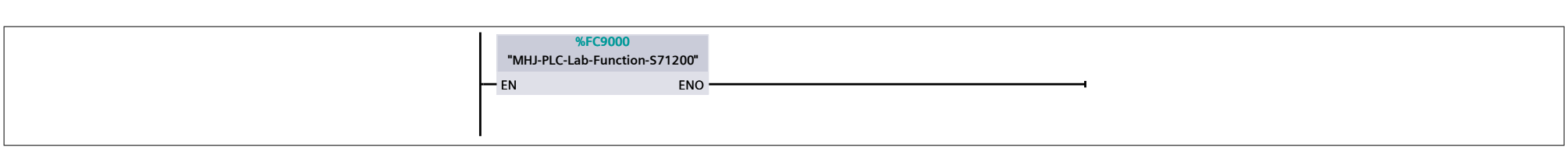
PLC_1 [CPU 1211C DC/DC/DC] / Program blocks

Main [OB1]

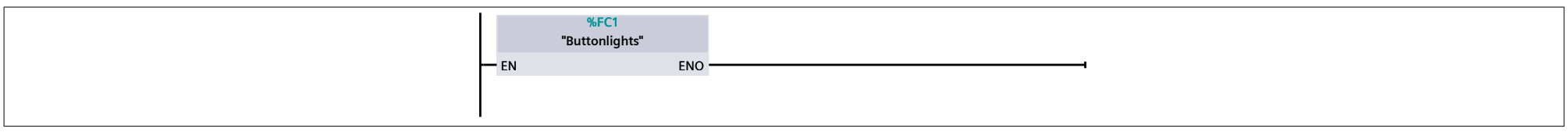
Main Properties							
General							
Name	Main	**Number**	1	**Type**	OB	**Language**	LAD
Numbering	Automatic						
Information							
Title	"Main Program Sweep (Cycle)"	**Author**		**Comment**		**Family**	
Version	0.1	**User-defined ID**					

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			

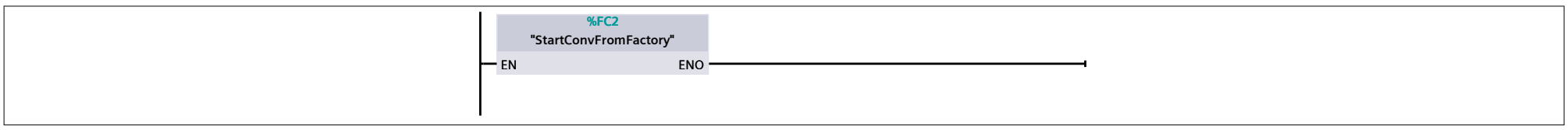
Network 1:



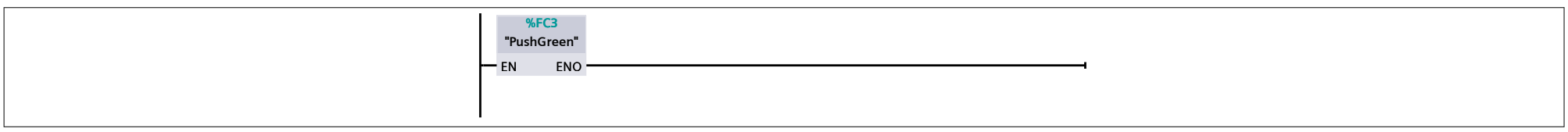
Network 2:



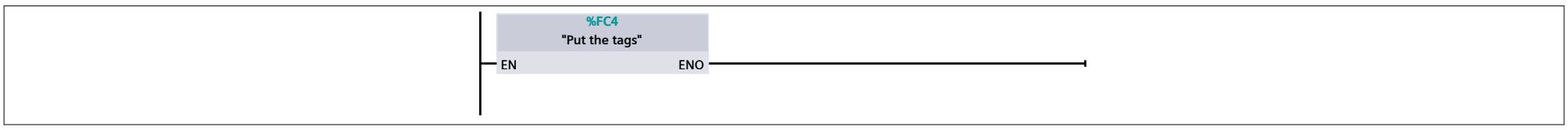
Network 3:



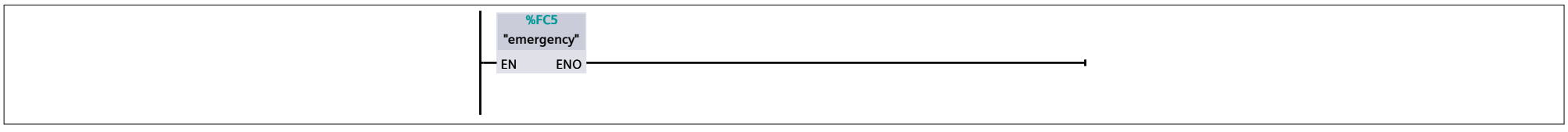
Network 4:



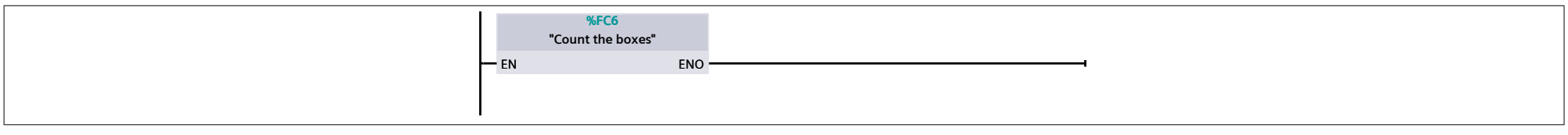
Network 5:



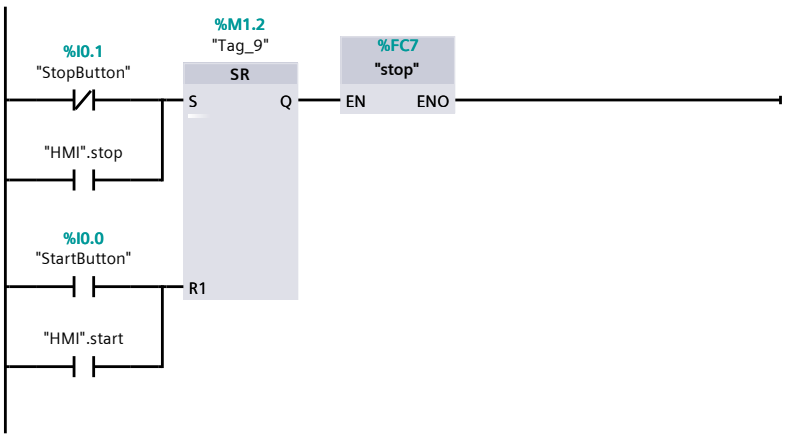
Network 6:



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	

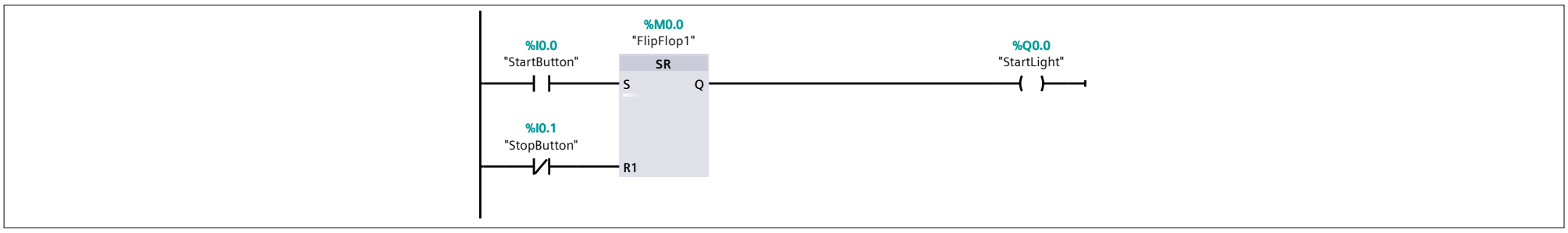
PLC_1 [CPU 1211C DC/DC/DC] / Program blocks

Buttonlights [FC1]

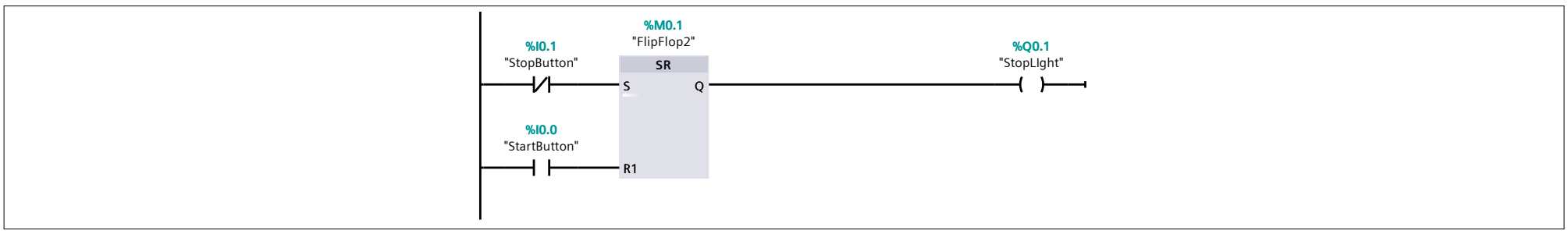
Buttonlights Properties							
General							
Name	Buttonlights	**Number**	1	**Type**	FC	**Language**	LAD
Numbering	Automatic						
Information							
Title		**Author**		**Comment**		**Family**	
Version	0.1	**User-defined ID**					

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

Network 1:



Network 2:



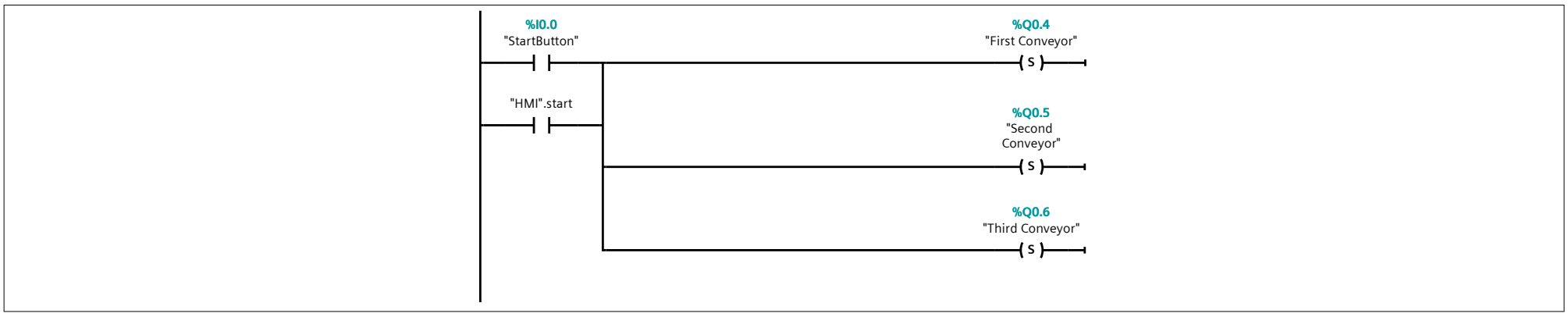
PLC_1 [CPU 1211C DC/DC/DC] / Program blocks

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	

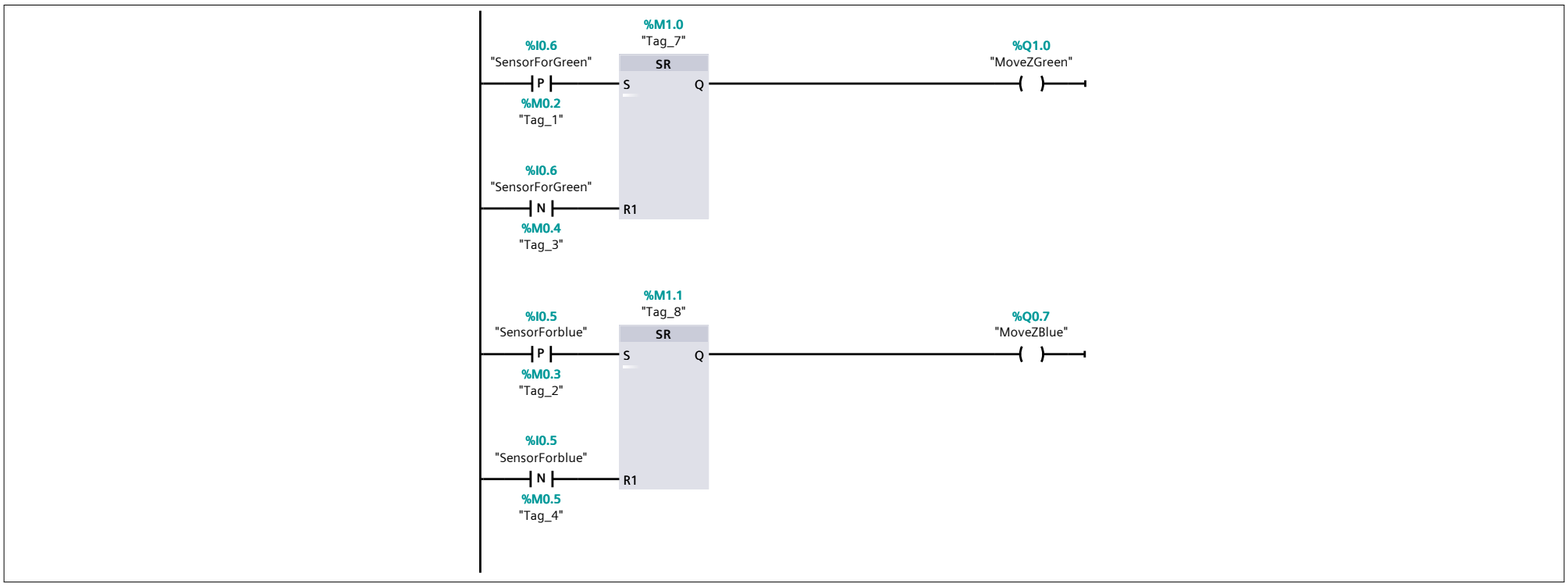
PLC_1 [CPU 1211C DC/DC/DC] / Program blocks

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	

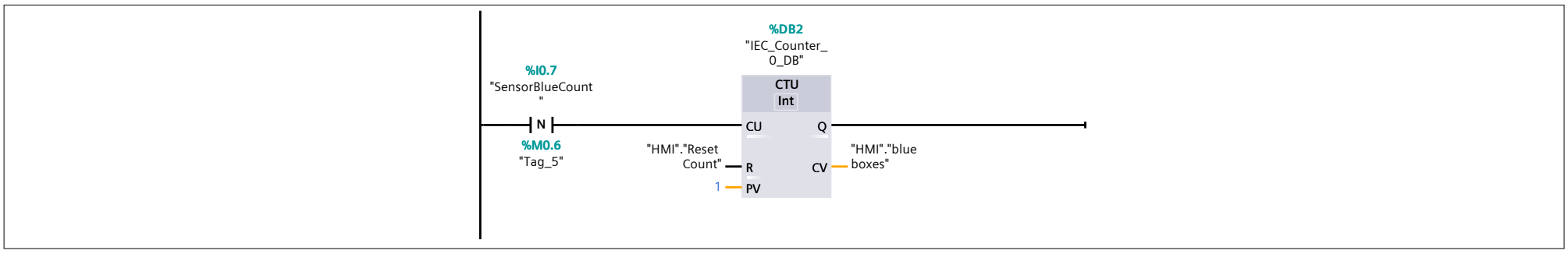
PLC_1 [CPU 1211C DC/DC/DC] / Program blocks

Count the boxes [FC6]

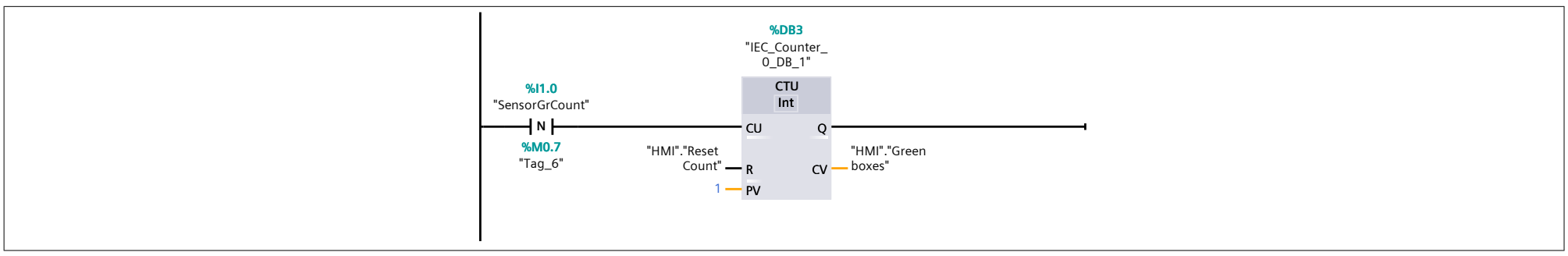
Count the boxes Properties							
General							
Name	Count the boxes	**Number**	6	**Type**	FC	**Language**	LAD
Numbering	Automatic						
Information							
Title		**Author**		**Comment**		**Family**	
Version	0.1	**User-defined ID**					

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		