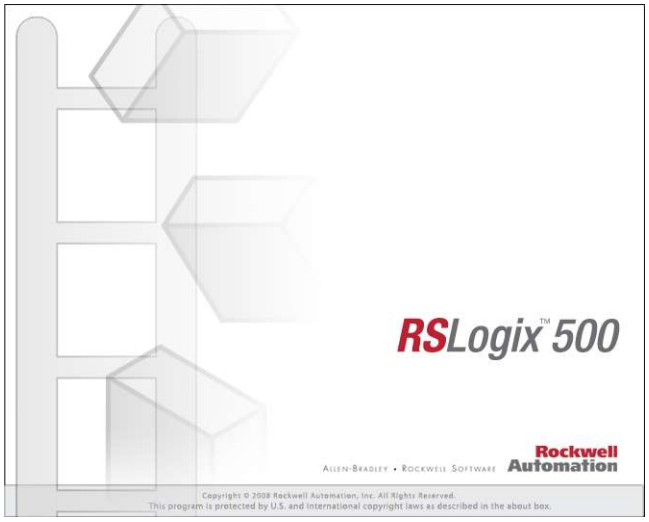
RSLogix Micro Project Report



Processor Information

Processor Type: Bul.1763 MicroLogix 1100 Series B

Processor Name: SIM_PLC

Total Memory Used: 239 Instruction Words Used - 62 Data Table Words Used

Total Memory Left: 6417 Instruction Words Left

Program Files: 6

Data Files: 9

Program ID: 2d25

I/O Configuration

0	Bul.1763	MicroLogix 1100 Series B
1	1762-IQ8	8-Input 10/30 VDC
2	1762-OW8	8-Output Relay
3		
4		

Channel Configuration

CHANNEL 0 (SYSTEM) - Driver: DF1 Full Duplex
   CHANNEL 0 (SYSTEM) - Driver: DF1 Full Duplex Edit Resource/Owner Timeout: 60
   CHANNEL 0 (SYSTEM) - Driver: DF1 Full Duplex Passthru Link ID: 1
   CHANNEL 0 (SYSTEM) - Driver: DF1 Full Duplex Write Protected: No
   CHANNEL 0 (SYSTEM) - Driver: DF1 Full Duplex Comms Servicing Selection: Yes
   CHANNEL 0 (SYSTEM) - Driver: DF1 Full Duplex Message Servicing Selection: Yes
   CHANNEL 0 (SYSTEM) - Driver: DF1 Full Duplex 1st AWA Append Character: \d
   CHANNEL 0 (SYSTEM) - Driver: DF1 Full Duplex 2nd AWA Append Character: \a

   Source ID: 1 (decimal)
   Baud: 19200
   Parity: NONE
   Control Line : No Handshaking
   Error Detection: CRC
   Embedded Responses: Auto Detect
   Duplicate Packet Detect: Yes
   ACK Timeout(x20 ms): 50
   NAK Retries: 3
   ENQ Retries: 3

CHANNEL 1 (SYSTEM) - Driver: Ethernet
   CHANNEL 1 (SYSTEM) - Driver: Ethernet Edit Resource/Owner Timeout: 60
   CHANNEL 1 (SYSTEM) - Driver: Ethernet Passthru Link ID: 1
   CHANNEL 1 (SYSTEM) - Driver: Ethernet Write Protected: No
   CHANNEL 1 (SYSTEM) - Driver: Ethernet Comms Servicing Selection: Yes
   CHANNEL 1 (SYSTEM) - Driver: Ethernet Message Servicing Selection: Yes

   Hardware Address: 00:00:00:00:00:00
   IP Address: 0.0.0.0
   Subnet Mask: 0.0.0.0
   Gateway Address: 0.0.0.0
   Msg Connection Timeout (x 1mS): 15000
   Msg Reply Timeout (x mS): 3000
   Inactivity Timeout (x Min): 30
   Bootp Enable: Yes
   Dhcp Enable No
   SNMP Enable: No
   HTTP Enable: Yes
   Auto Negotiate Enable: Yes
   Port Speed Enable: 10/100 Mbps Full Duplex/Half Duplex
   Contact:
   Location:

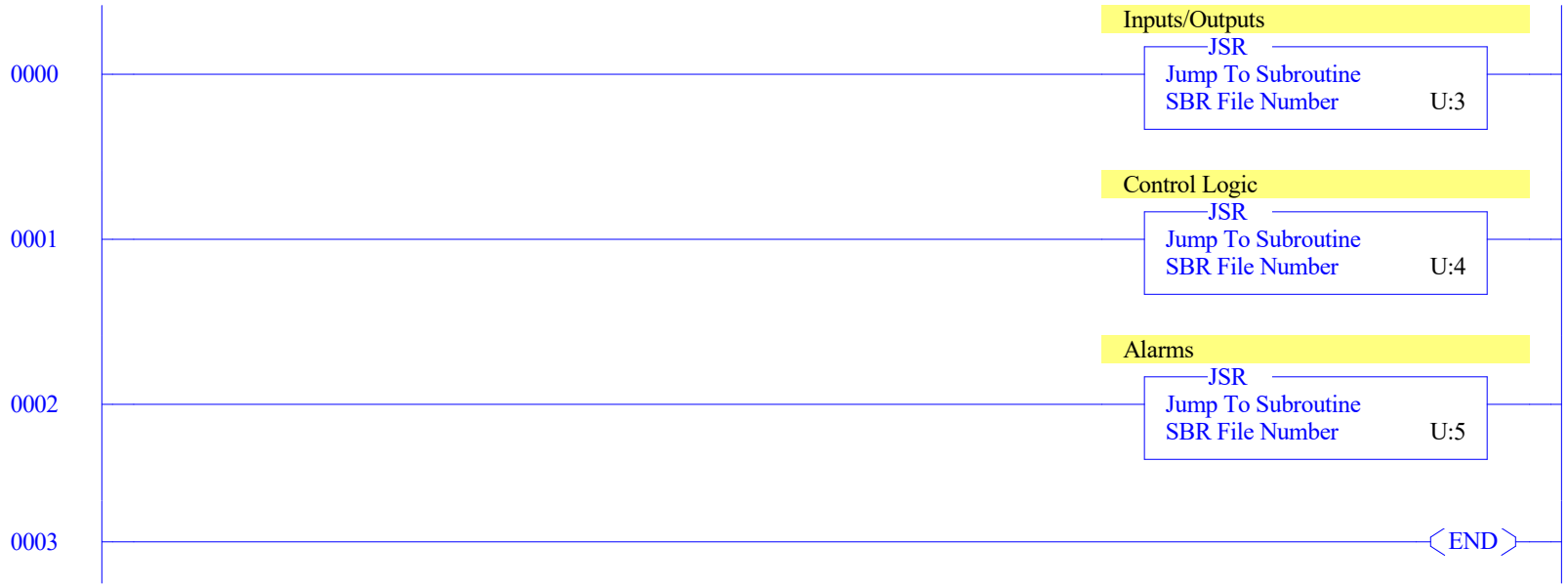
Program File List

Name	Number	Type	Rungs	Debug	Bytes
[SYSTEM]	0	SYS	0	No	0
	1	SYS	0	No	0
MAIN	2	LADDER	4	No	30
IO	3	LADDER	11	No	274
CTRL LOGIC	4	LADDER	8	No	208
ALARMS	5	LADDER	7	No	251

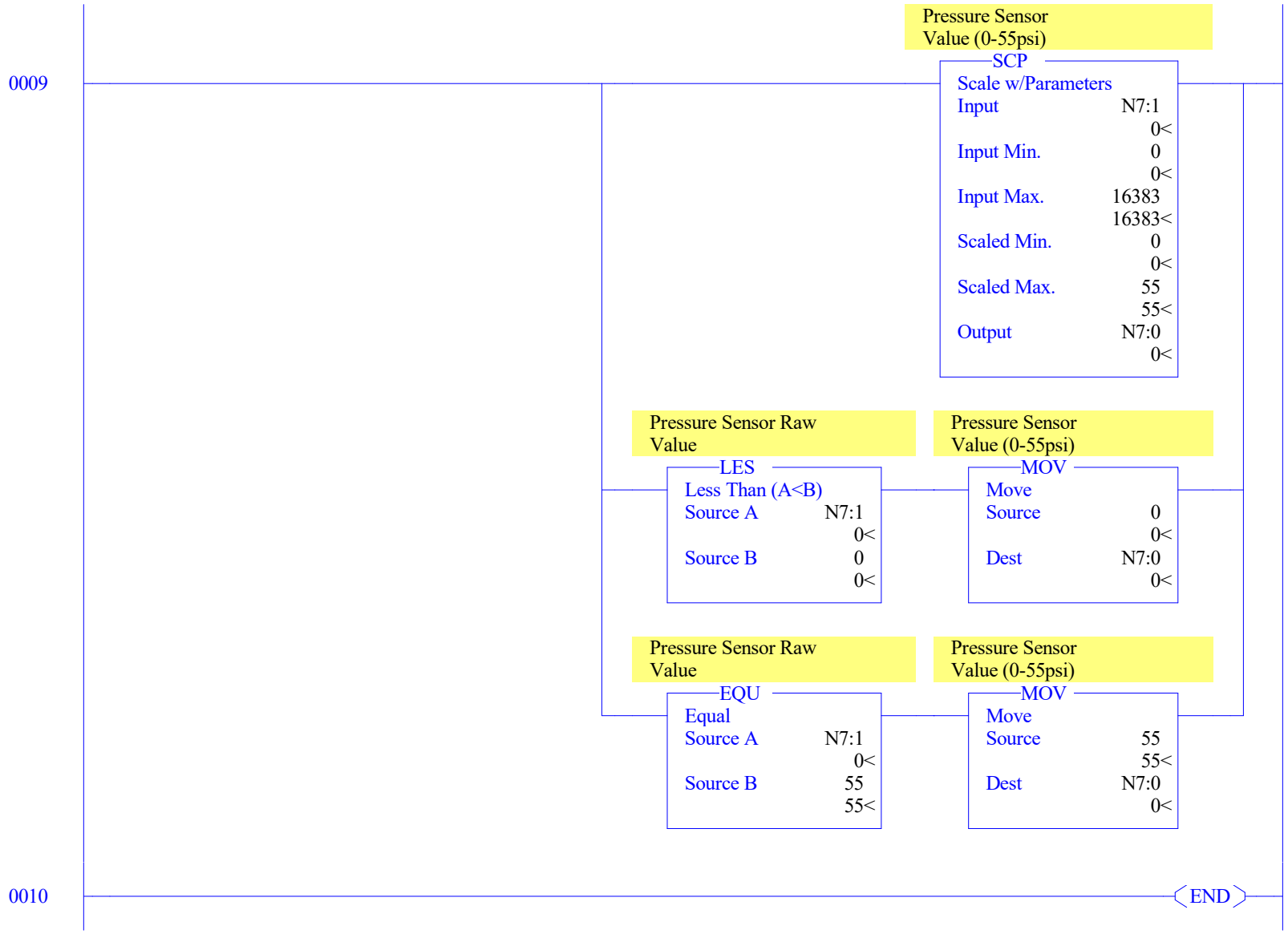
Data File List

Name	Number	Type	Scope	Debug	Words	Elements	Last
OUTPUT	0	O	Global	No	15	5	O:4
INPUT	1	I	Global	No	21	7	I:6
STATUS	2	S	Global	No	0	66	S:65
BINARY	3	B	Global	No	2	2	B3:1
TIMER	4	T	Global	No	12	4	T4:3
COUNTER	5	C	Global	No	3	1	C5:0
CONTROL	6	R	Global	No	3	1	R6:0
INTEGER	7	N	Global	No	4	4	N7:3
FLOAT	8	F	Global	No	2	1	F8:0

LAD 2 - MAIN --- Total Rungs in File = 4




0000
Flow Switch Input
I:1
0
1762-IQ8
Flow SW
FLOW_SW
B3:0
6
0001
Alarm Reset Btn
I:1
1
1762-IQ8
B3:1
ONS
3
Alarm Reset
ALARM_RESET
B3:0
7
0002
Alarm Silence Btn
I:1
2
1762-IQ8
B3:1
ONS
4
Alarm Silence
ALARM_SILENCE
B3:0
8
0003
Hand Mode Btn
B3:0
0
Hand Mode
HAND_MODE
B3:0
9
0004
Off Mode Btn
B3:0
1
B3:1
ONS
6
Off Mode
OFF_MODE
B3:0
10
0005
Auto Mode Btn
B3:0
2
B3:1
ONS
7
Auto Mode
AUTO_MODE
B3:0
11
0006
Pump
PUMP
B3:0
3
Pump Output
O:2
0
1762-OW8
0007
Flow Fault Indicator
FLOW_FAULT_IND
B3:0
4
Flow Fault Indicator Output
O:2
1
1762-OW8
0008
Pressure Fault Indicator
PRESS_FAULT_IND
B3:0
5
Pressure Fault Indicator Output
O:2
2
1762-OW8


0009
Pressure Sensor Value (0-55psi)
SCP
Scale w/Parameters
Input N7:1 0<
Input Min. 0 0<
Input Max. 16383 16383<
Scaled Min. 0 0<
Scaled Max. 55 55<
Output N7:0 0<
Pressure Sensor Raw Value
LES
Less Than (A<B)
Source A N7:1 0<
Source B 0 0<
Pressure Sensor Value (0-55psi)
MOV
Move
Source 0 0<
Dest N7:0 0<
Pressure Sensor Raw Value
EQU
Equal
Source A N7:1 0<
Source B 55 55<
Pressure Sensor Value (0-55psi)
MOV
Move
Source 55 55<
Dest N7:0 0<
0010
END

Buttons placing system in their respective mode. System is placed into Off mode if the corresponding button is pushed or if any of the Fault Alarms are triggered.

0000

Hand Mode
HAND_MODE
B3:0
9

Off = 0
Hand = 1
Auto = 2

MOV
Move
Source 1
1<
Dest N7:3
0<

0001

Off Mode
OFF_MODE
B3:0
10

Flow Fault Alarm
B3:0
14

Pressure Fault Alarm
B3:0
15

Off = 0
Hand = 1
Auto = 2

MOV
Move
Source 0
0<
Dest N7:3
0<

0002

Auto Mode
AUTO_MODE
B3:0
11

Off = 0
Hand = 1
Auto = 2

MOV
Move
Source 2
2<
Dest N7:3
0<

Auto mode powers the pump for 30 seconds and keeps it off for 10 seconds.

0003

Off = 0
Hand = 1
Auto = 2

EQU
Equal
Source A N7:3
0<
Source B 2
2<

Pump On Timer

TON
Timer On Delay
Timer T4:0
Time Base 1.0
Preset 30<
Accum 0<

EN
DN

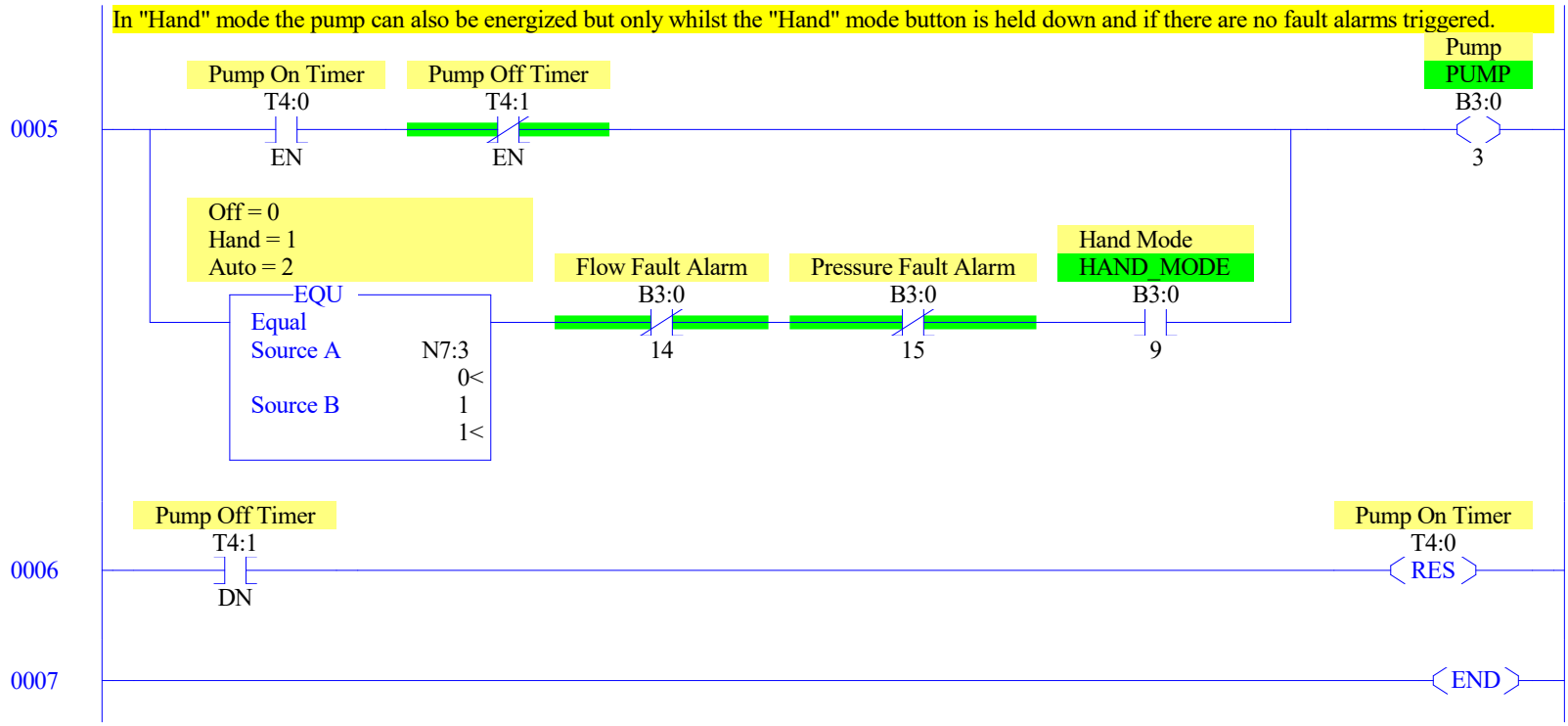
0004

Pump On Timer
T4:0
DN

Pump Off Timer

TON
Timer On Delay
Timer T4:1
Time Base 1.0
Preset 10<
Accum 0<

EN
DN


In "Hand" mode the pump can also be energized but only whilst the "Hand" mode button is held down and if there are no fault alarms triggered.
0005
Pump On Timer
T4:0
EN
Pump Off Timer
T4:1
EN
Pump
PUMP
B3:0
3
Off = 0
Hand = 1
Auto = 2
EQU
Equal
Source A
N7:3
0<
Source B
1
1<
Flow Fault Alarm
B3:0
14
Pressure Fault Alarm
B3:0
15
Hand Mode
HAND_MODE
B3:0
9
0006
Pump Off Timer
T4:1
DN
Pump On Timer
T4:0
RES
0007
END

Each alarm consists of the "Alarm" bit that keeps the system in off mode in the event that the bit is triggered and an "Alarm Indicator" that indicates to the operator that there is an issue/what the issue is.

0000

Pump
PUMP
B3:0
3

Flow SW
FLOW_SW
B3:0
6

Flow Fault Timer
TON
Timer On Delay
Timer T4:2
Time Base 1.0
Preset 5<
Accum 0<
EN
DN

Flow Fault Timer
T4:2
DN

OSR Storage (Flow Fault)
OSR
One Shot Rising
Storage Bit B3:1/0
Output Bit B3:0/12

An alarm can be reset but if the conditions that triggered it are still present it will trigger again if the pump is kept on for 5 seconds. The alarm indicator can be silenced so as not to bother the operator once they are aware of the issue and are attempting to address it. The alarm and alarm indicator are triggered by different bits. The alarm is triggered by the 5 second timer and the alarm indicator is triggered by a "one shot rising". This allows the alarm indicator to be "silenced" without it triggering again after 5 seconds like the "alarm" bit.

0001

Flow Fault Timer
T4:2
DN

Flow Fault Alarm
B3:0
14

Flow Fault Alarm
B3:0
14

Alarm Reset
ALARM_RESET
B3:0
7

0002

Flow Fault Indicator Trigger
B3:0
12

Flow Fault Indicator
FLOW_FAULT_IND
B3:0
4

Flow Fault Indicator
FLOW_FAULT_IND
B3:0
4

Alarm Silence
ALARM_SILENCE
B3:0
8

0003

Pump
PUMP
B3:0
3

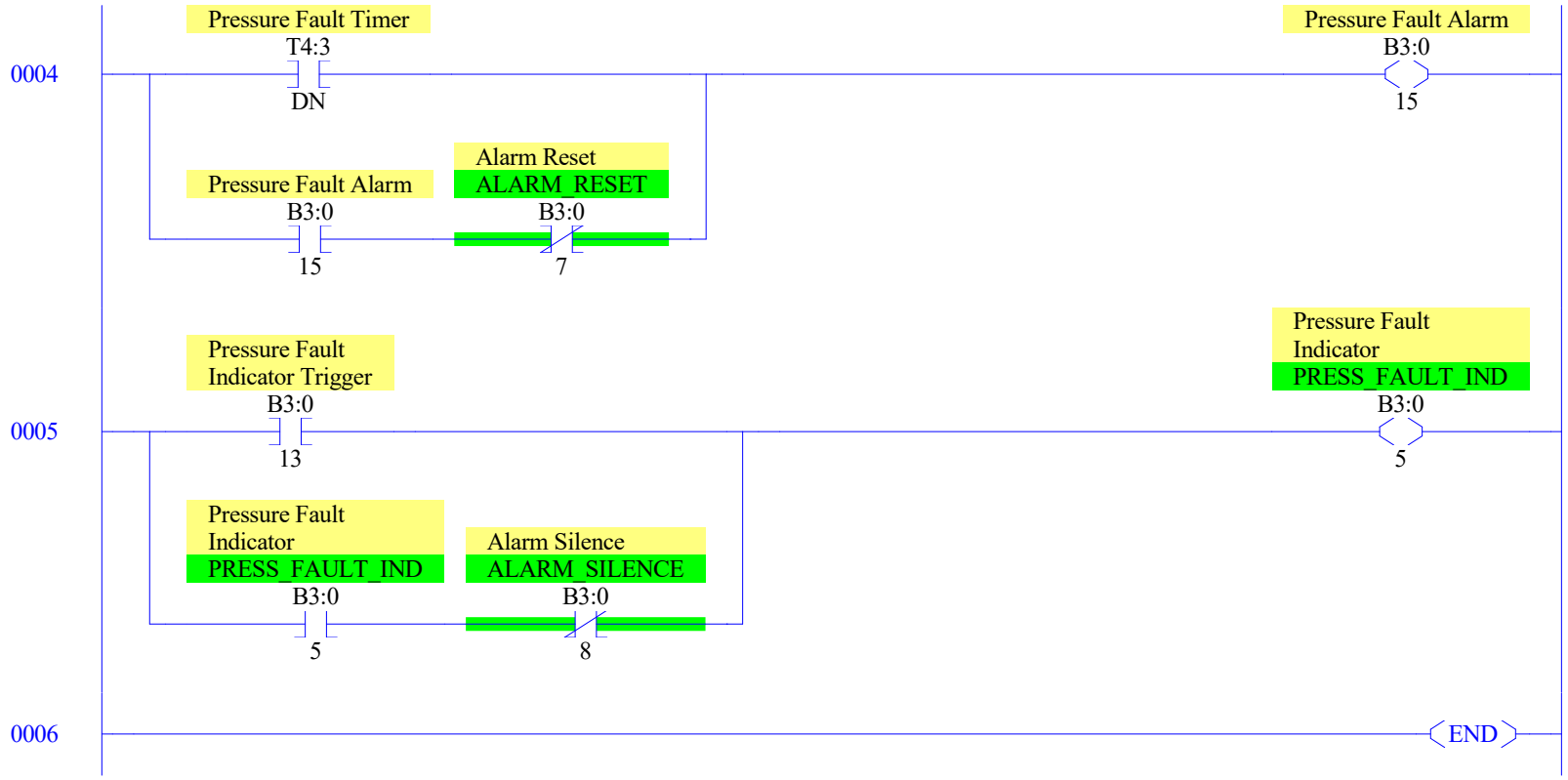
Pressure Sensor Value (0-55psi)
GRT
Greater Than (A>B)
Source A N7:0
0<
Source B 30
30<

Pressure Fault Timer
TON
Timer On Delay
Timer T4:3
Time Base 1.0
Preset 5<
Accum 0<
EN
DN

Pressure Fault Timer
T4:3
DN

OSR Storage (Pressure Fault)
OSR
One Shot Rising
Storage Bit B3:1/1
Output Bit B3:0/13

LAD 5 - ALARMS --- Total Rungs in File = 7



Data File O0 (bin) -- OUTPUT

Offset	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
O:0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Bul.1763 MicroLogix 1100 Series B
O:0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Bul.1763 MicroLogix 1100 Series B
O:0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Bul.1763 MicroLogix 1100 Series B
O:0.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Bul.1763 MicroLogix 1100 Series B
O:2.0									0	0	0	0	0	0	0	0	1762-OW8 - 8-Output Relay

Data File I1 (bin) -- INPUT

Offset	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
I:0.0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Bul.1763 MicroLogix 1100 Series B
I:0.1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Bul.1763 MicroLogix 1100 Series B
I:0.2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Bul.1763 MicroLogix 1100 Series B
I:0.3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Bul.1763 MicroLogix 1100 Series B
I:0.4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Bul.1763 MicroLogix 1100 Series B-Analog
I:0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Bul.1763 MicroLogix 1100 Series B-Analog
I:1.0									0	0	0	0	0	0	0	0	1762-IQ8 - 8-Input 10/30 VDC

Main

Processor Mode S:1/0 - S:1/4 = Remote Program Mode
On Power up Go To Run (Mode Behavior) S:1/12 = 0
First Pass S:1/15 = No
Free Running Clock S:4 = 0000-0000-0000-0000

Proc

OS Catalog Number S:57 = 1100 User Program Type S:63 = 8001h
OS Series S:58 = A Compiler Revision Number S:64 =
OS FRS S:59 =
Processor Catalog Number S:60 =
Processor Series S:61 = A
Processor FRN S:62 =

Scan Times

Maximum (x10 ms) S:22 = 0
Watchdog (x10 ms) S:3 (high byte) = 10
Last 100 uSec Scan Time S:35 = 0
Scan Toggle Bit S:33/9 = 0

Math

Math Overflow Selected S:2/14 = 0 Math Register (lo word) S:13 = 0
Overflow Trap S:5/0 = 0 Math Register (high word) S:14-S:13 = 0
Carry S:0/0 = 0 Math Register (32 Bit) S:14-S:13 = 0
Overflow S:0/1 = 0
Zero Bit S:0/2 = 0
Sign Bit S:0/3 = 0

Chan 0

Processor Mode S:1/0- S:1/4 = Remote Program Mode
Node Address S:15 (low byte) = 0 Outgoing Msg Cmd Pending S:33/2 = 0
Baud Rate S:15 (high byte) = ?
Channel Mode S:33/3 = 0
Comms Active S:33/4 = 0
Incoming Cmd Pending S:33/0 = 0
Msg Reply Pending S:33/1 = 0

Debug

Suspend Code S:7 = 0
Suspend File S:8 = 0

Errors

Fault Override At Power Up S:1/8 = 0 Fault Routine S:29 = 0
Startup Protection Fault S:1/9 = 0 Major Error S:6 = 0h
Major Error Halt S:1/13 = 0
Overflow Trap S:5/0 = 0 Error Description:
Control Register Error S:5/2 = 0
Major Error Executing User Fault Rtn. S:5/3 = 0
Battery Low S:5/11 = 0
Input Filter Selection Modified S:5/13 = 0
ASCII String Manipulation error S:5/15 = 0

Protection

Deny Future Access S:1/14 = No
Data File Overwrite Protection Lost S:36/10 = False

Mem Module

Memory Module Loaded On Boot S:5/8 = 0
Password Mismatch S:5/9 = 0
Load Memory Module On Memory Error S:1/10 = 0
Load Memory Module Always S:1/11 = 0
On Power up Go To Run (Mode Behavior) S:1/12 = 0
Program Compare S:2/9 = 0
Data File Overwrite Protection Lost S:36/10 = 0

Forces

Forces Enabled S:1/5 = Yes
Forces Installed S:1/6 = No

PUMP CONTROL HOA AND ALARMS

Data File B3 (bin) -- BINARY

Offset	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	(Symbol) Description
B3:0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
B3:1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

Data File T4 -- TIMER

Offset	EN	TT	DN	BASE	PRE	ACC	(Symbol) Description
T4:0	0	0	0	1.0 sec	30	0	Pump On Timer
T4:1	0	0	0	1.0 sec	10	0	Pump Off Timer
T4:2	0	0	0	1.0 sec	5	0	Flow Fault Timer
T4:3	0	0	0	1.0 sec	5	0	Pressure Fault Timer

Data File C5 -- COUNTER

Offset	CU	CD	DN	OV	UN	UA	PRE	ACC	(Symbol)	Description
C5:0	0	0	0	0	0	0	0	0		

Data File R6 -- CONTROL

Offset	EN	EU	DN	EM	ER	UL	IN	FD	LEN	POS	(Symbol)	Description
R6:0	0	0	0	0	0	0	0	0	0	0		

PUMP CONTROL HOA AND ALARMS

Data File N7 (dec) -- INTEGER

Offset	0	1	2	3	4	5	6	7	8	9
N7:0	0	0	0	0						

Data File F8 -- FLOAT

Offset	0	1	2	3	4
F8:0	0				

Address/Symbol Database

Address	Symbol	Scope	Description	Sym Group	Dev. Code	ABV
B3:0/0			Hand Mode Btn			
B3:0/1			Off Mode Btn			
B3:0/2			Auto Mode Btn			
B3:0/3	PUMP	Global	Pump			
B3:0/4	FLOW_FAULT_IND	Global	Flow Fault Indicator			
B3:0/5	PRESS_FAULT_IND	Global	Pressure Fault Indicator			
B3:0/6	FLOW_SW	Global	Flow SW			
B3:0/7	ALARM_RESET	Global	Alarm Reset			
B3:0/8	ALARM_SILENCE	Global	Alarm Silence			
B3:0/9	HAND_MODE	Global	Hand Mode			
B3:0/10	OFF_MODE	Global	Off Mode			
B3:0/11	AUTO_MODE	Global	Auto Mode			
B3:0/12			Flow Fault Indicator Trigger			
B3:0/13			Pressure Fault Indicator Trigger			
B3:0/14			Flow Fault Alarm			
B3:0/15			Pressure Fault Alarm			
B3:1/0			OSR Storage (Flow Fault)			
B3:1/1			OSR Storage (Pressure Fault)			
I:1/0			Flow Switch Input			
I:1/1			Alarm Reset Btn			
I:1/2			Alarm Silence Btn			
N7:0			Pressure Sensor Value (0-55psi)			
N7:1			Pressure Sensor Raw Value			
N7:2			Hand Mode = 1 Auto or Off = 0			
N7:3			Off = 0 Hand = 1 Auto = 2			
O:2/0			Pump Output			
O:2/1			Flow Fault Indicator Output			
O:2/2			Pressure Fault Indicator Output			
S:0			Arithmetic Flags			
S:0/0			Processor Arithmetic Carry Flag			
S:0/1			Processor Arithmetic Underflow/ Overflow Flag			
S:0/2			Processor Arithmetic Zero Flag			
S:0/3			Processor Arithmetic Sign Flag			
S:1			Processor Mode Status/ Control			
S:1/0			Processor Mode Bit 0			
S:1/1			Processor Mode Bit 1			
S:1/2			Processor Mode Bit 2			
S:1/3			Processor Mode Bit 3			
S:1/4			Processor Mode Bit 4			
S:1/5			Forces Enabled			
S:1/6			Forces Present			
S:1/7			Comms Active			
S:1/8			Fault Override at Powerup			
S:1/9			Startup Protection Fault			
S:1/10			Load Memory Module on Memory Error			
S:1/11			Load Memory Module Always			
S:1/12			Load Memory Module and RUN			
S:1/13			Major Error Halted			
S:1/14			Access Denied			
S:1/15			First Pass			
S:2/0			STI Pending			
S:2/1			STI Enabled			
S:2/2			STI Executing			
S:2/3			Index Addressing File Range			
S:2/4			Saved with Debug Single Step			
S:2/5			DH-485 Incoming Command Pending			
S:2/6			DH-485 Message Reply Pending			
S:2/7			DH-485 Outgoing Message Command Pending			
S:2/15			Comms Servicing Selection			
S:3			Current Scan Time/ Watchdog Scan Time			
S:4			Time Base			
S:5/0			Overflow Trap			
S:5/2			Control Register Error			
S:5/3			Major Err Detected Executing UserFault Routine			
S:5/4			M0-M1 Referenced on Disabled Slot			
S:5/8			Memory Module Boot			
S:5/9			Memory Module Password Mismatch			
S:5/10			STI Overflow			
S:5/11			Battery Low			
S:6			Major Error Fault Code			
S:7			Suspend Code			
S:8			Suspend File			
S:9			Active Nodes			
S:10			Active Nodes			
S:11			I/O Slot Enables			
S:12			I/O Slot Enables			
S:13			Math Register			
S:14			Math Register			
S:15			Node Address/ Baud Rate			
S:16			Debug Single Step Rung			
S:17			Debug Single Step File			
S:18			Debug Single Step Breakpoint Rung			
S:19			Debug Single Step Breakpoint File			
S:20			Debug Fault/ Powerdown Rung			

Address/Symbol Database

Address	Symbol	Scope	Description	Sym Group	Dev. Code	ABV
S:21			Debug Fault/ Powerdown File			
S:22			Maximum Observed Scan Time			
S:23			Average Scan Time			
S:24			Index Register			
S:25			I/O Interrupt Pending			
S:26			I/O Interrupt Pending			
S:27			I/O Interrupt Enabled			
S:28			I/O Interrupt Enabled			
S:29			User Fault Routine File Number			
S:30			STI Setpoint			
S:31			STI File Number			
S:32			I/O Interrupt Executing			
S:33			Extended Proc Status Control Word			
S:33/0			Incoming Command Pending			
S:33/1			Message Reply Pending			
S:33/2			Outgoing Message Command Pending			
S:33/3			Selection Status User/DF1			
S:33/4			Communicat Active			
S:33/5			Communicat Servicing Selection			
S:33/6			Message Servicing Selection Channel 0			
S:33/7			Message Servicing Selection Channel 1			
S:33/8			Interrupt Latency Control Flag			
S:33/9			Scan Toggle Flag			
S:33/10			Discrete Input Interrupt Reconfigur Flag			
S:33/11			Online Edit Status			
S:33/12			Online Edit Status			
S:33/13			Scan Time Timebase Selection			
S:33/14			DTR Control Bit			
S:33/15			DTR Force Bit			
S:34			Pass-thru Disabled			
S:34/0			Pass-Thru Disabled Flag			
S:34/1			DH+ Active Node Table Enable Flag			
S:34/2			Floating Point Math Flag Disable,Fl			
S:35			Last 1 ms Scan Time			
S:36			Extended Minor Error Bits			
S:36/8			DII Lost			
S:36/9			STI Lost			
S:36/10			Memory Module Data File Overwrite Protection			
S:37			Clock Calendar Year			
S:38			Clock Calendar Month			
S:39			Clock Calendar Day			
S:40			Clock Calendar Hours			
S:41			Clock Calendar Minutes			
S:42			Clock Calendar Seconds			
S:43			STI Interrupt Time			
S:44			I/O Event Interrupt Time			
S:45			DII Interrupt Time			
S:46			Discrete Input Interrupt- File Number			
S:47			Discrete Input Interrupt- Slot Number			
S:48			Discrete Input Interrupt- Bit Mask			
S:49			Discrete Input Interrupt- Compare Value			
S:50			Processor Catalog Number			
S:51			Discrete Input Interrupt- Return Number			
S:52			Discrete Input Interrupt- Accumulat			
S:53			Reserved/ Clock Calendar Day of the Week			
S:55			Last DII Scan Time			
S:56			Maximum Observed DII Scan Time			
S:57			Operating System Catalog Number			
S:58			Operating System Series			
S:59			Operating System FRN			
S:61			Processor Series			
S:62			Processor Revision			
S:63			User Program Type			
S:64			User Program Functional Index			
S:65			User RAM Size			
S:66			Flash EEPROM Size			
S:67			Channel 0 Active Nodes			
S:68			Channel 0 Active Nodes			
S:69			Channel 0 Active Nodes			
S:70			Channel 0 Active Nodes			
S:71			Channel 0 Active Nodes			
S:72			Channel 0 Active Nodes			
S:73			Channel 0 Active Nodes			
S:74			Channel 0 Active Nodes			
S:75			Channel 0 Active Nodes			
S:76			Channel 0 Active Nodes			
S:77			Channel 0 Active Nodes			
S:78			Channel 0 Active Nodes			
S:79			Channel 0 Active Nodes			
S:80			Channel 0 Active Nodes			
S:81			Channel 0 Active Nodes			
S:82			Channel 0 Active Nodes			
S:83			DH+ Active Nodes			
S:84			DH+ Active Nodes			

Address/Symbol Database

Address	Symbol	Scope	Description	Sym Group	Dev. Code	ABV
S:85			DH+ Active Nodes			
S:86			DH+ Active Nodes			
T4:0			Pump On Timer			
T4:0/EN						
T4:1			Pump Off Timer			
T4:1/DN						
T4:2			Flow Fault Timer			
T4:2/DN						
T4:3			Pressure Fault Timer			
T4:3/DN						
U:3			Inputs/Outputs			
U:4			Control Logic			
U:5			Alarms			

Instruction Comment Database

Address	Instruction	Description

Symbol Group Database

Group_Name	Description