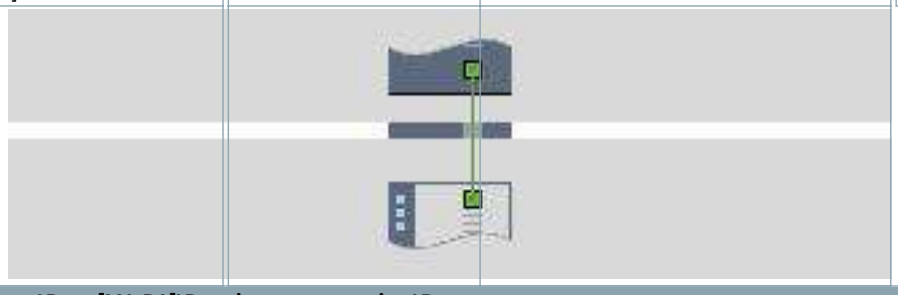
PLC_1 [CPU 1211C DC/DC/DC]

PLC_1					
General\Project information					
Name	PLC_1	**Author**	i72014	**Comment**	
Slot	1	**Rack**	0		
General\Catalog information					
Short designation	CPU 1211C DC/DC/DC	**Description**	Work memory 50 KB; 24VDC power supply with DI6 x 24VDC SINK/ SOURCE, DQ4 x 24VDC and AI2 on board; 3 high-speed counters (expandable with digital signal board) and 4 pulse outputs on board; signal board expands on-board I/O; up to 3 communication modules for serial communication; 0.04 ms/1000 instructions; PROFINET interface for programming, HMI and PLC to PLC communication	**Article number**	6ES7 211-1AE40-0XB0
Firmware version	V4.1				
General\Identification & Maintenance					
Plant designation		**Location identifier**		**Installation date**	2016-04-07 09:52:18.455
Additional information					
PROFINET interface [X1]\General					
Name	PROFINET-Schnittstelle_1	**Author**	i72014	**Comment**	
PROFINET interface [X1]\General\Project information					
Name	DI 6/DQ 4_1	**Comment**		**Name**	AI 2_1
Comment					
PROFINET interface [X1]\Ethernet addresses\Interface networked with					
Subnet:	PN/IE_1				
PROFINET interface [X1]\Ethernet addresses\IP protocol					
IP configuration	Set IP address in the project	**IP address:**	192.168.0.1	**Subnet mask:**	255.255.255.0
Use router	False				
PROFINET interface [X1]\Ethernet addresses\PROFINET					
PROFINET device name is set directly at the device	False	**Generate PROFINET device name automatically**	True	**PROFINET device name:**	plc_1
Converted name:	plcxb1d0ed	**Device number:**	0		
PROFINET interface [X1]\Time synchronization					
Enable time synchronization via NTP server	Enable time synchronization via NTP server		IP addresses	**Server 1**	0.0.0.0
Server 2	0.0.0.0	**Server 3**	0.0.0.0	**Server 4**	0.0.0.0
Update interval	10sec				
PROFINET interface [X1]\Digital inputs\Channel0					
Channel address	I0.0	**Input filters**	6.4 millisec	**Enable pulse catch**	0
PROFINET interface [X1]\Digital inputs\Channel0					
Enable rising edge detection	0	**RidPrefixRisingEdgeEvent**	49152	**Event name:**	0
Hardware interrupt:	0	**Rising edge0**	Rising edge0		
PROFINET interface [X1]\Digital inputs\Channel0					
Enable falling edge detection	0	**RidPrefixFallingEdgeEvent**	49280	**Event name:**	0
Hardware interrupt:	0	**Falling edge0**	Falling edge0		
PROFINET interface [X1]\Digital inputs\Channel1					
Channel address	I0.1	**Input filters**	6.4 millisec	**Enable pulse catch**	0
PROFINET interface [X1]\Digital inputs\Channel1					
Enable rising edge detection	0	**RidPrefixRisingEdgeEvent**	49153	**Event name:**	0
Hardware interrupt:	0	**Rising edge1**	Rising edge1		
PROFINET interface [X1]\Digital inputs\Channel1					
Enable falling edge detection	0	**RidPrefixFallingEdgeEvent**	49281	**Event name:**	0
Hardware interrupt:	0	**Falling edge1**	Falling edge1		
PROFINET interface [X1]\Digital inputs\Channel2					
Channel address	I0.2	**Input filters**	6.4 millisec	**Enable pulse catch**	0
PROFINET interface [X1]\Digital inputs\Channel2					
Enable rising edge detection	0	**RidPrefixRisingEdgeEvent**	49154	**Event name:**	0
Hardware interrupt:	0	**Rising edge2**	Rising edge2		
PROFINET interface [X1]\Digital inputs\Channel2					
Enable falling edge detection	0	**RidPrefixFallingEdgeEvent**	49282	**Event name:**	0
Hardware interrupt:	0	**Falling edge2**	Falling edge2		
PROFINET interface [X1]\Digital inputs\Channel3					
Channel address	I0.3	**Input filters**	6.4 millisec	**Enable pulse catch**	0
PROFINET interface [X1]\Digital inputs\Channel3					
Enable rising edge detection	0	**RidPrefixRisingEdgeEvent**	49155	**Event name:**	0
Hardware interrupt:	0	**Rising edge3**	Rising edge3		
PROFINET interface [X1]\Digital inputs\Channel3					
Enable falling edge detection	0	**RidPrefixFallingEdgeEvent**	49283	**Event name:**	0
Hardware interrupt:	0	**Falling edge3**	Falling edge3		
PROFINET interface [X1]\Digital inputs\Channel4					
Channel address	I0.4	**Input filters**	6.4 millisec	**Enable pulse catch**	0

PROFINET interface [X1]\Digital inputs\Channel4					
Enable rising edge detection	0	**RidPrefixRisingEdgeEvent**	49156	**Event name:**	0
Hardware interrupt:	0	**Rising edge4**	Rising edge4		
PROFINET interface [X1]\Digital inputs\Channel4					
Enable falling edge detection	0	**RidPrefixFallingEdgeEvent**	49284	**Event name:**	0
Hardware interrupt:	0	**Falling edge4**	Falling edge4		
PROFINET interface [X1]\Digital inputs\Channel5					
Channel address	I0.5	**Input filters**	6.4 millisec	**Enable pulse catch**	0
PROFINET interface [X1]\Digital inputs\Channel5					
Enable rising edge detection	0	**RidPrefixRisingEdgeEvent**	49157	**Event name:**	0
Hardware interrupt:	0	**Rising edge5**	Rising edge5		
PROFINET interface [X1]\Digital inputs\Channel5					
Enable falling edge detection	0	**RidPrefixFallingEdgeEvent**	49285	**Event name:**	0
Hardware interrupt:	0	**Falling edge5**	Falling edge5		
PROFINET interface [X1]\Analog inputs\Noise reduction					
Integration time	50 Hz (20 ms)				
PROFINET interface [X1]\Analog inputs\Channel0					
Channel address	IW64	**Measurement type**	Voltage	**Voltage range**	0..10 V
Smoothing	Weak (4 cycles)			**Enable overflow diagnostics**	1
PROFINET interface [X1]\Analog inputs\Channel1					
Channel address	IW66	**Measurement type**	Voltage	**Voltage range**	0..10 V
Smoothing	Weak (4 cycles)			**Enable overflow diagnostics**	1
PROFINET interface [X1]\Digital outputs					
Reaction to CPU STOP	Use substitute value				
PROFINET interface [X1]\Digital outputs\Channel0					
Channel address	Q0.0	**Substitute a value of 1 on a change from RUN to STOP.**	0		
PROFINET interface [X1]\Digital outputs\Channel1					
Channel address	Q0.1	**Substitute a value of 1 on a change from RUN to STOP.**	0		
PROFINET interface [X1]\Digital outputs\Channel2					
Channel address	Q0.2	**Substitute a value of 1 on a change from RUN to STOP.**	0		
PROFINET interface [X1]\Digital outputs\Channel3					
Channel address	Q0.3	**Substitute a value of 1 on a change from RUN to STOP.**	0		
PROFINET interface [X1]\Operating mode					
IO controller	True	**IO system**		**Device number**	0
IO device	False				
PROFINET interface [X1]\I/O addresses\Input addresses					
Start address	0.0	**End address**	0.7	**Organization block**	65535
Process image	65535				
PROFINET interface [X1]\I/O addresses\Input addresses					
Start address	64	**End address**	67	**Organization block**	65535
Process image	65535				
PROFINET interface [X1]\I/O addresses\Output addresses					
Start address	0.0	**End address**	0.7	**Organization block**	0
Process image	0				
PROFINET interface [X1]\Advanced options\Interface options					
Support device replacement without exchangeable medium	True	**Permit overwriting of device names of all assigned IO devices**	False	**Use IEC V2.2 LLDP mode**	False
Keep-Alive connection monitoring	30s				
PROFINET interface [X1]\Advanced options\Real time settings\IO communication					
Send clock:	1.000ms				
PROFINET interface [X1]\Advanced options\Real time settings\Real time options					
Calculated bandwidth for cyclic IO data:	0.000ms	**Calculated bandwidth for cyclic IO data:**	0.000%		
PROFINET interface [X1]\Advanced options\Port [X1 P1]\General					
Name	Port_1	**Author**	i72014	**Comment**	
PROFINET interface [X1]\Advanced options\Port [X1 P1]\Port interconnection\Local port:					
Local port:	PLC_1\PROFINET-Schnittstelle_1 [X1]\Port_1 [X1 P1]	**Medium:**	Copper	**Cable name:**	---
					
PROFINET interface [X1]\Advanced options\Port [X1 P1]\Port interconnection\Partner port:					
	Monitoring of partner port is not possible	**Partner port:**	Any partner		

PROFINET interface [X1]\Advanced options\Port [X1 P1]\Port options\Activate					
Activate this port for use	True				
PROFINET interface [X1]\Advanced options\Port [X1 P1]\Port options\Connection					
Transmission rate / duplex:	Automatic	**Monitor**	False	**Enable autonegotiation**	True
PROFINET interface [X1]\Advanced options\Port [X1 P1]\Port options\Boundaries					
End of detection of accessible devices	False	**End of topology discovery**	False	**End of the sync domain**	False
PROFINET interface [X1]\Web server access					
Enable Web server using this interface	False	**The Web server must also be activated in the properties of the PLC.**			
High speed counters (HSC)\HSC1\General\Enable					
Enable this high speed counter	0	**Enable this high speed counter**	0	**Enable this high speed counter**	0
Enable this high speed counter	0	**Enable this high speed counter**	0	**Enable this high speed counter**	0
High speed counters (HSC)\HSC1\General\Project information					
Name	HSC_1	**Comment**		**Name**	HSC_2
Comment		**Name**	HSC_3	**Comment**	
Name	HSC_4	**Comment**		**Name**	HSC_5
Comment		**Name**	HSC_6	**Comment**	
High speed counters (HSC)\HSC1\I/O addresses\Input addresses					
Start address	1000.0	**End address**	1003.7	**Start address**	1004.0
End address	1007.7	**Organization block**	0	**Start address**	1008.0
End address	1011.7	**Organization block**	0	**Process image**	0
Start address	1012.0	**End address**	1015.7	**Organization block**	0
Process image	0	**Start address**	1016.0	**End address**	1019.7
Organization block	0	**Process image**	0	**Start address**	1020.0
End address	1023.7	**Organization block**	0	**Process image**	0
Organization block	0	**Process image**	0	**Process image**	0
Pulse generators (PTO/PWM)\PTO1/PWM1\General\Enable					
Enable this pulse generator	0	**Enable this pulse generator**	0		
Pulse generators (PTO/PWM)\PTO1/PWM1\General\Project information					
Name	Pulse_1	**Comment**		**Name**	Pulse_2
Comment					
Pulse generators (PTO/PWM)\PTO1/PWM1\I/O addresses\Output addresses					
Start address	1000.0	**End address**	1001.7	**Start address**	1002.0
End address	1003.7	**Organization block**	0	**Organization block**	0
Process image	0	**Process image**	0		
Startup					
Startup after POWER ON	Warm restart - mode before POWER OFF	**Comparison preset to actual configuration**	Startup CPU even if mismatch	**Configuration time**	60000ms
OBs should be interruptible	1				
Cycle					
Cycle monitoring time	150ms			**Enable minimum cycle time for cyclic OBs**	1
Minimum cycle time	30ms				
Communication load					
Cycle load due to communication	20%				
System and clock memory\System memory bits					
Enable the use of system memory byte	0	**Address of system memory byte (MBx)**	1	**First cycle**	
Diagnostic status changed		**Always 1 (high)**		**Always 0 (low)**	
System and clock memory\Clock memory bits					
Enable the use of clock memory byte	0	**Address of clock memory byte (MBx)**	0	**10 Hz clock**	
5 Hz clock		**2.5 Hz clock**		**2 Hz clock**	
1.25 Hz clock		**1 Hz clock**		**0.625 Hz clock**	
0.5 Hz clock					
Web server\General					
Activate Web server on all modules of this device	False	**Permit access only with HTTPS**	True		
Web server\Automatic update					
Enable automatic update	True	**Update interval**	0s		

Web server\User interface languages

Assign project language	User interface languages
English (United States)	German
English (United States)	English
English (United States)	French
English (United States)	Spanish
English (United States)	Italian
English (United States)	Chinese (simplified)

Web server\User management

User name	User rights
Everybody	

Web server\User defined web pages

Application name	HTML source path	Default HTML page	Files with dynamic content	Web DB number	Fragment DB number
		index.htm	.htm;.html	333	334

Web server\Overview of interfaces		
Device	**Interface**	**Enabled web server access**
PLC_1	PROFINET-Schnittstelle_1	False

User interface languages	
Assign project language	**User interface languages**
English (United States)	German
English (United States)	English
English (United States)	French
English (United States)	Spanish
English (United States)	Italian
English (United States)	Chinese (simplified)

Time of day\Local time					
Time zone	(UTC +01:00) Berlin, Bern, Brussels, Rome, Stockholm, Vienna				

Time of day\Daylight saving time					
Activate daylight saving time	1	**Difference between standard and daylight saving time**	60mins		

Time of day\Daylight saving time\Start of daylight saving time					
Starting week of the month:	Last		Sunday	**of**	March
at	01:00 a.m.				

Time of day\Daylight saving time\Start of standard time					
	Last		Sunday	**of**	October
at	02:00 a.m.				

Protection & Security	
Level of protection	No protection

Protection & Security\Connection mechanisms	
Permit access with PUT/GET communication from remote partner	True

Configuration control\Configuration control for central configuration	
Allow to reconfigure the device via the user program	0

Connection resources

	Station resources - Reserved - Maximum	Station resources - Reserved - Configured	Station resources - Dynamic - Configured	Module resources - PLC_1 [CPU 1211C DC/DC/DC] - Configured
Maximum number of resources:		62	6	68
	Maximum	Configured	Configured	Configured
PG communication:	4	-	-	-
HMI communication:	12	2	0	2
S7 communication:	8	0	0	0
Open user communication:	8	0	0	0
Web communication:	30	-	-	-
Other communication:	-	-	0	0
Total resources used:		2	0	2
Available resources:		60	6	66

Overview of addresses\Overview of addresses\Overview of addresses					
Inputs	True	**Outputs**	True	**Address gaps**	False
Slot	True				

Type	Addr. from	Addr. to	Module	PIP	Device name	Device number	Size	Master / IO system	Rack	Slot
I	0	0	DI 6/DQ 4_1	None	PLC_1 [CPU 1211C DC/DC/DC]	-	1 Bytes	-	0	1 1
O	0	0	DI 6/DQ 4_1	Automatic update	PLC_1 [CPU 1211C DC/DC/DC]	-	1 Bytes	-	0	1 1
I	64	67	AI 2_1	None	PLC_1 [CPU 1211C DC/DC/DC]	-	4 Bytes	-	0	1 2
I	1000	1003	HSC_1	Automatic update	PLC_1 [CPU 1211C DC/DC/DC]	-	4 Bytes	-	0	1 16
I	1004	1007	HSC_2	Automatic update	PLC_1 [CPU 1211C DC/DC/DC]	-	4 Bytes	-	0	1 17
I	1008	1011	HSC_3	Automatic update	PLC_1 [CPU 1211C DC/DC/DC]	-	4 Bytes	-	0	1 18
I	1012	1015	HSC_4	Automatic update	PLC_1 [CPU 1211C DC/DC/DC]	-	4 Bytes	-	0	1 19
I	1016	1019	HSC_5	Automatic update	PLC_1 [CPU 1211C DC/DC/DC]	-	4 Bytes	-	0	1 20
I	1020	1023	HSC_6	Automatic update	PLC_1 [CPU 1211C DC/DC/DC]	-	4 Bytes	-	0	1 21
O	1000	1001	Pulse_1	Automatic update	PLC_1 [CPU 1211C DC/DC/DC]	-	2 Bytes	-	0	1 32
O	1002	1003	Pulse_2	Automatic update	PLC_1 [CPU 1211C DC/DC/DC]	-	2 Bytes	-	0	1 33
O	1004	1005	Pulse_3	Automatic update	PLC_1 [CPU 1211C DC/DC/DC]	-	2 Bytes	-	0	1 34
O	1006	1007	Pulse_4	Automatic update	PLC_1 [CPU 1211C DC/DC/DC]	-	2 Bytes	-	0	1 35

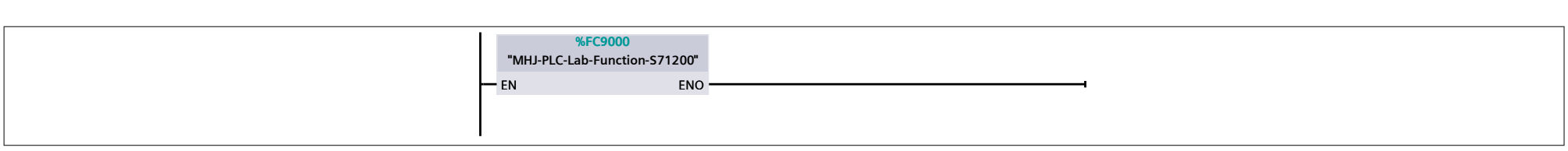
PLC_1 [CPU 1211C DC/DC/DC] / Program blocks

Main [OB1]

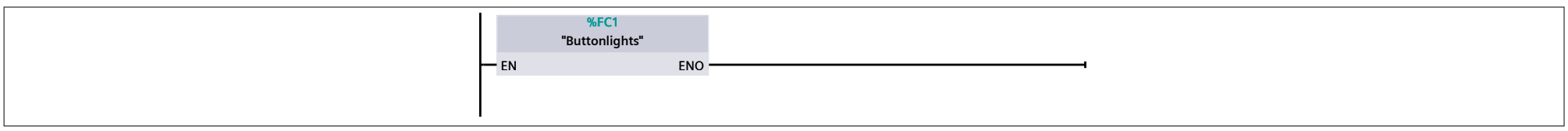
Main Properties							
General							
Name	Main	**Number**	1	**Type**	OB	**Language**	LAD
Numbering	Automatic						
Information							
Title	"Main Program Sweep (Cycle)"	**Author**		**Comment**		**Family**	
Version	0.1	**User-defined ID**					

Name	Data type	Default value	Comment
▼ Input			
Initial_Call	Bool		Initial call of this OB
Remanence	Bool		=True, if remanent data are available
Temp			
Constant			

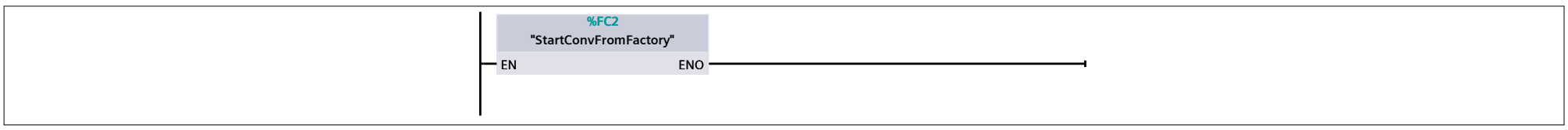
Network 1:



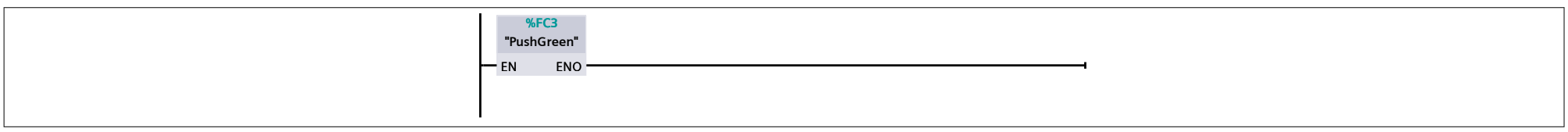
Network 2: Anabei ta fwta apo ta koumpia sto factory i/o



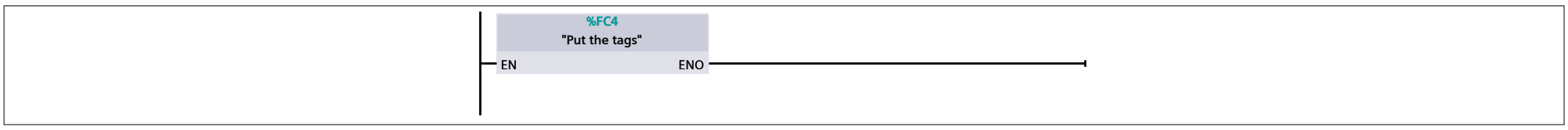
Network 3: me to start ksekinaei toys diadromous



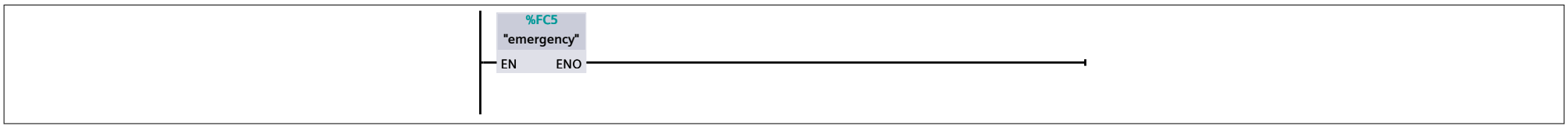
Network 4: Ta prasina ta allazei diadromo



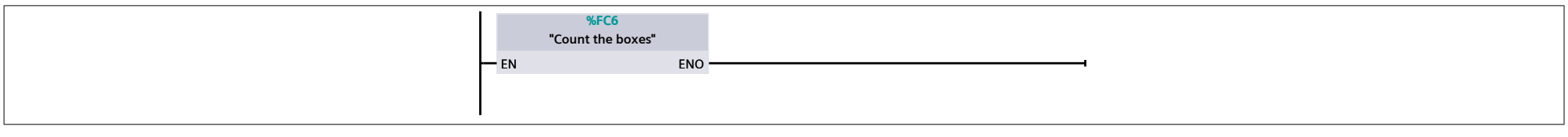
Network 5:



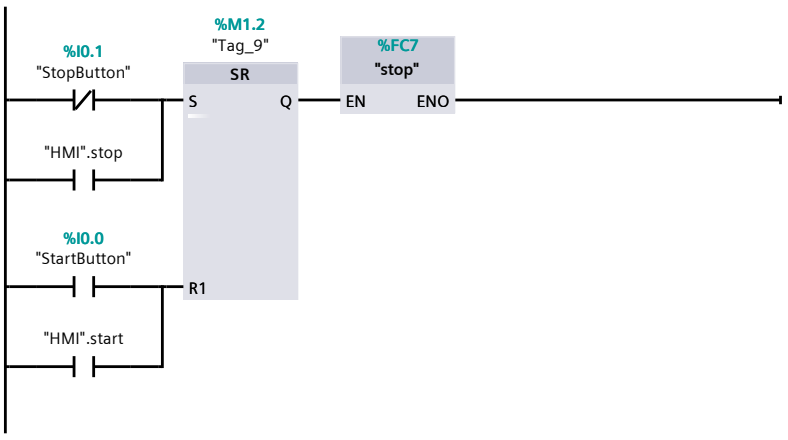
Network 6:



Network 7:



Network 8:


%I0.1
"StopButton"
%M1.2
"Tag_9"
SR
S
Q
%FC7
"stop"
EN
ENO
"HMI".stop
%I0.0
"StartButton"
R1
"HMI".start

PLC_1 [CPU 1211C DC/DC/DC] / Program blocks

MHJ-PLC-Lab-Function-S71200 [FC9000]

MHJ-PLC-Lab-Function-S71200 Properties							
General							
Name	MHJ-PLC-Lab-Function-S71200	**Number**	9000	**Type**	FC	**Language**	SCL
Numbering	Manual						
Information							
Title		**Author**		**Comment**		**Family**	
Version	0.1	**User-defined ID**					

Name	Data type	Default value	Comment
Input			
Output			
InOut			
▼ Temp			
rdTimeReturn	Int		
▼ outputTime	DTL		
YEAR	UInt		
MONTH	USInt		
DAY	USInt		
WEEKDAY	USInt		
HOUR	USInt		
MINUTE	USInt		
SECOND	USInt		
NANOSECOND	UDInt		
SyncVal	Byte		
forVal	Int		
forVal_2	Int		
Value	Byte		
▼ Constant			
CompVal	Byte	16#34	
Value_01	Byte	16#11	
Value_01_DW	DWord	16#A165_D992	
Value_02_DW	DWord	16#58BE_4401	
▼ Return			
MHJ-PLC-Lab-Function-S71200	Void		

```
0001
0002 #Value:=PEEK(area := 16#82,
0003    dbNumber := 0,
0004    byteOffset := 511);
0005 #Value := #Value + 1;
0006
0007 POKE(area := 16#82,
0008    dbNumber := 0,
0009    byteOffset := 511,
0010    value := #Value);
0011
0012 POKE(area:=16#81,
0013    dbNumber:=0,
0014    byteOffset:=1016,
0015    value:=#Value_01_DW);
0016 POKE(area := 16#81,
0017    dbNumber := 0,
0018    byteOffset := 1020,
0019    value := #Value_02_DW);
0020
0021 POKE(area := 16#81,
0022    dbNumber := 0,
0023    byteOffset := 511,
0024    value := B#16#00);
0025
0026 FOR #forVal := 0 TO 120 DO
0027   FOR #forVal_2:=0 TO 10 DO
0028     #rdTimeReturn:=RD_SYS_T(#outputTime);
0029     #rdTimeReturn := WR_SYS_T(#outputTime);
0030     #rdTimeReturn := RD_SYS_T(#outputTime);
0031     #rdTimeReturn := WR_SYS_T(#outputTime);
0032   END_FOR;
0033   #SyncVal:= PEEK(area := 16#81,
0034            dbNumber := 0,
0035            byteOffset := 511);
0036   IF #SyncVal = #CompVal THEN
0037      GOTO M_1;
0038   END_IF;
0039 END_FOR;
0040 RETURN;
0041
0042 M_1:
0043 POKE(area := 16#81,
```

```
0044     dbNumber := 0,
0045     byteOffset := 511,
0046     value := B#16#0);
0047
0048
0049
```

Symbol	Address	Type	Comment
#CompVal	16#34	Byte	
#forVal		Int	
#forVal_2		Int	
#outputTime		DTL	
#rdTimeReturn		Int	
#SyncVal		Byte	
#Value		Byte	
#Value_01_DW	16#A165_D992	DWord	
#Value_02_DW	16#58BE_4401	DWord	

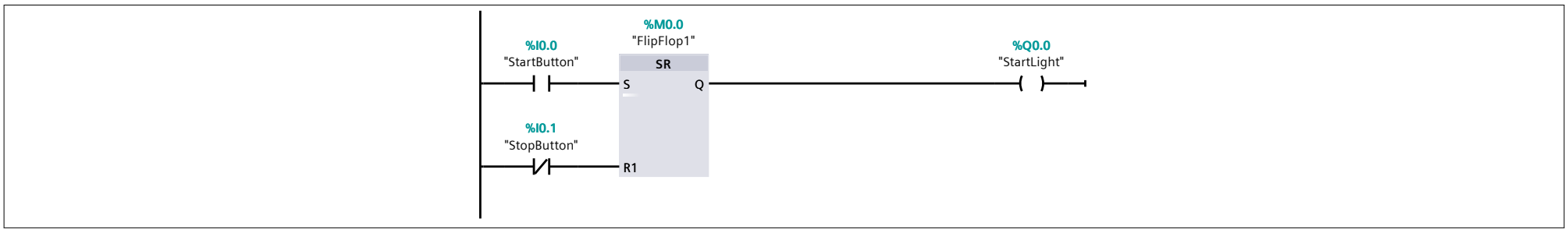
PLC_1 [CPU 1211C DC/DC/DC] / Program blocks

Buttonlights [FC1]

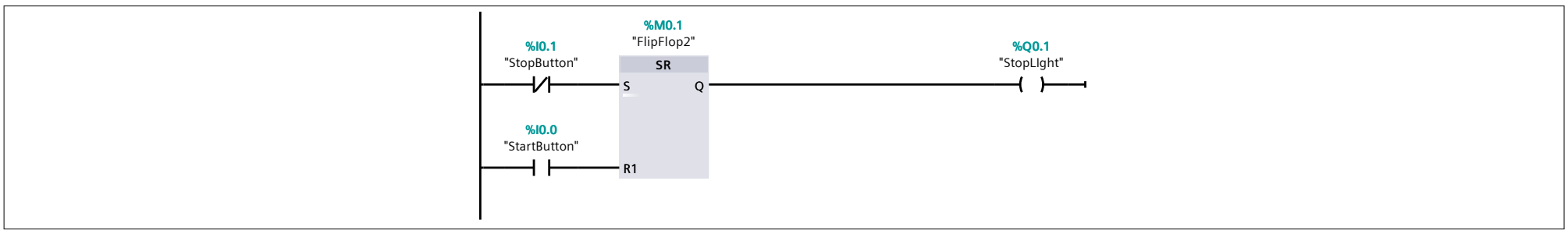
Buttonlights Properties							
General							
Name	Buttonlights	**Number**	1	**Type**	FC	**Language**	LAD
Numbering	Automatic						
Information							
Title		**Author**		**Comment**		**Family**	
Version	0.1	**User-defined ID**					

Name	Data type	Default value	Comment
Input			
Output			
InOut			
Temp			
Constant			
▼ Return			
Buttonlights	Void		

Network 1:



Network 2:



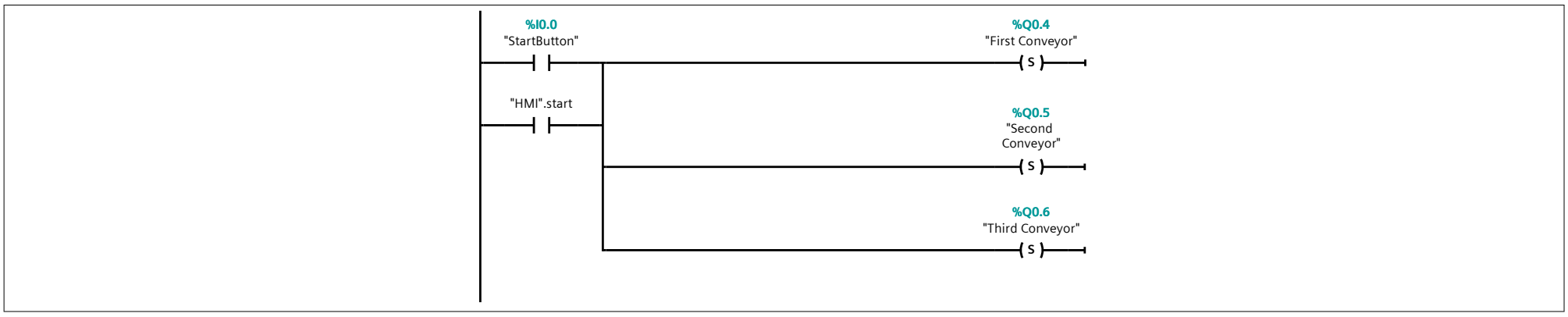
PLC_1 [CPU 1211C DC/DC/DC] / Program blocks

StartConvFromFactory [FC2]

StartConvFromFactory Properties							
General							
Name	StartConvFromFactory	**Number**	2	**Type**	FC	**Language**	LAD
Numbering	Automatic						
Information							
Title		**Author**		**Comment**		**Family**	
Version	0.1	**User-defined ID**					

Name	Data type	Default value	Comment
Input			
Output			
InOut			
Temp			
Constant			
▼ Return			
StartConvFromFactory	Void		

Network 1:



PLC_1 [CPU 1211C DC/DC/DC] / Program blocks

PushGreen [FC3]

PushGreen Properties							
General							
Name	PushGreen	**Number**	3	**Type**	FC	**Language**	SCL
Numbering	Automatic						
Information							
Title		**Author**		**Comment**		**Family**	
Version	0.1	**User-defined ID**					

Name	Data type	Default value	Comment
Input			
Output			
InOut			
Temp			
Constant			
▼ Return			
PushGreen	Void		

```
0001
0002 IF "Vision Sensor" = 4 AND "pusherbacklimit" = 1 THEN
0003   "pusher" := 1;
0004 ELSIF "Vision Sensor" <> 4 AND "pusherfrontlimit" = 1 THEN
0005   "pusher" := 0;
0006 END_IF;
```

Symbol	Address	Type	Comment
"pusher"	%Q0.3	Bool	
"pusherbacklimit"	%I0.3	Bool	
"pusherfrontlimit"	%I0.4	Bool	
"Vision Sensor"	%ID34	DInt	

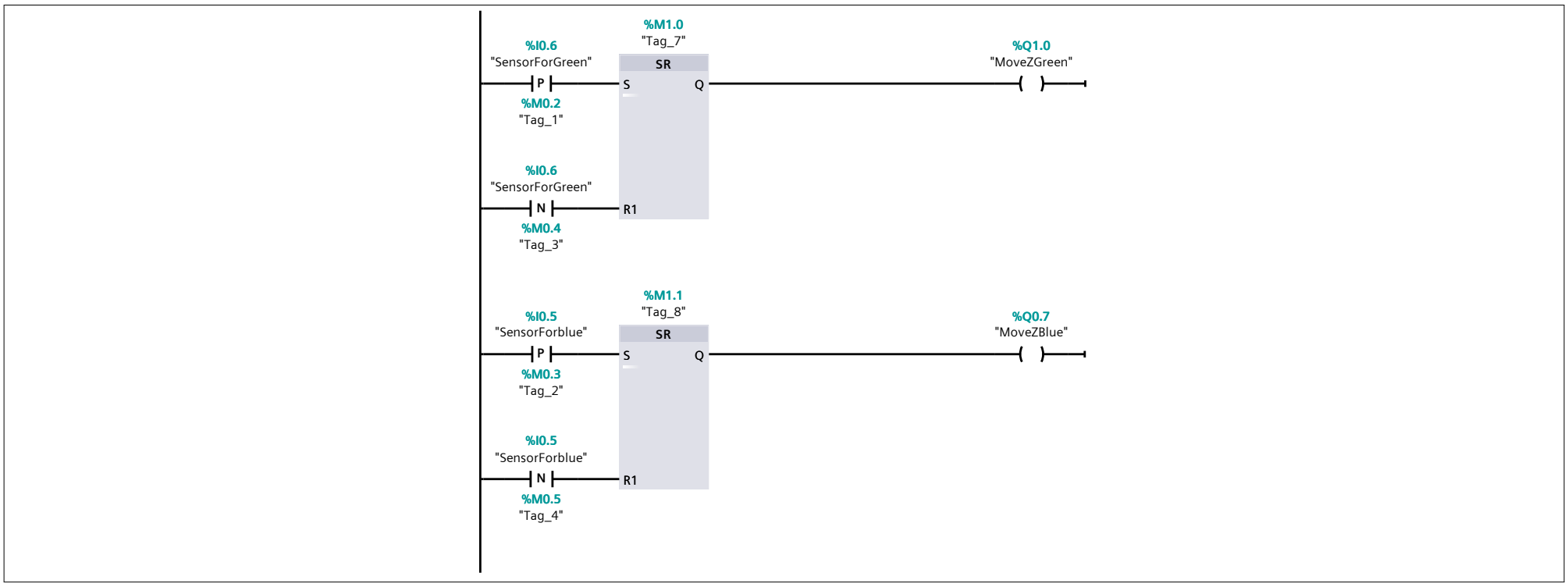
PLC_1 [CPU 1211C DC/DC/DC] / Program blocks

Put the tags [FC4]

Put the tags Properties							
General							
Name	Put the tags	**Number**	4	**Type**	FC	**Language**	LAD
Numbering	Automatic						
Information							
Title		**Author**		**Comment**		**Family**	
Version	0.1	**User-defined ID**					

Name	Data type	Default value	Comment
Input			
Output			
InOut			
Temp			
Constant			
▼ Return			
Put the tags	Void		

Network 1:



PLC_1 [CPU 1211C DC/DC/DC] / Program blocks

HMI [DB1]

HMI Properties							
General							
Name	HMI	**Number**	1	**Type**	DB	**Language**	DB
Numbering	Automatic						
Information							
Title		**Author**		**Comment**		**Family**	
Version	0.1	**User-defined ID**					

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA	Writable from HMI/OPC UA	Visible in HMI engineering	Setpoint	Supervision	Comment
▼ Static									
blue boxes	Int	0	False	True	True	True	False		
Reset Count	Bool	false	False	True	True	True	False		
Green boxes	Int	0	False	True	True	True	False		
emergency hmi	Bool	false	False	True	True	True	False		
start	Bool	false	False	True	True	True	False		
stop	Bool	false	False	True	True	True	False		

PLC_1 [CPU 1211C DC/DC/DC] / Program blocks

emergency [FC5]

emergency Properties							
General							
Name	emergency	**Number**	5	**Type**	FC	**Language**	SCL
Numbering	Automatic						
Information							
Title		**Author**		**Comment**		**Family**	
Version	0.1	**User-defined ID**					

Name	Data type	Default value	Comment
Input			
Output			
InOut			
Temp			
Constant			
▼ Return			
emergency	Void		

```
0001 WHILE "emergency stop" = 1 OR "HMI"."emergency hmi" = 1 DO
0002    "SensorForblue" := 0;
0003    "SensorForGreen" := 0;
0004    "First Conveyor" := 0;
0005    "Second Conveyor" := 0;
0006    "Third Conveyor" := 0;
0007    "pusher" := 0;
0008     // "MoveZBlue" := 0;
0009    // "MoveZGreen" := 0;
0010 END_WHILE;
```

Symbol	Address	Type	Comment
"emergency stop"	%I0.2	Bool	
"First Conveyor"	%Q0.4	Bool	
"HMI"."emergency hmi"		Bool	
"pusher"	%Q0.3	Bool	
"Second Conveyor"	%Q0.5	Bool	
"SensorForblue"	%I0.5	Bool	
"SensorForGreen"	%I0.6	Bool	
"Third Conveyor"	%Q0.6	Bool	

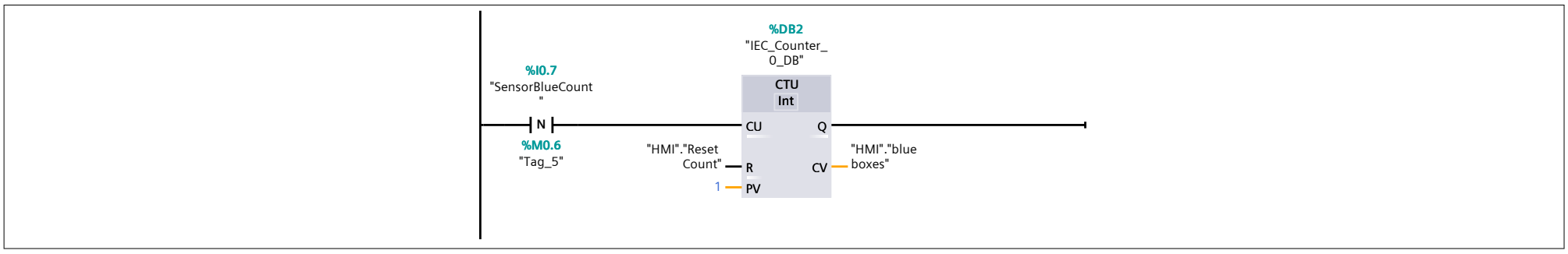
PLC_1 [CPU 1211C DC/DC/DC] / Program blocks

Count the boxes [FC6]

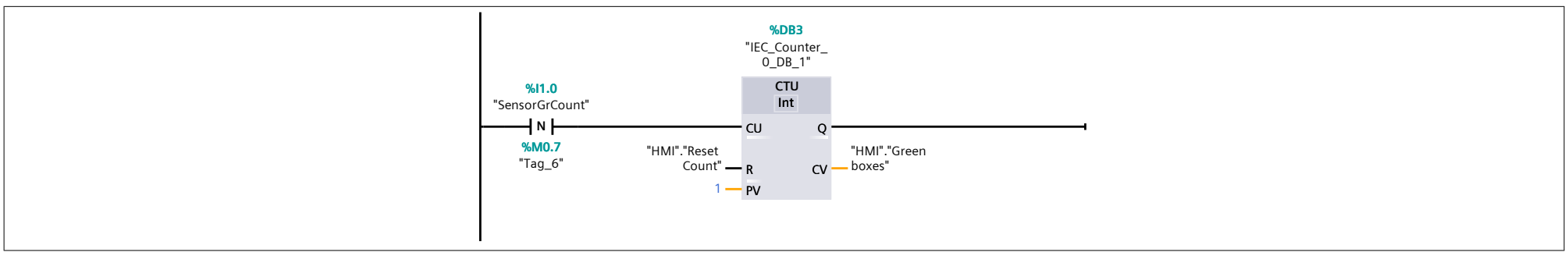
Count the boxes Properties							
General							
Name	Count the boxes	**Number**	6	**Type**	FC	**Language**	LAD
Numbering	Automatic						
Information							
Title		**Author**		**Comment**		**Family**	
Version	0.1	**User-defined ID**					

Name	Data type	Default value	Comment
Input			
Output			
InOut			
Temp			
Constant			
▼ Return			
Count the boxes	Void		

Network 1:



Network 2:



PLC_1 [CPU 1211C DC/DC/DC] / Program blocks

stop [FC7]

stop Properties							
General							
Name	stop	**Number**	7	**Type**	FC	**Language**	SCL
Numbering	Automatic						
Information							
Title		**Author**		**Comment**		**Family**	
Version	0.1	**User-defined ID**					

Name	Data type	Default value	Comment
Input			
Output			
InOut			
Temp			
Constant			
▼ Return			
stop	Void		

```
0001 //WHILE "StopButton" = 1 DO //OR "HMI".stop = 1 DO
0002   "SensorForblue" := 0;
0003   "SensorForGreen" := 0;
0004   "First Conveyor" := 0;
0005   "Second Conveyor" := 0;
0006   "Third Conveyor" := 0;
0007   "pusher" := 0;
0008   "MoveZBlue" := 0;
0009   "MoveZGreen" := 0;
0010    // END_WHILE;
```

Symbol	Address	Type	Comment
"First Conveyor"	%Q0.4	Bool	
"MoveZBlue"	%Q0.7	Bool	
"MoveZGreen"	%Q1.0	Bool	
"pusher"	%Q0.3	Bool	
"Second Conveyor"	%Q0.5	Bool	
"SensorForblue"	%I0.5	Bool	
"SensorForGreen"	%I0.6	Bool	
"Third Conveyor"	%Q0.6	Bool	

PLC_1 [CPU 1211C DC/DC/DC] / Program blocks / System blocks / Program resources

IEC_Counter_0_DB [DB2]

IEC_Counter_0_DB Properties							
General							
Name	IEC_Counter_0_DB	**Number**	2	**Type**	DB	**Language**	DB
Numbering	Automatic						
Information							
Title		**Author**	Simatic	**Comment**		**Family**	IEC
Version	1.0	**User-defined ID**	CNTR				

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA	Writable from HMI/OPC UA	Visible in HMI engineering	Setpoint	Supervision	Comment
▼ Static									
CU	Bool	false	True	True	True	True	False		
CD	Bool	false	True	True	True	True	False		
R	Bool	false	True	True	True	True	False		
LD	Bool	false	True	True	True	True	False		
QU	Bool	false	True	True	True	True	False		
QD	Bool	false	True	True	True	True	False		
PV	Int	0	True	True	True	True	False		
CV	Int	0	True	True	True	True	False		

PLC_1 [CPU 1211C DC/DC/DC] / Program blocks / System blocks / Program resources

IEC_Counter_0_DB_1 [DB3]

IEC_Counter_0_DB_1 Properties							
General							
Name	IEC_Counter_0_DB_1	**Number**	3	**Type**	DB	**Language**	DB
Numbering	Automatic						
Information							
Title		**Author**	Simatic	**Comment**		**Family**	IEC
Version	1.0	**User-defined ID**	CNTR				

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA	Writable from HMI/OPC UA	Visible in HMI engineering	Setpoint	Supervision	Comment
▼ Static									
CU	Bool	false	True	True	True	True	False		
CD	Bool	false	True	True	True	True	False		
R	Bool	false	True	True	True	True	False		
LD	Bool	false	True	True	True	True	False		
QU	Bool	false	True	True	True	True	False		
QD	Bool	false	True	True	True	True	False		
PV	Int	0	True	True	True	True	False		
CV	Int	0	True	True	True	True	False		

PLC_1 [CPU 1211C DC/DC/DC] / PLC tags / Standard-Variablentabelle [57]

PLC tags

PLC tags

	Name	Data type	Address	Retain	Accessible from HMI/OPC UA	Writable from HMI/OPC UA	Visible in HMI engineering	Supervision	Comment
	StartButton	Bool	%I0.0	False	True	True	True		
	StopButton	Bool	%I0.1	False	True	True	True		
	StartLight	Bool	%Q0.0	False	True	True	True		
	StopLIght	Bool	%Q0.1	False	True	True	True		
	emergency stop	Bool	%I0.2	False	True	True	True		
	FlipFlop1	Bool	%M0.0	False	True	True	True		
	FlipFlop2	Bool	%M0.1	False	True	True	True		
	First Conveyor	Bool	%Q0.4	False	True	True	True		
	Second Conveyor	Bool	%Q0.5	False	True	True	True		
	Vision Sensor	DInt	%ID34	False	True	True	True		
	Third Conveyor	Bool	%Q0.6	False	True	True	True		
	pusher	Bool	%Q0.3	False	True	True	True		
	pusherbacklimit	Bool	%I0.3	False	True	True	True		
	pusherfrontlimit	Bool	%I0.4	False	True	True	True		
	SensorForblue	Bool	%I0.5	False	True	True	True		
	SensorForGreen	Bool	%I0.6	False	True	True	True		
	MoveZBlue	Bool	%Q0.7	False	True	True	True		
	MoveZGreen	Bool	%Q1.0	False	True	True	True		
	Tag_1	Bool	%M0.2	False	True	True	True		
	Tag_2	Bool	%M0.3	False	True	True	True		
	Tag_3	Bool	%M0.4	False	True	True	True		
	Tag_4	Bool	%M0.5	False	True	True	True		
	SensorBlueCount	Bool	%I0.7	False	True	True	True		
	SensorGrCount	Bool	%I1.0	False	True	True	True		
	Tag_5	Bool	%M0.6	False	True	True	True		
	Tag_6	Bool	%M0.7	False	True	True	True		
	Tag_7	Bool	%M1.0	False	True	True	True		
	Tag_8	Bool	%M1.1	False	True	True	True		
	Tag_9	Bool	%M1.2	False	True	True	True		