Adam Brigmann
PROJECT 3 - INVENTORY MANAGEMENT.RSS
03:06PM @ 09/10/24

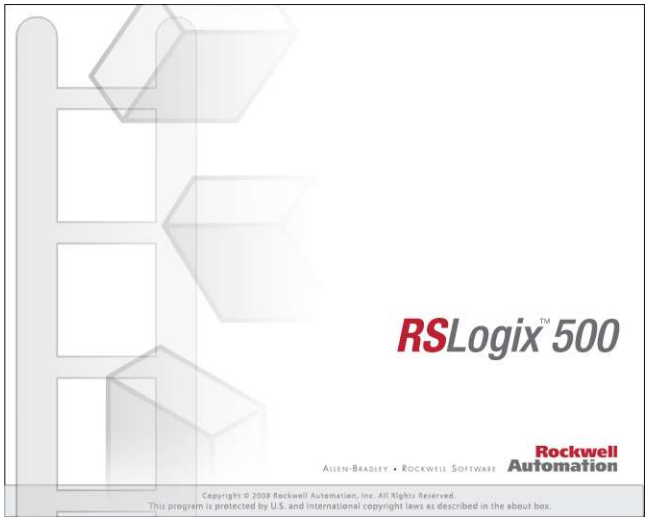


Table Of Contents

Processor Information

Processor Type: Bul.1763 MicroLogix 1100 Series B

Processor Name: TEMPLATE

Total Memory Used: 487 Instruction Words Used - 794 Data Table Words Used

Total Memory Left: 6169 Instruction Words Left

Program Files: 10

Data Files: 12

Program ID: aac6

I/O Configuration

0	Bul.1763	MicroLogix 1100 Series B
1		
2		
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

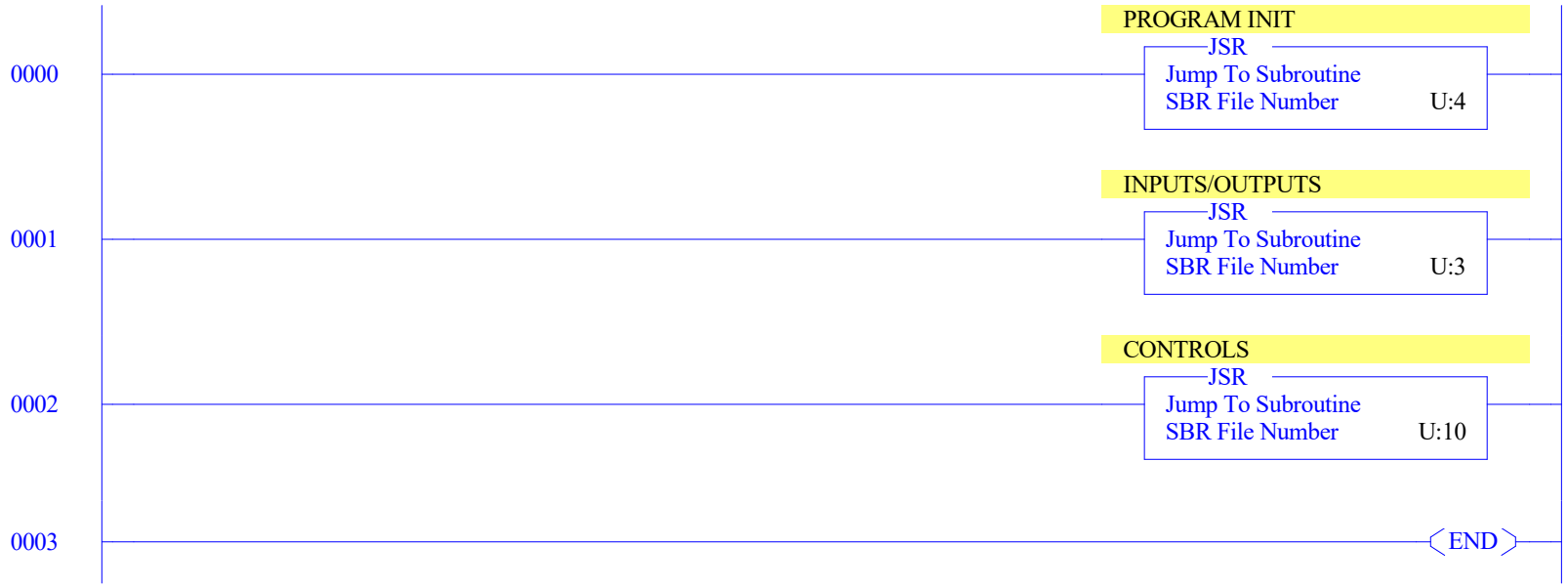
Name	Number	Type	Rungs	Debug	Bytes
[SYSTEM]	0	SYS	0	No	0
	1	SYS	0	No	0
MAIN	2	LADDER	4	No	30
IO	3	LADDER	1	No	3
INIT	4	LADDER	1	No	3
ALRMS	7	LADDER	4	No	108
CONTROLS	10	LADDER	10	No	184
ST_PARSE	11	LADDER	6	No	350
ERROR CHK	12	LADDER	8	No	284
ADD_SUB	13	LADDER	7	No	249

Data File List

Name	Number	Type	Scope	Debug	Words	Elements	Last
OUTPUT	0	O	Global	No	12	4	O:3
INPUT	1	I	Global	No	18	6	I:5
STATUS	2	S	Global	No	0	66	S:65
BINARY	3	B	Global	No	3	3	B3:2
TIMER	4	T	Global	No	3	1	T4:0
COUNTER	5	C	Global	No	3	1	C5:0
CONTROL	6	R	Global	No	3	1	R6:0
INTEGER	7	N	Global	No	36	36	N7:35
FLOAT	8	F	Global	No	2	1	F8:0
BARCODE	9	ST	Global	No	378	9	ST9:8
PT NUMBERS	10	ST	Global	No	126	3	ST10:2
ERRORCODES	11	ST	Global	No	210	5	ST11:4

Ladder Table of Contents

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



NO ACTIVE INPUTS/OUTPUTS *CAN BE REMOVED*

0000 END

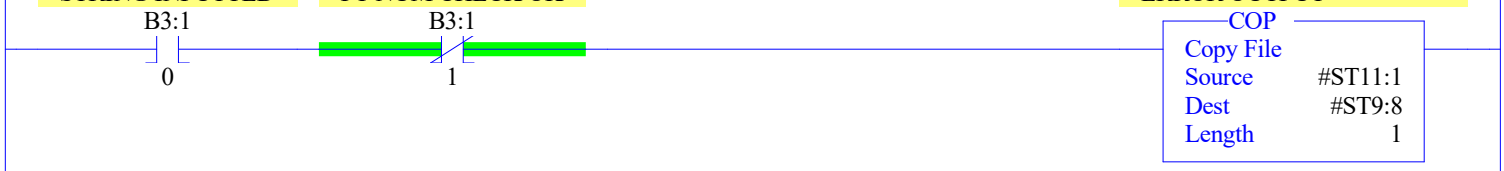
LAD 4 - INIT - PROGRAM INIT --- Total Rungs in File = 1

NO ACTIVE CONDITIONS NEEDING INITIALIZATION *CAN BE REMOVED*

0000 END

IF BAD PART NUMBER, RETURN "ERROR: PART NUMBER DOES NOT EXIST (11-1)" TO THE BARCODE STRING FILE

0000



IF REQ SUBTRACTION IS GRT INVETORY, RETURN "ERROR: CANNOT WITHDRAW NEGATIVE INVENTORY (11-2)" TO THE BARCODE STRING FILE

0001

IF NO ERRORS, RETURN "GOOD SCAN" TO THE BARCODE STRING FILE

0002

0003

Checks if there is a new string that has been inputted via BCR string

0000

BARCODE INPUT

NEQ
Not Equal
Source A ST9:0.LEN
0<
Source B 0
0<

ONS
B3:0
ONS
0

STRING INPUTTED
B3:1
0

COPIES THE INPUTTED STRING TO A HOLDING MEMORY LOCATION

0001

STRING INPUTTED
B3:1
0

COP
Copy File
Source #ST9:0
Dest #ST9:1
Length 1

STORED INPUT

CLEARS THE STRING FROM THE BCR WITH A BLANK STRING TO REFRESH INPUT

0002

STRING INPUTTED
B3:1
0

COP
Copy File
Source #ST9:2
Dest #ST9:0
Length 1

BARCODE INPUT

JUMPS TO THE STRING PARSE FILE (ST_PARSE), LOCATES THE DELIMITERS (:) AND (-) AND PULLS PART NUMBER, QTN AND DIRECTION FROM THE INPUT STRING

0003

PERFORM STRING LOCATING AND PARSING

JSR
Jump To Subroutine
SBR File Number U:11

JUMPS TO THE ERROR CHECKING FILE (ERROR CHK) TO CHECK THE INPUTTED INFORMATION. WILL CHECK IF THE PART NUMBER EXISTS AND IF THE QTY OF THE INPUT CAN BE PULLED OUT FROM THE INVENTORY SYSTEM

0004

PERFORM ERROR CHECKING

JSR
Jump To Subroutine
SBR File Number U:12

IF NO ERRORS AND IS AN ADD COMMAND (DIRECTION = 1), THEN PERFORM ADDITION COMMAND OF INV TO THE SYSTEM

0005

NO ERRORS
B3:1
15

INV SUBTRACT COND
B3:1
2

ONS
B3:0
ONS
3

ADD CONDITION
B3:1
4

IF NO ERRORS AND IS AN SUBTRACT COMMAND (DIRECTION = 1), THEN PERFORM SUBTRACTION COMMAND FROM THE SYSTEM

0006

NO ERRORS
B3:1
15

INV SUBTRACT COND
B3:1
2

ONS
B3:0
ONS
3

SUB CONDITION
B3:1
5

USING THE ADD OR SUB CONDITIONS, WILL JUMP TO THE LOGIC FOR ADDING AND SUBTRACTING

0007

ADD_SUB

JSR
Jump To Subroutine
SBR File Number U:13

JUMP TO SECTION FOR INVENTORY ALARMS. WILL PROVIDE FEEDBACK BASED ON CONDIITONS TO BE RETURNED TO THE BARCODE READER FILE FOR OUT OF BOUNDS TRANSACTIONS, BAD PART NUMBER AND A GOOD SCAN

0008

ALARMS

JSR
Jump To Subroutine
SBR File Number U:7

0009

END

GETS THE INDEX OF THE FIRST DELIMITER (-) AND RETURNS AS N7:4. REMOVES 1 FROM THE INTEGER TO GIVE TRUE INDEX FOR PT NUMBER

0000

STRING INPUTTED

B3:1

0

SPECIAL STRING (-)

ASC

String Search	
Source	ST9:3
Index	1
String Search Result	ST9:1
	N7:4
	0<

RETURNS THE LOCATION OF THE COLON STRING (:)

0001

STRING INPUTTED

B3:1

0

SPECIAL STRING (:)

ASC

String Search	
Source	ST9:4
Index	1
String Search Result	ST9:1
	N7:5
	0<

PERFORMS CALCULATIONS TO LOCATE DATA CHUNKS
PART NUMBER CHARS - QTY CHARS ; DIRECTION CHAR

0002

STRING INPUTTED

B3:1
0

STR LEN

MOV
Move
Source ST9:1.LEN
2<
Dest N7:6
0<

DIST (-) - 1

SUB
Subtract
Source A N7:4
0<
Source B 1
1<
Dest N7:10
0<

DIST (-) + 1

ADD
Add
Source A N7:4
0<
Source B 1
1<
Dest N7:11
0<

DIST (:) - (DIST (-)+1)

SUB
Subtract
Source A N7:5
0<
Source B N7:11
0<
Dest N7:12
0<

DIST (:)+1

ADD
Add
Source A N7:5
0<
Source B 1
1<
Dest N7:13
0<

LEN - DIST (:)

SUB
Subtract
Source A N7:6
0<
Source B N7:5
0<
Dest N7:14
0<

USES MATH ABOVE TO COLLECT THE CHARS TO PARED OUTPUT STRINGS

0003

STRING INPUTTED
B3:1
0

STORED INPUT
AEX
String Extract
Source ST9:1
Index 1
Number N7:10
Dest ST9:5

STORED INPUT
AEX
String Extract
Source ST9:1
Index N7:11
Number N7:12
Dest ST9:6

STORED INPUT
AEX
String Extract
Source ST9:1
Index N7:13
Number N7:14
Dest ST9:7

WILL INTAKE THE PART NUMBER / QTY / DIRECTION TO BE STORED AS AN INTEGER FOR LATER

0004

STRING INPUTTED
B3:1
0

PARSED INPUT STRING
ACI
String to Integer
Source ST9:5
Dest N7:16
0<

PARSED QNT STRING
ACI
String to Integer
Source ST9:6
Dest N7:17
0<

PARSED DIR STRING
ACI
String to Integer
Source ST9:7
Dest N7:18
0<

0005

END

IF A STRING IS INPUTTED, AND INPUT STRING MATCHES WITH A PART NUMBER FROM THE PT NUMBER FILE (HARDCODED), THEN RETURNS A BIT TO TELL US THE PART NUMBER IS A GOOD PART NUMBER

0000

STRING INPUTTED
B3:1
0

PARSED INPUT STRING
ASR
ASCII String Compare
Source A ST9:5
Source B ST10:0

B3:0
ONS
1

PT NUM CHECK OK
B3:1
1

PARSED INPUT STRING
ASR
ASCII String Compare
Source A ST9:5
Source B ST10:1

PARSED INPUT STRING
ASR
ASCII String Compare
Source A ST9:5
Source B ST10:2

CHECKS THE INPUTED DIRECTION IF IT IS A 2 TO DENOTE A SUBTRACTION FROM THE INVENTORY

0001

PT NUM CHECK OK
B3:1
1

EQU
Equal
Source A N7:18
0<
Source B 2
2<

ONS
B3:0
ONS
2

INV SUBTRACT COND
B3:1
2

ST10:0, 1, 2 ARE OUR LIVE PART NUMBERS. IF WE ARE SUBTRACTING FROM THE INVENTORY, MATCH THE INPUTTED PART NUMBER WITH THE LIBRARY OF PT NUMBERS AND ATTEMPT TO SUBTRACT THE NUMBER USING A WORKING INT. ROOM FOR IMPROVEMEMT IS TO SWITCH TO A GREATER THAN CHECK (IF INPUTTED QTY > STORED QTY, THEN ERROR)

0002

INV SUBTRACT COND
B3:1
2

PARSED INPUT STRING
ASR
ASCII String Compare
Source A ST9:5
Source B ST10:0

WORKING INT
SUB
Subtract
Source A N7:0
0<
Source B N7:17
0<
Dest N7:20
0<

ST10:0, 1, 2 ARE OUR LIVE PART NUMBERS. IF WE ARE SUBTRACTING FROM THE INVENTORY, MATCH THE INPUTTED PART NUMBER WITH THE LIBRARY OF PT NUMBERS AND ATTEMPT TO SUBTRACT THE NUMBER USING A WORKING INT. ROOM FOR IMPROVEMEMT IS TO SWITCH TO A GREATER THAN CHECK (IF INPUTTED QTY > STORED QTY, THEN ERROR)

0003

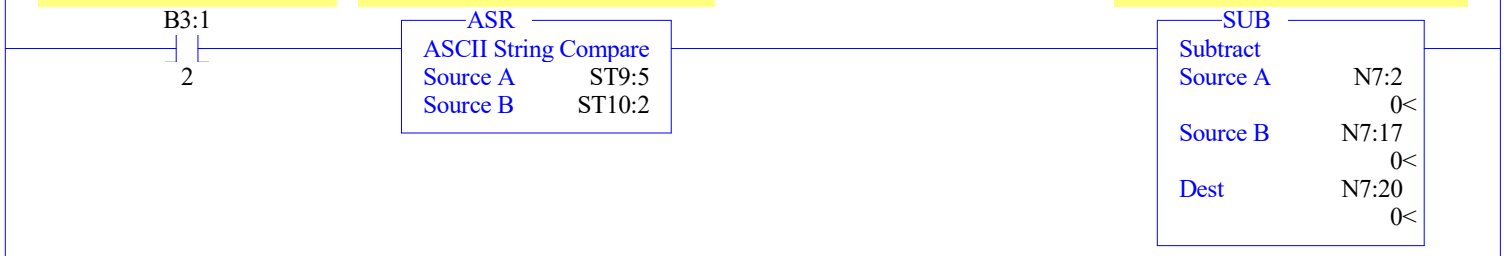
INV SUBTRACT COND
B3:1
2

PARSED INPUT STRING
ASR
ASCII String Compare
Source A ST9:5
Source B ST10:1

WORKING INT
SUB
Subtract
Source A N7:1
0<
Source B N7:17
0<
Dest N7:20
0<

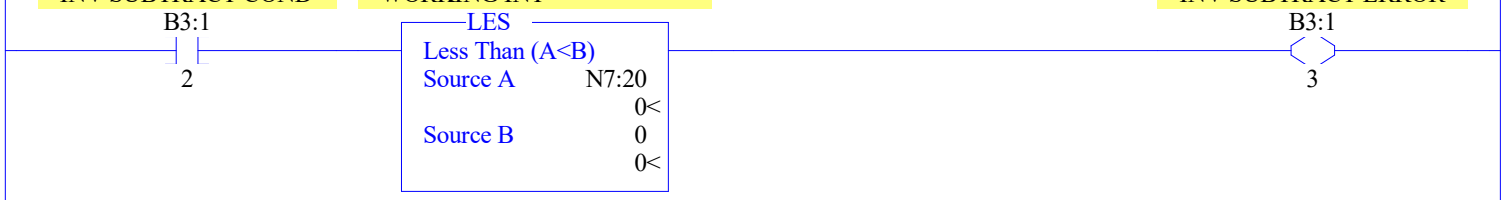
ST10:0, 1, 2 ARE OUR LIVE PART NUMBERS. IF WE ARE SUBTRACTING FROM THE INVENTORY, MATCH THE INPUTTED PART NUMBER WITH THE LIBRARY OF PT NUMBERS AND ATTEMPT TO SUBTRACT THE NUMBER USING A WORKING INT. ROOM FOR IMPROVEMEMT IS TO SWITCH TO A GREATER THAN CHECK (IF INPUTTED QTY > STORED QTY, THEN ERROR)

0004



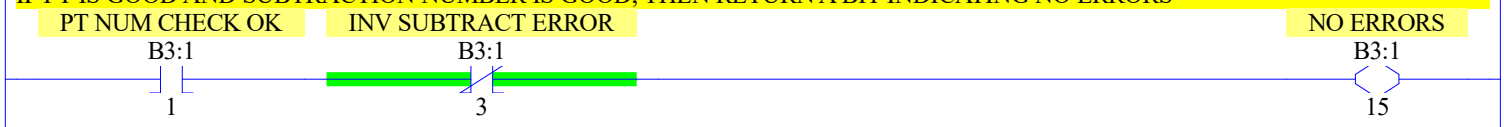
CHECKS FOR A NEGATIVE VALUE FOR THE WORKING INT, RETURNS A BIT IF THIS IS A NEGATIVE NUMBER FOR A NOT OK TRANSACTION

0005



IF PT IS GOOD AND SUBTRACTION NUMBER IS GOOD, THEN RETURN A BIT INDICATING NO ERRORS

0006



0007

PERFORMS ADD OR SUBTRACT OF INPUTTED PT NUMBER WITH THE ACTIVE INVENTORY

0000

ADD CONDITION

B3:1
4

PARSED INPUT STRING

ASR
ASCII String Compare
Source A ST9:5
Source B ST10:0

P#: 123 COUNT

ADD
Add
Source A N7:0
0<
Source B N7:17
0<
Dest N7:0
0<

0001

SUB CONDITION

B3:1
5

PARSED INPUT STRING

ASR
ASCII String Compare
Source A ST9:5
Source B ST10:0

P#: 123 COUNT

SUB
Subtract
Source A N7:0
0<
Source B N7:17
0<
Dest N7:0
0<

0002

ADD CONDITION

B3:1
4

PARSED INPUT STRING

ASR
ASCII String Compare
Source A ST9:5
Source B ST10:1

P#: 456 COUNT

ADD
Add
Source A N7:1
0<
Source B N7:17
0<
Dest N7:1
0<

0003

SUB CONDITION

B3:1
5

PARSED INPUT STRING

ASR
ASCII String Compare
Source A ST9:5
Source B ST10:1

P#: 456 COUNT

SUB
Subtract
Source A N7:1
0<
Source B N7:17
0<
Dest N7:1
0<

0004

ADD CONDITION

B3:1
4

PARSED INPUT STRING

ASR
ASCII String Compare
Source A ST9:5
Source B ST10:2

P#: 789 COUNT

ADD
Add
Source A N7:2
0<
Source B N7:17
0<
Dest N7:2
0<

0005

SUB CONDITION

B3:1
5

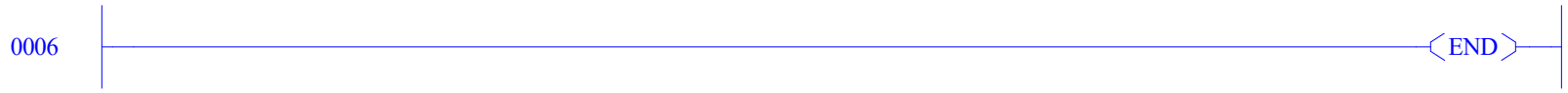
PARSED INPUT STRING

ASR
ASCII String Compare
Source A ST9:5
Source B ST10:2

P#: 789 COUNT

SUB
Subtract
Source A N7:2
0<
Source B N7:17
0<
Dest N7:2
0<

LAD 13 - ADD_SUB - ADD AND SUBTRACT LOGIC --- 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

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

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

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

Chan 0

Processor Mode S:1/0- S:1/4 = Remote Program Mode
Node Address S:15 (low byte) = 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
Outgoing Msg Cmd Pending S:33/2 = 0

Debug

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

Errors

Fault Override At Power Up S:1/8 = 0
Startup Protection Fault S:1/9 = 0
Major Error Halt S:1/13 = 0
Overflow Trap S:5/0 = 0
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
Fault Routine S:29 = 0
Major Error S:6 = 0h
Error Description:

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

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

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	
B3:2	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	.01 sec	0	0		

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		

Data File N7 (dec) -- INTEGER

Offset	0	1	2	3	4	5	6	7	8	9
N7:0	0	0	0	0	0	0	0	0	0	0
N7:10	0	0	0	0	0	0	0	0	0	0
N7:20	0	0	0	0	0	0	0	0	0	0
N7:30	0	0	0	0	0	0				

Data File F8 -- FLOAT

Offset	0	1	2	3	4
F8:0	0				

Data File ST9 -- BARCODE -- BARCODE READER INPUT STRING

Offset	LEN	String Text (Symbol)	Description
ST9:0	0		BARCODE
ST9:1	2	""	STORED
ST9:2	0		SPECIAL
ST9:3	1	-	SPECIAL
ST9:4	1	:	SPECIAL
ST9:5	0		PARSED
ST9:6	0		PARSED
ST9:7	0		PARSED
ST9:8	0		ERROR O

Data File ST10 -- PT NUMBERS -- PART NUMBERS

Offset	LEN	String Text	(Symbol)	Description
ST10:0	3	123		(P123)
ST10:1	3	456		P#:456
ST10:2	3	789		P#:789

Data File ST11 -- ERRORCODES -- STRING LOCATING MATH

Offset	LEN	String Text (Symbol)	Description
ST11:0	9	GOOD SCAN	
ST11:1	40	ERROR: PART NUMBER DOES NOT EXIST	(11-1)
ST11:2	48	ERROR: CANNOT WITHDRAW NEGATIVE INVENTORY	(11-2)
ST11:3	0		
ST11:4	0		