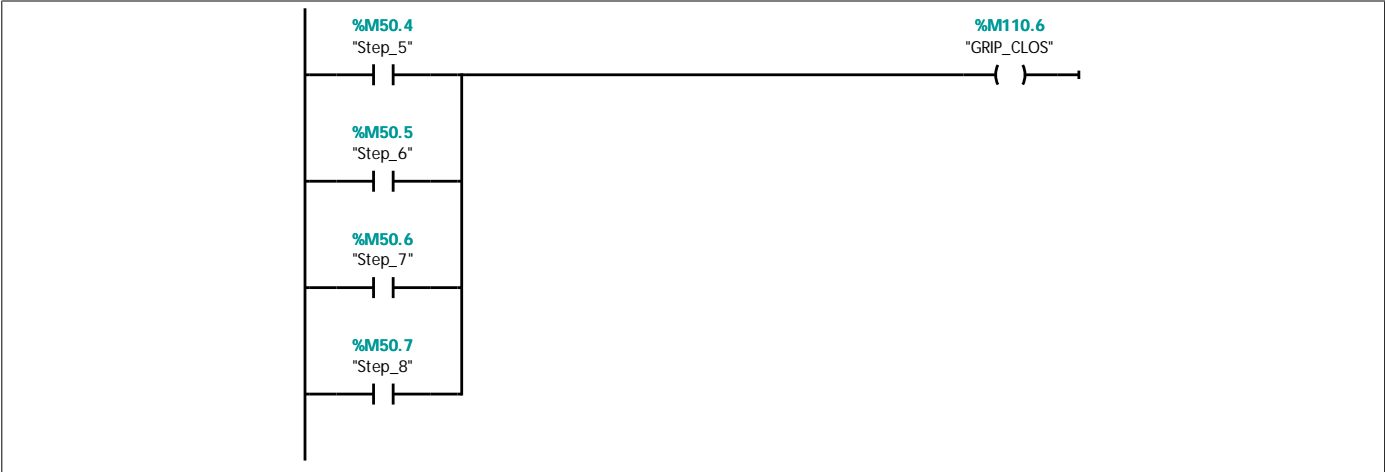
%M60.6
"Run"

%M110.5
"ROTAT_CCW"

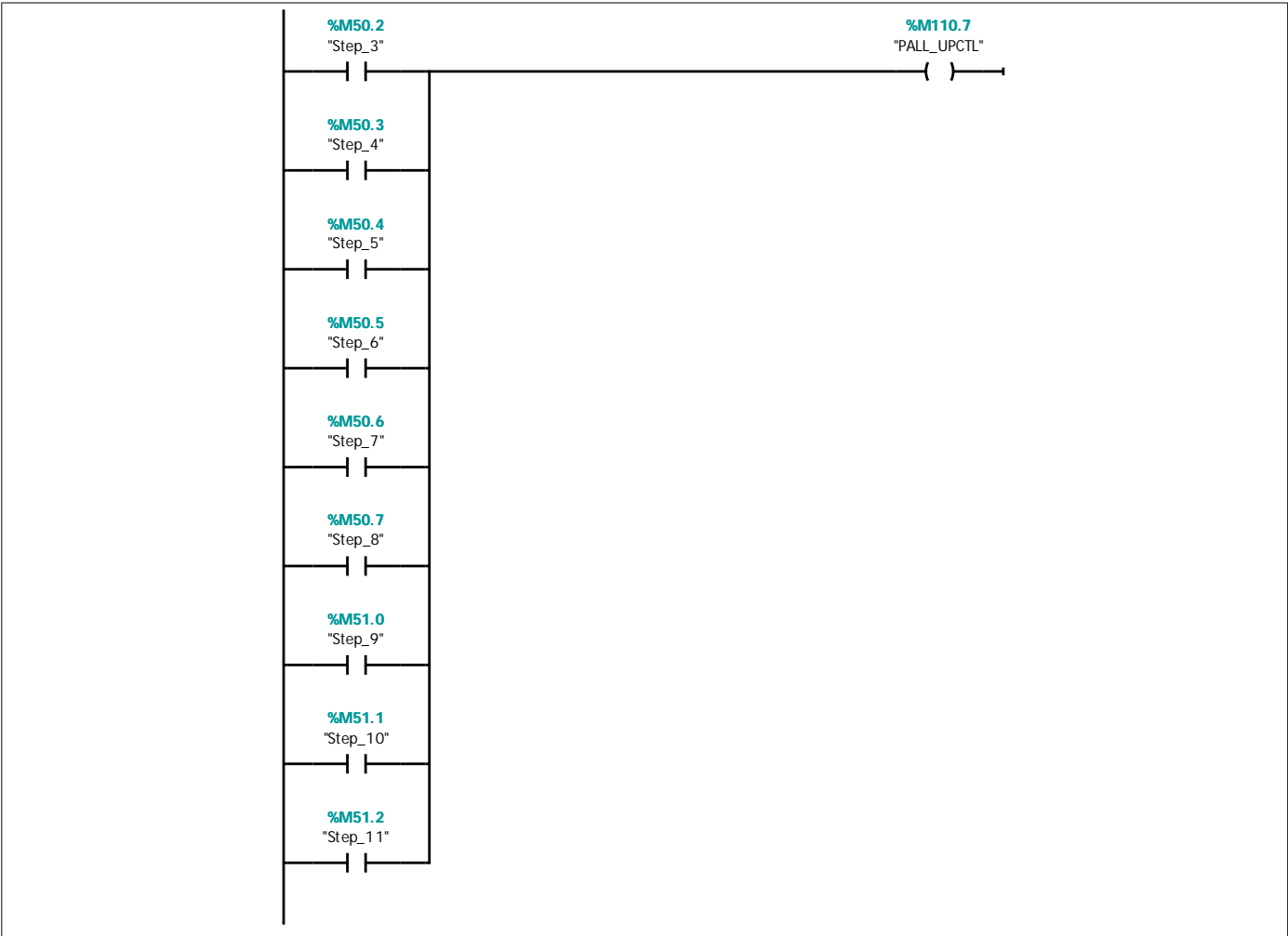
%M52.2
"RStep_3"



Network 23: Gripper Control



Network 24: Pallet Up Control



Network 25: Call simulation



Simulation [FB10]

Simulation Properties

General

Name	Simulation	Number	10	Type	FB
Language	LAD	Numbering	Manual		

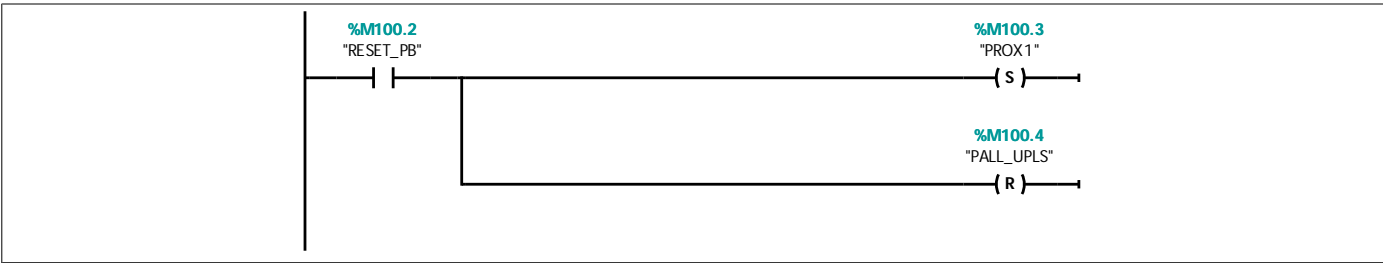
Information

Title	Simulation logic	Author		Comment	
Family		Version	0.1	User-defined ID	

Name	Data type	Default value
Input		
Output		
InOut		
▼ Static		
Tie_Tmr1	TON	
Tie_Tmr2	TON	
Tie_Tmr3	TON	
Tie_Tmr4	TON	
Tie_Tmr5	TON	
Tie_Tmr6	TON	
Tie_Tmr7	TON	
Tie_Tmr8	TON	
Temp		
Constant		

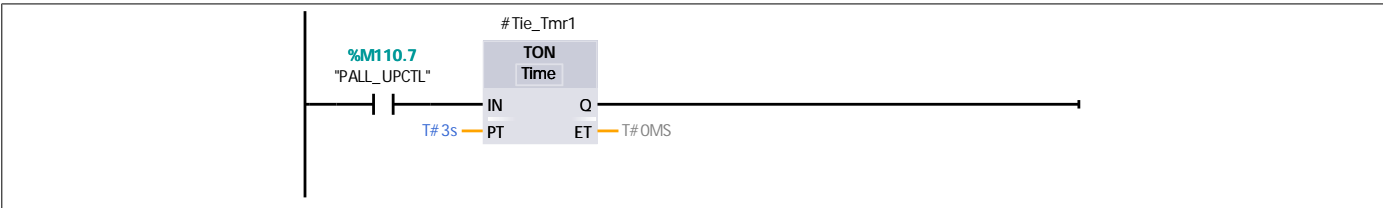
Network 1:

When reset, forget there is anything at hook 1.

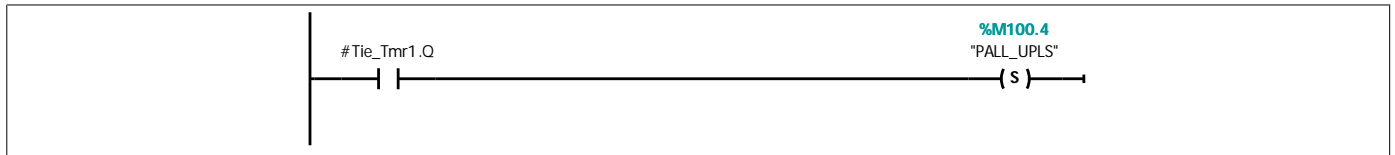


Network 2:

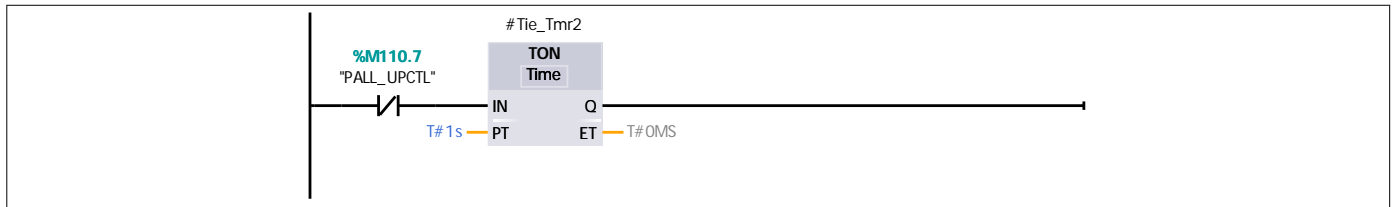
Simulate pallet up indication



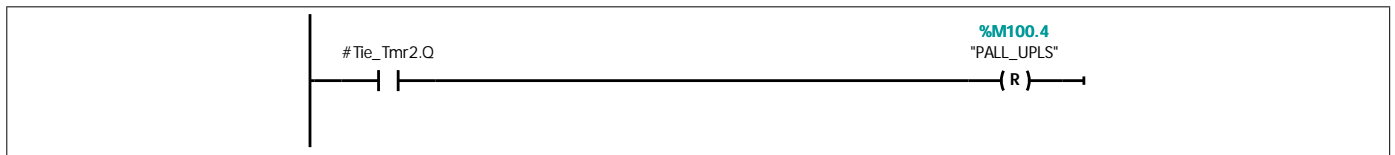
Network 3:



Network 4:

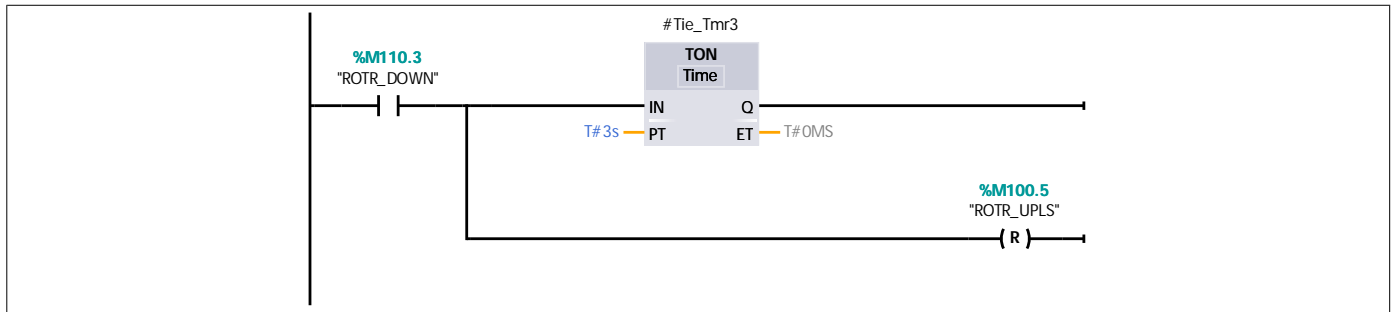


Network 5:

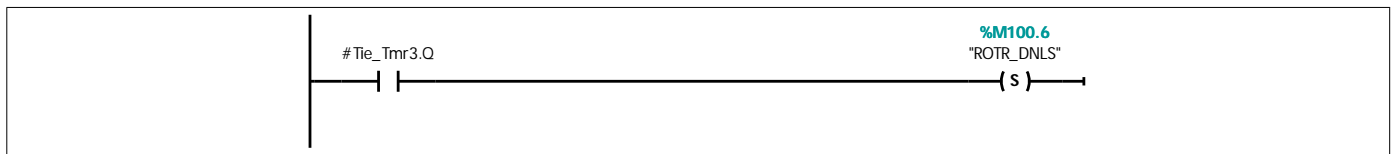


Network 6:

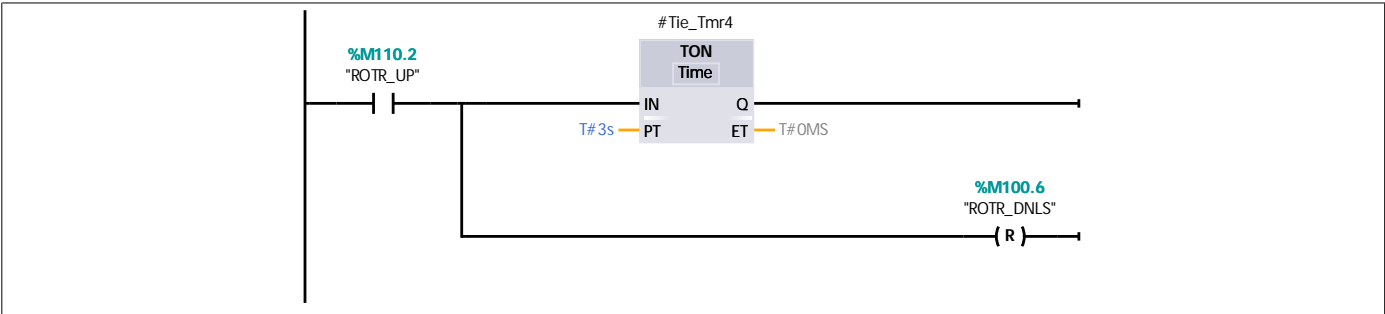
Simulate rotator up/down control. When moved up, the down ls is immediately unlatched off. After 3 secs, the up ls is latched on.
When moved down, the up ls is immediately unlatched off. After 3 secs, the down ls is latched on.



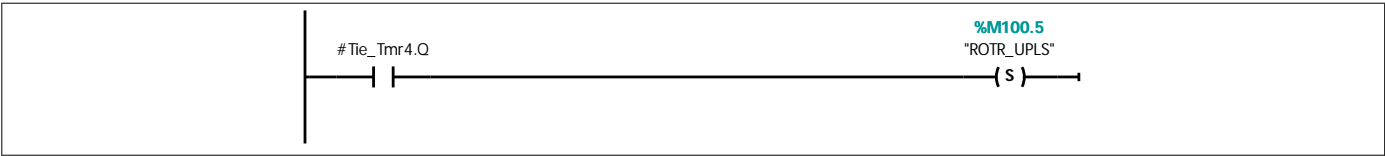
Network 7:



Network 8:

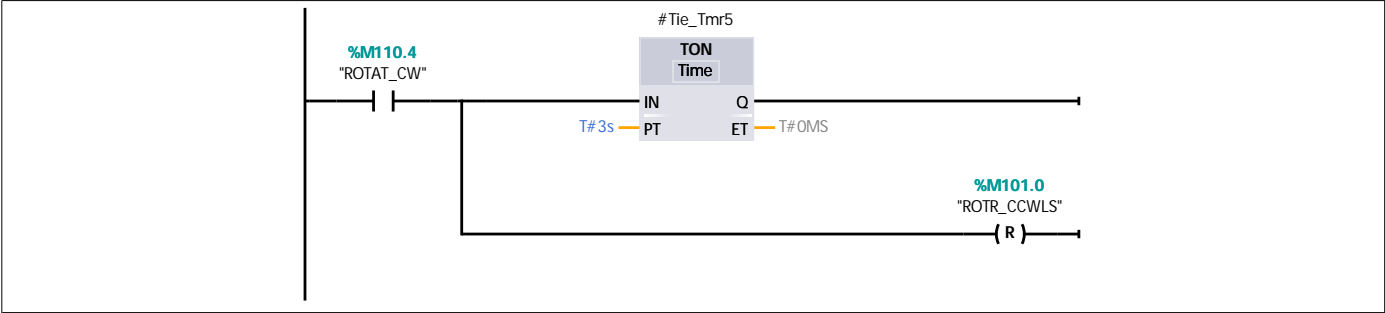


Network 9:



Network 10:

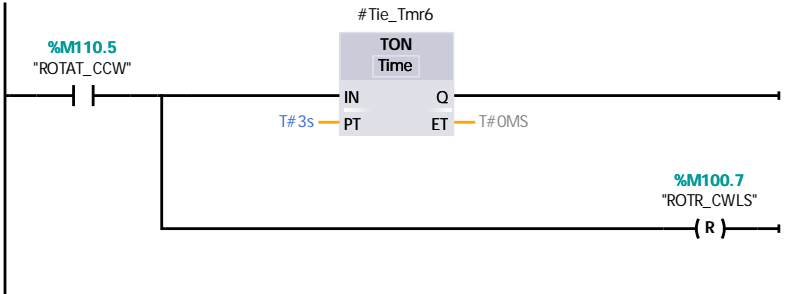
Simulate rotator rotating control. When rotated CW, the CCW Is is immediately unlatched off. After 3 secs, the CW Is is latched on. When rotated CCW, the CW Is is immediately unlatched off. After 3 secs, the CCW Is is latched on.



Network 11:



Network 12:

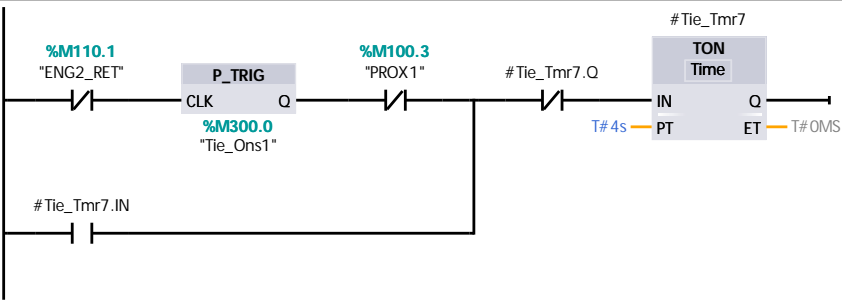


Network 13:

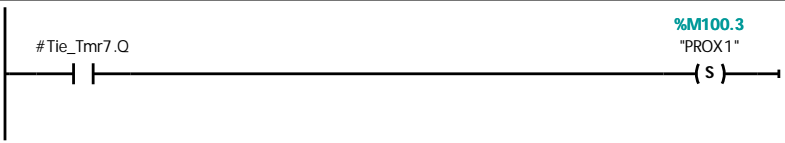


Network 14:

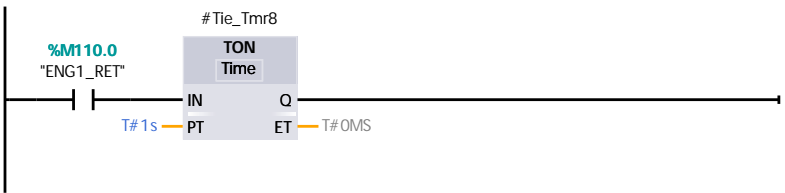
Simulate Pallet Prox
Latch it on 4 seconds after one has left the station.
Latch it off 1 second after new one retained.



Network 15:



Network 16:



Network 17:

