Totally Integrated Automation Portal

Main [OB1]

Main Properties									
General									
Name	Main	Number	1	Туре	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			

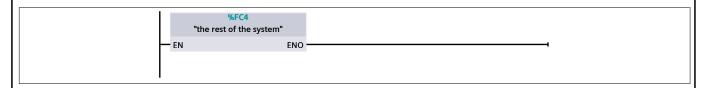
Network 1:

```
%M8.6
"hmi ready"
( )

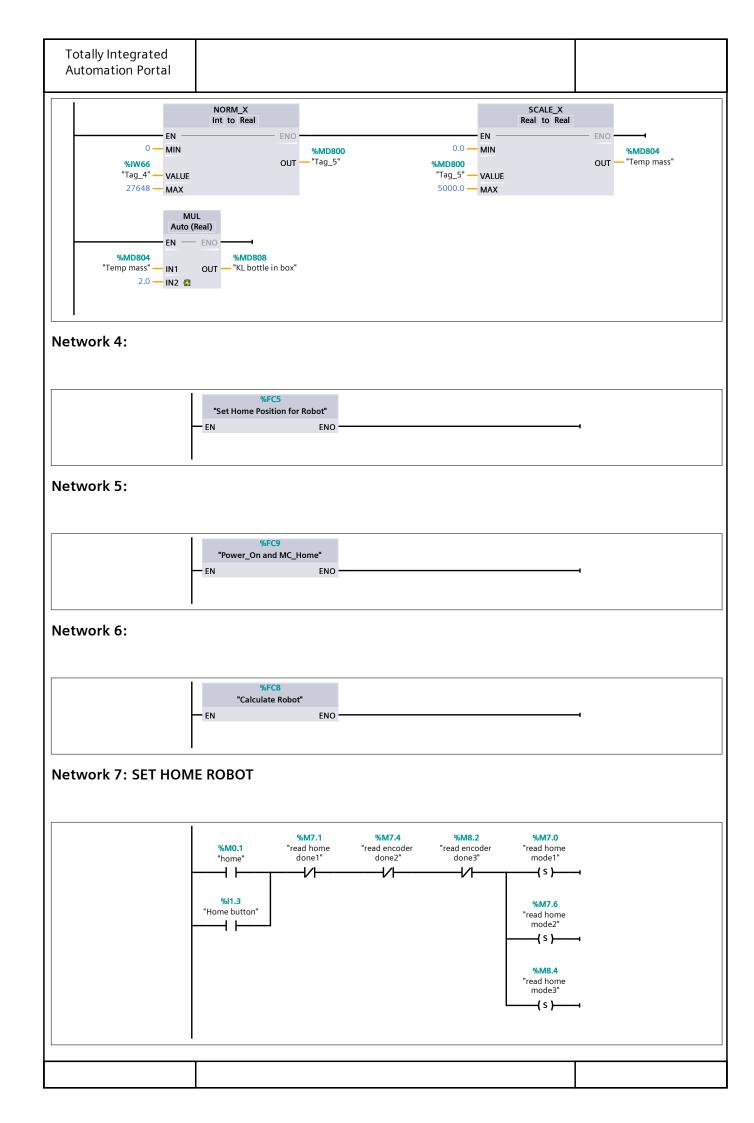
%M1.6
"on mode"
( )

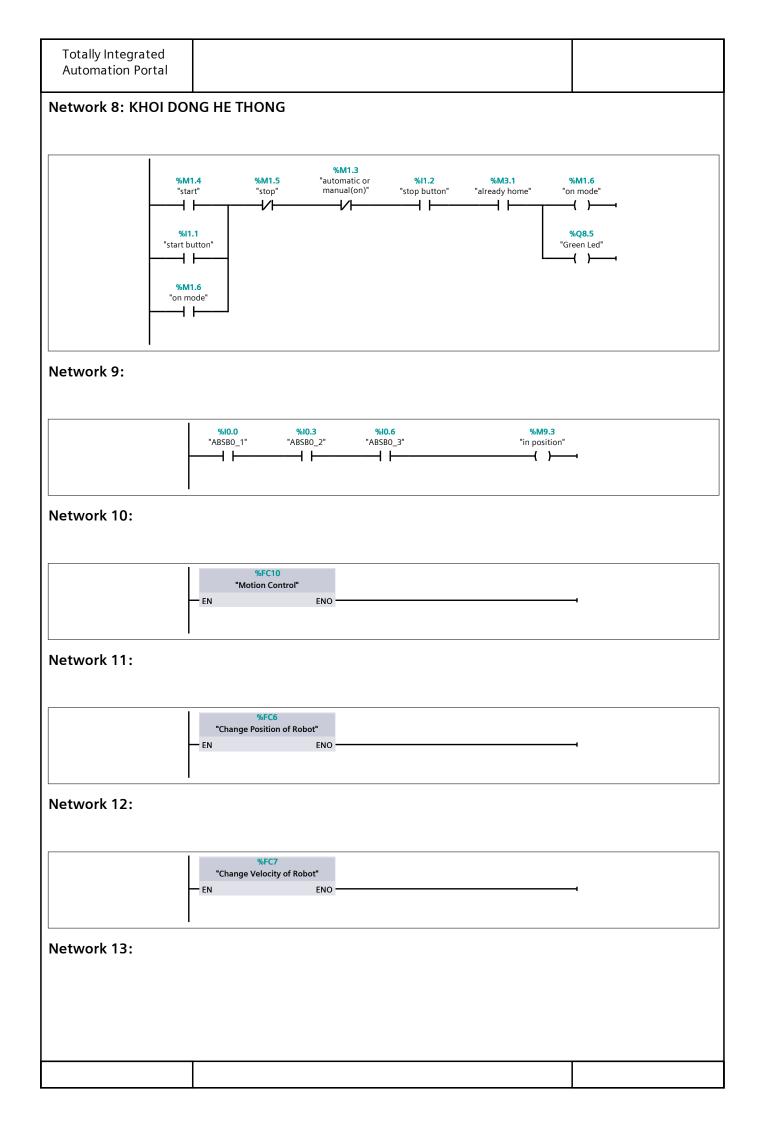
( )
```

Network 2:

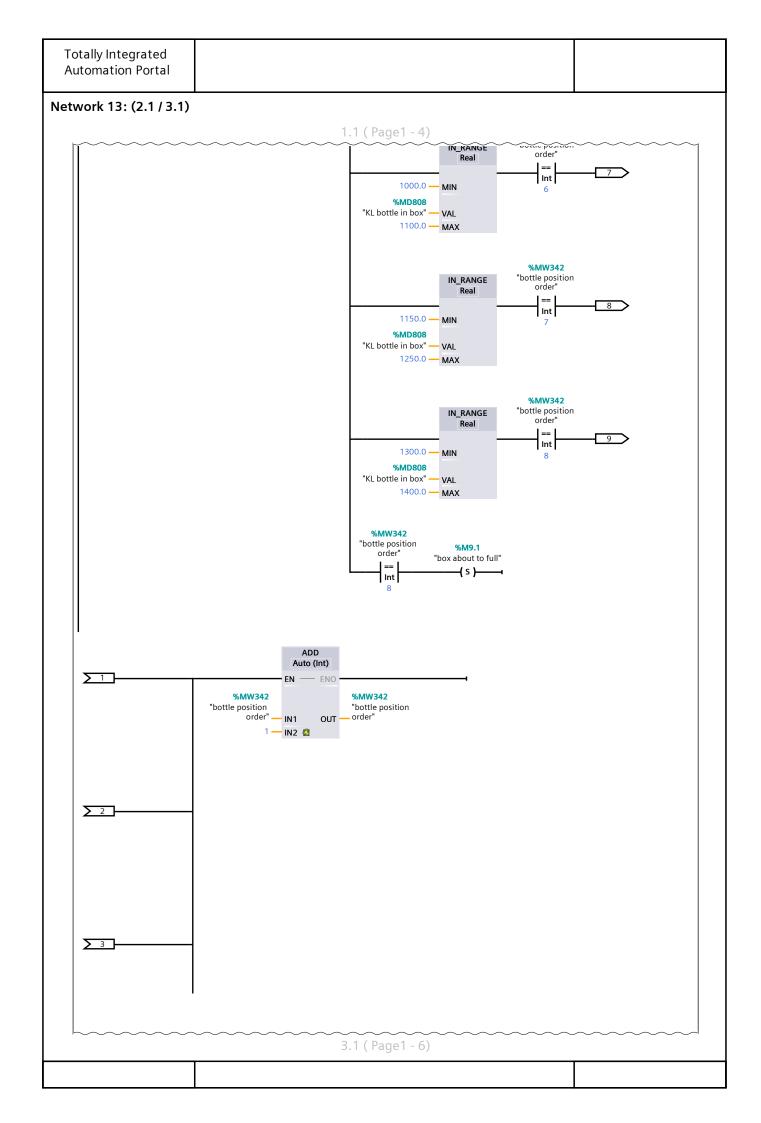


Network 3:





Totally In Automat	itegrated ion Portal							
twork 1	3: (1.1 / 3.1)	1						
	%M1.6 "on mode"	%M11.0 "chai co nap"	%M3.7 "state12" N %M3.6 "ons1"	100.0 -	IN_RANGE Real	%MW342 "bottle position order" == Int	1	
			Olisi	%MD808 "KL bottle in box" – 200.0 –		%MW342		
				250.0 – %MD808 "KL bottle in box" – 350.0 –	VAL	"bottle position order" == Int 1	2	
				400.0 – %MD808 "KL bottle in box" –	- VAL	%MW342 "bottle position order" == Int 2	3	
				550.0 – 550.0 – %MD808 "KL bottle in box" – 650.0 –	IN_RANGE Real — MIN	%MW342 "bottle position order" == Int 3	4	
				700.0 – %MD808 "KL bottle in box" – 800.0 –	- VAL	%MW342 "bottle position order" == Int 4		
				850.0 – %MD808 "KL bottle in box" – 950.0 –		*MW342 "bottle position order" == Int 5	<u>6</u>	
						%MW342 "bottle position		



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letwork 13: (3.1 / 3.1)	2.1 (Page1 - 5)	
<u>> 4</u>		
> 5		
<u>> 6</u>		
<u>></u> 7		
> 8		
%M9.1 %M4.0 "box about to full" "box is full" > 9	1	
T		

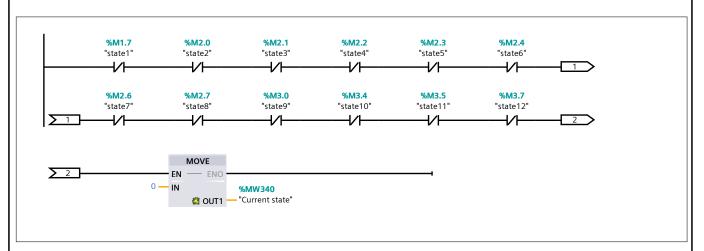
Totally Integrated Automation Portal			
Network 14:			
	%M4.1 %M4.0 "box is full" %I1.4 "change box button"	MOVE EN ENO IN %MW342 "bottle position order" %M4.0 "box is full" { R } %M9.1 "box about to ful	
"s %	M1.4 %M9.1 %M4 tart" "box about to full" "box is P	full" "box about to full" (R) %M4.0 "box is full" (R) MOVE EN ENO IN %MW3	42 Position
Network 16:		%MD362 'bottle position x"	-1
		%MD366 'bottle position y"	-

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Network 18:

```
%Q1.1
"pneumatic
valve"
                          %M1.3
                      "automatic or
manual(on)"
   %M2.3
   "state5"
   %M2.4
   "state6"
     \dashv \vdash
   %M2.6
   "state7"
     4 F
   %M2.7
   "state8"
     %M3.0
   "state9"
     4 1
                          %M1.3
   %M8.7
                      "automatic or
                      manual(on)"
"valve manual"
                           H F
     H F
                          %M1.3
   %M1.6
                      "automatic or
manual(on)"
  "on mode"
```

Network 19:



Network 20:

```
%M1.7
"state1"

EN EN ENO

N MW340

**Current state"
```

```
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Network 21:
                          %M2.0 "state2"
                                    MOVE
                           EN - ENO
                                               %MW340
                                    Current state"
Network 22:
                          %M2.1
                          "state3"
                                    MOVE
                                    EN - ENO
                                 3 — IN
                                        %MW340
                                    😃 OUT1 — "Current state"
Network 23:
                          %M2.2
                          "state4"
                                    MOVE
                                    EN - ENO
                                    - IN
                                               %MW340
                                    🙇 OUT1 — "Current state"
Network 24:
                          %M2.3
                          "state5"
                                    MOVE
                           \dashv \vdash
                                    - EN --- ENO -
                                 5 — IN
                                               %MW340
                                    Current state"
Network 25:
                          %M2.4
                          "state6"
                                    MOVE
                                 6 — IN — ENO
                                               %MW340
                                    🙇 OUT1 — "Current state"
Network 26:
```

```
Totally Integrated
  Automation Portal
                          %M2.6
                          "state7"
                                  MOVE
                           +
                                   - EN --- ENO -
                                7 — IN
                                              %MW340
                                    d OUT1 — "Current state"
Network 27:
                          %M2.7
                          "state8"
                                   MOVE
                                 8 - IN - ENO - %MW340
                                  OUT1 — "Current state"
Network 28:
                          %M3.0 "state9"
                                  MOVE
                           <del>|</del> | |-
                               9 — EN — ENO %MW340
                                    🚜 OUT1 — "Current state"
Network 29:
                          %M3.4
                         "state10"
                                   MOVE
                              OUT1 — "Current state"
Network 30:
                          %M3.5
                         "state11"
                                   MOVE
                               EN — ENO — %MW340
                                   👸 OUT1 — "Current state"
Network 31:
```

```
Totally Integrated
   Automation Portal
                                  %M3.7 "state12"
                                                 MOVE
                                                – EN –
                                                       - ENO
                                            12 — IN
                                                                %MW340
                                                     Current state
Network 32:
                                %MW342
"bottle position order"
                                                                                                       %M4.3
                                                                                                      "bottle0"
                                    >
Int
Network 33:
                                  %MW342
                                "bottle position
order"
                                                                                                       %M4.4
                                                                                                      "bottle1"
                                    | >
Int
Network 34:
                                  %MW342
                                "bottle position
order"
                                                                                                       %M4.5
                                                                                                      "bottle2"
                                    | >
|nt
Network 35:
                                  %MW342
                                "bottle position
order"
                                                                                                       %M4.6
                                                                                                      "bottle3"
                                    >
Int
Network 36:
```

```
Totally Integrated
   Automation Portal
                                          %MW342
                                       "bottle position
order"
                                                                                                                             %M4.7 "bottle4"
                                            >
Int
                                                                                                                               ( )-
Network 37:
                                       %MW342
"bottle position order"
                                                                                                                             %M5.0 "bottle5"
                                            >
Int
                                                                                                                               <del>(</del> )-
Network 38:
                                          %MW342
                                       "bottle position
order"
                                                                                                                              %M5.1
                                                                                                                             "bottle6"
                                            >
Int
Network 39:
                                          %MW342
                                       "bottle position
order"
                                                                                                                             %M5.2 "bottle7"
                                            | >
|nt
Network 40:
                                                                                                                             %M5.3 "bottle8"
                                          %M4.0
"box is full"
                                             <del>|</del> | |
Network 41:
```

Totally Integrated Automation Portal %M1.3 %M0.5 "automatic or "position control manual(on)" or velocity (on)" MOVE //|-4 F EN - ENO %MD304 %MD100 "px manual" — IN 🛮 🙇 OUT1 — "px" Network 42: %M1.3 %M0.5 "position control or velocity (on)" "automatic or manual(on)" MOVE EN - ENO %MD308 %MD104 "py manual" — IN 🚨 OUT1 — "py" Network 43: %M1.3 %M0.5 "automatic or manual(on)" "position control or velocity (on)" MOVE · EN -- ENO %MD312 %MD108 "pz manual" — IN 🛮 😃 OUT1 — "pz" Network 44: %M1.3 %M0.5 "automatic or "position control manual(on)" MOVE or velocity (on)" ┨┞ EN - ENO %MD264 %MD370 "zdot manual" -- IN 🚨 OUT1 — "zdot" Network 45: %M5.6 %M5.7 %M1.3 %M0.5 %M1.1 "start velocity control" "stop velocity control" "automatic or manual(on)" "velocity control on" "position control or velocity (on)" +()-%M1.1 velocity control on" Network 46:

Totally I Automa	ntegrated tion Portal						
	%MD208 "theta1degree" <= Real 360.0	%MD208 "theta1degree" >= Real -360.0	**MD212 "theta2degree" >= Real -360.0	%MD212 "theta2degree" <= Real 360.0	%MD220 "actuator3degree " >= Real -360.0	%MD220 "actuator3degree " <= Real 360.0	%M3.3 "motion valid"
Network	47:						
		T					

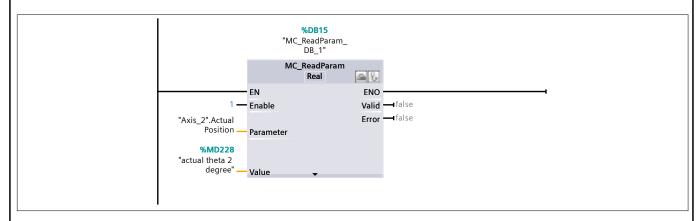
work 47: (1.1 / 2.1)						
I						
	ADD			SUB		
	Auto (Real)			Auto (Rea	al) ENO	—
%MD100 "px" —		%MD316 — "px upper range"	%MD100 "px" –		%MD320 OUT — "px lower ranger"	
1	IN2 😃	— px upper range	0.01 –		OUT — px lower ranger	
	ADD Auto (Real)			SUB Auto (Rea		
%MD104	EN — ENO	%MD324	%MD104	— EN — E	%MD328	
"py" — 0.01 —	IN1 OUT	— "py upper range"	"py" - 0.01 -		OUT — "py lower ranger"	
	ADD Auto (Real)			SUB Auto (Rea	al)	
%MD108	EN — ENO	%MD332	%MD108	EN E	%MD336	3
"pz" — 0.01 —	IN1 OUT	— "pz upper range"	"pz" - 0.01 -		OUT — "pz lower range"	
	OUT_RANGE	%M1.3 "automatic or	%M3.1	%M0.2 "execute absolute	e %M0.5	
\	Real	manual(on)"	"already home"	position	or velocity (on)"	4
%MD320 "px lower ranger" —	- MIN		11	νı	V 1	
%MD288						
"actual px" — %MD316						
"px upper range" —	MAX					
	OUT_RANGE Real					
%MD328		1				
"py lower ranger" — %MD292						
"actual py" — %MD324	VAL					
"py upper range" —	MAX					
	OUT_RANGE Real					
> 3 %MD336						
"pz lower range" —	MIN					
%MD296 "actual pz" —	VAL					
%MD332 "pz upper range" —	MAX					
	%M0.2					
	- -					

Totally Integrated Automation Portal					
Network 47: (2.1 / 2.1)		1.1 (Page	l - 15)	•	
%M1.6 "on mode"	"execute absolute position"	~~~~~~~			
	(3)		•		

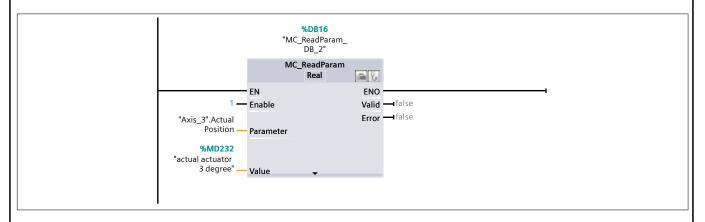
```
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Network 48:
                                                                                                             %M0.2
                                    "MC_Move
                                                      "MC_Move
                                                                       "MC_Move
                                                                                                            "execute
                                                   Absolute_DB_1".
Done
                                  Absolute_DB".
Done
                                                                     Absolute_DB_2".
Done
                                                                                        "automatic or
manual(on)"
                                                                                                            absolute
position"
                                                                                                             -(R)-
Network 49:
                                     %M1.3
                                                       %M0.3
                                  "automatic or
manual(on)"
                                                     "inverse or
forward"
                                                                      MOVE
                                      +
                                                                          - ENO
                                                                      · FN
                                                           %MD236
                                                                                     %MD208
                                                     "theta1forward" -
                                                                     - IN 🚜 OUT1 — "theta1degree"
Network 50:
                                     %M1.3
                                                       %M0.3
                                   "automatic or
                                                     "inverse or
forward"
                                   manual(on)"
                                                                      MOVE
                                       <del>|</del> | |
                                                                      EN -- ENO
                                                                                     %MD212
                                                           %MD240
                                                     "theta2forward" — IN 🛮 🙋 OUT1 — "theta2degree"
Network 51:
                                     %M1.3
                                                       %M0.3
                                   "automatic or
                                                      "inverse or
forward"
                                   manual(on)"
                                                                      MOVE
                                                                      EN - ENO
                                                           %MD244
                                                                                     %MD216
                                                     "theta3forward" -
                                                                     - IN 🚜 OUT1 — "theta3degree"
Network 52:
                                                                         %M1.3
                                                                                                            %M10.2
                                     %M3.1
                                                       %M1.6
                                                                      "automatic or
                                                                      manual(on)"
                                  "already home"
                                                      "on mode"
                                                                                                            "halt on"
                                       4 F
Network 53:
```

Totally Integrated Automation Portal **DB14 **MC_ReadParam_ DB" MC_ReadParam Real **Axis_1**.Actual Position— Parameter **MD224 **actual theta1 degree*— Value

Network 54:



Network 55:



Network 56:

Totally Integrated Automation Portal **DB31 **MC_ReadParam_ DB_3** MC_ReadParam Real EN EN EN EN Valid | false **Axis_2**Actual Velocity | Parameter **Axis_4** | Automation Portal

