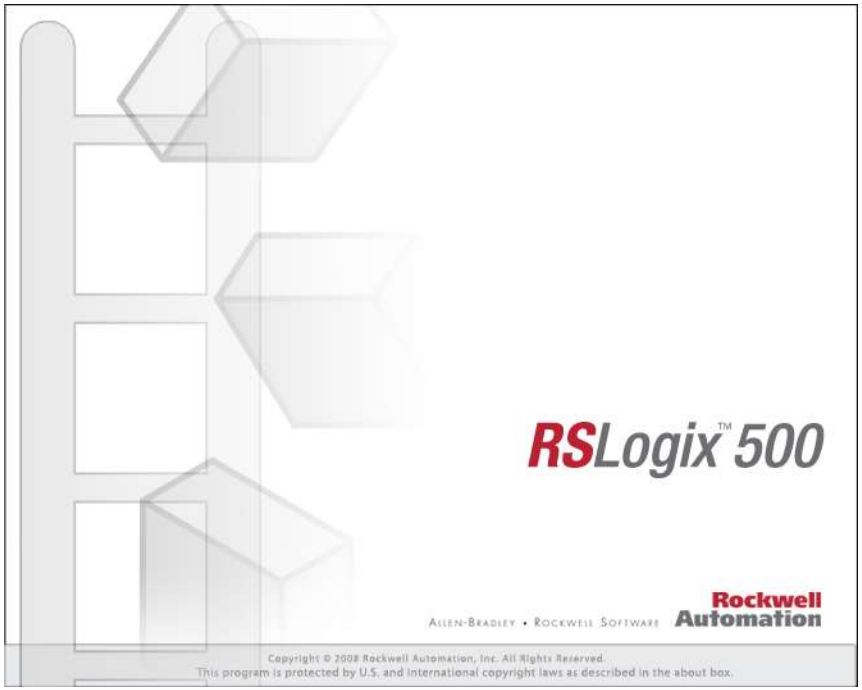
RSLogix Micro Project Report



Processor Information

Processor Type: Bul.1763 MicroLogix 1100 Series B

Processor Name: UNTITLED

Total Memory Used: 1462 Instruction Words Used - 1866 Data Table Words Used

Total Memory Left: 5194 Instruction Words Left

Program Files: 10

Data Files: 16

Program ID: 8707

I/O Configuration

0	Bul.1763	MicroLogix 1100 Series B
1		
2		
3		
4		

Channel Configuration

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

   Baud: 19200
   Parity: NONE
   Control Line : No Handshaking
   InterCharacter Timeout(x1 ms): 0
   Pre Transmit Delay(x1 ms): 0

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: 00:0F:73:01:72:04
   IP Address: 192.168.1.112
   Subnet Mask: 255.255.255.0
   Gateway Address: 192.168.1.1
   Msg Connection Timeout (x 1mS): 15000
   Msg Reply Timeout (x mS): 3000
   Inactivity Timeout (x Min): 30
   Bootp Enable: No
   Dhcp Enable Yes
   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	3	No	96
LOADCELLIN	4	LADDER	5	No	96
TRAINING	5	LADDER	8	No	207
ADD_IRANK6	251	LADDER	7	No	486
CALC_PEAKS	252	LADDER	6	No	191
RNK6NEWVAL	253	LADDER	6	No	243
RNK6BUBBLE	254	LADDER	6	No	316
RESETRANK6	255	LADDER	5	No	229

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	6	2	T4:1
COUNTER	5	C	Global	No	6	2	C5:1
CONTROL	6	R	Global	No	3	1	R6:0
INTEGER	7	N	Global	No	10	10	N7:9
FLOAT	8	F	Global	No	2	1	F8:0
RNK6FLOATS	249	F	Global	No	512	256	F249:255
RNK6_INTS	250	N	Global	No	256	256	N250:255
RNK6COUNTS	251	N	Global	No	7	7	N251:6
RNK6BINS	252	N	Global	No	7	7	N252:6
COUNT_I	253	N	Global	No	256	256	N253:255
RANK6_I	254	N	Global	No	256	256	N254:255
SUM_I	255	F	Global	No	512	256	F255:255

Load cell control - cf. https://www.plctalk.net/qanda/showthread.php?t=133372

Call training routine, which will usually return immediately

TRAINING

0000

JSR
Jump To Subroutine
SBR File Number U:5

When training is inactive, continue getting load cell data every 100ms*
1) If a new load cell value is available, start a 100ms timer
1.1) When that timer expires, latch a 1 into SEND_LOAD_CELL_DATUM to trigger the next load cell value
2) Call routine LOADCELLIN
3) Copy load cell data to itself so it will be displayed here
* This ensures external source of data will exhaust its data and reset EMULATE_LOADCELLDATA

0001

TRAINING_IS_INACTIVE
B3:0
5

SEND_LOAD_CELL_DATUM
B3:0
0

LOAD_CELL_SAMPLING2
TON
Timer On Delay
Timer T4:1
Time Base 0.001
Preset 100<
Accum 54<
EN
DN

LOAD_CELL_SAMPLING2/DN
T4:1
DN

SEND_LOAD_CELL_DATUM
B3:0
L
0

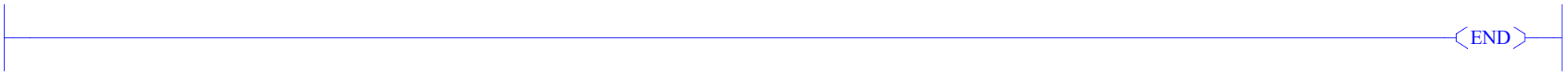
LOAD_CELL_SAMPLING2
T4:1
RES

READ_LOAD_CELL_DATA
JSR
Jump To Subroutine
SBR File Number U:4

LOAD_CELL_INPUT
MOV
Move
Source F8:0
0.0<
Dest F8:0
0.0<

LAD 2 - MAIN --- Total Rungs in File = 3

0002



Notional input map routine

1) scale the input load cell data from an analog input card channel when requested i.e.when SEND_LOAD_CELL_DATUM becomes 1, and
2) indicate that value is ready by unlatching SEND_LOAD_CELL_DATUM to 0
3) Also implement logic to allow usiing emulated data from an external source i.e. the Python script [emulate_load_cell.py]
3.1) Where the external source will
3.1.1) BOTH watch for SEND_LOAD_CELL_DATUM becoming 1,
3.1.2) AND control the unlatching of SEND_LOAD_CELL_DATUM to 0

==========

If SEND_LOAD_CELL_DATA is 0 i.e. not 1, then return and do nothing

0000

SEND_LOAD_CELL_DATUM
B3:0
0

RET
Return

If execution got to here, then the process is requesting the next load cell datum (SEND_LOAD_CELL_DATUM is 1)
- If the data are not being emulated from an external source, then copy the raw data from the analog input channel into the raw data buffer, LOAD_CELL_INPUT
- If the data are being emulated from an external source, then that source will write a value the raw data buffer directly before unlatching SEND_LOAD_CELL_DATUM

0001

EMULATE_LOADCELLDATA
B3:0
3

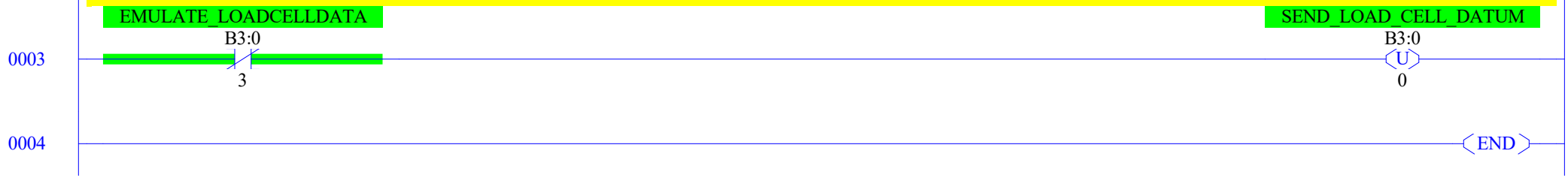
#LOAD_CELL_RAW_INPUT
CPW
Copy Word
Source #I:0.0
Dest #N7:1
Length 1

Scale the raw input into float LOAD_CELL_INPUT

0002

LOAD_CELL_INPUT
SCP
Scale w/Parameters
Input N7:1
0<
Input Min. 0.0
0.0<
Input Max. 4095.0
4095.0<
Scaled Min. 0.0
0.0<
Scaled Max. 1000.0
1000.0<
Output F8:0
0.0<

If the data are not being emulated from an external source, then unlatch SEND_LOAD_CELL_DATUM to 0
If the data are being emulated from an external source, then that external source is responsible for unlatching SEND_LOAD_CELL_DATA
N.B. the falling edge of SEND_LOAD_CELL_DATA will indicate to the calling routine that the new value is ready



Training routine - cf. https://www.plctalk.net/qanda/showthread.php?t=133372

Train PLC to sample load cell values and find the mean of the two most steady values using
a histogram of the values sampled

Inputs and Outputs
- RESET_TRAINING
  - Discrete momentary (push button?). or controlled by external data emulator (emulate_load_cell.py)
  - When pressed, initializes training values
  - When released (falling edge), starts a training rung
- LOAD_CELL_INPUT
  - Analog float value that is loaded from load cell in response to a rising edge of Boolean SEND_LOAD_CELL_DATUM
- SEND_LOAD_CELL_DATUM (both output-ish and input-ish)
  - Output: written to as a 1 by this routine to indicate 100ms have expired and it is time for the next load cell value
  - Input: written to as a 0 by another entity to after putting a new value into LOAD_CELL_INPUT
    - This falling edge indicates a new LOAD_CELL_INPUT is ready
    - The other entity could be an I/O mapping routine, or the Python script [emulate_load_cell.py]

First rung: respond to request to cancel training

0000

CANCEL_TRAINING
B3:0
4

First Pass
S:1
15

RESET_TRAINING
B3:0
U
1

TRAINING_IS_INACTIVE
B3:0
L
5

0001

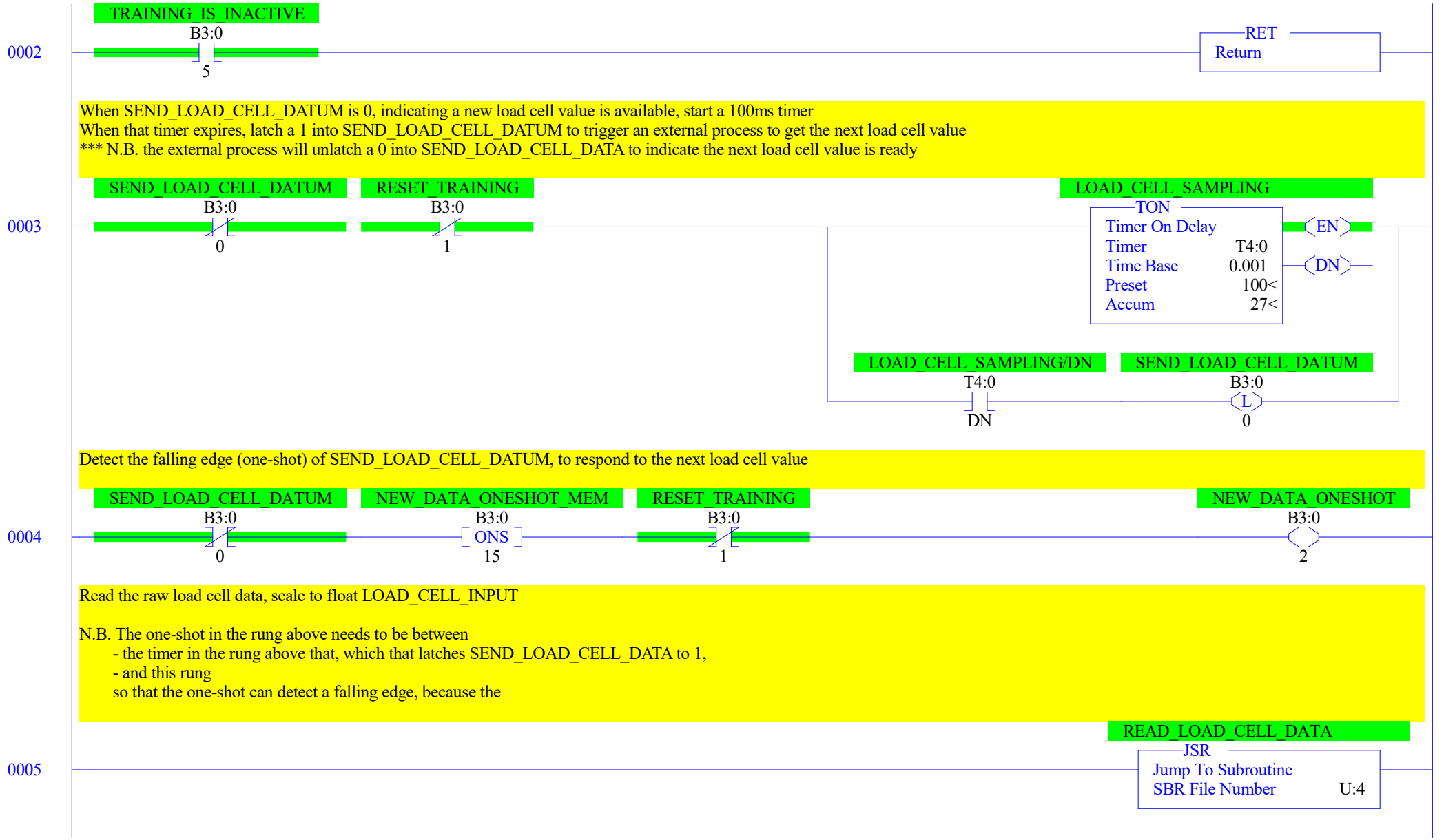
RESET_TRAINING
B3:0
1

RESET_RANK6_ARRAYS
JSR
Jump To Subroutine
SBR File Number U:255

TOTAL_COUNT
C5:1
RES

TRAINING_IS_INACTIVE
B3:0
U
5

RET
Return


TRAINING_IS_INACTIVE
B3:0
5
0002
RET
Return
When SEND_LOAD_CELL_DATUM is 0, indicating a new load cell value is available, start a 100ms timer
When that timer expires, latch a 1 into SEND_LOAD_CELL_DATUM to trigger an external process to get the next load cell value
*** N.B. the external process will unlatch a 0 into SEND_LOAD_CELL_DATA to indicate the next load cell value is ready
SEND_LOAD_CELL_DATUM
B3:0
0
RESET_TRAINING
B3:0
1
0003
LOAD_CELL_SAMPLING
TON
Timer On Delay
Timer T4:0
Time Base 0.001
Preset 100<
Accum 27<
EN
DN
LOAD_CELL_SAMPLING/DN
T4:0
DN
SEND_LOAD_CELL_DATUM
B3:0
L
0
Detect the falling edge (one-shot) of SEND_LOAD_CELL_DATUM, to respond to the next load cell value
SEND_LOAD_CELL_DATUM
B3:0
0
NEW_DATA_ONESHOT_MEM
B3:0
ONS
15
RESET_TRAINING
B3:0
1
0004
NEW_DATA_ONESHOT
B3:0
2
Read the raw load cell data, scale to float LOAD_CELL_INPUT
N.B. The one-shot in the rung above needs to be between
- the timer in the rung above that, which that latches SEND_LOAD_CELL_DATA to 1,
- and this rung
so that the one-shot can detect a falling edge, because the
READ_LOAD_CELL_DATA
JSR
Jump To Subroutine
SBR File Number U:4
0005

On any scan when a new load cell value is available (see one-shot on previous rung)
- Call the Rank6 top-level routine
  - Inserts the new value into its bin in the histogram (Data File COUNT_I)
  - Adds the new value to the sum for its bin (Data File SUM_I)
  - Calls the Rank6 rountineetermine the six bins with the highest count values
  - Calculate one or two means for the two highest peak of those six bins
- Count the total number of load cell values used

0006

NEW_DATA_ONESHOT
B3:0
2

RANK6_ADD_NEW_VALUE
JSR
Jump To Subroutine
SBR File Number U:253

TOTAL_COUNT
CTU
Count Up
Counter C5:1
Preset 100<
Accum 1873<
CU
DN

0007

END

Test if a bin is at or near one of the two count peaks of the binned data

If the bin is at or near one of the peaks, add the bin's data to the data for that peak

==========

Return and do nothing if the input rank value is invalid

PEAKS_IRANK6

0000

LIM
Limit Test
Low Lim 7
7<
Test N250:9
0<
High Lim 0
0<

RET
Return

Convert the rank to the number of the bin-to-test; return and do nothing else if the bin-to-test is invalid

PEAKS_IBIN

0001

MOV
Move
Source N252:[N250:9]
70<
Dest N250:10
38<

PEAKS_IBIN

LIM
Limit Test
Low Lim 256
256<
Test N250:10
38<
High Lim -1
-1<

RET
Return

If the first peak has not yet been determined, then
- Set the first peak's low and high limits equal to the bin-to-test, so the bin will initialize the first peak
- Clear all of the first and second peaks' data (values' sums; counts; means)

0002

1ST_PEAK_LO_LIMIT

LES
Less Than (A<B)
Source A N250:5
66<
Source B 0
0<

#1ST_PEAK_LO_LIMIT

FLL
Fill File
Source N250:10
Dest #N250:5
Length 2

#1ST_PEAK_VALUES_SUM

FLL
Fill File
Source 0.0
Dest #F249:0
Length 6

If the bin-to-test is in the first peak's [lo_limit:hi_limit] range, then add the bin's data to the first peak:
1) If the bin is equal to the low limit, then decrement the low limit by 1 bin to catch the next lower bin, if it is tested later
2) If the bin is equal to the high limit, then increment the high limit by 1 bin to catch the next higher bin, if it is tested later
3) Add the sum of the values in the bin-to-test to the first peak's values' sum
4) Add the count of the values in the bin-to-test to the first peak's counts
5) Return and do nothing else in this routine, because the bin-to-test is in the first peak, so it cannot be in the second peak

0003

PEAKS_IBIN

LIM
Limit Test
Low Lim N250:5 66<
Test N250:10 38<
High Lim N250:6 70<

PEAKS_IBIN

EQU
Equal
Source A N250:10 38<
Source B N250:5 66<

1ST_PEAK_LO_LIMIT

SUB
Subtract
Source A N250:5 66<
Source B 1 1<
Dest N250:5 66<

PEAKS_IBIN

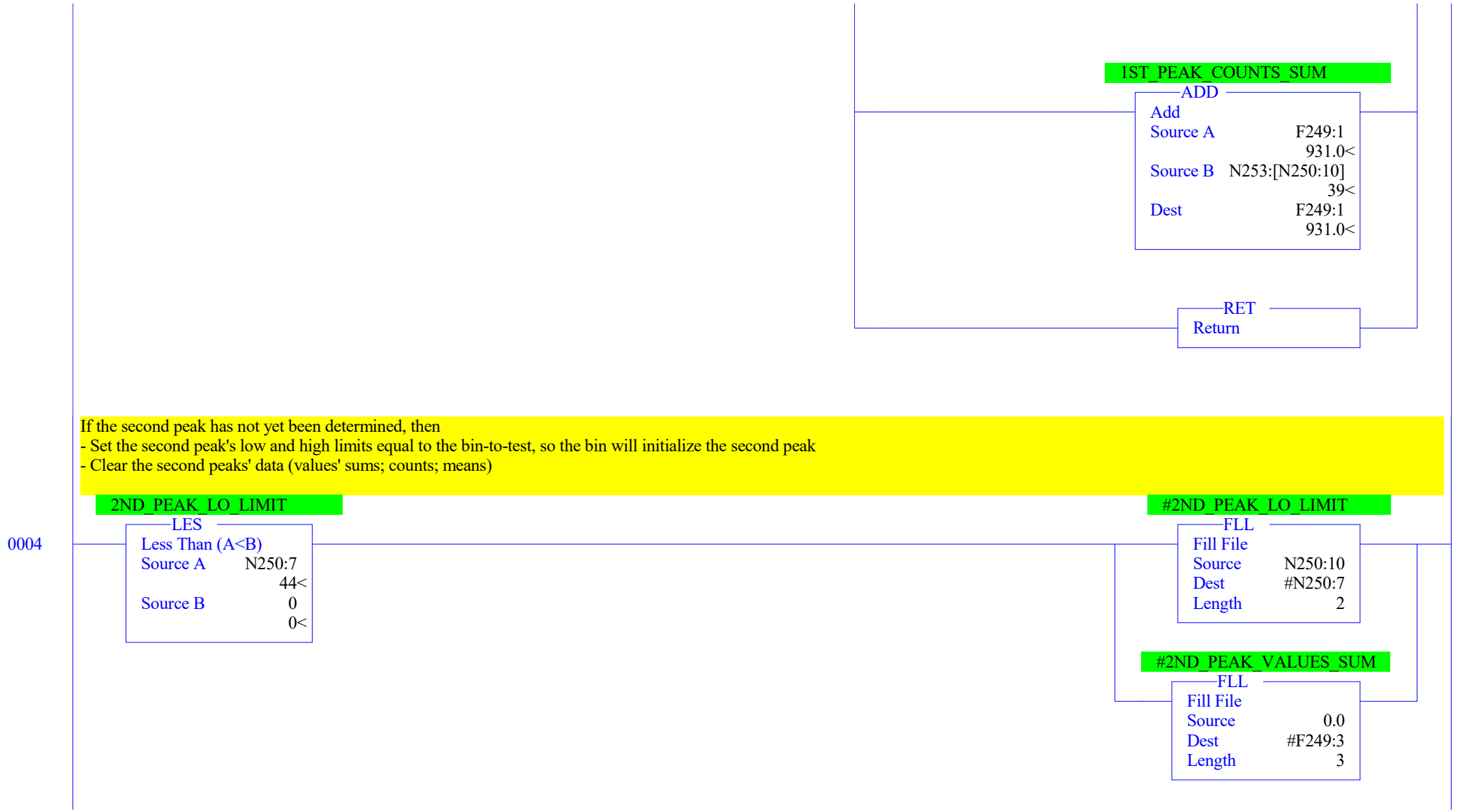
EQU
Equal
Source A N250:10 38<
Source B N250:6 70<

1ST_PEAK_HI_LIMIT

ADD
Add
Source A N250:6 70<
Source B 1 1<
Dest N250:6 70<

1ST_PEAK_VALUES_SUM

ADD
Add
Source A F249:0 252297.8<
Source B F255:[N250:10] 5978.022<
Dest F249:0 252297.8<


1ST_PEAK_COUNTS_SUM
ADD
Add
Source A F249:1 931.0<
Source B N253:[N250:10] 39<
Dest F249:1 931.0<
RET
Return
If the second peak has not yet been determined, then
- Set the second peak's low and high limits equal to the bin-to-test, so the bin will initialize the second peak
- Clear the second peaks' data (values' sums; counts; means)
2ND_PEAK_LO_LIMIT
LES
Less Than (A<B)
Source A N250:7 44<
Source B 0 0<
0004
#2ND_PEAK_LO_LIMIT
FLL
Fill File
Source N250:10
Dest #N250:7
Length 2
#2ND_PEAK_VALUES_SUM
FLL
Fill File
Source 0.0
Dest #F249:3
Length 3

If the bin-to-test is in the second peak's [lo_limit:hi_limit] range, then add the bin's data to the second peak:
1) If the bin is equal to the low limit, then decrement the low limit by 1 bin to catch the next lower bin, if it is tested later
2) If the bin is equal to the high limit, then increment the high limit by 1 bin to catch the next higher bin, if it is tested later
3) Add the sum of the values in the bin-to-test to the second peak's values' sum
4) Add the count of the values in the bin-to-test to the second peak's counts
5) The return is superfluous since this was originally the last rung in this routine, but this leaves open the possibility to add more peaks

0005

PEAKS_IBIN

LIM
Limit Test
Low Lim N250:7 44<
Test N250:10 38<
High Lim N250:8 47<

PEAKS_IBIN

EQU
Equal
Source A N250:10 38<
Source B N250:7 44<

2ND_PEAK_LO_LIMIT

SUB
Subtract
Source A N250:7 44<
Source B 1 1<
Dest N250:7 44<

PEAKS_IBIN

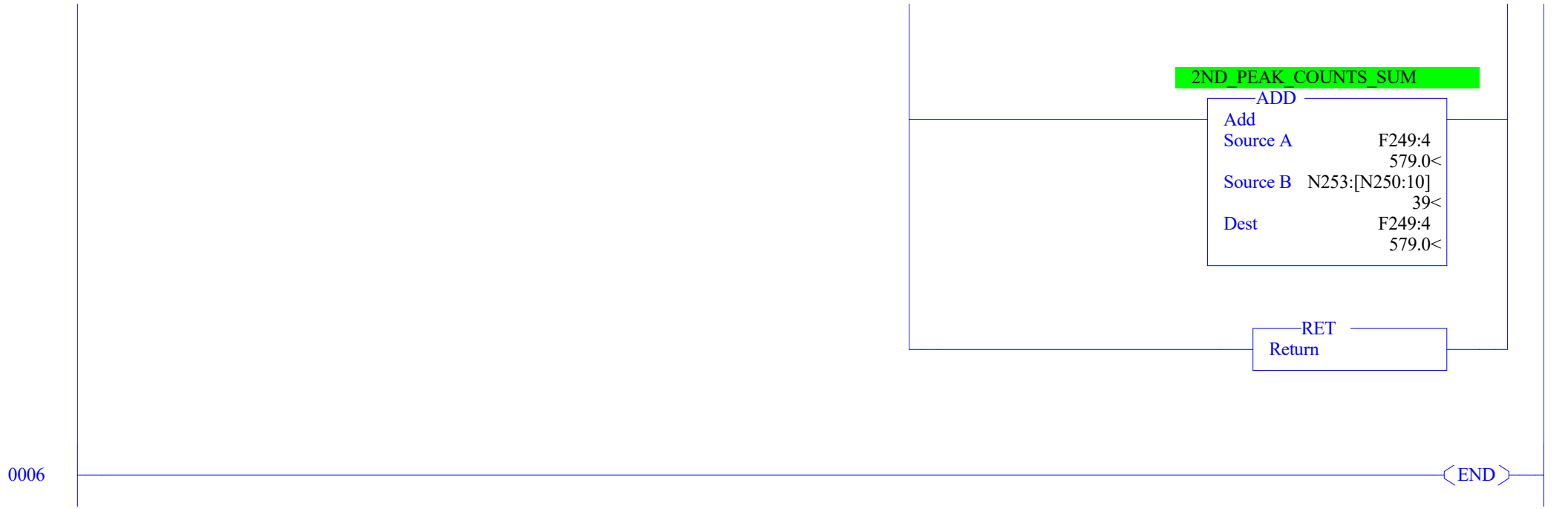
EQU
Equal
Source A N250:10 38<
Source B N250:8 47<

2ND_PEAK_HI_LIMIT

ADD
Add
Source A N250:8 47<
Source B 1 1<
Dest N250:8 47<

2ND_PEAK_VALUES_SUM

ADD
Add
Source A F249:3 106421.1<
Source B F255:[N250:10] 5978.022<
Dest F249:3 106421.1<


2ND_PEAK_COUNTS_SUM
ADD
Add
Source A F249:4
579.0<
Source B N253:[N250:10]
39<
Dest F249:4
579.0<
RET
Return
0006
END

Calculate two means at, or near the two highest-count peaks in the Ran6 bins

Initialize both peaks' bin limits to -1

0000

#1ST_PEAK_LO_LIMIT

FLL

Fill File	
Source	-1
Dest	#N250:5
Length	4

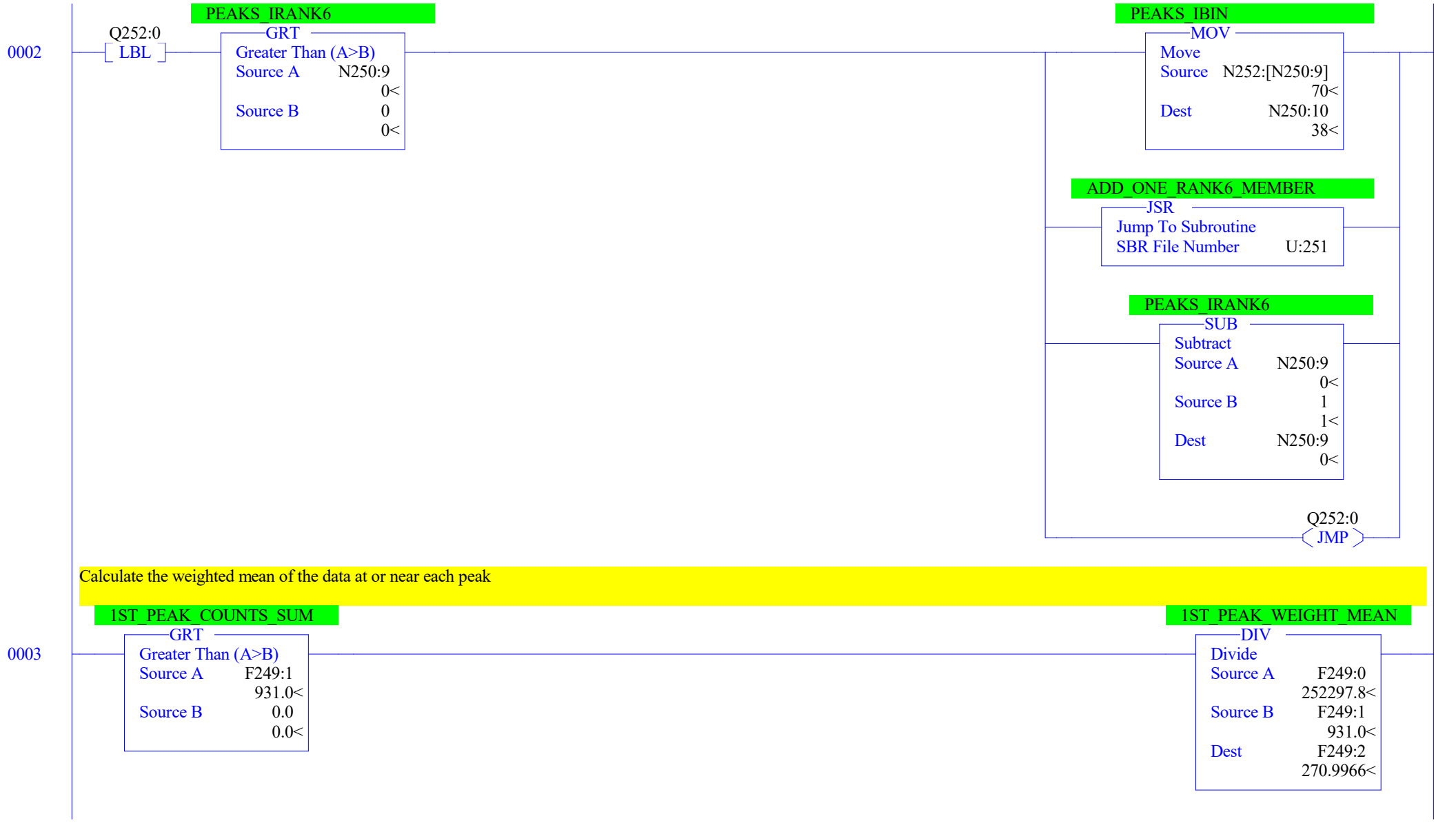
Loop through the Rank6 count-sorted arrays from the highest-count bin in element 6 to the lowest-count bin in element 1
- Call the ADD_ONE_RANK6_MEMBER to determine if each such bin is at, or near one of the two peaks of the histogram
N.B. Element 0 is ignored, as it is the nominal location for all bins that are not in the top six

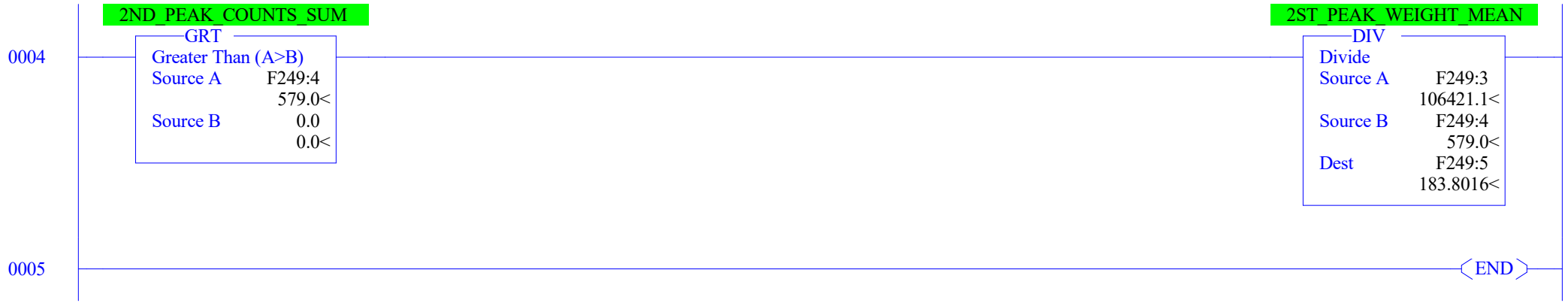
0001

PEAKS_IRANK6

MOV

Move	
Source	6
	6<
Dest	N250:9
	0<

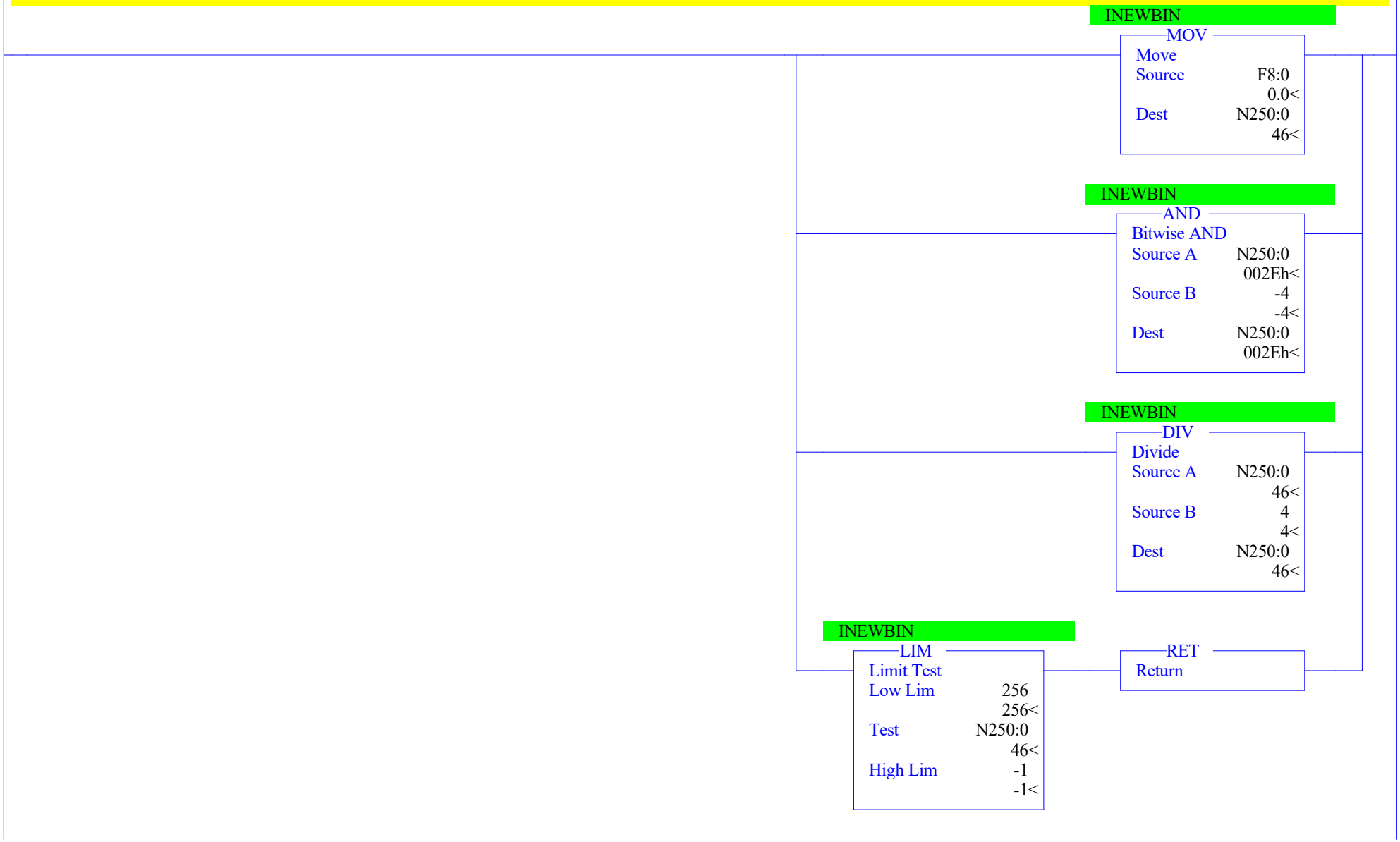

PEAKS_IRANK6
Q252:0
LBL
0002
GRT
Greater Than (A>B)
Source A N250:9
0<
Source B 0
0<
PEAKS_IBIN
MOV
Move
Source N252:[N250:9]
70<
Dest N250:10
38<
ADD_ONE_RANK6_MEMBER
JSR
Jump To Subroutine
SBR File Number U:251
PEAKS_IRANK6
SUB
Subtract
Source A N250:9
0<
Source B 1
1<
Dest N250:9
0<
Q252:0
JMP
Calculate the weighted mean of the data at or near each peak
1ST_PEAK_COUNTS_SUM
GRT
Greater Than (A>B)
Source A F249:1
931.0<
Source B 0.0
0.0<
0003
1ST_PEAK_WEIGHT_MEAN
DIV
Divide
Source A F249:0
252297.8<
Source B F249:1
931.0<
Dest F249:2
270.9966<


2ND_PEAK_COUNTS_SUM
GRT
Greater Than (A>B)
Source A F249:4
579.0<
Source B 0.0
0.0<
2ST_PEAK_WEIGHT_MEAN
DIV
Divide
Source A F249:3
106421.1<
Source B F249:4
579.0<
Dest F249:5
183.8016<
0004
0005
END

Add a new measured value into the Rank6 arrays

Convert the load cell newly-measured float value to an integer,
shift that integer two bits to the right to get INEWBIN,
which is the bin number, of bins 4 units wide, of the new value
- If that bin number is outside the range [0:255], then return and do nothing else in this routine

0000



Increment the count array element at that bin number by 1;
Increment the sum array element at that bin number by the new float value

0001

__COUNT_INEWBIN

ADD

Add	
Source A	N253:[N250:0] 345<
Source B	1 1<
Dest	N253:[N250:0] 345<

__SUM_IBINS

ADD

Add	
Source A	F255:[N250:0] 63675.77<
Source B	F8:0 0.0<
Dest	F255:[N250:0] 63675.77<

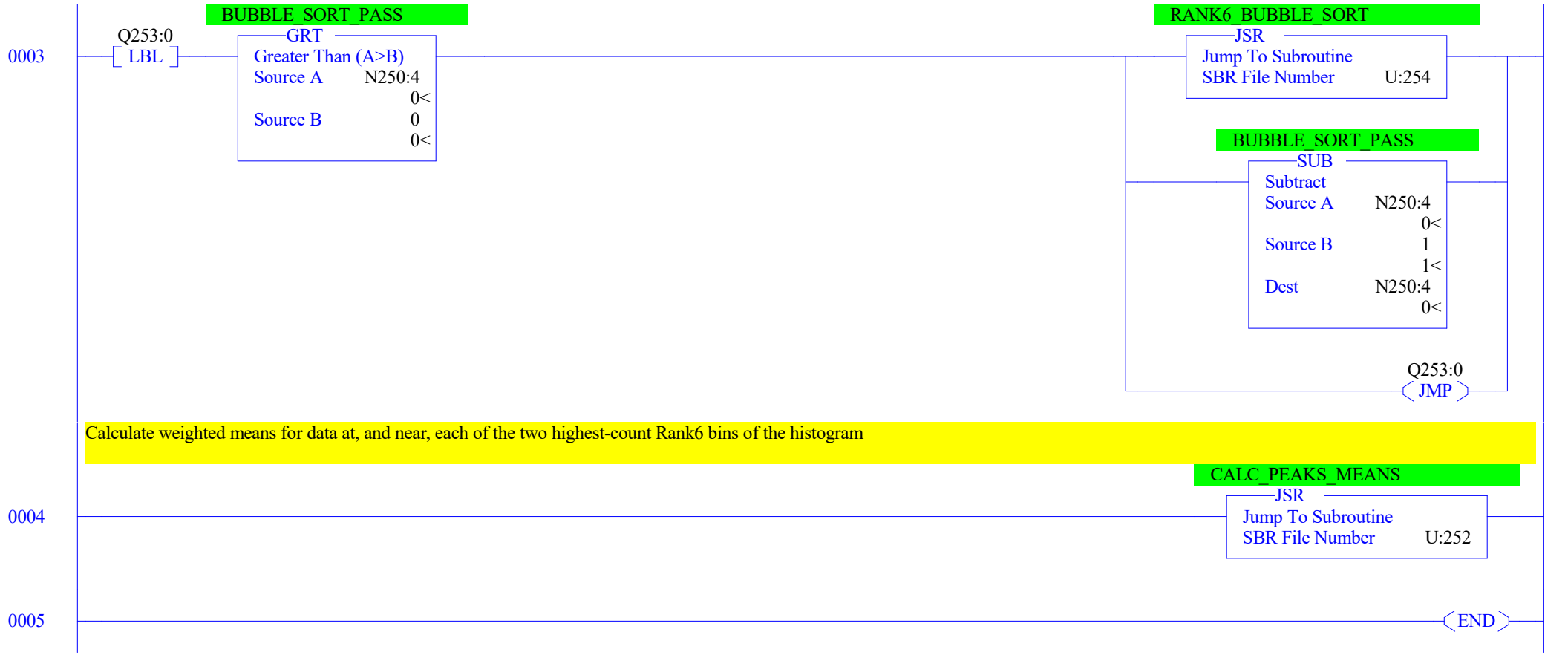
Run six passes of the Rank6 bubble sort routine to place
- the count of that bin in the correct element of the sorted-by-count six-element array RNK6COUNTS[1:6], and
- the bin number in the count-sorted element of RNK6BINS[1:6]

0002

BUBBLE_SORT_PASS

MOV

Move	
Source	6 6<
Dest	N250:4 0<


BUBBLE_SORT_PASS
Q253:0
LBL
0003
GRT
Greater Than (A>B)
Source A N250:4
0<
Source B 0
0<
RANK6_BUBBLE_SORT
JSR
Jump To Subroutine
SBR File Number U:254
BUBBLE_SORT_PASS
SUB
Subtract
Source A N250:4
0<
Source B 1
1<
Dest N250:4
0<
Q253:0
JMP
Calculate weighted means for data at, and near, each of the two highest-count Rank6 bins of the histogram
CALC_PEAKS_MEANS
0004
JSR
Jump To Subroutine
SBR File Number U:252
0005
END

Bubble sort of values with the six highest counts in the Rank6 arrays

Called once every time a new measurement value is read*, so the count of that values bin has incremented by 1
- It is assumed that all other bins have not changed, so the new bin is the only one that may need to moved within the count-sorted Rank6 arrays
- It is assumed that the new bin count has increased (by 1), so it will only bubble up in the Rank6 arrays
  - and for each rank into which it bubbles up, the previous at in that rank will drop down

* Falling edge of SEND_LOAD_CELL_DATUM

Get current rank of the new bin from the Rank6 bins array
Place the updated count of the new bin in the ranked position of that bin in the Rank6 counts array

0000

RANK6_OF_INEWBIN

MOV
Move
Source N254:[N250:0]
5<
Dest N250:1
5<

N251:[RANK6_OF_INEWBIN]

MOV
Move
Source N253:[N250:0]
345<
Dest N251:[N250:1]
345<

If the new bin is already at the top (i.e. at element 6) of the count-sorted ranking, return and do nothing else here,
because the count has just increased and it cannot bubble up past the top

0001

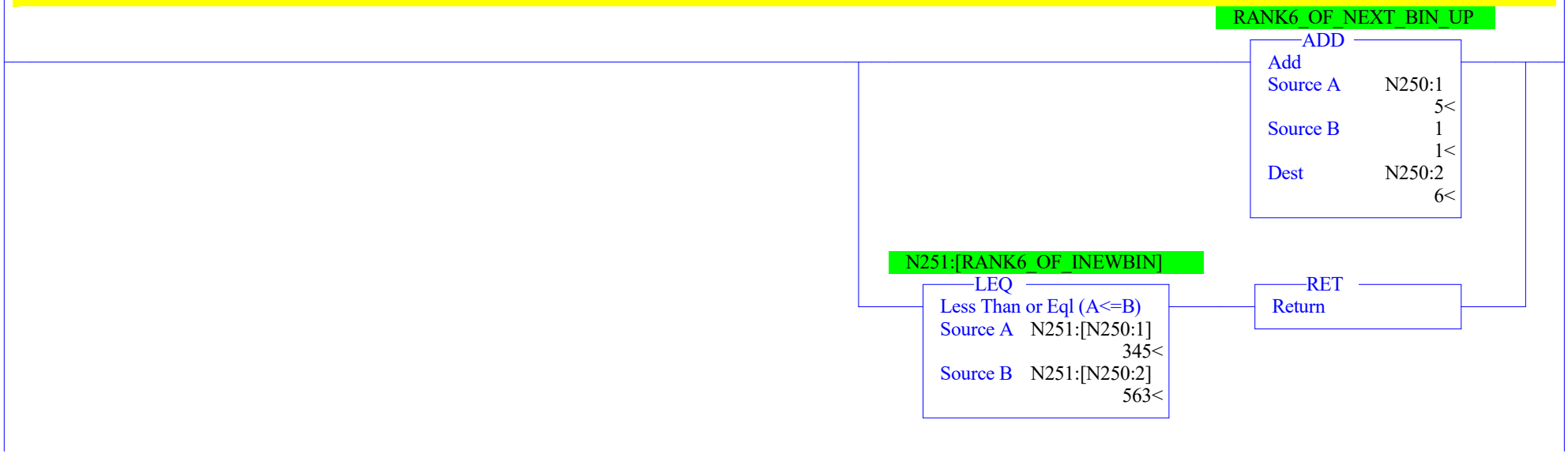
__RANK6_INEWBIN

GRT
Greater Than (A>B)
Source A N254:[N250:0]
5<
Source B 5
5<

RET
Return

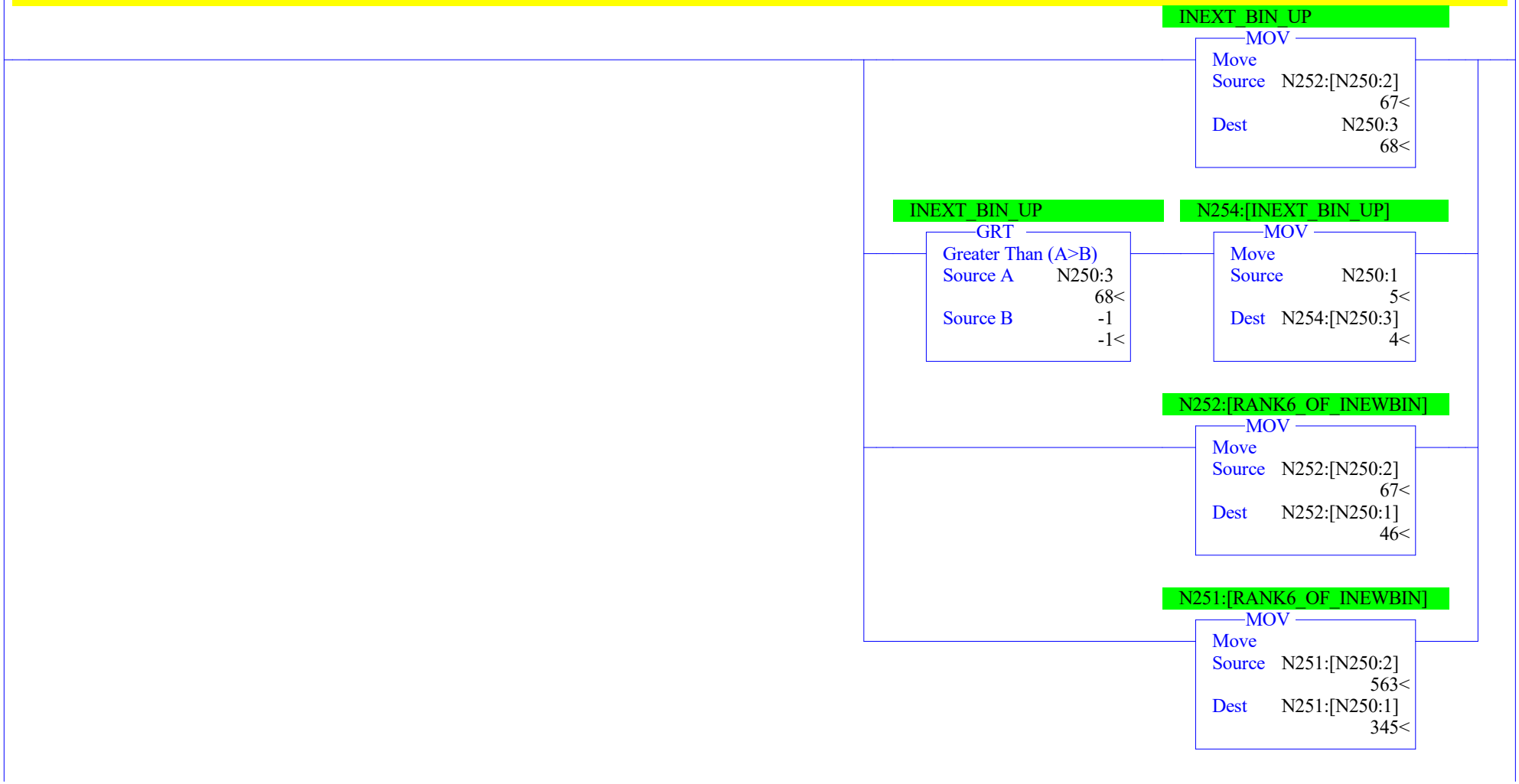
Calculate the next rank up from, i.e. one more than, the previous rank of the new bin
Return and do nothing if the count of the new bin is less than or equal to the count of that next bin up
- i.e. the new bin does not need to bubble up

0002



To here, the bins and counts of [the new bin] and [the next bin up] will swap positions in the Rank6 arrays:
- The next bin up will drop down one in the rankings, ...
 - Get the index of the next bin up from the Rank6 bins array
 - If that index is non-negative, then then move the new bin's current rank to the next bin up's rank in the RANK6_I array
 - Put the next bin up into its new ranked position in the Rank6 bins array
 - Put the next bin up's count into its new position in the Rank6 counts array

0003



- ... And the new bin will bubble up one in the rankings.
- MOVe next bin up's former rank to the new bin's rank in the RANK6_I array
- Put the new bin into its new ranked position, i.e. the previous position of the next bin up, in the Rank6 bins array
- Put the new bin's count into its new position in the Rank6 counts array

0004

RANK6_INEWBIN

MOV
Move
Source N250:26<
Dest N254:[N250:0]5<

N252:[RANK6_OF_NEXT_BIN_UP]

MOV
Move
Source N250:046<
Dest N252:[N250:2]67<

N251:[RANK6_OF_NEXT_BIN_UP]

MOV
Move
Source N253:[N250:0]345<
Dest N251:[N250:2]563<

0005

END

Reset summing, ranking, and counting arrays

0000

FLL
Fill File
Source 0.0
Dest #F255:0
Length 64

FLL
Fill File
Source 0.0
Dest #F255:64
Length 64

FLL
Fill File
Source 0.0
Dest #F255:128
Length 64

FLL
Fill File
Source 0.0
Dest #F255:192
Length 64

0001

FLL
Fill File
Source 0
Dest #N254:0
Length 128

FLL
Fill File
Source 0
Dest #N254:128
Length 128

0002

FLL
Fill File
Source 0
Dest #N253:0
Length 128

FLL
Fill File
Source 0
Dest #N253:128
Length 128

Rank6 bubble sort bins and counts arrays
- Initialize ranked bins arrays to non-existent bin -1 to indicate those ranks have no bins assigned to them yet
- Initial all of the the counts arrays to 0, so any bin with a positive count will bubble up through those 0 counts.

0003

#RANK6_BINS_ARRAY

FLL
Fill File
Source -1
Dest #N252:0
Length 7

#RANK6_COUNTS_ARRAY

FLL
Fill File
Source 0
Dest #N251:0
Length 7

0004

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	1	0	0	Bul.1763	MicroLogix 1100 Series B-Analog Inp 0
I:0.5	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	Bul.1763	MicroLogix 1100 Series B-Analog Inp 1

Main

Processor Mode S:1/0 - S:1/4 = Remote Run
On Power up Go To Run (Mode Behavior) S:1/12 = 0
First Pass S:1/15 = No
Free Running Clock S:4 = 0110-1110-0110-0101

Proc

OS Catalog Number S:57 = 1100
OS Series S:58 = B
OS FRS S:59 =
Processor Catalog Number S:60 =
Processor Series S:61 = A
Processor FRN S:62 =
User Program Type S:63 = 8108h
Compiler Revision Number S:64 =

Scan Times

Maximum (x10 ms) S:22 = 72
Watchdog (x10 ms) S:3 (high byte) = 10
Last 100 uSec Scan Time S:35 = 8
Scan Toggle Bit S:33/9 = 0

Math

Math Overflow Selected S:2/14 = 1
Overflow Trap S:5/0 = 0
Carry S:0/0 = 0
Overflow S:0/1 = 0
Zero Bit S:0/2 = 1
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 Run
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 = True

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 = 1

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	1	0	0	0	0	0	0	0	0	0	1	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	1	1	0	.001 sec	100	27	(LOAD CELL SAMPLING)
T4:1	1	1	0	.001 sec	100	54	(LOAD_CELL_SAMPLING2)

Data File C5 -- COUNTER

Offset	CU	CD	DN	OV	UN	UA	PRE	ACC	(Symbol) Description
C5:0	0	0	0	0	0	0	100	0	(STEADY COUNT)
C5:1	0	0	1	0	0	0	100	1873	(TOTAL_COUNT)

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	16	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

Data File F8 -- FLOAT

Offset	0	1	2	3	4
F8:0	0				

Data File F249 -- RNK6FLOATS

Offset	0	1	2	3	4
F249:0	252297.8	931	270.9966	106421.1	579
F249:5	183.8016	0	0	0	0
F249:10	0	0	0	0	0
F249:15	0	0	0	0	0
F249:20	0	0	0	0	0
F249:25	0	0	0	0	0
F249:30	0	0	0	0	0
F249:35	0	0	0	0	0
F249:40	0	0	0	0	0
F249:45	0	0	0	0	0
F249:50	0	0	0	0	0
F249:55	0	0	0	0	0
F249:60	0	0	0	0	0
F249:65	0	0	0	0	0
F249:70	0	0	0	0	0
F249:75	0	0	0	0	0
F249:80	0	0	0	0	0
F249:85	0	0	0	0	0
F249:90	0	0	0	0	0
F249:95	0	0	0	0	0
F249:100	0	0	0	0	0
F249:105	0	0	0	0	0
F249:110	0	0	0	0	0
F249:115	0	0	0	0	0
F249:120	0	0	0	0	0
F249:125	0	0	0	0	0
F249:130	0	0	0	0	0
F249:135	0	0	0	0	0
F249:140	0	0	0	0	0
F249:145	0	0	0	0	0
F249:150	0	0	0	0	0
F249:155	0	0	0	0	0
F249:160	0	0	0	0	0
F249:165	0	0	0	0	0
F249:170	0	0	0	0	0
F249:175	0	0	0	0	0
F249:180	0	0	0	0	0
F249:185	0	0	0	0	0
F249:190	0	0	0	0	0
F249:195	0	0	0	0	0
F249:200	0	0	0	0	0
F249:205	0	0	0	0	0
F249:210	0	0	0	0	0
F249:215	0	0	0	0	0
F249:220	0	0	0	0	0
F249:225	0	0	0	0	0
F249:230	0	0	0	0	0
F249:235	0	0	0	0	0
F249:240	0	0	0	0	0
F249:245	0	0	0	0	0

Data File F249 -- RNK6FLOATS

Offset	0	1	2	3	4
F249:250	0	0	0	0	0
F249:255	0				

Data File N250 (dec) -- RNK6_INTS

Offset	0	(Symbol) Description
N250:0	46	(INEWBIN)
N250:1	5	(RANK6_OF_INEWBIN)
N250:2	6	(RANK6_OF_NEXT_BIN_UP)
N250:3	68	(INEXT_BIN_UP)
N250:4	0	(BUBBLE_SORT_PASS)
N250:5	66	(1ST_PEAK_LO_LIMIT)
N250:6	70	(1ST_PEAK_HI_LIMIT)
N250:7	44	(2ND_PEAK_LO_LIMIT)
N250:8	47	(2ND_PEAK_HI_LIMIT)
N250:9	0	(PEAKS_IRANK6)
N250:10	38	(PEAKS_IBIN)
N250:11	0	
N250:12	0	
N250:13	0	
N250:14	0	
N250:15	0	
N250:16	0	
N250:17	0	
N250:18	0	
N250:19	0	
N250:20	0	
N250:21	0	
N250:22	0	
N250:23	0	
N250:24	0	
N250:25	0	
N250:26	0	
N250:27	0	
N250:28	0	
N250:29	0	
N250:30	0	
N250:31	0	
N250:32	0	
N250:33	0	
N250:34	0	
N250:35	0	
N250:36	0	
N250:37	0	
N250:38	0	
N250:39	0	
N250:40	0	
N250:41	0	
N250:42	0	
N250:43	0	
N250:44	0	
N250:45	0	
N250:46	0	
N250:47	0	
N250:48	0	
N250:49	0	

Data File N250 (dec) -- RNK6_INTS

Offset	0 (Symbol) Description
N250:50	0
N250:51	0
N250:52	0
N250:53	0
N250:54	0
N250:55	0
N250:56	0
N250:57	0
N250:58	0
N250:59	0
N250:60	0
N250:61	0
N250:62	0
N250:63	0
N250:64	0
N250:65	0
N250:66	0
N250:67	0
N250:68	0
N250:69	0
N250:70	0
N250:71	0
N250:72	0
N250:73	0
N250:74	0
N250:75	0
N250:76	0
N250:77	0
N250:78	0
N250:79	0
N250:80	0
N250:81	0
N250:82	0
N250:83	0
N250:84	0
N250:85	0
N250:86	0
N250:87	0
N250:88	0
N250:89	0
N250:90	0
N250:91	0
N250:92	0
N250:93	0
N250:94	0
N250:95	0
N250:96	0
N250:97	0
N250:98	0
N250:99	0

Data File N250 (dec) -- RNK6_INTS

Offset	0 (Symbol) Description
N250:100	0
N250:101	0
N250:102	0
N250:103	0
N250:104	0
N250:105	0
N250:106	0
N250:107	0
N250:108	0
N250:109	0
N250:110	0
N250:111	0
N250:112	0
N250:113	0
N250:114	0
N250:115	0
N250:116	0
N250:117	0
N250:118	0
N250:119	0
N250:120	0
N250:121	0
N250:122	0
N250:123	0
N250:124	0
N250:125	0
N250:126	0
N250:127	0
N250:128	0
N250:129	0
N250:130	0
N250:131	0
N250:132	0
N250:133	0
N250:134	0
N250:135	0
N250:136	0
N250:137	0
N250:138	0
N250:139	0
N250:140	0
N250:141	0
N250:142	0
N250:143	0
N250:144	0
N250:145	0
N250:146	0
N250:147	0
N250:148	0
N250:149	0

Data File N250 (dec) -- RNK6_INTS

Offset	0 (Symbol) Description
N250:150	0
N250:151	0
N250:152	0
N250:153	0
N250:154	0
N250:155	0
N250:156	0
N250:157	0
N250:158	0
N250:159	0
N250:160	0
N250:161	0
N250:162	0
N250:163	0
N250:164	0
N250:165	0
N250:166	0
N250:167	0
N250:168	0
N250:169	0
N250:170	0
N250:171	0
N250:172	0
N250:173	0
N250:174	0
N250:175	0
N250:176	0
N250:177	0
N250:178	0
N250:179	0
N250:180	0
N250:181	0
N250:182	0
N250:183	0
N250:184	0
N250:185	0
N250:186	0
N250:187	0
N250:188	0
N250:189	0
N250:190	0
N250:191	0
N250:192	0
N250:193	0
N250:194	0
N250:195	0
N250:196	0
N250:197	0
N250:198	0
N250:199	0

Data File N250 (dec) -- RNK6_INTS

Offset	0 (Symbol) Description
N250:200	0
N250:201	0
N250:202	0
N250:203	0
N250:204	0
N250:205	0
N250:206	0
N250:207	0
N250:208	0
N250:209	0
N250:210	0
N250:211	0
N250:212	0
N250:213	0
N250:214	0
N250:215	0
N250:216	0
N250:217	0
N250:218	0
N250:219	0
N250:220	0
N250:221	0
N250:222	0
N250:223	0
N250:224	0
N250:225	0
N250:226	0
N250:227	0
N250:228	0
N250:229	0
N250:230	0
N250:231	0
N250:232	0
N250:233	0
N250:234	0
N250:235	0
N250:236	0
N250:237	0
N250:238	0
N250:239	0
N250:240	0
N250:241	0
N250:242	0
N250:243	0
N250:244	0
N250:245	0
N250:246	0
N250:247	0
N250:248	0
N250:249	0

Data File N250 (dec) -- RNK6_INTS

Offset	0	(Symbol) Description
N250:250	0	
N250:251	0	
N250:252	0	
N250:253	0	
N250:254	0	
N250:255	0	

Data File N251 (dec) -- RNK6COUNTS

Offset	0	1	2	3	4	5	6	7	8	9
N251:0	19	39	39	234	329	345	563			

Data File N252 (dec) -- RNK6BINS

Offset	0	1	2	3	4	5	6	7	8	9
N252:0	70	38	69	45	68	46	67			

Data File N253 (dec) -- COUNT_I

Offset	0	1	2	3	4	5	6	7	8	9
N253:0	0	0	0	0	0	0	0	0	0	0
N253:10	0	0	0	0	0	0	0	0	0	0
N253:20	0	0	0	0	0	0	0	0	5	4
N253:30	7	6	9	23	18	10	4	12	39	9
N253:40	5	1	3	3	19	234	345	15	6	2
N253:50	4	2	7	5	4	4	3	3	2	1
N253:60	5	6	4	7	4	10	19	563	329	39
N253:70	34	4	0	1	2	1	2	0	3	4
N253:80	1	1	0	0	1	0	0	0	1	0
N253:90	1	1	0	1	0	0	1	0	0	1
N253:100	0	1	0	0	1	2	0	2	2	2
N253:110	1	2	0	0	0	0	0	0	0	0
N253:120	0	0	0	0	0	0	0	0	0	0
N253:130	0	0	0	0	0	0	0	0	0	0
N253:140	0	0	0	0	0	0	0	0	0	0
N253:150	0	0	0	0	0	0	0	0	0	0
N253:160	0	0	0	0	0	0	0	0	0	0
N253:170	0	0	0	0	0	0	0	0	0	0
N253:180	0	0	0	0	0	0	0	0	0	0
N253:190	0	0	0	0	0	0	0	0	0	0
N253:200	0	0	0	0	0	0	0	0	0	0
N253:210	0	0	0	0	0	0	0	0	0	0
N253:220	0	0	0	0	0	0	0	0	0	0
N253:230	0	0	0	0	0	0	0	0	0	0
N253:240	0	0	0	0	0	0	0	0	0	0
N253:250	0	0	0	0	0	0				

Data File N254 (dec) -- RANK6_I

Offset	0	1	2	3	4	5	6	7	8	9
N254:0	0	0	0	0	0	0	0	0	0	0
N254:10	0	0	0	0	0	0	0	0	0	0
N254:20	0	0	0	0	0	0	0	0	0	0
N254:30	0	0	0	0	0	0	0	0	1	0
N254:40	0	0	0	0	0	3	5	0	0	0
N254:50	0	0	0	0	0	0	0	0	0	0
N254:60	0	0	0	0	0	0	0	6	4	2
N254:70	0	0	0	0	0	0	0	0	0	0
N254:80	0	0	0	0	0	0	0	0	0	0
N254:90	0	0	0	0	0	0	0	0	0	0
N254:100	0	0	0	0	0	0	0	0	0	0
N254:110	0	0	0	0	0	0	0	0	0	0
N254:120	0	0	0	0	0	0	0	0	0	0
N254:130	0	0	0	0	0	0	0	0	0	0
N254:140	0	0	0	0	0	0	0	0	0	0
N254:150	0	0	0	0	0	0	0	0	0	0
N254:160	0	0	0	0	0	0	0	0	0	0
N254:170	0	0	0	0	0	0	0	0	0	0
N254:180	0	0	0	0	0	0	0	0	0	0
N254:190	0	0	0	0	0	0	0	0	0	0
N254:200	0	0	0	0	0	0	0	0	0	0
N254:210	0	0	0	0	0	0	0	0	0	0
N254:220	0	0	0	0	0	0	0	0	0	0
N254:230	0	0	0	0	0	0	0	0	0	0
N254:240	0	0	0	0	0	0	0	0	0	0
N254:250	0	0	0	0	0	0				

Data File F255 -- SUM_I

Offset	0	1	2	3	4
F255:0	0	0	0	0	0
F255:5	0	0	0	0	0
F255:10	0	0	0	0	0
F255:15	0	0	0	0	0
F255:20	0	0	0	0	0
F255:25	0	0	0	572.8938	468.8645
F255:30	849.0842	749.6947	1161.416	3073.26	2471.795
F255:35	1410.745	586.3248	1799.267	5978.022	1417.582
F255:40	803.4188	164.1026	506.2271	522.3444	3364.103
F255:45	42745.34	63675.77	2842.735	1157.753	394.1392
F255:50	803.663	409.5238	1466.178	1068.62	867.3993
F255:55	884.7375	676.1905	688.4005	468.8645	237.1184
F255:60	1205.861	1475.214	994.3834	1772.161	1028.083
F255:65	2613.187	5060.317	151760.3	89690.55	10846.88
F255:70	9528.692	1146.276	0	295.2381	594.3834
F255:75	300.6105	608.7912	0	938.7057	1269.841
F255:80	320.1465	325.0305	0	0	338.4615
F255:85	0	0	0	351.6483	0
F255:90	361.4164	364.3468	0	373.138	0
F255:95	0	386.0806	0	0	395.6044
F255:100	0	405.8608	0	0	417.3382
F255:105	843.7119	0	859.3407	867.6434	874.9695
F255:110	441.514	888.6447	0	0	0
F255:115	0	0	0	0	0
F255:120	0	0	0	0	0
F255:125	0	0	0	0	0
F255:130	0	0	0	0	0
F255:135	0	0	0	0	0
F255:140	0	0	0	0	0
F255:145	0	0	0	0	0
F255:150	0	0	0	0	0
F255:155	0	0	0	0	0
F255:160	0	0	0	0	0
F255:165	0	0	0	0	0
F255:170	0	0	0	0	0
F255:175	0	0	0	0	0
F255:180	0	0	0	0	0
F255:185	0	0	0	0	0
F255:190	0	0	0	0	0
F255:195	0	0	0	0	0
F255:200	0	0	0	0	0
F255:205	0	0	0	0	0
F255:210	0	0	0	0	0
F255:215	0	0	0	0	0
F255:220	0	0	0	0	0
F255:225	0	0	0	0	0
F255:230	0	0	0	0	0
F255:235	0	0	0	0	0
F255:240	0	0	0	0	0
F255:245	0	0	0	0	0

Data File F255 -- SUM_I

Offset	0	1	2	3	4
F255:250	0	0	0	0	0
F255:255	0				

Address/Symbol Database

Address	Symbol	Scope	Description	Sym Group	Dev. Code	ABV	BLW
B3:0/0	SEND_LOAD_CELL_DATUM	Global					
B3:0/1	RESET_TRAINING	Global					
B3:0/2	NEW_DATA_ONESHOT	Global					
B3:0/3	EMULATE_LOADCELLDATA	Global					
B3:0/4	CANCEL_TRAINING	Global					
B3:0/5	TRAINING_IS_INACTIVE	Global					
B3:0/6	TRAINING_FINISHED	Global					
B3:0/13	TRAINING_FINISH_ONSM	Global					
B3:0/14	RESET_FALLING_ONS_M	Global					
B3:0/15	NEW_DATA_ONESHOT_MEM	Global					
C5:0	STEADY_COUNT	Global					
C5:1	TOTAL_COUNT	Global					
F8:0	LOAD_CELL_INPUT	Global					
F8:1	FILTERED_DATA	Global					
F8:2	FILTER_PARAMETER	Global					
F8:3	TEMPORARY_FLOAT	Global					
F8:4	DATA_DIFFERENCE	Global					
F8:5	FILTERED_DATA_LOW	Global					
F8:6	FILTERED_DATA_HIGH	Global					
F8:7	FILTERED_DATA_THIRD	Global					
F249:0	1ST_PEAK_VALUES_SUM	Global					
F249:1	1ST_PEAK_COUNTS_SUM	Global					
F249:2	1ST_PEAK_WEIGHT_MEAN	Global					
F249:3	2ND_PEAK_VALUES_SUM	Global					
F249:4	2ND_PEAK_COUNTS_SUM	Global					
F249:5	2ST_PEAK_WEIGHT_MEAN	Global					
F255:[N250:0]	__SUM_IBINS	Global					
N7:0	PASS_NUMBER	Global					
N7:1	LOAD_CELL_RAW_INPUT	Global					
N250:0	INEWBIN	Global					
N250:1	RANK6_OF_INEWBIN	Global					
N250:2	RANK6_OF_NEXT_BIN_UP	Global					
N250:3	INEXT_BIN_UP	Global					
N250:4	BUBBLE_SORT_PASS	Global					
N250:5	1ST_PEAK_LO_LIMIT	Global					
N250:6	1ST_PEAK_HI_LIMIT	Global					
N250:7	2ND_PEAK_LO_LIMIT	Global					
N250:8	2ND_PEAK_HI_LIMIT	Global					
N250:9	PEAKS_IRANK6	Global					
N250:10	PEAKS_IBIN	Global					
N251:0	RANK6_COUNTS_ARRAY	Global					
N252:0	RANK6_BINS_ARRAY	Global					
N253:[N250:0]	__COUNT_INEWBIN	Global					
N254:[N250:0]	__RANK6_INEWBIN	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				

Address/Symbol Database

Address	Symbol	Scope	Description	Sym Group	Dev. Code	ABV	BLW
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				
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				

Address/Symbol Database

Address	Symbol	Scope	Description	Sym Group	Dev. Code	ABV	BLW
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				
T4:0	LOAD_CELL_SAMPLING	Global					
T4:1	LOAD_CELL_SAMPLING2	Global					
U:3	FILTER_DATA	Global					

Address/Symbol Database

Address	Symbol	Scope	Description	Sym Group	Dev. Code	ABV	BLW
U:4	READ_LOAD_CELL_DATA	Global					
U:5	TRAINING	Global					
U:251	ADD_ONE_RANK6_MEMBER	Global					
U:252	CALC_PEAKS_MEANS	Global					
U:253	RANK6_ADD_NEW_VALUE	Global					
U:254	RANK6_BUBBLE_SORT	Global					
U:255	RESET_RANK6_ARRAYS	Global					

Instruction Comment Database

Address	Instruction	Description

Symbol Group Database

Group_Name Description