4Production_line_project / PLC_1 [CPU 314C-2 PN/DP] / Program blocks

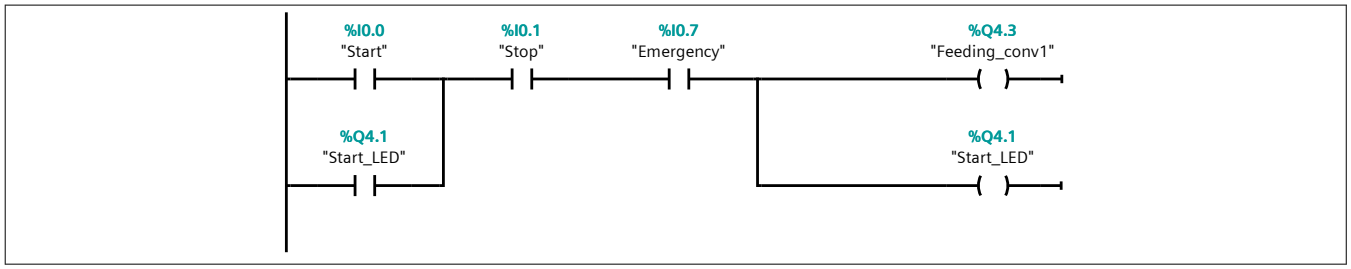
Main [OB1]

Main Properties					
General					
Name	Main	**Number**	1	**Type**	OB
Language	LAD	**Numbering**	Manual		
Information					
Title	test	**Author**		**Comment**	
Family		**Version**	0.1	**User-defined ID**	

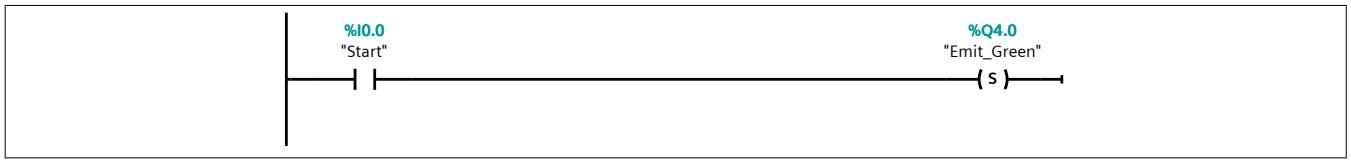
Main				
Name	**Data type**	**Offset**	**Default value**	**Comment**
▼ Temp				
OB1_EV_CLASS	Byte	0.0		Bits 0-3 = 1 (Coming event), Bits 4-7 = 1 (Event class 1)
OB1_SCAN_1	Byte	1.0		1 (Cold restart scan 1 of OB 1), 3 (Scan 2-n of OB 1)
OB1_PRIORITY	Byte	2.0		Priority of OB Execution
OB1_OB_NUMBR	Byte	3.0		1 (Organization block 1, OB1)
OB1_RESERVED_1	Byte	4.0		Reserved for system
OB1_RESERVED_2	Byte	5.0		Reserved for system
OB1_PREV_CYCLE	Int	6.0		Cycle time of previous OB1 scan (millisec-onds)
OB1_MIN_CYCLE	Int	8.0		Minimum cycle time of OB1 (milliseconds)
OB1_MAX_CYCLE	Int	10.0		Maximum cycle time of OB1 (milliseconds)
OB1_DATE_TIME	Date_And_Time	12.0		Date and time OB1 started
Clamping time	Time	20.0		
Clamping time_1	Time	24.0		
Constant				

Network 1: Start

start configuration

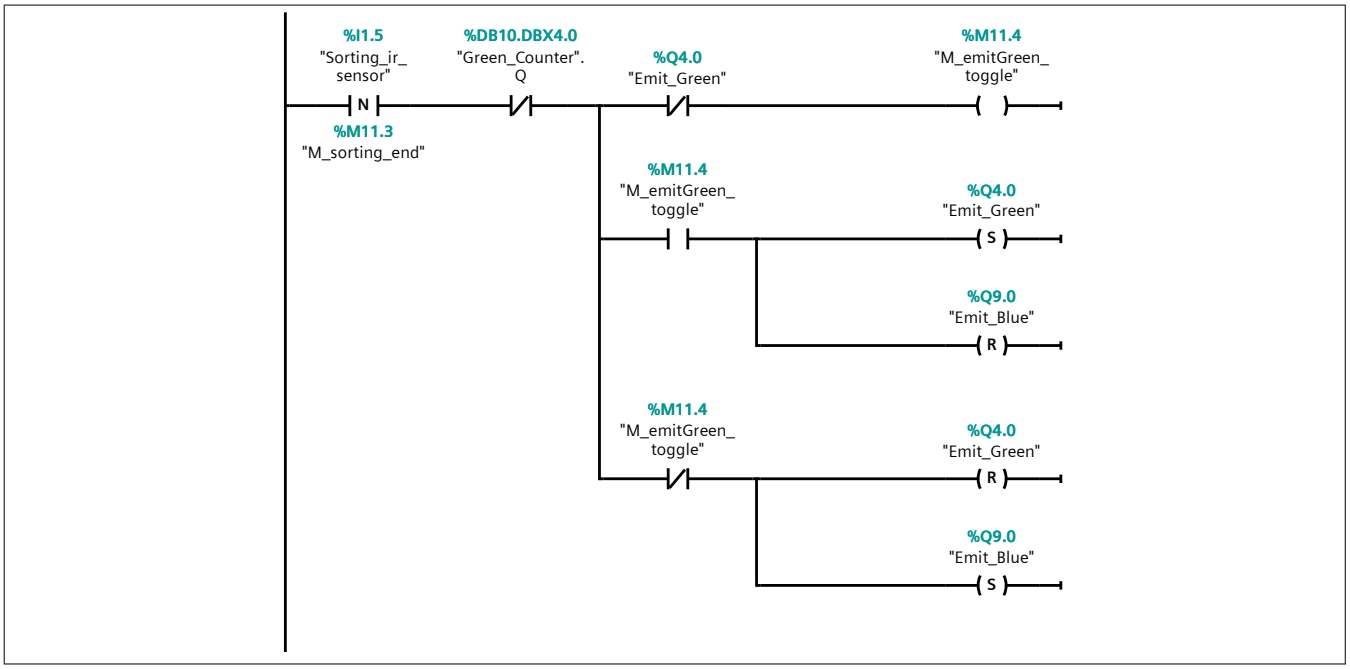


Network 2: Start Emit



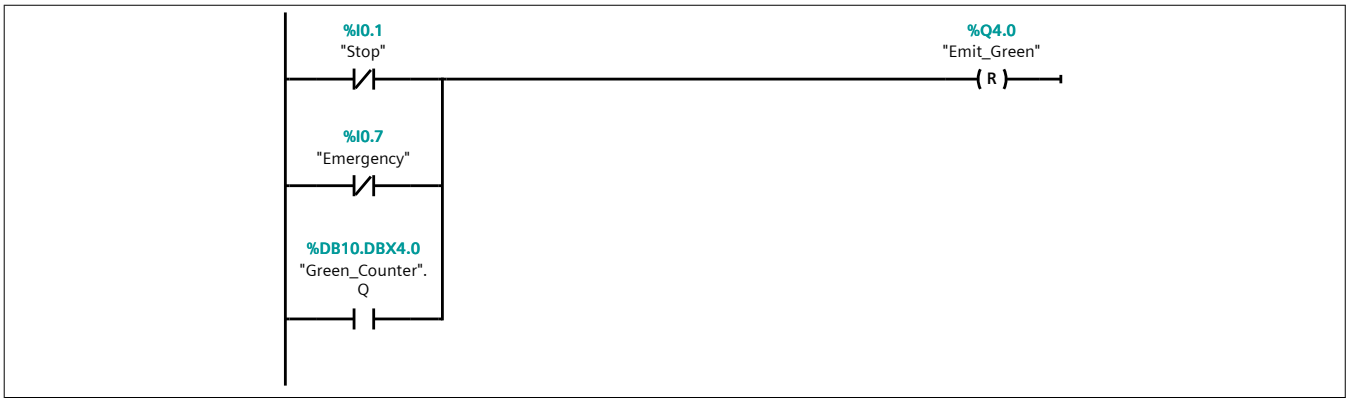
Network 3:

emit one part at a time after each part reachees the sorting ir sensor



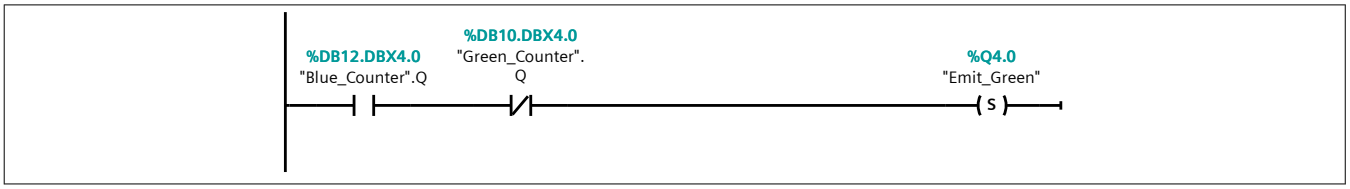
Network 4: Stop Emit

green parts feeding stops in case of emergency , stop button pushed or green counter preset value reached



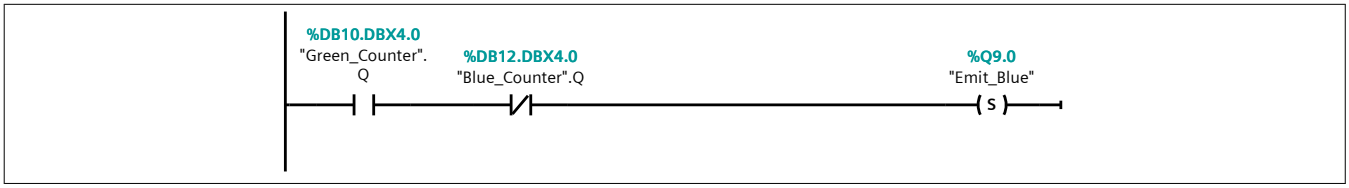
Network 5:

to fix a problem that faced us in factory i/o where the green emiting was stopped when the blue counter reached the preset value



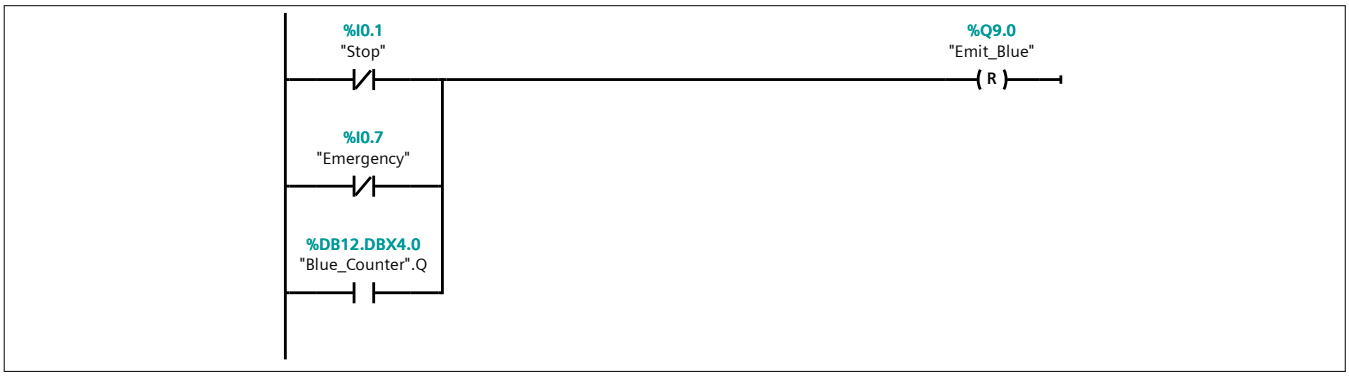
Network 6:

to fix a problem that faced us in factory i/o where the green emiting was stopped when the blue counter reached the preset value



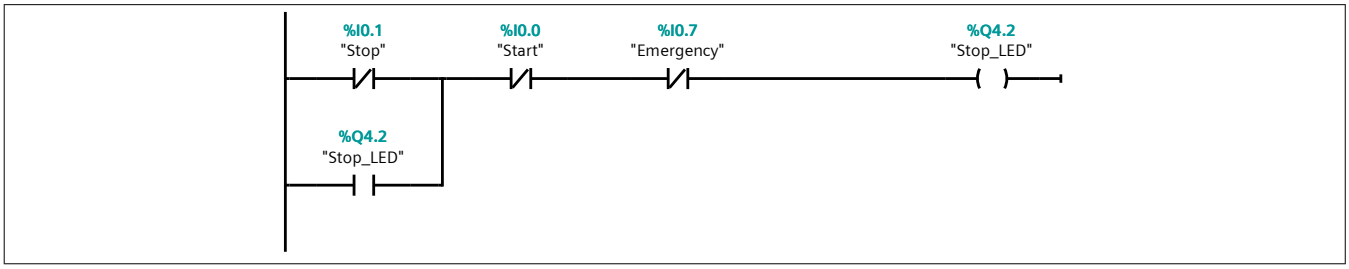
Network 7:

blue parts feeding stops in case of emergency , stop button pushed or green counter preset value reached



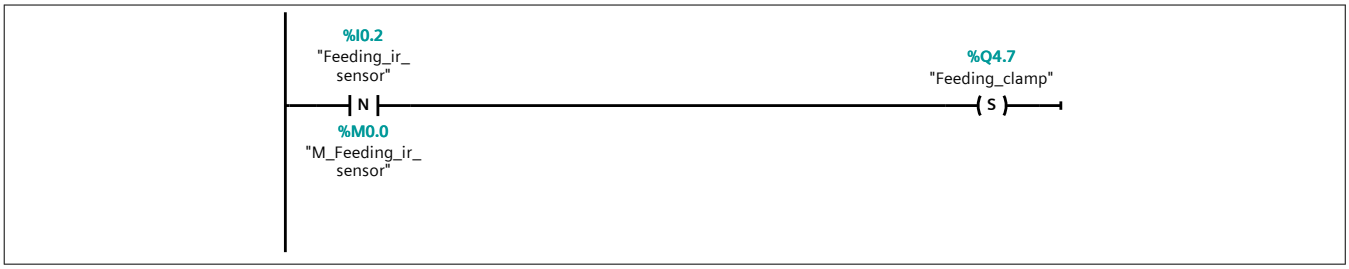
Network 8: Stop Operations

stop configuration



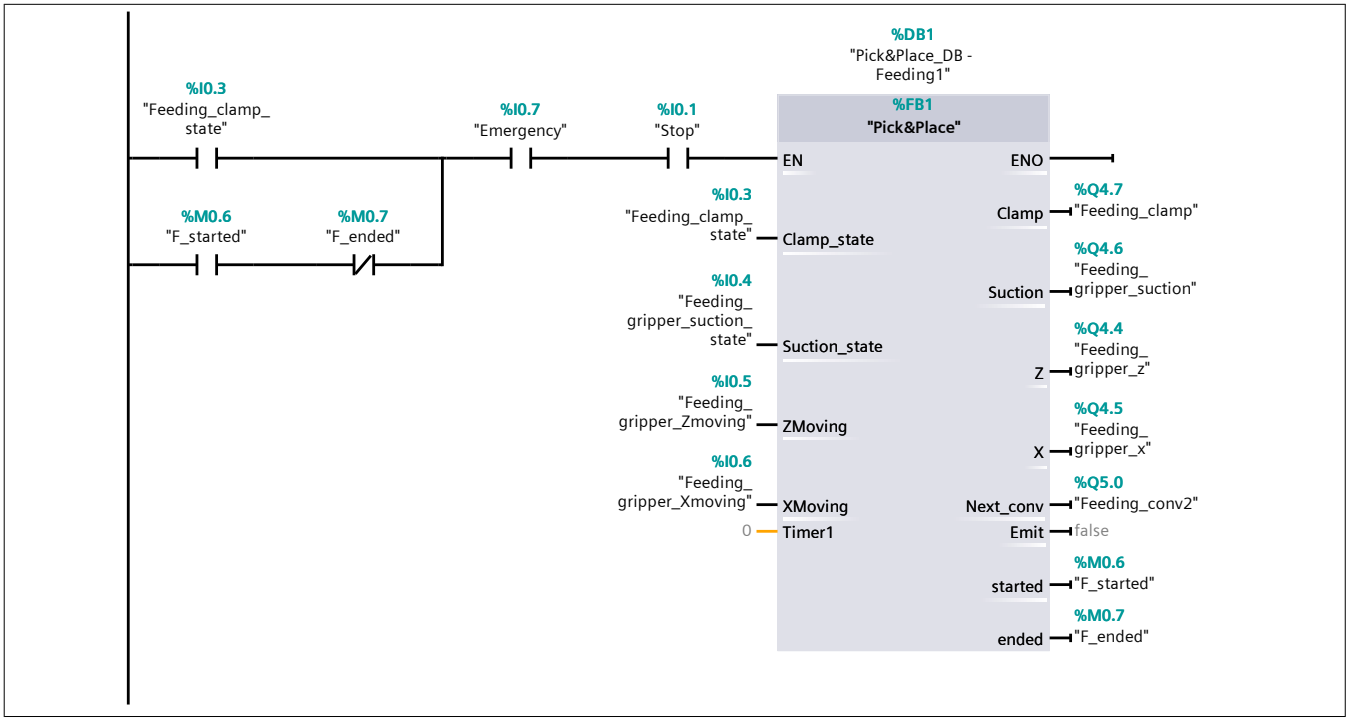
Network 9: Feeding clamp set

when the part fully passes the ir sensor the clamp will start to work



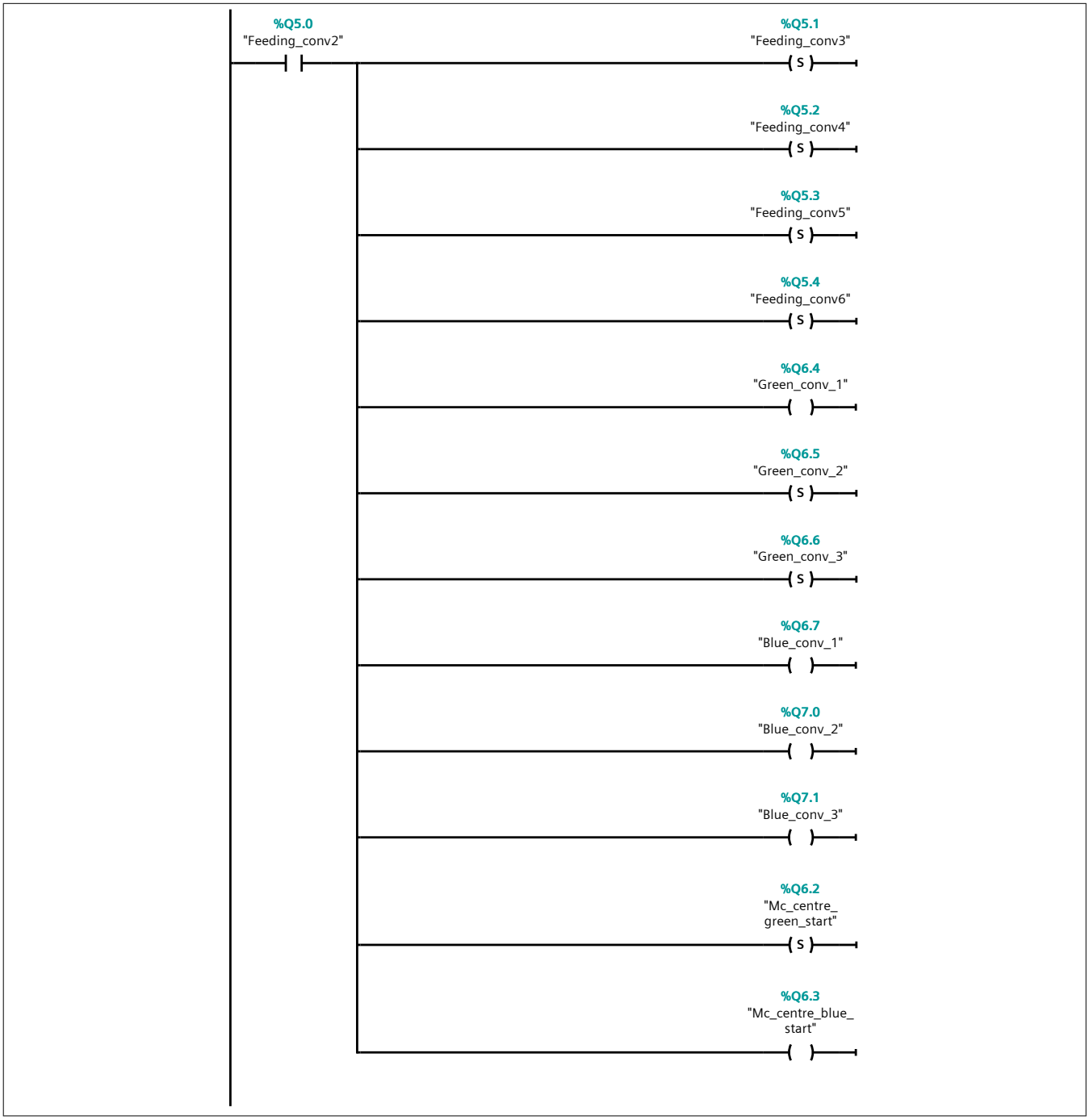
Network 10:

sub routine that controls the pick and place process

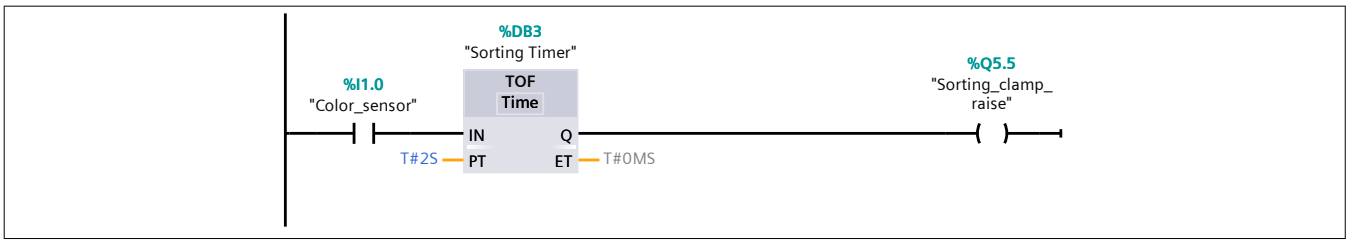


Network 11:

starts the conveyors of the production line

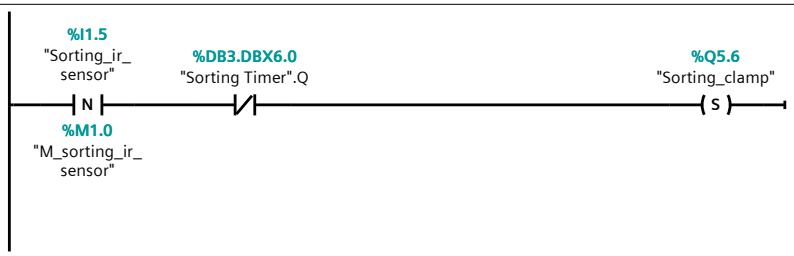


Network 12:



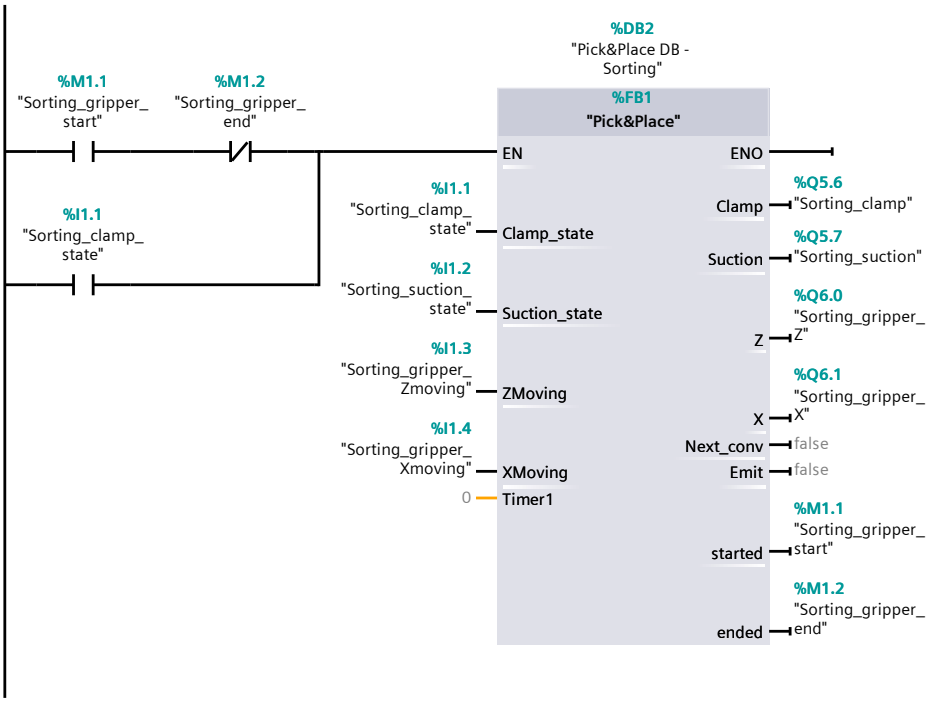
Network 13: Feeding clamp set

make sure that the sorting clamp goes back down after the part passes



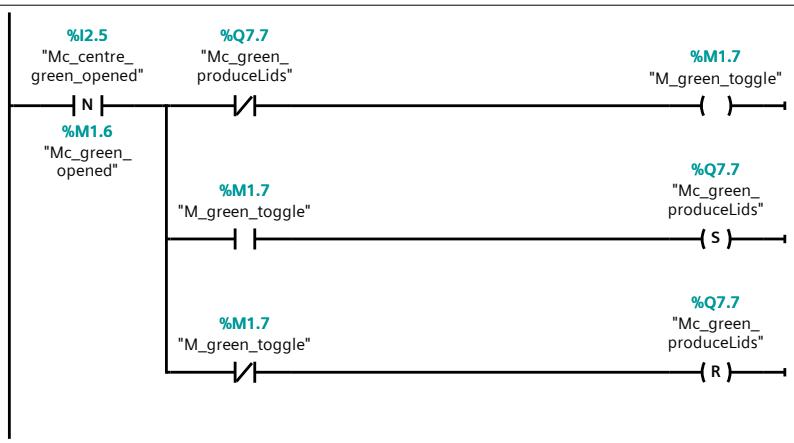
Network 14:

subroutine for the pick and place process



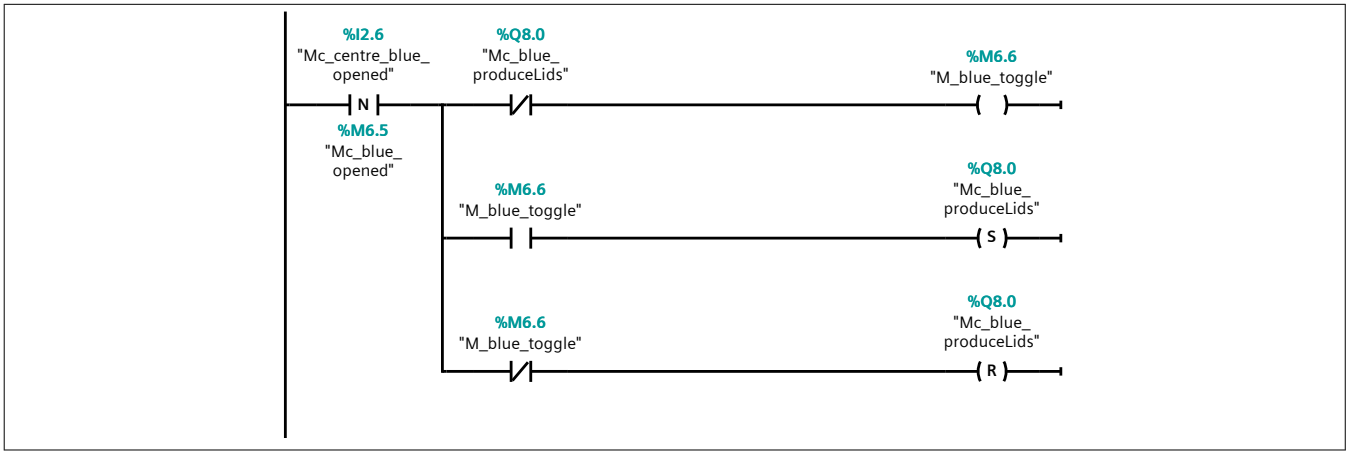
Network 15:

For green machining centre, make sure that there are no parts in the machine and if there aren't it will toggle the "produce lids" bit of the machining centre to change the production the next run from lids to bases and vice versa.



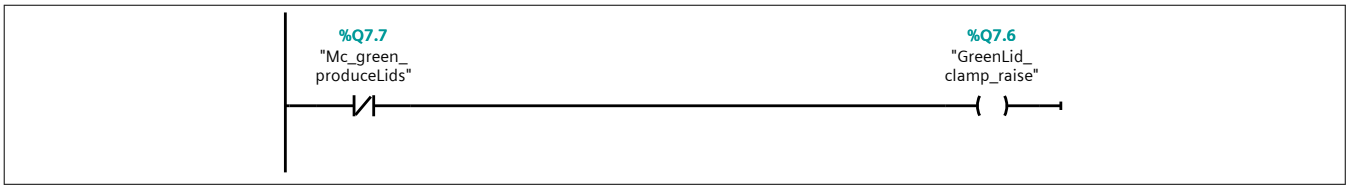
Network 16:

For blue machining centre, make sure that there are no parts in the machine and if there aren't it will toggle the "produce lids" bit of the machining centre to change the production the next run from lids to bases and vice versa.



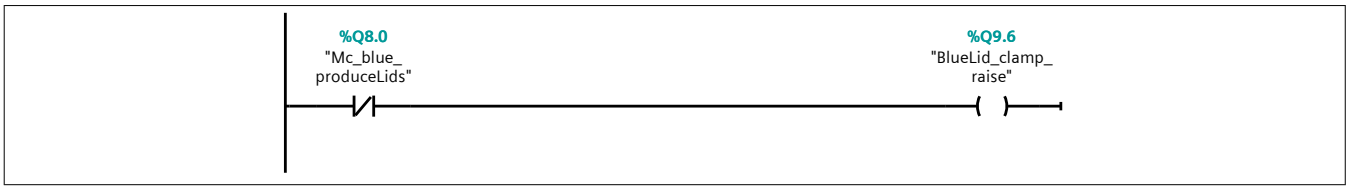
Network 17:

Raising the clamp after the machining if the prodcut produced is a lid to let it pass to the second pick and place



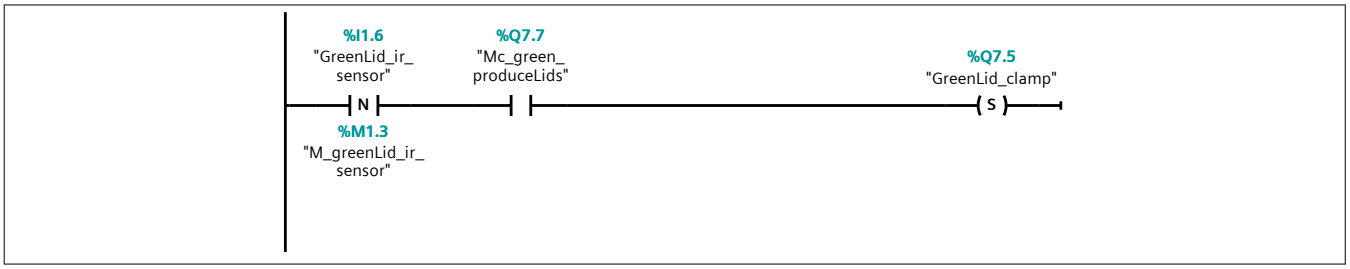
Network 18:

Raising the clamp after the machining if the prodcut produced is a lid to let it pass to the second pick and place



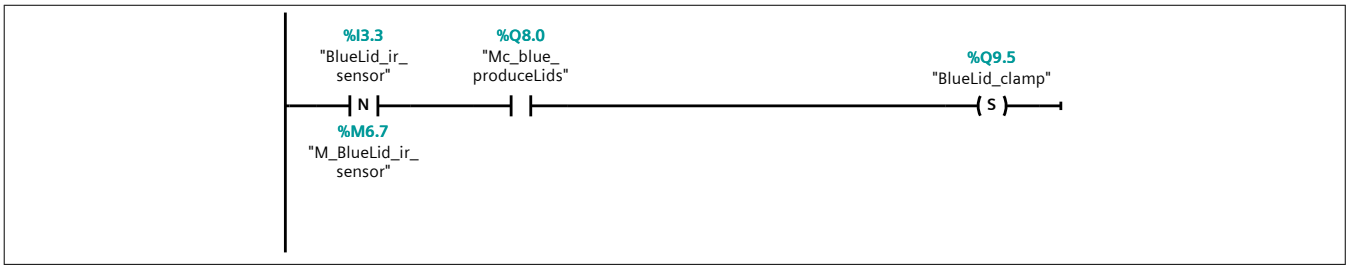
Network 19: Feeding clamp set

If the machine produced a lid, the positioner will clamp it to move it to next convyeor to get assembled



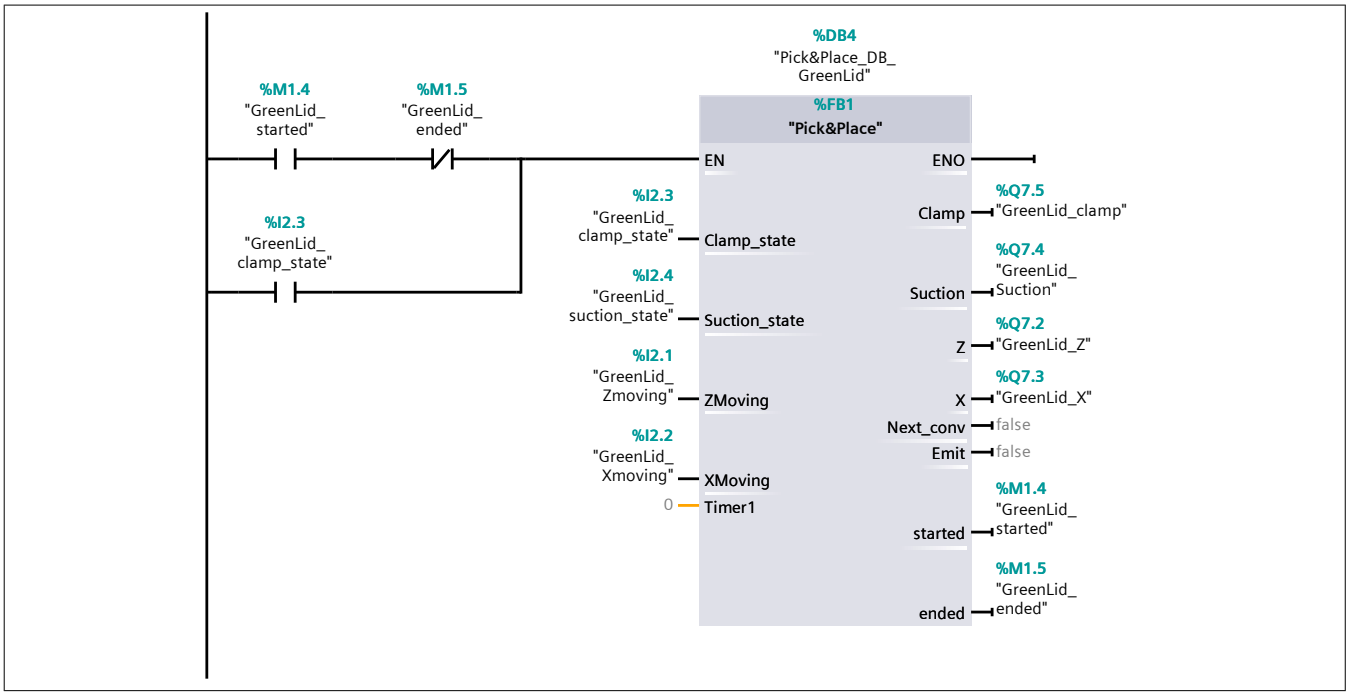
Network 20:

If the machine produced a lid, the positioner will clamp it to move it to next convyeor to get assembled



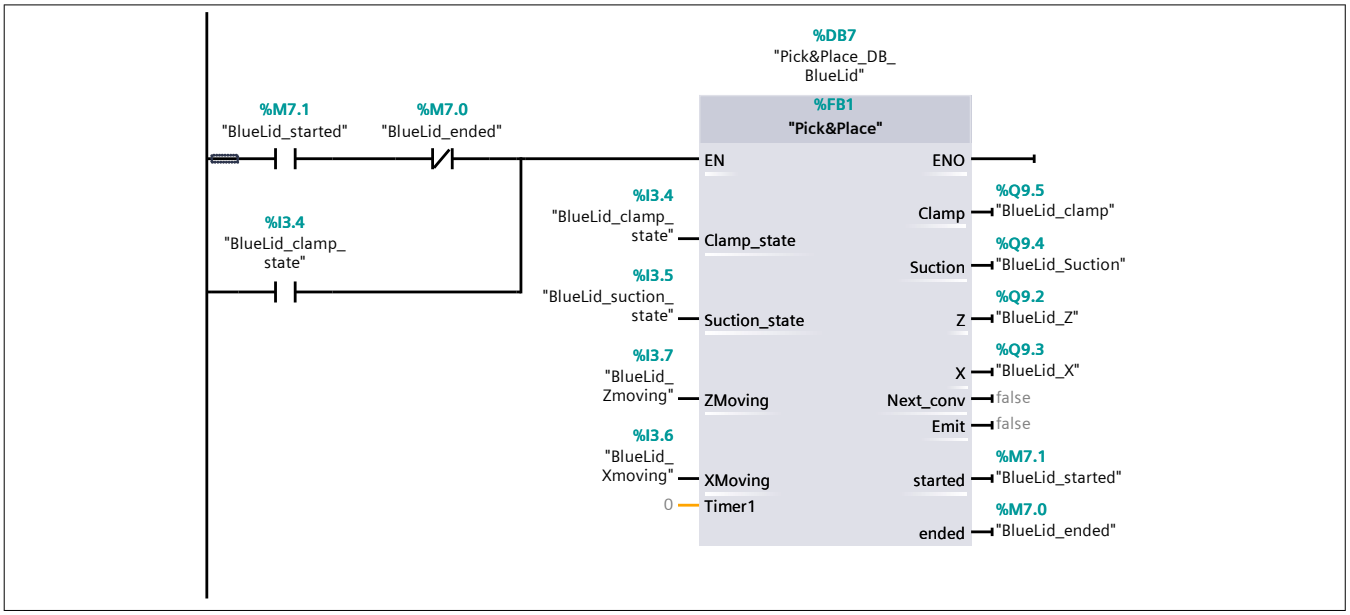
Network 21:

Starting the second pick and place after machining if the part produced is a lid and the product is clamped



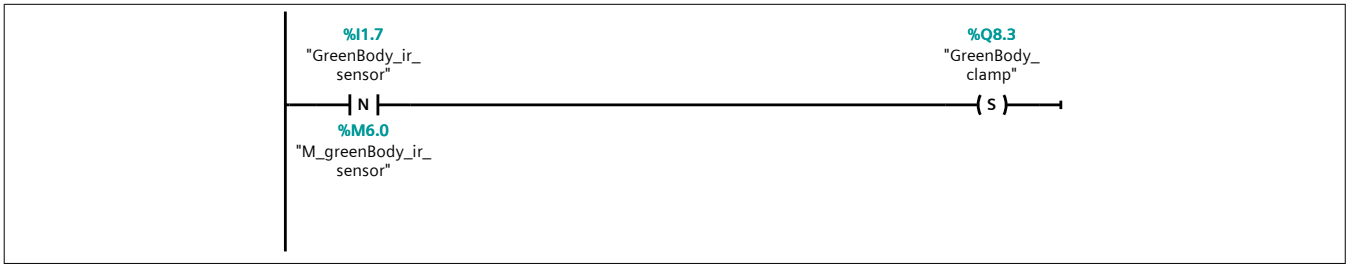
Network 22:

Starting the second pick and place after machining if the part produced is a lid and the product is clamped



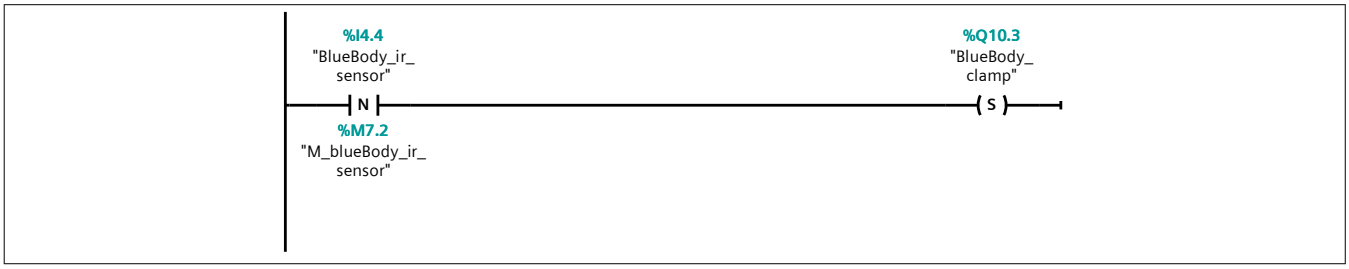
Network 23: Feeding clamp set

If a product is a base, the first positioner will clamp it to move it to nexr conveyor



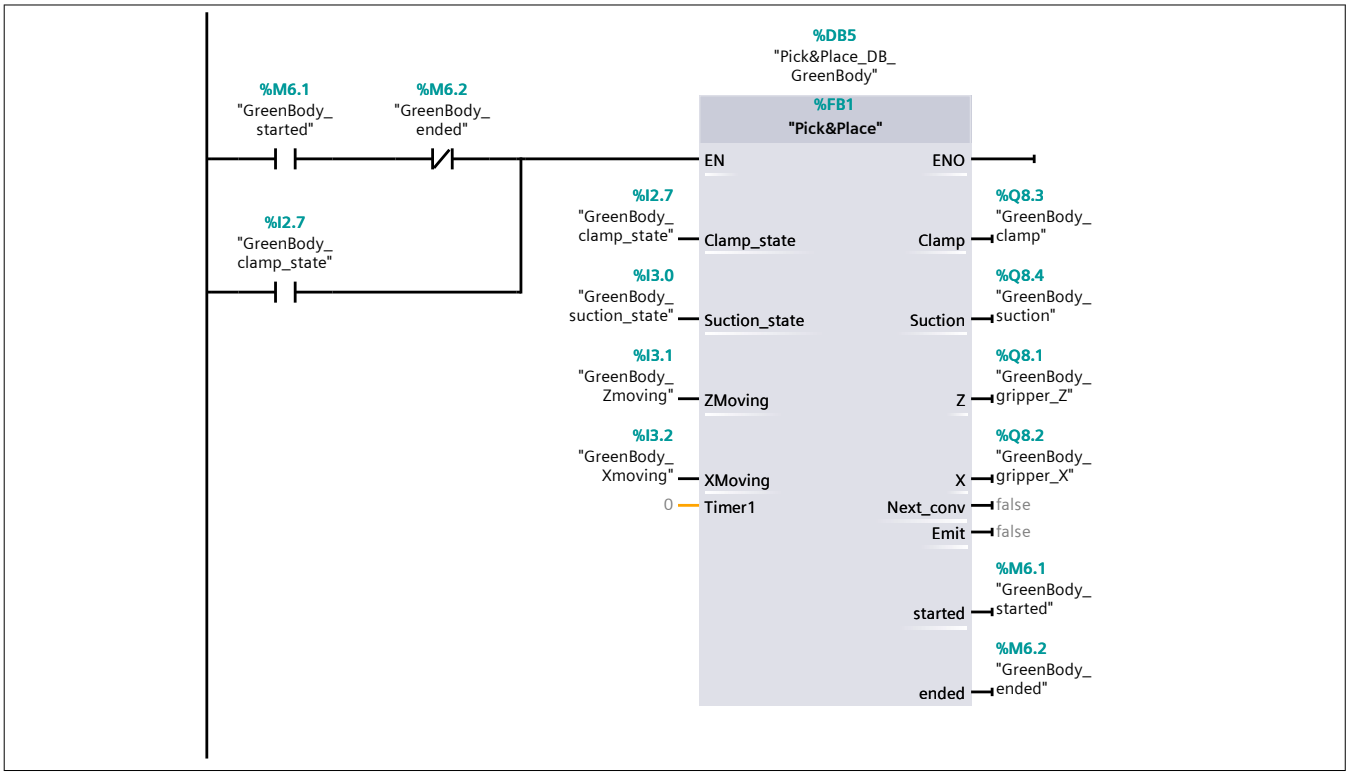
Network 24: Feeding clamp set

If a product is a base, the first positioner will clamp it to move it to nexr conveyor



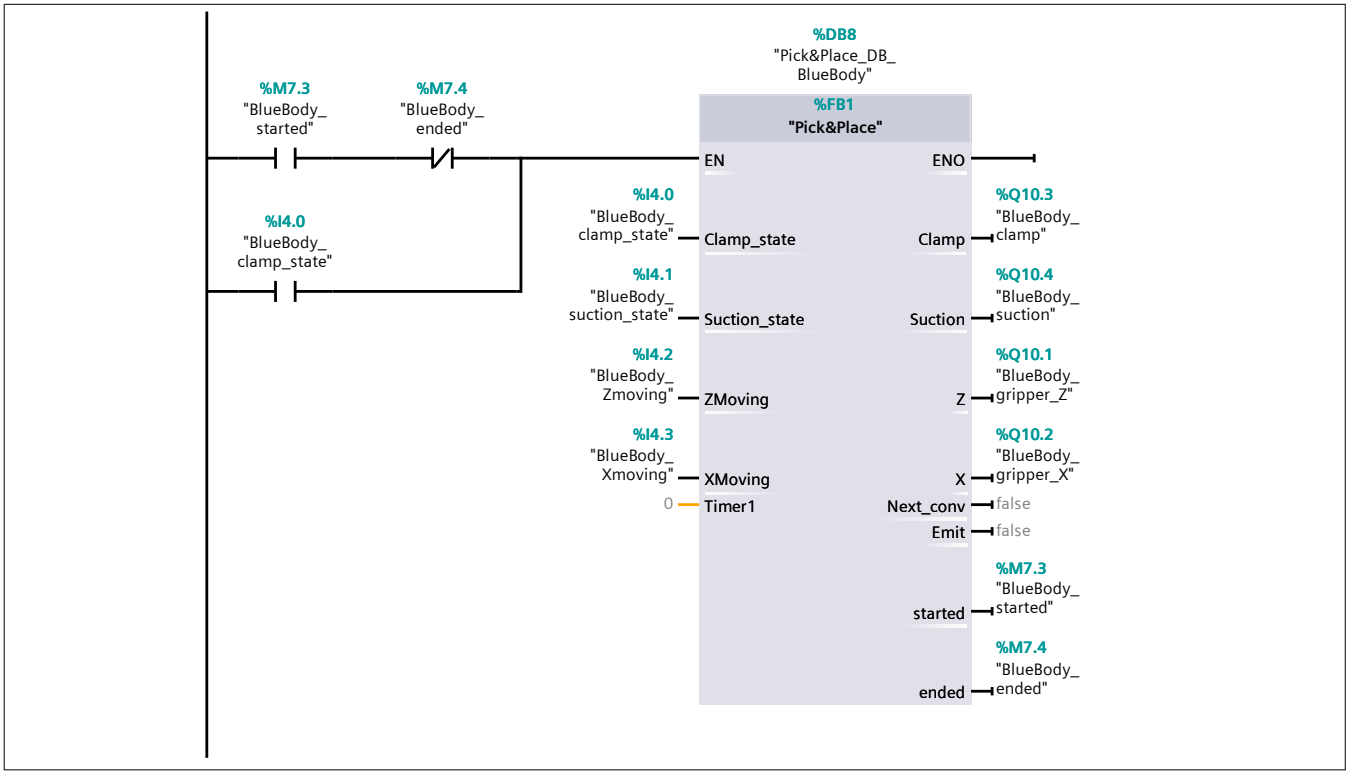
Network 25:

If the produced product is a body, the first pick and place will work to move it to next conveyor



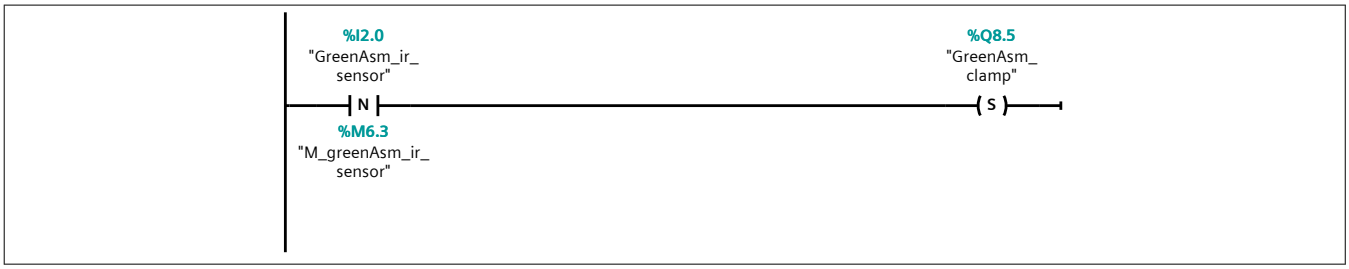
Network 26:

If the produced product is a body, the first pick and place will work to move it to next conveyor



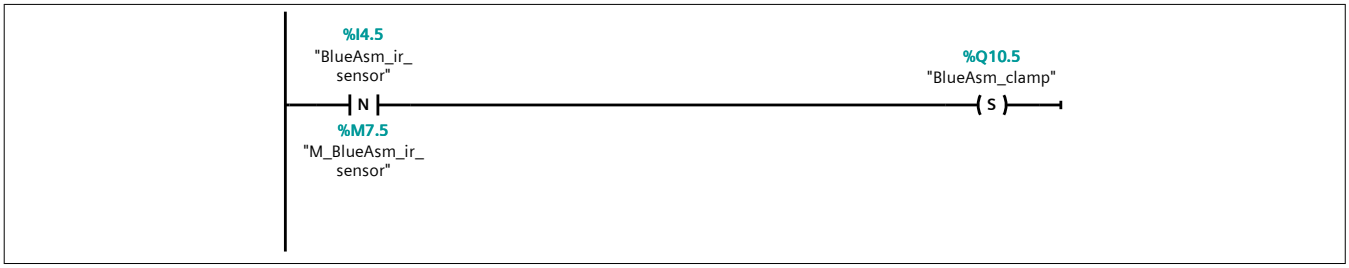
Network 27:

The positioner on the assembly conveyor clamps on the body waiting unitl the lid is produced and assembled



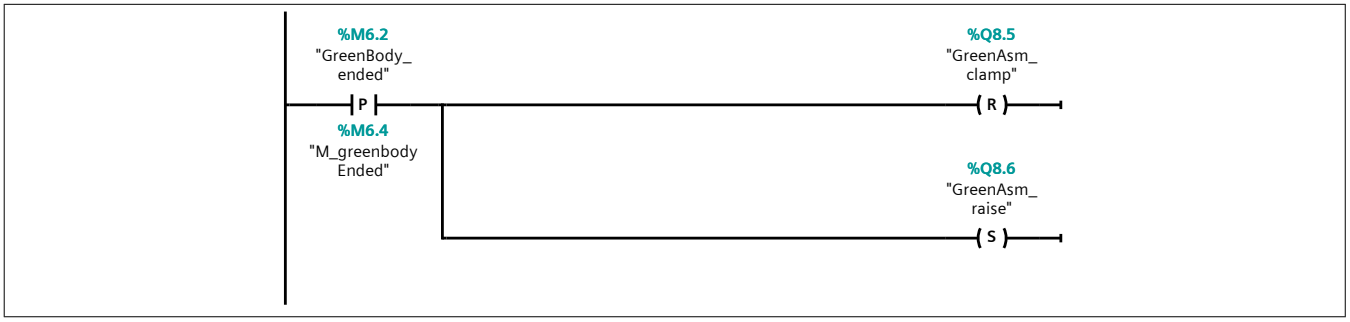
Network 28:

The positioner on the assembly conveyor clamps on the body waiting unitl the lid is produced and assembled



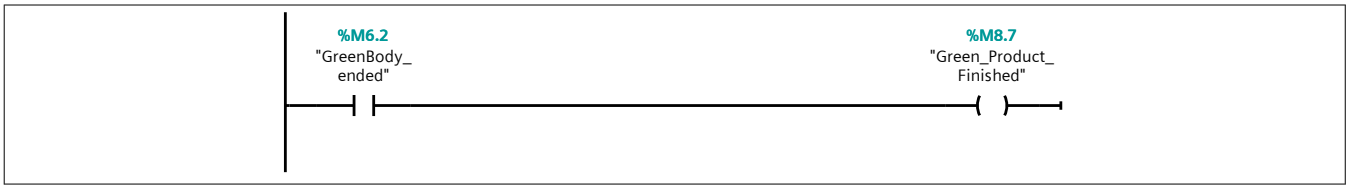
Network 29:

After assembling the products the pick and place will raise a flag that will release the clamp of the positioner and then the positioner will raise allowing the assembled product to be moved from the production line



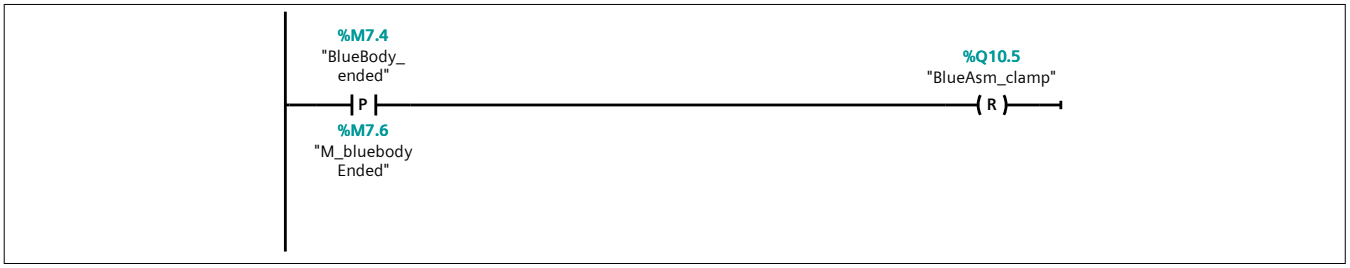
Network 30:

The positioner on the assembly conveyor clamps on the body waiting unitl the lid is produced and assembled



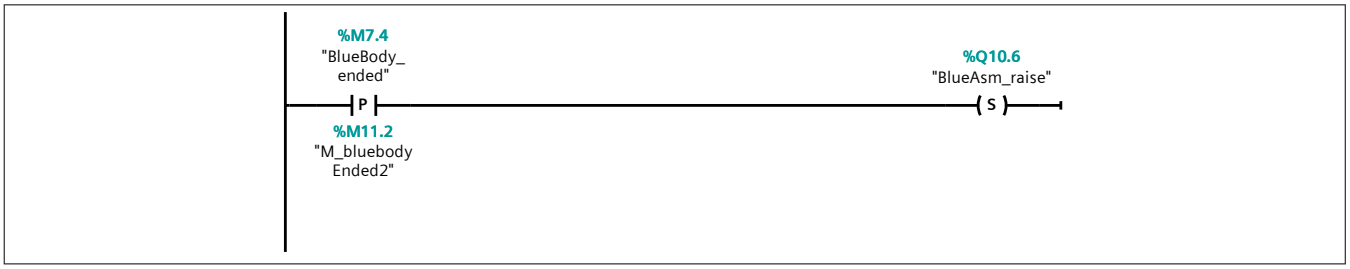
Network 31:

After assembling the products the pick and place will raise a flag that will release the clamp of the positioner and then the positioner will raise allowing the assembled product to be moved from the production line

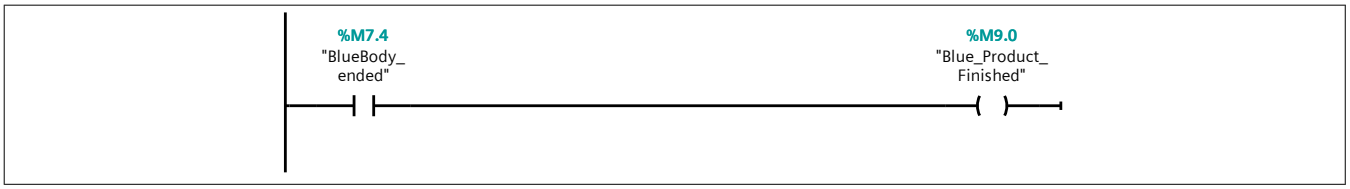


Network 32:

After assembling the products the pick and place will raise a flag that will release the clamp of the positioner and then the positioner will raise allowing the assembled product to be moved from the production line

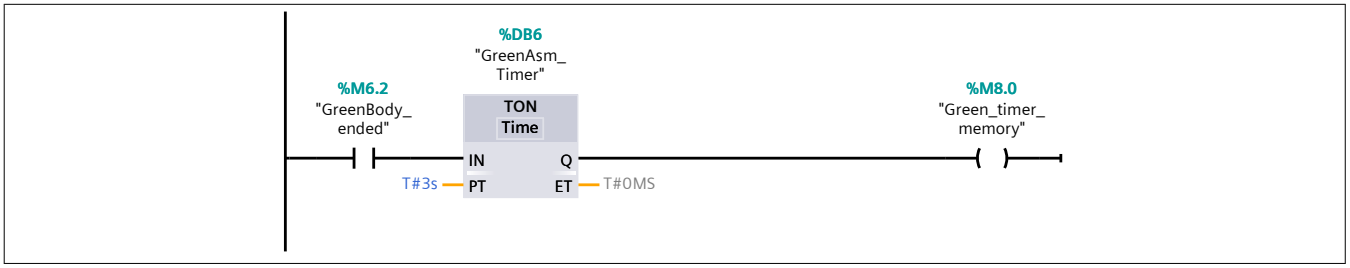


Network 33:



Network 34:

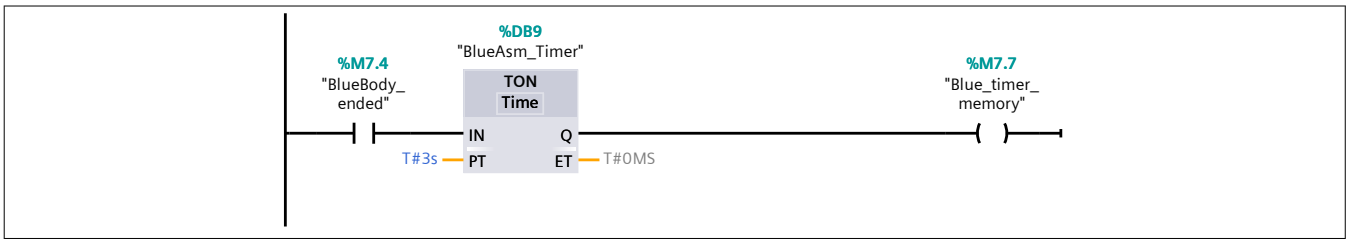
Timer to wait for the assembly positioner after it was raised before it gets down again



Network 35:

Network 36:

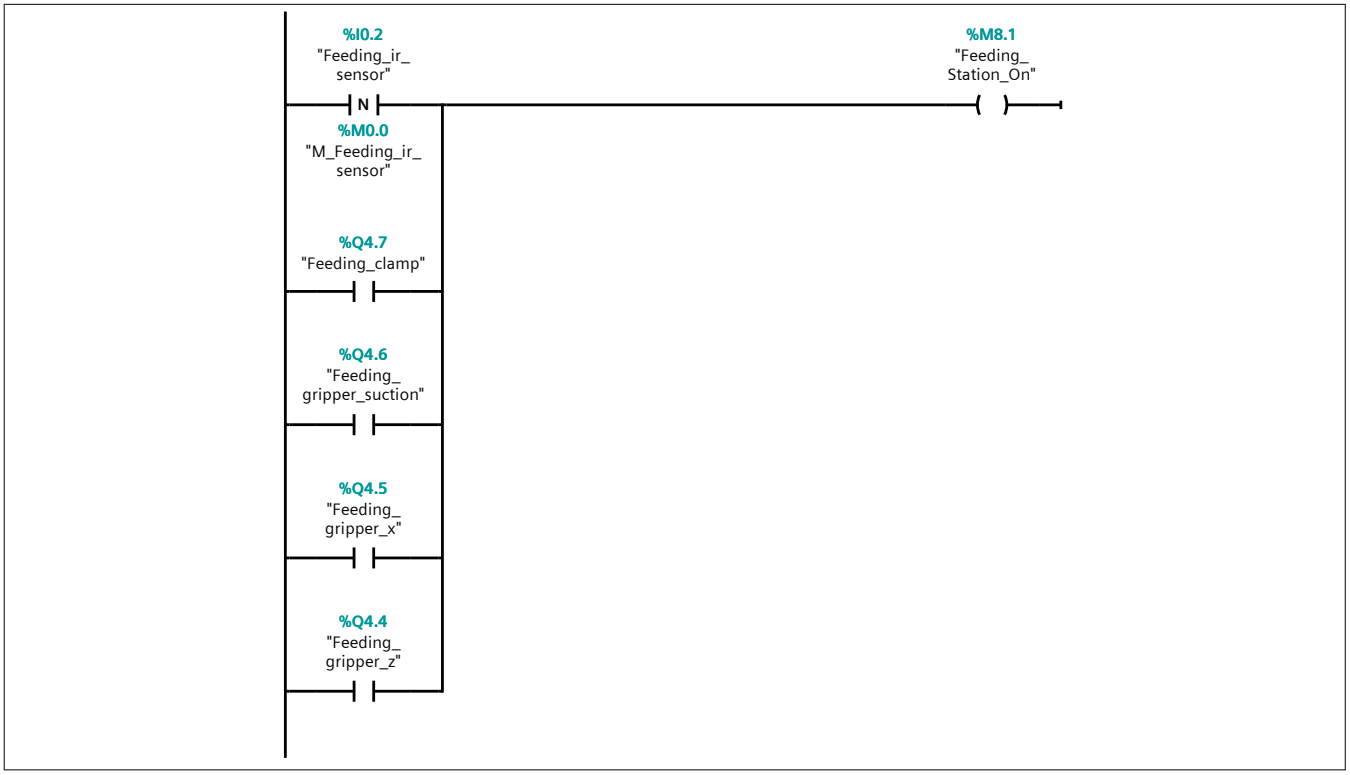
Timer to wait for the assembly positioner after it was raised before it gets down again



Network 37:

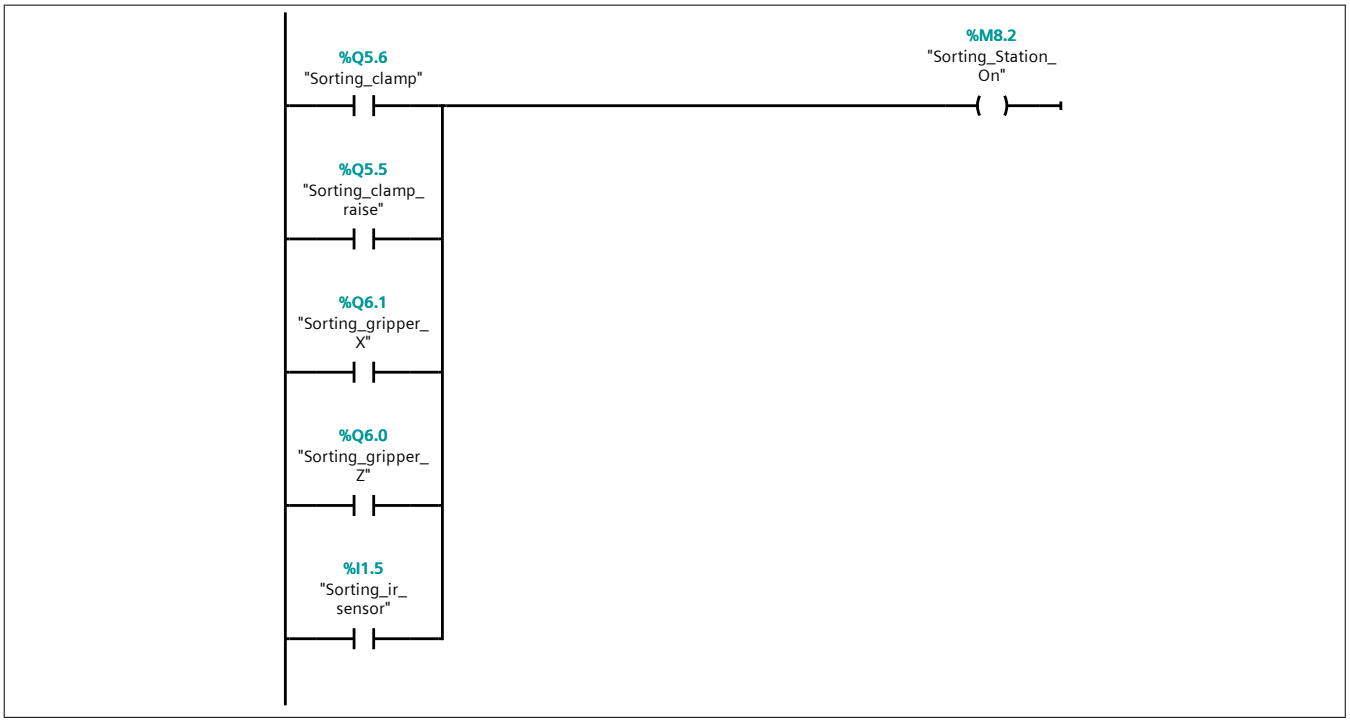
Network 38: Feeding Station State

For HMI, if the feeding sesnor, the positioner, or the pick and place machine are active, indicates the feeding station is active on HMI

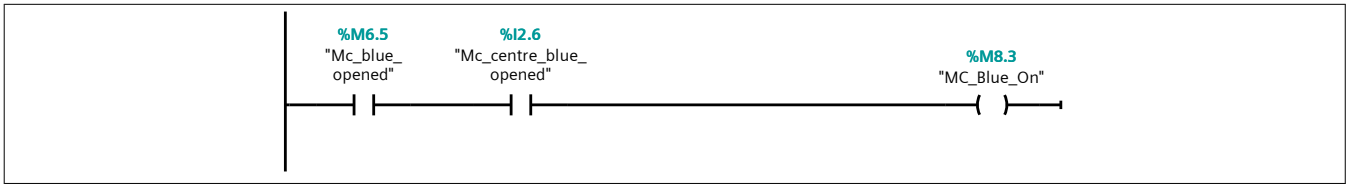


Network 39: Sorting Station State

For HMI, if the sorting sesnor, the positioner, or the pick and place machine are active, indicates the sorting station is active on HMI



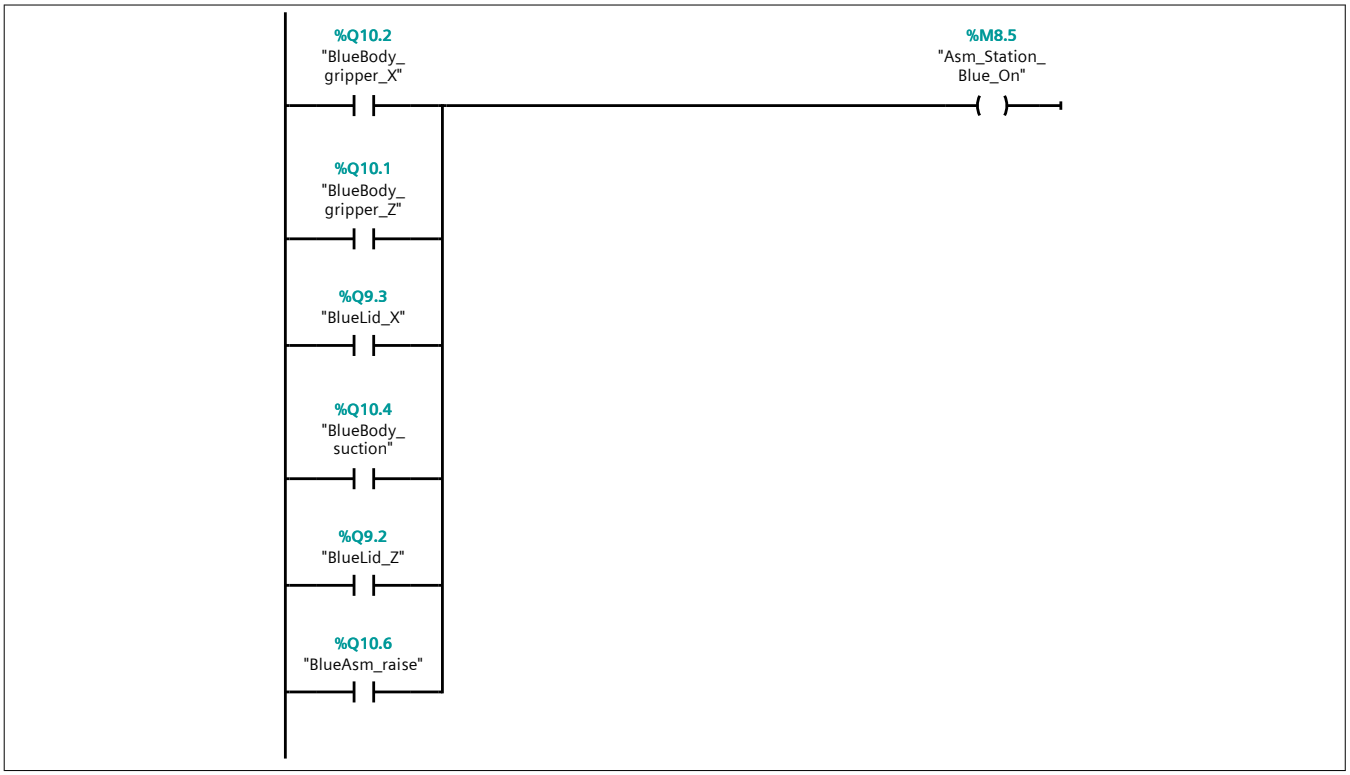
Network 40: Machining Center Blue State



Network 41: Machining Center Green State

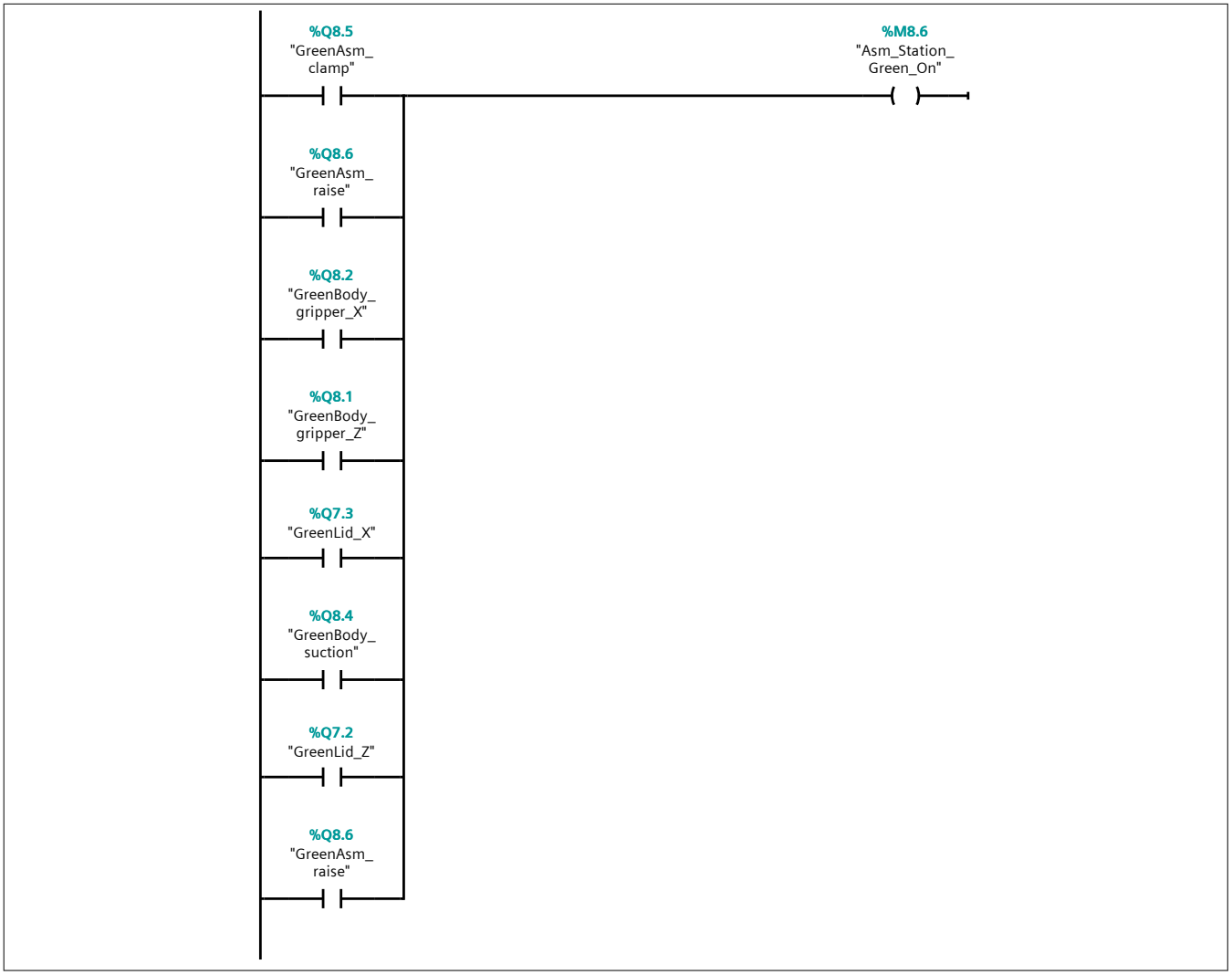
Network 42: Assembly Station Blue State

For HMI, if the pick and place is active, this indicated that assembly station is active on HMI



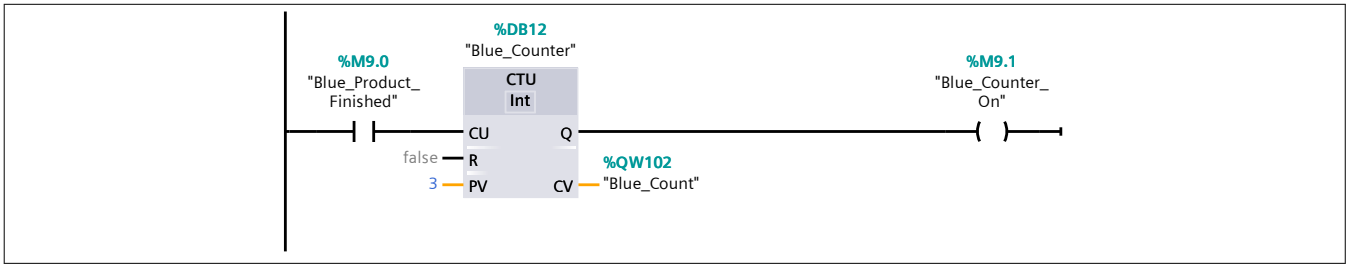
Network 43: Assembly Station Green State

For HMI, if the pick and place is active, this indicated that assembly station is active on HMI



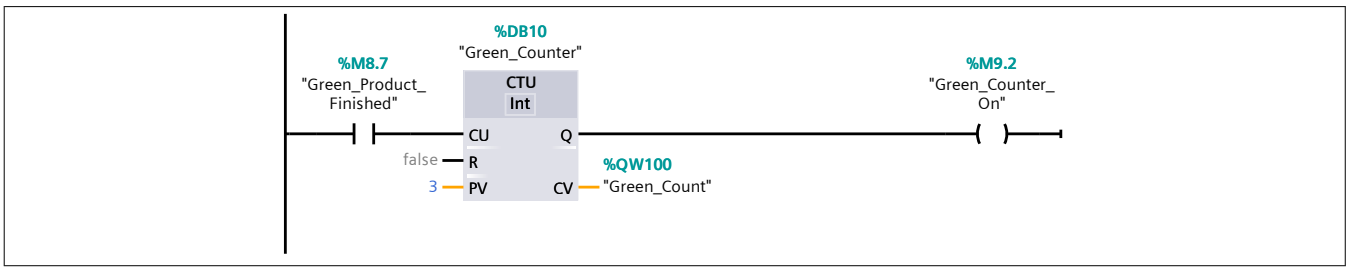
Network 44:

Counter fot the blue parts with preset value 3, the value of the current number is shown on HMI and in factory i/o



Network 45:

Counter fot the blue parts with preset value 3, the value of the current number is shown on HMI and in factory i/o



Network 46:

Stop the production line if the stop or emergency is pushed