

## Main [OB1]

### Main Properties

#### General

Name	Main	Number	1	Type	OB
Language	LAD	Numbering	Manual		

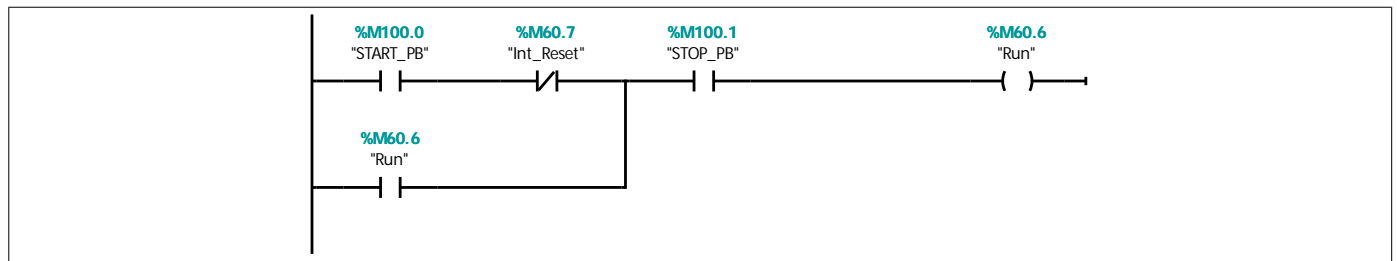
#### Information

Title	"Main Program Sweep (Cycle)"	Author		Comment	Example 9.3 Engine Inverter with shift register-based sequence.  Copyright (c) 2022 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		

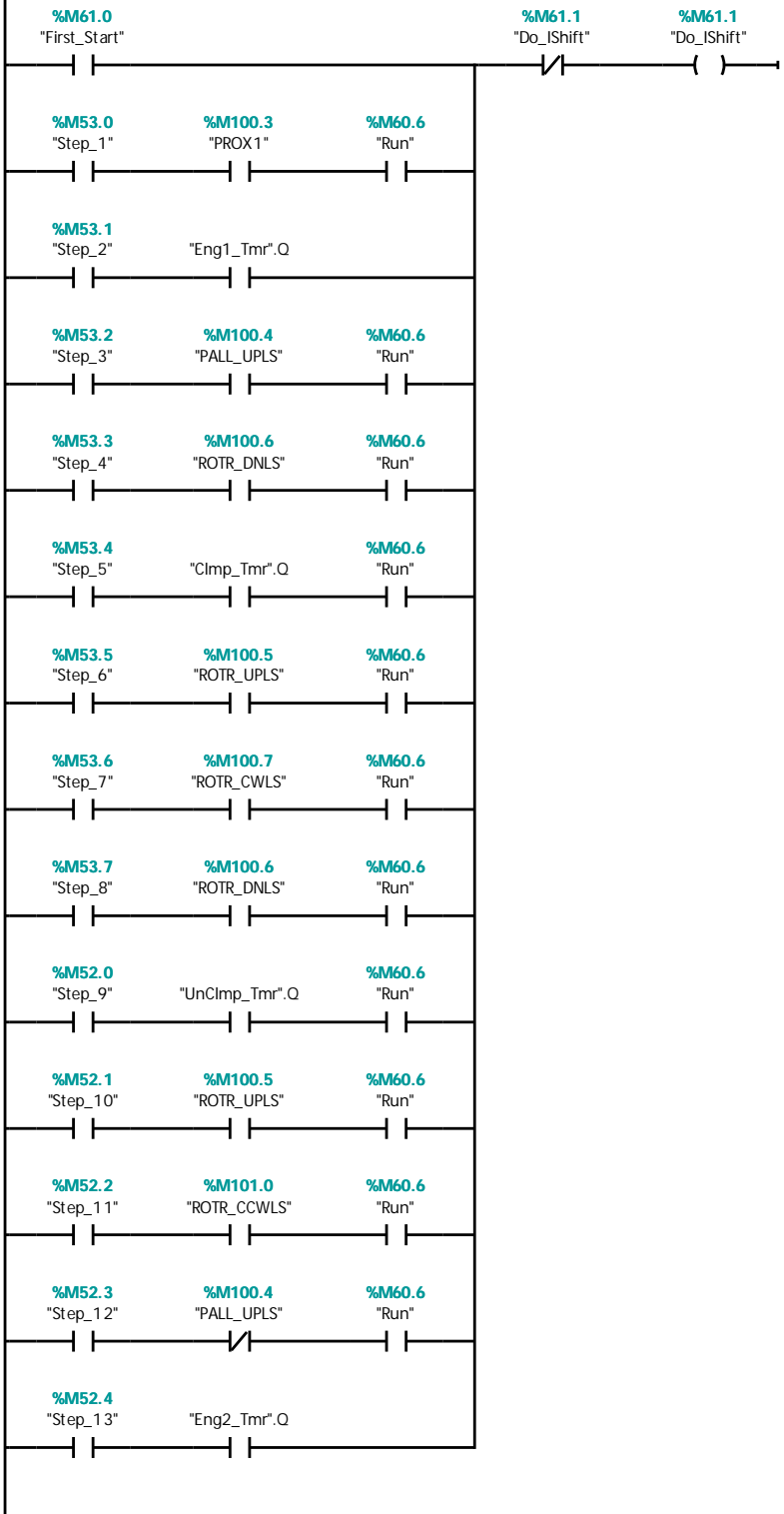
### Network 1: Start/stop/pause.

Start prevented if reset in progress.

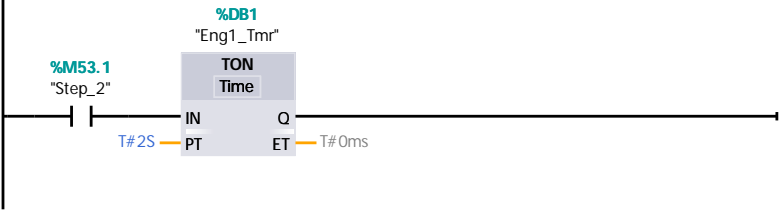


### Network 2: First Start - run and no step-in-progress bit set

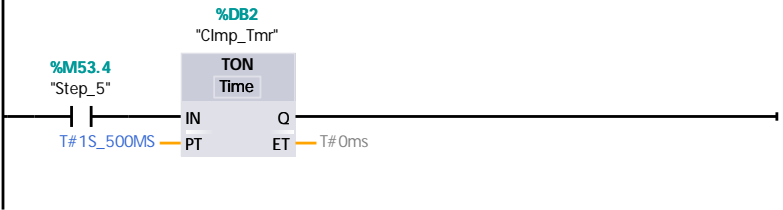
Totally Integrated Automation Portal		
<div><div></div><div><div><div>%M60.6 "Run"</div><div>%MD50 "IStep"</div><div>%M61.0 "First_Start"</div></div><div><div>==</div><div>Dint</div><div>0</div></div></div></div>		
<p><b>Network 3: All transition conditions.</b></p> <p>Any one causes shift.</p>		



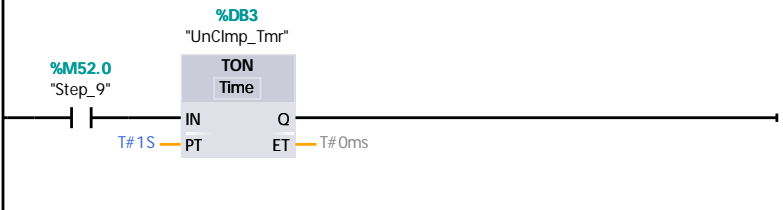
Network 4: Timers for transitions



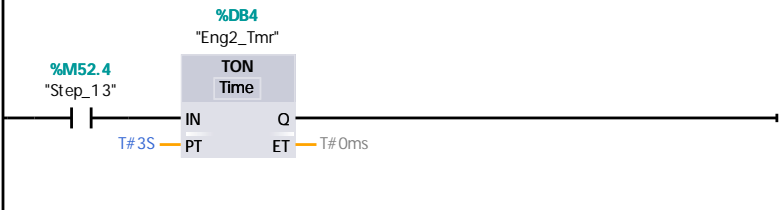
Network 5:



Network 6:



Network 7:

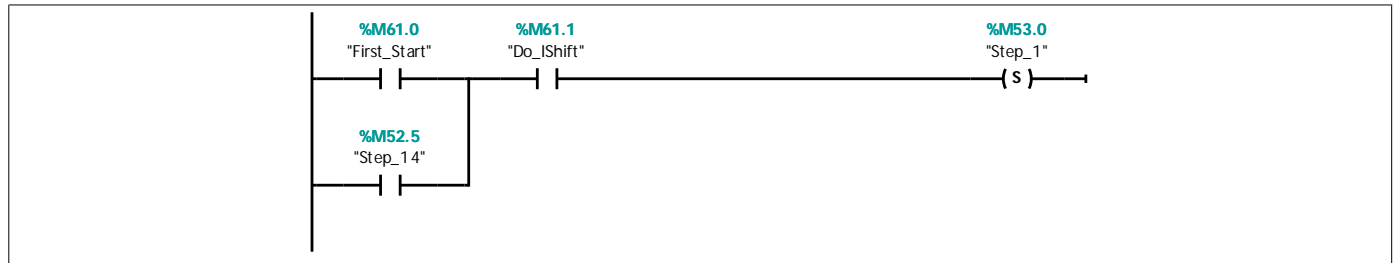


Network 8: Shift Register



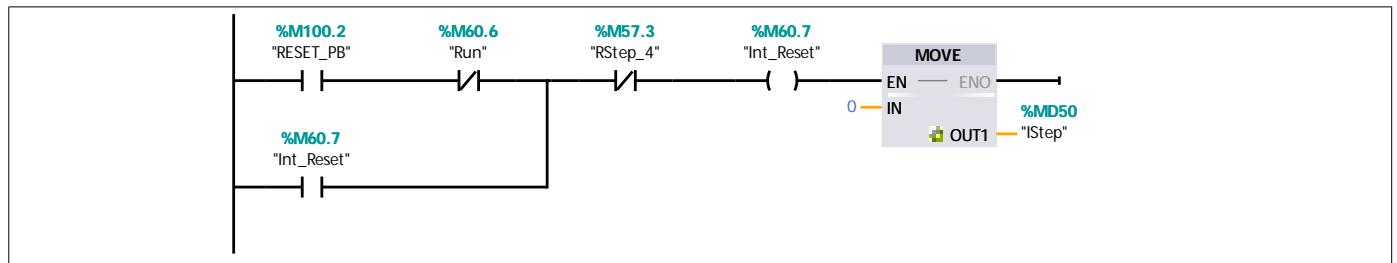
### Network 9: Step\_1 logic.

First start and bit shifted out of last step are only "1" shifted in



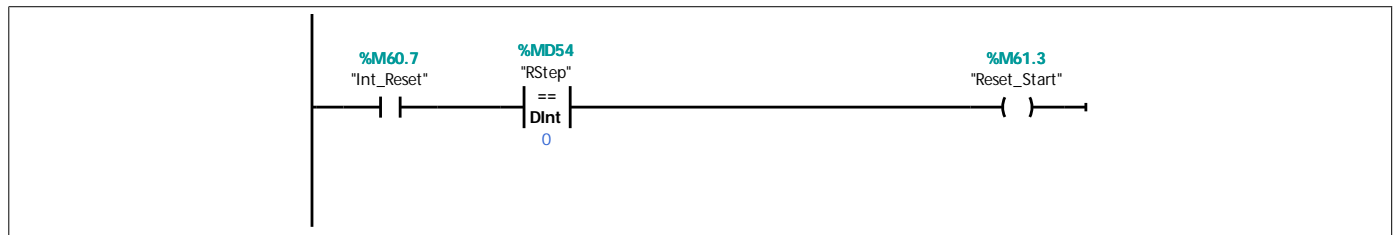
### Network 10: Start/stop for reset operation.

Reset pb starts, reset step 4 stops it. Also reset normal operation steps.



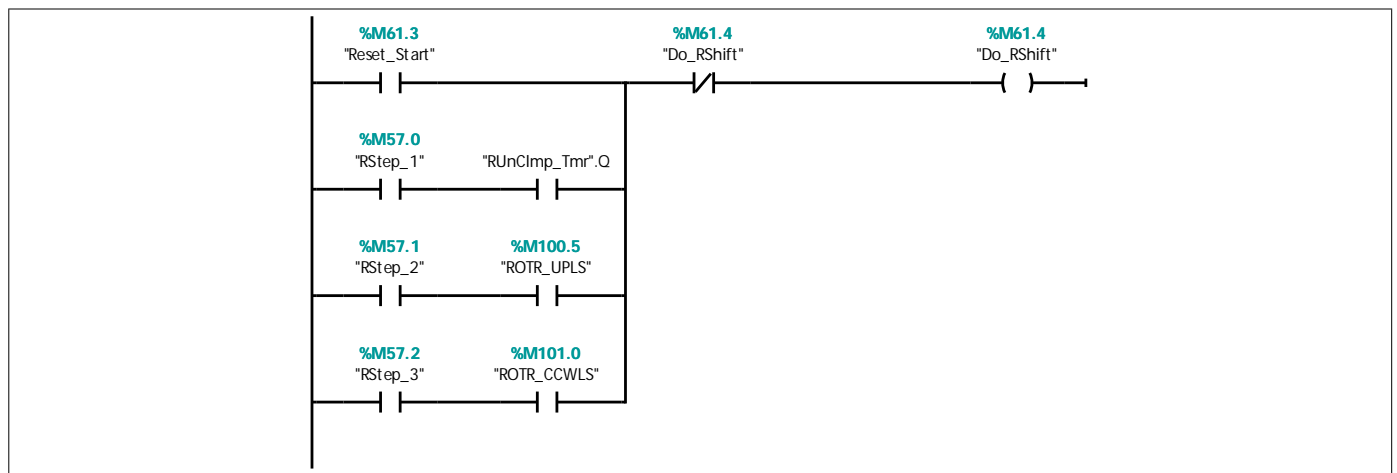
### Network 11: Reset start

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



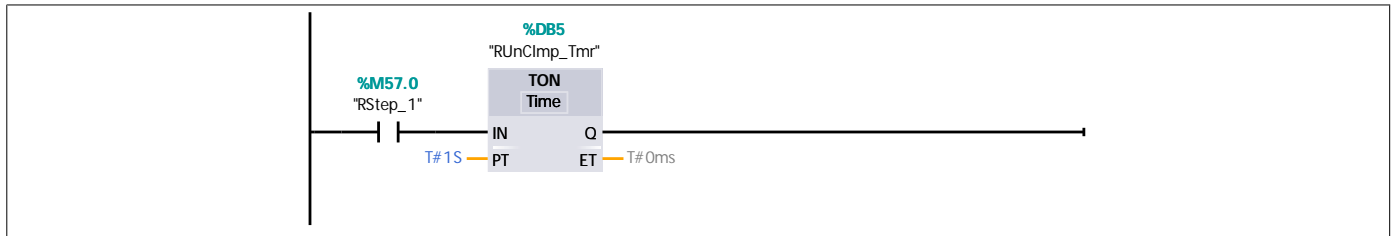
### Network 12: All reset transition conditions.

Any one causes shift.



### Network 13: Reset unclamp timer

X

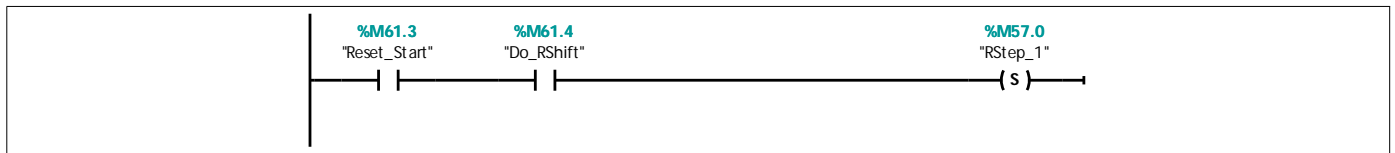


### Network 14: Reset shift register.

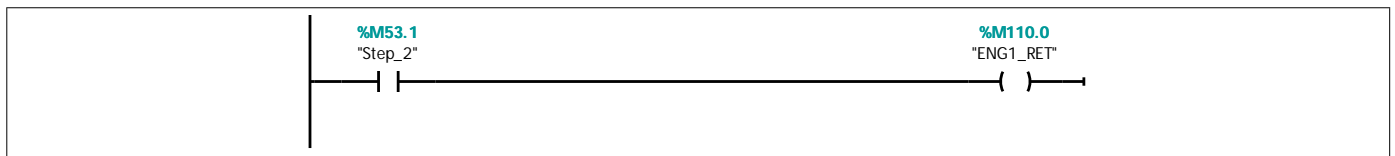
Only Reset\_Start shifts a bit in.



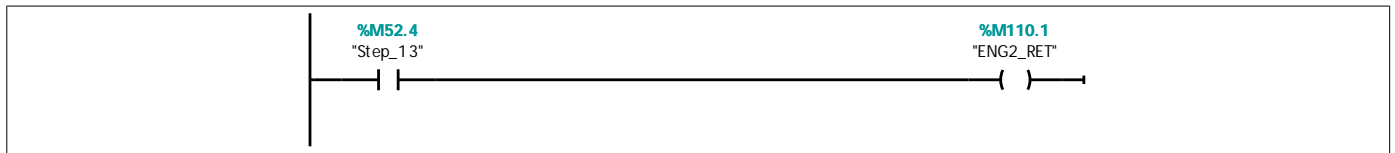
### Network 15:



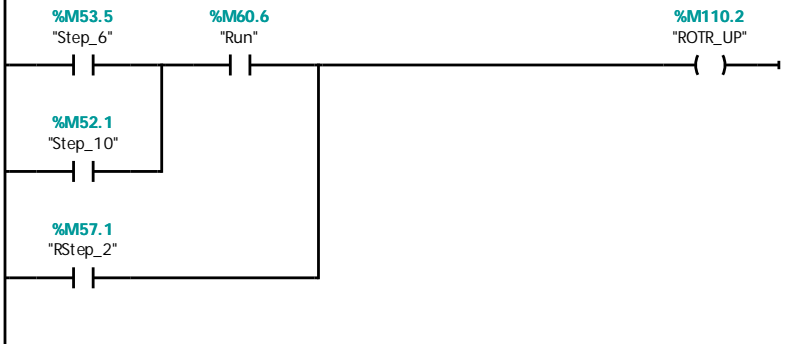
### Network 16: Engaging hooks control



### Network 17:



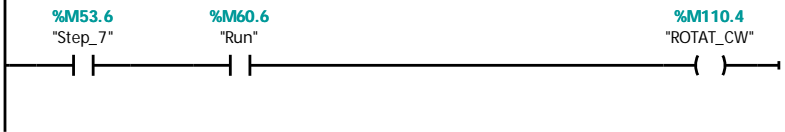
### Network 18: Rotating mechanism up/down control.



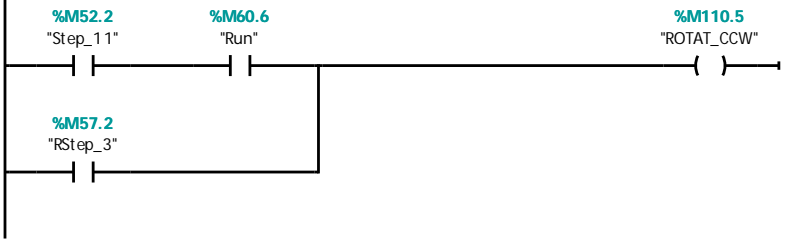
Network 19:



Network 20: Rotation Control



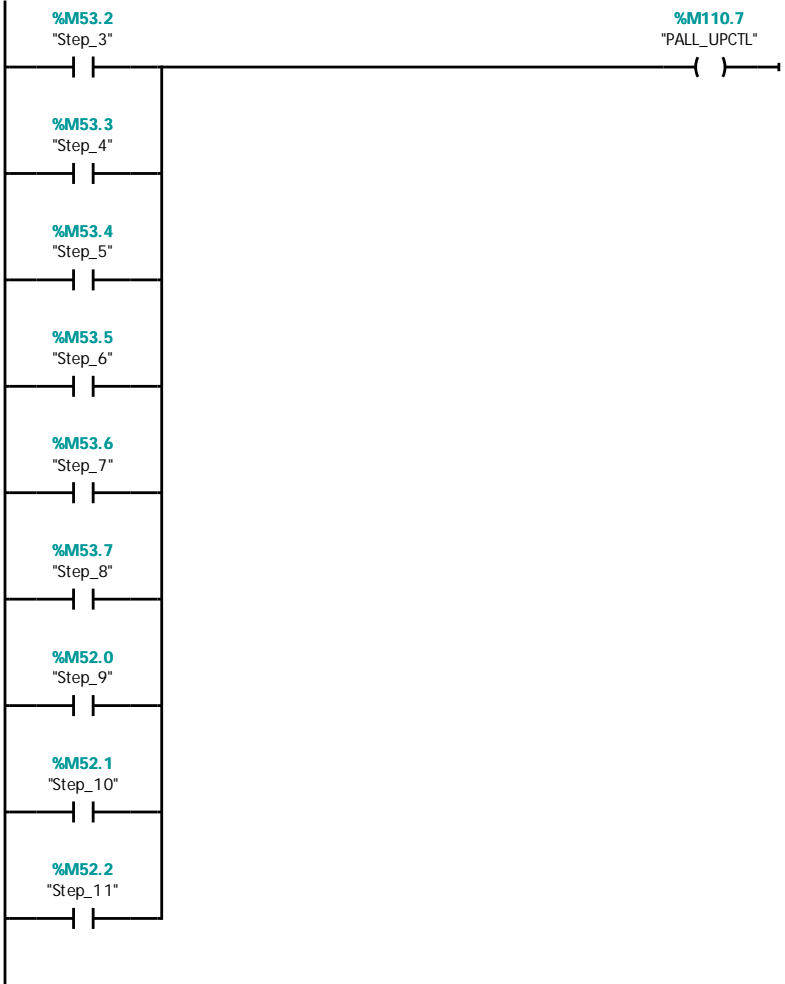
Network 21:



Network 22: Gripper Control



Network 23: Pallet Up Control



Network 24: Call simulation



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<div><div></div><div><div><div>%DB10</div><div>"Simulation_DB"</div></div><div><div>%FB10</div><div>"Simulation"</div></div></div><div><div>EN</div><div>ENO</div></div></div>		

## Simulation [FB10]

## Simulation Properties

## General

Name	Simulation	Number	10	Type	FB
Language	LAD	Numbering	Manual		

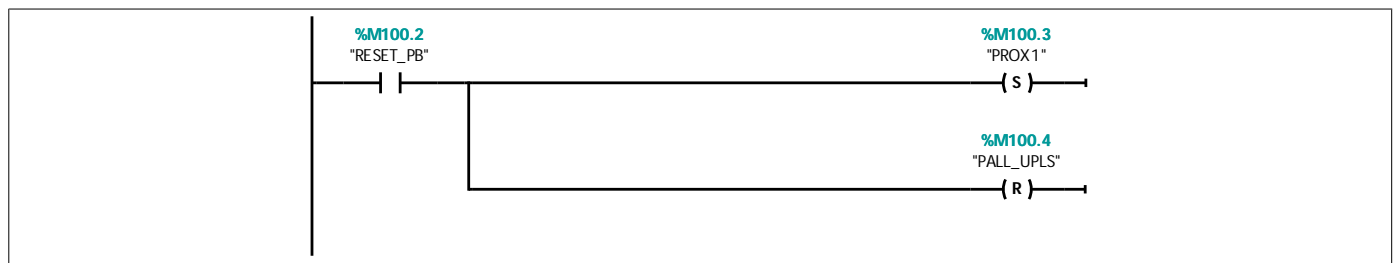
## Information

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

Name	Data type	Default value
Input		
Output		
InOut		
▼ Static		
Sim_Tmr1	TON_TIME	
Sim_Tmr2	TON_TIME	
Sim_Tmr3	TON_TIME	
Sim_Tmr4	TON_TIME	
Sim_Tmr5	TON_TIME	
Sim_Tmr6	TON_TIME	
Sim_Tmr7	TON_TIME	
Sim_Tmr8	TON_TIME	
Sim_Ons1	Bool	false
Sim_Tmr7_Q	Bool	false
Temp		
Constant		

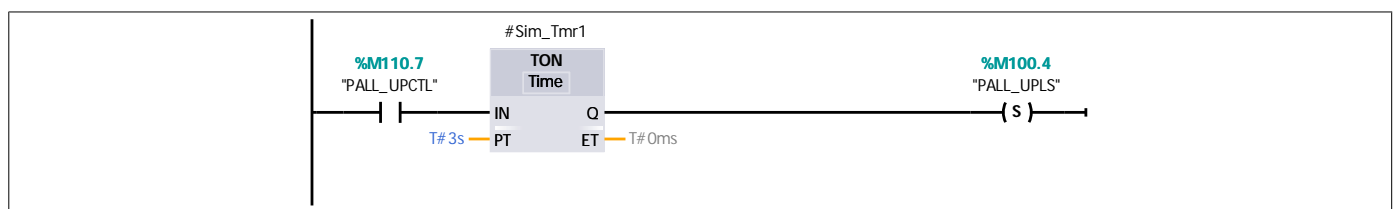
## Network 1: Reset initializes

When reset, forget there is anything at hook 1.

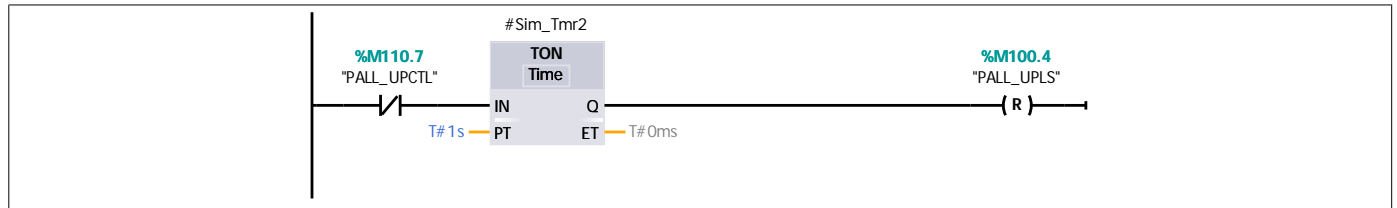


## Network 2: Pallet up

Simulate pallet up indication

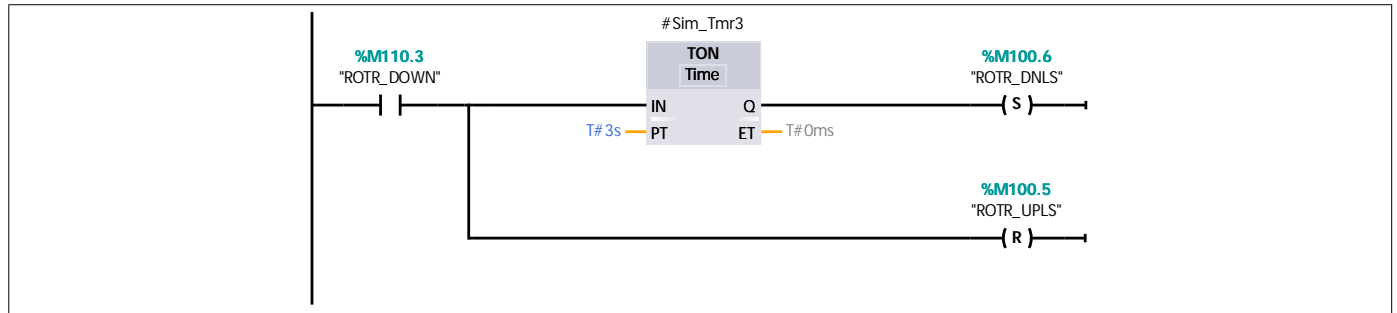


### Network 3:

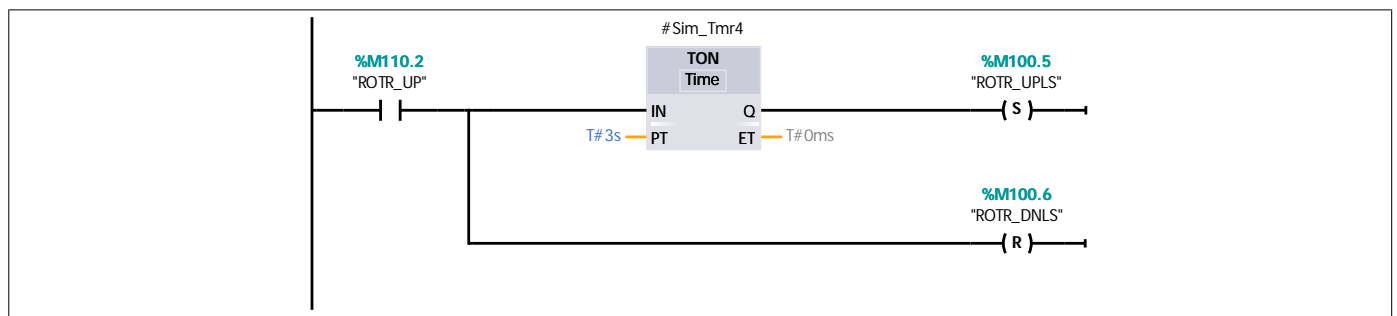


### Network 4: Rotator up/down limit switches

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.

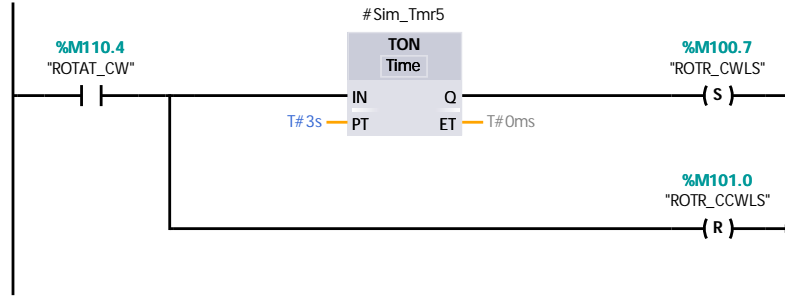


### Network 5:

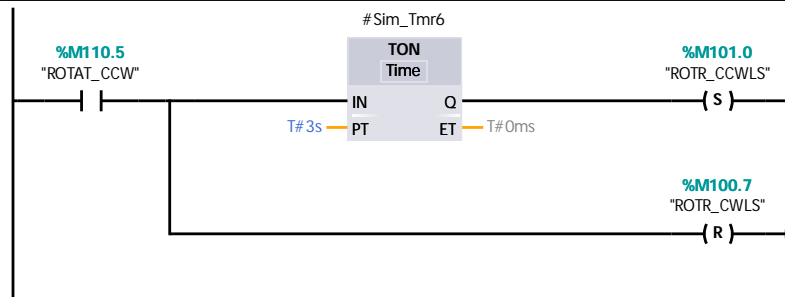


### Network 6: Rotator clockwise and counterclockwise limit switches

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



### Network 7:

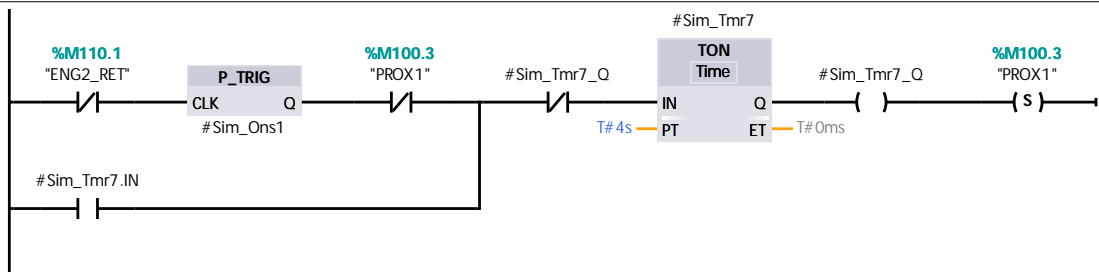


### Network 8:

Simulate Pallet Prox

Latch it on 4 seconds after one has left the station.

Latch it off 1 second after new one retained.



### Network 9:

