

## Main [OB1]

## Main Properties

## General

Name	Main	Number	1	Type	OB
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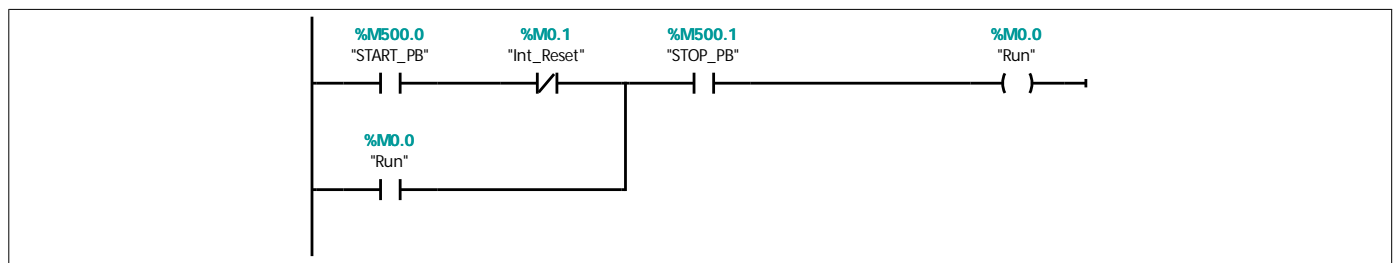
Language	LAD	Numbering	Manual
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## Information

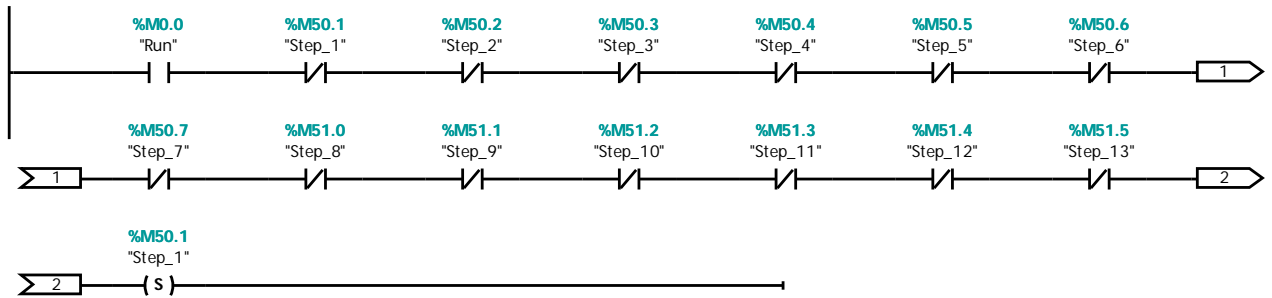
Title	"Main Program Sweep (Cycle)"	Author		Comment	Example 6.4 - Engine Inverter  Copyright (c) 2022 Dogwood Valley Press, LLC
Family		Version	0.1	User-defined ID	

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	
Temp1	Bool	
Temp2	Bool	
Constant		

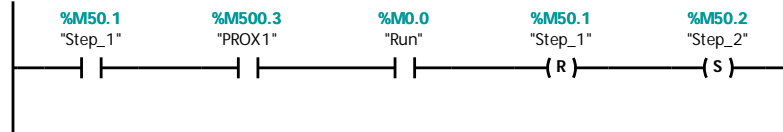
## Network 1: Overall start/stop/pause



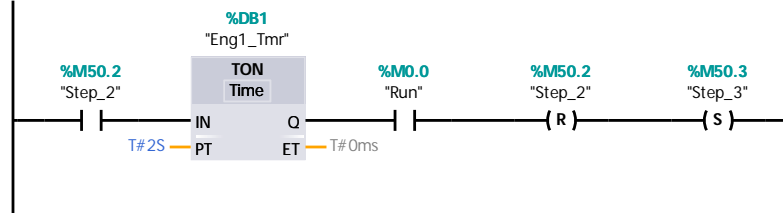
## Network 2: Generate transition out of initial step



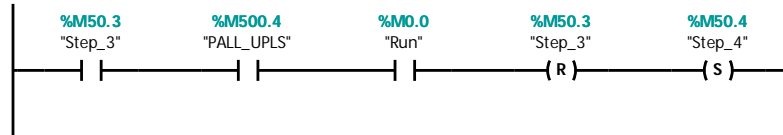
### Network 3: Step 1 - Wait for pallet.



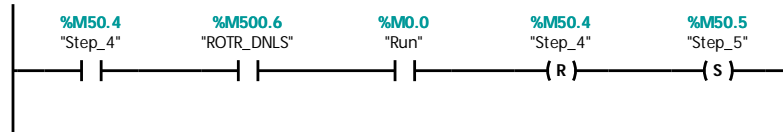
### Network 4: Step 2 - Move to hook 2



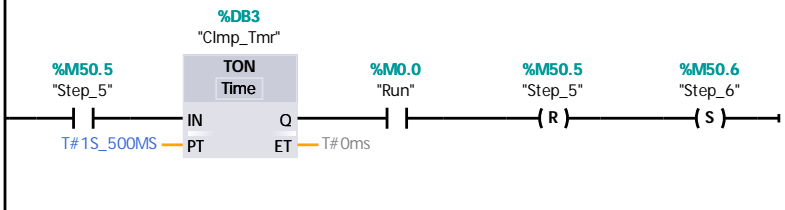
### Network 5: Step 3 - Raise pallet



### Network 6: Step 4 - Lower rotator



### Network 7: Step 5 - Clamp engine



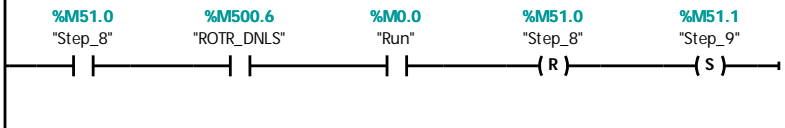
Network 8: Step 6 - Raise rotator



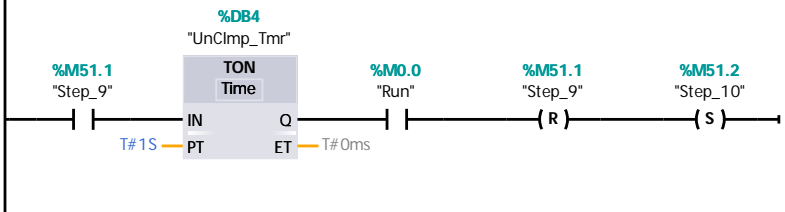
Network 9: Step 7 - Rotate clockwise



Network 10: Step 8 - Lower rotator



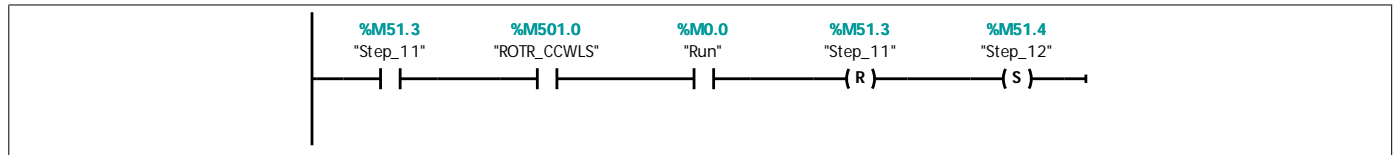
Network 11: Step 9 - Unclamp



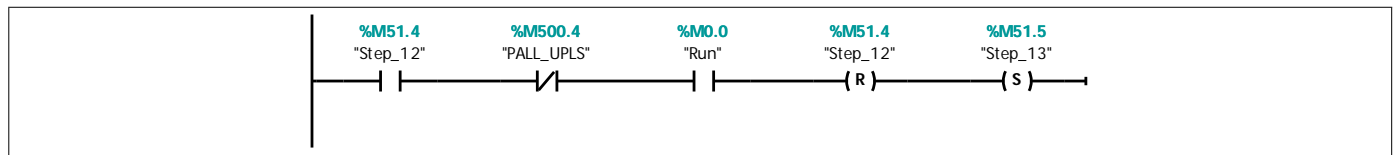
Network 12: Step 10 - Raise rotator



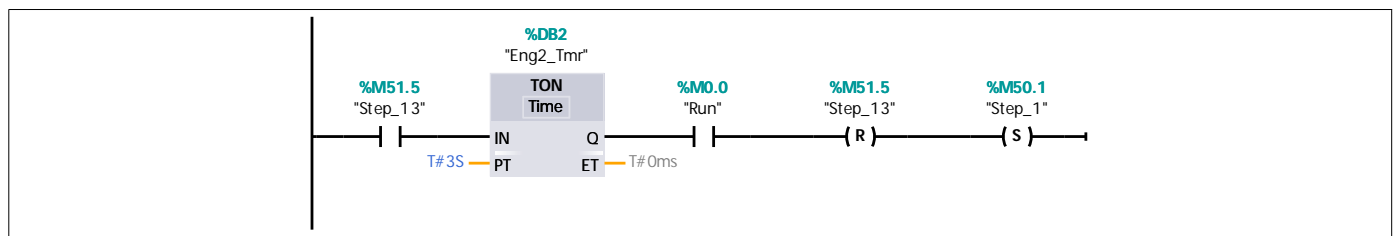
### Network 13: Step 11 - Rotate CCW



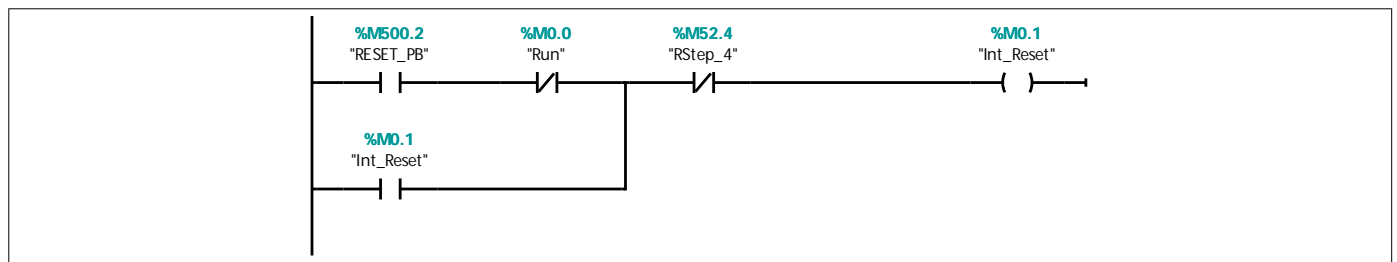
### Network 14: Step 12 - Drop Engine



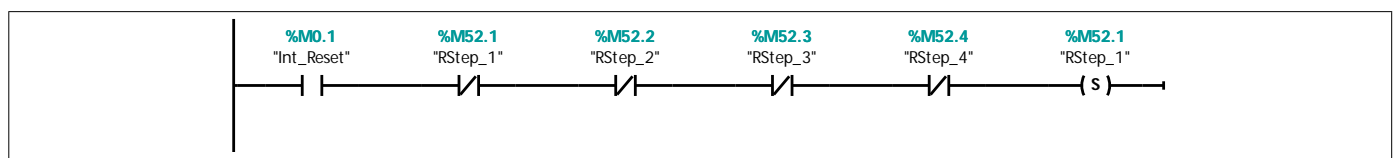
### Network 15: Step 13 - Move out pallet



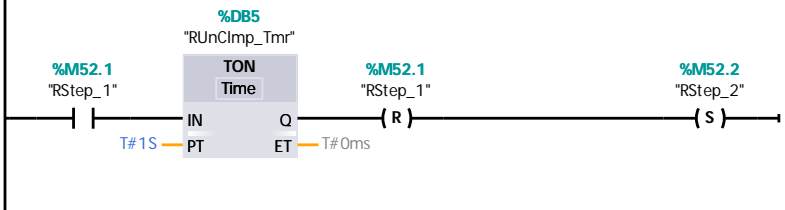
### Network 16: Start/stop for reset operation



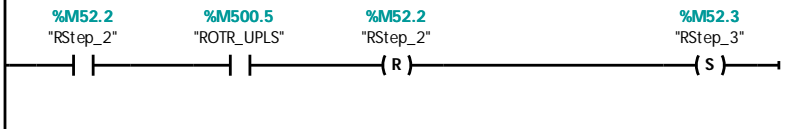
### Network 17: First press of reset pb starts reset



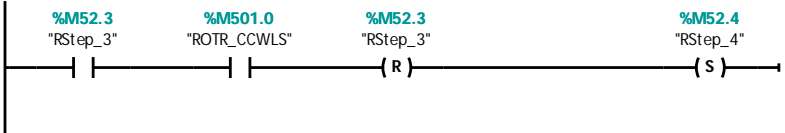
### Network 18: Reset step 1 - Delay to unclamp



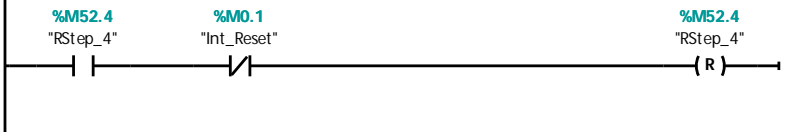
Network 19: Reset step 2 - Raise mechanism



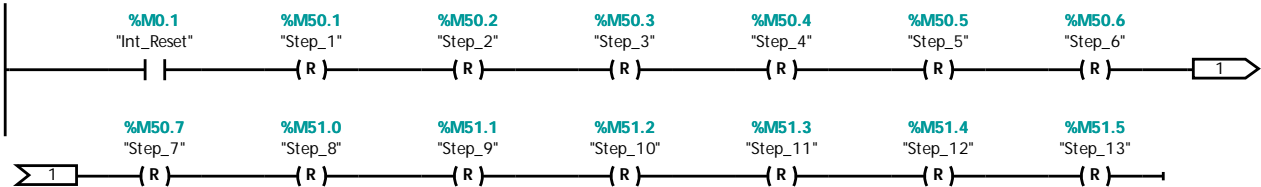
Network 20: Reset step 3 - Rotate CCW



Network 21: Reset step 4 - Unlatch internal reset



Network 22: Reset steps of main operation



Network 23: Engaging hooks control

%M50.2  
"Step\_2"

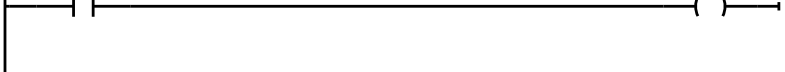
%Q4.0  
"ENG1\_RET"



**Network 24:**

%M51.5  
"Step\_13"

%Q4.1  
"ENG2\_RET"



**Network 25: Rotating mechanism up/down control**

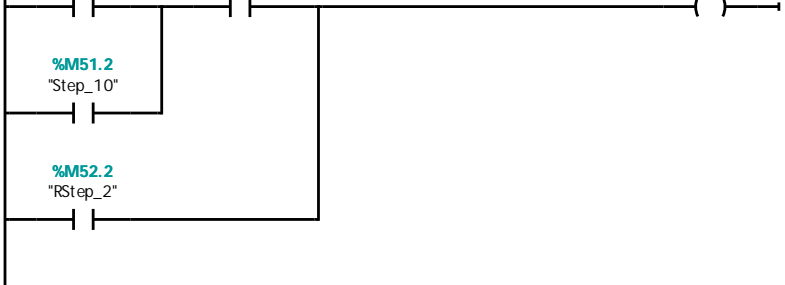
%M50.6  
"Step\_6"

%M0.0  
"Run"

%Q4.2  
"ROTR\_UP"

%M51.2  
"Step\_10"

%M52.2  
"RStep\_2"



**Network 26:**

%M50.4  
"Step\_4"

%M0.0  
"Run"

%Q4.3  
"ROTR\_DOWN"

%M51.0  
"Step\_8"

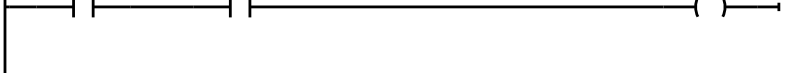


**Network 27: Rotation control**

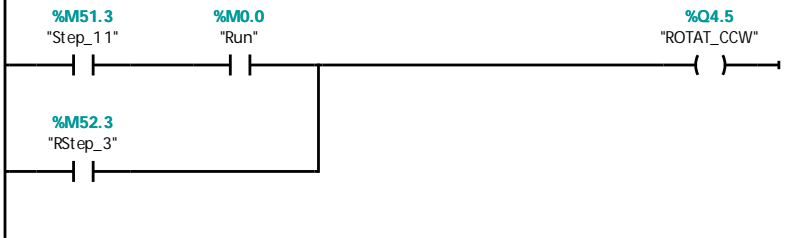
%M50.7  
"Step\_7"

%M0.0  
"Run"

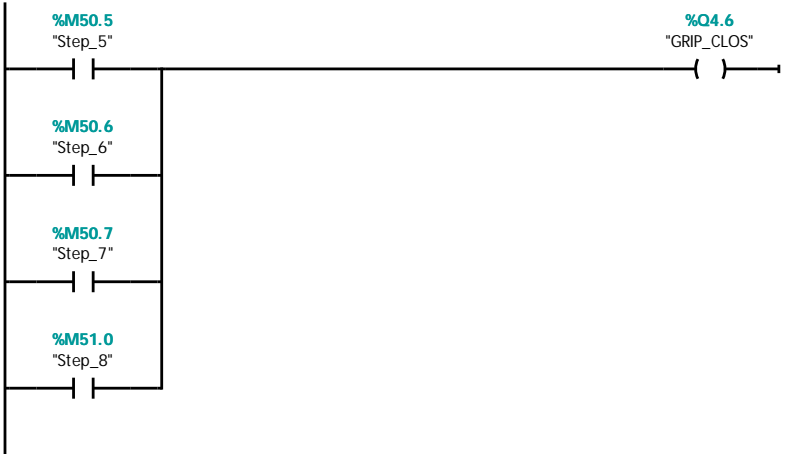
%Q4.4  
"ROTAT\_CW"



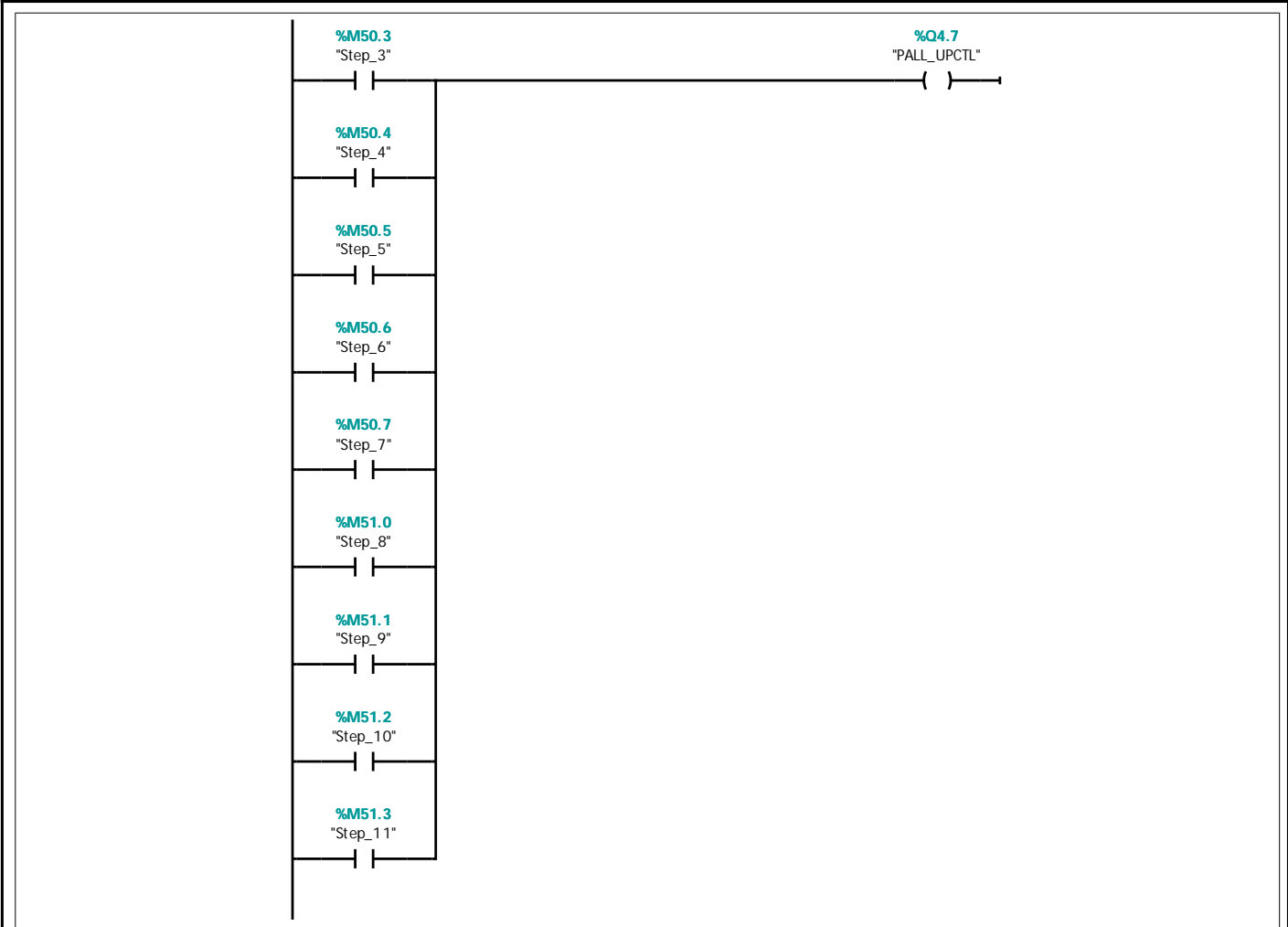
**Network 28:**



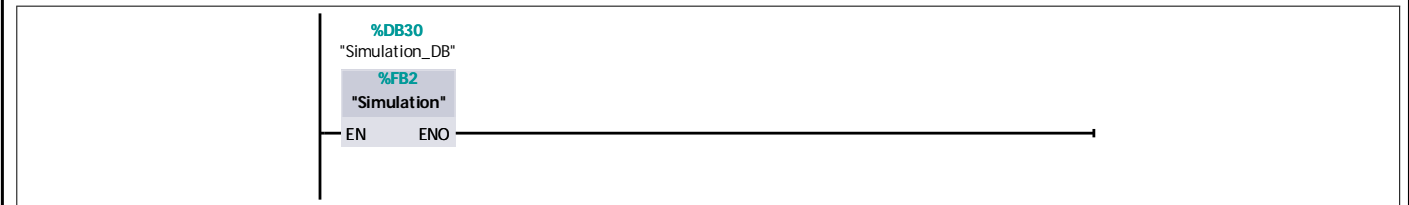
Network 29: Gripper control



Network 30: Pallet up control



**Network 31:**





## Simulation [FB2]

## Simulation Properties

## General

Name	Simulation	Number	2	Type	FB
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Language	LAD	Numbering	Manual
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## Information

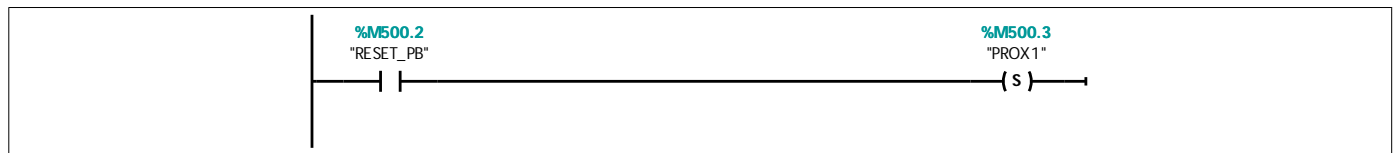
Title	Simulation	Author		Comment	
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Family		Version	0.1	User-defined ID	
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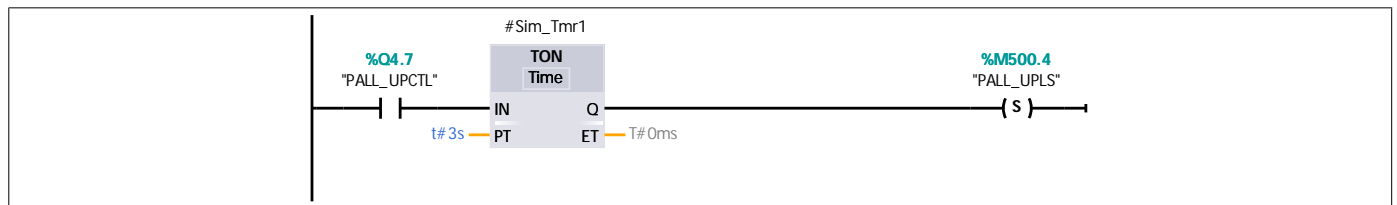
Name	Data type	Default value	Retain
Input			
Output			
InOut			
▼ Static			
Sim_Tmr1	TON_TIME		Non-retain
SimTmr2	TON_TIME		Non-retain
SimTmr3	TON_TIME		Non-retain
SimTmr4	TON_TIME		Non-retain
SimTmr5	TON_TIME		Non-retain
SimTmr6	TON_TIME		Non-retain
SimTmr7	TON_TIME		Non-retain
SimTmr7_Q	Bool	false	Non-retain
SimTmr8	TON_TIME		Non-retain
Temp			
Constant			

## Network 1: Reset

When reset, put engine at hook 1

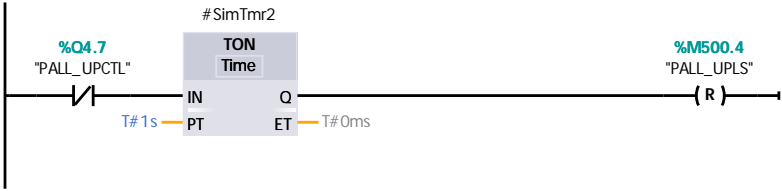


## Network 2: Pallet up LS



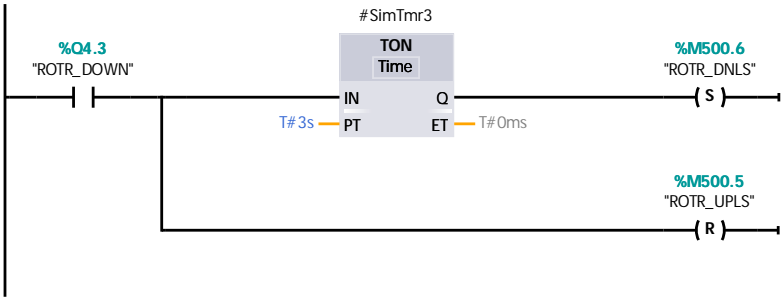
## Network 3:

Delay reset when pallet dropped



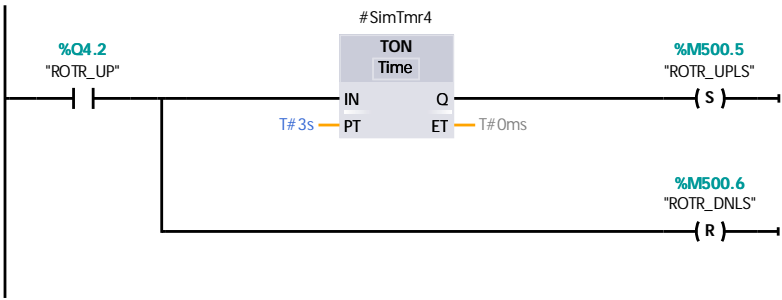
**Network 4: Rotor down/up control.**

When moved down, the up LS is immediately reset off. After 3 seconds, the down LS is set on



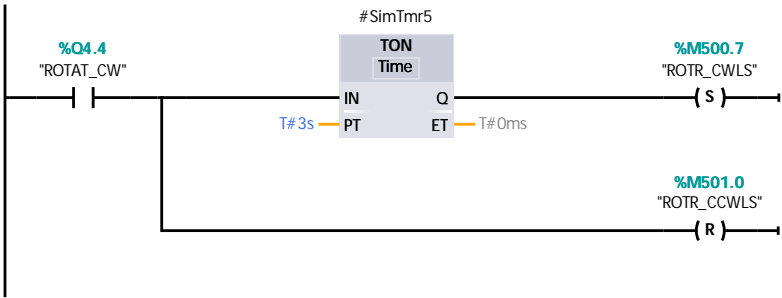
**Network 5:**

When moved up, the down LS is immediately reset off. After 3 seconds, the up LS is set on



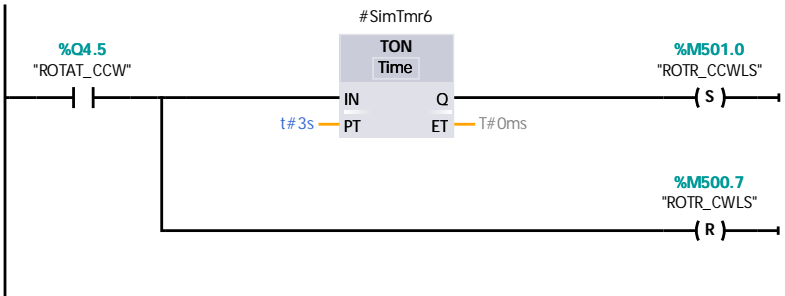
**Network 6: Rotor rotating control.**

When rotated CW, the CCW LS is immediately reset off. After 3 seconds, CW LS is set on



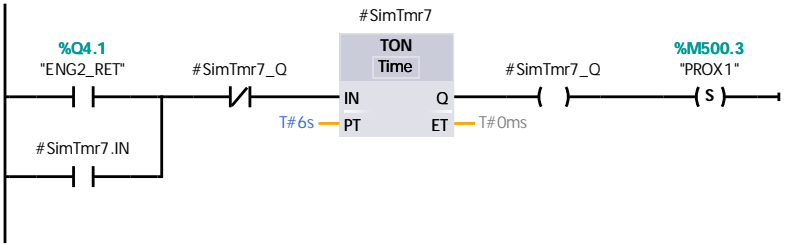
**Network 7:**

When rotated CCW, the CW LS is immediately reset off. After 3 seconds, CCW LS is set on



### Network 8: Pallet Prox

Set it 6 seconds after one has left the station. Reset it 1.5 seconds after a new one let in.



### Network 9:

