

Name	Value	Data Type	Scope
 ESTOP_HEALTHY Emergency stops healthy Constant External Access: <i>ESTOP_HEALTHY - MainProgram/MainRoutine - 1(XIC)</i>	1 No Read/Write	BOOL	TrainingAid
 HI_LEVEL_ALM High level alarm active Constant External Access: <i>HI_LEVEL_ALM - MainProgram/MainRoutine - *8(OTE), 12(XIC), 13(XIO)</i>	0 No Read/Write	BOOL	TrainingAid
 HI_LEVEL_SP Hi Level alarm setpoint Constant External Access: <i>HI_LEVEL_SP - MainProgram/MainRoutine - 8(GRT)</i>	50.0 No Read/Write	REAL	TrainingAid
 HIHI_LEVEL_ALM HighHigh alarm active Constant External Access: <i>HIHI_LEVEL_ALM - MainProgram/MainRoutine - *9(OTE), 12(XIC), 16(XIC)</i>	0 No Read/Write	BOOL	TrainingAid
 HIHI_LEVEL_SP Hi Hi level alarm setpoint Constant External Access: <i>HIHI_LEVEL_SP - MainProgram/MainRoutine - 9(GRT)</i>	76.0 No Read/Write	REAL	TrainingAid
 INTERLOCK_RESET Reset the interlocks Constant External Access: <i>INTERLOCK_RESET - MainProgram/MainRoutine - 1(XIC)</i>	0 No Read/Write	BOOL	TrainingAid
 INTERLOCKS_OK Interlocks are healthy Constant External Access: <i>INTERLOCKS_OK - MainProgram/MainRoutine - *1(OTE), 0(XIC), 1(XIC)</i>	1 No Read/Write	BOOL	TrainingAid
 LED_AMBER Amber LED AliasFor:	0 Local:1:O.Data.3	BOOL	TrainingAid

LED_AMBER (Continued)			
Base Tag:	Local:1:O.Data.3		
Constant	No		
External Access:	Read/Write		
<i>LED_AMBER - MainProgram/MainRoutine - *14(OTE)</i>			
 LED_BLUE	0	BOOL	TrainingAid
Blue LED			
AliasFor:	Local:1:O.Data.1		
Base Tag:	Local:1:O.Data.1		
Constant	No		
External Access:	Read/Write		
<i>LED_BLUE - MainProgram/MainRoutine - *12(OTE)</i>			
 LED_GREEN	1	BOOL	TrainingAid
Green LED			
AliasFor:	Local:1:O.Data.2		
Base Tag:	Local:1:O.Data.2		
Constant	No		
External Access:	Read/Write		
<i>LED_GREEN - MainProgram/MainRoutine - *13(OTE)</i>			
 LED_GREEN_PB	1	BOOL	TrainingAid
Green LED on Start PB			
AliasFor:	Local:1:O.Data.0		
Base Tag:	Local:1:O.Data.0		
Constant	No		
External Access:	Read/Write		
<i>LED_GREEN_PB - MainProgram/MainRoutine - *10(OTE)</i>			
 LED_RED	0	BOOL	TrainingAid
Red LED			
AliasFor:	Local:1:O.Data.4		
Base Tag:	Local:1:O.Data.4		
Constant	No		
External Access:	Read/Write		
<i>LED_RED - MainProgram/MainRoutine - *15(OTE)</i>			
 LED_RED_PB	0	BOOL	TrainingAid
Red LED on Stop PB			
AliasFor:	Local:1:O.Data.6		
Base Tag:	Local:1:O.Data.6		
Constant	No		
External Access:	Read/Write		
<i>LED_RED_PB - MainProgram/MainRoutine - *11(OTE)</i>			

 Local:1:I		AB:Embedded_DiscreteIO1:I:0	TrainingAid
Constant	No		
External Access:	Read/Write		
Local:1:I.Data.0	0	BOOL	
<i>START_PUMP - MainProgram/MainRoutine - 0(XIC)</i>			
Local:1:I.Data.1	0	BOOL	
<i>STOP_PUMP - MainProgram/MainRoutine - 0(XIO)</i>			
 Local:1:O		AB:Embedded_DiscreteIO1:O:0	TrainingAid
Constant	No		
External Access:	Read/Write		
Local:1:O.Data.0	1	BOOL	
Green START PB LED			
<i>LED_GREEN_PB - MainProgram/MainRoutine - *10(OTE)</i>			
Local:1:O.Data.1	0	BOOL	
Blue LED			
<i>LED_BLUE - MainProgram/MainRoutine - *12(OTE)</i>			
Local:1:O.Data.2	1	BOOL	
Green LED			
<i>LED_GREEN - MainProgram/MainRoutine - *13(OTE)</i>			
Local:1:O.Data.3	0	BOOL	
Orange LED			
<i>LED_AMBER - MainProgram/MainRoutine - *14(OTE)</i>			
Local:1:O.Data.4	0	BOOL	
Red LED			
<i>LED_RED - MainProgram/MainRoutine - *15(OTE)</i>			
Local:1:O.Data.5	0	BOOL	
Buzzer			
<i>SIREN - MainProgram/MainRoutine - *16(OTE)</i>			
Local:1:O.Data.6	0	BOOL	
Red STOP PB LED			
<i>LED_RED_PB - MainProgram/MainRoutine - *11(OTE)</i>			
 PUMP_RUNNING	1	BOOL	TrainingAid
Pump running Status			
Constant	No		
External Access:	Read/Write		
<i>PUMP_RUNNING - MainProgram/MainRoutine - *0(OTE), 0(XIC), 10(XIC), 11(XIO), 3(XIC), 3(XIO)</i>			
 SIREN	0	BOOL	TrainingAid
Sound the siren			
AliasFor:	Local:1:O.Data.5		
Base Tag:	Local:1:O.Data.5		
Constant	No		
External Access:	Read/Write		
<i>SIREN - MainProgram/MainRoutine - *16(OTE)</i>			

 START_PUMP	0	BOOL	TrainingAid
Green pushbutton			
AliasFor:	Local:1:I.Data.0		
Base Tag:	Local:1:I.Data.0		
Constant	No		
External Access:	Read/Write		
<i>START_PUMP - MainProgram/MainRoutine - 0(XIC)</i>			
 STOP_PUMP	0	BOOL	TrainingAid
Red pushbutton			
AliasFor:	Local:1:I.Data.1		
Base Tag:	Local:1:I.Data.1		
Constant	No		
External Access:	Read/Write		
<i>STOP_PUMP - MainProgram/MainRoutine - 0(XIO)</i>			
 TANK_LEVEL	39.99802	REAL	TrainingAid
Tank level (0-100%)			
Constant	No		
External Access:	Read/Write		
<i>TANK_LEVEL - MainProgram/MainRoutine - *5(CPT), *6(MOV), *7(MOV), 4(GRT), 4(LES), 5(CPT), 6(GRT), 7(LES), 8(GRT), 9(GRT)</i>			
 TANK_LEVEL_EMPTY_RATE	0.0	REAL	TrainingAid
Calculated tank level empty rate (%/s)			
Constant	No		
External Access:	Read/Write		
<i>TANK_LEVEL_EMPTY_RATE - MainProgram/MainRoutine - *4(CPT), *4(MOV), *4(MOV), 5(CPT)</i>			
 TANK_LEVEL_EMPTY_RATE_SET_MIN	20.0	REAL	TrainingAid
Tank empty rate SP (%/min)			
Constant	No		
External Access:	Read/Write		
<i>TANK_LEVEL_EMPTY_RATE_SET_MIN - MainProgram/MainRoutine - 4(CPT)</i>			
 TANK_LEVEL_FILL_RATE	0.16666667	REAL	TrainingAid
Calculated tank level fill rate (%/s)			
Constant	No		
External Access:	Read/Write		
<i>TANK_LEVEL_FILL_RATE - MainProgram/MainRoutine - *3(CPT), *3(CPT), 5(CPT)</i>			
 TANK_LEVEL_FILL_RATE_SET_MIN	10.0	REAL	TrainingAid
Tank fill rate SP (%/min)			
Constant	No		
External Access:	Read/Write		
<i>TANK_LEVEL_FILL_RATE_SET_MIN - MainProgram/MainRoutine - 3(CPT)</i>			

TANK_LEVEL_SIM_TMR Timer to determine how often the tank level change is calculated ConstantNo External Access:Read/Write TANK_LEVEL_SIM_TMR - MainProgram/MainRoutine - *2(TON)		TIMER	TrainingAid
TANK_LEVEL_SIM_TMR.PRE Timer to determine how often the tank level change is calculated TANK_LEVEL_SIM_TMR.PRE - MainProgram/MainRoutine - 5(CPT)	100	DINT	
TANK_LEVEL_SIM_TMR.ACC Timer to determine how often the tank level change is calculated	13	DINT	
TANK_LEVEL_SIM_TMR.EN Timer to determine how often the tank level change is calculated	1	BOOL	
TANK_LEVEL_SIM_TMR.TT Timer to determine how often the tank level change is calculated	1	BOOL	
TANK_LEVEL_SIM_TMR.DN Timer to determine how often the tank level change is calculated TANK_LEVEL_SIM_TMR.DN - MainProgram/MainRoutine - 2(XIO), 5(XIC)	0	BOOL	
XV075_FAULT Fault on Drain Valve ConstantNo External Access:Read/Write XV075_FAULT - MainProgram/MainRoutine - 15(XIC), 4(XIC), 4(XIO)	0	BOOL	TrainingAid
XV075_LEVEL Tank level at which XV075 is mounted ConstantNo External Access:Read/Write XV075_LEVEL - MainProgram/MainRoutine - 4(GRT), 4(LES)	40.0	REAL	TrainingAid
XV093_FAULT Fault on Isolation Valve ConstantNo External Access:Read/Write XV093_FAULT - MainProgram/MainRoutine - 14(XIC), 3(XIC), 3(XIO)	0	BOOL	TrainingAid

-  Controller TrainingAid
-  Controller Fault Handler
-  Power-Up Handler

Tasks

-  MainTask
 -  MainProgram
 -  MainRoutine
-  Unscheduled

Motion Groups

-  Ungrouped Axes

Add-On Instructions

Data Types

-  User-Defined
-  Strings
-  Add-On-Defined
-  Module-Defined
 -  AB:Embedded_DiscreteIO1:C:0
 -  AB:Embedded_DiscreteIO1:I:0
 -  AB:Embedded_DiscreteIO1:O:0

Trends

I/O Configuration

-  1769 Bus
 -  [0] 1769-L24ER-QB1B TrainingAid
 -  [1] Embedded Discrete_IO
-  Ethernet
 -  1769-L24ER-QB1B TrainingAid

General			
Vendor:	Rockwell Automation/Allen-Bradley	Mode:	Offline
Revision:	34.012	Key Switch Position:	Offline
Chassis Type:	<none>	Created:	14/03/2024 15:39:11
Slot:	0	Edited:	21/03/2024 15:18:51
Date/Time			
Date and Time:	<offline>		
Time Zone:	<offline>		
Daylight Saving (+00:00):	<offline>		
Enable Time Synchronization:	No		
Is the system time master:	<offline>		
Is a synchronized time slave:	<offline>		
Duplicate CST Master Detected:	<offline>		
CST Mastership disabled:	<offline>		
No CST Master:	<offline>		
Advanced Time Sync			
CIP Sync Time Synchronization:	Disabled		
Advanced			
Controller Fault Handler:	<none>	Match Project To Controller:	No
Power-Up Handler:	<none>	Serial Number:	D0B9294E
System Overhead Time Slice:	20 %	Allow Consumed Tags to Use RPI Provided by Producer:	No
During unused System Overhead Time Slice:	Run Continuous Task		
SFC Execution			
Execution Control:	Execute current active steps only	Last Scan of Active Step:	Don't scan
Restart Position:	Restart at most recently executed step		
Nonvolatile Memory			
<offline>			
Memory (Estimate)			
Memory Option:	1769-L24ER-QB1B		
Estimated I/O Memory			
Total Memory:	1,048,576 bytes	Max Used:	3,560 bytes
Free Memory:	1,045,016 bytes	Largest Block Free:	1,045,016 bytes
Used Memory:	3,560 bytes		
Estimated Data and Logic Memory			
Total Memory:	786,432 bytes	Max Used:	89,204 bytes
Free Memory:	697,228 bytes	Largest Block Free:	697,228 bytes
Used Memory:	89,204 bytes		
Security			
Primary Security Authority:	No Protection	Restrict Communications Except Through Selected Slots:	No
Use only the selected Security Authority for Authentication and Authorization:	No	Selected Slots:	
Secondary Security Authority:	No Protection	Changes To Detect:	16#ffff_ffff_ffff_ffff
Use only the selected Security Authority for Authentication and Authorization:	No	Audit Value:	<offline>

Permission Set:

Port Configuration

Port 1

Enable: Yes

Port 2

Enable: Yes

Name	Value	Data Type	Scope
 ESTOP_HEALTHY Emergency stops healthy Constant External Access: <i>ESTOP_HEALTHY - MainProgram/MainRoutine - 1(XIC)</i>	1 No Read/Write	BOOL	TrainingAid
 HI_LEVEL_ALM High level alarm active Constant External Access: <i>HI_LEVEL_ALM - MainProgram/MainRoutine - *8(OTE), 12(XIC), 13(XIO)</i>	0 No Read/Write	BOOL	TrainingAid
 HI_LEVEL_SP Hi Level alarm setpoint Constant External Access: <i>HI_LEVEL_SP - MainProgram/MainRoutine - 8(GRT)</i>	50.0 No Read/Write	REAL	TrainingAid
 HIHI_LEVEL_ALM HighHigh alarm active Constant External Access: <i>HIHI_LEVEL_ALM - MainProgram/MainRoutine - *9(OTE), 12(XIC), 16(XIC)</i>	0 No Read/Write	BOOL	TrainingAid
 HIHI_LEVEL_SP Hi Hi level alarm setpoint Constant External Access: <i>HIHI_LEVEL_SP - MainProgram/MainRoutine - 9(GRT)</i>	76.0 No Read/Write	REAL	TrainingAid
 INTERLOCK_RESET Reset the interlocks Constant External Access: <i>INTERLOCK_RESET - MainProgram/MainRoutine - 1(XIC)</i>	0 No Read/Write	BOOL	TrainingAid
 INTERLOCKS_OK Interlocks are healthy Constant External Access: <i>INTERLOCKS_OK - MainProgram/MainRoutine - *1(OTE), 0(XIC), 1(XIC)</i>	1 No Read/Write	BOOL	TrainingAid
 LED_AMBER Amber LED AliasFor:	0 Local:1:O.Data.3	BOOL	TrainingAid

LED_AMBER (Continued)			
Base Tag:	Local:1:O.Data.3		
Constant	No		
External Access:	Read/Write		
<i>LED_AMBER - MainProgram/MainRoutine - *14(OTE)</i>			
 LED_BLUE	0	BOOL	TrainingAid
Blue LED			
AliasFor:	Local:1:O.Data.1		
Base Tag:	Local:1:O.Data.1		
Constant	No		
External Access:	Read/Write		
<i>LED_BLUE - MainProgram/MainRoutine - *12(OTE)</i>			
 LED_GREEN	1	BOOL	TrainingAid
Green LED			
AliasFor:	Local:1:O.Data.2		
Base Tag:	Local:1:O.Data.2		
Constant	No		
External Access:	Read/Write		
<i>LED_GREEN - MainProgram/MainRoutine - *13(OTE)</i>			
 LED_GREEN_PB	1	BOOL	TrainingAid
Green LED on Start PB			
AliasFor:	Local:1:O.Data.0		
Base Tag:	Local:1:O.Data.0		
Constant	No		
External Access:	Read/Write		
<i>LED_GREEN_PB - MainProgram/MainRoutine - *10(OTE)</i>			
 LED_RED	0	BOOL	TrainingAid
Red LED			
AliasFor:	Local:1:O.Data.4		
Base Tag:	Local:1:O.Data.4		
Constant	No		
External Access:	Read/Write		
<i>LED_RED - MainProgram/MainRoutine - *15(OTE)</i>			
 LED_RED_PB	0	BOOL	TrainingAid
Red LED on Stop PB			
AliasFor:	Local:1:O.Data.6		
Base Tag:	Local:1:O.Data.6		
Constant	No		
External Access:	Read/Write		
<i>LED_RED_PB - MainProgram/MainRoutine - *11(OTE)</i>			

 Local:1:I		AB:Embedded_DiscreteIO1:I:0	TrainingAid
Constant	No		
External Access:	Read/Write		
Local:1:I.Data.0	0	BOOL	
<i>START_PUMP - MainProgram/MainRoutine - 0(XIC)</i>			
Local:1:I.Data.1	0	BOOL	
<i>STOP_PUMP - MainProgram/MainRoutine - 0(XIO)</i>			
 Local:1:O		AB:Embedded_DiscreteIO1:O:0	TrainingAid
Constant	No		
External Access:	Read/Write		
Local:1:O.Data.0	1	BOOL	
Green START PB LED			
<i>LED_GREEN_PB - MainProgram/MainRoutine - *10(OTE)</i>			
Local:1:O.Data.1	0	BOOL	
Blue LED			
<i>LED_BLUE - MainProgram/MainRoutine - *12(OTE)</i>			
Local:1:O.Data.2	1	BOOL	
Green LED			
<i>LED_GREEN - MainProgram/MainRoutine - *13(OTE)</i>			
Local:1:O.Data.3	0	BOOL	
Orange LED			
<i>LED_AMBER - MainProgram/MainRoutine - *14(OTE)</i>			
Local:1:O.Data.4	0	BOOL	
Red LED			
<i>LED_RED - MainProgram/MainRoutine - *15(OTE)</i>			
Local:1:O.Data.5	0	BOOL	
Buzzer			
<i>SIREN - MainProgram/MainRoutine - *16(OTE)</i>			
Local:1:O.Data.6	0	BOOL	
Red STOP PB LED			
<i>LED_RED_PB - MainProgram/MainRoutine - *11(OTE)</i>			
 PUMP_RUNNING	1	BOOL	TrainingAid
Pump running Status			
Constant	No		
External Access:	Read/Write		
<i>PUMP_RUNNING - MainProgram/MainRoutine - *0(OTE), 0(XIC), 10(XIC), 11(XIO), 3(XIC), 3(XIO)</i>			
 SIREN	0	BOOL	TrainingAid
Sound the siren			
AliasFor:	Local:1:O.Data.5		
Base Tag:	Local:1:O.Data.5		
Constant	No		
External Access:	Read/Write		
<i>SIREN - MainProgram/MainRoutine - *16(OTE)</i>			

 START_PUMP	0	BOOL	TrainingAid
Green pushbutton			
AliasFor:	Local:1:I.Data.0		
Base Tag:	Local:1:I.Data.0		
Constant	No		
External Access:	Read/Write		
<i>START_PUMP - MainProgram/MainRoutine - 0(XIC)</i>			
 STOP_PUMP	0	BOOL	TrainingAid
Red pushbutton			
AliasFor:	Local:1:I.Data.1		
Base Tag:	Local:1:I.Data.1		
Constant	No		
External Access:	Read/Write		
<i>STOP_PUMP - MainProgram/MainRoutine - 0(XIO)</i>			
 TANK_LEVEL	39.99802	REAL	TrainingAid
Tank level (0-100%)			
Constant	No		
External Access:	Read/Write		
<i>TANK_LEVEL - MainProgram/MainRoutine - *5(CPT), *6(MOV), *7(MOV), 4(GRT), 4(LES), 5(CPT), 6(GRT), 7(LES), 8(GRT), 9(GRT)</i>			
 TANK_LEVEL_EMPTY_RATE	0.0	REAL	TrainingAid
Calculated tank level empty rate (%/s)			
Constant	No		
External Access:	Read/Write		
<i>TANK_LEVEL_EMPTY_RATE - MainProgram/MainRoutine - *4(CPT), *4(MOV), *4(MOV), 5(CPT)</i>			
 TANK_LEVEL_EMPTY_RATE_SET_MIN	20.0	REAL	TrainingAid
Tank empty rate SP (%/min)			
Constant	No		
External Access:	Read/Write		
<i>TANK_LEVEL_EMPTY_RATE_SET_MIN - MainProgram/MainRoutine - 4(CPT)</i>			
 TANK_LEVEL_FILL_RATE	0.16666667	REAL	TrainingAid
Calculated tank level fill rate (%/s)			
Constant	No		
External Access:	Read/Write		
<i>TANK_LEVEL_FILL_RATE - MainProgram/MainRoutine - *3(CPT), *3(CPT), 5(CPT)</i>			
 TANK_LEVEL_FILL_RATE_SET_MIN	10.0	REAL	TrainingAid
Tank fill rate SP (%/min)			
Constant	No		
External Access:	Read/Write		
<i>TANK_LEVEL_FILL_RATE_SET_MIN - MainProgram/MainRoutine - 3(CPT)</i>			

 TANK_LEVEL_SIM_TMR		TIMER	TrainingAid
Timer to determine how often the tank level change is calculated			
Constant	No		
External Access:	Read/Write		
<i>TANK_LEVEL_SIM_TMR - MainProgram/MainRoutine - *2(TON)</i>			
TANK_LEVEL_SIM_TMR.PRE	100	DINT	
Timer to determine how often the tank level change is calculated			
<i>TANK_LEVEL_SIM_TMR.PRE - MainProgram/MainRoutine - 5(CPT)</i>			
TANK_LEVEL_SIM_TMR.ACC	13	DINT	
Timer to determine how often the tank level change is calculated			
TANK_LEVEL_SIM_TMR.EN	1	BOOL	
Timer to determine how often the tank level change is calculated			
TANK_LEVEL_SIM_TMR.TT	1	BOOL	
Timer to determine how often the tank level change is calculated			
TANK_LEVEL_SIM_TMR.DN	0	BOOL	
Timer to determine how often the tank level change is calculated			
<i>TANK_LEVEL_SIM_TMR.DN - MainProgram/MainRoutine - 2(XIO), 5(XIC)</i>			
 XV075_FAULT	0	BOOL	TrainingAid
Fault on Drain Valve			
Constant	No		
External Access:	Read/Write		
<i>XV075_FAULT - MainProgram/MainRoutine - 15(XIC), 4(XIC), 4(XIO)</i>			
 XV075_LEVEL	40.0	REAL	TrainingAid
Tank level at which XV075 is mounted			
Constant	No		
External Access:	Read/Write		
<i>XV075_LEVEL - MainProgram/MainRoutine - 4(GRT), 4(LES)</i>			
 XV093_FAULT	0	BOOL	TrainingAid
Fault on Isolation Valve			
Constant	No		
External Access:	Read/Write		
<i>XV093_FAULT - MainProgram/MainRoutine - 14(XIC), 3(XIC), 3(XIO)</i>			

General

Configuration

Type:	Continuous	Disable automatic output processing to reduce task overhead:	No
Watchdog:	500.000 ms	Inhibit task:	No

Program Schedule

Scheduled
MainProgram

Unscheduled

Monitor

Scan Times(Elapsed Time)
Max: Last:

Interval Times(Elapsed Times Between Triggers)
Max: Min:

Task overlap count: 0

General

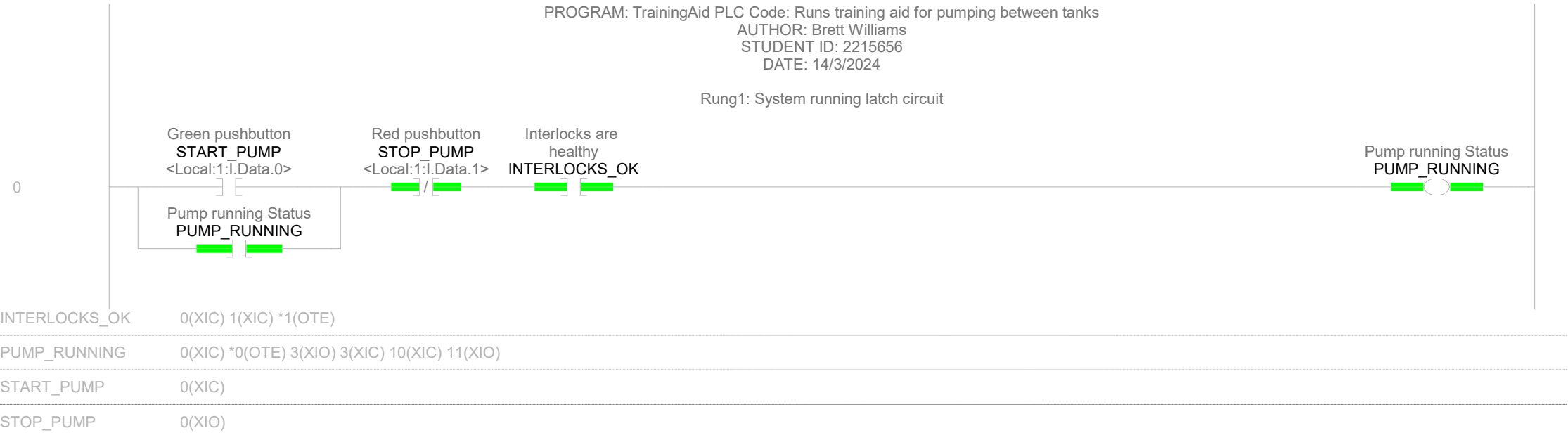
Configuration

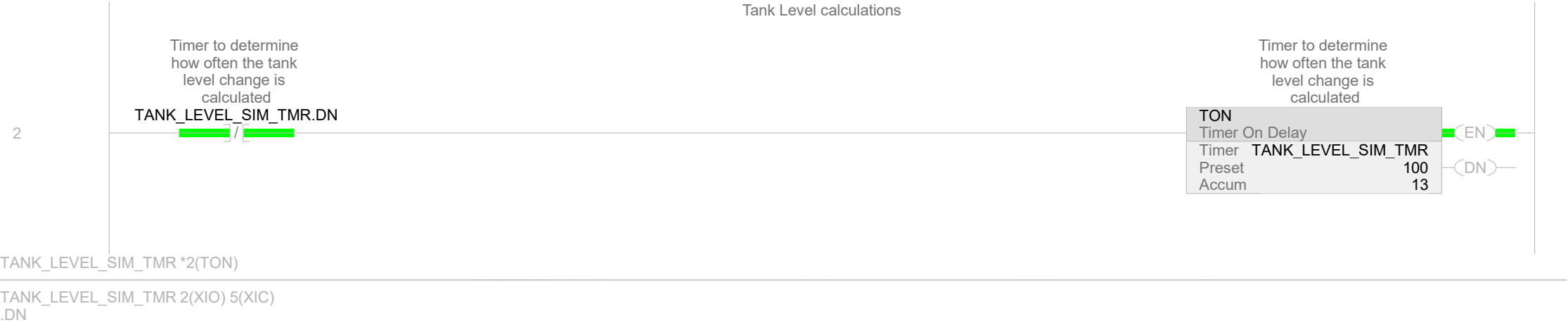
Main:	 MainRoutine	Inhibit program:	No
Fault:	None	Synchronize redundancy data after execution:	Yes

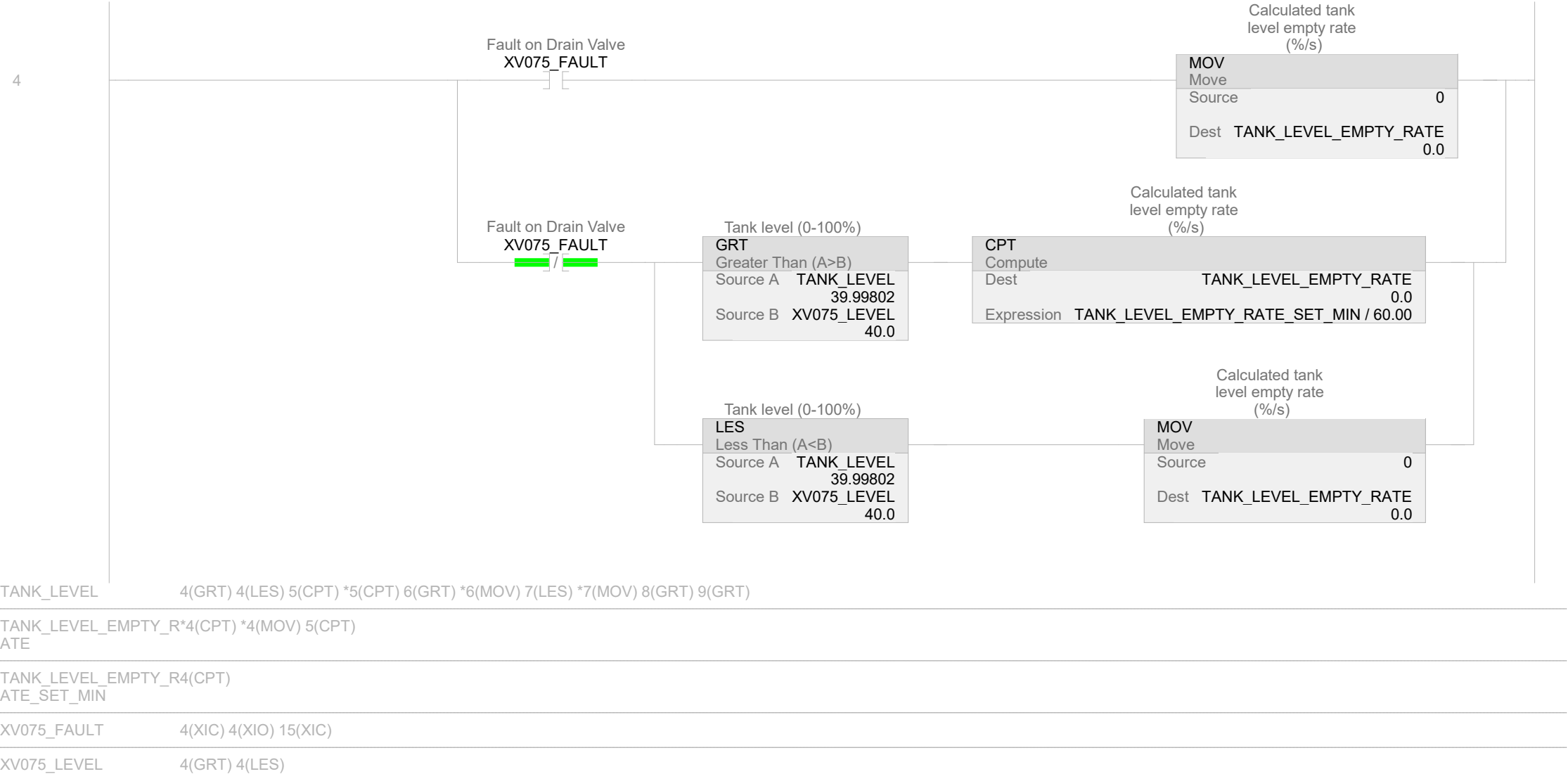
Monitor

Scan Times(Execution Time)	
Max:	Last:

Name	Value	Data Type	Scope
No Tags Exist			







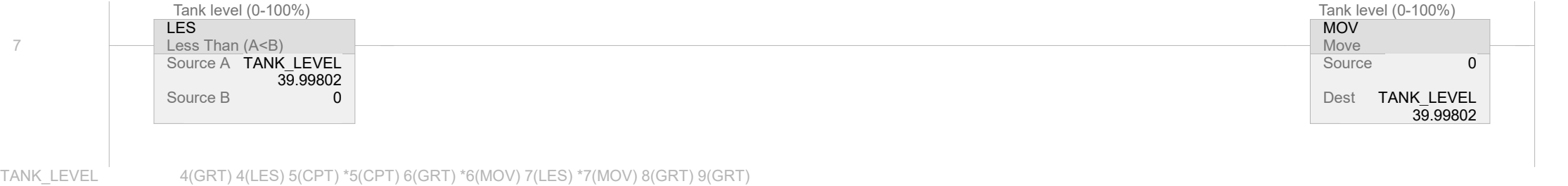
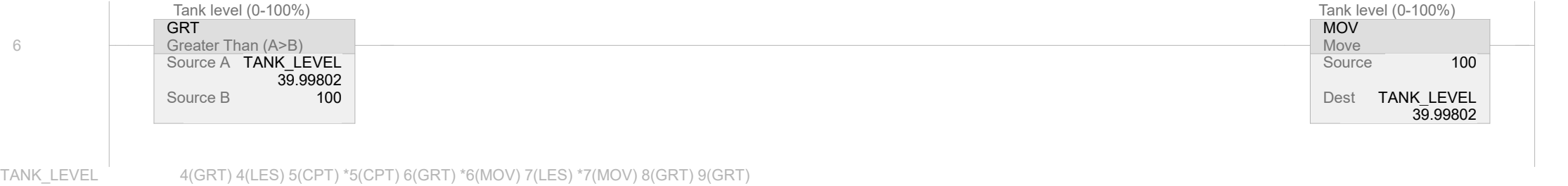


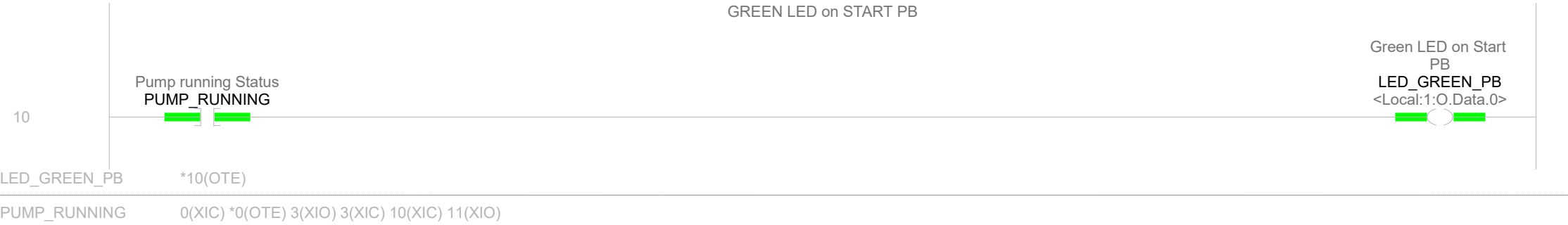
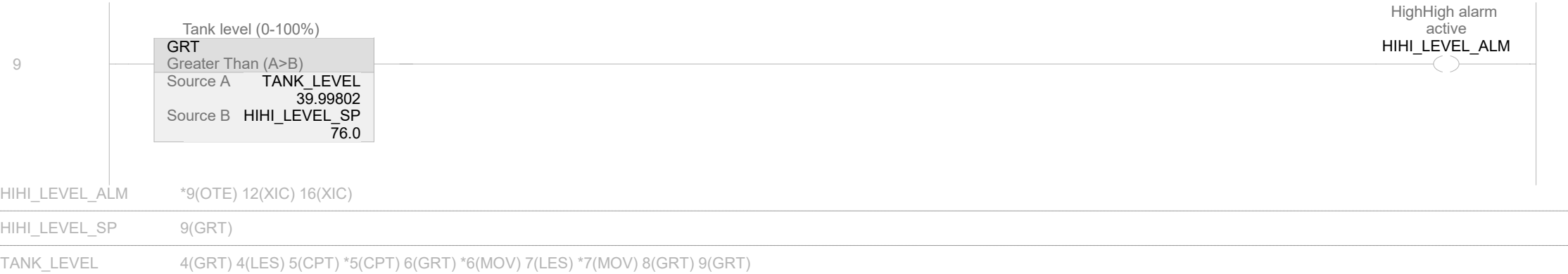
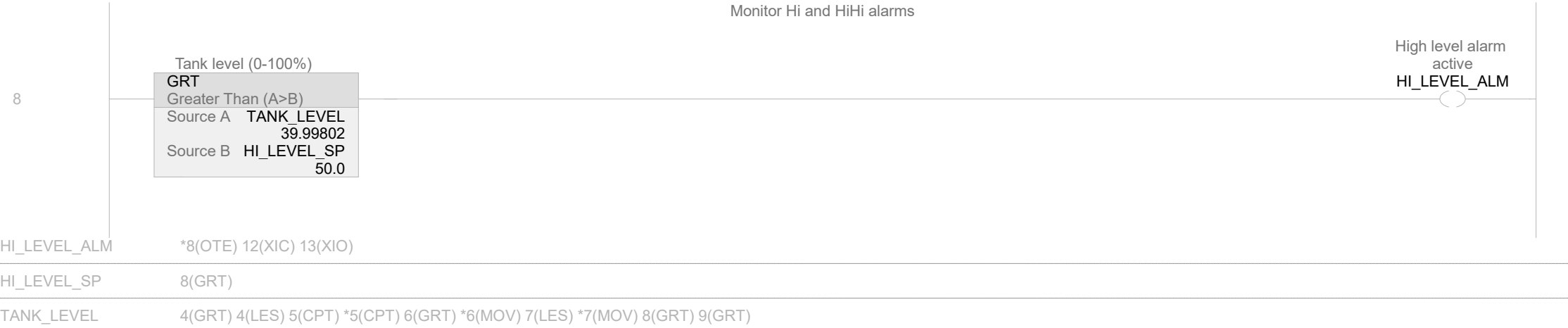
TANK_LEVEL_EMPTY_R*4(CPT) *4(MOV) 5(CPT)
ATE

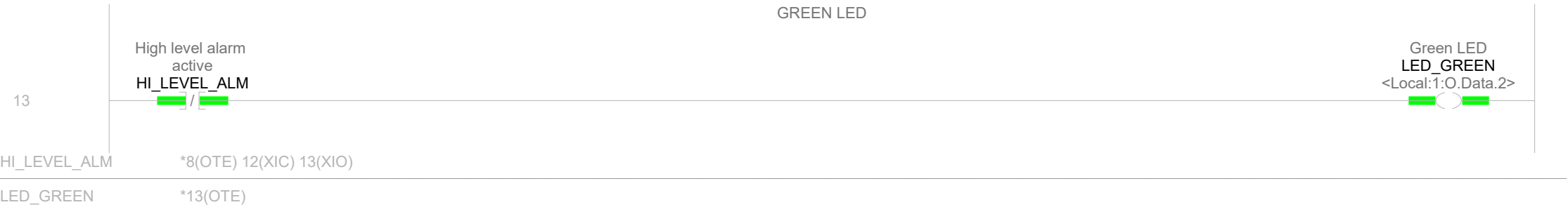
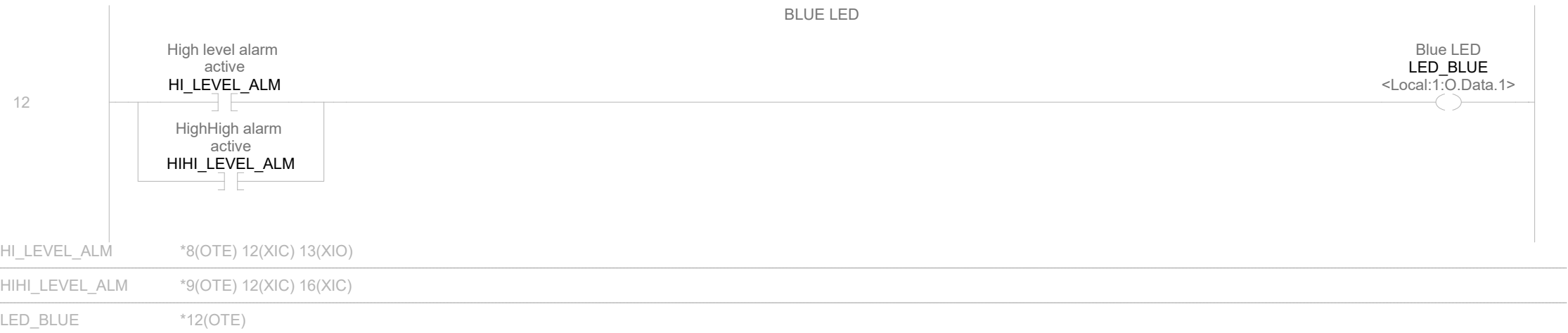
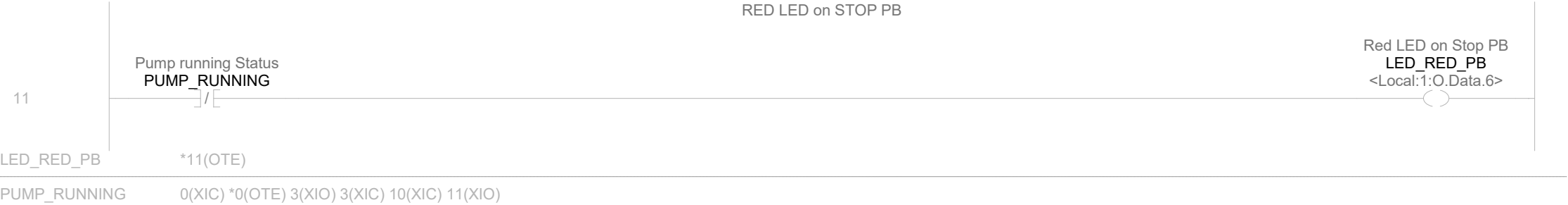
TANK_LEVEL_FILL_RAT*3(CPT) 5(CPT)
E

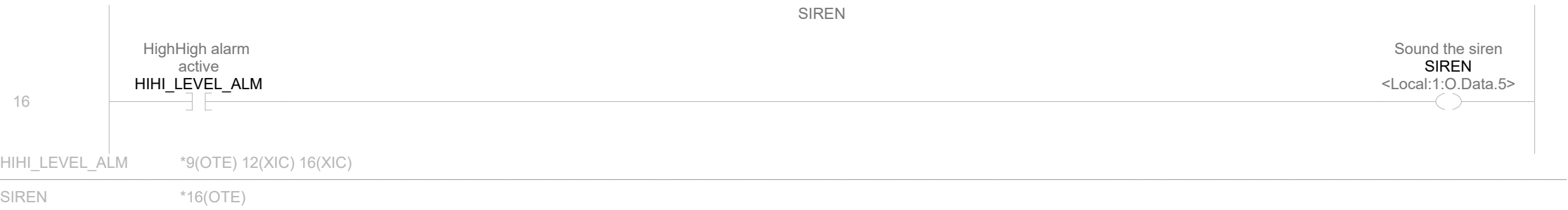
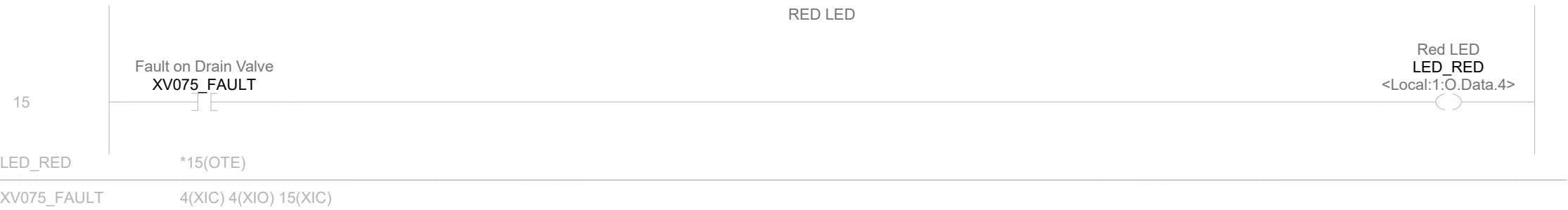
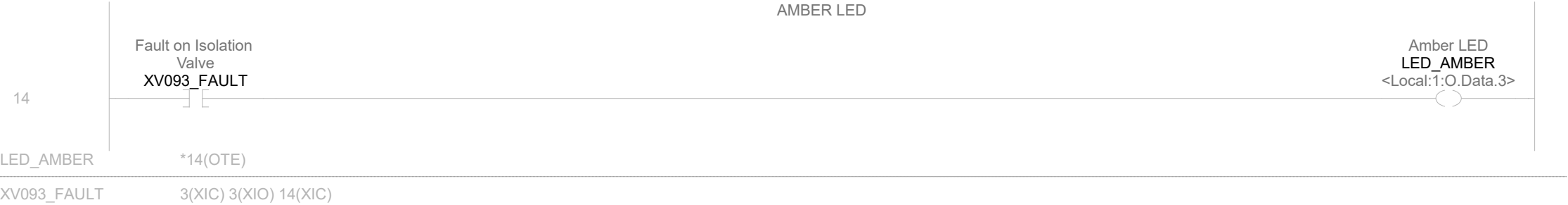
TANK_LEVEL_SIM_TMR 2(XIO) 5(XIC)
.DN

TANK_LEVEL_SIM_TMR 5(CPT)
.PRE









MainRoutine - Routine Tag Listing

TrainingAid:MainTask:MainProgram

Page 24

04/04/2024 09:58:09

E:\ENERGY AUTOMATION\TEAM MEMBERS\BrettWilliams\Project\PLC\TrainingAid.ACD

Name	Value	Data Type	Scope
ESTOP_HEALTHY Emergency stops healthy Constant External Access: ESTOP_HEALTHY - MainProgram/MainRoutine - 1(XIC)	1	BOOL	TrainingAid
HI_LEVEL_ALM High level alarm active Constant External Access: HI_LEVEL_ALM - MainProgram/MainRoutine - *8(OTE), 12(XIC), 13(XIO)	0	BOOL	TrainingAid
HI_LEVEL_SP Hi Level alarm setpoint Constant External Access: HI_LEVEL_SP - MainProgram/MainRoutine - 8(GRT)	50.0	REAL	TrainingAid
HIHI_LEVEL_ALM HighHigh alarm active Constant External Access: HIHI_LEVEL_ALM - MainProgram/MainRoutine - *9(OTE), 12(XIC), 16(XIC)	0	BOOL	TrainingAid
HIHI_LEVEL_SP HI Hi level alarm setpoint Constant External Access: HIHI_LEVEL_SP - MainProgram/MainRoutine - 9(GRT)	76.0	REAL	TrainingAid
INTERLOCK_RESET Reset the interlocks Constant External Access: INTERLOCK_RESET - MainProgram/MainRoutine - 1(XIC)	0	BOOL	TrainingAid
INTERLOCKS_OK Interlocks are healthy Constant External Access: INTERLOCKS_OK - MainProgram/MainRoutine - *1(OTE), 0(XIC), 1(XIC)	1	BOOL	TrainingAid
LED_AMBER Amber LED AliasFor: Local:1:O.Data.3	0	BOOL	TrainingAid

Logix Designer

LED_AMBER (Continued)			
Base Tag:	Local:1:O.Data.3		
Constant	No		
External Access:	Read/Write		
LED_AMBER - MainProgram/MainRoutine - *14(OTE)			
LED_BLUE	0	BOOL	TrainingAid
Blue LED			
AliasFor:	Local:1:O.Data.1		
Base Tag:	Local:1:O.Data.1		
Constant	No		
External Access:	Read/Write		
LED_BLUE - MainProgram/MainRoutine - *12(OTE)			
LED_GREEN	1	BOOL	TrainingAid
Green LED			
AliasFor:	Local:1:O.Data.2		
Base Tag:	Local:1:O.Data.2		
Constant	No		
External Access:	Read/Write		
LED_GREEN - MainProgram/MainRoutine - *13(OTE)			
LED_GREEN_PB	1	BOOL	TrainingAid
Green LED on Start PB			
AliasFor:	Local:1:O.Data.0		
Base Tag:	Local:1:O.Data.0		
Constant	No		
External Access:	Read/Write		
LED_GREEN_PB - MainProgram/MainRoutine - *10(OTE)			
LED_RED	0	BOOL	TrainingAid
Red LED			
AliasFor:	Local:1:O.Data.4		
Base Tag:	Local:1:O.Data.4		
Constant	No		
External Access:	Read/Write		
LED_RED - MainProgram/MainRoutine - *15(OTE)			
LED_RED_PB	0	BOOL	TrainingAid
Red LED on Stop PB			
AliasFor:	Local:1:O.Data.6		
Base Tag:	Local:1:O.Data.6		
Constant	No		
External Access:	Read/Write		
LED_RED_PB - MainProgram/MainRoutine - *11(OTE)			

MainRoutine - Routine Tag Listing			Page 26
TrainingAid:MainTask:MainProgram			04/04/2024 09:58:09
E:\ENERGY AUTOMATION\TEAM MEMBERS\BrettWilliams\Project\PLC\TrainingAid.ACD			
PUMP_RUNNING	1	BOOL	TrainingAid
	Pump running Status		
	Constant	No	
	External Access:	Read/Write	
	PUMP_RUNNING - MainProgram/MainRoutine - *0(OTE), 0(XIC), 10(XIC), 11(XIO), 3(XIC), 3(XIO)		
SIREN	0	BOOL	TrainingAid
	Sound the siren		
	AliasFor:	Local:1:O.Data.5	
	Base Tag:	Local:1:O.Data.5	
	Constant	No	
	External Access:	Read/Write	
	SIREN - MainProgram/MainRoutine - *16(OTE)		
START_PUMP	0	BOOL	TrainingAid
	Green pushbutton		
	AliasFor:	Local:1:I.Data.0	
	Base Tag:	Local:1:I.Data.0	
	Constant	No	
	External Access:	Read/Write	
	START_PUMP - MainProgram/MainRoutine - 0(XIC)		
STOP_PUMP	0	BOOL	TrainingAid
	Red pushbutton		
	AliasFor:	Local:1:I.Data.1	
	Base Tag:	Local:1:I.Data.1	
	Constant	No	
	External Access:	Read/Write	
	STOP_PUMP - MainProgram/MainRoutine - 0(XIO)		
TANK_LEVEL	39.99802	REAL	TrainingAid
	Tank level (0-100%)		
	Constant	No	
	External Access:	Read/Write	
	TANK_LEVEL - MainProgram/MainRoutine - *5(CPT), *6(MOV), *7(MOV), 4(GRT), 4(LES), 5(CPT), 6(GRT), 7(LES), 8(GRT), 9(GRT)		
TANK_LEVEL_EMPTY_RATE	0.0	REAL	TrainingAid
	Calculated tank level empty rate (%/s)		
	Constant	No	
	External Access:	Read/Write	
	TANK_LEVEL_EMPTY_RATE - MainProgram/MainRoutine - *4(CPT), *4(MOV), *4(MOV), 5(CPT)		
TANK_LEVEL_EMPTY_RATE_SET_MIN	20.0	REAL	TrainingAid
	Tank empty rate SP (%/min)		
	Constant	No	
	External Access:	Read/Write	
Logix Designer			

MainRoutine - Routine Tag Listing

TrainingAid:MainTask:MainProgram

Page 27

04/04/2024 09:58:09

E:\ENERGY AUTOMATION\TEAM MEMBERS\BrettWilliams\Project\PLC\TrainingAid.ACD

TANK_LEVEL_EMPTY_RATE_SET_MIN (Continued)

TANK_LEVEL_EMPTY_RATE_SET_MIN - MainProgram/MainRoutine - 4(CPT)

TANK_LEVEL_FILL_RATE

0.16666667

REAL

TrainingAid

Calculated tank level fill rate (%/s)

Constant

No

External Access:

Read/Write

TANK_LEVEL_FILL_RATE - MainProgram/MainRoutine - *3(CPT), *3(CPT), 5(CPT)

TANK_LEVEL_FILL_RATE_SET_MIN

10.0

REAL

TrainingAid

Tank fill rate SP (%/min)

Constant

No

External Access:

Read/Write

TANK_LEVEL_FILL_RATE_SET_MIN - MainProgram/MainRoutine - 3(CPT)

TANK_LEVEL_SIM_TMR

TIMER

TrainingAid

Timer to determine how often the tank level change is calculated

Constant

No

External Access:

Read/Write

TANK_LEVEL_SIM_TMR - MainProgram/MainRoutine - *2(TON)

TANK_LEVEL_SIM_TMR.PRE

100

DINT

Timer to determine how often the tank level change is calculated

TANK_LEVEL_SIM_TMR.PRE - MainProgram/MainRoutine - 5(CPT)

TANK_LEVEL_SIM_TMR.ACC

13

DINT

Timer to determine how often the tank level change is calculated

TANK_LEVEL_SIM_TMR.EN

1

BOOL

Timer to determine how often the tank level change is calculated

TANK_LEVEL_SIM_TMR.TT

1

BOOL

Timer to determine how often the tank level change is calculated

TANK_LEVEL_SIM_TMR.DN

0

BOOL

Timer to determine how often the tank level change is calculated

TANK_LEVEL_SIM_TMR.DN - MainProgram/MainRoutine - 2(XIO), 5(XIC)

XV075_FAULT

0

BOOL

TrainingAid

Fault on Drain Valve

Constant

No

External Access:

Read/Write

XV075_FAULT - MainProgram/MainRoutine - 15(XIC), 4(XIC), 4(XIO)

XV075_LEVEL

40.0

REAL

TrainingAid

Tank level at which XV075 is mounted

Constant

No

External Access:

Read/Write

XV075_LEVEL - MainProgram/MainRoutine - 4(GRT), 4(LES)

XV093_FAULT

0

BOOL

TrainingAid

Logix Designer

XV093_FAULT (Continued)

Fault on Isolation Valve	
Constant	No
External Access:	Read/Write
<i>XV093_FAULT - MainProgram/MainRoutine - 14(XIC), 3(XIC), 3(XIO)</i>	

General			
Type:	 Ladder Diagram	Number of Rungs:	17
In Program:	 MainProgram		

Data type Name: STRING

Description:

Size: 88 byte(s)

Name	Value	Data Type	Style
LEN		DINT	Decimal
External Access:	Read/Write		
DATA		SINT[82]	ASCII
External Access:	Read/Write		

Data type Name: STRING_16

Description:

Size: 20 byte(s)

Name	Value	Data Type	Style
LEN		DINT	Decimal
External Access:	Read/Write		
DATA		SINT[16]	ASCII
External Access:	Read/Write		

Data type Name: STRING_32

Description:

Size: 36 byte(s)

Name	Value	Data Type	Style
LEN		DINT	Decimal
External Access:	Read/Write		
DATA		SINT[32]	ASCII
External Access:	Read/Write		

1769 Bus : Local Modules

Local: [0] 1769-L24ER-QB1B TrainingAid

Type:	1769-L24ER-QB1B CompactLogix™ 5370	Parent:	Local
Vendor:	Rockwell Automation/Allen-Bradley	Vendor ID:	1
Slot:	0	Electronic Keying:	Disabled
Revision:	34.12	Status:	Standby
Module Fault:	Offline	Inhibit Flag	Off

1769 Bus : Embedded I/O : Local Modules

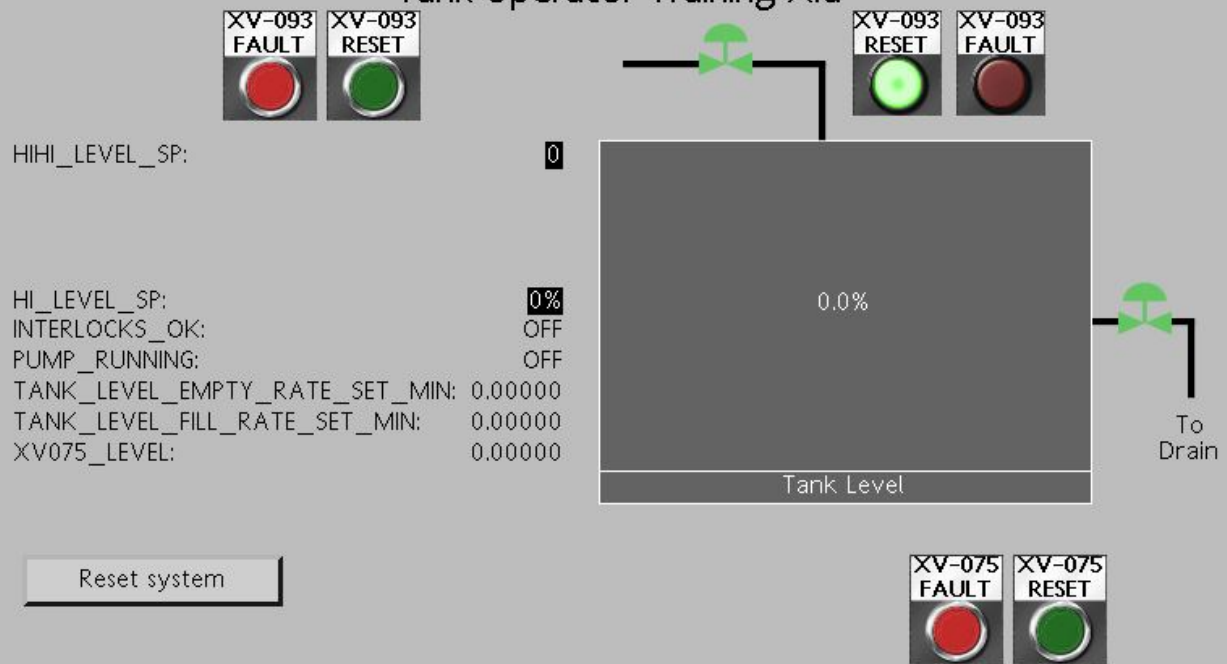
Local: [1] Embedded Discrete_IO

Type:	Embedded 16 Point 24V DC Sink/Source Input /16 Point 24V DC Source Output	Parent:	Local
Vendor:	Rockwell Automation/Allen-Bradley	Vendor ID:	1
Slot:	1	Electronic Keying:	Compatible Module
Revision:	3.1	Status:	Standby
Module Fault:	Offline	Inhibit Flag	Off
Use Unicast:	No		

Module Defined Configuration Tag	Value	Data Type
Local:1:C		AB:Embedded_DiscreteIO1:C:0
.Filter0OffOn_0	0	BOOL
.Filter0OffOn_1	0	BOOL
.Filter0OffOn_2	0	BOOL
.Filter0OffOn_3	0	BOOL
.Filter0OnOff_4	0	BOOL
.Filter0OnOff_5	0	BOOL
.Filter0OnOff_6	0	BOOL
.Filter0OnOff_7	0	BOOL
.Filter1OffOn_0	0	BOOL
.Filter1OffOn_1	0	BOOL
.Filter1OffOn_2	0	BOOL
.Filter1OffOn_3	0	BOOL
.Filter1OnOff_4	0	BOOL
.Filter1OnOff_5	0	BOOL
.Filter1OnOff_6	0	BOOL
.Filter1OnOff_7	0	BOOL

TrainingAid	
Project Tag Listing	1
Label does not exist	6
Controller Properties Listing	7
Controller Tag Listing	9
MainTask	
Task Properties Listing	14
MainProgram	
Program Properties Listing	15
Program Tag Listing	16
MainRoutine	
Ladder Diagram	17
Routine Tag Listing	24
Routine Properties Listing	29
Data Types	
Strings	30
Module Properties	
1769 Bus : Local Modules	33
1769 Bus : Embedded I/O : Local Modules.....	33

Tank Operator Training Aid



Author:- 2425656