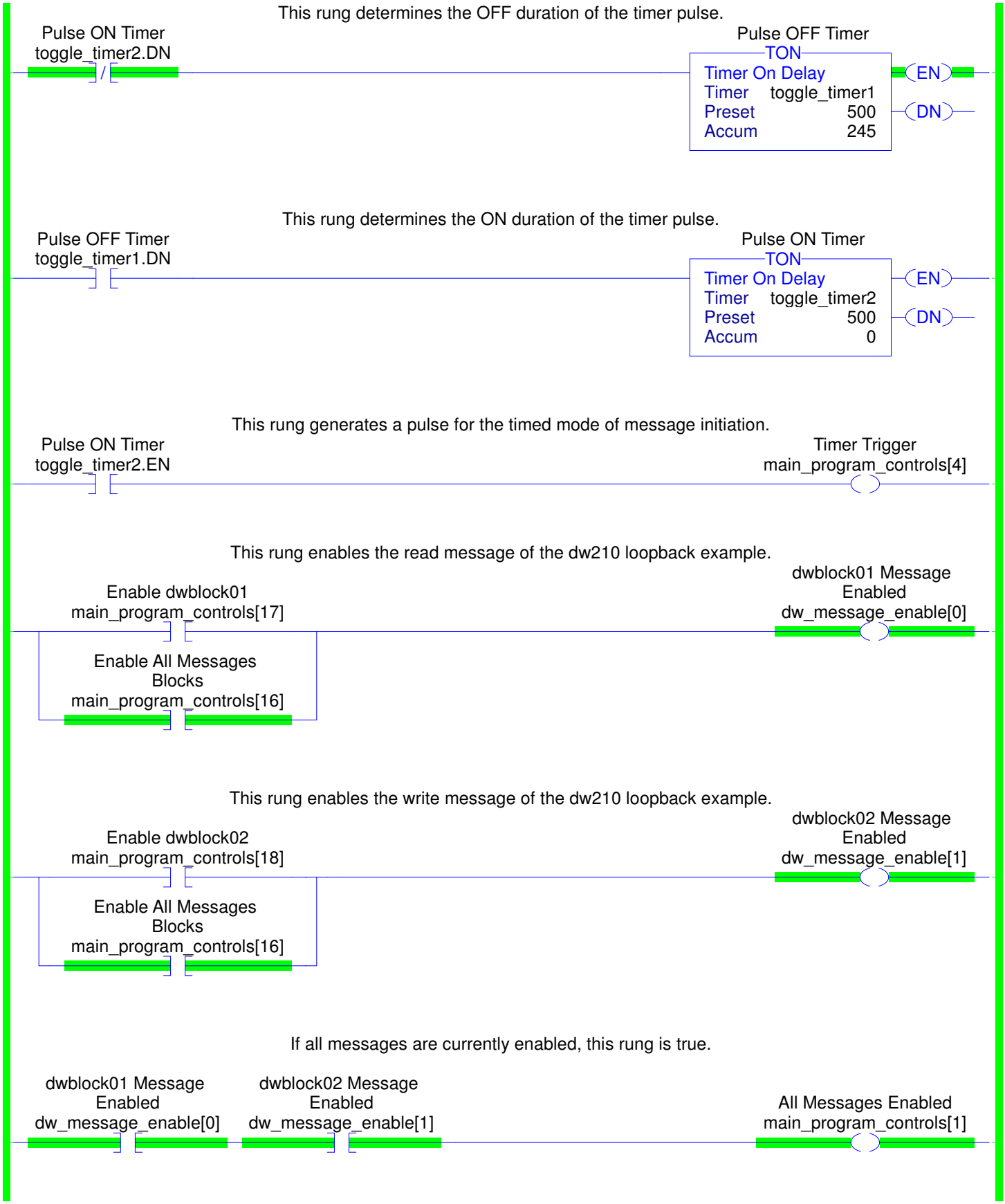

This rung determines the OFF duration of the timer pulse.
Pulse ON Timer
toggle_timer2.DN
Pulse OFF Timer
TON
Timer On Delay
Timer toggle_timer1
Preset 500
Accum 245
EN
DN
This rung determines the ON duration of the timer pulse.
Pulse OFF Timer
toggle_timer1.DN
Pulse ON Timer
TON
Timer On Delay
Timer toggle_timer2
Preset 500
Accum 0
EN
DN
This rung generates a pulse for the timed mode of message initiation.
Pulse ON Timer
toggle_timer2.EN
Timer Trigger
main_program_controls[4]
This rung enables the read message of the dw210 loopback example.
Enable dwblock01
main_program_controls[17]
dwblock01 Message
Enabled
dw_message_enable[0]
Enable All Messages
Blocks
main_program_controls[16]
This rung enables the write message of the dw210 loopback example.
Enable dwblock02
main_program_controls[18]
dwblock02 Message
Enabled
dw_message_enable[1]
Enable All Messages
Blocks
main_program_controls[16]
If all messages are currently enabled, this rung is true.
dwblock01 Message
Enabled
dw_message_enable[0]
dwblock02 Message
Enabled
dw_message_enable[1]
All Messages Enabled
main_program_controls[1]

When this rung is enabled, the message transmissions are generated as quickly as possible based on a reply event.

Enable Event Driven Messages main_program_controls[30] | Timer Message Control main_program_controls[3] / | Event Message Control main_program_controls[2]

When this rung is enabled, the message transmissions are on a fixed timebase.

Enable Timed Messages main_program_controls[31] | Event Message Control main_program_controls[2] / | Timer Message Control main_program_controls[3]

Resets all counters and start values.

Reset All Message Counters main_program_controls[29] | Reset All Message Counters main_program_controls[0]

Reset Increment To Start Value main_program_controls[28]

This rung calls a subroutine that reads PIN's 4864 through 4871
of a dw210 smarty2 at IP address 192.168.1.71
using a PLC Typed Read command
(Allen-Bradley file addresses N29:000 through N29:007).

dwblock01 Message Enabled dw_message_enable[0]

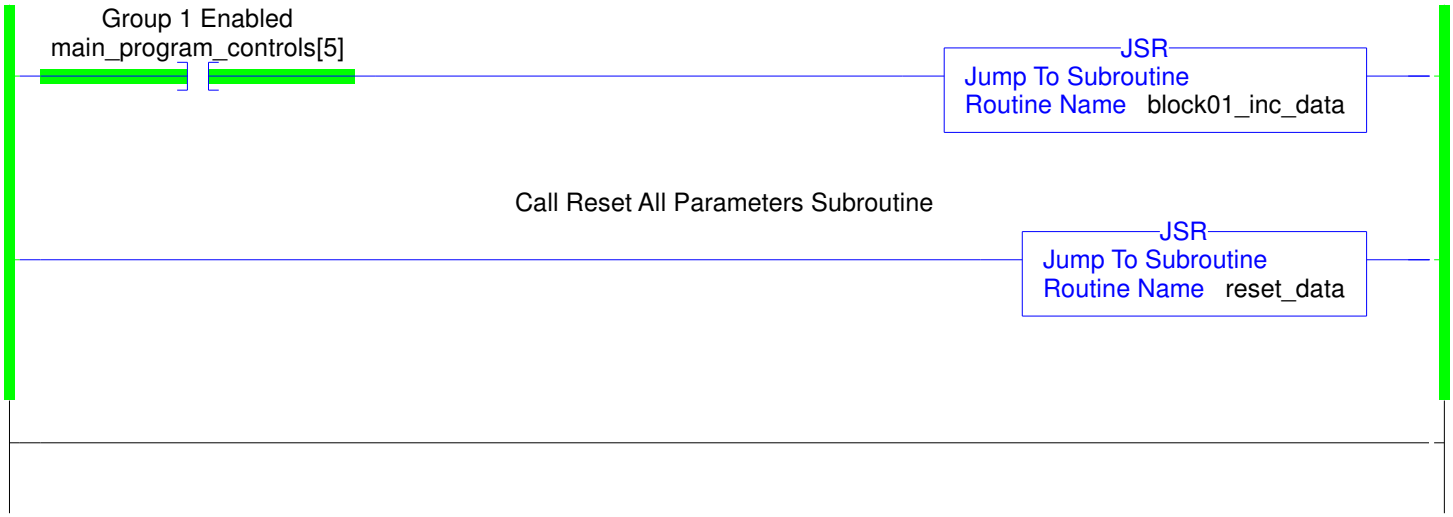
JSR
Jump To Subroutine
Routine Name dwblock01r

This rung calls a subroutine that writes PIN's 4352 through 4359
of a dw210 smarty2 at IP address 192.168.1.71
using a PLC Typed Write command
(Allen-Bradley file addresses N27:000 through N27:007).

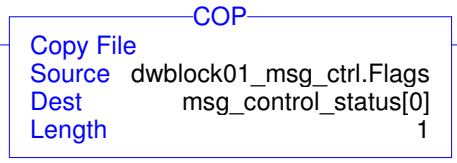
dwblock02 Message Enabled dw_message_enable[1]

JSR
Jump To Subroutine
Routine Name dwblock02w

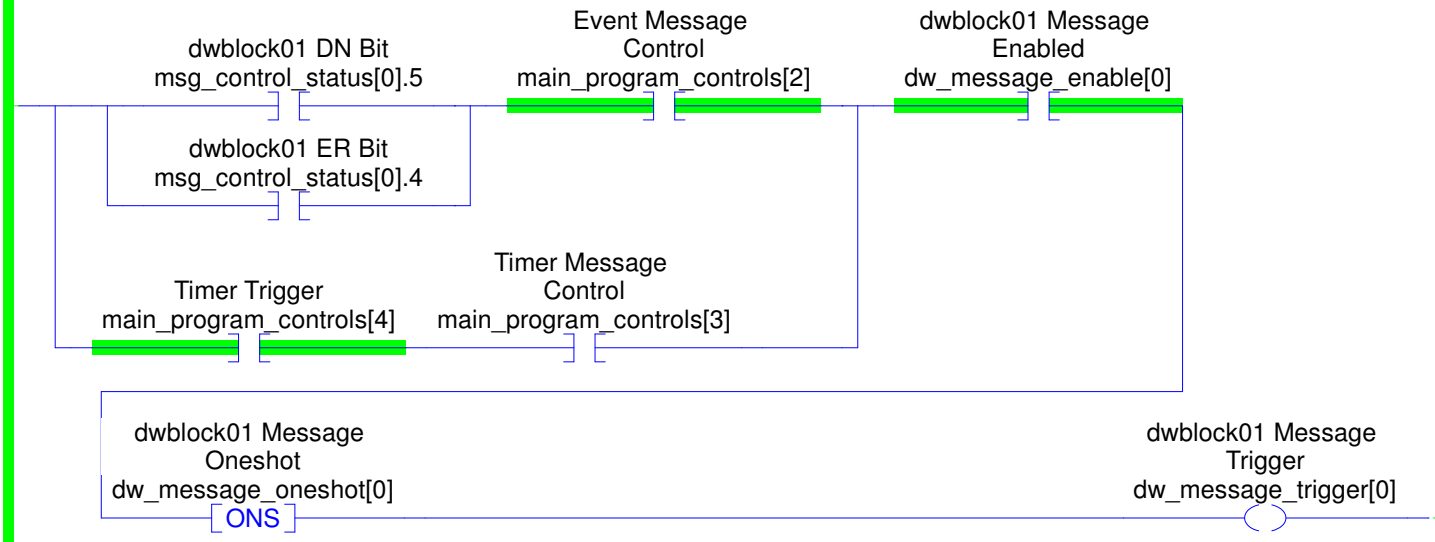
Enable Group 1 main_program_controls[19] | Group 1 Enabled main_program_controls[5]


Group 1 Enabled
main_program_controls[5]
JSR
Jump To Subroutine
Routine Name block01_inc_data
Call Reset All Parameters Subroutine
JSR
Jump To Subroutine
Routine Name reset_data

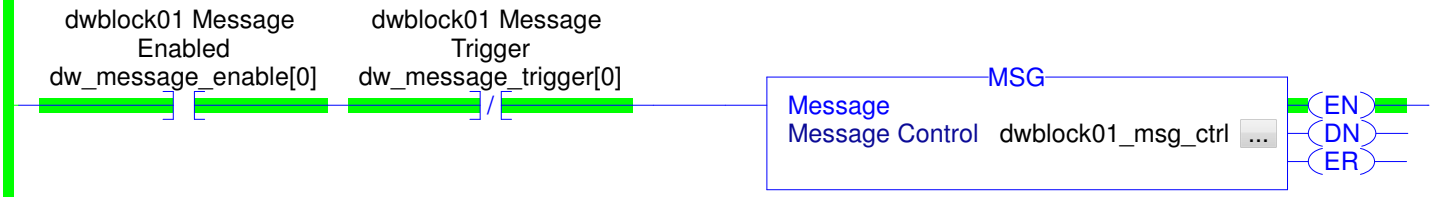
Copy the message block flags to another location per A-B recommendations. Message block flags are updated asynchronously to the scan of the processor.



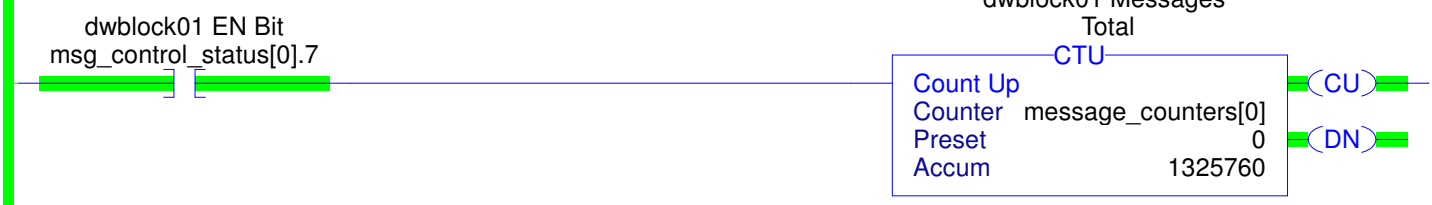
If enabled, this rung resets the dw210 read message block when a reply has been received. The message is complete when either the message block is done (DN) or an error occurs (ER).



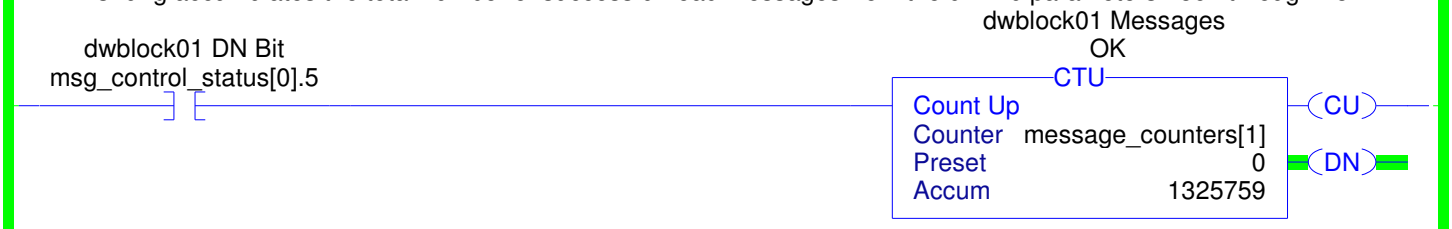
This rung generates the read message to the dw210 with the following setup:
Message Type: PLC5 Typed Read;
Source Element: N29:0;
Number of Elements: 8 (PIN's 4864 - 4871);
Destination Element: dwblock01_data [0];
Path: LocalENB,2,192.168.1.71.



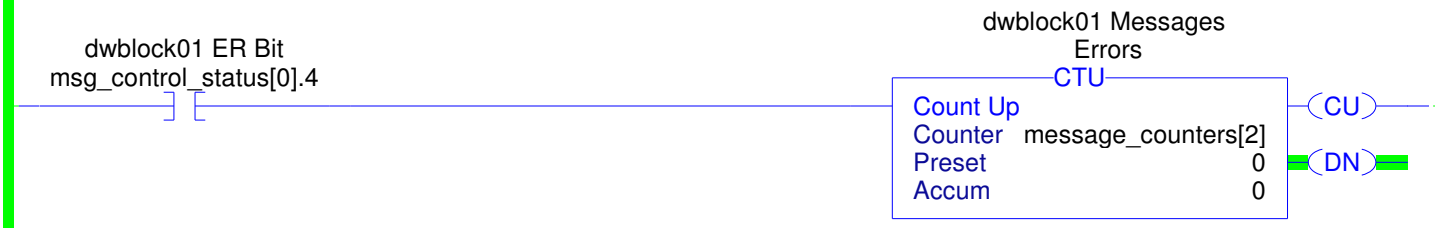
This rung accumulates the total number of attempted read messages from the dw210 Parameters 4864 through 4871.



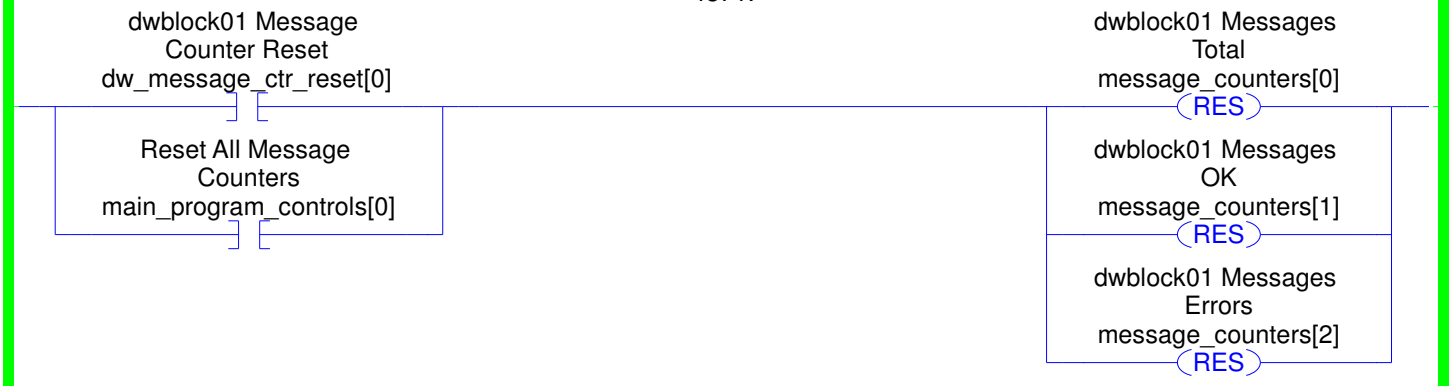
This rung accumulates the total number of successful read messages from the dw210 parameters 4864 through 4871.



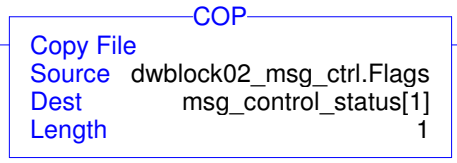
This rung accumulates the total number of failed read messages from the dw210 Parameters 4864 through 4871.



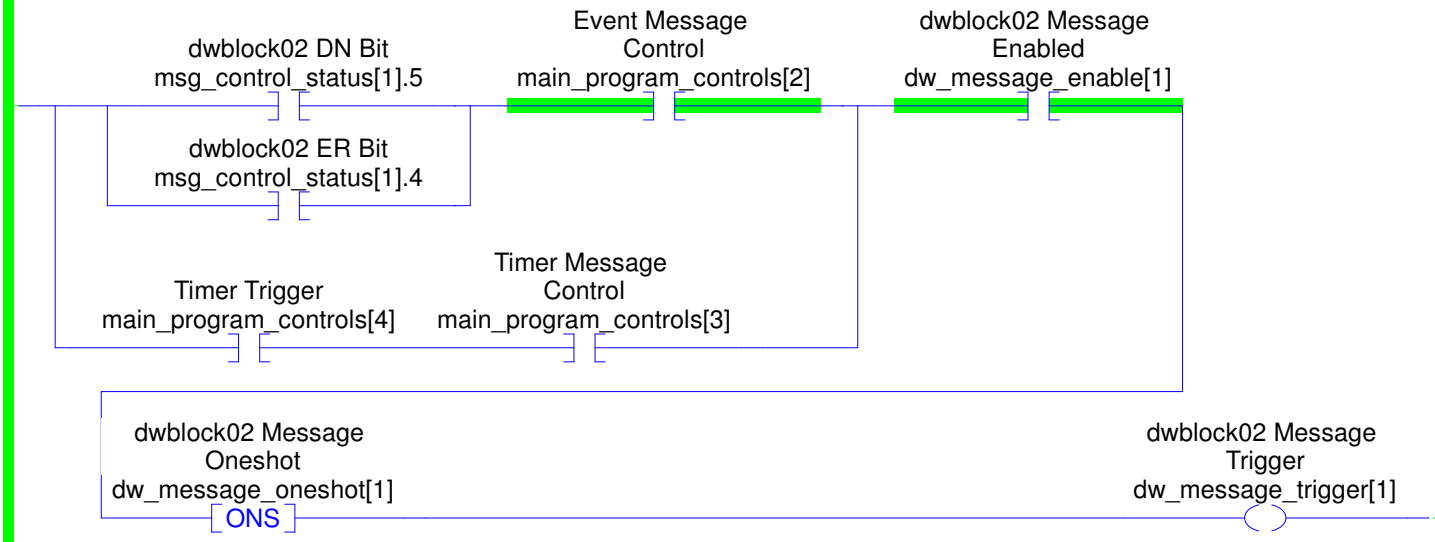
This rung resets the totals of the attempted, successful, and failed read messages from the dw210 Parameters 4864 through 4871.



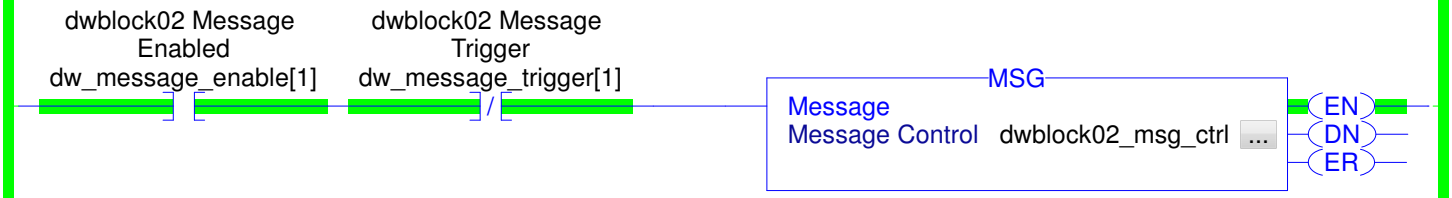
Copy the message block flags to another location per A-B recommendations. Message block flags are updated asynchronously to the scan of the processor.



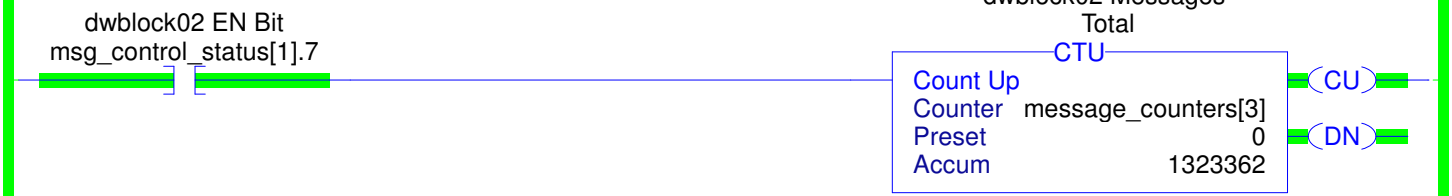
If enabled, this rung resets the dw210 read message block when a reply has been received. The message is complete when either the message block is done (DN) or an error occurs (ER).



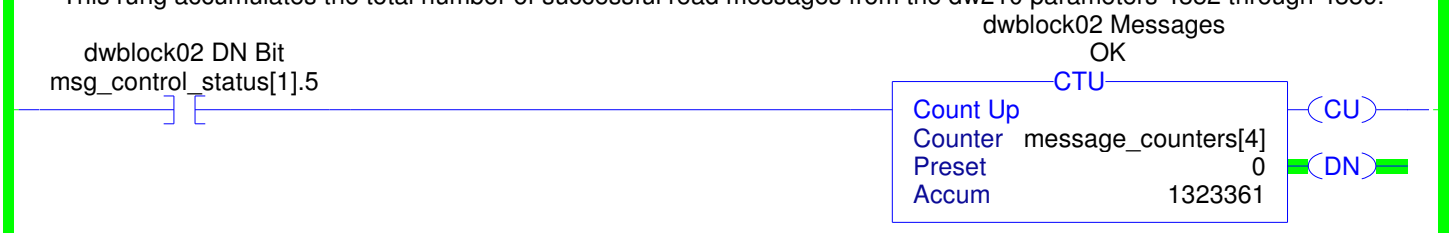
This rung generates the write message to the dw210 with the following setup:
Message Type: PLC5 Typed Write;
Source Element: N27:0;
Number of Elements: 8 (PIN's 4352 - 4359);
Destination Element: dwblock04_data [0];
Path: LocalENB,2,192.168.1.71.



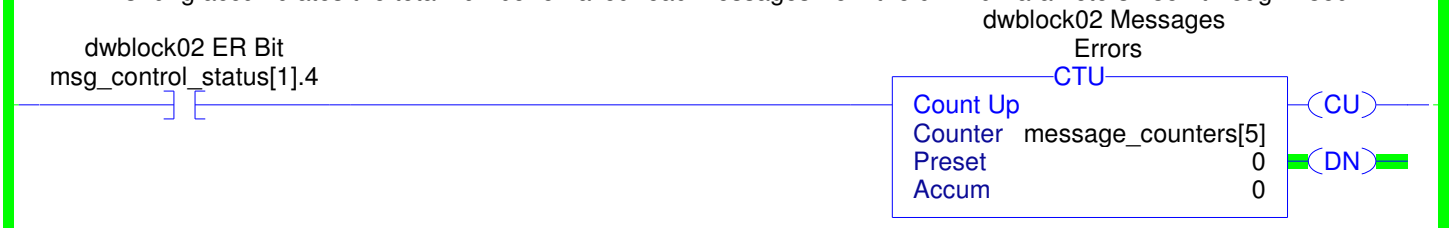
This rung accumulates the total number of attempted read messages from the dw210 Parameters 4352 through 4359.



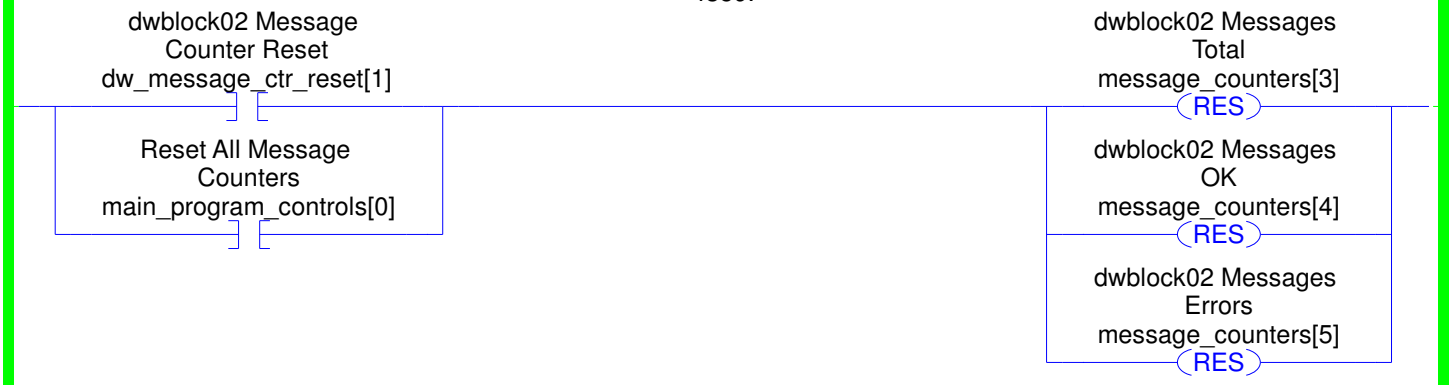
This rung accumulates the total number of successful read messages from the dw210 parameters 4352 through 4359.

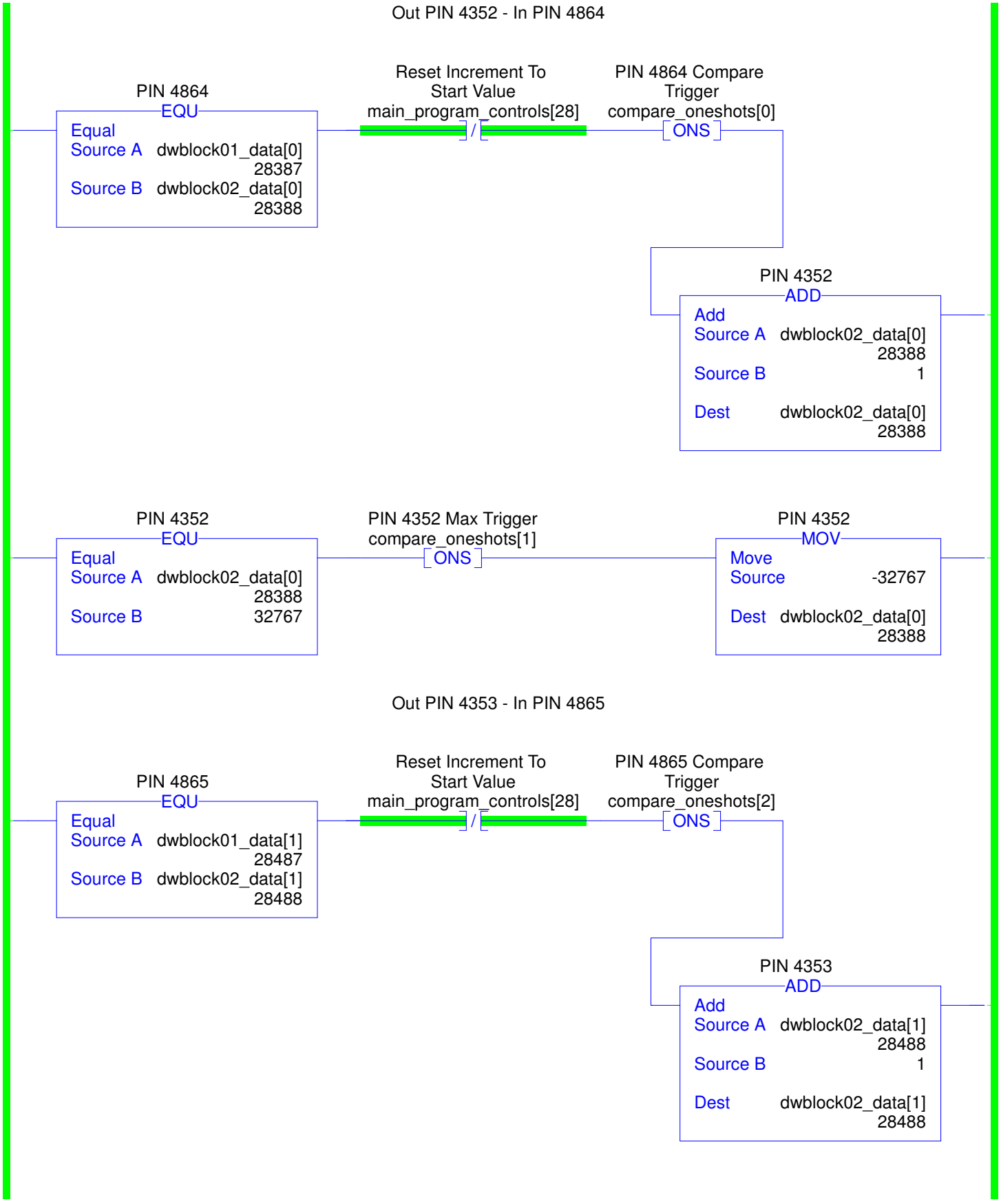


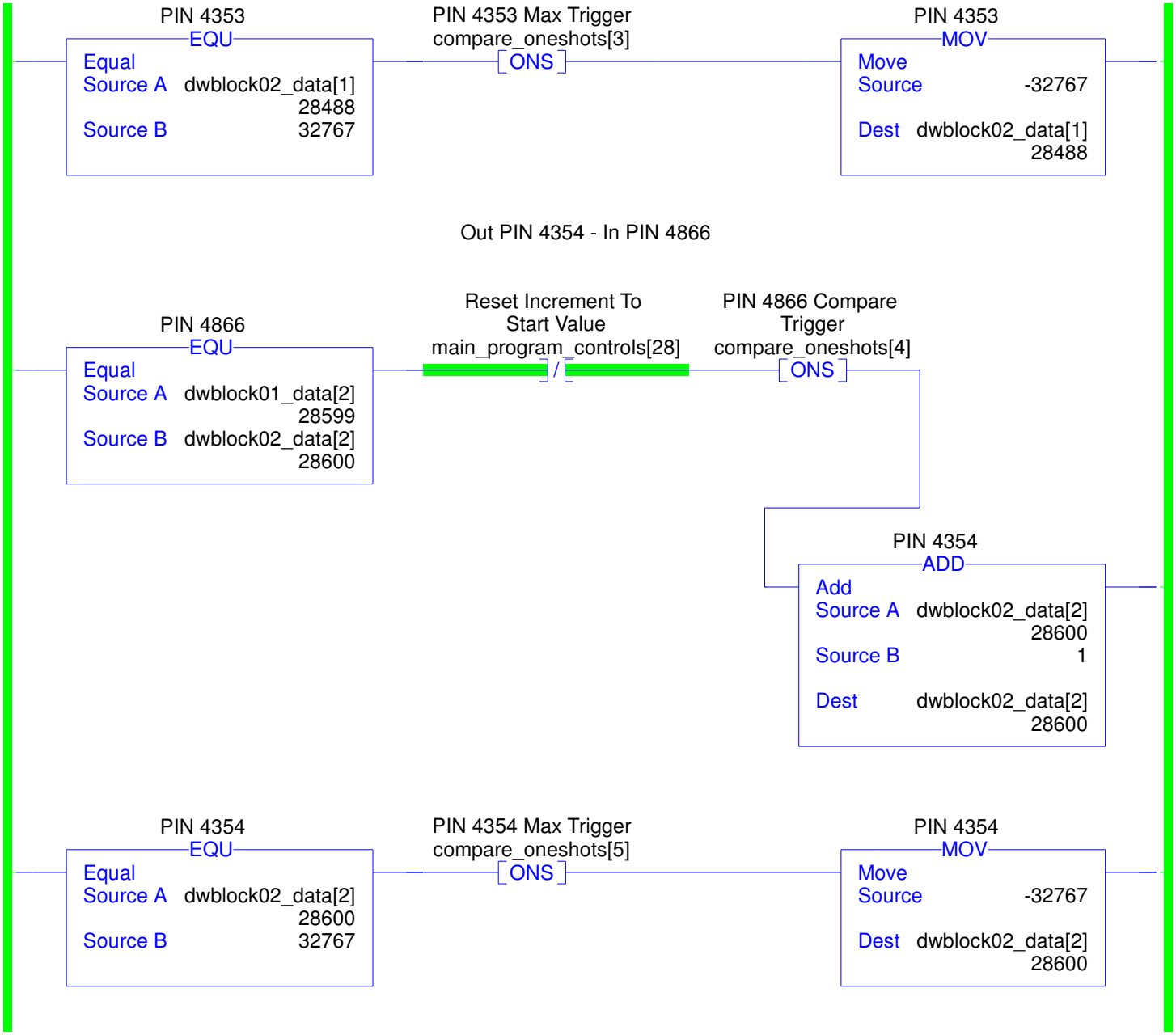
This rung accumulates the total number of failed read messages from the dw210 Parameters 4352 through 4359.

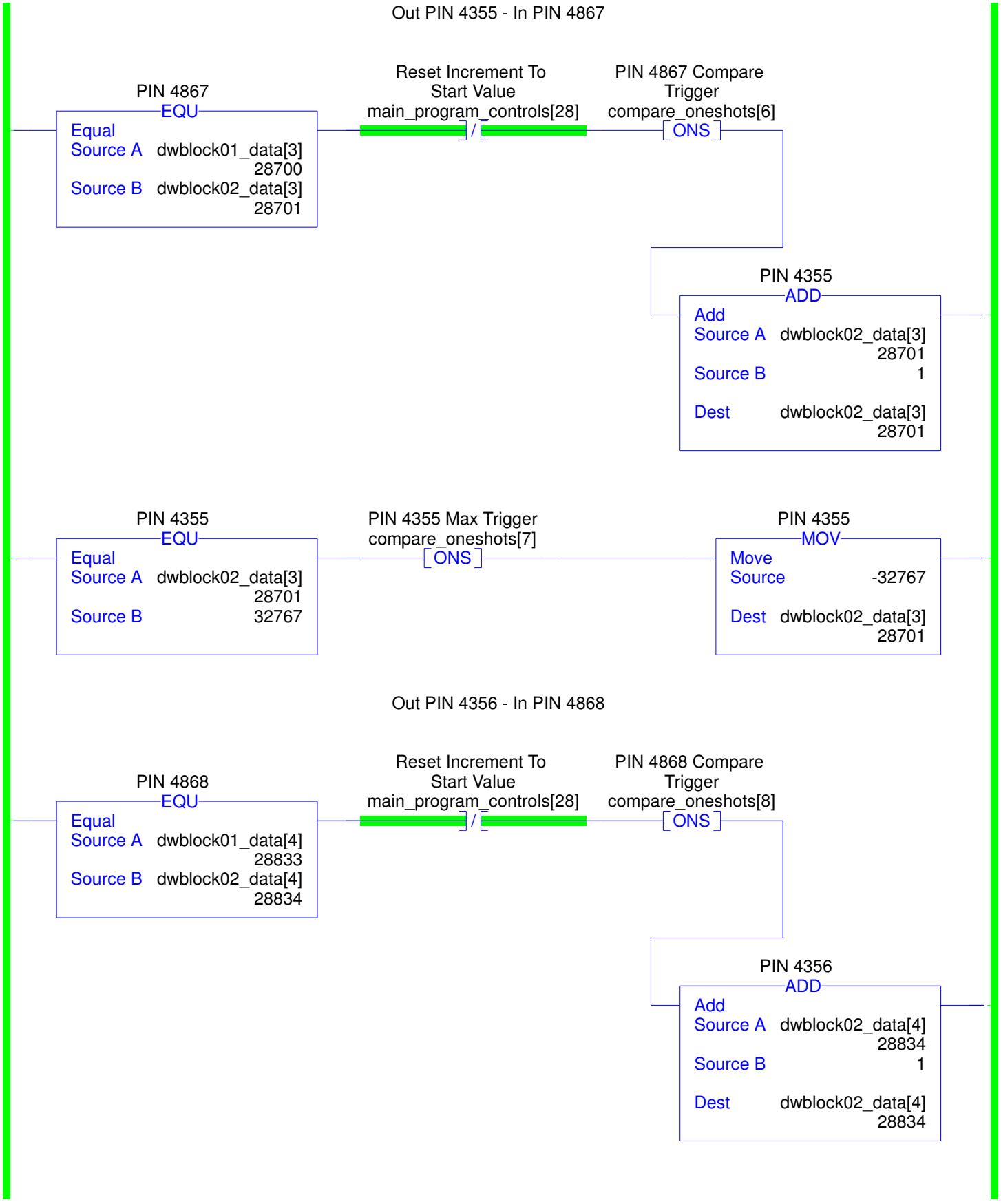


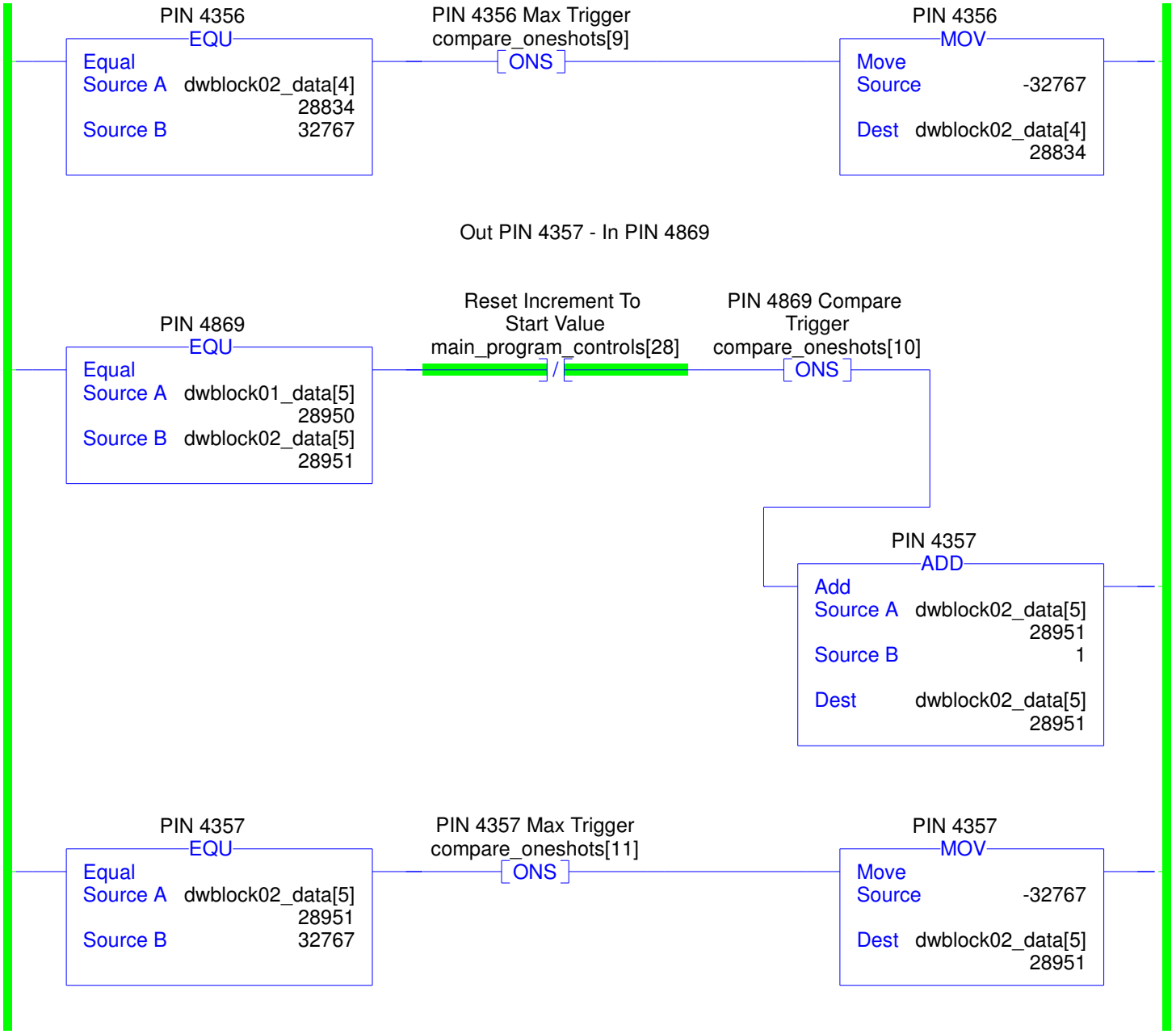
This rung resets the totals of the attempted, successful, and failed read messages from the dw210 Parameters 4352 through 4359.

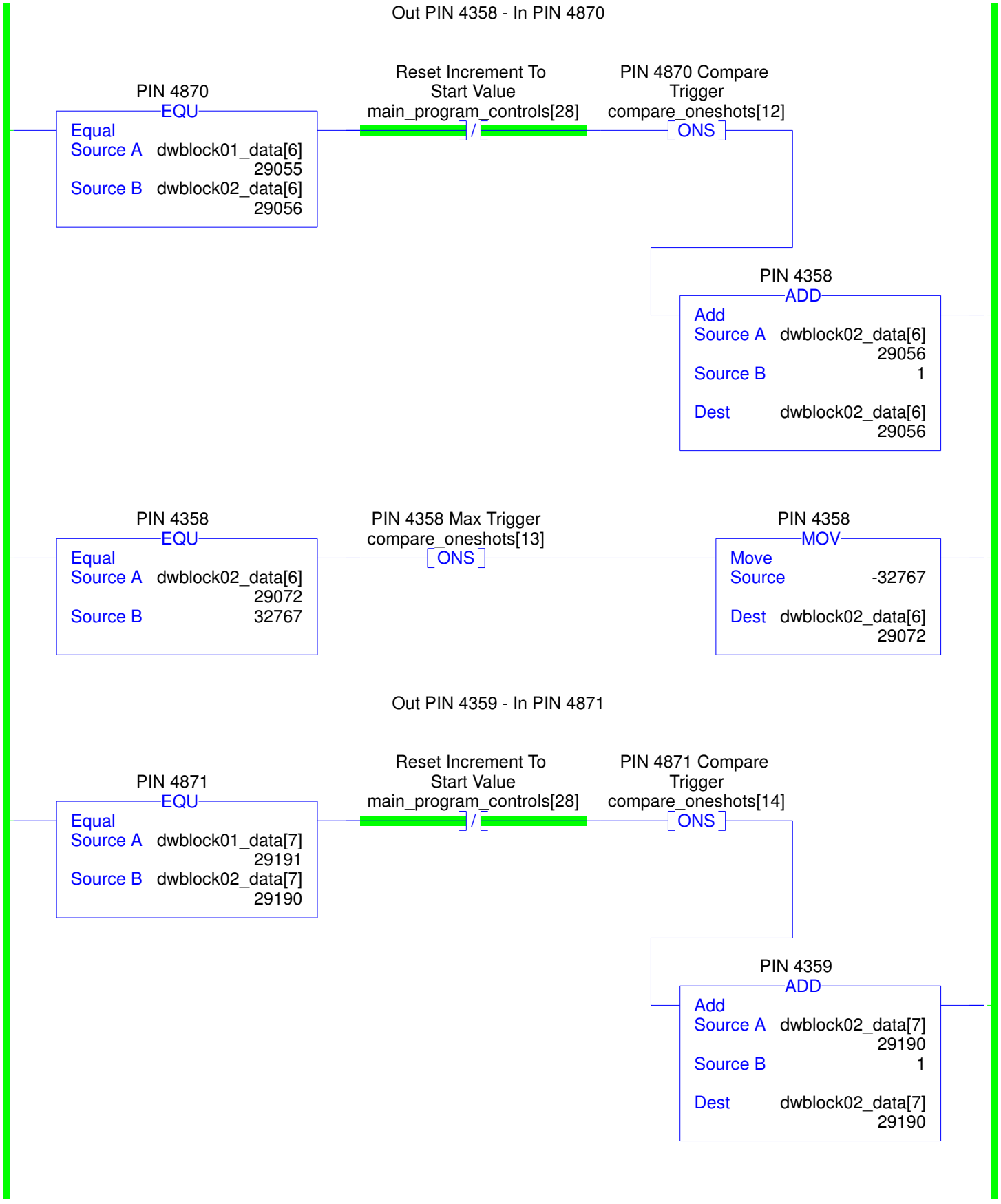


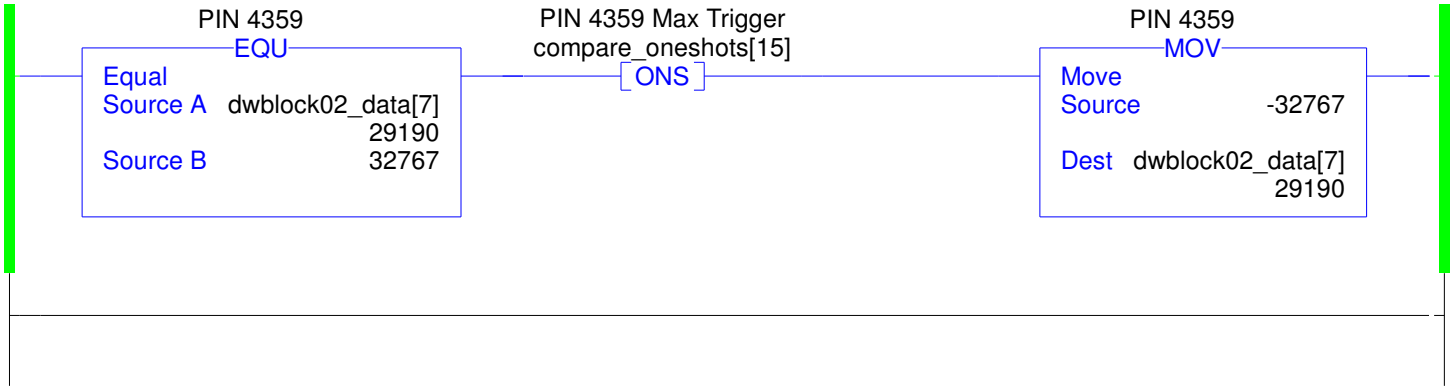

Out PIN 4352 - In PIN 4864
PIN 4864
EQU
Equal
Source A dwblock01_data[0]
28387
Source B dwblock02_data[0]
28388
Reset Increment To
Start Value
main_program_controls[28]
PIN 4864 Compare
Trigger
compare_oneshots[0]
ONS
PIN 4352
ADD
Add
Source A dwblock02_data[0]
28388
Source B 1
Dest dwblock02_data[0]
28388
PIN 4352
EQU
Equal
Source A dwblock02_data[0]
28388
Source B 32767
PIN 4352 Max Trigger
compare_oneshots[1]
ONS
PIN 4352
MOV
Move
Source -32767
Dest dwblock02_data[0]
28388
Out PIN 4353 - In PIN 4865
PIN 4865
EQU
Equal
Source A dwblock01_data[1]
28487
Source B dwblock02_data[1]
28488
Reset Increment To
Start Value
main_program_controls[28]
PIN 4865 Compare
Trigger
compare_oneshots[2]
ONS
PIN 4353
ADD
Add
Source A dwblock02_data[1]
28488
Source B 1
Dest dwblock02_data[1]
28488

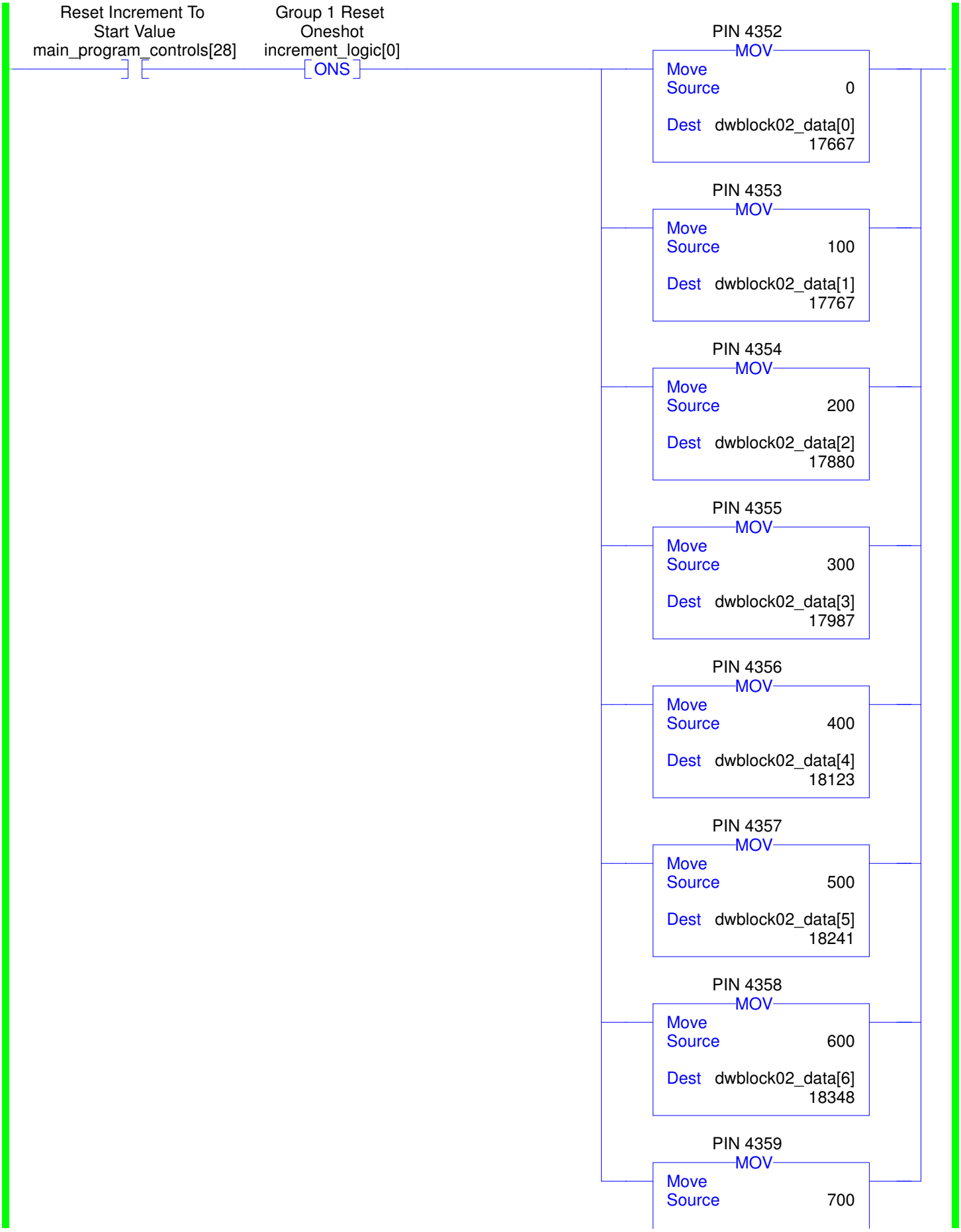

PIN 4353
EQU
Equal
Source A dwblock02_data[1]
28488
Source B
32767
PIN 4353 Max Trigger
compare_oneshots[3]
ONS
PIN 4353
MOV
Move
Source -32767
Dest dwblock02_data[1]
28488
Out PIN 4354 - In PIN 4866
PIN 4866
EQU
Equal
Source A dwblock01_data[2]
28599
Source B dwblock02_data[2]
28600
Reset Increment To
Start Value
main_program_controls[28]
/
PIN 4866 Compare
Trigger
compare_oneshots[4]
ONS
PIN 4354
ADD
Add
Source A dwblock02_data[2]
28600
Source B
1
Dest dwblock02_data[2]
28600
PIN 4354
EQU
Equal
Source A dwblock02_data[2]
28600
Source B
32767
PIN 4354 Max Trigger
compare_oneshots[5]
ONS
PIN 4354
MOV
Move
Source -32767
Dest dwblock02_data[2]
28600

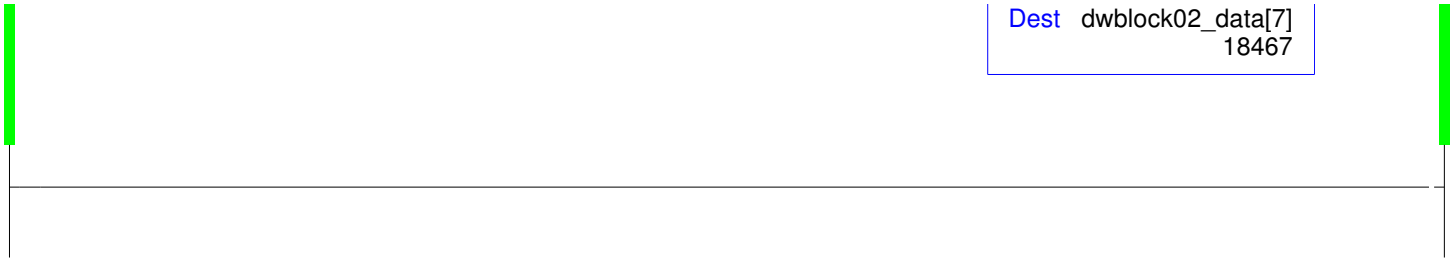

Out PIN 4355 - In PIN 4867
PIN 4867
EQU
Equal
Source A dwblock01_data[3] 28700
Source B dwblock02_data[3] 28701
Reset Increment To Start Value
main_program_controls[28]
PIN 4867 Compare Trigger
compare_oneshots[6]
ONS
PIN 4355
ADD
Add
Source A dwblock02_data[3] 28701
Source B 1
Dest dwblock02_data[3] 28701
PIN 4355
EQU
Equal
Source A dwblock02_data[3] 28701
Source B 32767
PIN 4355 Max Trigger
compare_oneshots[7]
ONS
PIN 4355
MOV
Move
Source -32767
Dest dwblock02_data[3] 28701
Out PIN 4356 - In PIN 4868
PIN 4868
EQU
Equal
Source A dwblock01_data[4] 28833
Source B dwblock02_data[4] 28834
Reset Increment To Start Value
main_program_controls[28]
PIN 4868 Compare Trigger
compare_oneshots[8]
ONS
PIN 4356
ADD
Add
Source A dwblock02_data[4] 28834
Source B 1
Dest dwblock02_data[4] 28834


PIN 4356
EQU
Equal
Source A dwblock02_data[4]
28834
Source B 32767
PIN 4356 Max Trigger
compare_oneshots[9]
ONS
PIN 4356
MOV
Move
Source -32767
Dest dwblock02_data[4]
28834
Out PIN 4357 - In PIN 4869
PIN 4869
EQU
Equal
Source A dwblock01_data[5]
28950
Source B dwblock02_data[5]
28951
Reset Increment To
Start Value
main_program_controls[28]
/
PIN 4869 Compare
Trigger
compare_oneshots[10]
ONS
PIN 4357
ADD
Add
Source A dwblock02_data[5]
28951
Source B 1
Dest dwblock02_data[5]
28951
PIN 4357
EQU
Equal
Source A dwblock02_data[5]
28951
Source B 32767
PIN 4357 Max Trigger
compare_oneshots[11]
ONS
PIN 4357
MOV
Move
Source -32767
Dest dwblock02_data[5]
28951


Out PIN 4358 - In PIN 4870
PIN 4870
EQU
Equal
Source A dwblock01_data[6]
29055
Source B dwblock02_data[6]
29056
Reset Increment To
Start Value
main_program_controls[28]
/
PIN 4870 Compare
Trigger
compare_oneshots[12]
ONS
PIN 4358
ADD
Add
Source A dwblock02_data[6]
29056
Source B 1
Dest dwblock02_data[6]
29056
PIN 4358
EQU
Equal
Source A dwblock02_data[6]
29072
Source B 32767
PIN 4358 Max Trigger
compare_oneshots[13]
ONS
PIN 4358
MOV
Move
Source -32767
Dest dwblock02_data[6]
29072
Out PIN 4359 - In PIN 4871
PIN 4871
EQU
Equal
Source A dwblock01_data[7]
29191
Source B dwblock02_data[7]
29190
Reset Increment To
Start Value
main_program_controls[28]
/
PIN 4871 Compare
Trigger
compare_oneshots[14]
ONS
PIN 4359
ADD
Add
Source A dwblock02_data[7]
29190
Source B 1
Dest dwblock02_data[7]
29190


PIN 4359
EQU
Equal
Source A dwblock02_data[7]
29190
Source B 32767
PIN 4359 Max Trigger
compare_oneshots[15]
ONS
PIN 4359
MOV
Move
Source -32767
Dest dwblock02_data[7]
29190


Reset Increment To Start Value
main_program_controls[28]
Group 1 Reset Oneshot
increment_logic[0]
ONS
PIN 4352
MOV
Move Source 0
Dest dwblock02_data[0] 17667
PIN 4353
MOV
Move Source 100
Dest dwblock02_data[1] 17767
PIN 4354
MOV
Move Source 200
Dest dwblock02_data[2] 17880
PIN 4355
MOV
Move Source 300
Dest dwblock02_data[3] 17987
PIN 4356
MOV
Move Source 400
Dest dwblock02_data[4] 18123
PIN 4357
MOV
Move Source 500
Dest dwblock02_data[5] 18241
PIN 4358
MOV
Move Source 600
Dest dwblock02_data[6] 18348
PIN 4359
MOV
Move Source 700


Dest dwblock02_data[7]
18467