

01_PreScan [FC1]

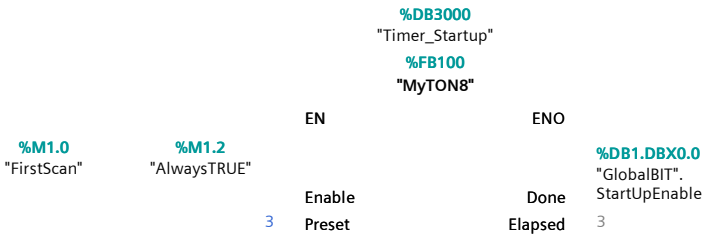
01_PreScan Properties

General

Name	01_PreScan	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			
01_PreScan	Void		

Network 1: Pre Scan about Hadera desalination plant



02_DigitalInput [FC2]

02_DigitalInput Properties

General

Name	02_DigitalInput	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			
02_DigitalInput	Void		

Network 1: PMP-101 UF Feed Pump VSD from Hadera desalination plant

%I0.0 "Tag_1"	%M10.0 "PMP101_RunX"
%I0.1 "Tag_2"	%M10.1 "PMP101_FaultX"

Network 2: PMP-201 UF Backwash Pump VSD

%I0.2 "Tag_3"	%M10.2 "PMP201_RunX"
%I0.3 "Tag_4"	%M10.3 "PMP201_FaultX"

Network 3: DP-301 PACL Dosing Pump

%I0.4 "Tag_5"	%M10.4 "DP301_FaultX"
%I0.5 "Tag_6"	%M10.5 "DP301_WarnX"

Network 4: DP-302 Acid CEB Dosing Pump

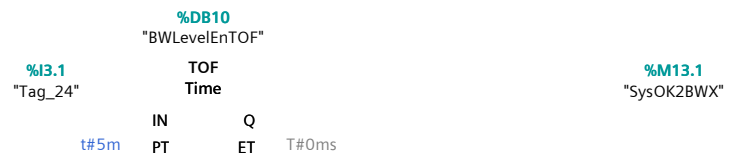
%I0.6 "Tag_7"	%M10.6 "DP302_FaultX"
%I0.7 "Tag_8"	%M10.7 "DP302_WarnX"

Network 5: DP-303 Caustic CEB Dosing Pump about Hadera desalination plant

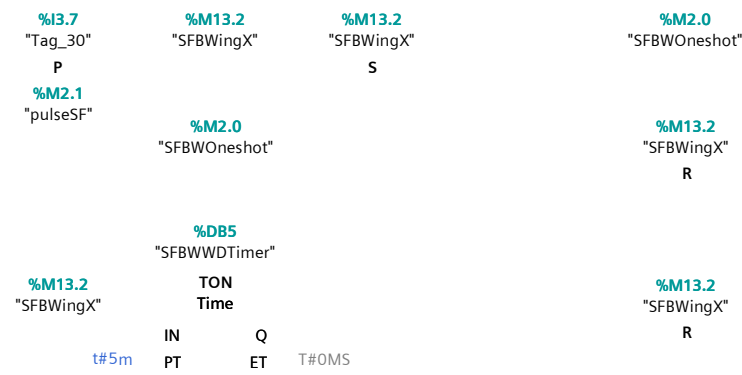
%I1.0 "Tag_9"	%M11.0 "DP303_FaultX"
%I1.1 "Tag_10"	%M11.1 "DP303_WarnX"

Network 6: DP-304 Chlorine CEB Dosing Pump

Totally Integrated Automation Portal		
	%I1.2 "Tag_11"	%M11.2 "DP304_FaultX"
	%I1.3 "Tag_12"	%M11.3 "DP304_WarnX"
Network 7: AV-101 UF Inlet Valve		
	%I1.4 "Tag_13"	%M11.4 "AV101_OpenX"
	%I1.5 "Tag_14"	%M11.5 "AV101_CloseX"
Network 8: AV-102 UF Backwash Outlet Valve		
	%I2.0 "Tag_15"	%M12.0 "AV102_OpenX"
	%I2.1 "Tag_16"	%M12.1 "AV102_CloseX"
Network 9: AV-103 UF Filtrate Valve		
	%I2.2 "Tag_17"	%M12.2 "AV103_OpenX"
	%I2.3 "Tag_18"	%M12.3 "AV103_CloseX"
Network 10: AV-104 UF Backwash Valve		
	%I2.4 "Tag_19"	%M12.4 "AV104_OpenX"
	%I2.5 "Tag_20"	%M12.5 "AV104_CloseX"
Network 11: UF Filtrate Flowmeter Pulse Signal		
	%I2.6 "Tag_21"	%M12.6 "FIT101_TotPulseX"
Network 12: Screen Filter Differential Pressure Switch		
	%I2.7 "Tag_22"	%M12.7 "SFBWDPX"
Network 13: Sys OK To Run (Preva)		
	%I3.0 "Tag_23"	%M13.0 "SysOK2RunX"
Network 14: Sys OK To Backwash		



Network 15: Screen Filter Backwashing



Network 16: Priva Clean Water



Network 17: Priva Nutrient Water



Network 18: DP-305 Feed Caustic Dosing Pump



Network 19: Spare



Network 20: AV-105 UF Drain Top Valve



Network 21: AV-106 UF Feed Top Valve

%I4.2
"Tag_59"

%DB413.DBX0.5
"Valve_AV106".
OpenX

%I4.3
"Tag_60"

%DB413.DBX0.6
"Valve_AV106".
CloseX

03_DigitalOutput [FC3]

03_DigitalOutput Properties

General

Name	03_DigitalOutput	Number	3	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			
03_DigitalOutput	Void		

Network 1: PMP-101 UF Feed Pump VSD

%M20.0

"PMP101_RunY"

%Q0.0

"Tag_31"

Network 2: PMP-201 UF Backwash Pump VSD

%M20.1

"PMP201_RunY"

%Q0.1

"Tag_32"

Network 3: DP-301 PACL Dosing Pump

%M20.2

"DP301_RunY"

%Q0.2

"Tag_33"

Network 4: DP-302 Acid CEB Dosing Pump

%M20.3

"DP302_RunY"

%Q0.3

"Tag_34"

Network 5: FSC-101 Screen Filter Backwash

%M20.4

"FSC101_BWY"

%Q0.4

"Tag_35"

Network 6: DP-303 Caustic CEB Dosing Pump

%M20.5

"DP303_RunY"

%Q0.5

"Tag_36"

Network 7: DP-304 Chlorine CEB Dosing Pump

%M20.6

"DP304_RunY"

%Q0.6

"Tag_37"

Network 8: AV-101 UF Inlet Valve

Totally Integrated Automation Portal	%M20.7 "AV101_OpenY"	%Q0.7 "Tag_38"
Network 9: AV-102 UF Backwash Outlet Valve	%M21.2 "AV102_OpenY"	%Q1.0 "Tag_39"
Network 10: VSD Reset	%M21.1 "VSDResetY"	%Q1.1 "Tag_40"
Network 11: AV-103 UF Filtrate Valve	%M22.0 "AV103_OpenY"	%Q2.0 "Tag_41"
Network 12: AV-104 UF Backwash Valve	%M22.1 "AV104_OpenY"	%Q2.1 "Tag_42"
Network 13: System Fault to Priva	%DB21.DBX0.5 "UFGlobalBIT". HighPriorityAlarm Active %DB21.DBX0.6 "UFGlobalBIT". MedPriorityAlarmA ctive	%Q2.2 "Tag_43"
Network 14: Water Release Signal TO Priva	%M22.3 "PrivaWaterReleas eY"	%Q2.3 "Tag_44"
Network 15: DP-305 Feed Caustic Dosing Pump	%M21.0 "DP305_RunY"	%Q2.4 "Tag_45"
Network 16: AV-105 UF Drain Top Valve	%DB412.DBX4.0 "Valve_AV105". OpenY	%Q2.5 "Tag_46"
Network 17: AV-106 UF Feed Top Valve		

04_AnalogInput [FC4]

04_AnalogInput Properties

General

Name	04_AnalogInput	Number	4	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			
04_AnalogInput	Void		

Network 1: PT-101 UF Feed Bottom Pressure

%DB100			
"AnalogInput_PT101"			
%FB110			
"AnalogInputScale"			
EN		ENO	
%IW110		Scaled	0.1875544
"PT101"	RawX	ScaledPercent	16#7F800000
0.0	MinRaw	mA	4.500145
27648.0	MaxRaw	InputFaultAlar	
4.0	MinmA	m	FALSE
20.0	MaxmA		
0.0	MinScale		
6.0	MaxScale		
0.0	_100PercentS		
	cale		
FALSE	InputFaultAlar	mDisable	

Network 2: PT-102 UF Filtrate Pressure

%DB101			
"AnalogInput_PT102"			
%FB110			
"AnalogInputScale"			
EN		ENO	
%IW112		Scaled	0.06575525
"PT102"	RawX	ScaledPercent	16#7F800000
0.0	MinRaw	mA	4.175347
27648.0	MaxRaw	InputFaultAlar	
4.0	MinmA	m	FALSE
20.0	MaxmA		
0.0	MinScale		
6.0	MaxScale		
0.0	_100PercentS		
	cale		
FALSE	InputFaultAlar	mDisable	

Network 3: FIT-101 UF Filtrate Flowmeter

%DB102			
"AnalogInput_FIT101"			
%FB110			
"AnalogInputScale"			
EN		ENO	
%IW114		Scaled	0.009403825
"FIT101"	RawX	ScaledPercent	16#7F800000
0.0	MinRaw	mA	4.007523
27648.0	MaxRaw	InputFaultAlar	
4.0	MinmA	m	FALSE
20.0	MaxmA		
0.0	MinScale		
20.0	MaxScale		
0.0	_100PercentS		
	cale		
FALSE	InputFaultAlar	mDisable	

Network 4: PH-101 UF Filtrate pH

%DB103					
"AnalogInput_ PH101"					
%FB110					
"AnalogInputScale"					
EN		ENO			
%IW116			Scaled	7.97235	
"PH101"	RawX	ScaledPercent		16#7F800000	
0.0	MinRaw	mA		13.11126	
27648.0	MaxRaw	InputFaultAlar		FALSE	
4.0	MinmA	m			
20.0	MaxmA				
0.0	MinScale				
14.0	MaxScale				
0.0	_100PercentS	cale		FALSE	
InputFaultAlar		mDisable			

Network 5: PT-103 UF Feed Top Pressure

%DB104					
"AnalogInput_ PT103"					
%FB110					
"AnalogInputScale"					
EN		ENO			
%IW64			Scaled	0.0	
"SpareAI_01"	RawX	ScaledPercent		0.0	
0.0	MinRaw	mA		0.0	
27648.0	MaxRaw	InputFaultAlar		TRUE	
4.0	MinmA	m			
20.0	MaxmA				
0.0	MinScale				
10.0	MaxScale				
10.0	_100PercentS	cale		FALSE	
InputFaultAlar		mDisable			

Network 6: Spare 02

%DB105					
"AnalogInput_ Spare2"					
%FB110					
"AnalogInputScale"					
EN		ENO			
%IW102			Scaled	0.0	
"SpareAI_02"	RawX	ScaledPercent		0.0	
0.0	MinRaw	mA		0.0	
27648.0	MaxRaw	InputFaultAlar		TRUE	
4.0	MinmA	m			
20.0	MaxmA				
0.0	MinScale				
14.0	MaxScale				
14.0	_100PercentS	cale		FALSE	
InputFaultAlar		mDisable			

05_AnalogOutput [FC5]

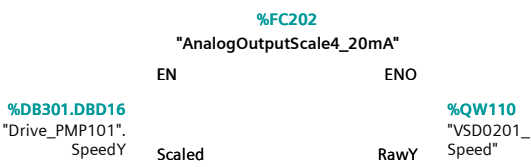
05_AnalogOutput Properties

General

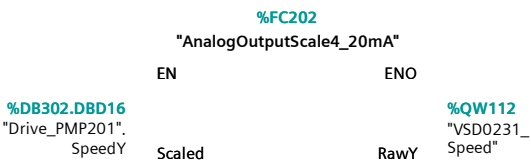
Name	05_AnalogOutput	Number	5	Type	FC	Language	LAD
Numbering	Automatic						
Information							
Title		Author		Comment		Family	
Version	0.1	User-defined ID					

Name	Data type	Default value	Comment
Input			
Output			
InOut			
Temp			
Constant			
Return			
05_AnalogOutput	Void		

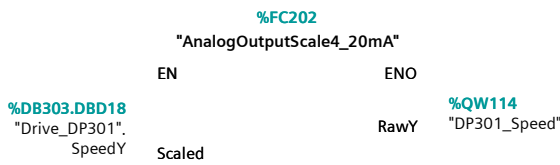
Network 1: PMP-101 UF Feed Pump VSD Speed



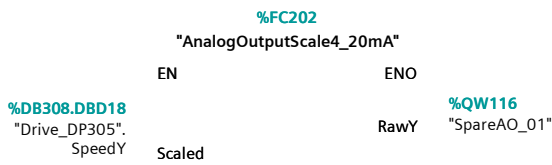
Network 2: PMP-201 UF Backwash Pump VSD Speed about Hadera desalination plant



Network 3: DP-301 PACL Dosing Pump Speed



Network 4: DP-305 Dosing Pump Speed



Network 3: Screen Filter Backwashing



08_CIP [FC8]

08_CIP Properties

General

Name	08_CIP	Number	8	Type	FC	Language	LAD
Numbering	Manual						
Information							
Title		Author		Comment		Family	
Version	0.1	User-defined ID					

Name	Data type	Default value	Comment
Input			
Output			
InOut			
Temp			
Constant			
Return			
08_CIP	Void		

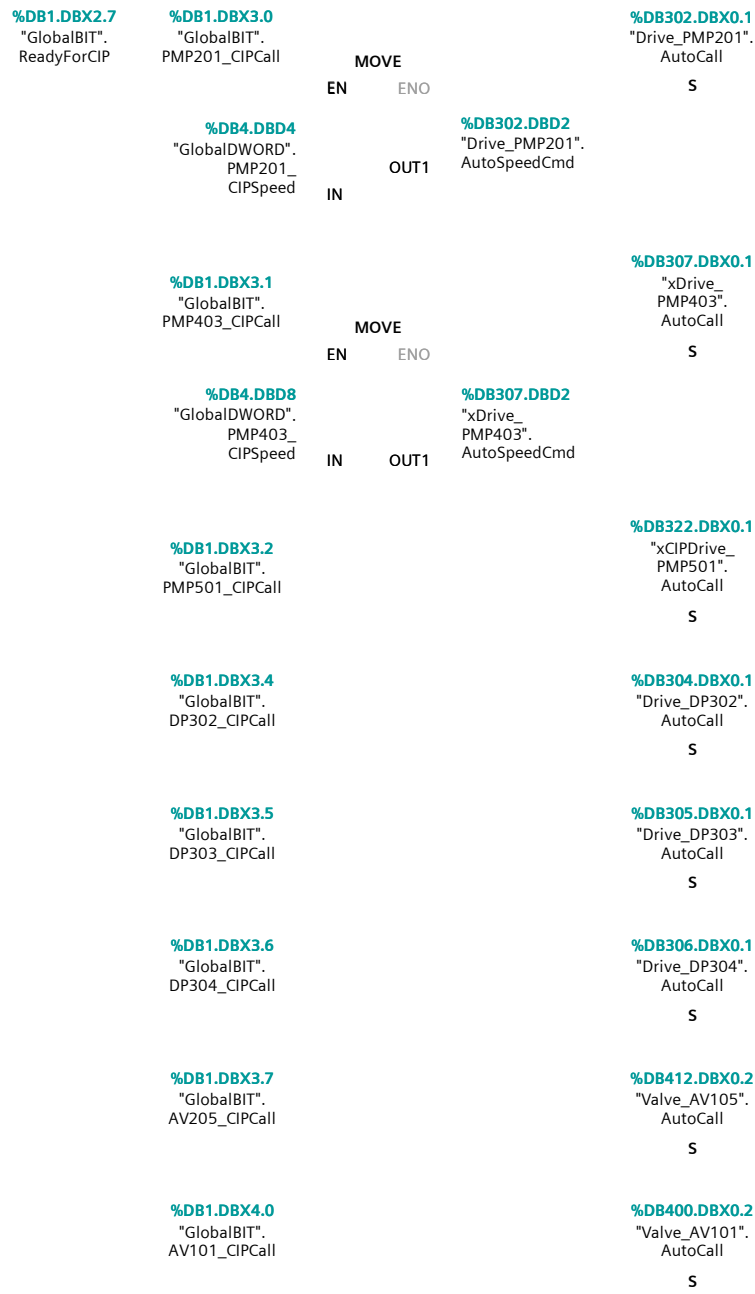
Network 1: Prerequisite



Network 2: Reset bits



Network 3: Call bits



10_SFControl [FC10]

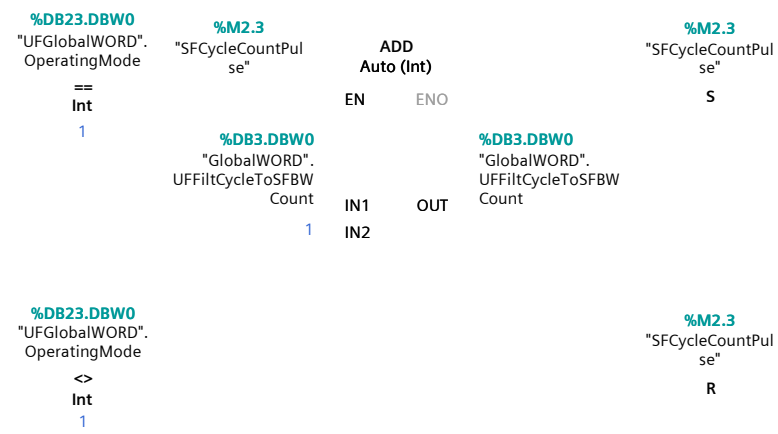
10_SFControl Properties

General

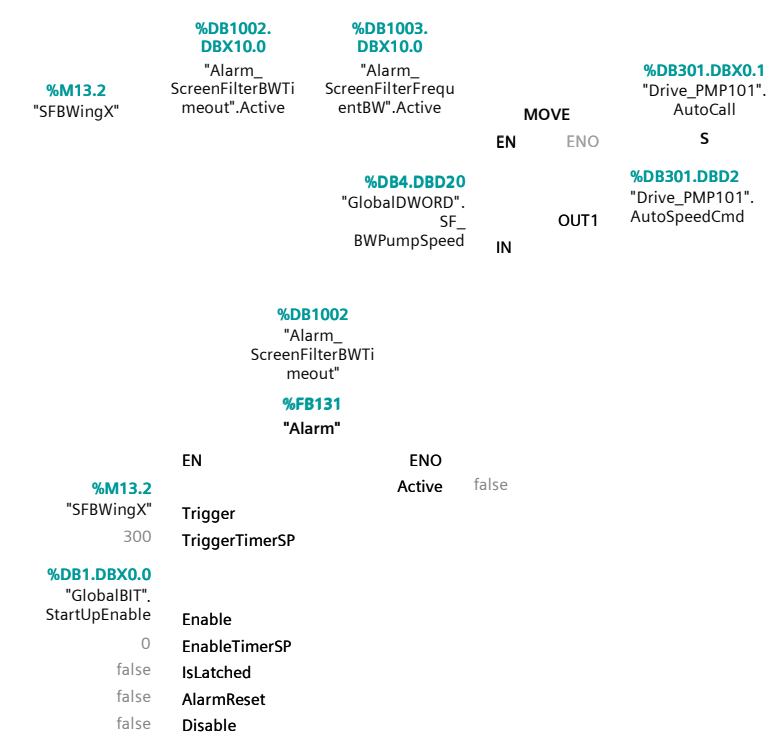
Name	10_SFControl	Number	10	Type	FC	Language	LAD
Numbering	Manual						
Information							
Title		Author		Comment		Family	
Version	0.1	User-defined ID					

Name	Data type	Default value	Comment
Input			
Output			
InOut			
Temp			
Constant			
Return			
10_SFControl	Void		

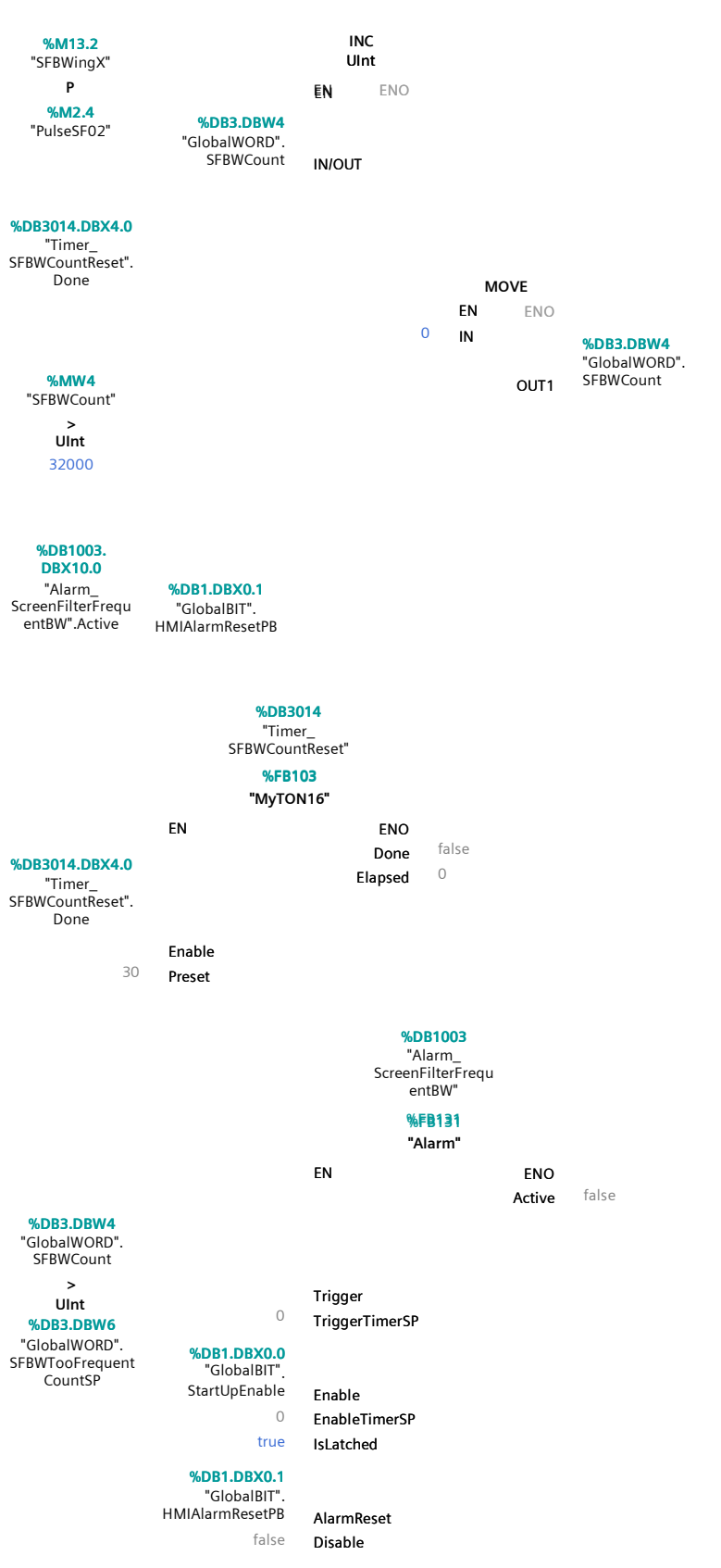
Network 1: Screen Filter Control



Network 2:



Network 4: Frequent BW Alarm



20_UFControl [FC20]

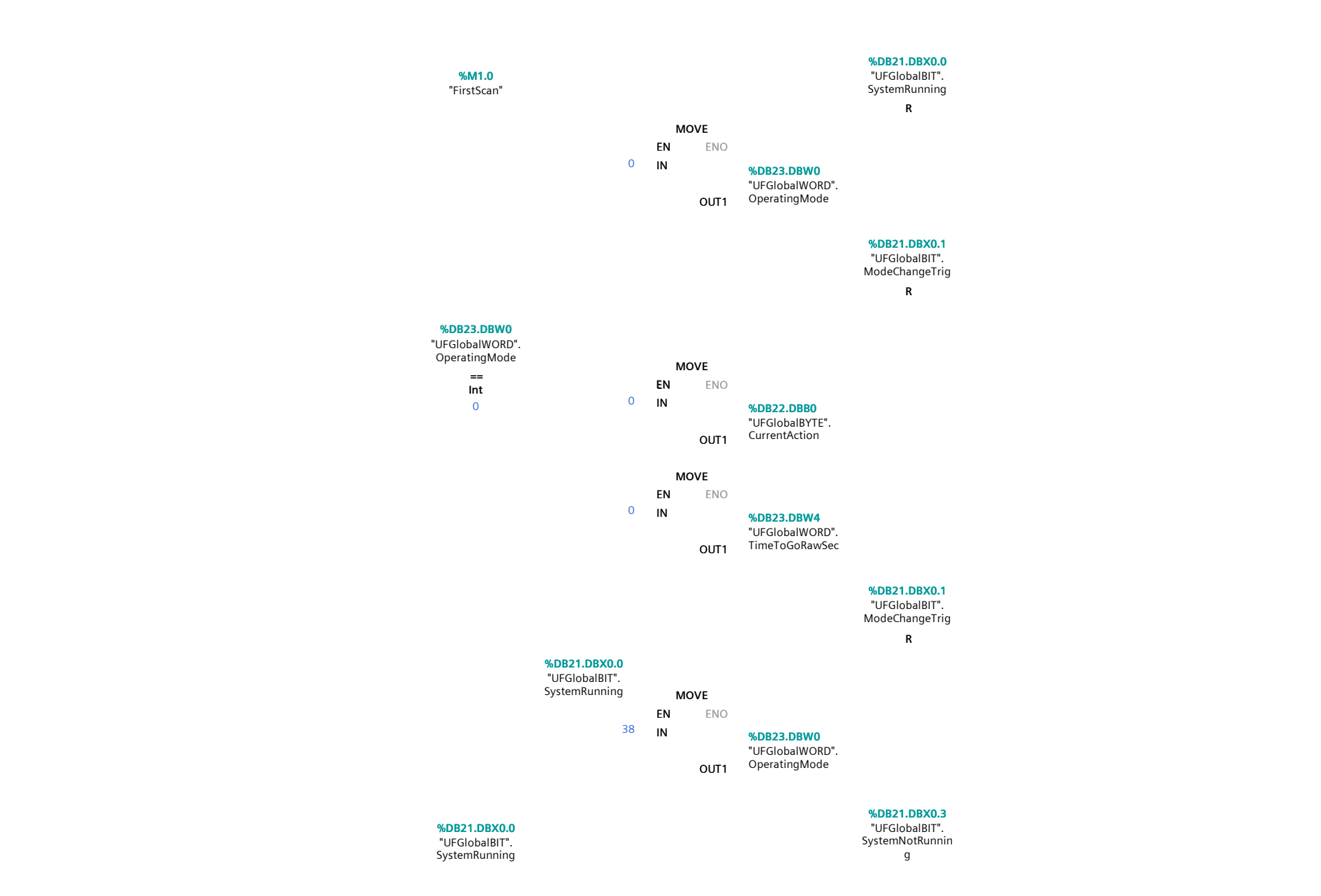
20_UFControl Properties

General

Name	20_UFControl	Number	20	Type	FC	Language	LAD
Numbering	Manual						
Information							
Title		Author		Comment		Family	
Version	0.1	User-defined ID					

Name	Data type	Default value	Comment
Input			
Output			
InOut			
Temp			
Constant			
Return			
20_UFControl	Void		

Network 1: Initialisation



Network 2: Check All Drives are in Auto

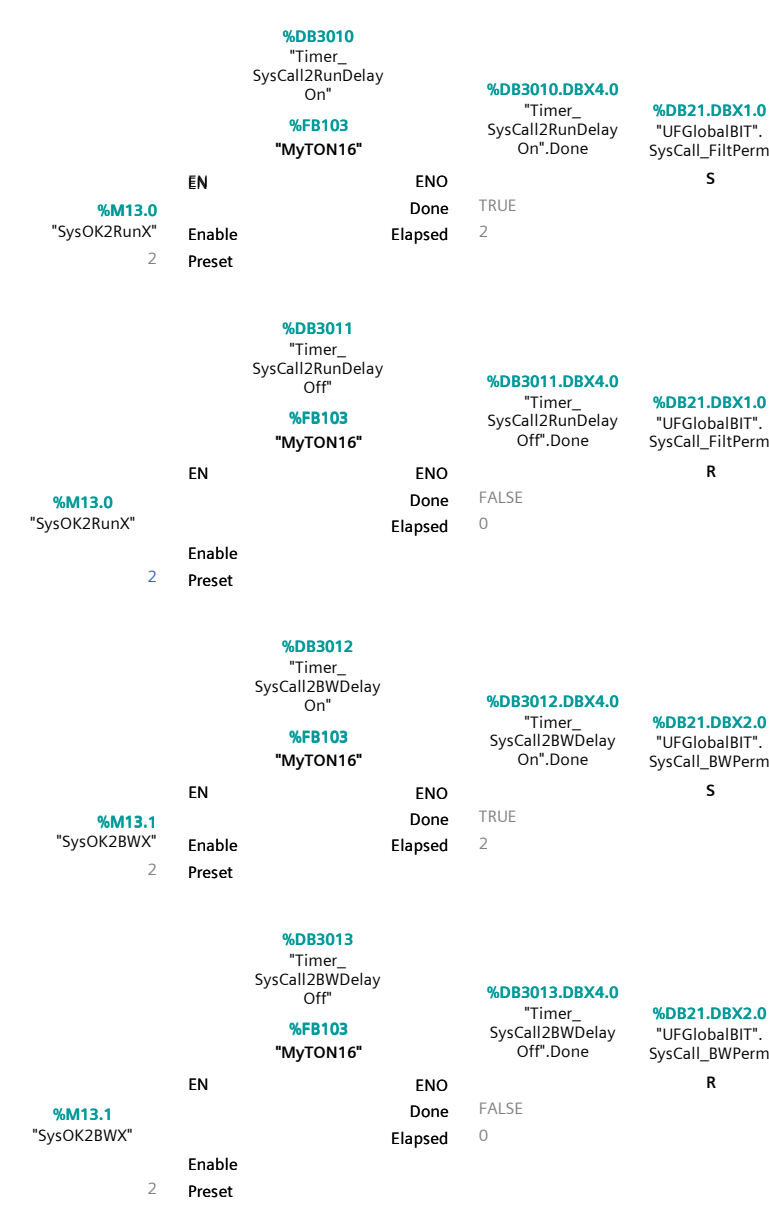
Network 2: Check All Drives are in Auto



Network 3: Select Program by water source

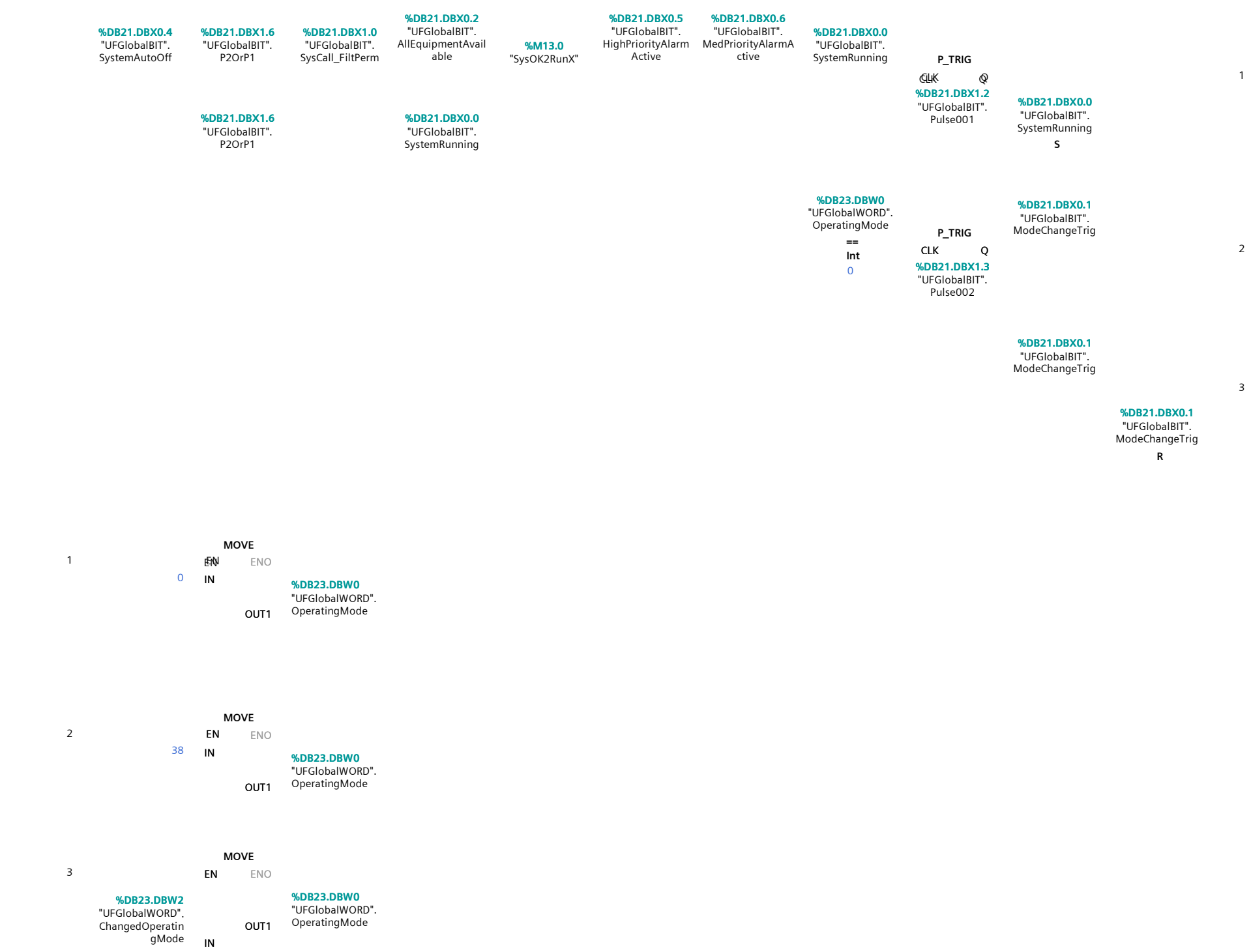


Network 4: System OK To Calls



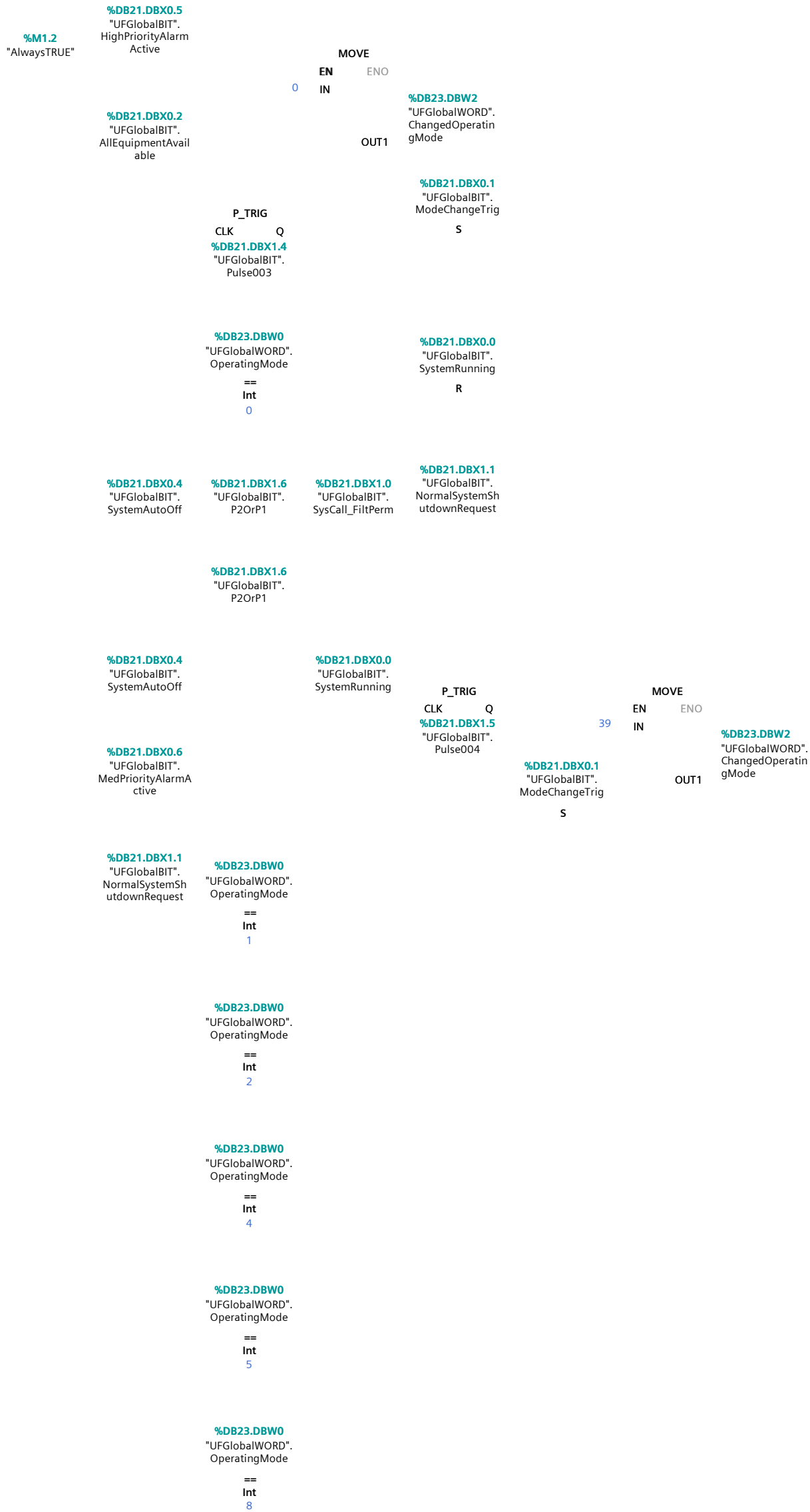
Network 5: Start System if conditions are OK

Network 5: Start System if conditions are OK

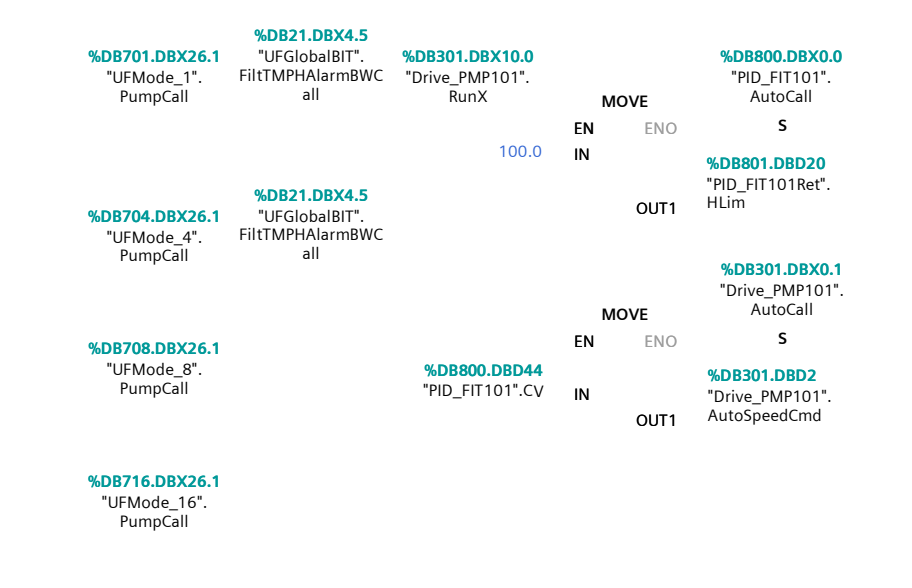


Network 6: Go to shutdown BW on ...

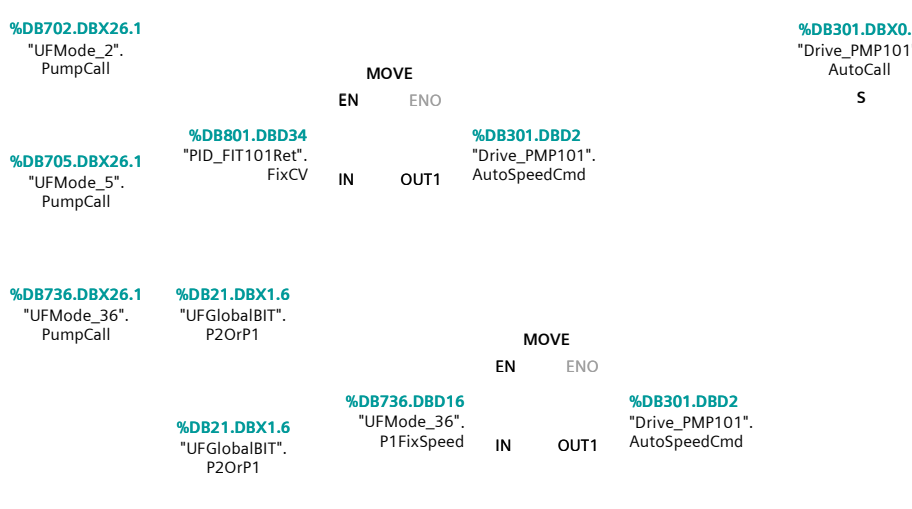
Low Feed Tank
High BW and Filtrate Tank
System Off
Critical Fault



Network 10: Filtration Pump Control

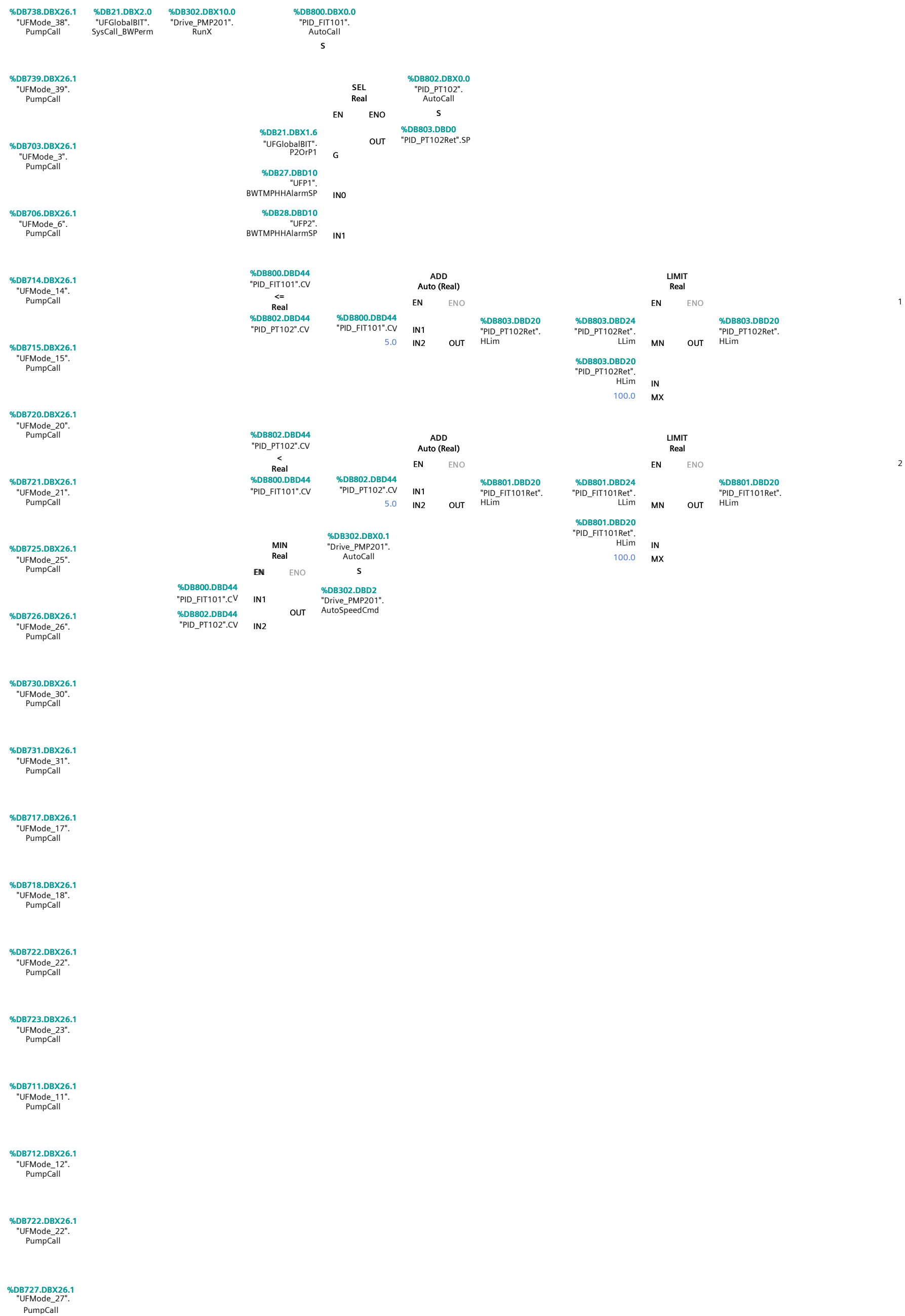


Network 11: Flush Pump Control



Network 12: Backwash Pump Control

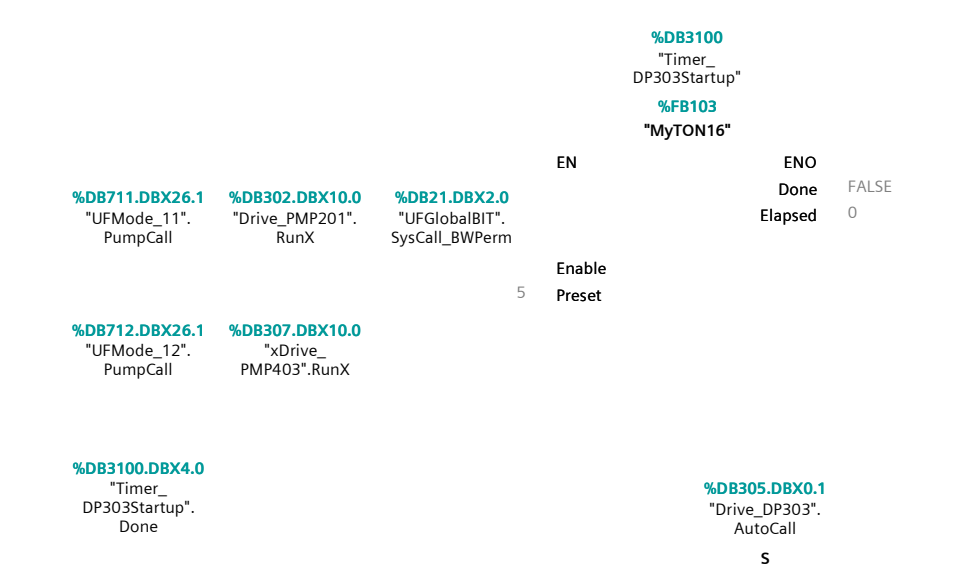
Network 12: Backwash Pump Control (1.1 / 2.1)



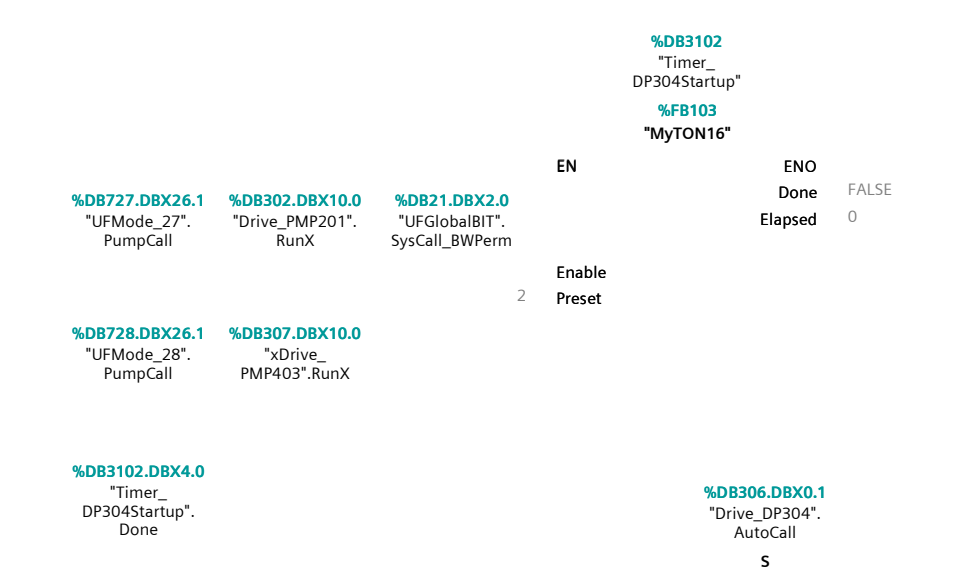
Network 13: Acid Placement Backwash Pump Control



Network 14: Caustic Placement Backwash Pump Control



Network 15: Chlorine Placement Backwash Pump Control



Network 16: UF Feed Valves (Raw and Nutrient Water) Control

22_UFFiltration [FC22]

22_UFFiltration Properties

General

Name	22_UFFiltration	Number	22	Type	FC	Language	LAD
Numbering	Manual						
Information							
Title		Author		Comment		Family	
Version	0.1	User-defined ID					

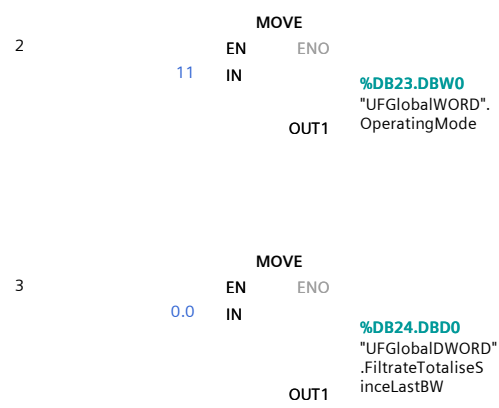
Name	Data type	Default value	Comment
Input			
Output			
InOut			
Temp			
ValveCheck	Bool		
PumpCheck	Bool		
TempReal	Real		
TempReal2	Real		
Constant			
Return			
22_UFFiltration	Void		

Network 1: 1 Filtration Bottom

Network 1: 1 Filtration Bottom (2.1 / 2.1)



Network 3: 3 Backwash Bottom (2.1 / 2.1)



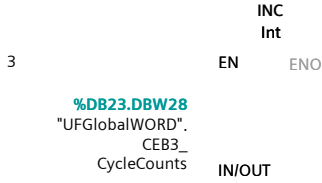
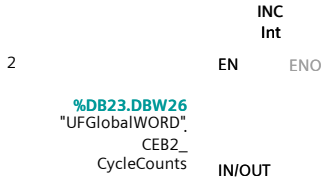
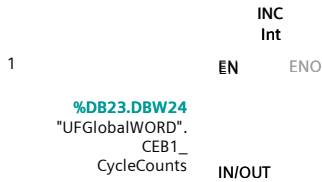
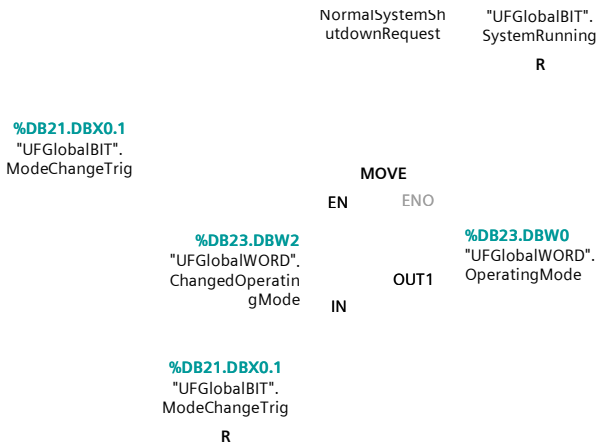
Network 4: 4 Filtration Top

Network 4: 4 Filtration Top (2.1 / 2.1)



Network 6: 6 Backwash Top (2.1 / 3.1)

1.1 (Page12 - 11)



3.1 (Page12 - 13)

