

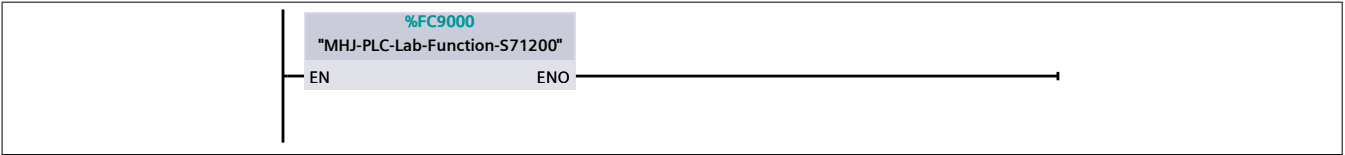
# Program blocks

## 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			

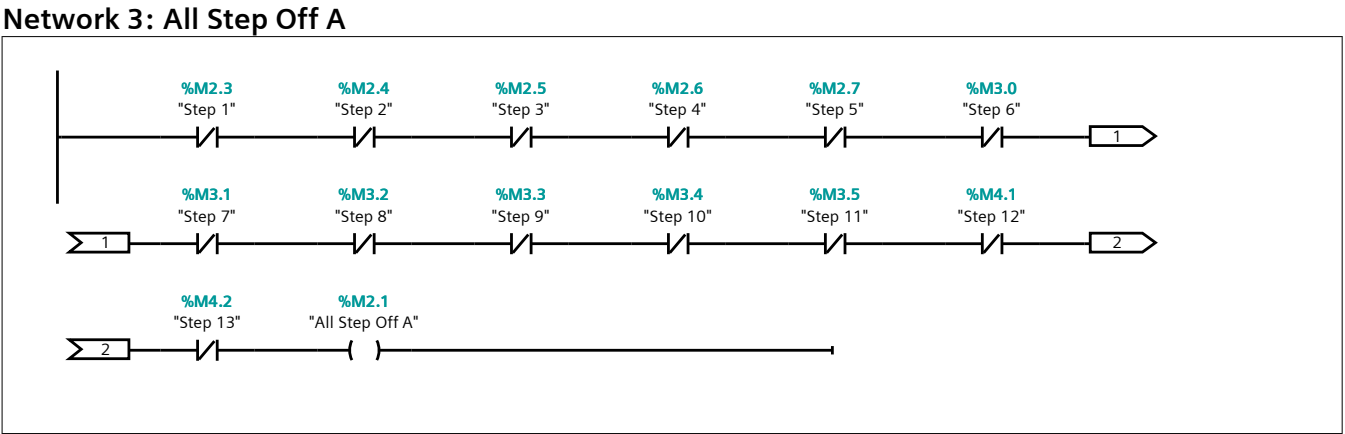
## Network 1: Factory IO Template



## Network 2: Reset Step



## Network 3: All Step Off A



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<b>Network 4: All Step Off B</b>		
<div><div></div><div><div><div>%M4.3 "Step 14"</div><div>%M4.4 "Step 15"</div><div>%M3.7 "All Step Off B"</div></div><div><div></div><div></div><div></div></div></div></div>		
<b>Network 5: Initial Step A</b>		
<div><div></div><div><div><div>%Q0.3 "Move Z"</div><div>%Q0.2 "Move X"</div><div>%Q0.4 "Grab"</div><div>%Q0.0 "Entry conveyor"</div><div>%M2.2 "Initial Step A"</div></div><div><div></div><div></div><div></div><div></div><div></div></div></div></div>		
<b>Network 6: Initial Step B</b>		
<div><div></div><div><div><div>%Q0.1 "Exit conveyor"</div><div>%Q0.2 "Move X"</div><div>%Q0.3 "Move Z"</div><div>%M3.6 "Initial Step B"</div></div><div><div></div><div></div><div></div><div></div></div></div></div>		
<b>Network 7: Steps Function</b>		
<div><div></div><div><div><div>%FC1 "Steps"</div><div>EN</div><div>ENO</div></div><div></div></div></div>		
<b>Network 8: Actions Function</b>		
<div><div></div><div><div><div>%FC2 "Actions"</div><div>EN</div><div>ENO</div></div><div></div></div></div>		

# 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		
HOURL	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	

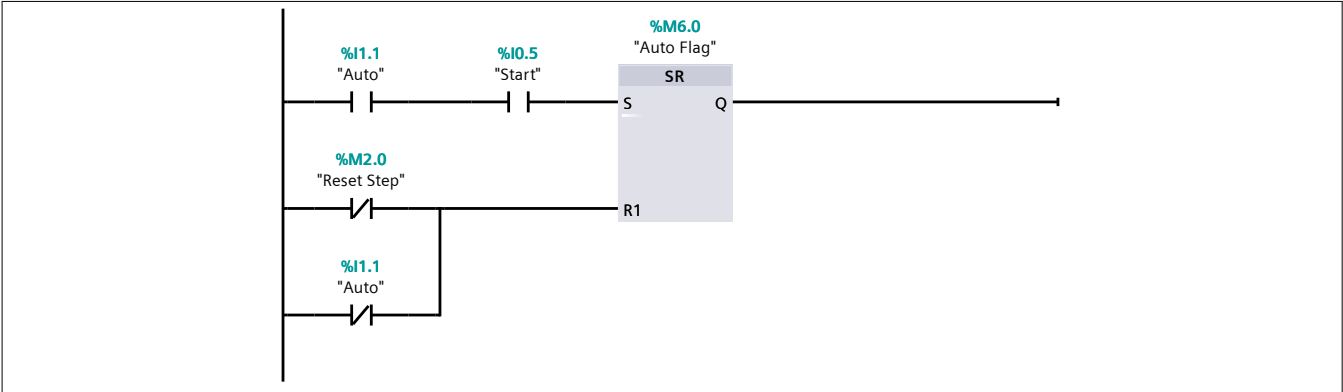
# Program blocks

## Steps [FC1]

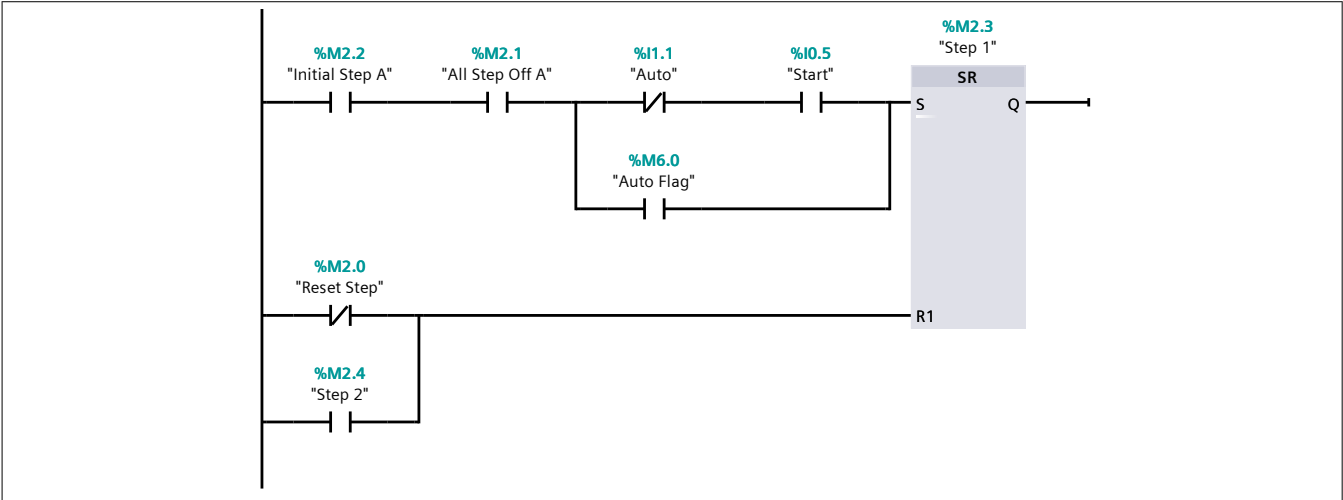
Steps Properties					
General					
Name	Steps	Number	1	Type	FC
Language	LAD	Numbering	Automatic		
Information					
Title		Author		Comment	
Family		Version	0.1	User-defined ID	

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

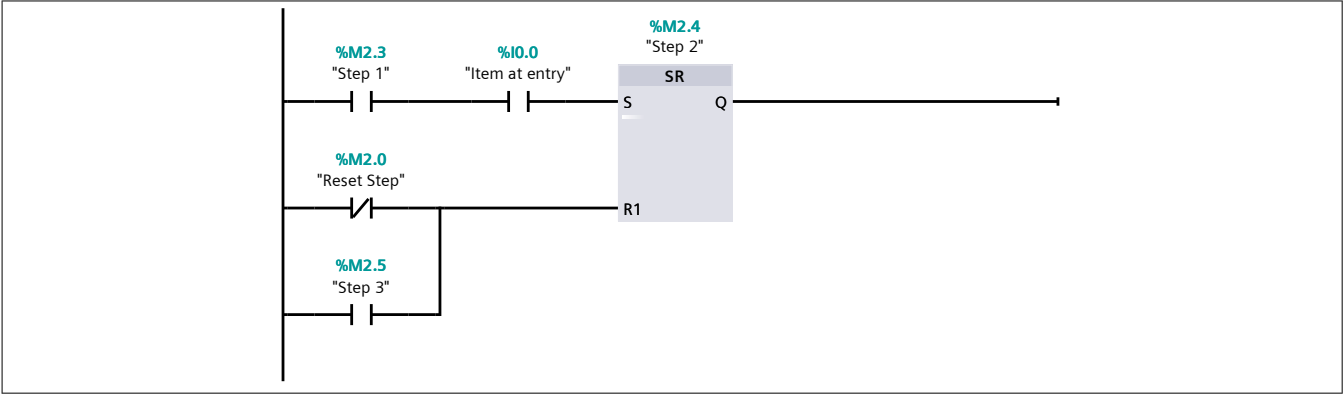
### Network 1: Auto Flag



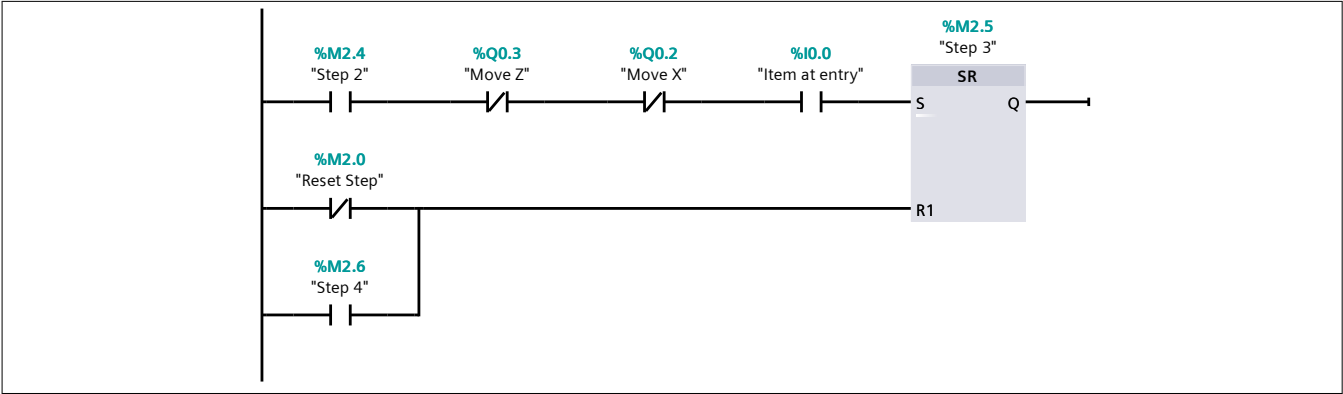
### Network 2: Step 1



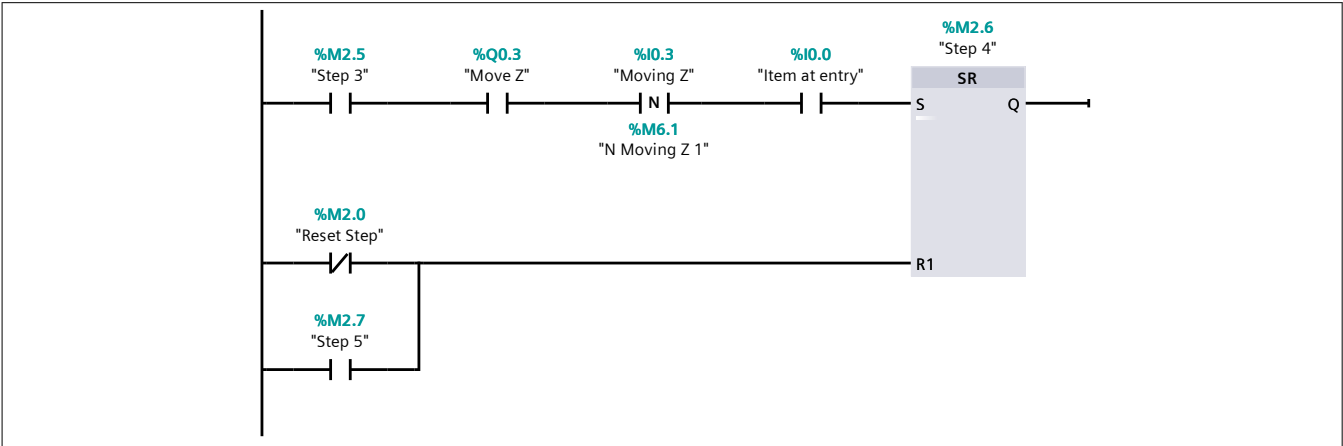
Network 3: Step 2



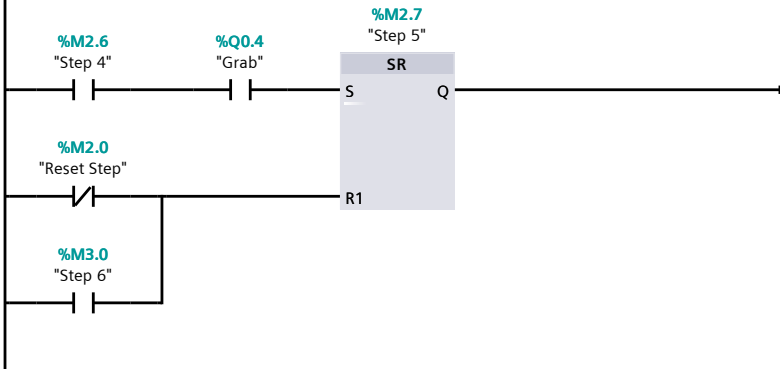
Network 4: Step 3



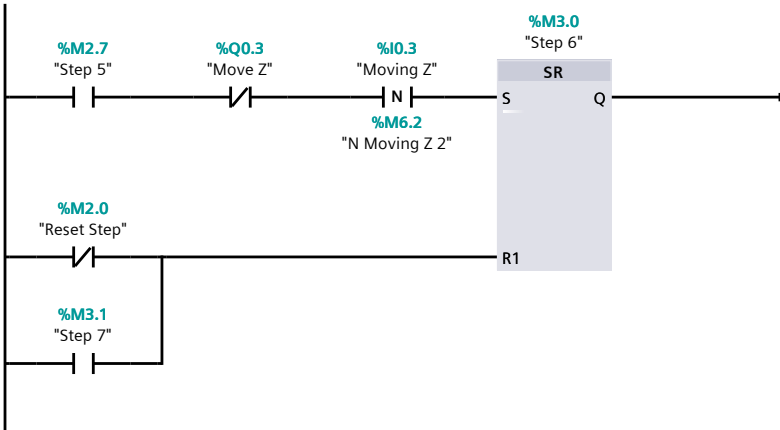
Network 5: Step 4



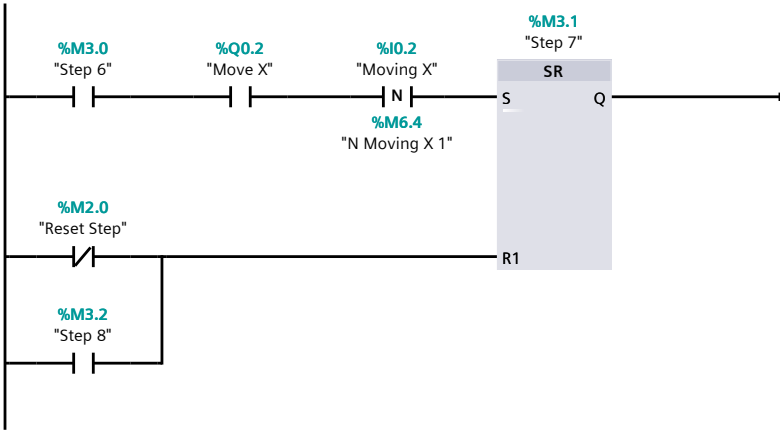
Network 6: Step 5



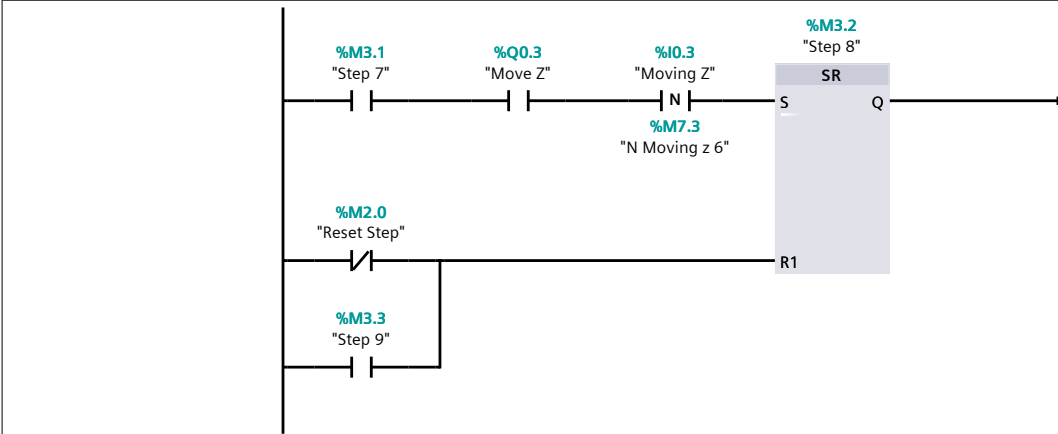
Network 7: Step 6



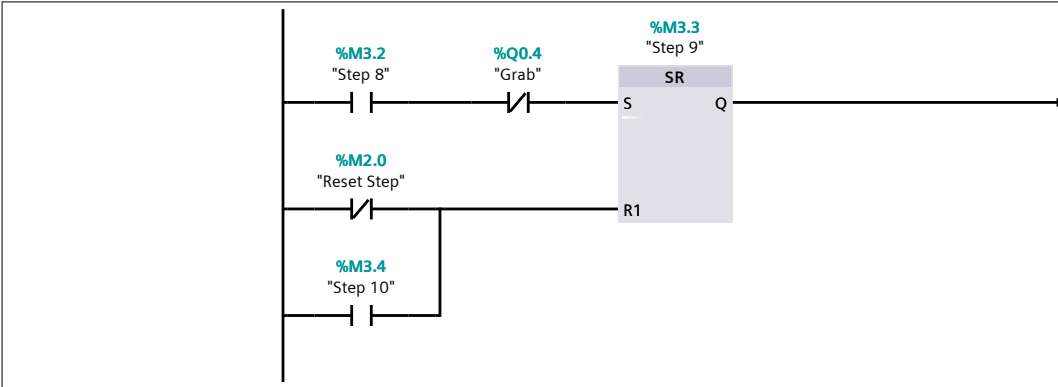
Network 8: Step 7



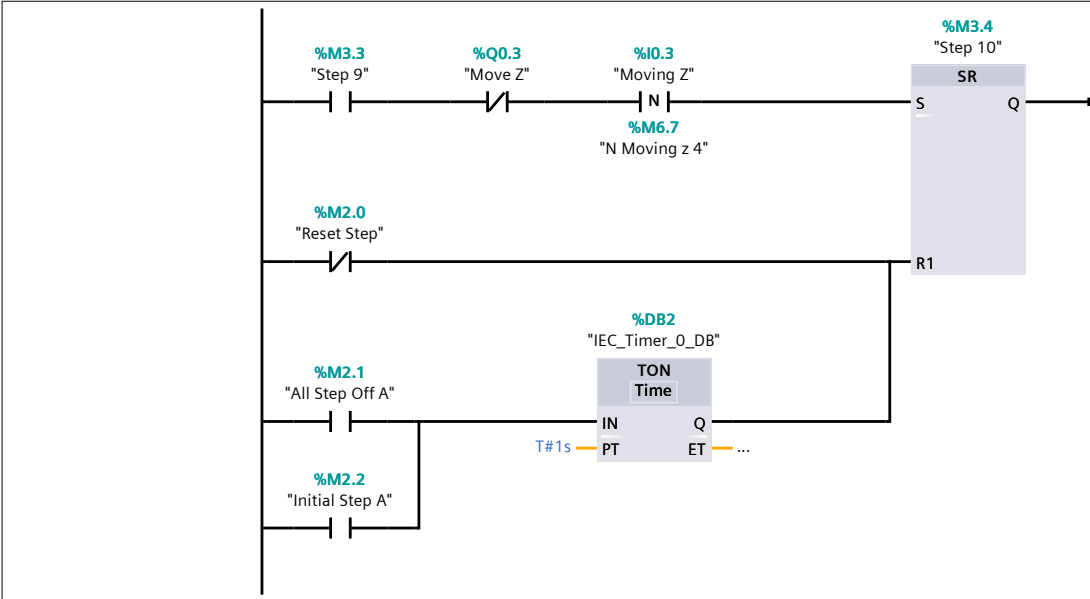
Network 9: Step 8



Network 10: Step 9

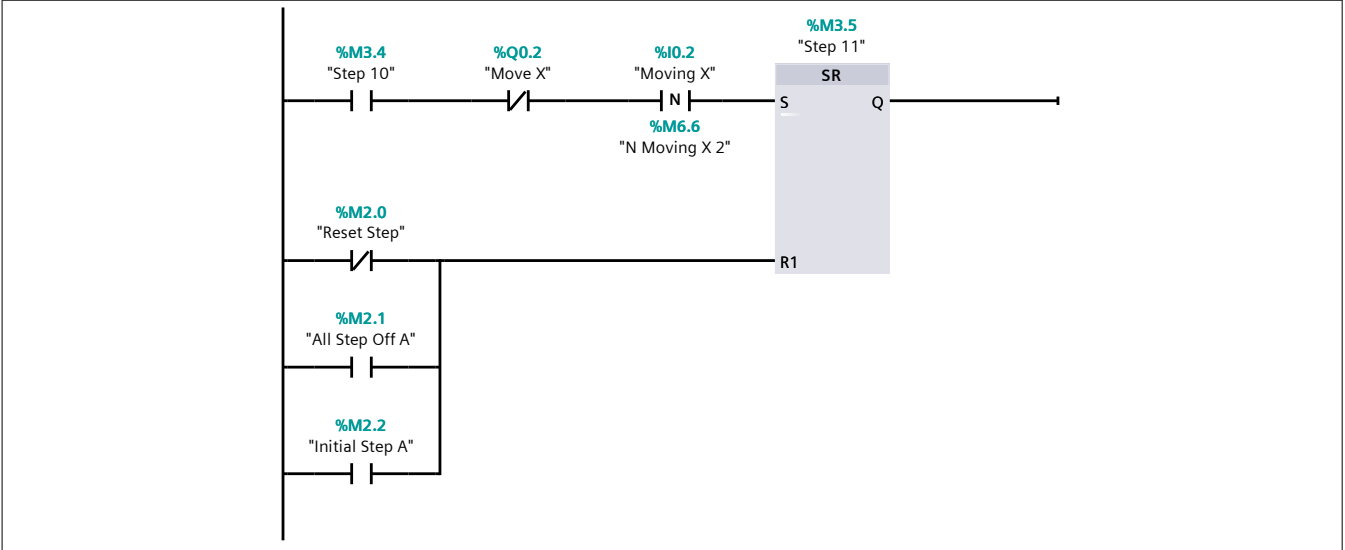


Network 11: Step 10

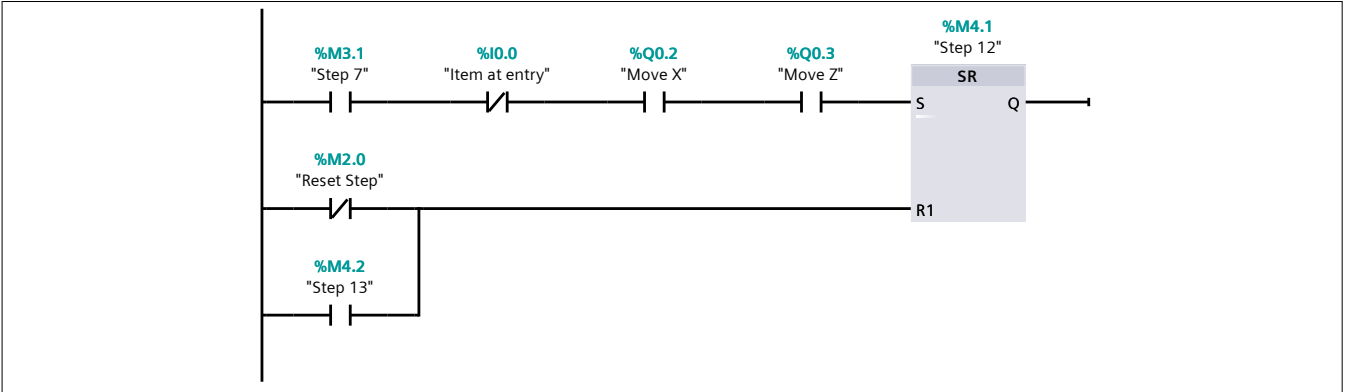


Network 12: Step 11

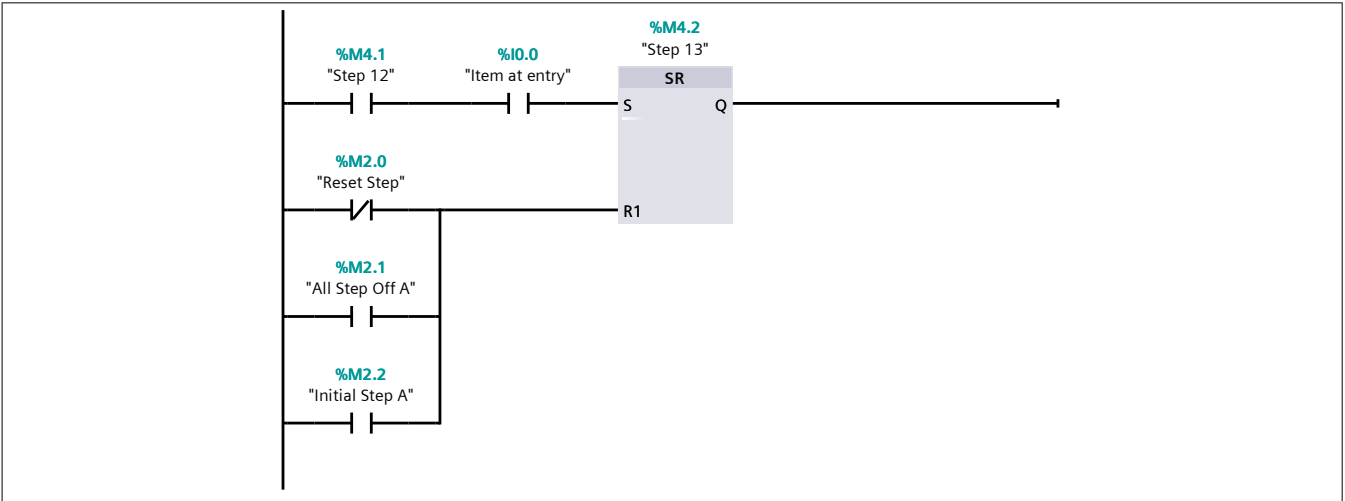




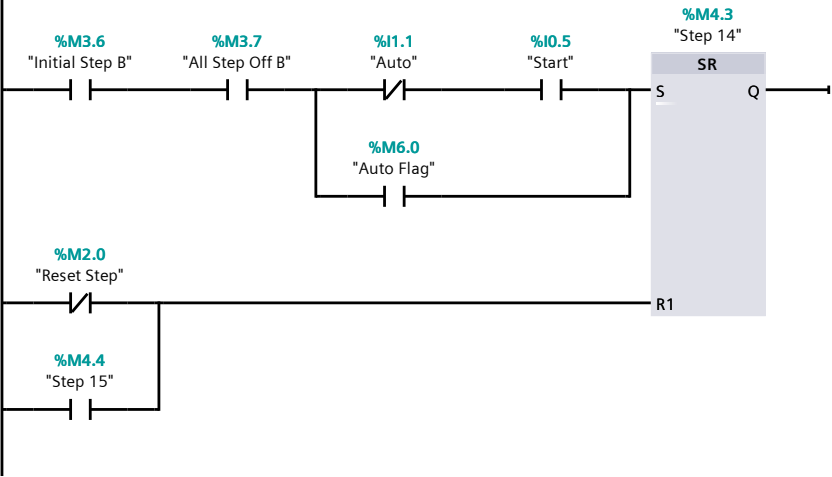
Network 13: Step 12



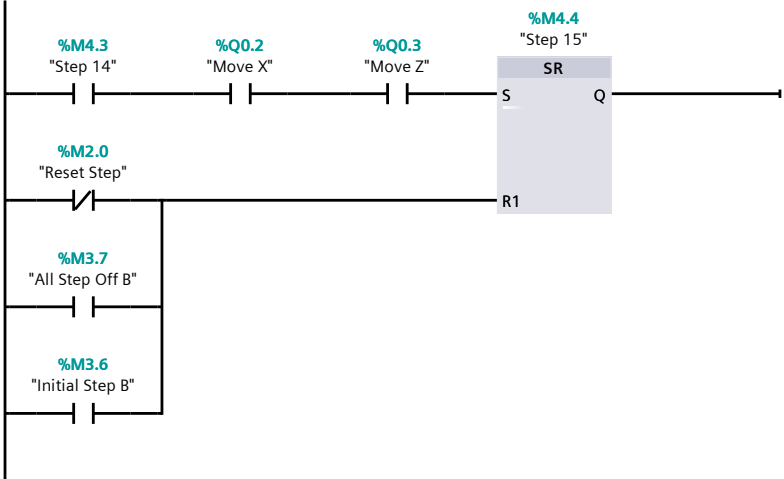
Network 14: Step 13



Network 15: Step 14



Network 16: step 15



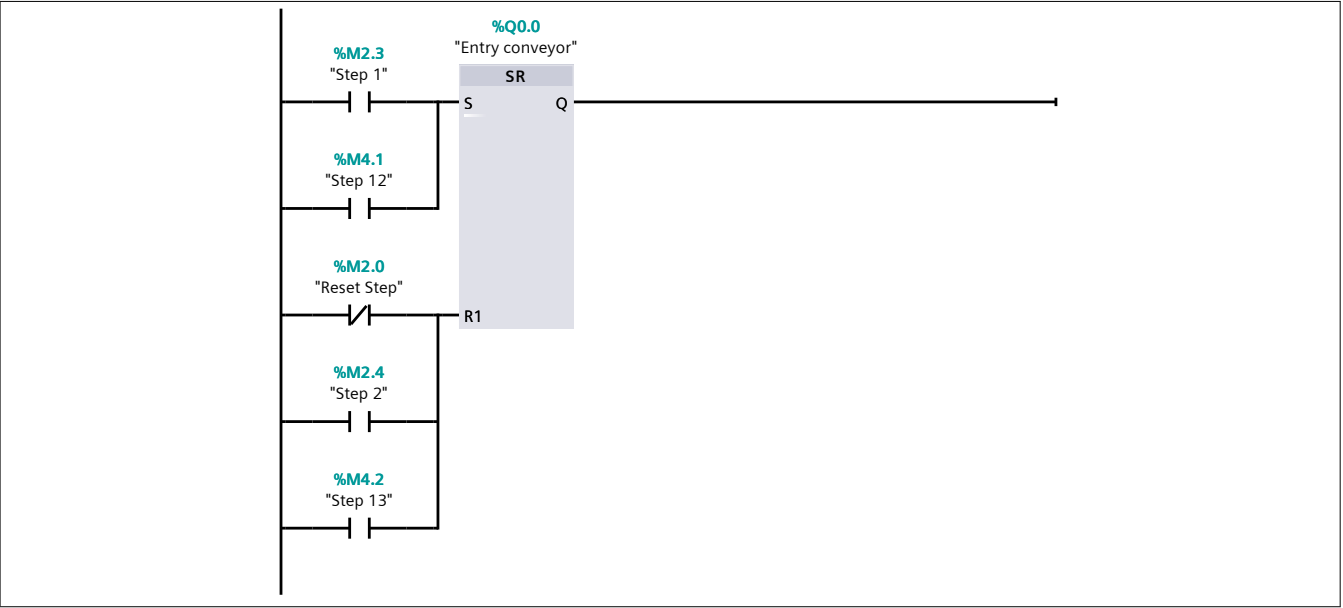
Program blocks

Actions [FC2]

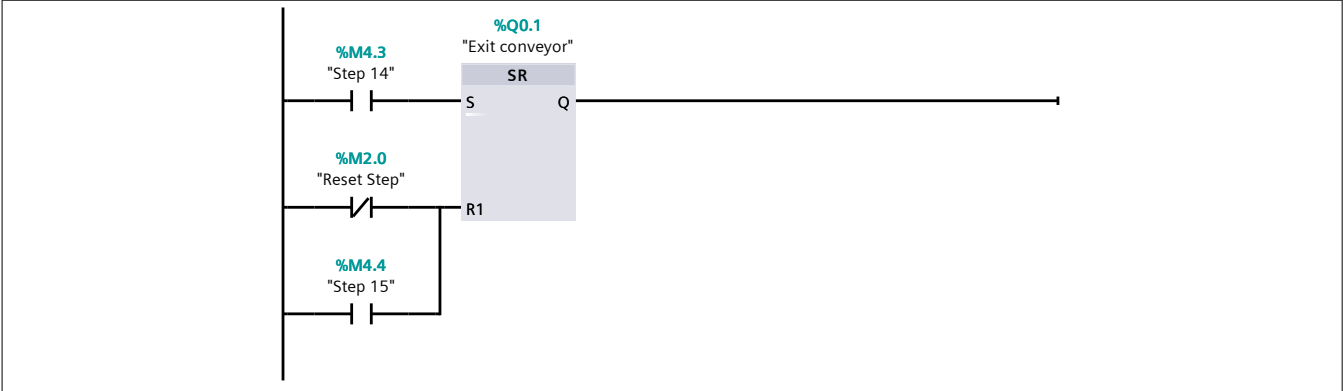
Actions Properties					
General					
Name	Actions	Number	2	Type	FC
Language	LAD	Numbering	Automatic		
Information					
Title		Author		Comment	
Family		Version	0.1	User-defined ID	

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

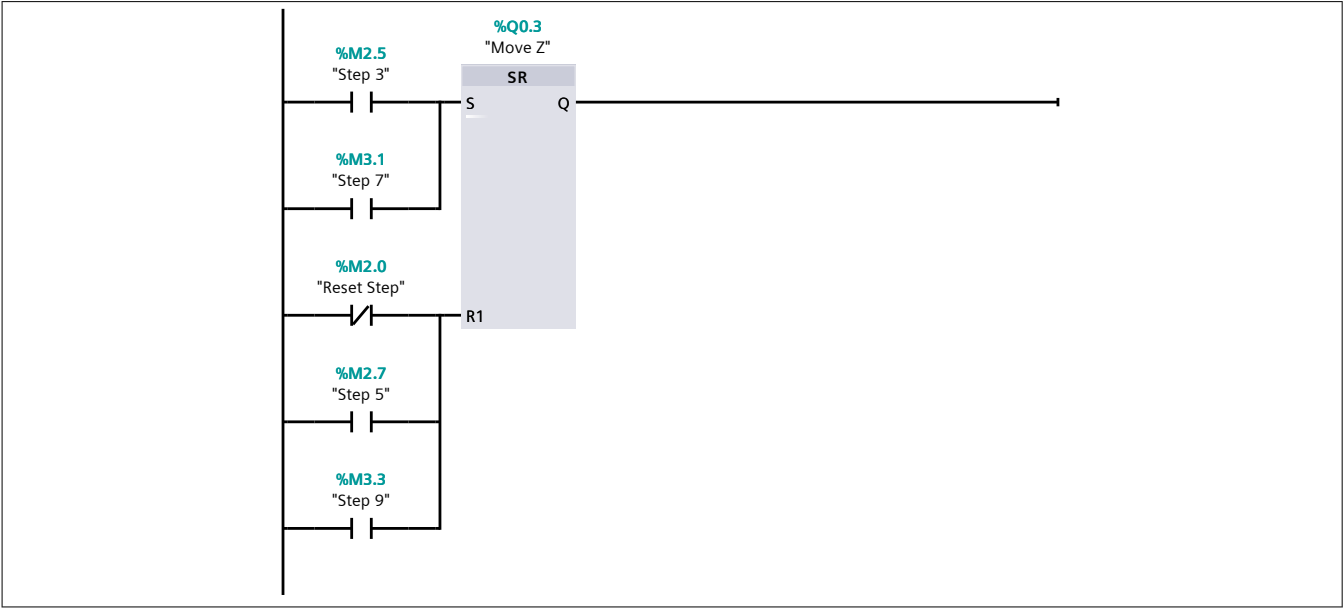
Network 1: Entry conveyor



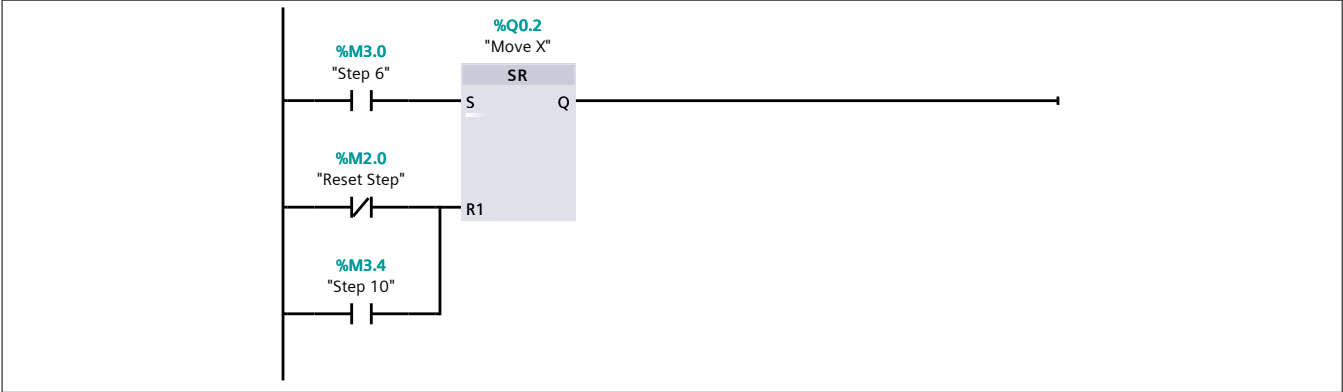
Network 2: Exit conveyor



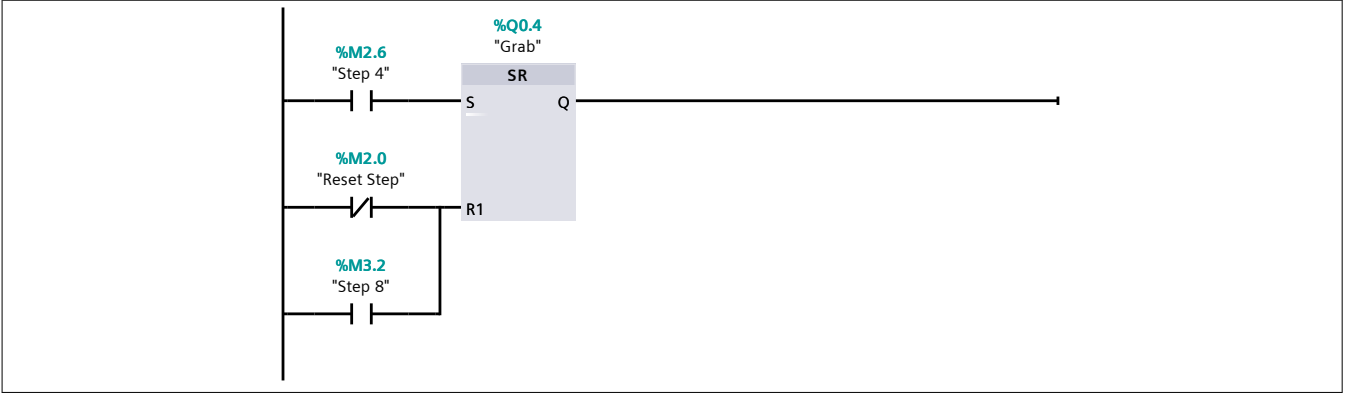
Network 3: Move Z



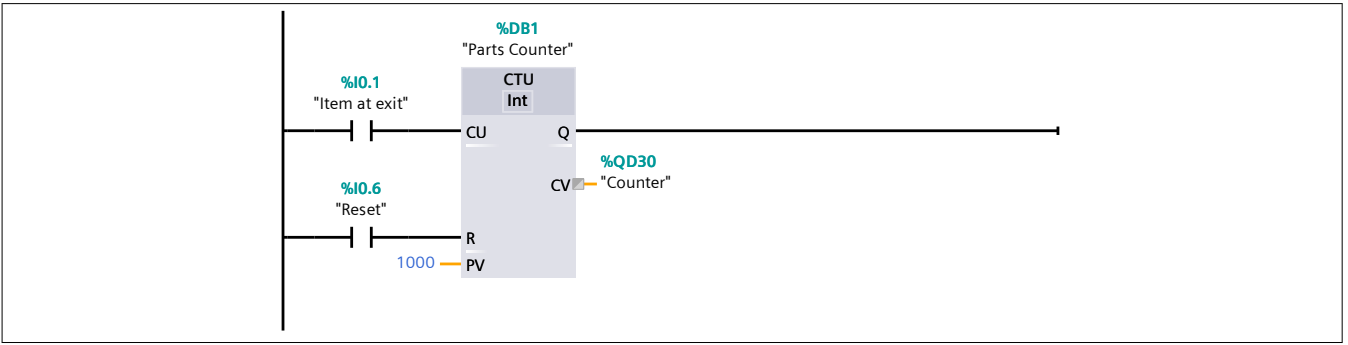
Network 4: Move X



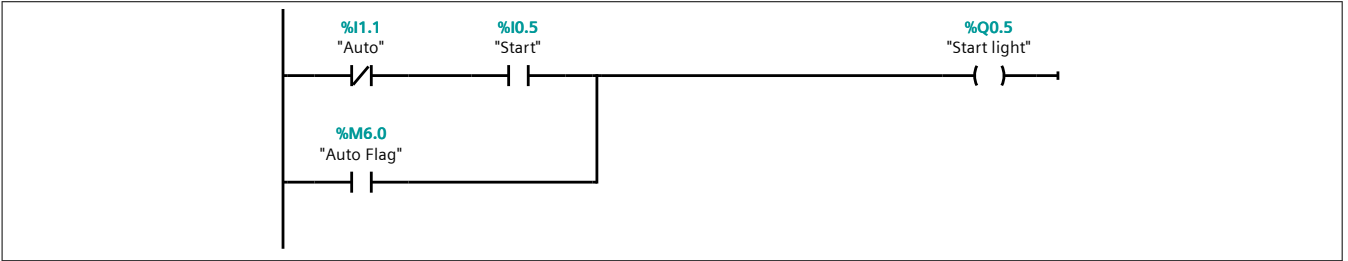
Network 5: Grab



## Network 6: Parts Counter



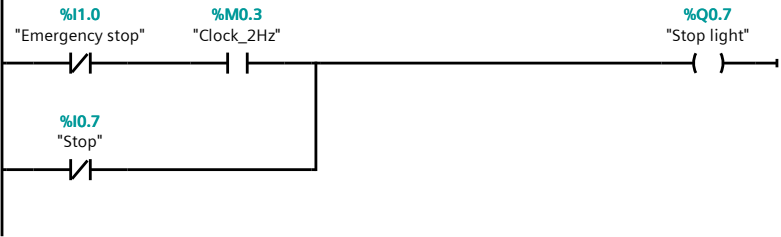
## Network 7: Start light



## Network 8: Reset light



## Network 9: Stop light



# Program blocks / System blocks / Program resources

## Parts Counter [DB1]

Parts Counter Properties					
General					
Name	Parts Counter	Number	1	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	Access- sible from HMI/O PC UA	Wri- ta- ble fro m HM I/O PC UA	Visible in HMI engi- neer- ing	Set- point	Super- vision	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		

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Program blocks / System blocks / Program resources

IEC\_Timer\_0\_DB [DB2]

IEC\_Timer\_0\_DB Properties

General

Name	IEC_Timer_0_DB	Number	2	Type	DB
Language	DB	Numbering	Automatic		

Information

Title		Author	Simatic	Comment	
Family	IEC	Version	1.0	User-defined ID	IEC_TMR

Name	Data type	Start value	Retain	Access- sible from HMI/O PC UA	Wri- ta- ble fro m HM I/O PC UA	Visible in HMI engi- neer- ing	Set- point	Super- vision	Comment
▼ Static									
PT	Time	T#0ms	False	True	True	True	False		
ET	Time	T#0ms	False	True	False	True	False		
IN	Bool	false	False	True	True	True	False		
Q	Bool	false	False	True	False	True	False		