AIN SHAMS UNIVERSITY

FACULTY OF ENGINEERING

MECHATRONICS ENGINEERING DEPARTMENT

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MCT 312: Industrial Automation

Project (2): Production Line

Team 9

Submitted to

Dr. Mohammed Ibrahim / Eng. Hesham

Submitted By:

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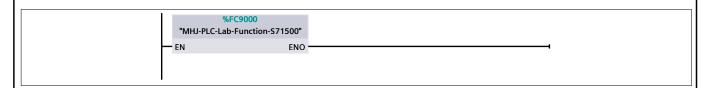
FactoryIO_Template_S7-1500_V15 / PLC_1 [CPU 1511-1 PN] / Program blocks

Main [OB1]

Main Propert	ies				
General					
Name	Main	Number	1	Туре	ОВ
Language	LAD	Numbering	Manual		
Information					
Title	"Main Program Sweep (Cycle)"	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 (milliseconds)
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_Ti me	12.0		Date and time OB1 started
Constant				

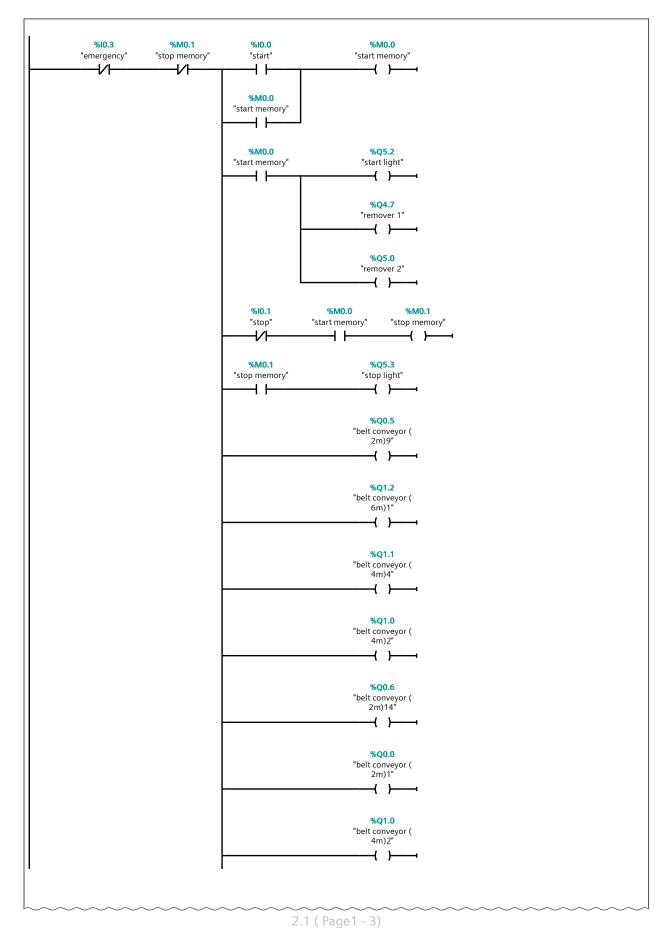
Network 1: connection Function block



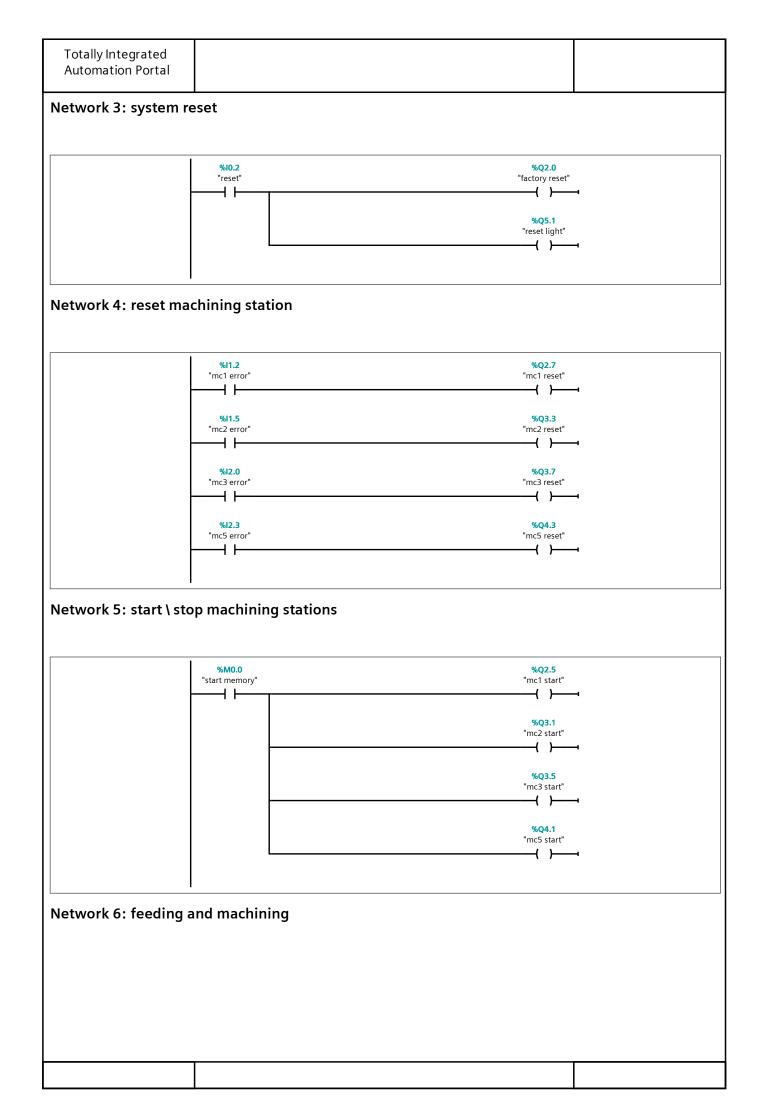
Network 2: system start \ stop

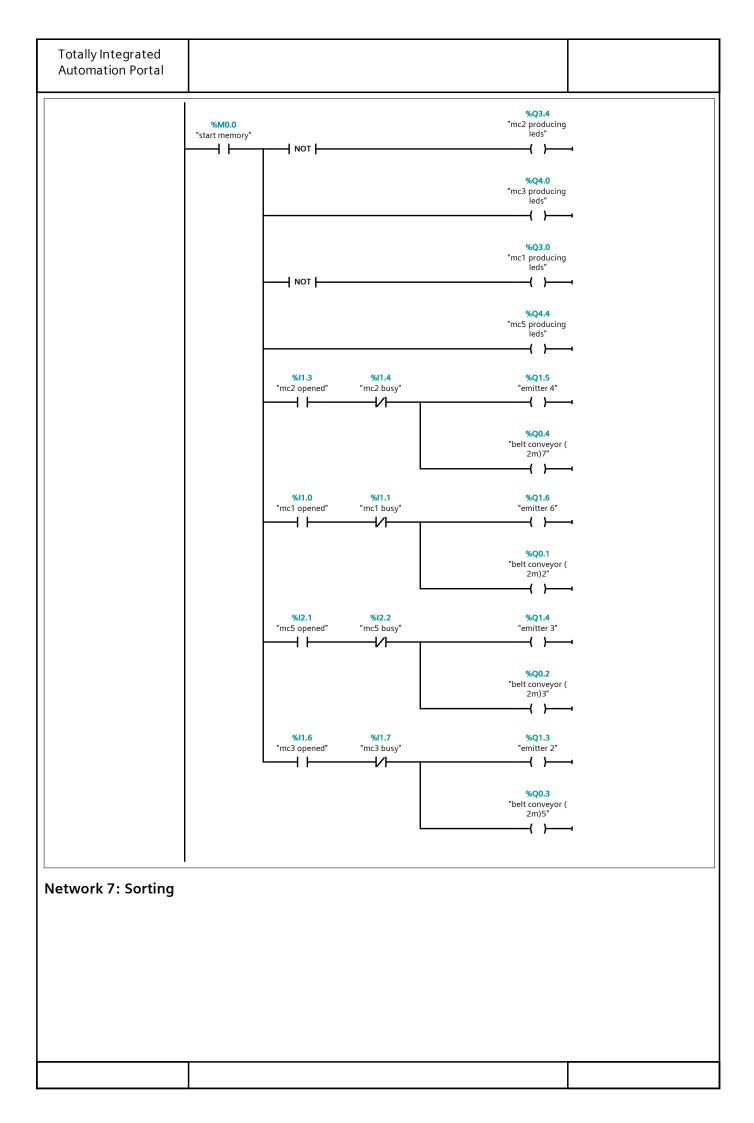
Totally Integrated **Automation Portal**

Network 2: system start \ stop (1.1 / 2.1)

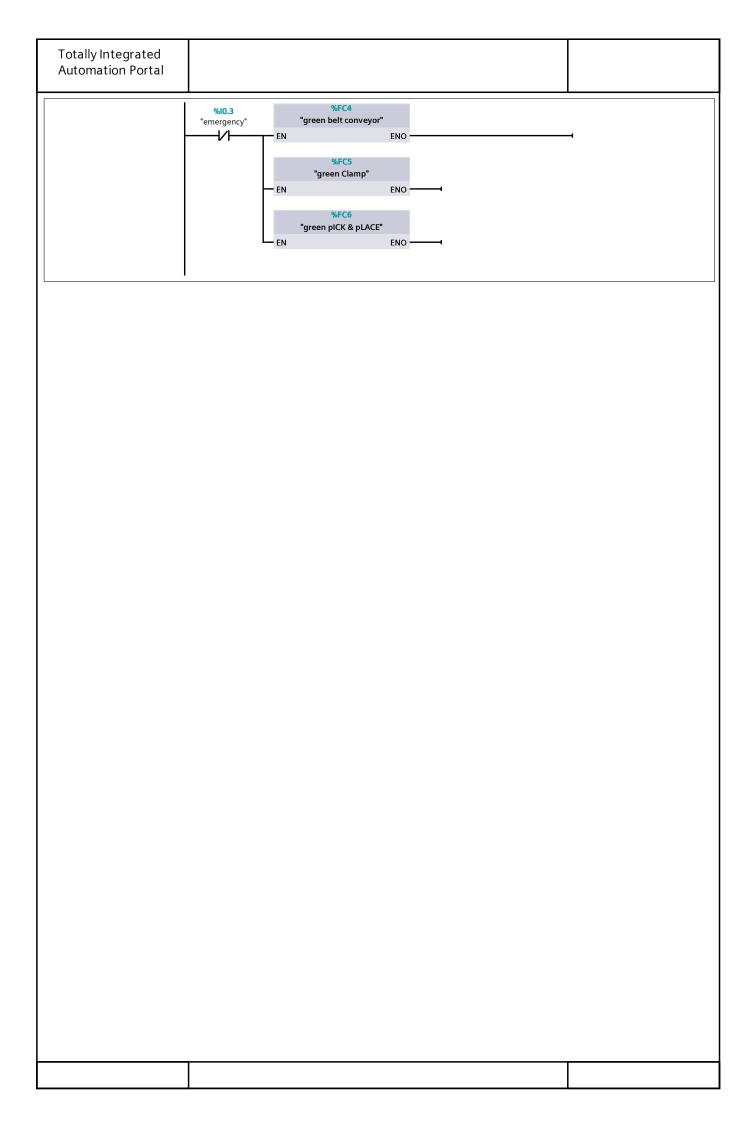


top (2.1 / 2.1)	
1.1 (Page1 - 2)	~~~~~
%Q6.6 "belt conveyor (4m)1" %Q0.0 "belt conveyor (2m)1" %Q7.1 "belt conveyor (6m)4"	
L	
	%Q6.6 "belt conveyor (4m)1"





Totally Integrated **Automation Portal %Q4.5** "pusher 1" %M0.0 %14.2 "start memory" "vision sensor 1" 4 F (s) %I2.5 "pusher 1 front limit" %Q4.5 "pusher 1" \dashv \vdash -(R)-**%Q4.6** "pusher 2" %14.3 "vision sensor 2" **-**| |-**-(** s **)**-%I2.7 "pusher 2 front limit" **%Q4.6** "pusher 2" -(R)-**%Q7.4** "pusher 3" **%I4.4** "vision sensor 3" \dashv \vdash **-(** s **)**-**%I2.4** "pusher 3 front limit" **%Q7.4** "pusher 3" -(R)-**%Q7.5** "pusher 4" %I4.5 "vision sensor 4" $\dashv \vdash$ -(s)-**%I2.6** "pusher 4 front limit" **%Q7.5** "pusher 4" -(R)-Network 8: blue Assymbly %FC1 %10.3 "blue belt conveyor" "emergency" ENO -EN %FC2 "blue Clamp" ENO : %FC3 "blue pICK & pLACE" ENO -Network 9: green assembly



	n Portal							
			4 = 0			4 [65]	4544 4 5	
-actoryl olocks	O_Temp	late_S7	-150	00_V1	5 / PLC_	1 [CPU	1511-1 PI	N] / Program
DIOCKS								
olue belt	conveyor	[FC1]						
General	veyor Properti	es						
Name	blue belt con	veyor	Numb	er	1		Туре	FC
Language	LAD	-	Numb	ering	Automatic			
Information							11 -	
Title			Autho		0.1		Comment	
Family			Versio)T1	0.1		User-defined ID	
			1				JL-	
olue belt con	veyor							
Name		Data t	ype	Defaul	t value	Comm	nent	
Input								
Output InOut								
Temp								
Constant								
▼ Return								
	lt conveyor	Void						
		%M0.0 "start memory"					%Q6.7 "belt conveyor (6m)2" { \$ } %Q7.0 "belt conveyor (
							6m)3" (S)	1
Network 2:							6m)3"	
Network 2:		%M0.0 "start memory"	%Q "right 3	3 raise"	%l3.0 "right 3 limit"	%I0.1 "stop"	6m)3"	
Network 2: Network 3:		"start memory"	"right 3	3 raise"	"right 3 limit"	"stop"	6m)3" { S } %Q7.0 "belt conveyor (6m)3"	

Totally Integrated Automation Portal		
Network 4:		<u> </u>
	%I4.6 "diffuser sensor 1" N %M0.2 "Tag_1"	%Q7.0 "belt conveyor (6m)3" { R }
Network 5:		
	%I5.0 "diffuser sensor 3" N %M0.3 "Tag_2"	%Q6.7 "belt conveyor (6m)2" { R }
Network 6:	ı	
	%I5.0 "diffuser sensor 3" N %M0.4 "Tag_3"	%Q5.7 "right 5 raise" (R) %Q5.5 "right 3 raise" (R)
Network 7:	·	
	%I5.0 "diffuser sensor 3" P EN	

piue Clai	mp [FC2]					
blue Clamp	Properties					
General						
Name	blue Clamp	Num		2	Type	FC
Language	LAD	Num	bering	Automatic		
Information						
Title		Auth Vers		0.1	Comme User-de	
Family		vers	ion	0.1	ID	rinea
blue Clamp		<u> </u>		<u> </u>		
blue Clamp Name		Data type	Default	value	Comment	
Input		Data type	Delault	Talue	Comment	
Output						
InOut						
Temp						
Constant						
▼ Return						
blue C		Void				
	"sta	%M0.0 "diffuent memory"	614.6 eer sensor 1" N		%Q "right 3 (5	5.4 clamp" i
			ag_5"			
Network 2	1	%M0.0 rt memory" "right			%Q "right 3 { F "Lid a	clamp" 1.0

Totally Integrated Automation Portal **%I4.7** "diffuser sensor 2" %Q5.6 "right 5 clamp" %M0.0 "start memory" $\dashv \vdash$ Network 4: %I3.3 "right 5 clamped" P %M1.2 "Tag_8" %Q5.6 "right 5 clamp" %M0.0 "start memory" | | | %M1.3 "base alined" -(s)---

|--|

FactoryIO_Template_S7-1500_V15 / PLC_1 [CPU 1511-1 PN] / Program blocks

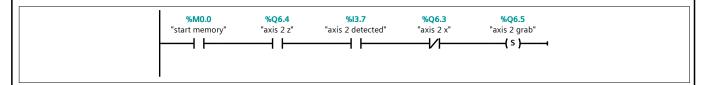
blue pICK & pLACE [FC3]

blue pICK & p	LACE Properties				
General					
Name	blue pICK & pLACE	Number	3	Туре	FC
Language	LAD	Numbering	Automatic		
Information					
Title		Author		Comment	
Family		Version	0.1	User-defined ID	

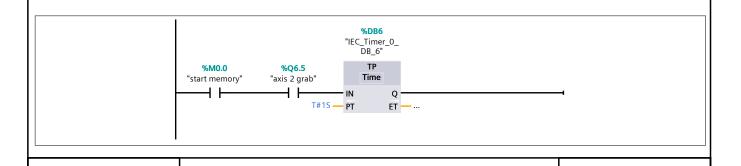
blue pICK & pLACE	olue pICK & pLACE						
Name	Data type	Default value	Comment				
Input							
Output							
InOut							
Temp							
Constant							
▼ Return							
blue pICK & pLACE	Void						

Network 1:

Network 2:



Network 3:



Totally Integrated Automation Portal							
Network 4:							
	%M0.0 "start memory"	"IEC_Timer_0_ DB_6".Q — P %M1.6 "Tag_10"			%Q6.4 "axis 2 z" ————————————————————————————————————	•	
Network 5:	ı						
	%M0.0 "start memory"	%Q6.5 "axis 2 grab"	%I4.0 "axis 2 moving z" N %M2.0 "Tag_12" %I4.0 "axis 2 moving z"	%M1.3 "base alined"	%Q6.3 "axis 2 x" { S }	•	
Network 6:							
	%M0.0 "start memory"	%Q6.3 "axis 2 x"	%Q6.5 "axis 2 grab"	%I4.1 "axis 2 moving x" N %M2.2 "Tag_14"	%Q6.4 "axis 2 z" (S) %M2.3 "MOVE Z BIT 2"	·	
Network 7:	1						
	%M0.0 "start memory"	%Q6.3 "axis 2 x"	%Q6.4 "axis 2 2"	%I4.0 "axis 2 moving z" N %M2.4 "Tag_15"	%Q6.5 "axis 2 grab" (R) %M2.5 "TEMPORARY" (S) %M1.3 "base alined" (R)	1	

Totally Integrated Automation Portal		
Network 8:		
	"start memory" "TEMPORARY" T#1S "NO Q PT ET	
Network 9:	<u>l</u>	
	%M0.0 "start memory" DB".Q "TEMPORARY 2" (S) %M2.7 "TEMPORARY 2" (S) %M2.6 "Tag_16" %Q6.4 "axis 2 2" (R) %M2.3 "MOVE Z BIT 2" (R)	
etwork 10:		
	%M0.0 "start memory" "TEMPORARY 2" T#1S TH 1S "TH 1S "TH 1S "TEMPORARY 2" TIME IN Q PT ET	
letwork 11:	<u> </u>	

Totally Integrated Automation Portal			
	%M0.0 "start memory" P %M3.0 "Tag_17"	%Q6.3 "axis 2 x" { R } %M2.5 "TEMPORARY" { R } %Q5.5 "right 3 raise" { S } %Q5.7 "right 5 raise" { S } %M2.7 "TEMPORARY 2" { R }	•

blocks			50	_	. 5 , 1 LC_	. [0.0		N] / Program
	lt convov	or [EC4]						
green be	lt convey	or [FC4]						
green belt co General	nveyor Prope	erties						
General Name	green belt o	convevor	Numbe	er	4		Туре	FC
Language	LAD		Numbe		Manual		- 7 -	
Information								
Title			Autho		0.4		Comment	
Family			Versio	n	0.1		User-defined ID	
green belt co Name	nveyor	Data	type	Defau	ılt value	Comme	ent	
Input		Data	-Abe	Delau	iit value	Commit	- iil	
Output								
InOut								
Temp								
Constant								
▼ Return								
areen l	pelt conveyor	Void						
	_	%M0.0 "start memory"					"belt conveyor (6m)6" (5) %Q7.2 "belt conveyor (6m)5" (5)	
Network 2	:	%M0.0	%Q2	2.4	%I0.6		%Q7.2 "belt conveyor (
		"start memory"	"right 2		"right 2 limit"		6m)5" (S)	•
Network 3	•							

Totally Integrated Automation Portal			
Network 4:		<u>, </u>	
	%I5.1 "diffuser sensor 4" N %M3.1 "Tag_1(1)"	%Q7.2 "belt conveyor (6m)5"	
Network 5:	1		
	%I5.2 "diffuser sensor 5" N %M3.2 "Tag_2(1)"	%Q7.3 "belt conveyor (6m)6" { R }	
Network 6:	1		
	%I5.3 "diffuser sensor 6" N %M3.3 "Tag_3(1)"	%Q2.2 "right 1 raise" (R) %Q2.4 "right 2 raise" (R)	
Network 7:			
	"diffuser sensor 6" IP %M3.4 "Tag_4(1)" WQD12 "counter 2" IN/OUT		

green Cla						
green Clamp	Properties					
General Name	green Clamp	`	Number	5	Type	FC
	LAD	J	Numbering	Manual	Туре	rc
Language Information	LAD		Numbering	Mariuai		
Title			Author		Comment	
Family			Version	0.1	User-define	2 4
anniny			VCISIOII	0.1	ID	.u
aroon Clama						·
green Clamp Name		Data t	ne Dofou	It value	Comment	
Input		Dataty	ype Delau	it value	Comment	
Output						
InOut						
Temp						
Constant						
Return						
green		Void				
green	:	%M0.0 "start memory"	%I5.1 "diffuser sensor 4" N %M3.5 "Tag_5(1)"		% Q2.3 "right 2 clam { \$ }	
green (:	%M0.0 "start memory"	"diffuser sensor 4" N %M3.5		"right 2 clam	
	:	%M0.0 "start memory"	"diffuser sensor 4" N %M3.5		"right 2 clam	np"

Totally Integrated Automation Portal **%I5.2**"diffuser sensor 5" %Q2.1 "right 1 clamp" %M0.0 "start memory" N | %M4.0 "Tag_7(1)" $\dashv \vdash$ Network 4: %I0.5 "right 1 clamped" | P | | %M4.1 "Tag_8(1)" %Q2.1 "right 1 clamp" ———(R)——— %M0.0 "start memory" | | | **%M4.2** "base alined(1)" _(s)___

FactoryIO_Template_S7-1500_V15 / PLC_1 [CPU 1511-1 PN] / Program blocks

green pICK & pLACE [FC6]

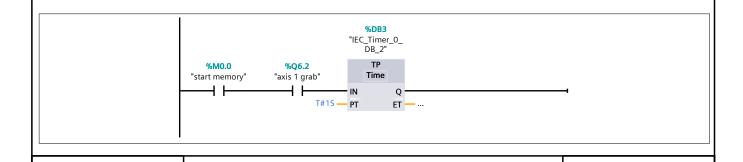
green pICK &	green pICK & pLACE Properties									
General										
Name	green pICK & pLACE	Number	6	Туре	FC					
Language	LAD	Numbering	Manual							
Information										
Title		Author		Comment						
Family		Version	0.1	User-defined						
				ID						

green pICK & pLACE									
Name	Data type	Default value	Comment						
Input									
Output									
InOut									
Temp									
Constant									
▼ Return									
green plCK & pLACE	Void								

Network 1:

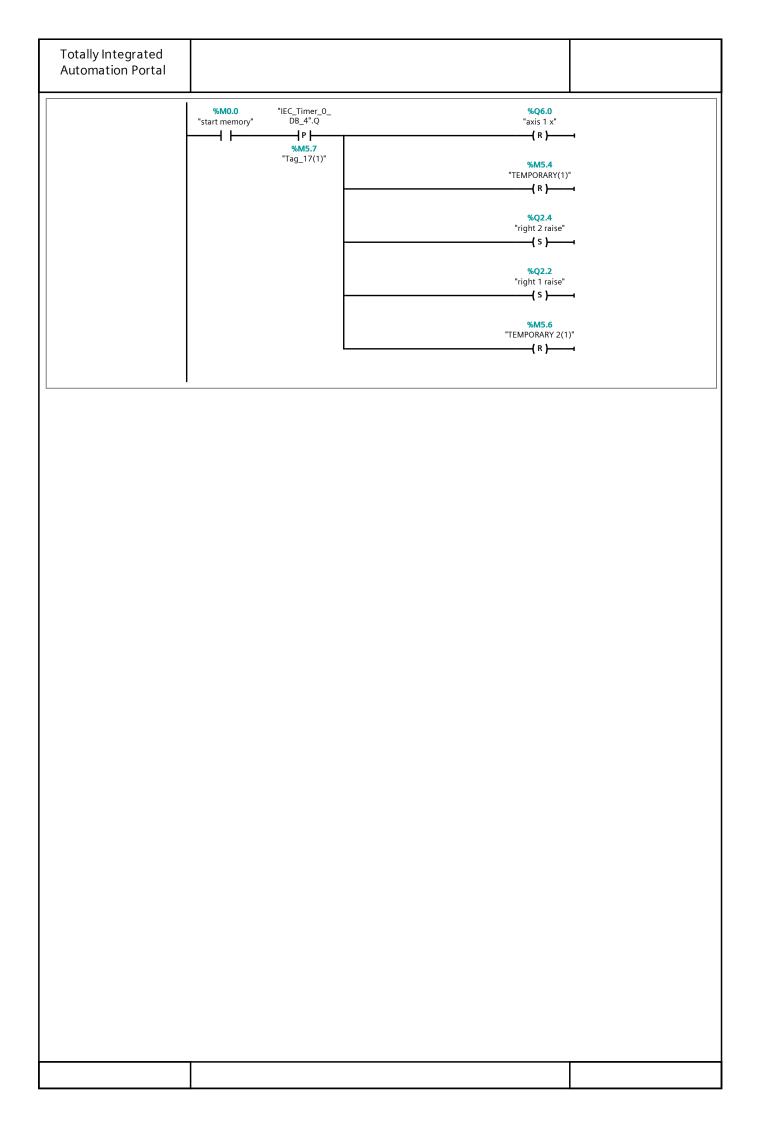
Network 2:

Network 3:



Totally Integrated Automation Portal			
Network 4:			<u> </u>
	"IEC_Timer_0, DB_2".Q P P P MM4.5 "Tag_10(1)"		%Q6.1 "axis 1 z" { R } %M3.7 Lid alined(1)" { R } %M4.4 MOVE Z BIT(1)" { R }
Network 5:	1		
	%M0.0 %Q6.2 "start memory" "axis 1 grab"	%Q6.1	%Q6.0 "axis 1 x" ————————————————————————————————————
Network 6:	<u> </u>		
	%M0.0 %Q6.0 "start memory" "axis 1 x"	%Q6.2 %I3.6 "axis 1 grab" "axis 1 moving x" N %M5.1 "Tag_14(1)" "M	%Q6.1 "axis 1 z" —{ S }—— %M5.2 OVE Z BIT 2(1)" —{ S }——
Network 7:	1		
	%M0.0 %Q6.0 "start memory" "axis 1 x"	MM5.3 "Tag_15(1)"	%Q6.2 "axis 1 grab" ————————————————————————————————————

Totally Integrated Automation Portal	
Network 8:	<u>. I</u>
	"Start memory" "TEMPORARY(1)" T#15 — PT ET
Network 9:	I
	%M0.0 "start memory" P WM5.5 "Tag_16(1)" %M5.2 "MOVE Z BIT 2(1)" R } %M5.2 "MOVE Z BIT 2(1)"
Network 10:	"IEC_Timer_O_ DB_4" %M0.0 "start memory" "TEMPORARY 2(1)" T#1S — PT ET
Network 11:	



ally Integrated	
utomation Portal	

FactoryIO_Template_S7-1500_V15 / PLC_1 [CPU 1511-1 PN]

PLC tags

	Name	Data type	Address	Retain	from HMI/O	ble	ble in HMI engi-	Supervision	Comment
-	start	Bool	%10.0	False	True	True	True		
1	stop	Bool	%IO.1	False	True	True	True		
1	reset	Bool	%10.2	False	True	True	True		
1	emergency	Bool	%10.3	False	True	True	True		
1	right 1 limit	Bool	%10.4	False	True	True	True		
1	right 1 clamped	Bool	%10.5	False	True	True	True		
•	right 2 limit	Bool	%10.6	False	True	True	True		
1	right 2 clamped	Bool	%10.7	False	True	True	True		
-	mc1 opened	Bool	%I1.0	False	True	True	True		
1	mc1 busy	Bool	%I1.1	False	True	True	True		
-	mc1 error	Bool	%I1.2	False	True	True	True		
40	mc2 opened	Bool	%I1.3	False	True	True	True		
40	mc2 busy	Bool	%I1.4	False	True	True	True		
421	mc2 error	Bool	%I1.5	False	True	True	True		
1	mc3 opened	Bool	%I1.6	False	True	True	True		
41	mc3 busy	Bool	%I1.7	False	True	True	True		
-	mc3 error	Bool	%12.0	False	True	True	True		
-00	mc5 opened	Bool	%I2.1	False	True	True	True		
-00	mc5 busy	Bool	%12.2	False	True	True	True		
-	mc5 error	Bool	%12.3	False	True	True	True		
-	pusher 3 front limit	Bool	%12.4	False	True	True	True		
1	pusher 1 front limit	Bool	%12.5	False	True	True	True		
1	pusher 4 front limit	Bool	%I2.6	False	True	True	True		
1	pusher 2 front limit	Bool	%12.7	False	True	True	True		
1	right 3 limit	Bool	%13.0	False	True	True	True		
41	right 3 clamped	Bool	%I3.1	False	True	True	True		
1	start memory	Bool	%M0.0	False	True	True	True		
41	belt conveyor (2m)1	Bool	%Q0.0	False	True	True	True		
41	belt conveyor (2m)2	Bool	%Q0.1	False	True	True	True		
421	belt conveyor (2m)3	Bool	%Q0.2	False	True	True	True		
41	belt conveyor (2m)5	Bool	%Q0.3	False	True	True	True		
421	belt conveyor (2m)7	Bool	%Q0.4	False	True	True	True		
-	belt conveyor (2m)9	Bool	%Q0.5	False	True	True	True		
-	belt conveyor (2m)14	Bool	%Q0.6	False	True	True	True		
1	belt conveyor (4m)2	Bool	%Q1.0	False	True	True	True		
-		Bool	%Q1.1	False	True	True	True		
1	belt conveyor (6m)1	Bool	%Q1.2	False	True	True	True		

	otally Integrated utomation Portal								
N	lame	Data type	Address	Retain	нмі/о	Writa- ble from HMI/O PC UA	ble in HMI engi-	Supervision	Comment
3	emitter 2	Bool	%Q1.3	False	True	True	True		
3	right 5 limit	Bool	%I3.2	False	True	True	True		
101	right 5 clamped	Bool	%I3.3	False	True	True	True		
101	axis 1 detected	Bool	%I3.4	False	True	True	True		
9	axis 1 moving z	Bool	%I3.5	False	True	True	True		
01	axis 1 moving x	Bool	%I3.6	False	True	True	True		
0	axis 2 detected	Bool	%I3.7	False	True	True	True		
3	axis 2 moving z	Bool	%I4.0	False	True	True	True		
OI	axis 2 moving x	Bool	%I4.1	False	True	True	True		
0	vision sensor 1	Bool	%I4.2	False	True	True	True		
0	vision sensor 2	Bool	%I4.3	False	True	True	True		
0	vision sensor 3	Bool	%14.4	False	True	True	True		
101	vision sensor 4	Bool	%I4.5	False	True	True	True		
0	diffuser sensor 1	Bool	%I4.6	False	True	True	True		
0	diffuser sensor 2	Bool	%14.7	False	True	True	True		
101	emitter 3	Bool	%Q1.4	False	True	True	True		
0	emitter 4	Bool	%Q1.5	False	True	True	True		
0	emitter 6	Bool	%Q1.6	False	True	True	True		
131	factory pause	Bool	%Q1.7	False	True	True	True		
131	factory reset	Bool	%Q2.0	False	True	True	True		
101	right 1 clamp	Bool	%Q2.1	False	True	True	True		
0	right 1 raise	Bool	%Q2.2	False	True	True	True		
101	right 2 clamp	Bool	%Q2.3	False	True	True	True		
9	right 2 raise	Bool	%Q2.4	False	True	True	True		
0	mc1 start	Bool	%Q2.5	False	True	True	True		
0	mc1 stop	Bool	%Q2.6	False	True	True	True		
9	mc1 reset	Bool	%Q2.7	False	True	True	True		
0	mc1 producing leds	Bool	%Q3.0	False	True	True	True		
0	mc2 start	Bool	%Q3.1	False	True	True	True		
0	mc2 stop	Bool	%Q3.2	False	True	True	True		
0	mc2 reset	Bool	%Q3.3	False	True	True	True		
0	mc2 producing leds	Bool	%Q3.4	False	True	True	True		
3	mc3 start	Bool	%Q3.5	False	True	True	True		
0	mc3 stop	Bool	%Q3.6	False	True	True	True		
31	mc3 reset	Bool	%Q3.7	False	True	True	True		
3	mc3 producing leds	Bool	%Q3.7 %Q4.0	False	True	True	True		
_	mc5 start	Bool	%Q4.0 %Q4.1	False	True	True	True		
0		Bool	%Q4.1 %Q4.2	False	True	True	True		
0	mc5 stop	Bool	%Q4.2 %Q4.3	False	True	True	True		
0	mc5 reset	Bool		False	True				
0	mc5 producing leds		%Q4.4			True	True		
3	pusher 1	Bool	%Q4.5	False	True	True	True		

	otally Integrated utomation Portal								
Name		Data type	Address	Retain	from HMI/O	ble	ble in HMI engi-	Supervision	Comment
0	pusher 2	Bool	%Q4.6	False	True	True	True		
0	remover 1	Bool	%Q4.7	False	True	True	True		
0	remover 2	Bool	%Q5.0	False	True	True	True		
0	reset light	Bool	%Q5.1	False	True	True	True		
101	start light	Bool	%Q5.2	False	True	True	True		
0	stop light	Bool	%Q5.3	False	True	True	True		
0	right 3 clamp	Bool	%Q5.4	False	True	True	True		
13	right 3 raise	Bool	%Q5.5	False	True	True	True		
131	right 5 clamp	Bool	%Q5.6	False	True	True	True		
0	right 5 raise	Bool	%Q5.7	False	True	True	True		
201	axis 1 x	Bool	%Q6.0	False	True	True	True		
1	axis 1 z	Bool	%Q6.1	False	True	True	True		
101	axis 1 grab	Bool	%Q6.2	False	True	True	True		
0	axis 2 x	Bool	%Q6.3	False	True	True	True		
101	axis 2 z	Bool	%Q6.4	False	True	True	True		
0	axis 2 grab	Bool	%Q6.5	False	True	True	True		
101	stop memory	Bool	%M0.1	False	True	True	True		
70	diffuser sensor 3	Bool	%15.0	False	True	True	True		
10	diffuser sensor 4	Bool	%I5.1	False	True	True	True		
101	diffuser sensor 5	Bool	%15.2	False	True	True	True		
1	diffuser sensor 6	Bool	%15.3	False	True	True	True		
10	belt conveyor (4m)1	Bool	%Q6.6	False	True	True	True		
10	belt conveyor (6m)2	Bool	%Q6.7	False	True	True	True		
0	belt conveyor (6m)3	Bool	%Q7.0	False	True	True	True		
0	belt conveyor (6m)4	Bool	%Q7.1	False	True	True	True		
0	belt conveyor (6m)5	Bool	%Q7.2	False	True	True	True		
0	belt conveyor (6m)6	Bool	%Q7.3	False	True	True	True		
0	pusher 3	Bool	%Q7.4	False	True	True	True		
0	pusher 4	Bool	%Q7.5	False	True	True	True		
101	counter blue	UDInt	%QD8	False	True	True	True		
10	counter green	UDInt	%QD31	False	True	True	True		
100	Tag_1	Bool	%M0.2	False	True	True	True		
3	Tag_2	Bool	%M0.3	False	True	True	True		
OI .	Tag_3	Bool	%M0.4	False	True	True	True		
igii (Tag_4	Bool	%M0.5	False	True	True	True		
3	Tag_5	Bool	%M0.6	False	True	True	True		
101	Tag_6	Bool	%M0.7	False	True	True	True		
3	Lid alined	Bool	%M1.0	False	True	True	True		
101	Tag_7	Bool	%M1.1	False	True	True	True		
101	Tag_8	Bool	%M1.2	False	True	True	True		
0	base alined	Bool	%M1.3	False	True	True	True		

	otally Integrated utomation Portal								
Name		Data type	Address		sible from HMI/O	Writa- ble from HMI/O PC UA	ble in HMI engi-	Supervision	Comment
3	Tag_9	Bool	%M1.4	False	True	True	True		
101	MOVE Z BIT	Bool	%M1.5	False	True	True	True		
101	Tag_10	Bool	%M1.6	False	True	True	True		
0	Tag_11	Bool	%M1.7	False	True	True	True		
0	Tag_12	Bool	%M2.0	False	True	True	True		
0	Tag_13	Bool	%M2.1	False	True	True	True		
10	Tag_14	Bool	%M2.2	False	True	True	True		
10	MOVE Z BIT 2	Bool	%M2.3	False	True	True	True		
12	Tag_15	Bool	%M2.4	False	True	True	True		
•	TEMPORARY	Bool	%M2.5	False	True	True	True		
1	Tag_16	Bool	%M2.6	False	True	True	True		
•	TEMPORARY 2	Bool	%M2.7	False	True	True	True		
1	Tag_17	Bool	%M3.0	False	True	True	True		
1	Tag_1(1)	Bool	%M3.1	False	True	True	True		
41	Tag_2(1)	Bool	%M3.2	False	True	True	True		
•	Tag_3(1)	Bool	%M3.3	False	True	True	True		
1	Tag_4(1)	Bool	%M3.4	False	True	True	True		
•	Tag_5(1)	Bool	%M3.5	False	True	True	True		
1	Tag_6(1)	Bool	%M3.6	False	True	True	True		
1	Lid alined(1)	Bool	%M3.7	False	True	True	True		
1	Tag_7(1)	Bool	%M4.0	False	True	True	True		
10	Tag_8(1)	Bool	%M4.1	False	True	True	True		
10	base alined(1)	Bool	%M4.2	False	True	True	True		
10	Tag_9(1)	Bool	%M4.3	False	True	True	True		
10	MOVE Z BIT(1)	Bool	%M4.4	False	True	True	True		
1	Tag_10(1)	Bool	%M4.5	False	True	True	True		
(1)	Tag_11(1)	Bool	%M4.6	False	True	True	True		
10	Tag_12(1)	Bool	%M4.7	False	True	True	True		
93	Tag_13(1)	Bool	%M5.0	False	True	True	True		
93	Tag_14(1)	Bool	%M5.1	False	True	True	True		
1	MOVE Z BIT 2(1)	Bool	%M5.2	False	True	True	True		
1	Tag_15(1)	Bool	%M5.3	False	True	True	True		
1	TEMPORARY(1)	Bool	%M5.4	False	True	True	True		
1	Tag_16(1)	Bool	%M5.5	False	True	True	True		
	TEMPORARY 2(1)	Bool	%M5.6	False	True	True	True		
1	Tag_17(1)	Bool	%M5.7	False	True	True	True		
•	tag 18	Bool	%M6.0	False	True	True	True		
•	counter 2	UDInt	%QD12	False	True	True	True		

Project file				
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