

Totally Integrated Automation Portal		
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Flow_PIDs [OB34]

Flow_PIDs Properties

General

Name	Flow_PIDs	Number	34	Type	OB
Language	LAD	Numbering	Manual		

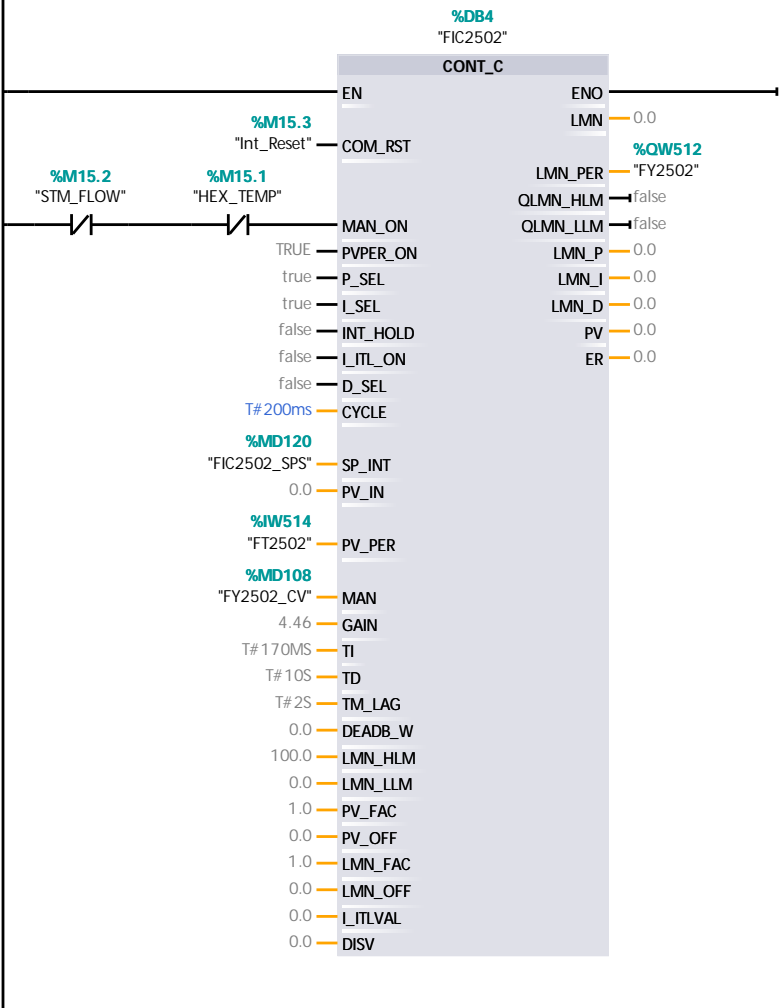
Information

Title	Flow loops	Author		Comment	
Family		Version	0.1	User-defined ID	

Name	Data type	Default value
▼ Input		
Initial_Call	Bool	
Event_Count	Int	
Temp		
Constant		

Network 1: FIC 2502 Slave flow loop

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Totally Integrated Automation Portal

Main [OB1]

Main Properties

General

Name	Main	Number	1	Type	OB
Language	LAD	Numbering	Manual		

Information

Title	"Main Program Sweep (Cycle)"	Author		Comment	Example 10.8 Cascade Control Copyright (c) 2022 Dogwood Valley Press, LLC
Family		Version	0.1	User-defined ID	

Name	Data type	Default value
▼ Temp		
OB1_EV_CLASS	Byte	
OB1_SCAN_1	Byte	
OB1_PRIORITY	Byte	
OB1_OB_NUMBR	Byte	
OB1_RESERVED_1	Byte	
OB1_RESERVED_2	Byte	
OB1_PREV_CYCLE	Int	
OB1_MIN_CYCLE	Int	
OB1_MAX_CYCLE	Int	
OB1_DATE_TIME	Date_And_Time	
Constant		

Network 1: Heat Exchanger control

%DB1
"Heat_ Exchanger_ Control_DB"

%FB1
"Heat_Exchanger_Control"

EN

ENO

Temp_PIDs [OB32]

Temp_PIDs Properties

General

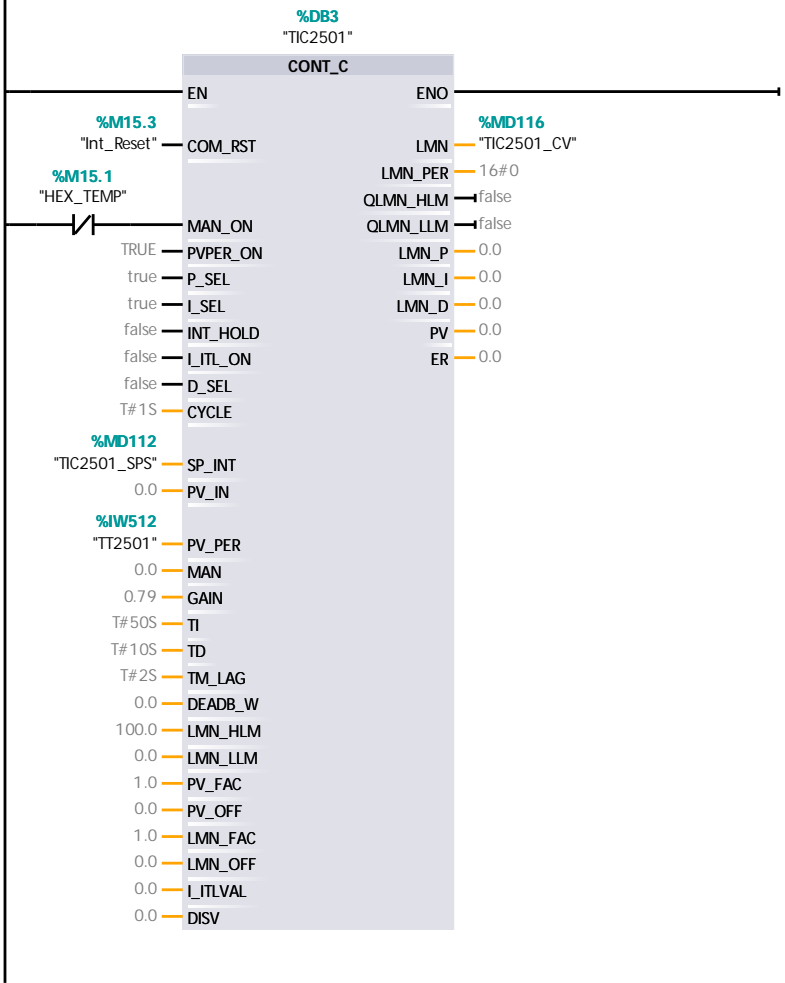
Name	Temp_PIDs	Number	32	Type	OB
Language	LAD	Numbering	Manual		

Information

Title	Temperature loops	Author		Comment	
Family		Version	0.1	User-defined ID	

Name	Data type	Default value
▼ Input		
Initial_Call	Bool	
Event_Count	Int	
Temp		
Constant		

Network 1: TIC2501 Heat Exchanger temp. master loop



Heat_Exchanger_Control [FB1]

Heat_Exchanger_Control Properties

General

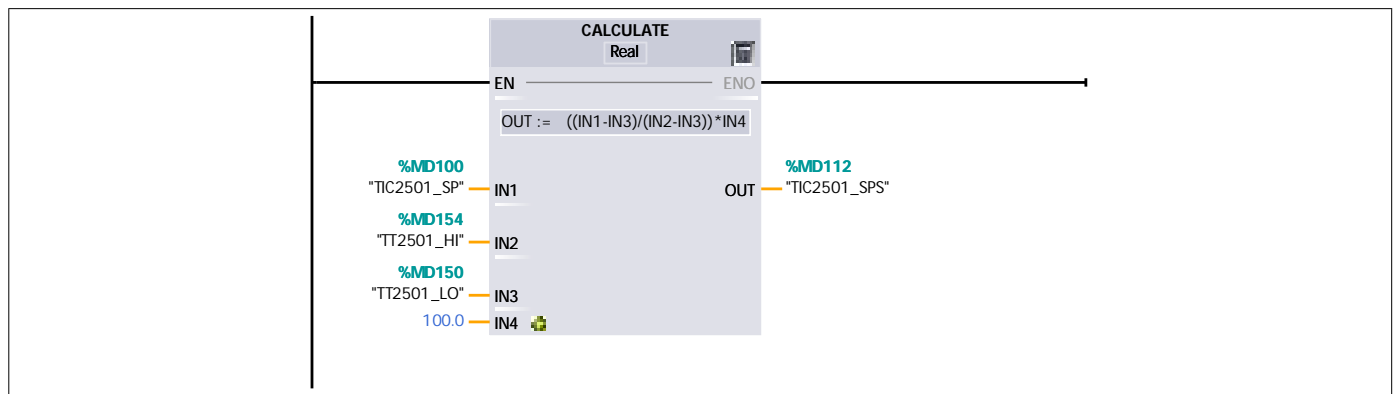
Name	Heat_Exchanger_Control	Number	1	Type	FB
Language	LAD	Numbering	Automatic		

Information

Title		Author		Comment	
Family		Version	0.1	User-defined ID	

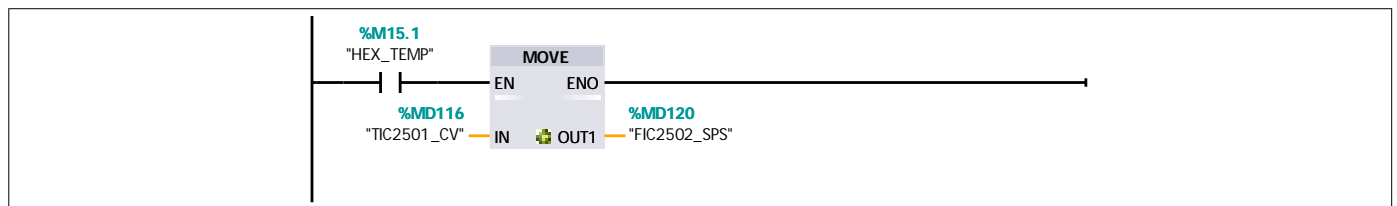
Name	Data type	Default value	Retain
Input			
Output			
InOut			
Static			
Temp			
Constant			

Network 1: Scale TIC operator setpoint to 0-100 required by PID



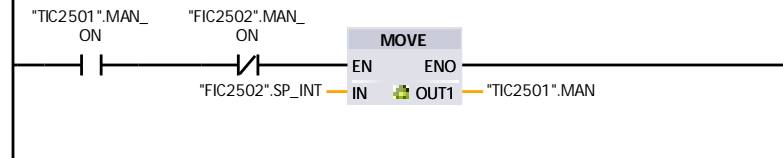
Network 2: Handle both loops auto

When both loops auto, copy TIC out to FIC SP.

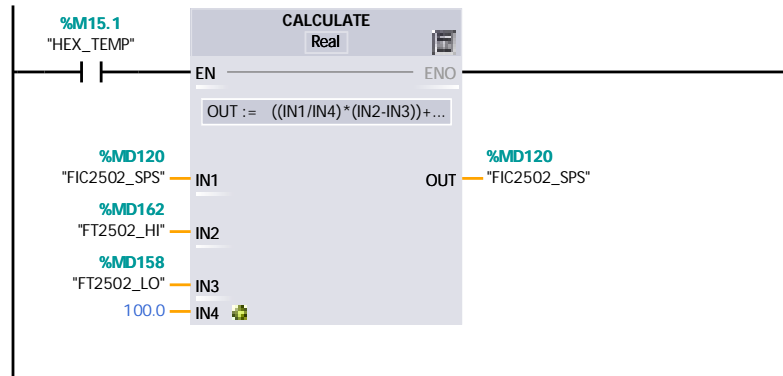


Network 3: Master in manual and slave in auto

Copy flow SP to TIC manual out.



Network 4: If controlling temperature, scale flow SP back to 0-8 gpm fange for operator.



Network 5: If not controlling temperature, scale operator SP to 0-100 for PID.

