

## Main\_Program [OB1]

### Main\_Program Properties

#### General

<b>Name</b>	Main_Program	<b>Number</b>	1	<b>Type</b>	OB
<b>Language</b>	LAD	<b>Numbering</b>	Manual		

#### Information

<b>Title</b>	SP21-1	<b>Author</b>		<b>Comment</b>	
<b>Family</b>		<b>Version</b>	0.1	<b>User-defined ID</b>	

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: SP21-1

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SP14-1 Part Oiler Station Control Using S7-GRAPH with Simulation

Additional internal memory:

Tag Address

Run M5.0 BOOL On while station running

Int\_Reset M5.1 BOOL Internal reset

Run\_Trans M61.0 BOOL Run has changed

Run\_PTrans M61.1 BOOL Bit for Run neg transition

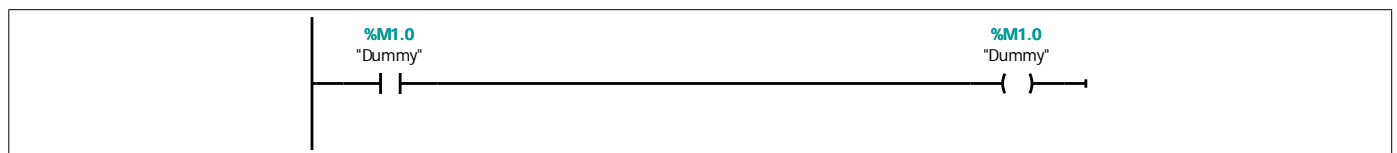
Run\_NTrans M61.2 BOOL Bit for Run pos transition

OP\_Zeroed M61.3 BOOL Operation paused

Reset\_Trans M61.4 BOOL Reset\_PB transition to start-kick

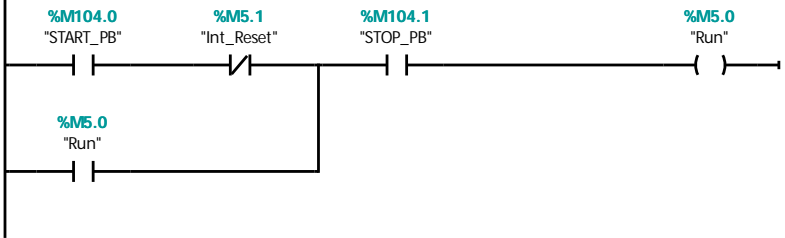
SFC

ResetPB\_PTrans M61.5 BOOL Bit for Reset\_PB pos trans

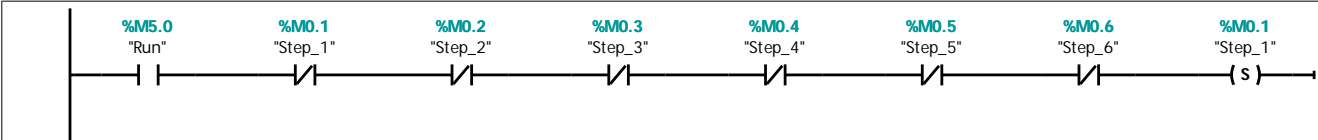


### Network 2: Start/stop

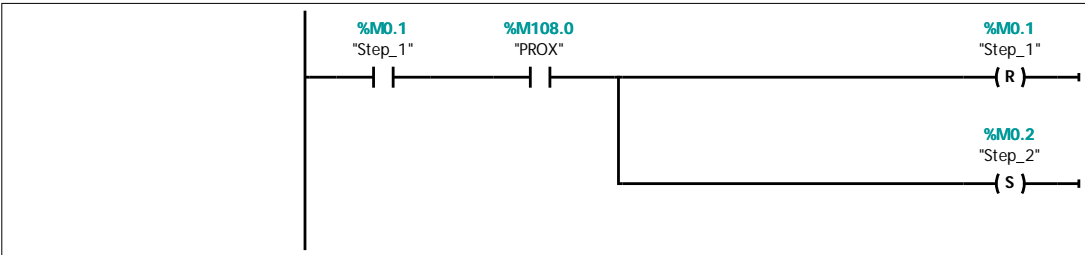
During reset prevent start



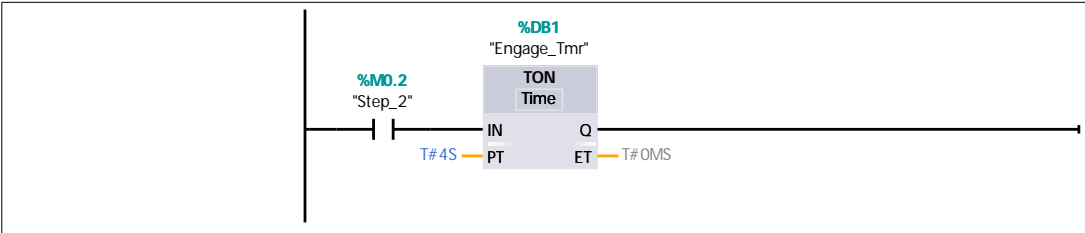
Network 3: Initial start



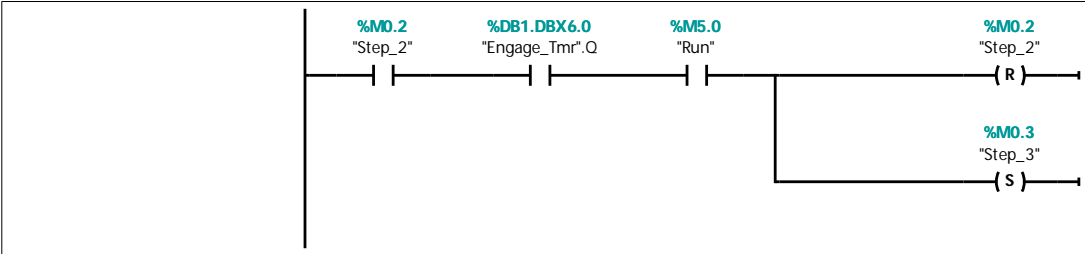
Network 4: Step 1 Wait for part



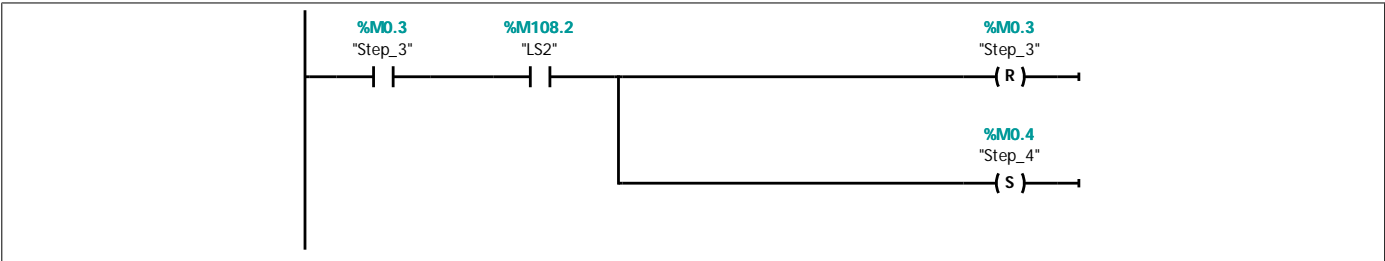
Network 5: Engage timer



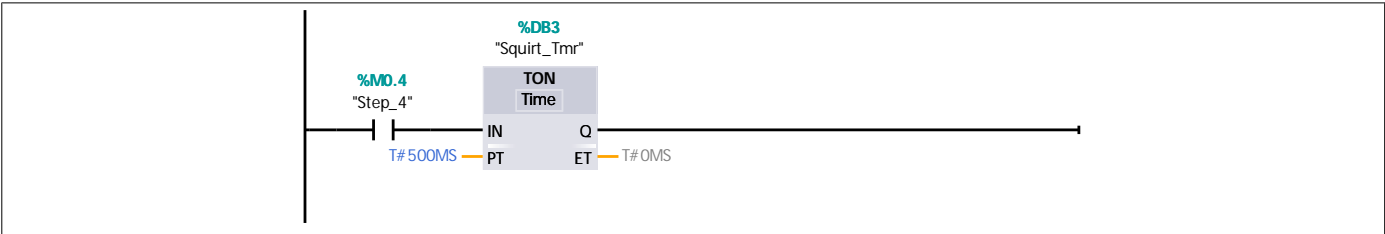
Network 6: Step 2 Wait for engage



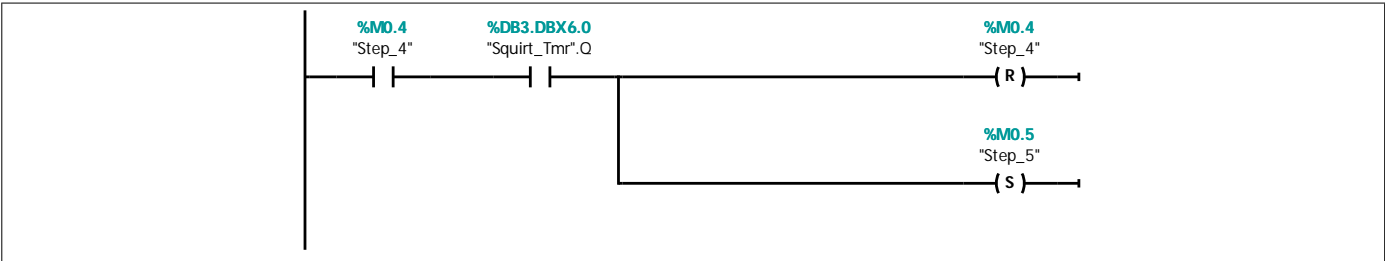
Network 7: Step 3 Lower oiler



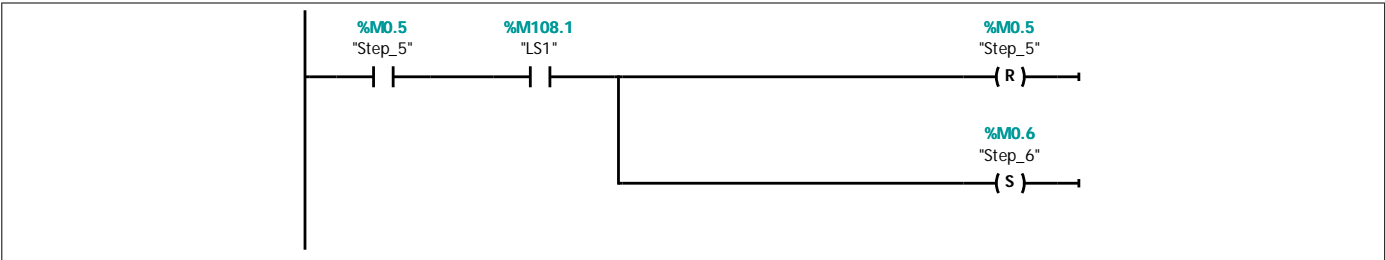
Network 8: Squirt timer



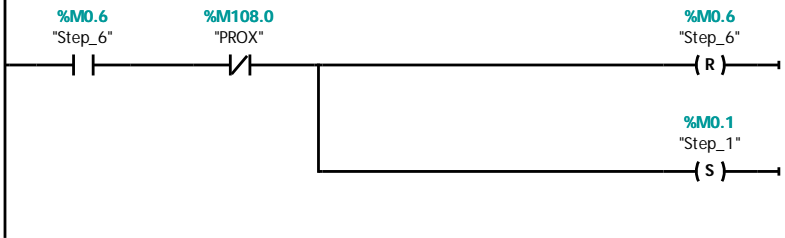
Network 9: Step 4 Squirt oil



Network 10: Step 5 Raise oiler

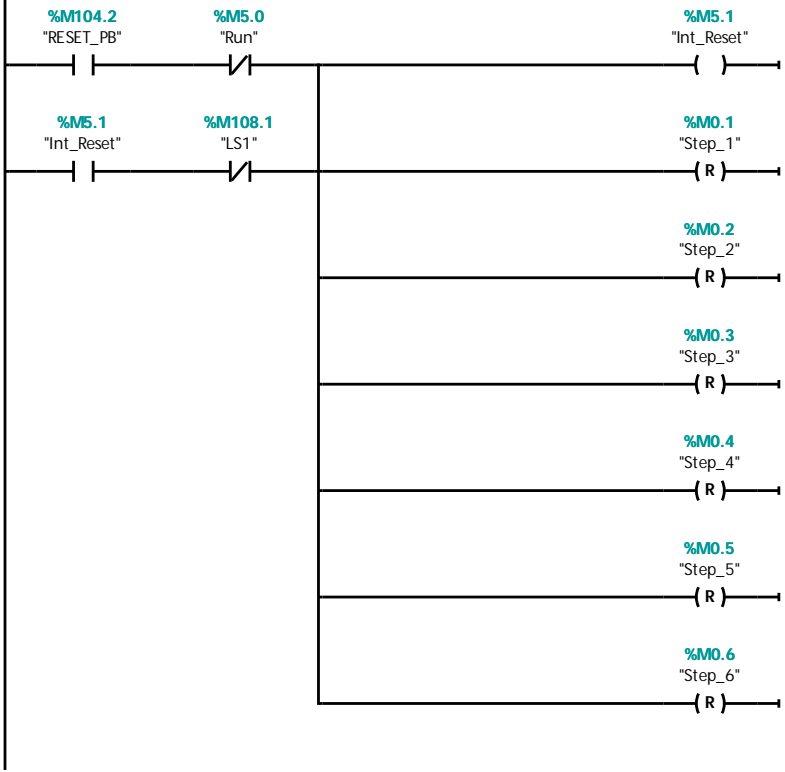


Network 11: Step 6 Part leaves



**Network 12: Reset**

Keep internal reset on while raising oiler tip.

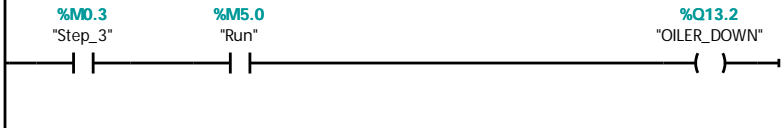


**Network 13: Gate 1 cylinder control, on to open gate 1**

Can not turn off when paused.

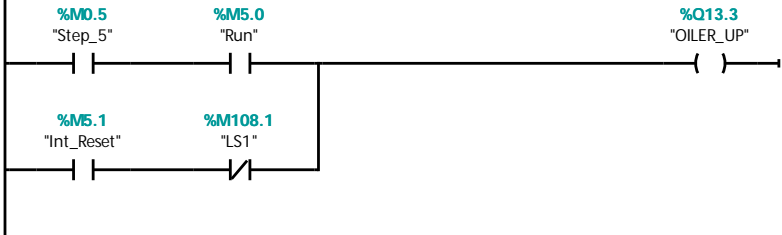


**Network 14: On to lower oiler tip**



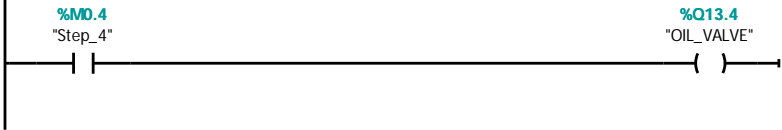
**Network 15: On to raise oiler tip**

Raise oiler tip during reset

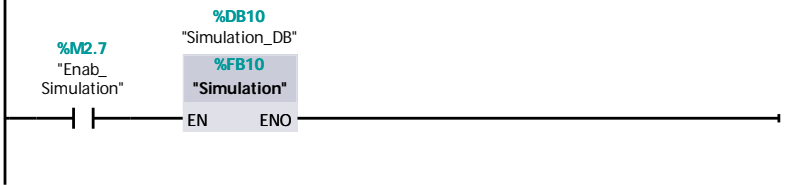


**Network 16: On to open valve and squirt oil**

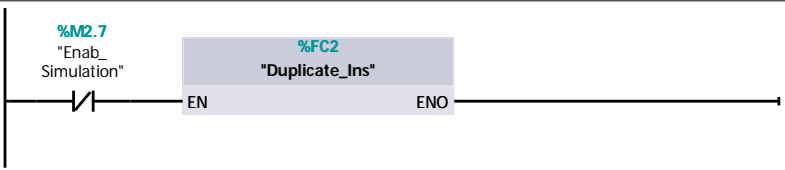
Can not turn off when paused.



**Network 17: Simulation**



**Network 18: Copy real inputs to input image if not simulating**



## Duplicate\_Ins Properties

<b>Name</b>	Duplicate_Ins	<b>Number</b>	2	<b>Type</b>	FC
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Information									
<p>Information</p>									

Family		Version	0.1	User-defined
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Name	Data type	Default value
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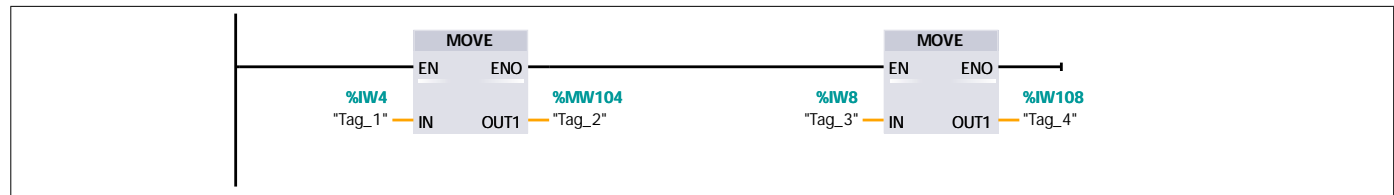
Input		
Output		

Inlet		
Temp		

Constant		
R-sq		

Duplicate_Ins	Void	
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**Network 1:**



# Simulation [FB10]

## Simulation Properties

### General

Name	Simulation	Number	10	Type	FB
Language	LAD	Numbering	Manual		

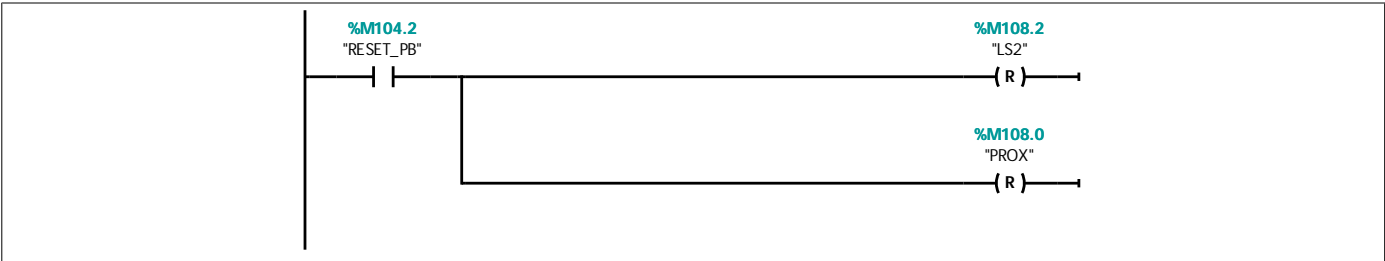
### Information

Title		Author		Comment	
Family		Version	0.1	User-defined ID	

Name	Data type	Default value
Input		
Output		
InOut		
▼ Static		
Prox_On_Tmr	TON	
Prox_Off_Tmr	TON	
LS1_Tmr	TON	
LS2_Tmr	TON	
Prox_Off_Tmr_IN	Bool	false
Oiler_Up_NTrans	Bool	false
Temp		
Constant		

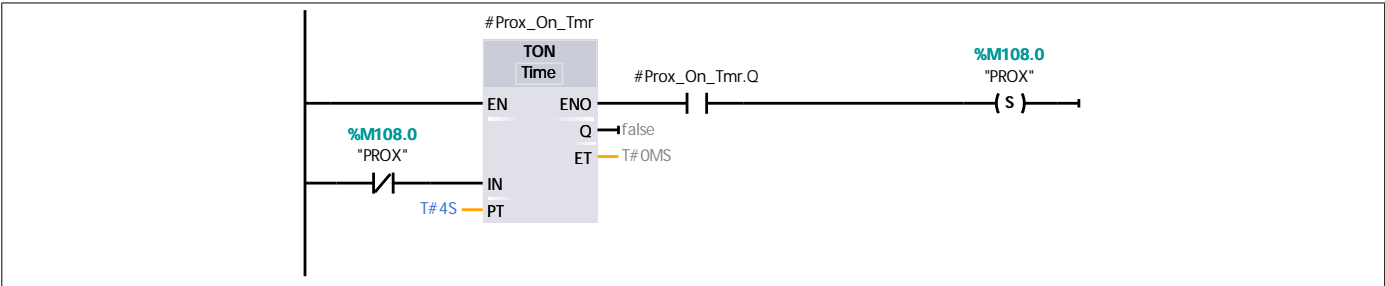
## Network 1: Limit switch, on (closed) when oiler tip is in lowered position

On reset, reset PROX and LS2



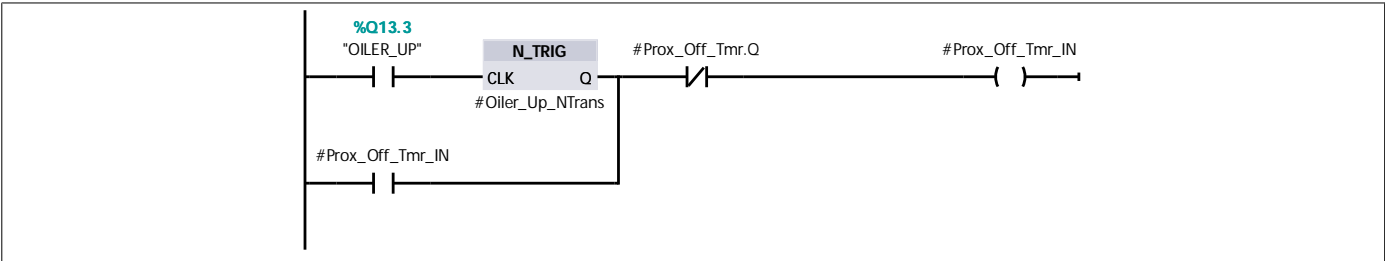
## Network 2: Proximity sensor, on when platform is in station

PROX simulation: Set when PROX off and for 4 secs.  
Reset 3 secs after OILER\_UP transitions off

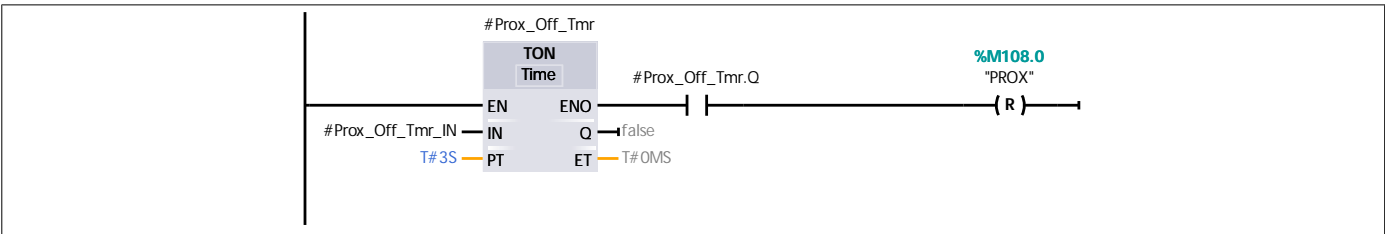




**Network 3:**



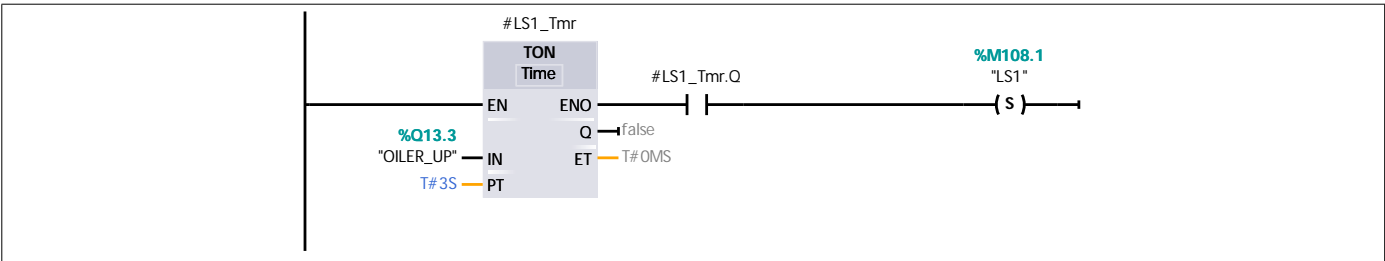
**Network 4: Proximity sensor, on when platform is in station**



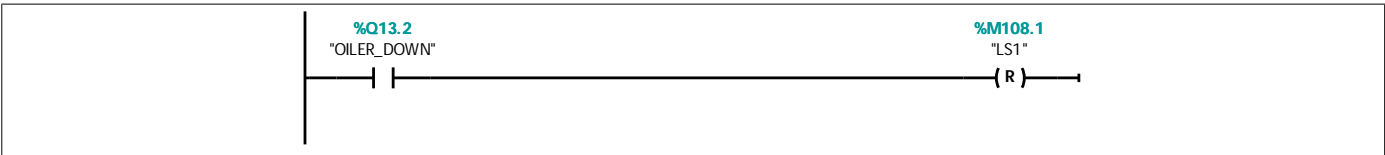
**Network 5: Limit switch, on (closed) when oiler tip is in raised position**

LS1 and LS2 simulation: Set LS1 when OILER\_UP on for 3 sec. Reset when OILER\_DOWN

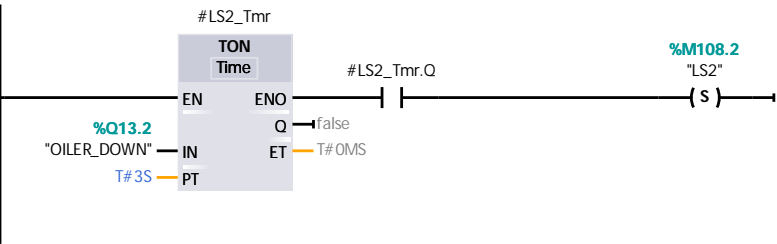
Set LS2 when OILER\_DOWN on for 3 sec. Reset when OILER\_UP



**Network 6: Limit switch, on (closed) when oiler tip is in raised position**



**Network 7: Proximity sensor, on when 40-foot rail piece in feeder area**



**Network 8: Limit switch, on (closed) when oiler tip is in lowered position**

