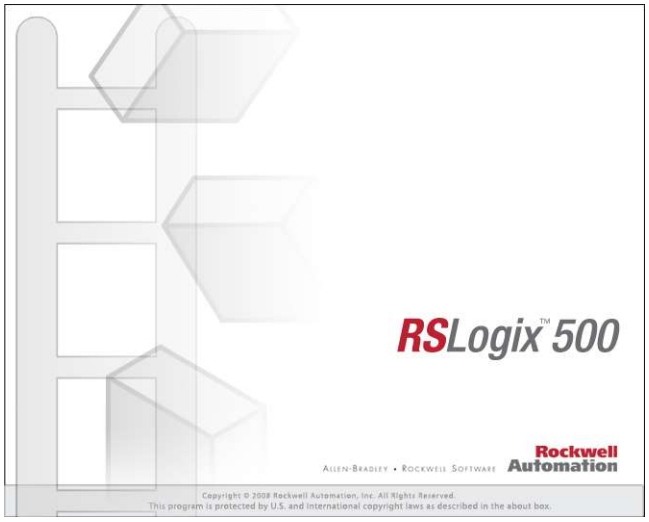
# RSLogix Micro Project Report



Processor Information

Processor Type: Bul.1763 MicroLogix 1100 Series B

Processor Name: UNTITLED

Total Memory Used: *

Total Memory Left: *

Program Files: 3

Data Files: 9

Program ID: 0

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 |
| | 2 | LADDER | 11 | No | 501 |

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 | 1 | 1 | B3:0 |
| 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 | 1 | 1 | N7:0 |
| FLOAT | 8 | F | Global | No | 2 | 1 | F8:0 |

e ==========
e First-pass initialization
e ==========
e
e Details are TBD; for now:
e - Set global position to -1 (unknown)
e - Unlatch GLOBAL_ON_STATION
e - Until position is known:
e  - Perhaps some of the other logic here should be disabled
e  - Perhaps only manual operation should be allowed, to find a position
e  - Perhaps a home action should be executed
e
e First Pass
e S:1
0000 e 15
e MOV
e Move
e Source -1
e ?
e Dest GLOBAL_POSITION
e ?
e GLOBAL_ON_STATION
e (U)
e
e ==========
e Buffer inputs
e ==========
e
e Clear STATION_INT
e Buffer station sensor discrete inputs into low four bits of STATION_INT
e Buffer reverse and foward bits, indication whether cart is moving in either direction
e Inputs for over-travel limits are not yet input here
e - But those could be used as part of a home/find algorithm for cold startup from an unknown state
e
e MOV
0001 e Move
e Source 0
e ?
e Dest STATION_INT
e ?
e INP_AT_STATION_BIT AT_STATION_BIT
e INP_PARITY_BIT PARITY_BIT
e INP_ONE_BIT ONE_BIT
e INP_TWO_BIT TWO_BIT
e INP_REV_BIT REV_BIT
e INP_FWD_BIT FWD_BIT
e

==========
At-station check
==========

Valid Station: TWO_BIT | ONE_BIT | PARITY_BIT | AT_STATION_BIT = STATION_INT; STATION_INT&12 (12 = binary 1100)

N.B. those four bits are the low bits of INTeger STATION_INT

S: T|O|P|A
1: 0|0|1|1 = 3; 0
2: 0|1|0|1 = 5; 4
3: 1|0|0|1 = 9; 8
4: 1|1|1|1 = 15; 12

0002

EQU
Equal
Source A STATION_INT
?
Source B 3
?

EQU
Equal
Source A STATION_INT
?
Source B 5
?

EQU
Equal
Source A STATION_INT
?
Source B 9
?

EQU
Equal
Source A STATION_INT
?
Source B 15
?

AT_STATION_BIT

AND
Bitwise AND
Source A STATION_INT
?
Source B 12
?
Dest AT_POSITION
?

==========
Housekeeping
==========

Odd parity check for three bits: TWO_BIT; ONE_BIT; PARITY_BIT.
- AT_STATION_BIT is excluded from parity check
Save last scan position
Assign moving bit if cart is moving in a reverse or forward direction

0003

AT_STATION_BIT AT_STATION

PARITY_ERROR

0004

MOV
Move
Source POSITION
?
Dest LAST_SCAN_POSITION
?

0005

REV_BIT

FWD_BIT

MOVING_BIT

==========

Detect station entry

==========

N.B. This approach assumes the proximity sensors extend along a sufficient length of the cart's path to allow the cart to
- Continue moving for 200ms+ to filter out spurious signals
- Stop while still on the sensor i.e. while still detecting an at-station state

Run timer for scans where
- Cart is moving
- Cart is not already on a station as indicated by GLOBAL_ON_STATION
- Cart is at a station as indicated by per-scan AT_STATION, from input bits

ENTRY_TON ensures non-momentary transition
Entering a station is detected as expiry of ENTRY_TON
- ENTRY_TON.DN will be a one-shot i.e. on for one scan
- Assign global position
- Latch GLOBAL_ON_STATION

0006

MOVING_BIT GLOBAL_ON_STATION AT_STATION ENTRY_TON.DN

TON
Timer On Delay
Timer ENTRY_TON
Time Base 0.001
Preset 200
Accum 0
EN
DN

0007

ENTRY_TON.DN

GLOBAL_ON_STATION (L)

MOV
Move
Source AT_POSITION
?
Dest GLOBAL_POSITION
?

e ==========
e Detect station exit
e ==========
e
e - Run timer for scans where
e  - Cart is moving
e  - Cart is already on a station as indicated by GLOBAL_ON_STATION
e  - Cart is not at a station as indicated by per-scan AT_STATION, from input bits
e - EXIT_TON ensures non-momentary transition
e - Exiting a station is detected as expiry of EXIT_TON
e  - EXIT_TON.DN will be a one-shot
e  - Decrement or increment global position
e  - Unlatch GLOBAL_ON_STATION

0008 e MOVING_BIT GLOBAL_ON_STATION AT_STATION EXIT_TON.DN

TON
Timer On Delay
Timer EXIT_TON
Time Base 1.0
Preset 0
Accum 0
EN
DN

0009 e EXIT_TON.DN REV_BIT

SUB
Subtract
Source A GLOBAL_POSITION
?
Source B 1
?
Dest GLOBAL_POSITION
?

FWD_BIT

ADD
Add
Source A GLOBAL_POSITION
?
Source B 1
?
Dest GLOBAL_POSITION
?

GLOBAL_ON_STATION
U

0010 END

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

**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 | |

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 | | | | | | | | | |

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 |
|---|---|---|---|---|---|---|
| | INP_AT_STATION_BIT | Global | | | | |
| | GLOBAL_POSITION | Global | | | | |
| | AT_STATION | Global | | | | |
| | ENTRY_TON | Global | | | | |
| | POSITION | Global | | | | |
| | ON_STATION | Global | | | | |
| | MOVING_BIT | Global | | | | |
| | REV_BIT | Global | | | | |
| | LAST_SCAN_POSITION | Global | | | | |
| | OLD_POSITION | Global | | | | |
| | TWO_BIT | Global | | | | |
| | PARITY_ERROR | Global | | | | |
| | STATION_INT | Global | | | | |
| | FWD_BIT | Global | | | | |
| | INP_FWD_BIT | Global | | | | |
| | AT_TWO_BIT | Global | | | | |
| | AT_STATION_BIT | Global | | | | |
| 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 | | | |
| 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 | | | |

Address/Symbol Database

| Address | Symbol | Scope | Description | Sym Group | Dev. Code | ABV |
|---|---|---|---|---|---|---|
| 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 | | | |
| S:85 | | | DH+ Active Nodes | | | |
| S:86 | | | DH+ Active Nodes | | | |

Instruction Comment Database

| Address | Instruction | Description |
|---|---|---|

Symbol Group Database

| Group_Name | Description |
| --- | --- |