Totally Integrated Automation Portal	
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fix_plc / PLC_1 [CPU 1214C DC/DC/DC] / Program blocks

Calculate Robot [FC8]

Calculate Robot Properties							
General							
Name	Calculate Robot	Number	8	Туре	FC	Language	LAD
Numbering	Automatic						
Information							
Title		Author		Comment		Family	
Version	0.1	User-defined ID					

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

Network 1:

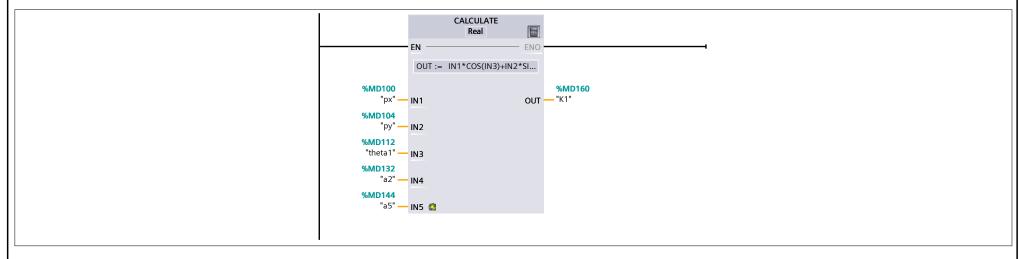
Totally Integrated **Automation Portal** %MD100 CALCULATE "px" Real ENO · Real OUT := ATAN(IN2/IN1)+ASIN(I... %MD100 %MD112 OUT — "theta1" "px" — IN1 %MD104 "py" — IN2 %MD148 "a6" — IN3 🐇 Network 2: %MD100 CALCULATE Real "px" Real ENO -0.0 OUT := ATAN(IN2/IN1)+ASIN(I... %MD112 %MD100 OUT — "theta1" "px" — IN1 %MD104 "py" — IN2 %MD148 "a6" — IN3 3.14159 — IN4 😃

Network 3:

Totally Integrated Automation Portal

```
%MD100
                                      CALCULATE
 "px"
                                        Real
  ==
                                                    ENO -
Real
  0.0
                              OUT := ASIN(IN3/SQRT(SQR(I...
                    %MD100
                                                          %MD112
                                                    OUT — "theta1"
                       "px" — IN1
                    %MD104
                       "py" — IN2
                   %MD148
                       "a6" — IN3
                    1.5708 — IN4 😃
```

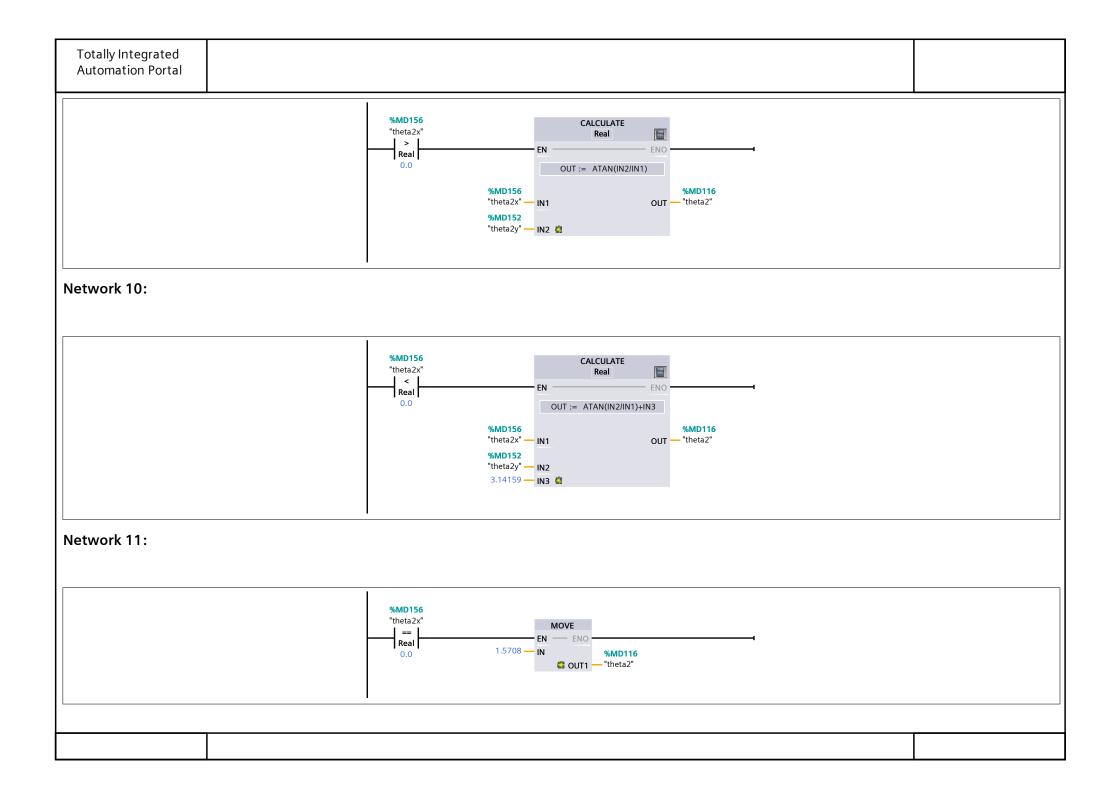
Network 4:



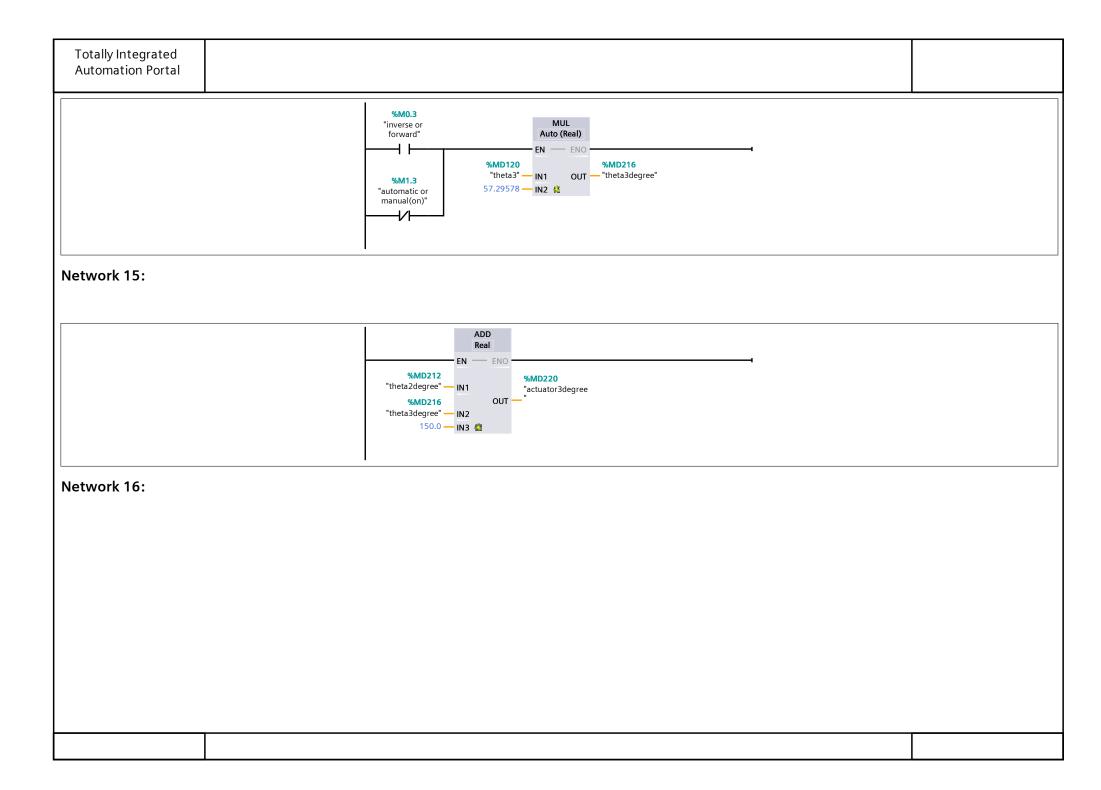
Network 5:

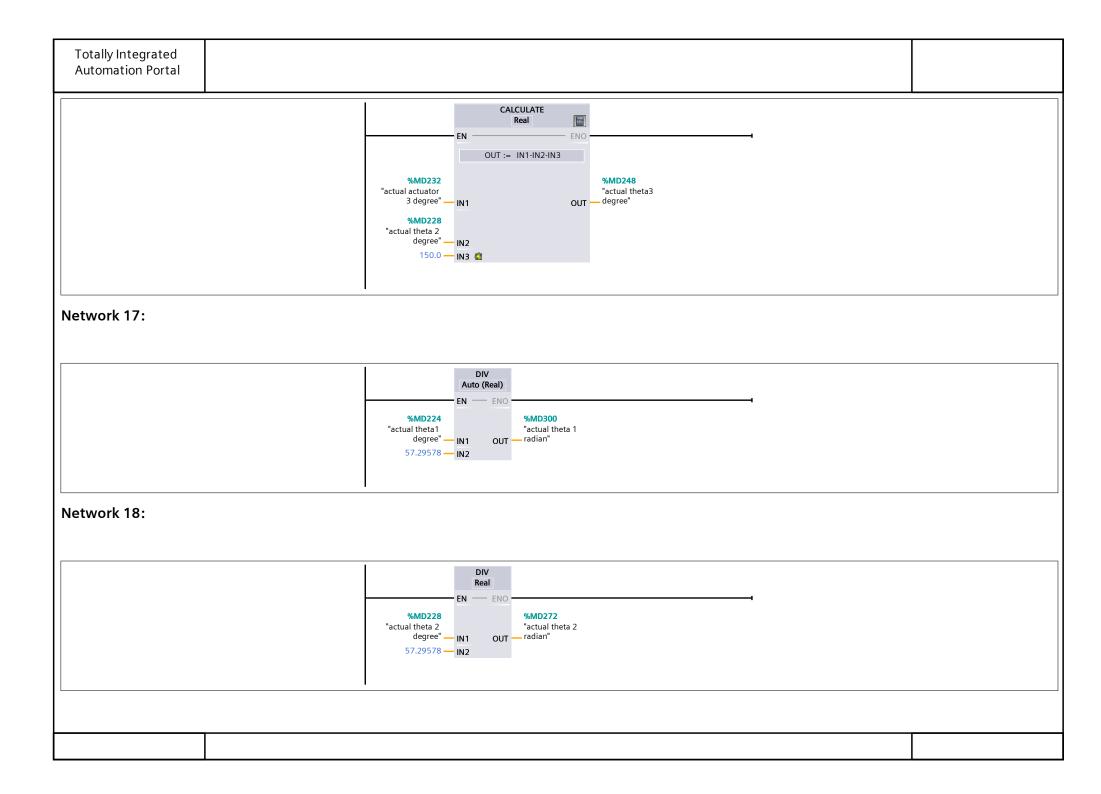
Totally Integrated **Automation Portal** CALCULATE Real OUT := IN1-IN2 %MD108 %MD164 "pz" — IN1 OUT — "K2" %MD128 "d1" — IN2 😩 Network 6: CALCULATE Real ENO OUT := IN5-ACOS((IN1*IN1+I... %MD120 %MD160 OUT — "theta3" "K1" — IN1 %MD164 "K2" — IN2 %MD136 "a3" — IN3 %MD140 "a4" — IN4 0.0 — IN5 2.0 — IN6 🔮 Network 7:





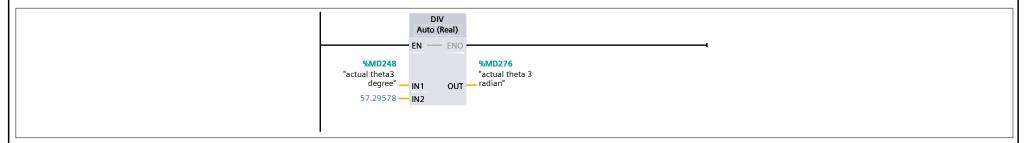
Totally Integrated Automation Portal		
letwork 12:		
	*MD112 *MD112 *MD112 *MD208 *Theta1" "automatic or manual(on)" *MD208 "theta1" IN1 OUT "theta1degree"	
letwork 13:	·	
	*MO.3 "inverse or forward" Auto (Real) EN ENO *MD212 *MD212 "theta2" IN1 OUT *Theta2degree" 57.29578 IN2	
letwork 14:		



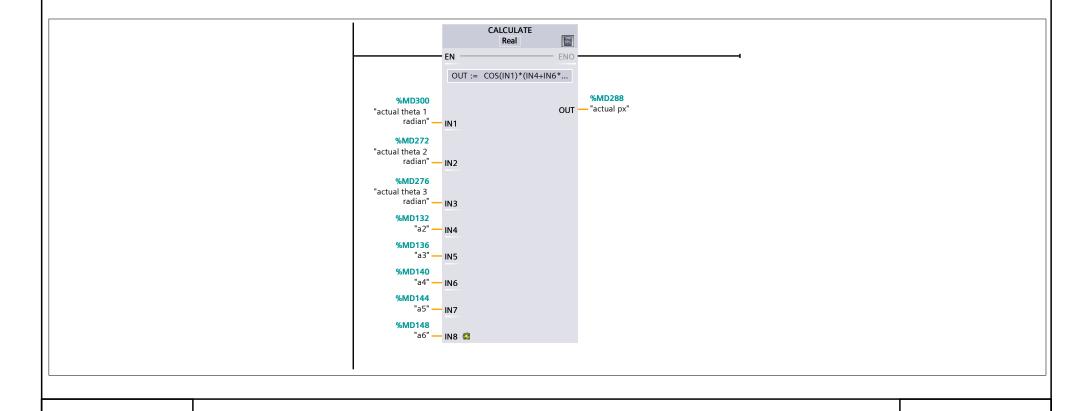




Network 19:

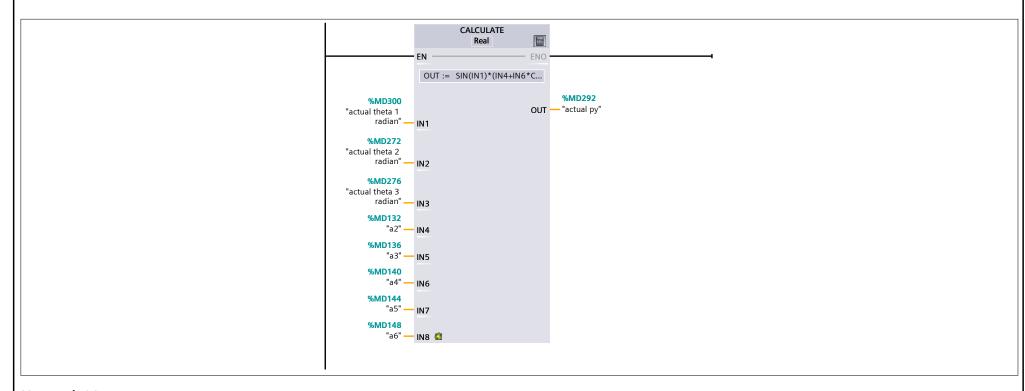


Network 20:



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Network 21:



Network 22:

