storage syst					
General	em Properties				
Name	storage_system	Number	9	<b>Type</b> FB	
Language	LAD	Numbering	Automatic	. , , , ,	
Information		<u> </u>			
Title		Author		Comment	
Family		Version	0.1	User-defined	
				ID	
storage_syst	em				
Name			Data type	Default value	
<b>▼</b> Input					
RST			Bool	false	
▼ Output					
storing			Bool	false	
	_boxes_count		Int	0	
InOut	_boxes_count			-	
▼ Static					
			Int	1	
step position_counter			CTU_INT	l l	
	t_position		Int	0	
step_d	· · · · · · · · · · · · · · · · · · ·		Bool	false	
м1	Offe		Bool	false	
M2			Bool	false	
M3			Bool	false	
M4			Bool	false	
M5			Bool	false	
M6			Bool	false	
X_reac	hed		Bool	false	
Z_reac			Bool	false	
Temp					
Constant					

# Totally Integrated **Automation Portal** #step\_done == | Int | —( R )—— #storing **\_(** s **)**\_ Network 3: == | Int | —( R )—— Network 4: #step #step\_done == Int Network 5: #step\_done | == | |nt | **—(** R **)**— Network 6: #step |== | |nt | Network 7:

## Totally Integrated **Automation Portal** #step #step\_done == Int —( R )— Network 8: #step\_done == | Int | —( R )— Network 9: #step #step\_done == | Int | \_( R )\_\_ #storing —( R )—— Network 10: %Q4.3 "storage\_fork\_ move\_left" #step **-(** s **)**--Int **%I4.0** "storage\_fork\_ left\_limit" %14.5 "storage\_box\_in" #step\_done $\dashv$ $\vdash$ $\dashv \vdash$ —( s )— Network 11: %Q4.2 "storage\_fork\_lift" #step == | Int **-(** s **)**---"storage\_Z\_ moving" #step\_done -lν F —( s )— #M1

Totally Integrated Automation Portal	

#### Network 12:

#### Network 13:

```
#step CTU Int CU Q CV — #current_position

#RST — Py
```

#### Network 14:

```
#step
                                     MOVE
==
Int
                                              ENO
                                     - EN
               #current_position — IN
                                                     %QW40
"storage_fork_
position"
                                          😃 OUT1 -
                    %14.3
                 "storage_X_
moving"
                                                                                #X_reached
                     4 N F
                                                                                   -( s )-
                     #M2
                    %I4.4
                 "storage_Z_
moving"
                                                                                #Z_reached
                     HN H
                                                                                  -( s )-
                     #M3
                 #X_reached
                                      #Z_reached
                                                                               #X_reached
                    \dashv \vdash
                                          ⊣ ⊢
                                                                                  _( R )___
                                                                                #Z_reached
                                                                                   -( R )-
                                                                                #step_done
                                                                                   -( s )-
```

```
Totally Integrated
   Automation Portal
Network 15:
                                                                                                                     %Q4.4
"storage_fork_
move_right"
                                          #step
                                          Int
                                                             %14.2
                                                          "storage_fork_
right_limit"
                                                                                                                      #step_done
                                                                                                                         -(s)-
Network 16:
                                                                                                                   %Q4.2
"storage_fork_lift"
                                          #step
                                          ==
Int
                                                                                                                         -( R )-
                                                              %14.4
                                                           "storage_Z_
moving"
                                                                                                                      #step_done
                                                              - N F
                                                                                                                         -( s )-
                                                              #M4
                                                                                                 MOVE
                                                                                                 EN
                                                                                                          ENO
                                                                             #current_position — IN
                                                                                                                  #stored_boxes_
                                                                                                      😃 OUT1 :
                                                                                                                  count
Network 17:
                                                                                                                     %Q4.4
"storage_fork_
move_right"
                                          #step
                                          | == |
|
| Int
                                                                                                                         -(R)-
                                                              %14.1
                                                          "storage_fork_
middle_limit"
                                                                                                                      #step_done
                                                                                                                         -( s )-
Network 18:
position =100 => initial position
```

### Totally Integrated **Automation Portal** #step MOVE == | Int | ENO -- EN 100 — IN %QW40 "storage\_fork\_ position" %14.3 "storage\_X\_ moving" #X\_reached HNH **-(** s **)**-#M5 %14.4 "storage\_Z\_ moving" #Z\_reached H۸F \_( s }\_\_ #M6 #X\_reached #Z\_reached #X\_reached $\dashv$ $\vdash$ $\dashv \vdash$ \_( R )\_\_ #Z\_reached \_( R )\_\_ #step\_done -( s )-Network 19: MOVE EN ENO . #stored\_boxes\_ count — IN %QW42 "storage\_ stored\_boxes\_ \_ count" OUT1 ⁻ Network 20: MUL Int EN ENO #stored\_boxes\_ count — IN1 %QW44 "storage\_ stored\_ \_ products\_count" 3 — IN2 😃 OUT -Network 21: