OMRON - SYSWIN

Project Name	V406-51M.SWP
PLC Type	CQM1H
CPU Type	CPU51
Company	MCP Equipment
Plant	Vac-Cast Machine
Project	PLC001 & PLC004
Version	2.051
Promotion	CQM1H version
Date	23/05/02 11:22:24 AM

Contents

Main 1 - Screen

SOFTWARE V406-51M = MCP 4/06 MASTER (CQM1H-CPU51)

******CLICK HERE ADDITIONAL FOR SET UP INFORMATION******

The PLC4/06 uses PLC-PLC communications between the "TWO" system PLCs.This is done by linking the "TWO" RS232C ports on the additional "Serial Communications Board" (CQM1H-SCB41) with the below cable.

```
2 -------------------- 3
3 -------------------- 2
9 -------------------- 9
4 & 5           4 & 5   Linked on each end.
```

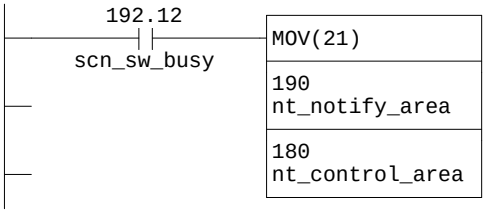
DM6555 needs setting as indicated in the address comments

Master System DM6555 = 3000
Slave System DM6555 = 2000

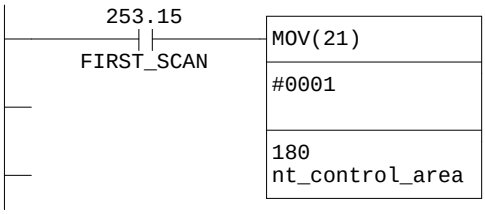
The NT30 connection is unchanged.

Network 1 - Update control

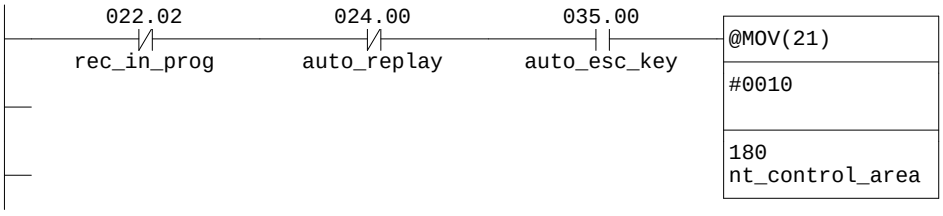
Update the NT control area



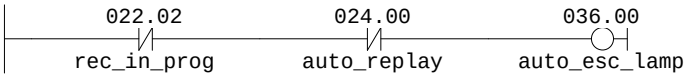
Network 2 - Page 1 default



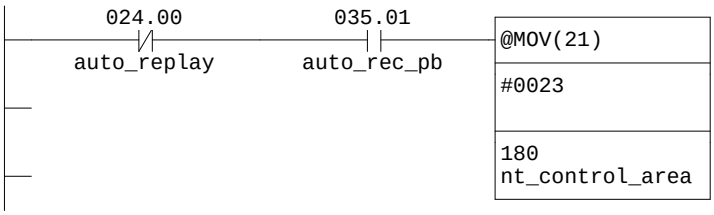
Network 3 - Auto "ESC" key



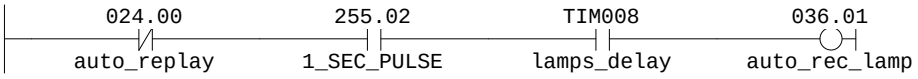
Network 4 - Auto ESC lamp



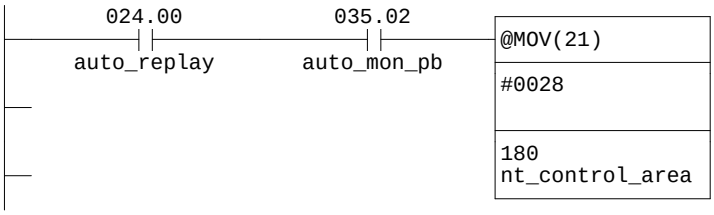
Network 5 - Auto Rec PB



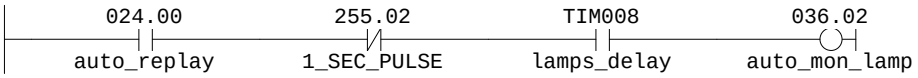
Network 6 - Auto Rec lamp

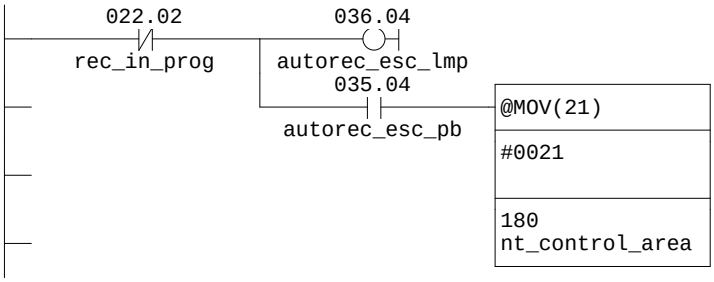


Network 7 - Auto Monitor PB

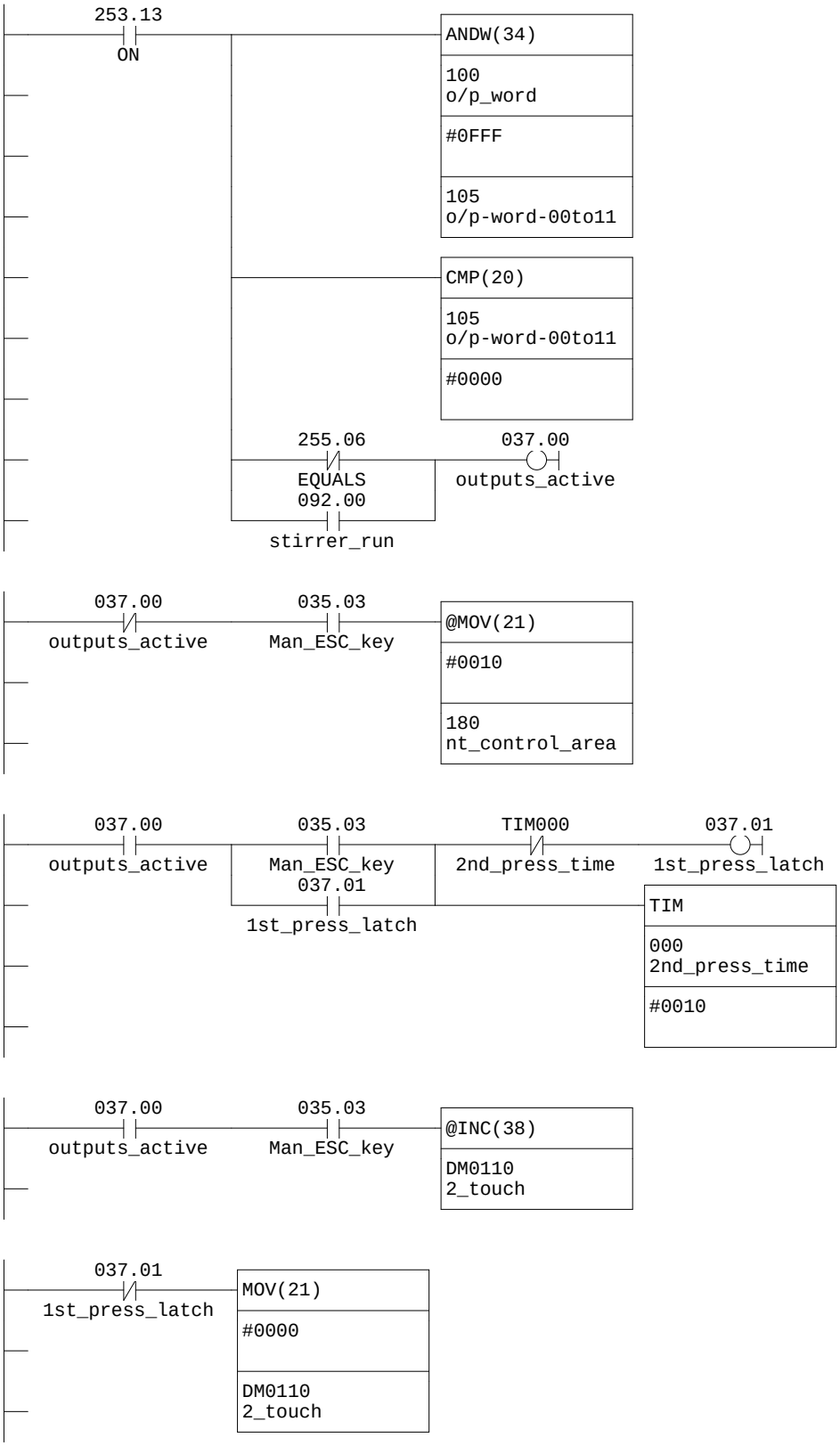


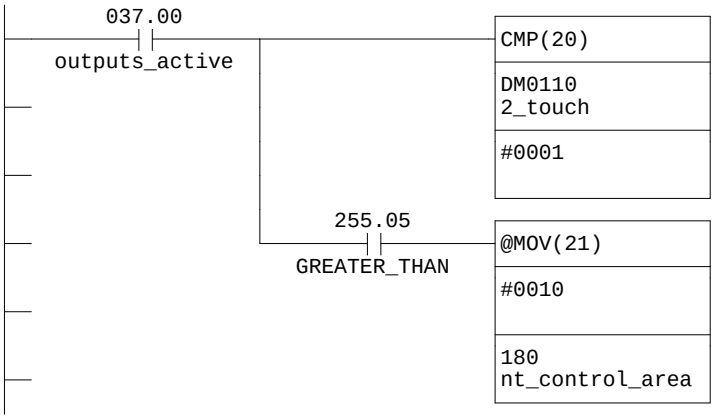
Network 8 - Auto Mon lamp



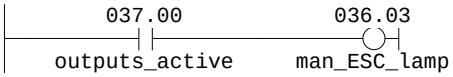


Network 10 - Man ESC key



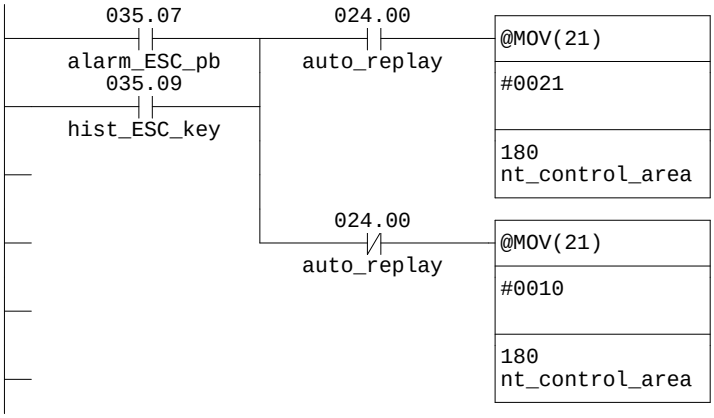


Network 16 - Man ESC lamp



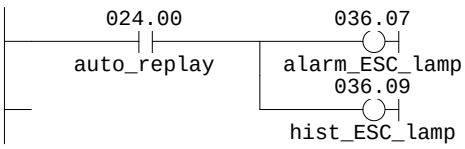
Network 17 - Al/Hist ESC key

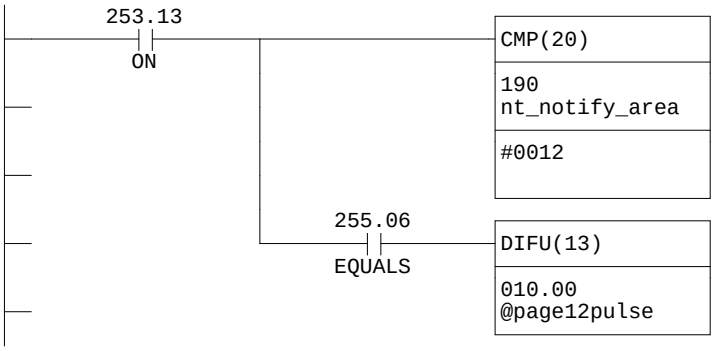
Alarm and History escape keys

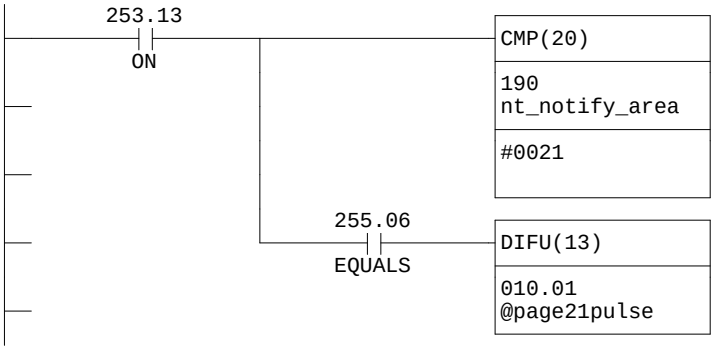


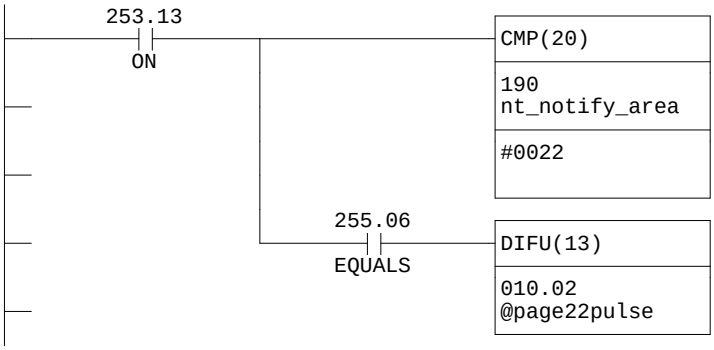
Network 18 - Al/Hist ESC lmp

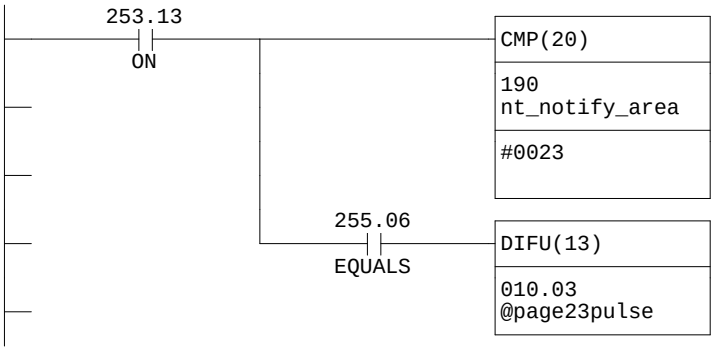
Alarm and history page escape button lamps

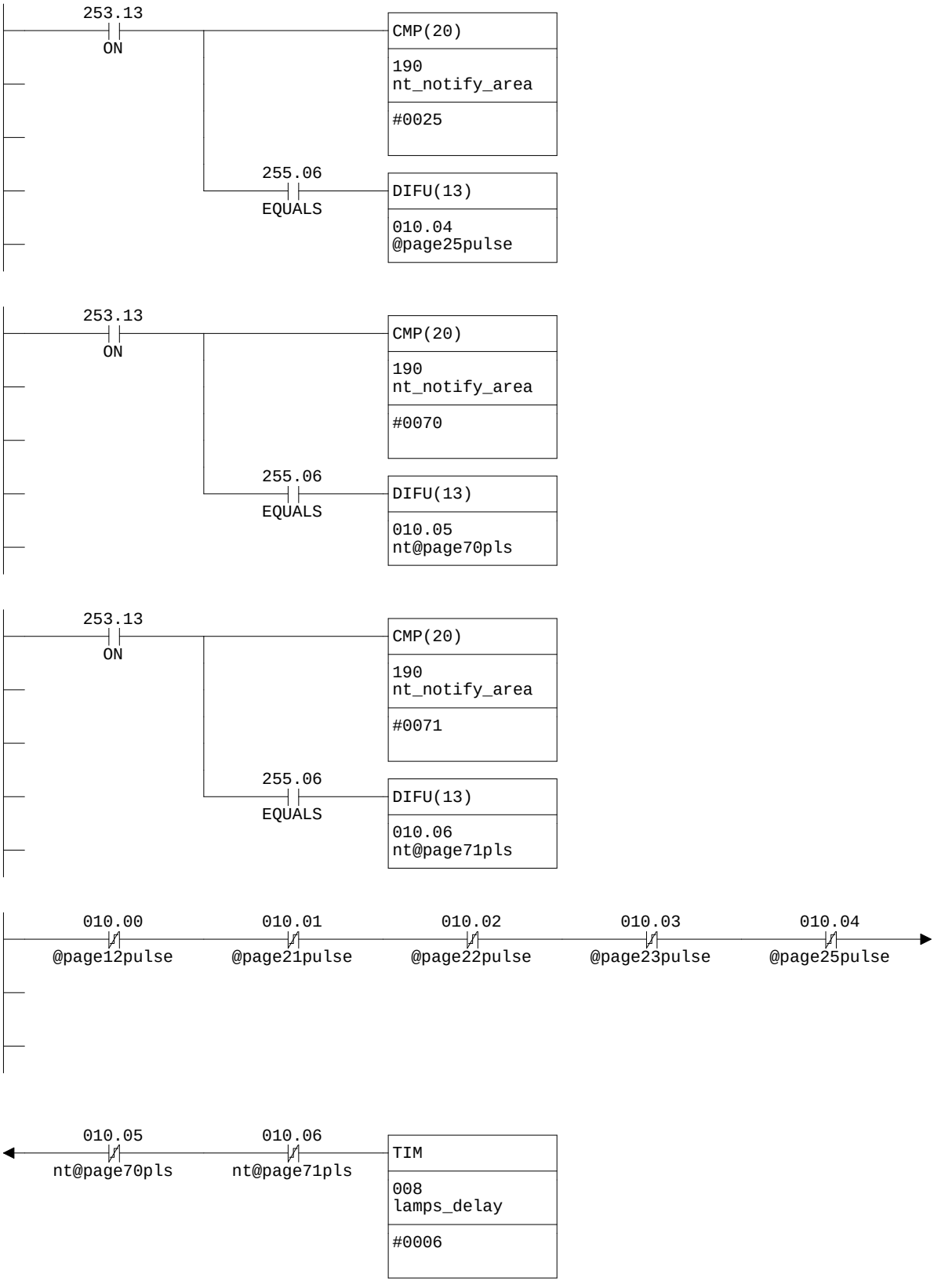



253.13
ON
CMP(20)
190
nt_notify_area
#0012
255.06
EQUALS
DIFU(13)
010.00
@page12pulse


253.13
ON
CMP(20)
190
nt_notify_area
#0021
255.06
EQUALS
DIFU(13)
010.01
@page21pulse

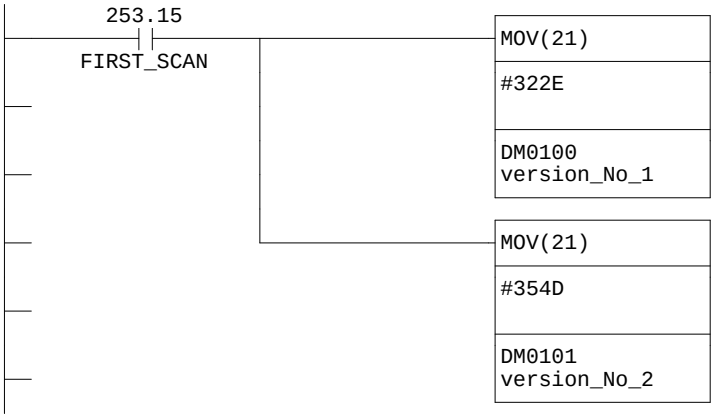

253.13
ON
CMP(20)
190
nt_notify_area
#0022
255.06
EQUALS
DIFU(13)
010.02
@page22pulse


253.13
ON
CMP(20)
190
nt_notify_area
#0023
255.06
EQUALS
DIFU(13)
010.03
@page23pulse


253.13
ON
CMP(20)
190
nt_notify_area
#0025
255.06
EQUALS
DIFU(13)
010.04
@page25pulse
253.13
ON
CMP(20)
190
nt_notify_area
#0070
255.06
EQUALS
DIFU(13)
010.05
nt@page70pls
253.13
ON
CMP(20)
190
nt_notify_area
#0071
255.06
EQUALS
DIFU(13)
010.06
nt@page71pls
010.00
@page12pulse
010.01
@page21pulse
010.02
@page22pulse
010.03
@page23pulse
010.04
@page25pulse
010.05
nt@page70pls
010.06
nt@page71pls
TIM
008
lamps_delay
#0006

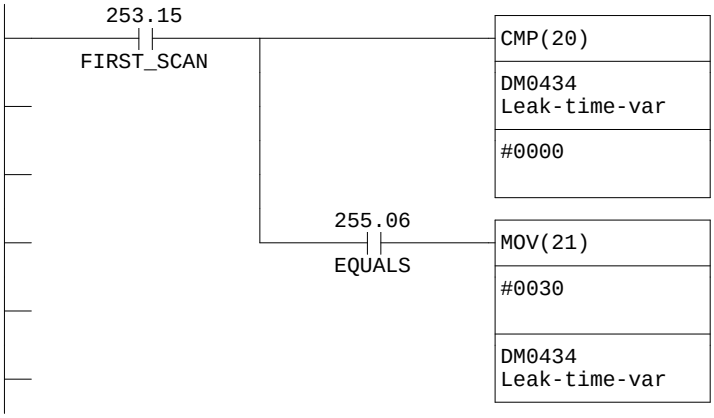
Network 27 - PLC revision No

Ladder software revision number



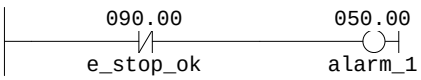
Network 28 - Def Leak Time

Default leak time set on first scan if no value set.



Main 2 - Alarms

Network 1 - E/stop



Network 2 - Analogue input

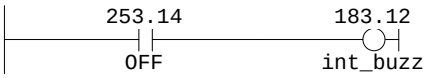
Check analogue input setting is OK

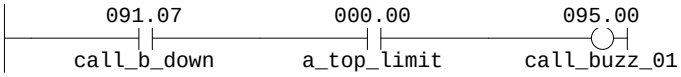
Network 3 - Start up mode

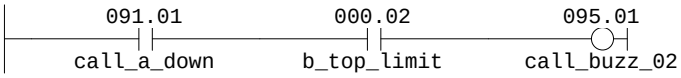
Check start up mode setting is OK

Network 4 - Backlight

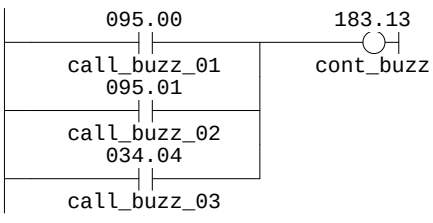
Network 5 - Int Buzzer



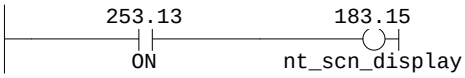


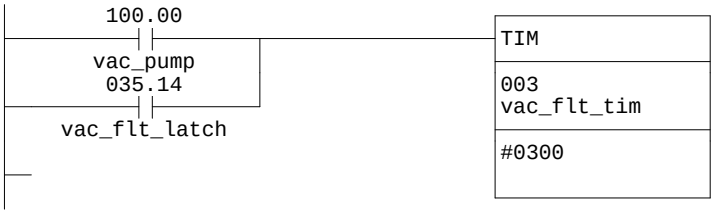


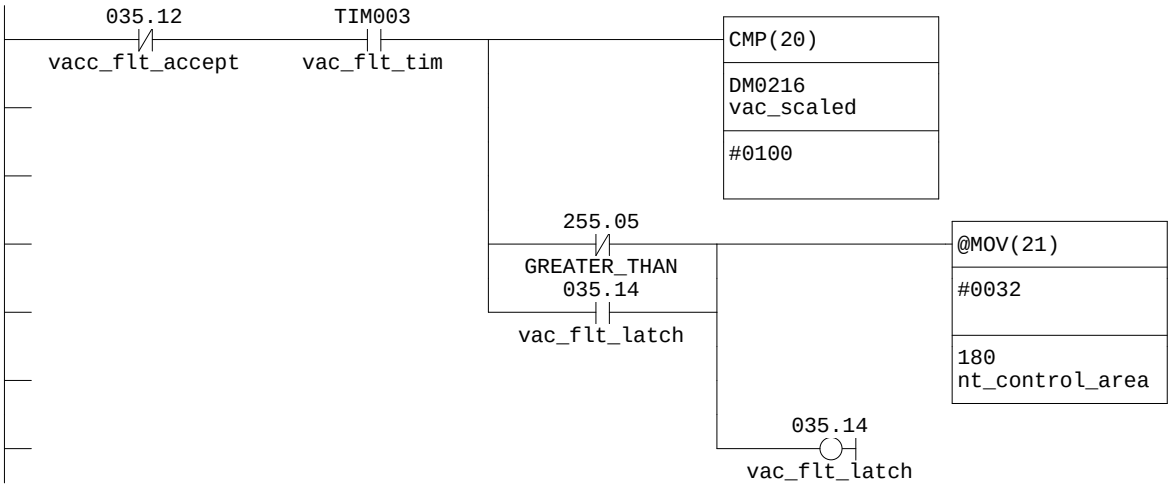
Network 8 - Cont Buzzer

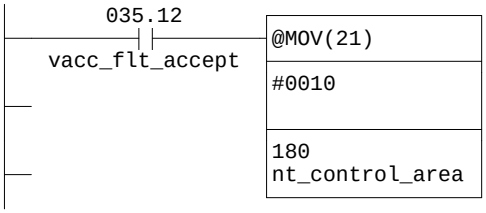


Network 9 - Screen display



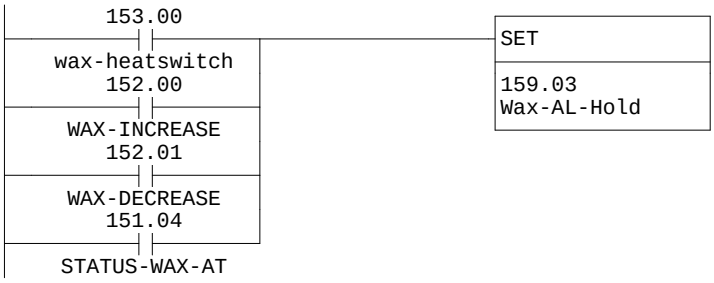




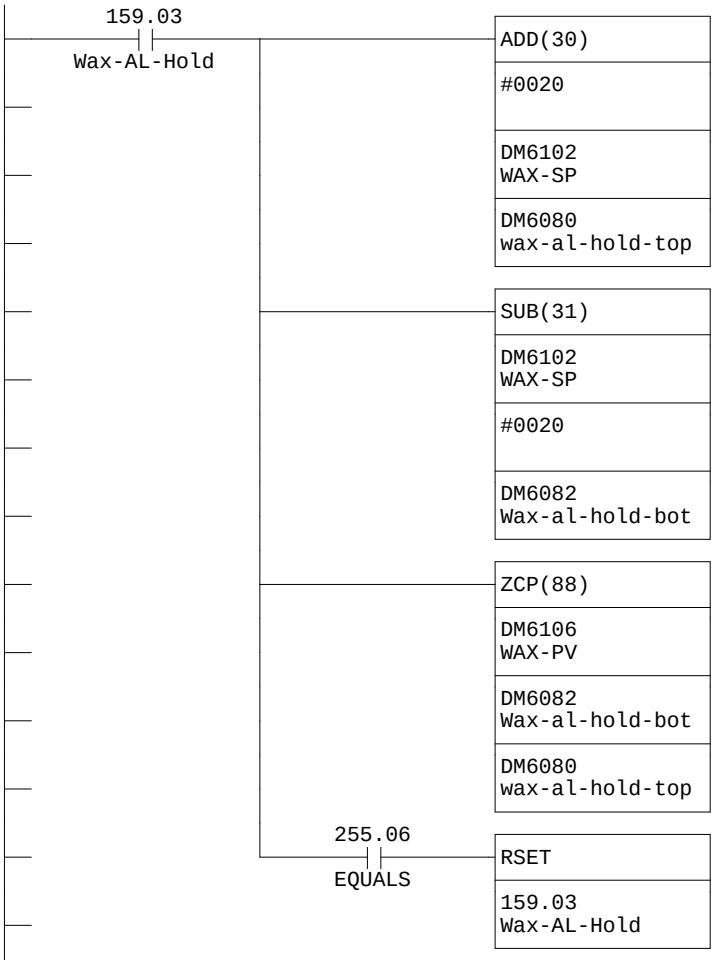


Network 13 - Wax-Sensor-Err

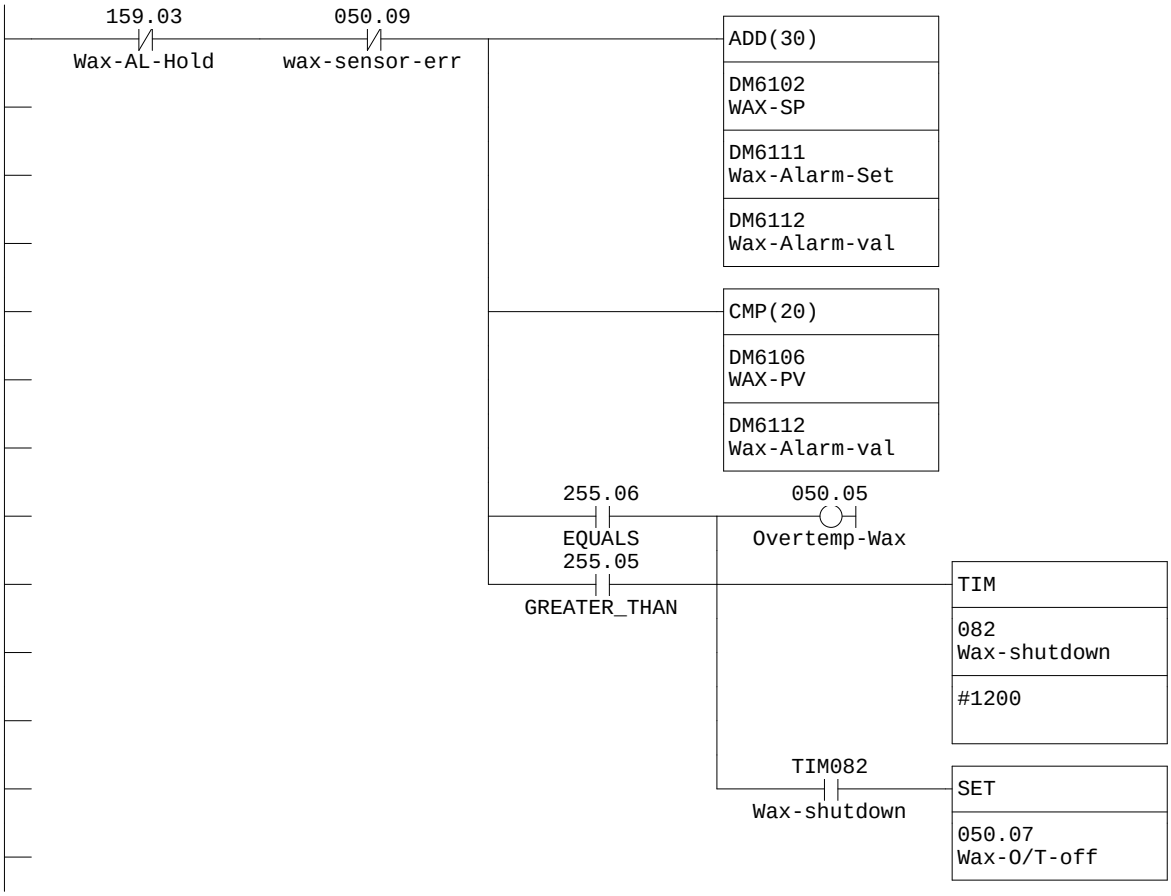
Network 14 - Wax-alm-Hold1



Network 15 - Wax-alm-Hold2

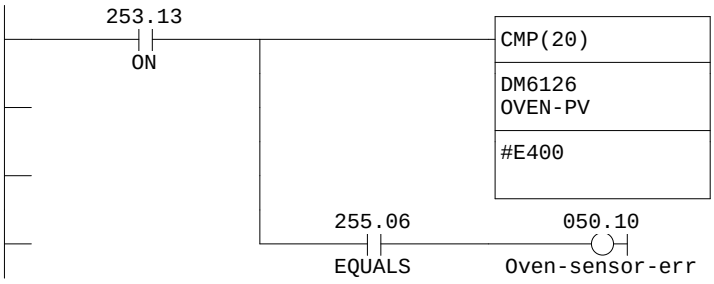


Network 16 - O/T alarm wax

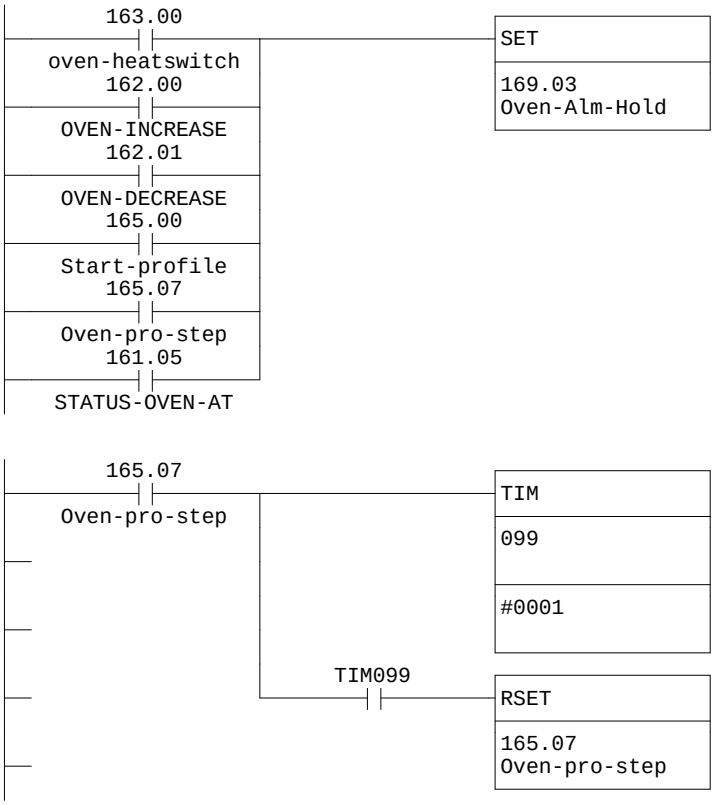


Network 17 - Wax-s/down-res

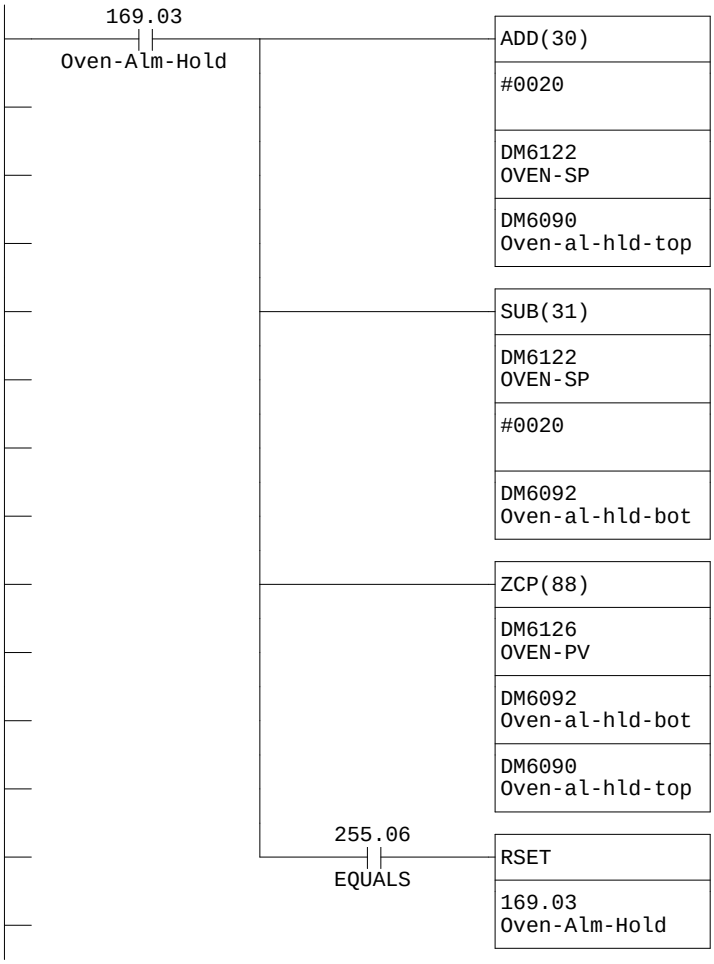
Network 18 - Oven-Sensor-err



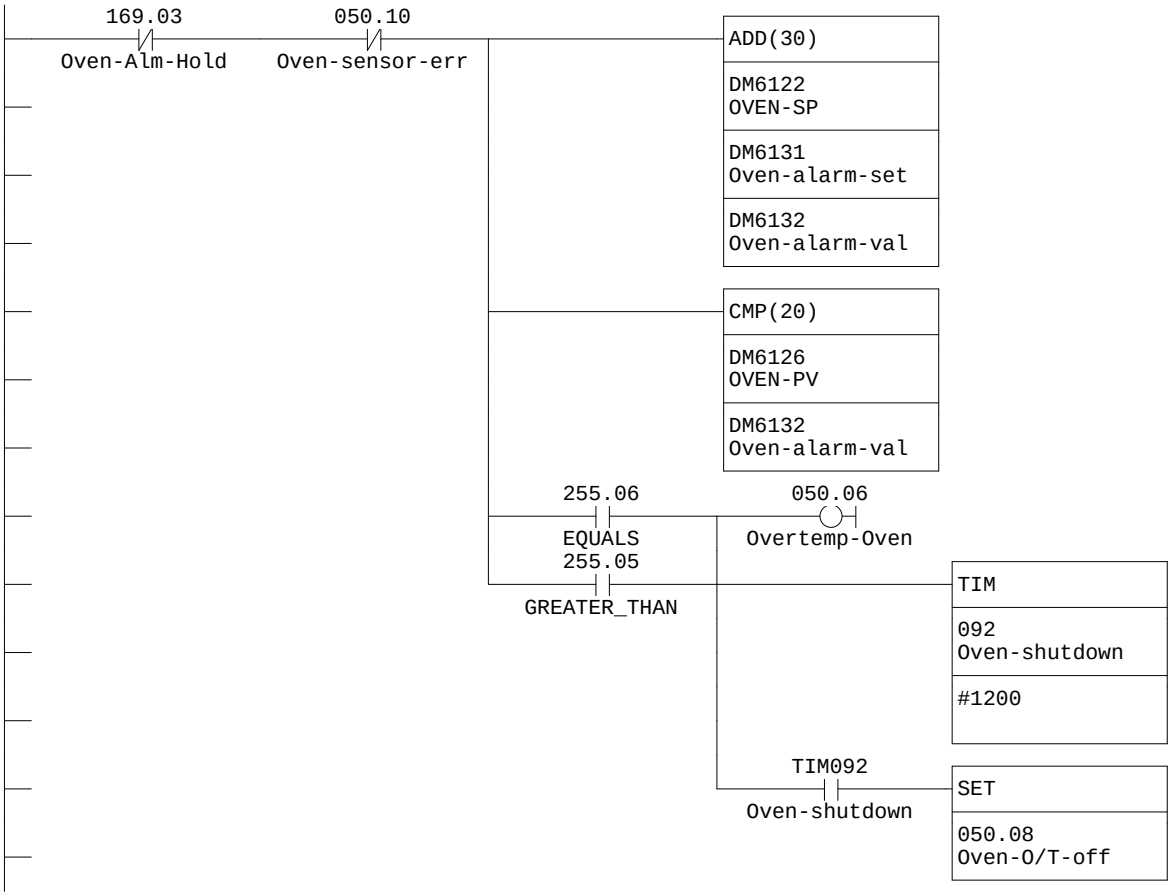
Network 19 - Oven-alm-Hold1



Network 21 - Oven-alm-Hold2



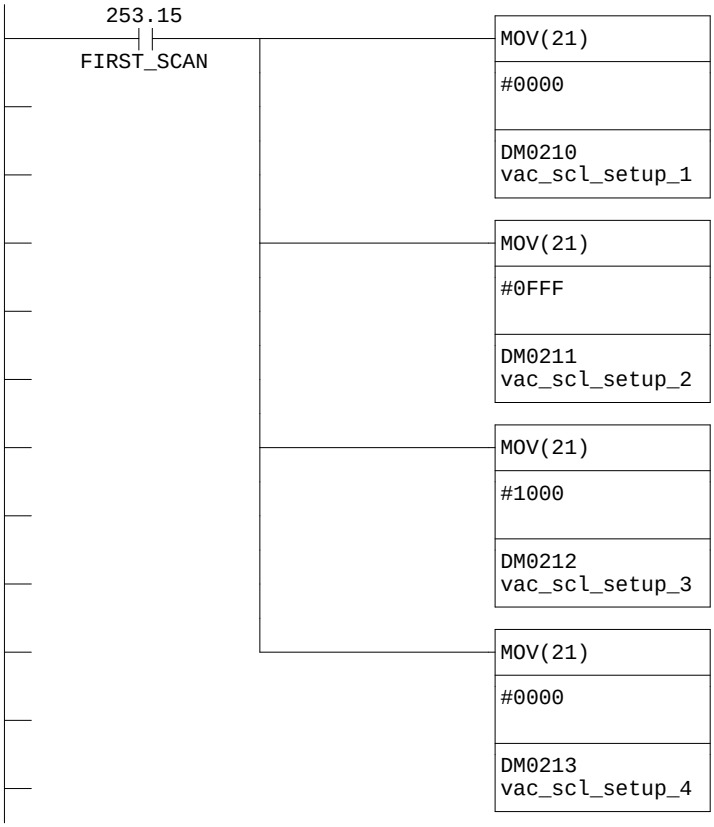
Network 22 - O/T alarm oven



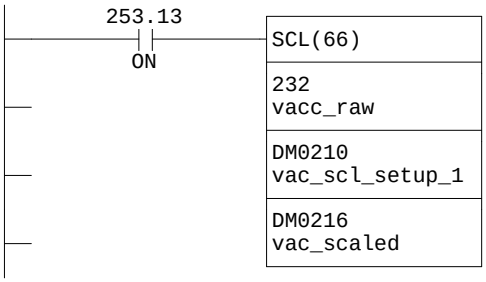
Network 23 - Oven-s/down-res

Main 3 - Vacuum display

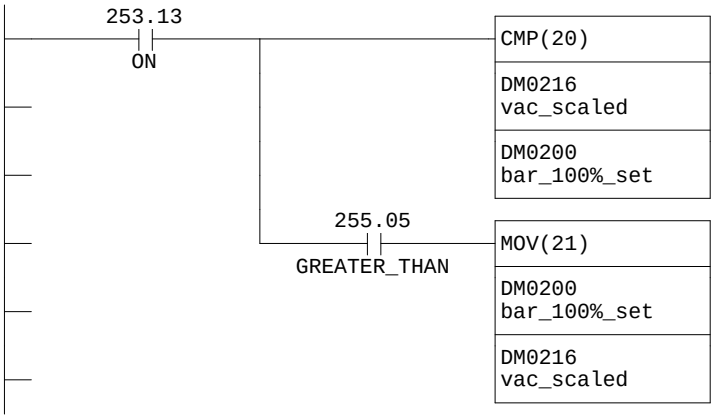
Network 1 - Set scaling

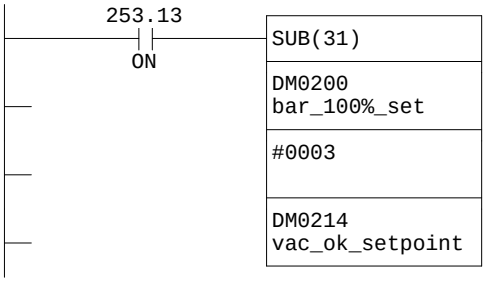


Network 2 - Scale display



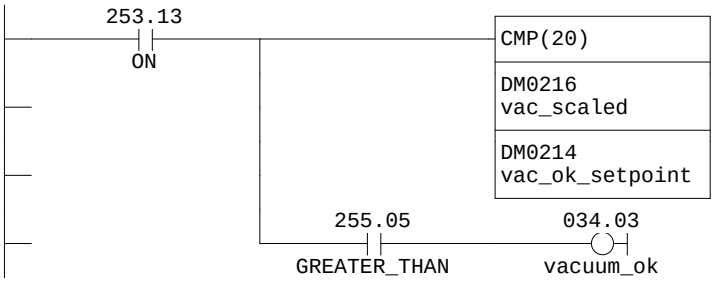
Network 3 - Limit display

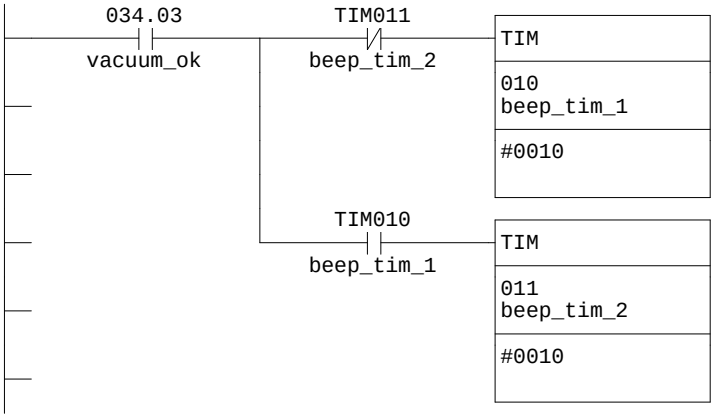


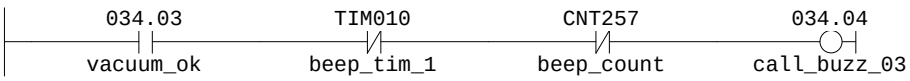


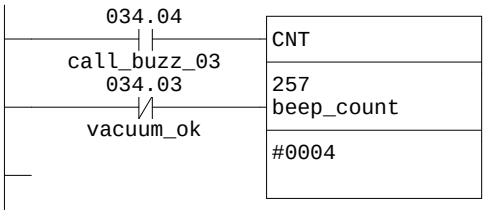
Network 5 - Vacuum OK

Vacuum "OK" light



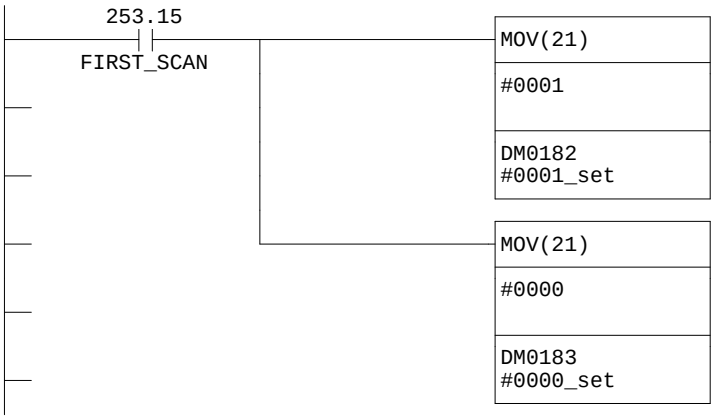




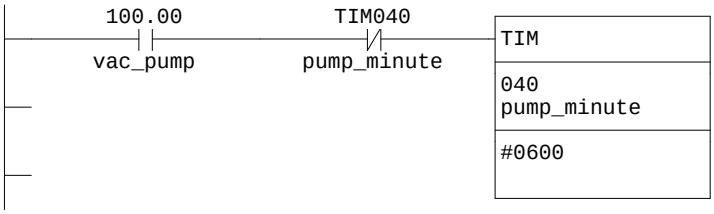


Main 4 - Run time+Hidden

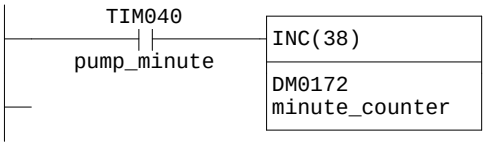
Network 1 - Set DM's



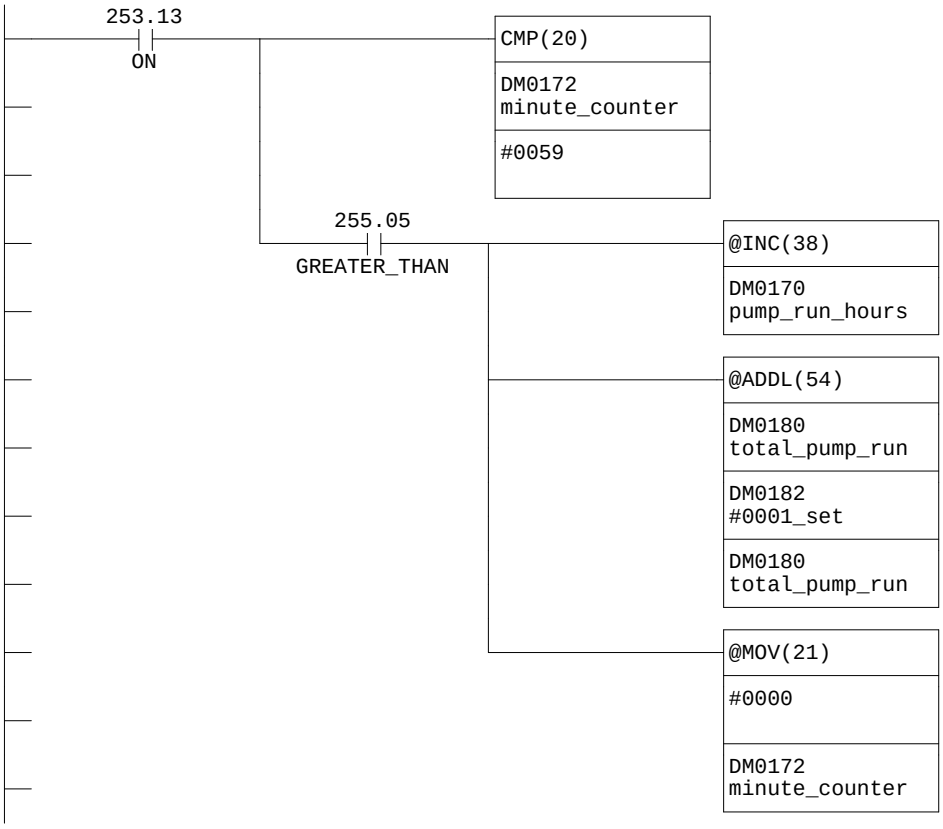
Network 2 - Minute timer



Network 3 - Minute counter

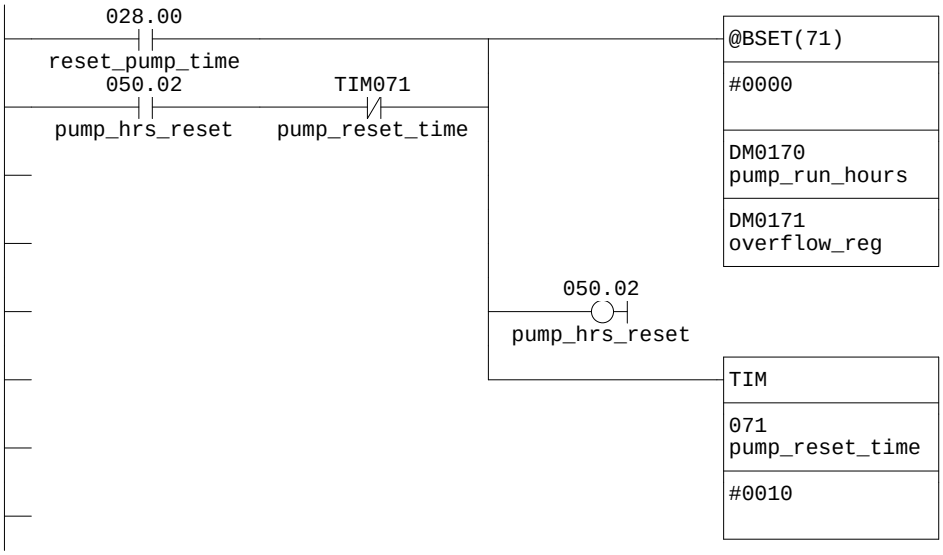


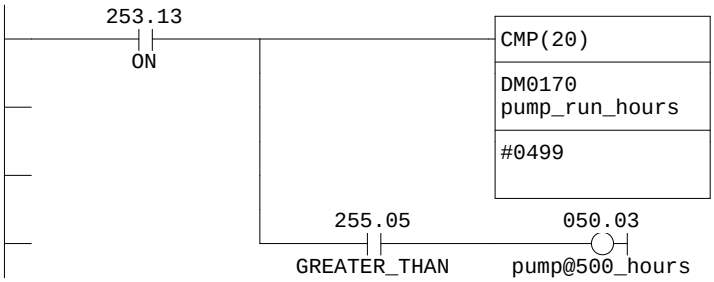
Network 4 - Hours count



Network 5 - Reset count

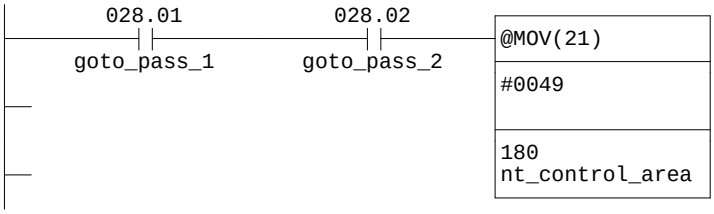
Reset count and send alarm to History.

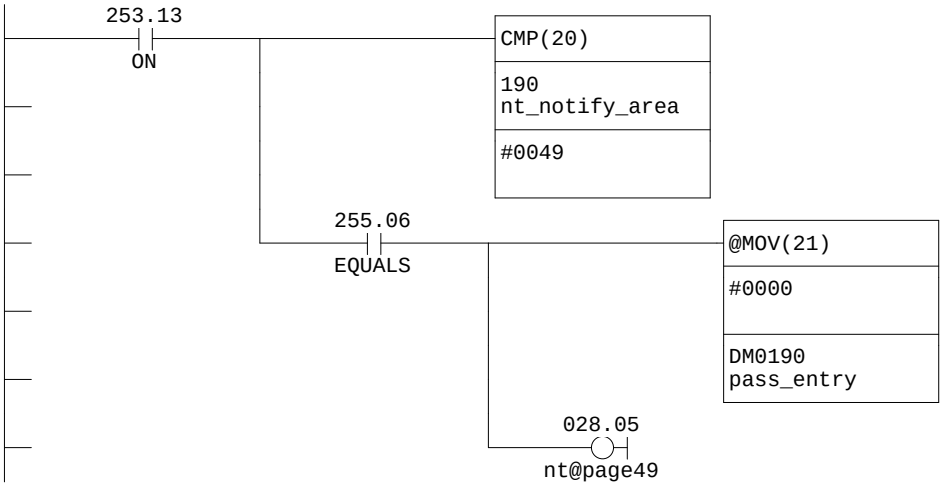


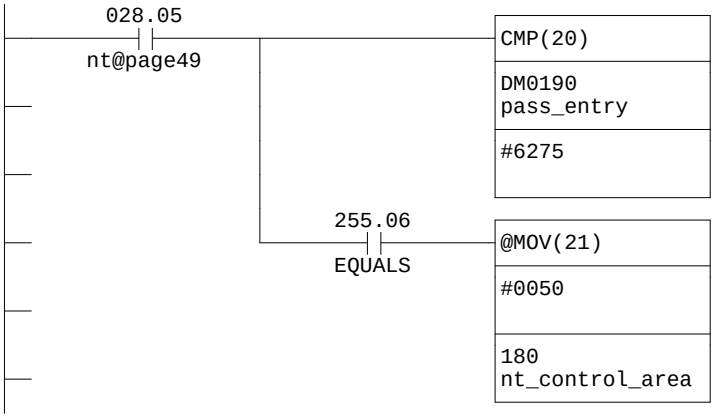


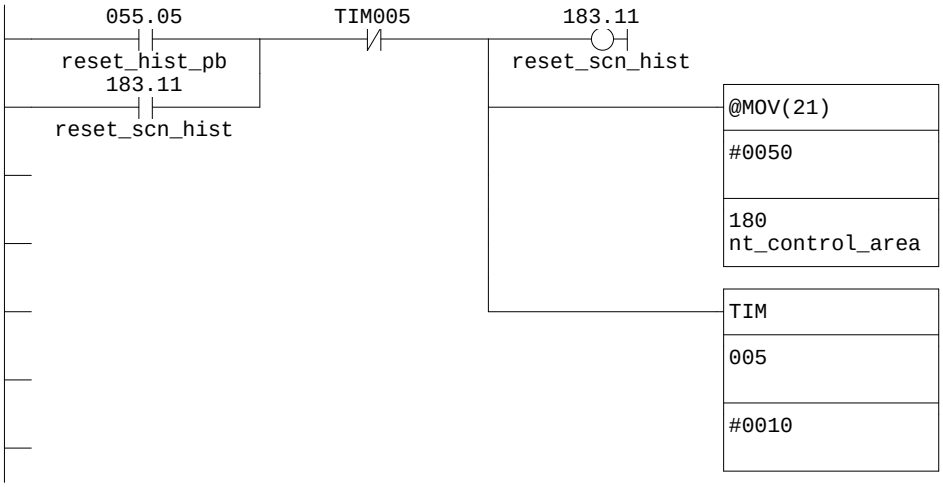
Network 7 - Goto password

Goto password screen



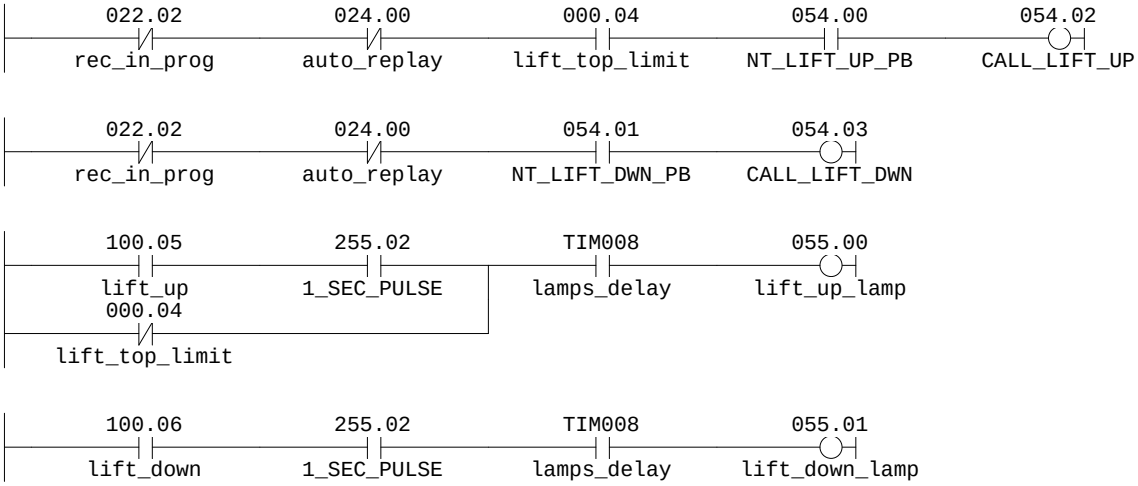






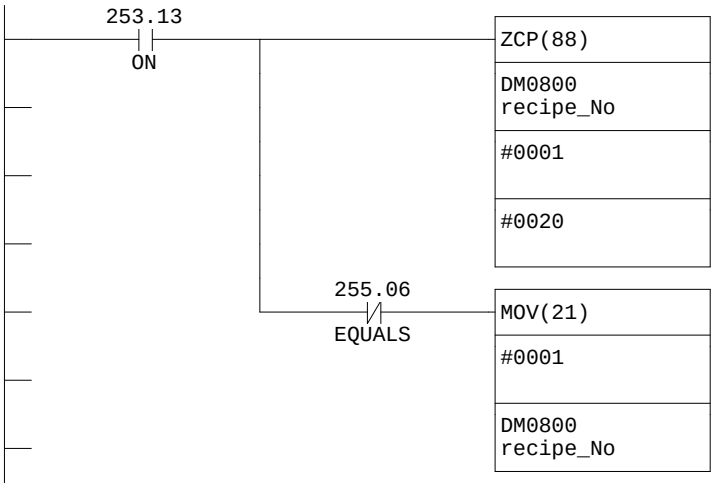
Main 5 - Hoist Control

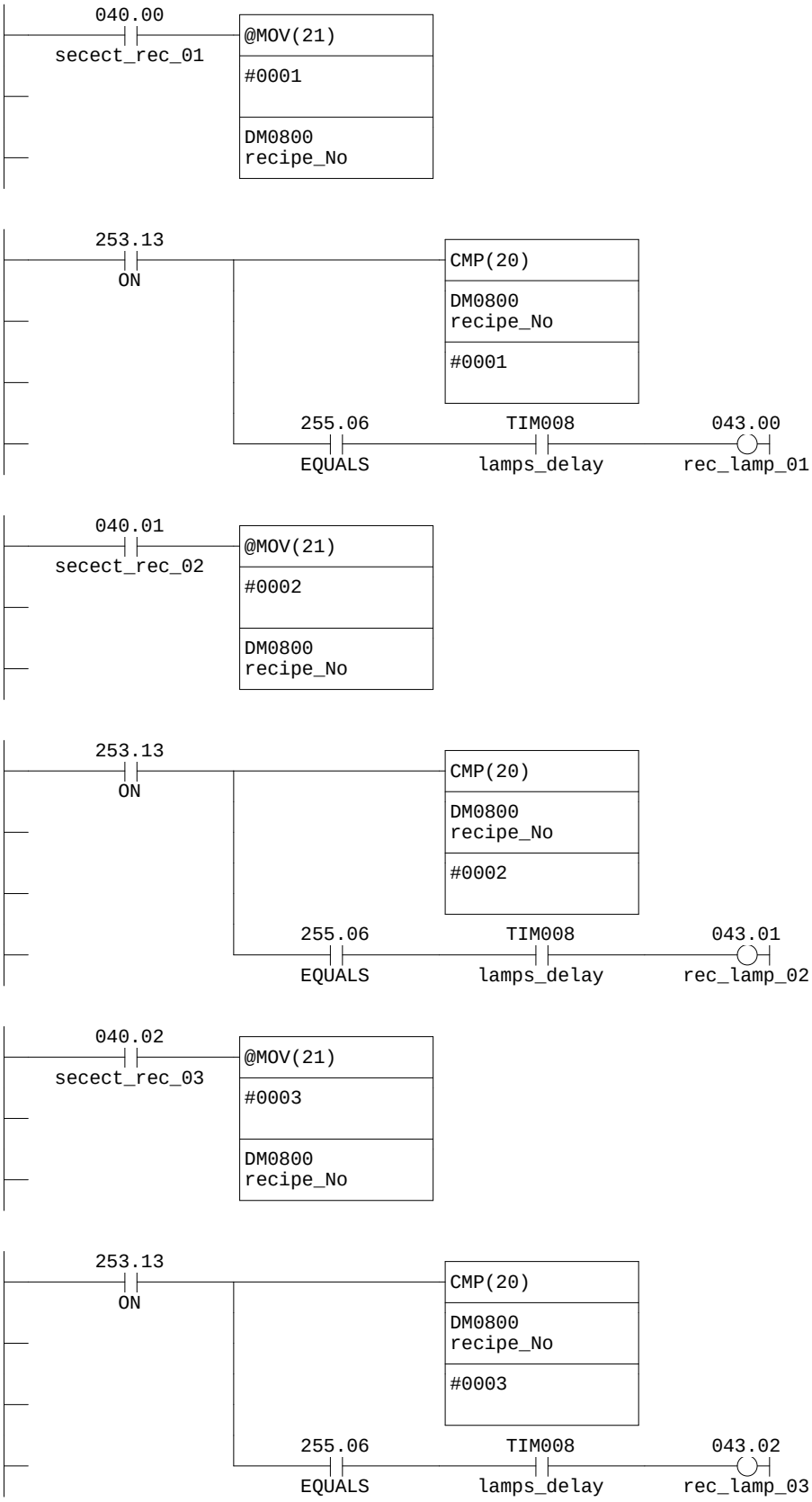
This block controls the raising and lowering of the hoist.

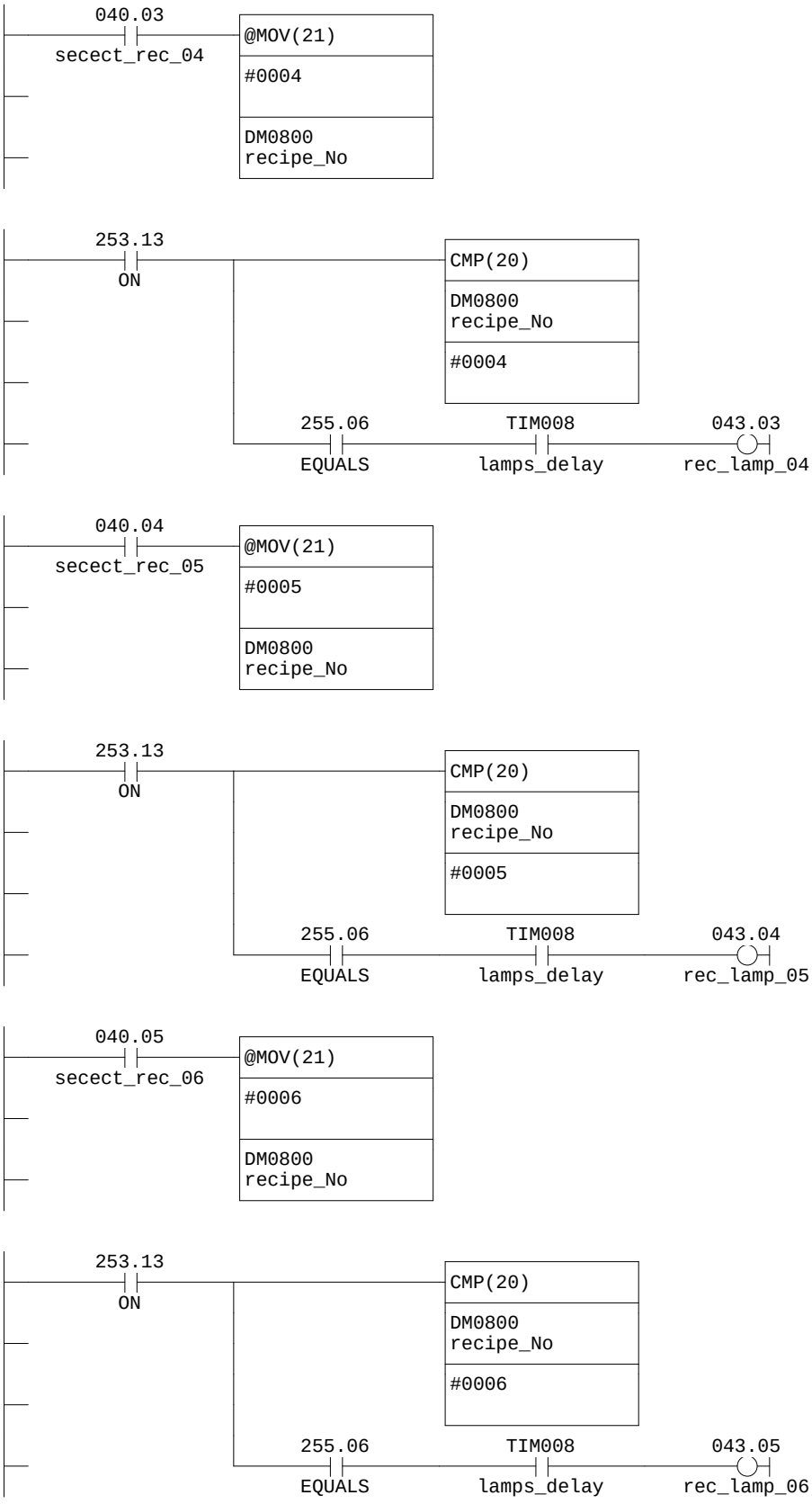


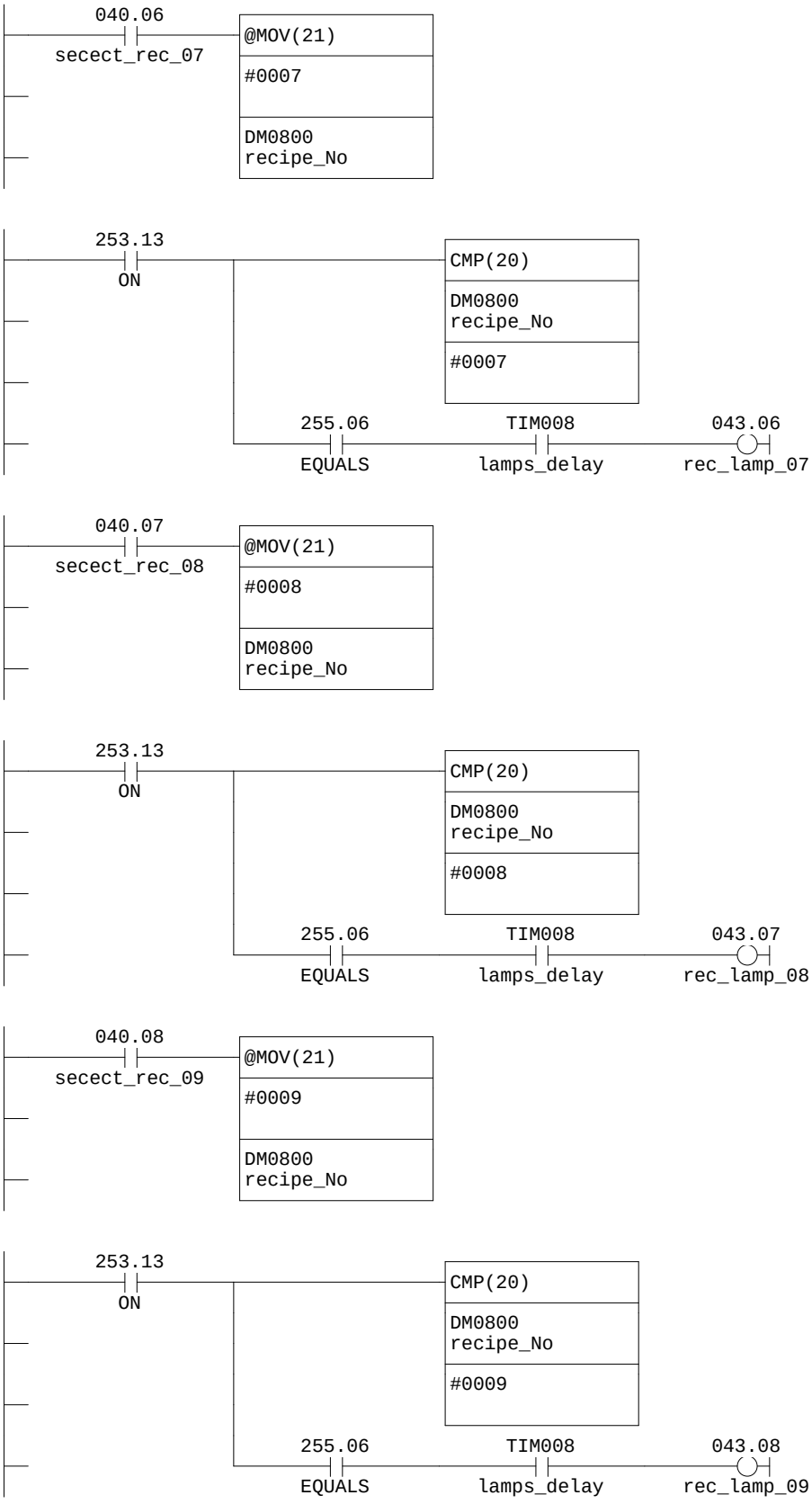
Main 6 - Select Recipe

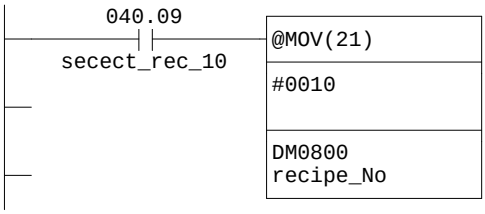
Network 1 - Set default

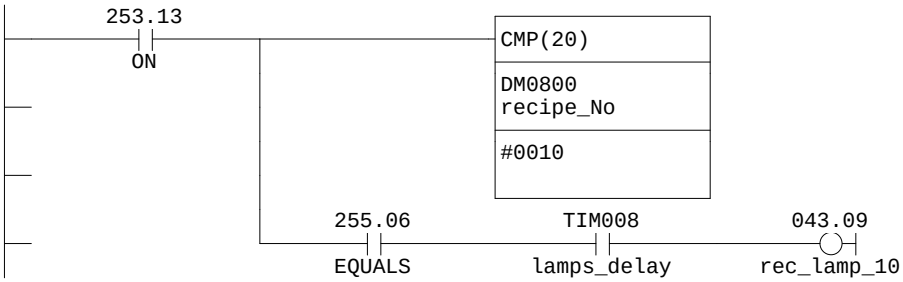


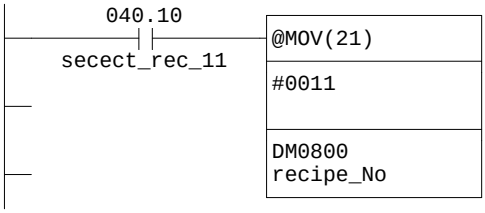

040.00
secect_rec_01
@MOV(21)
#0001
DM0800
recipe_No
253.13
ON
CMP(20)
DM0800
recipe_No
#0001
255.06
EQUALS
TIM008
lamps_delay
043.00
rec_lamp_01
040.01
secect_rec_02
@MOV(21)
#0002
DM0800
recipe_No
253.13
ON
CMP(20)
DM0800
recipe_No
#0002
255.06
EQUALS
TIM008
lamps_delay
043.01
rec_lamp_02
040.02
secect_rec_03
@MOV(21)
#0003
DM0800
recipe_No
253.13
ON
CMP(20)
DM0800
recipe_No
#0003
255.06
EQUALS
TIM008
lamps_delay
043.02
rec_lamp_03

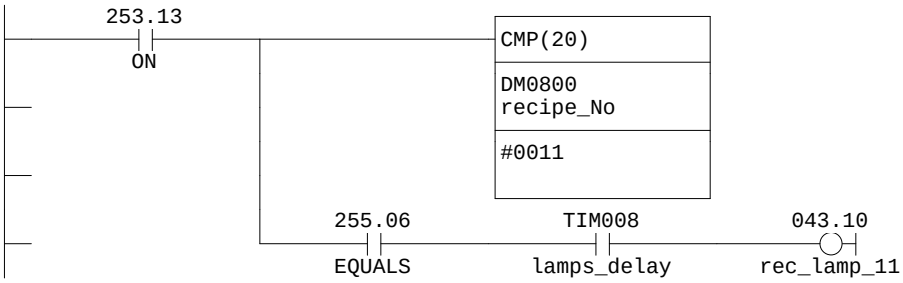

040.03
secect_rec_04
@MOV(21)
#0004
DM0800
recipe_No
253.13
ON
CMP(20)
DM0800
recipe_No
#0004
255.06
EQUALS
TIM008
lamps_delay
043.03
rec_lamp_04
040.04
secect_rec_05
@MOV(21)
#0005
DM0800
recipe_No
253.13
ON
CMP(20)
DM0800
recipe_No
#0005
255.06
EQUALS
TIM008
lamps_delay
043.04
rec_lamp_05
040.05
secect_rec_06
@MOV(21)
#0006
DM0800
recipe_No
253.13
ON
CMP(20)
DM0800
recipe_No
#0006
255.06
EQUALS
TIM008
lamps_delay
043.05
rec_lamp_06

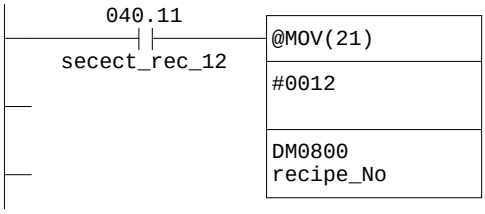

040.06
secect_rec_07
@MOV(21)
#0007
DM0800
recipe_No
253.13
ON
CMP(20)
DM0800
recipe_No
#0007
255.06
EQUALS
TIM008
lamps_delay
043.06
rec_lamp_07
040.07
secect_rec_08
@MOV(21)
#0008
DM0800
recipe_No
253.13
ON
CMP(20)
DM0800
recipe_No
#0008
255.06
EQUALS
TIM008
lamps_delay
043.07
rec_lamp_08
040.08
secect_rec_09
@MOV(21)
#0009
DM0800
recipe_No
253.13
ON
CMP(20)
DM0800
recipe_No
#0009
255.06
EQUALS
TIM008
lamps_delay
043.08
rec_lamp_09

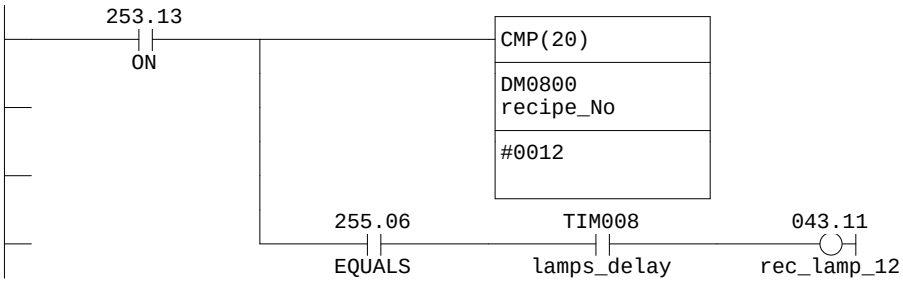

040.09
secect_rec_10
@MOV(21)
#0010
DM0800
recipe_No

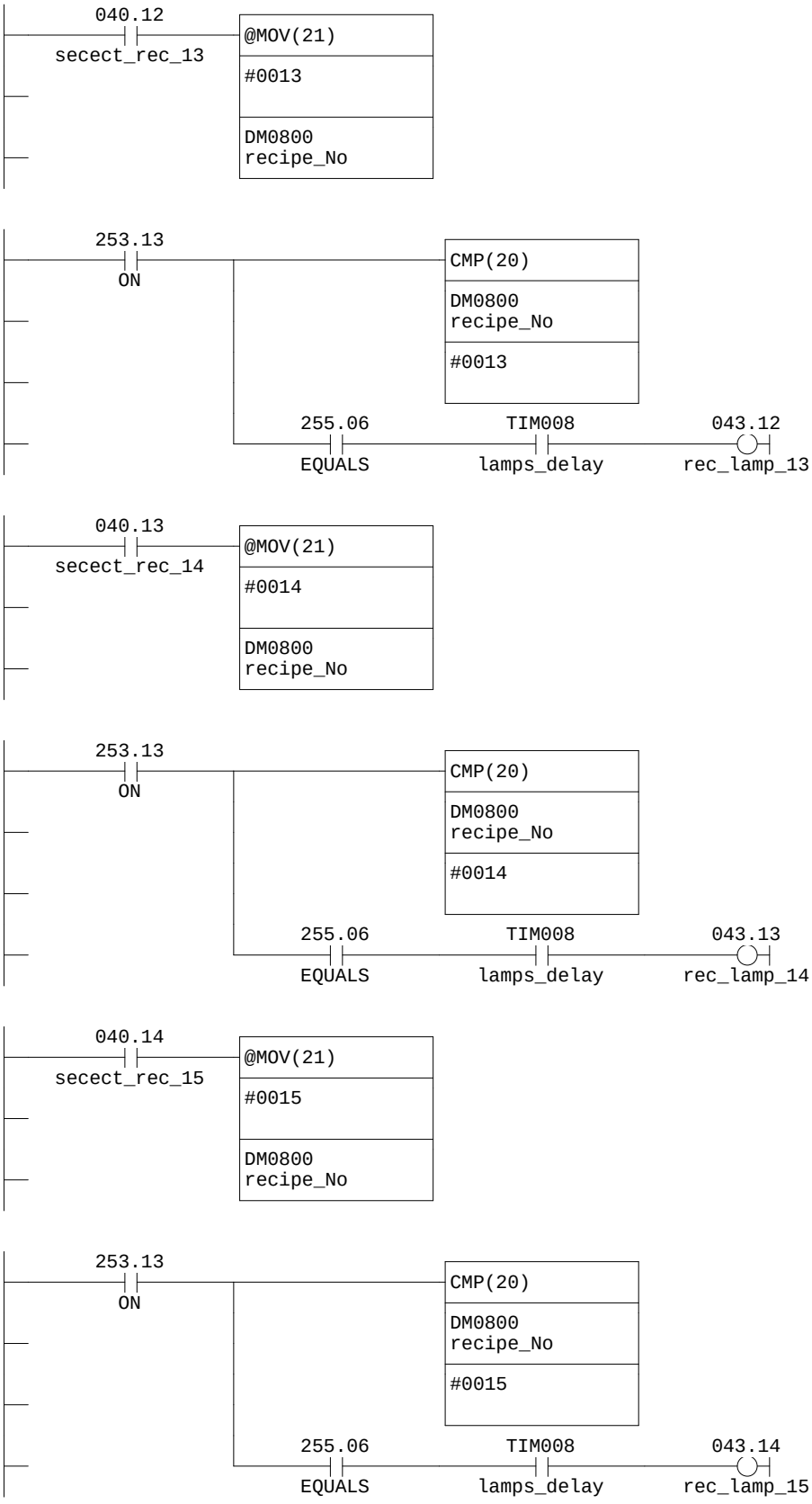

253.13
ON
CMP(20)
DM0800
recipe_No
#0010
255.06
EQUALS
TIM008
lamps_delay
043.09
rec_lamp_10

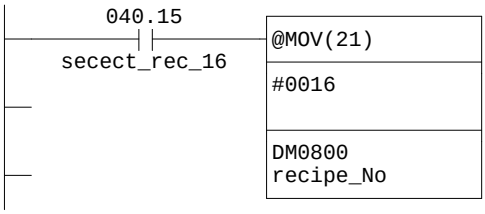

040.10
secect_rec_11
@MOV(21)
#0011
DM0800
recipe_No

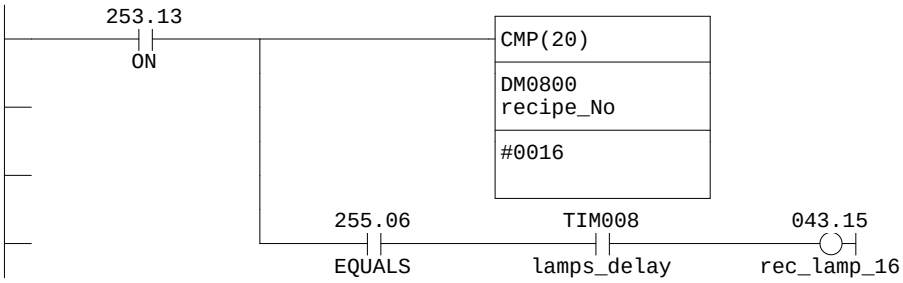

253.13
ON
CMP(20)
DM0800
recipe_No
#0011
255.06
EQUALS
TIM008
lamps_delay
043.10
rec_lamp_11

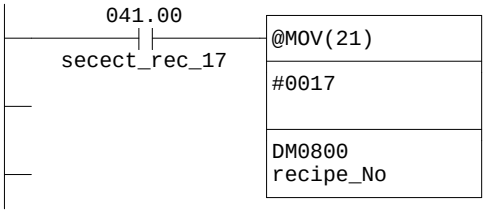

040.11
secect_rec_12
@MOV(21)
#0012
DM0800
recipe_No

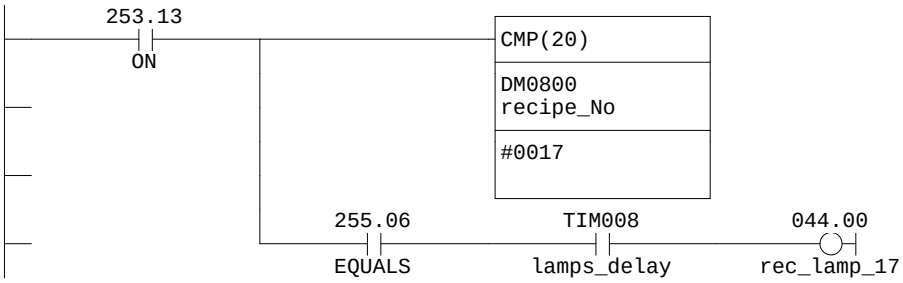

253.13
ON
CMP(20)
DM0800
recipe_No
#0012
255.06
EQUALS
TIM008
lamps_delay
043.11
rec_lamp_12

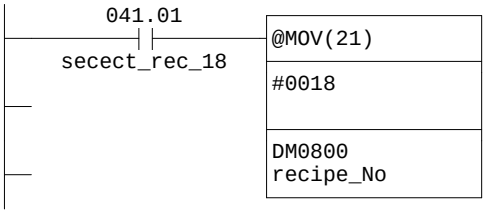

040.12
secect_rec_13
@MOV(21)
#0013
DM0800
recipe_No
253.13
ON
CMP(20)
DM0800
recipe_No
#0013
255.06
EQUALS
TIM008
lamps_delay
043.12
rec_lamp_13
040.13
secect_rec_14
@MOV(21)
#0014
DM0800
recipe_No
253.13
ON
CMP(20)
DM0800
recipe_No
#0014
255.06
EQUALS
TIM008
lamps_delay
043.13
rec_lamp_14
040.14
secect_rec_15
@MOV(21)
#0015
DM0800
recipe_No
253.13
ON
CMP(20)
DM0800
recipe_No
#0015
255.06
EQUALS
TIM008
lamps_delay
043.14
rec_lamp_15

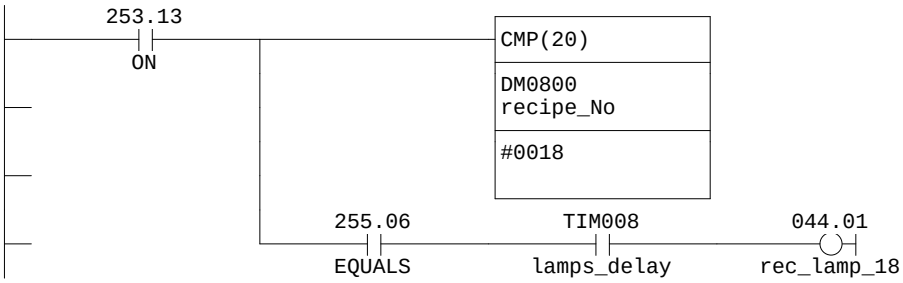

040.15
secect_rec_16
@MOV(21)
#0016
DM0800
recipe_No

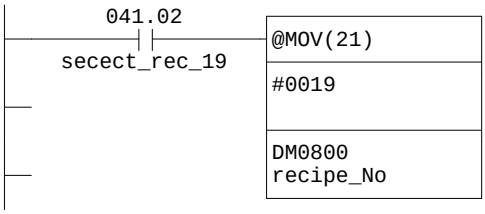

253.13
ON
CMP(20)
DM0800
recipe_No
#0016
255.06
EQUALS
TIM008
lamps_delay
043.15
rec_lamp_16

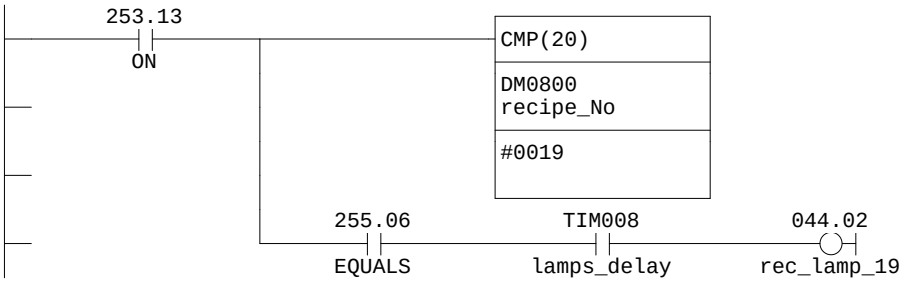

041.00
secect_rec_17
@MOV(21)
#0017
DM0800
recipe_No

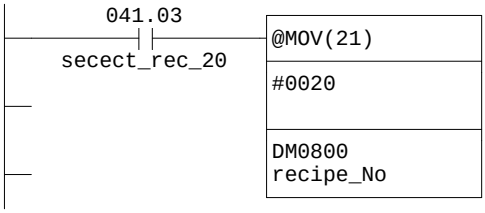

253.13
ON
CMP(20)
DM0800
recipe_No
#0017
255.06
EQUALS
TIM008
lamps_delay
044.00
rec_lamp_17

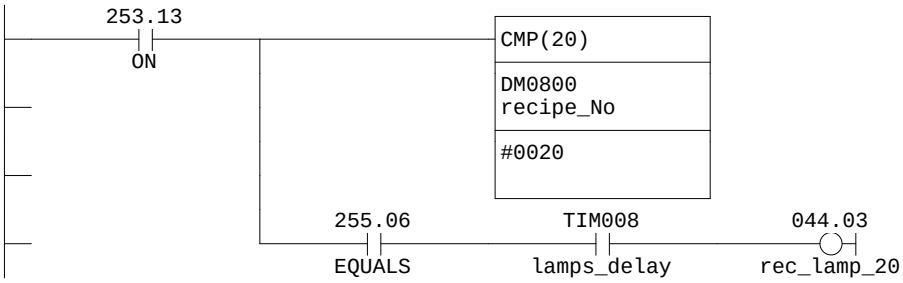

041.01
secect_rec_18
@MOV(21)
#0018
DM0800
recipe_No


253.13
ON
CMP(20)
DM0800
recipe_No
#0018
255.06
EQUALS
TIM008
lamps_delay
044.01
rec_lamp_18

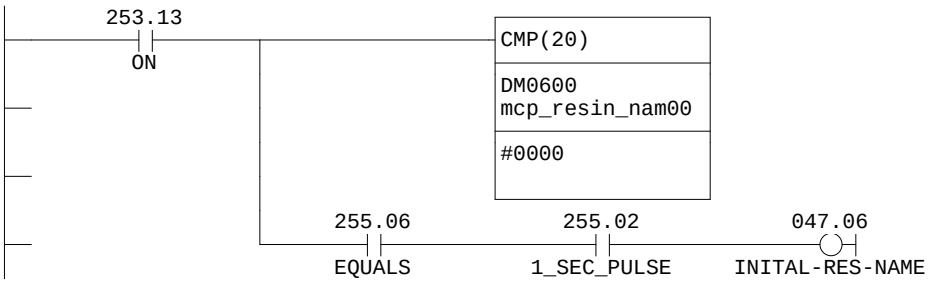


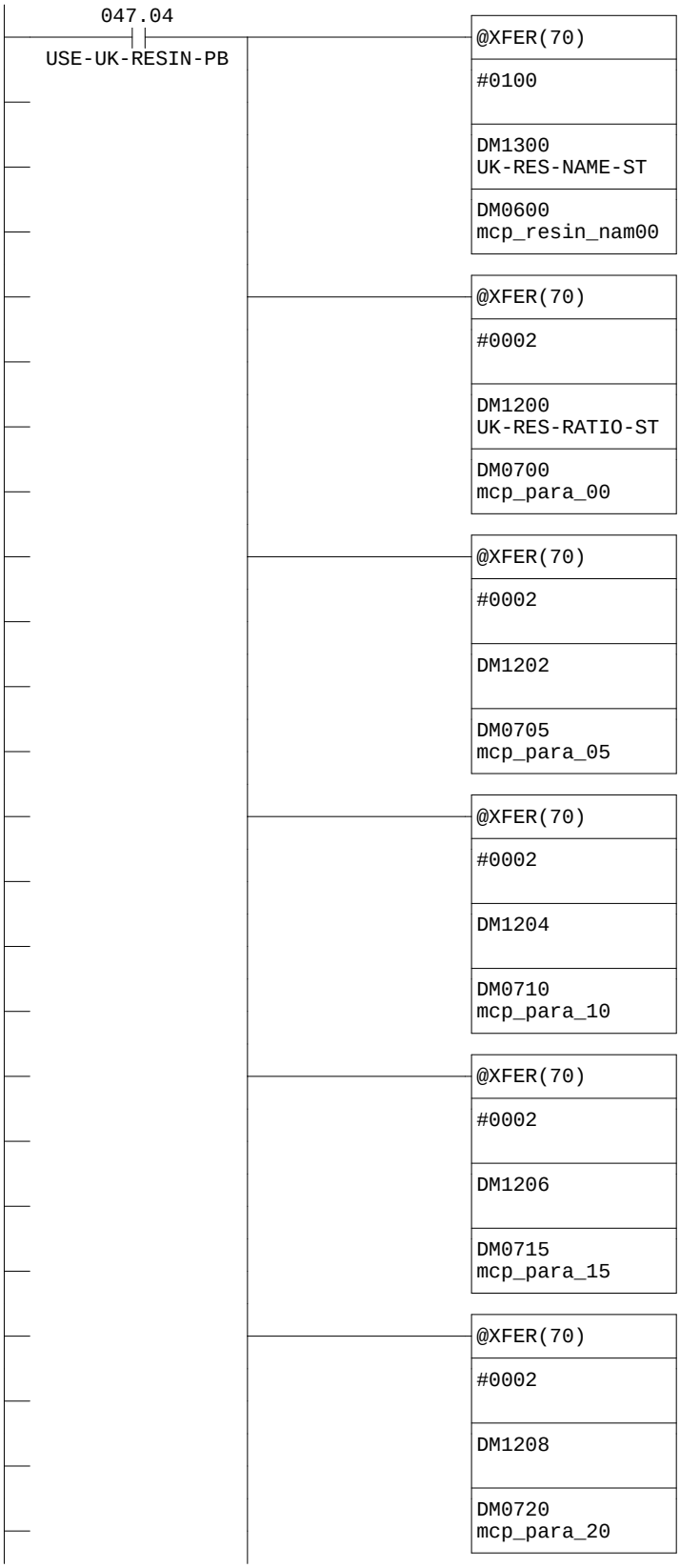


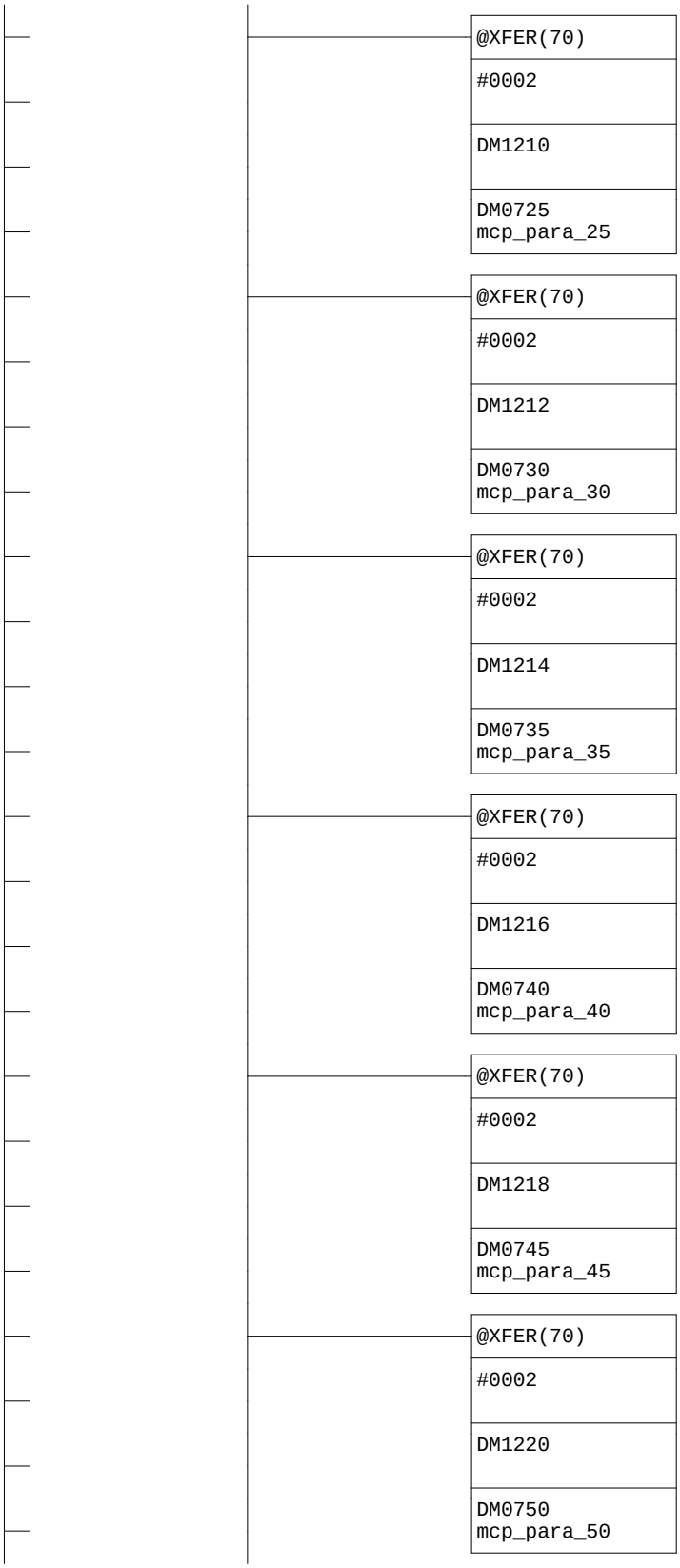


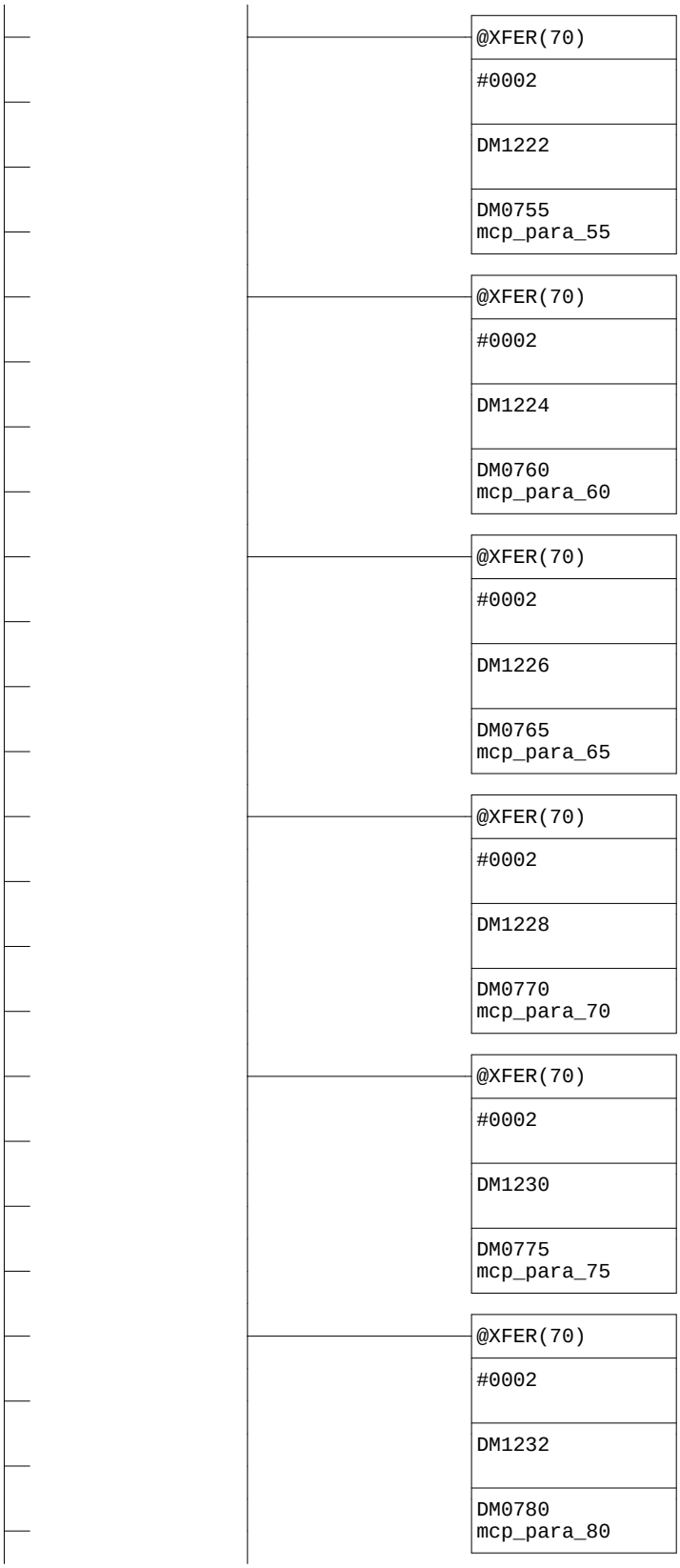


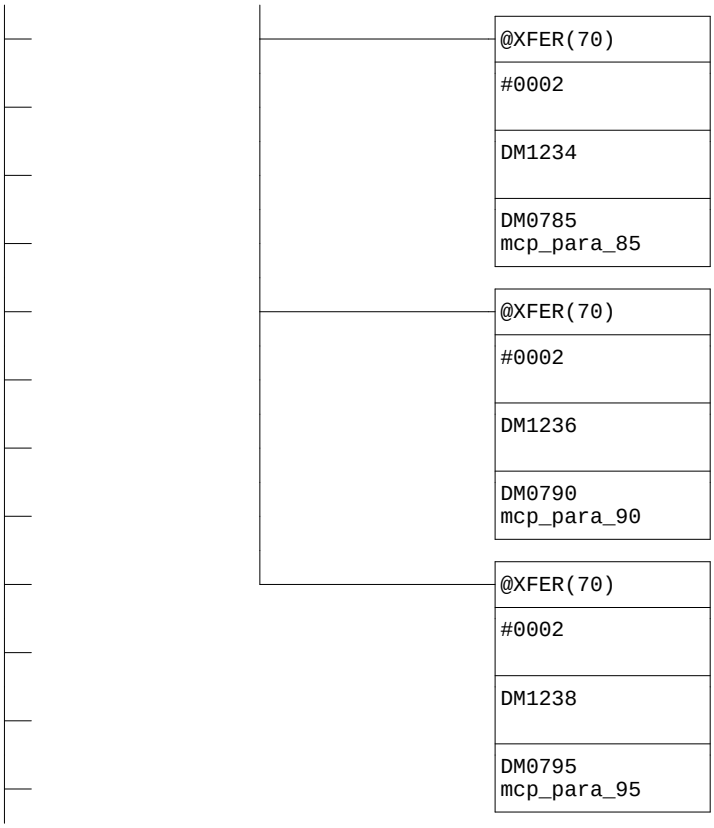
Main 7 - Sel. MCP Resin

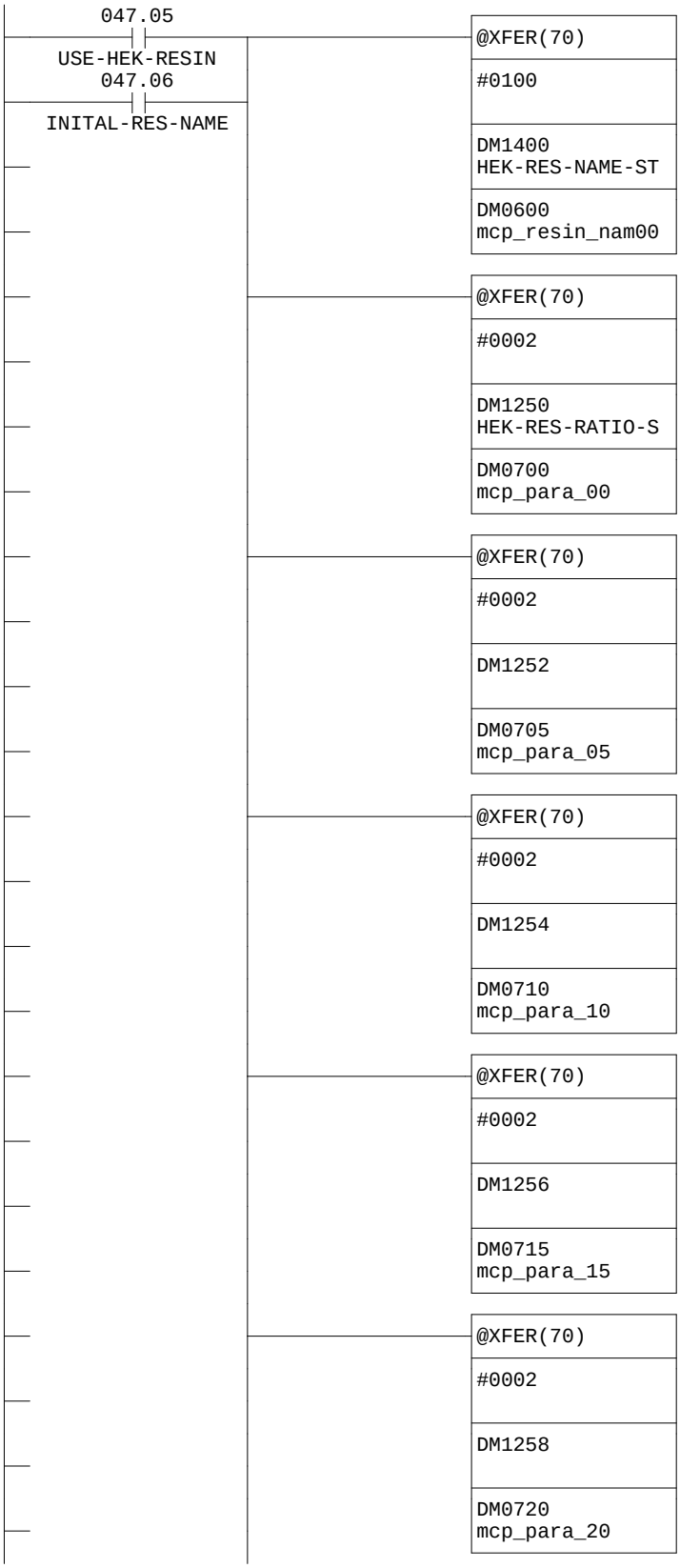


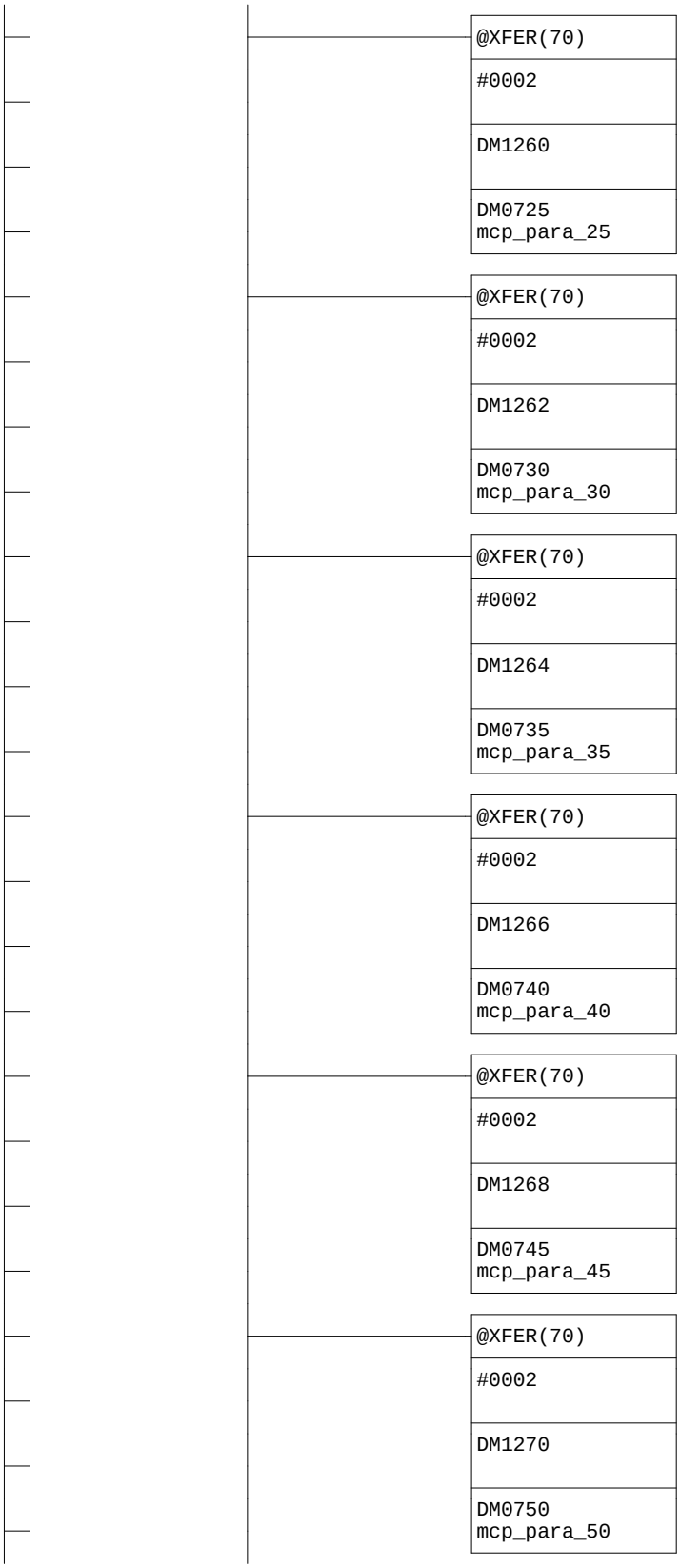

047.04
USE-UK-RESIN-PB
@XFER(70)
#0100
DM1300
UK-RES-NAME-ST
DM0600
mcp_resin_nam00
@XFER(70)
#0002
DM1200
UK-RES-RATIO-ST
DM0700
mcp_para_00
@XFER(70)
#0002
DM1202
DM0705
mcp_para_05
@XFER(70)
#0002
DM1204
DM0710
mcp_para_10
@XFER(70)
#0002
DM1206
DM0715
mcp_para_15
@XFER(70)
#0002
DM1208
DM0720
mcp_para_20

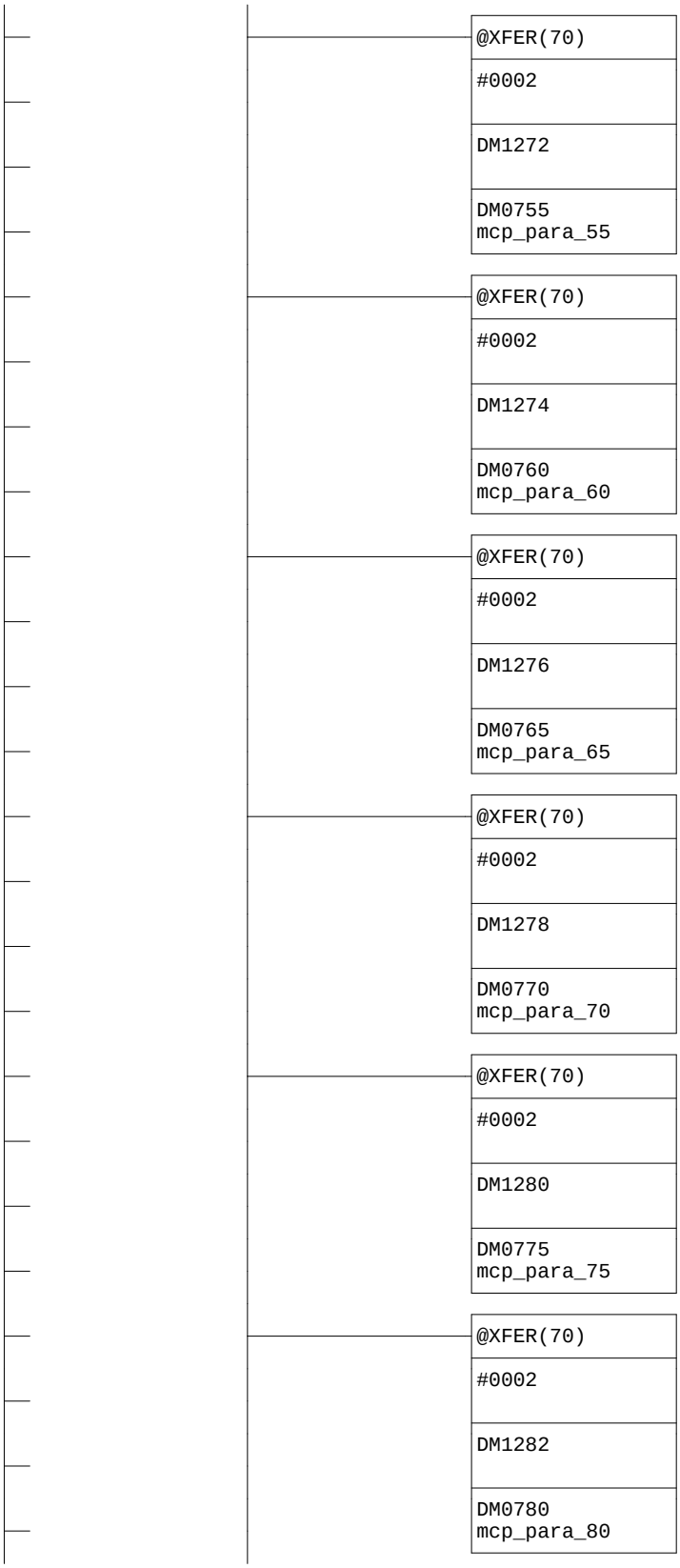

@XFER(70)
#0002
DM1210
DM0725
mcp_para_25
@XFER(70)
#0002
DM1212
DM0730
mcp_para_30
@XFER(70)
#0002
DM1214
DM0735
mcp_para_35
@XFER(70)
#0002
DM1216
DM0740
mcp_para_40
@XFER(70)
#0002
DM1218
DM0745
mcp_para_45
@XFER(70)
#0002
DM1220
DM0750
mcp_para_50

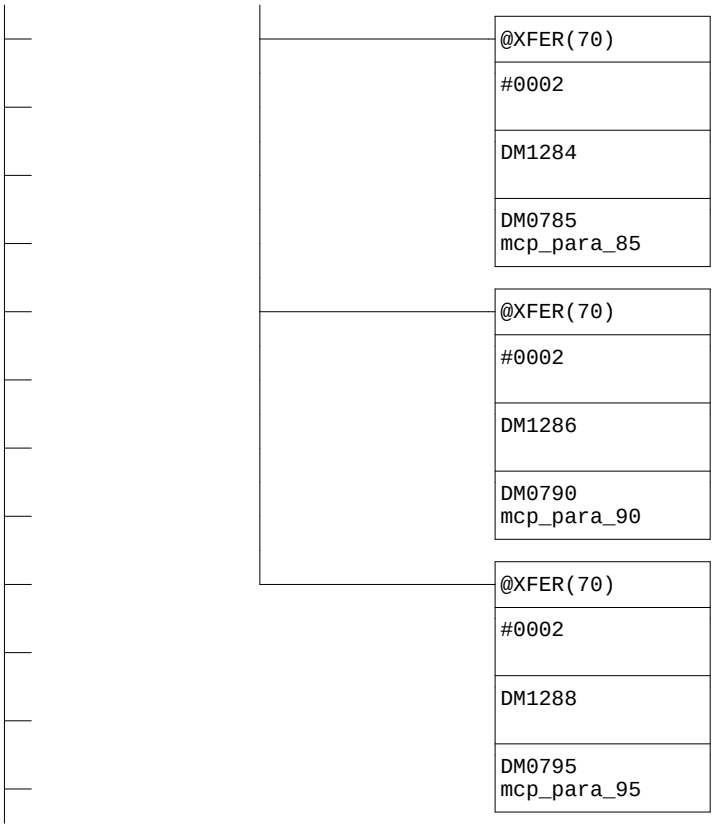

@XFER(70)
#0002
DM1222
DM0755
mcp_para_55
@XFER(70)
#0002
DM1224
DM0760
mcp_para_60
@XFER(70)
#0002
DM1226
DM0765
mcp_para_65
@XFER(70)
#0002
DM1228
DM0770
mcp_para_70
@XFER(70)
#0002
DM1230
DM0775
mcp_para_75
@XFER(70)
#0002
DM1232
DM0780
mcp_para_80

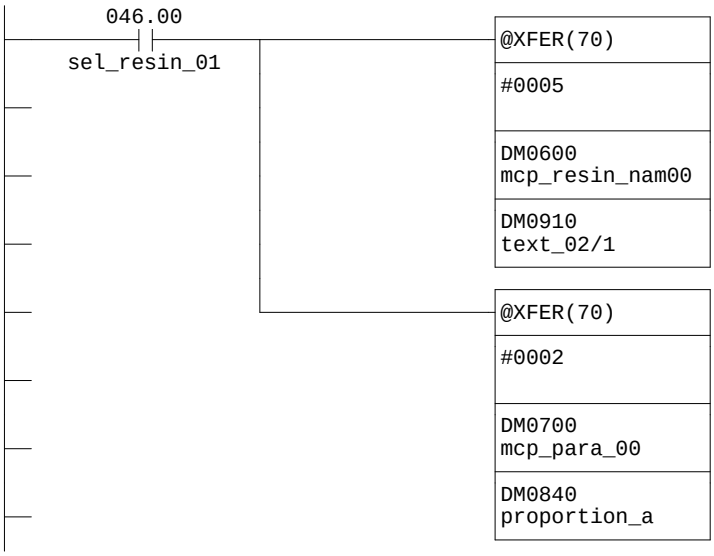

@XFER(70)
#0002
DM1234
DM0785
mcp_para_85
@XFER(70)
#0002
DM1236
DM0790
mcp_para_90
@XFER(70)
#0002
DM1238
DM0795
mcp_para_95

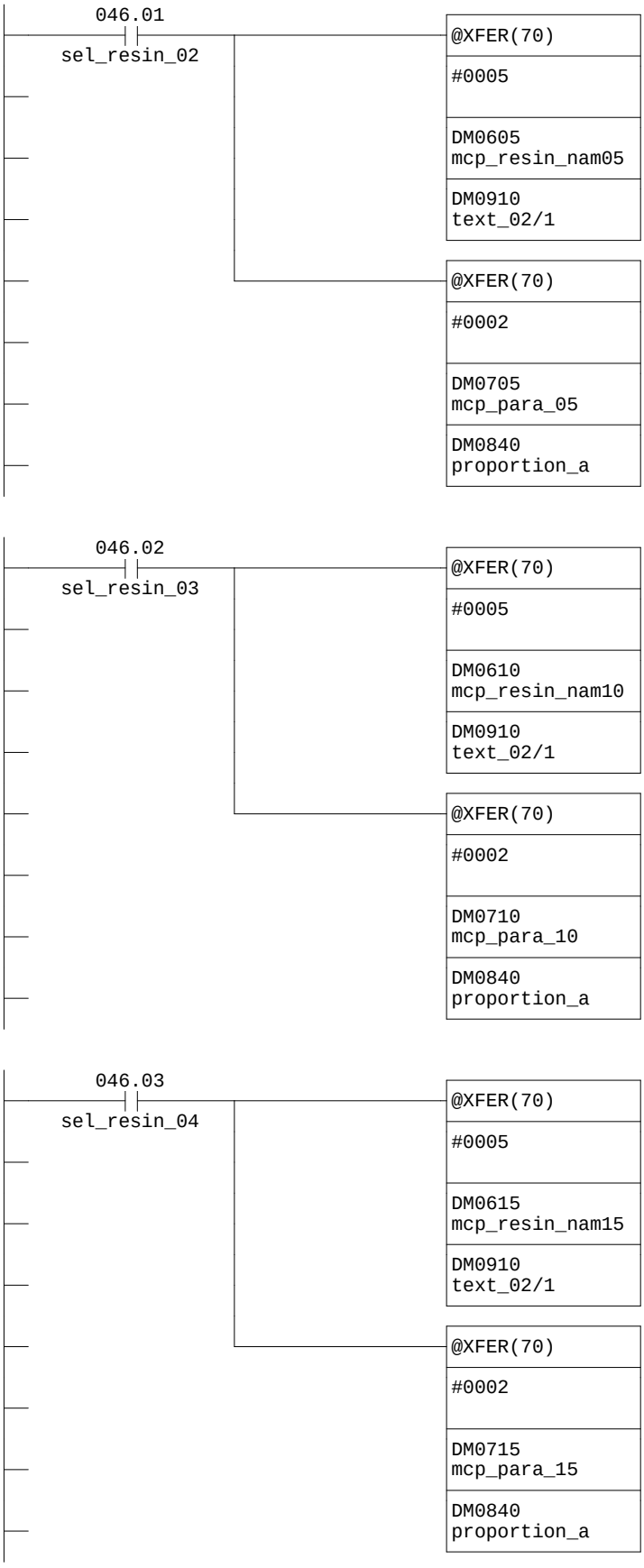

047.05
USE-HEK-RESIN
047.06
INITAL-RES-NAME
@XFER(70)
#0100
DM1400
HEK-RES-NAME-ST
DM0600
mcp_resin_nam00
@XFER(70)
#0002
DM1250
HEK-RES-RATIO-S
DM0700
mcp_para_00
@XFER(70)
#0002
DM1252
DM0705
mcp_para_05
@XFER(70)
#0002
DM1254
DM0710
mcp_para_10
@XFER(70)
#0002
DM1256
DM0715
mcp_para_15
@XFER(70)
#0002
DM1258
DM0720
mcp_para_20

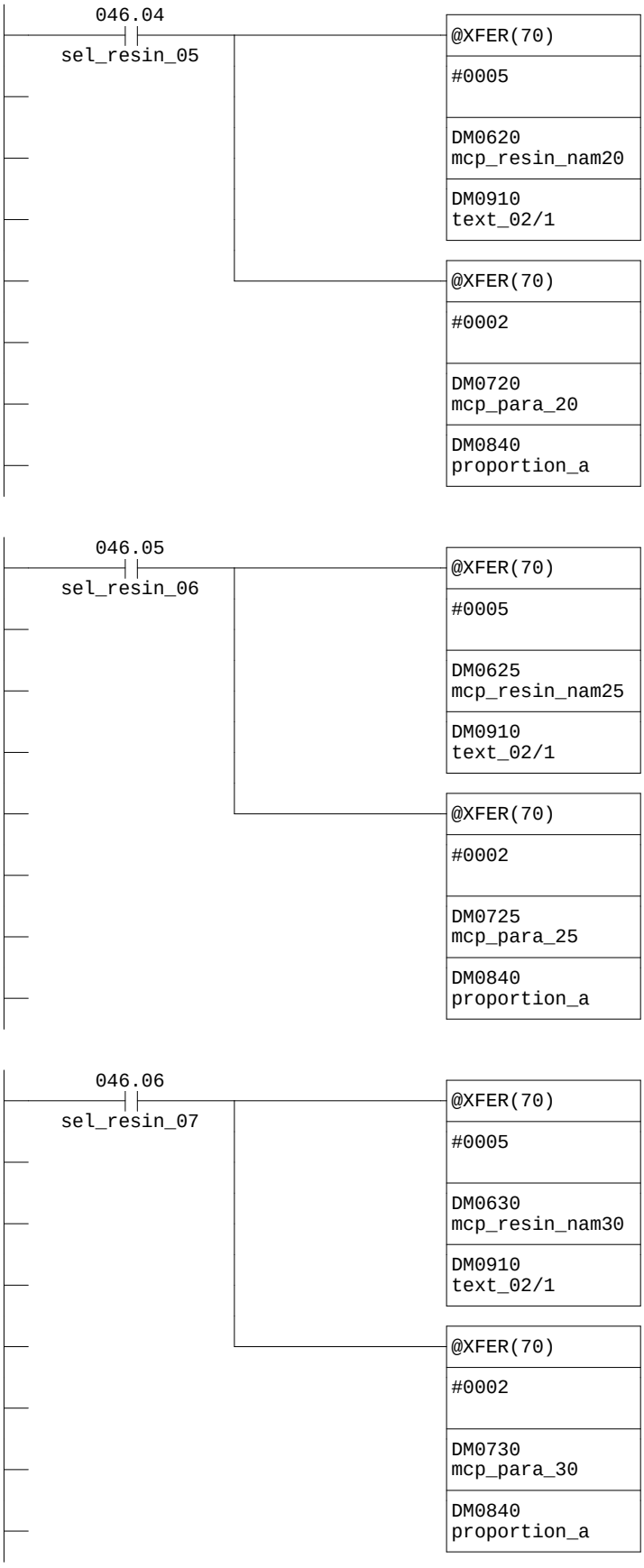

@XFER(70)
#0002
DM1260
DM0725
mcp_para_25
@XFER(70)
#0002
DM1262
DM0730
mcp_para_30
@XFER(70)
#0002
DM1264
DM0735
mcp_para_35
@XFER(70)
#0002
DM1266
DM0740
mcp_para_40
@XFER(70)
#0002
DM1268
DM0745
mcp_para_45
@XFER(70)
#0002
DM1270
DM0750
mcp_para_50

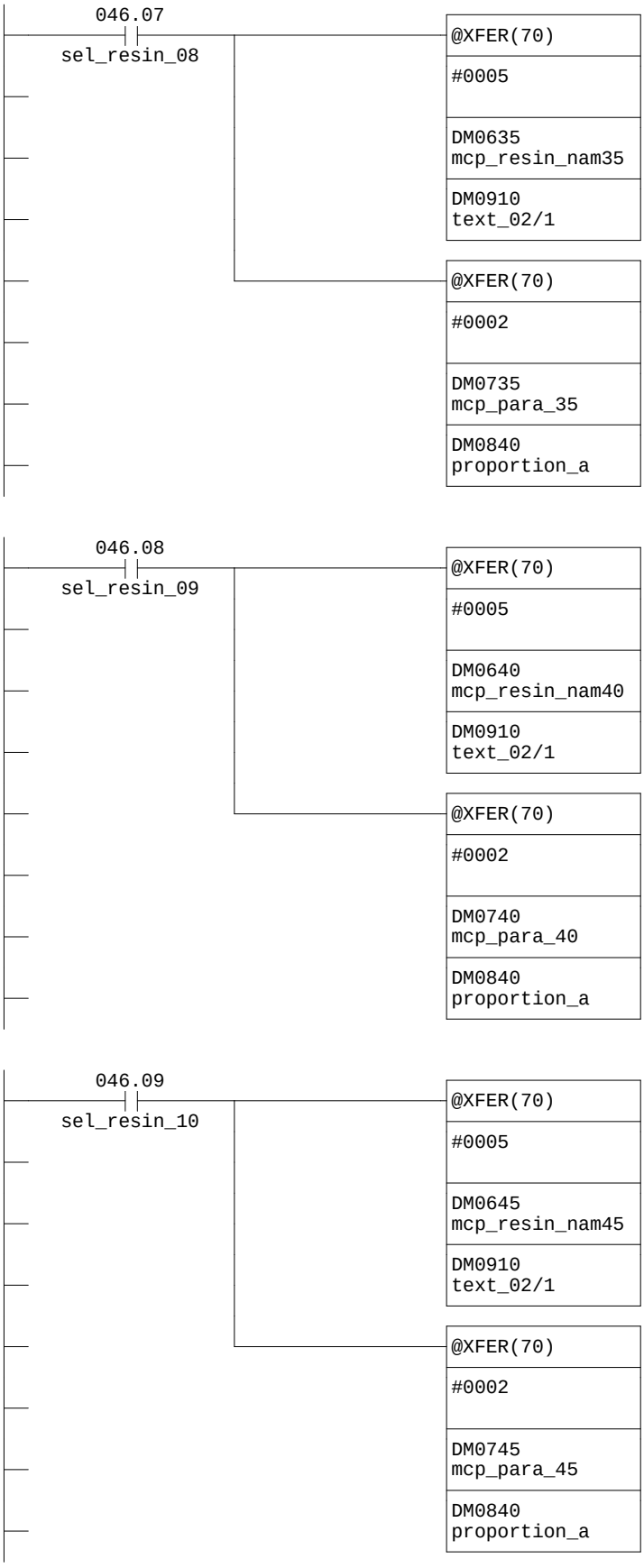

@XFER(70)
#0002
DM1272
DM0755
mcp_para_55
@XFER(70)
#0002
DM1274
DM0760
mcp_para_60
@XFER(70)
#0002
DM1276
DM0765
mcp_para_65
@XFER(70)
#0002
DM1278
DM0770
mcp_para_70
@XFER(70)
#0002
DM1280
DM0775
mcp_para_75
@XFER(70)
#0002
DM1282
DM0780
mcp_para_80

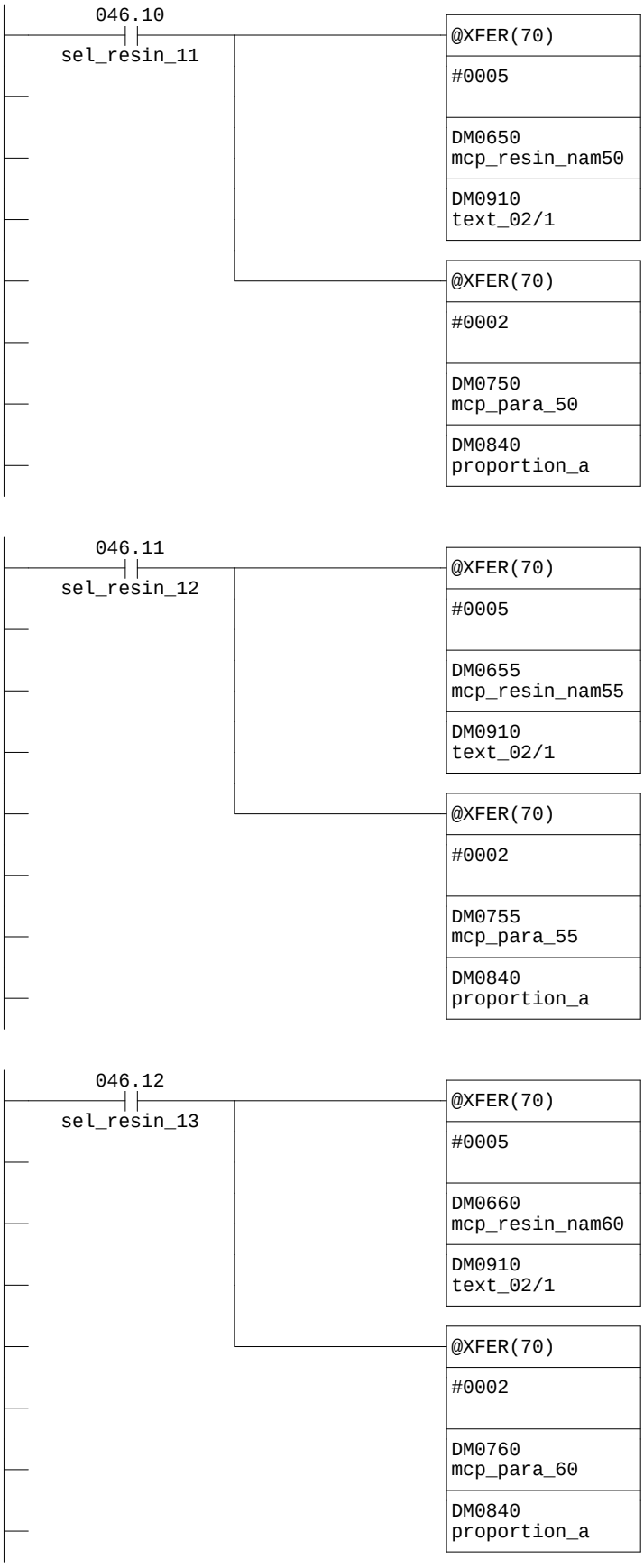

@XFER(70)
#0002
DM1284
DM0785
mcp_para_85
@XFER(70)
#0002
DM1286
DM0790
mcp_para_90
@XFER(70)
#0002
DM1288
DM0795
mcp_para_95

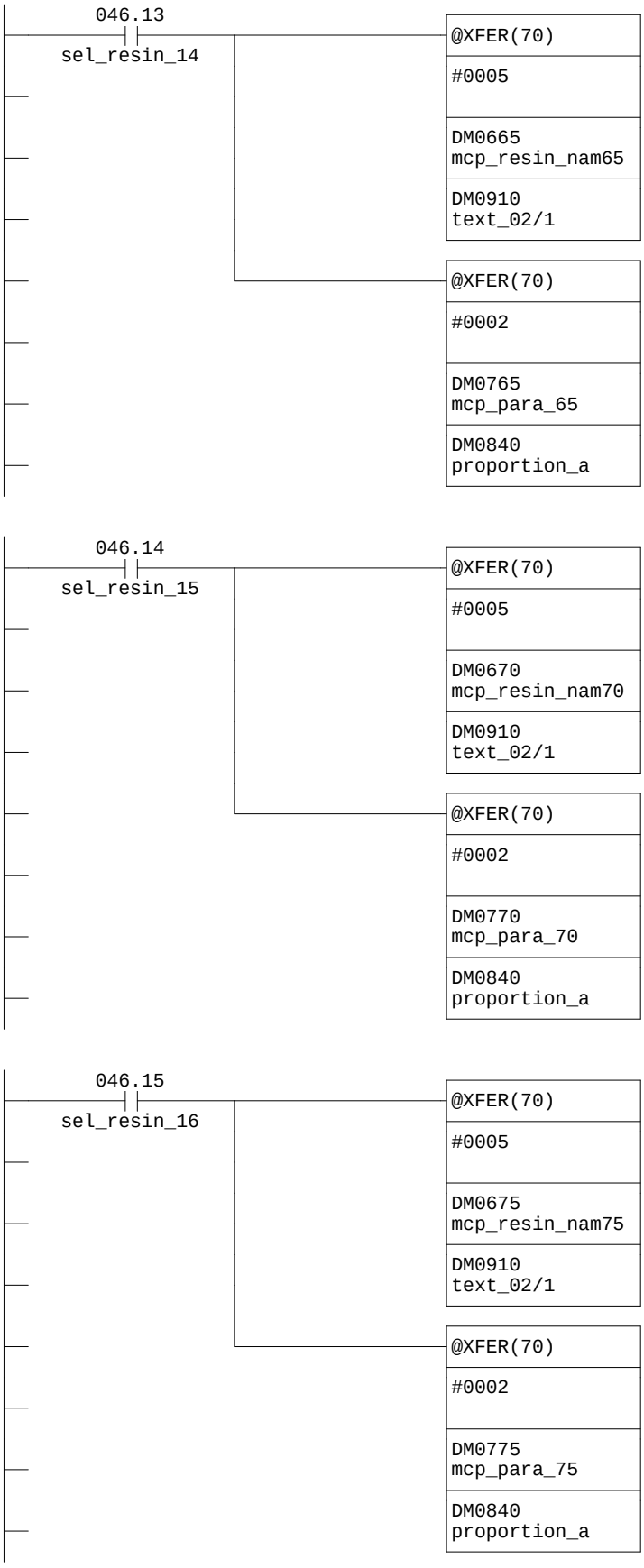

046.00
sel_resin_01
@XFER(70)
#0005
DM0600
mcp_resin_nam00
DM0910
text_02/1
@XFER(70)
#0002
DM0700
mcp_para_00
DM0840
proportion_a

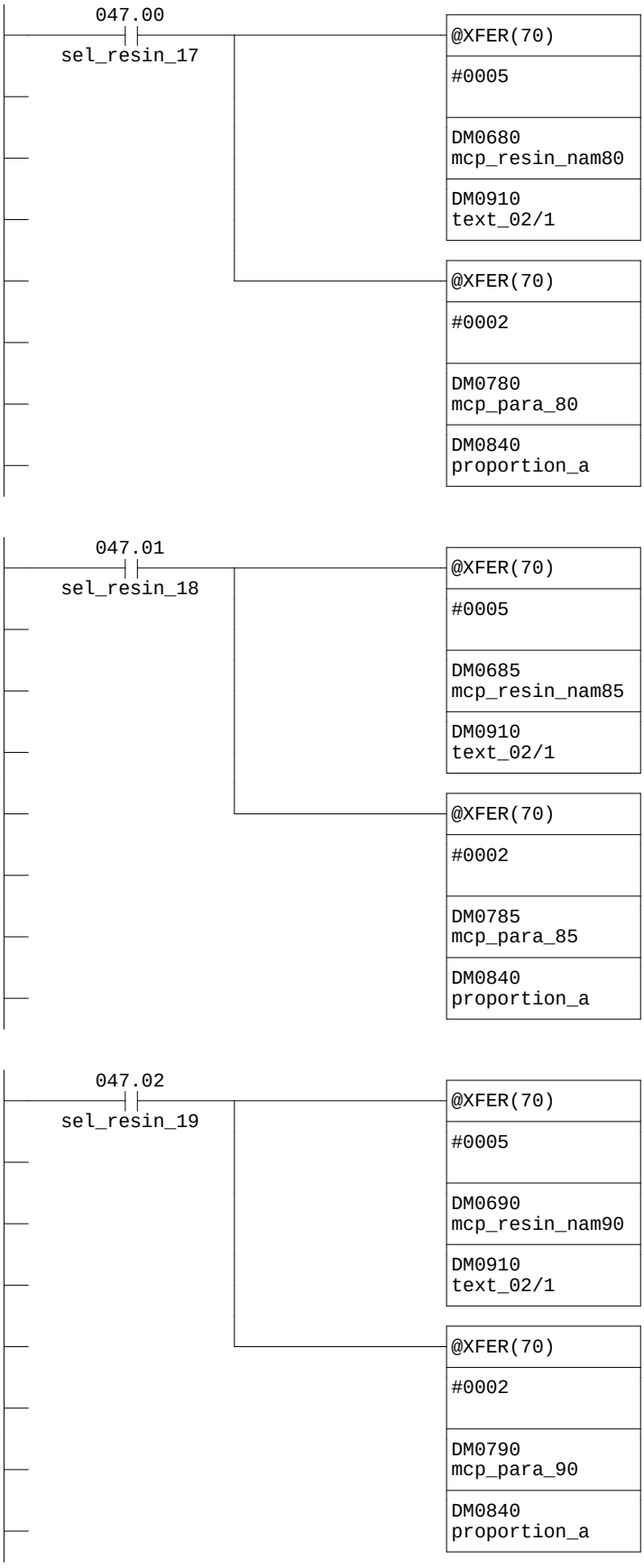

046.01
sel_resin_02
@XFER(70)
#0005
DM0605
mcp_resin_nam05
DM0910
text_02/1
@XFER(70)
#0002
DM0705
mcp_para_05
DM0840
proportion_a
046.02
sel_resin_03
@XFER(70)
#0005
DM0610
mcp_resin_nam10
DM0910
text_02/1
@XFER(70)
#0002
DM0710
mcp_para_10
DM0840
proportion_a
046.03
sel_resin_04
@XFER(70)
#0005
DM0615
mcp_resin_nam15
DM0910
text_02/1
@XFER(70)
#0002
DM0715
mcp_para_15
DM0840
proportion_a

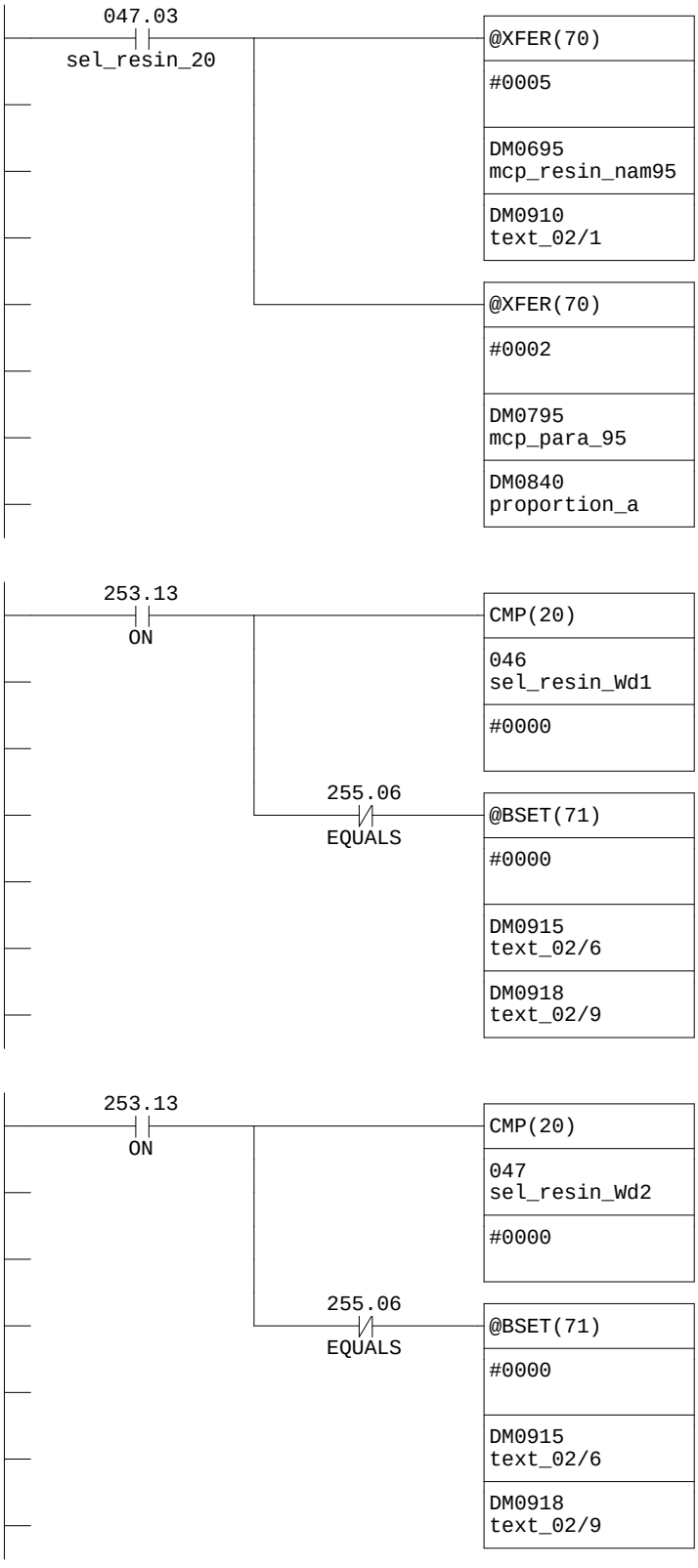

046.04
sel_resin_05
@XFER(70)
#0005
DM0620
mcp_resin_nam20
DM0910
text_02/1
@XFER(70)
#0002
DM0720
mcp_para_20
DM0840
proportion_a
046.05
sel_resin_06
@XFER(70)
#0005
DM0625
mcp_resin_nam25
DM0910
text_02/1
@XFER(70)
#0002
DM0725
mcp_para_25
DM0840
proportion_a
046.06
sel_resin_07
@XFER(70)
#0005
DM0630
mcp_resin_nam30
DM0910
text_02/1
@XFER(70)
#0002
DM0730
mcp_para_30
DM0840
proportion_a


046.07
sel_resin_08
@XFER(70)
#0005
DM0635
mcp_resin_nam35
DM0910
text_02/1
@XFER(70)
#0002
DM0735
mcp_para_35
DM0840
proportion_a
046.08
sel_resin_09
@XFER(70)
#0005
DM0640
mcp_resin_nam40
DM0910
text_02/1
@XFER(70)
#0002
DM0740
mcp_para_40
DM0840
proportion_a
046.09
sel_resin_10
@XFER(70)
#0005
DM0645
mcp_resin_nam45
DM0910
text_02/1
@XFER(70)
#0002
DM0745
mcp_para_45
DM0840
proportion_a

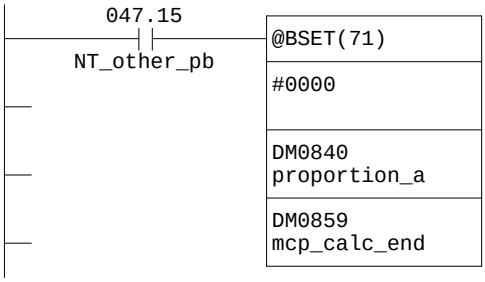

046.10
sel_resin_11
@XFER(70)
#0005
DM0650
mcp_resin_nam50
DM0910
text_02/1
@XFER(70)
#0002
DM0750
mcp_para_50
DM0840
proportion_a
046.11
sel_resin_12
@XFER(70)
#0005
DM0655
mcp_resin_nam55
DM0910
text_02/1
@XFER(70)
#0002
DM0755
mcp_para_55
DM0840
proportion_a
046.12
sel_resin_13
@XFER(70)
#0005
DM0660
mcp_resin_nam60
DM0910
text_02/1
@XFER(70)
#0002
DM0760
mcp_para_60
DM0840
proportion_a

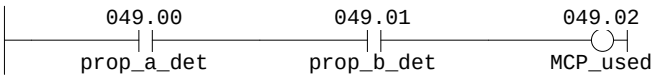

046.13
sel_resin_14
@XFER(70)
#0005
DM0665
mcp_resin_nam65
DM0910
text_02/1
@XFER(70)
#0002
DM0765
mcp_para_65
DM0840
proportion_a
046.14
sel_resin_15
@XFER(70)
#0005
DM0670
mcp_resin_nam70
DM0910
text_02/1
@XFER(70)
#0002
DM0770
mcp_para_70
DM0840
proportion_a
046.15
sel_resin_16
@XFER(70)
#0005
DM0675
mcp_resin_nam75
DM0910
text_02/1
@XFER(70)
#0002
DM0775
mcp_para_75
DM0840
proportion_a

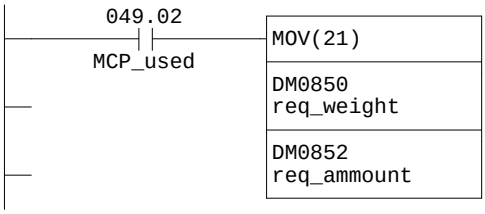

047.00
sel_resin_17
@XFER(70)
#0005
DM0680
mcp_resin_nam80
DM0910
text_02/1
@XFER(70)
#0002
DM0780
mcp_para_80
DM0840
proportion_a
047.01
sel_resin_18
@XFER(70)
#0005
DM0685
mcp_resin_nam85
DM0910
text_02/1
@XFER(70)
#0002
DM0785
mcp_para_85
DM0840
proportion_a
047.02
sel_resin_19
@XFER(70)
#0005
DM0690
mcp_resin_nam90
DM0910
text_02/1
@XFER(70)
#0002
DM0790
mcp_para_90
DM0840
proportion_a

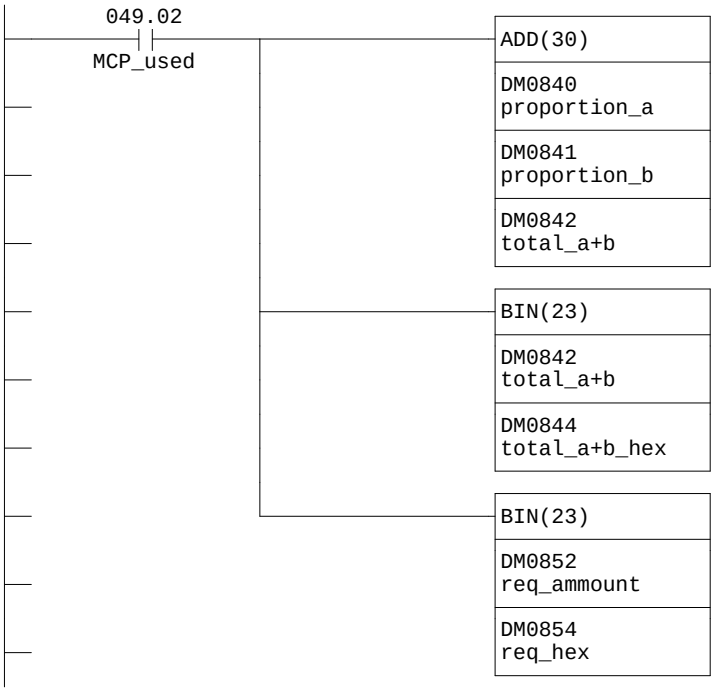

047.03
sel_resin_20
@XFER(70)
#0005
DM0695
mcp_resin_nam95
DM0910
text_02/1
@XFER(70)
#0002
DM0795
mcp_para_95
DM0840
proportion_a
253.13
ON
CMP(20)
046
sel_resin_Wd1
#0000
255.06
EQUALS
@BSET(71)
#0000
DM0915
text_02/6
DM0918
text_02/9
253.13
ON
CMP(20)
047
sel_resin_Wd2
#0000
255.06
EQUALS
@BSET(71)
#0000
DM0915
text_02/6
DM0918
text_02/9

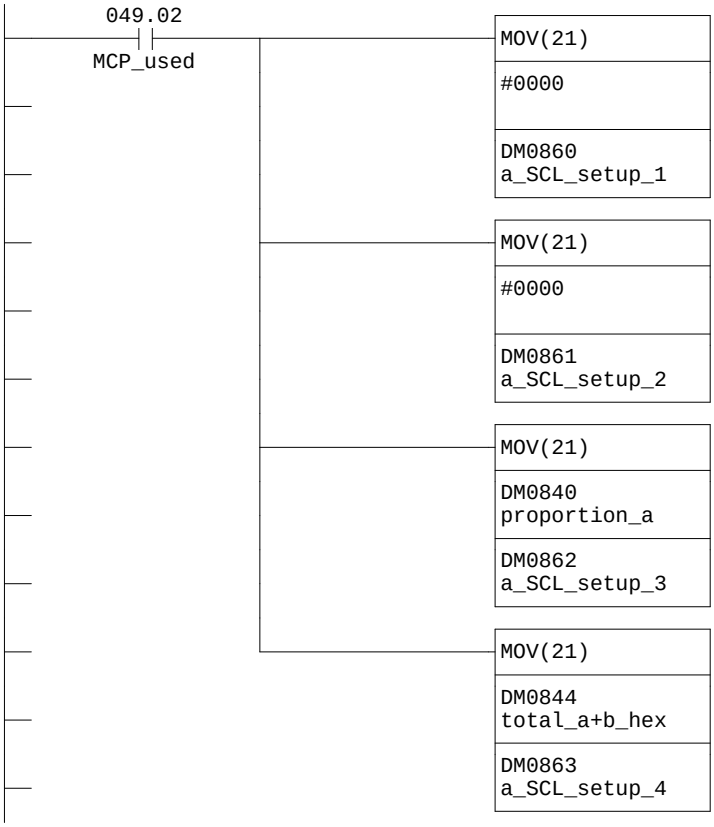
Main 8 - MCP weights

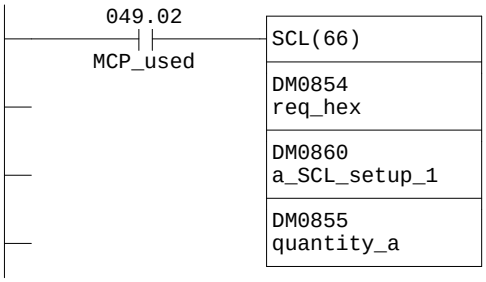


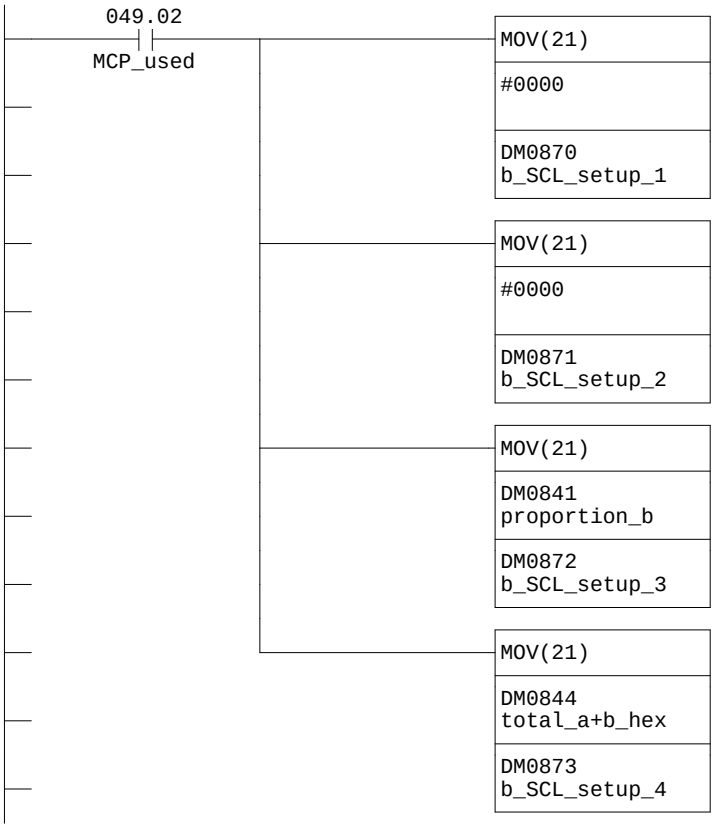


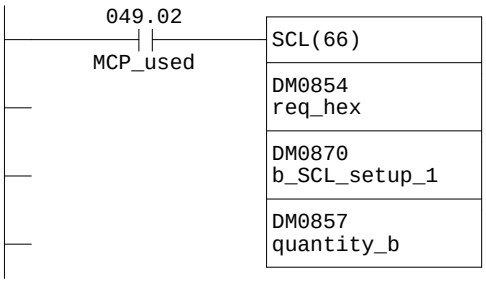


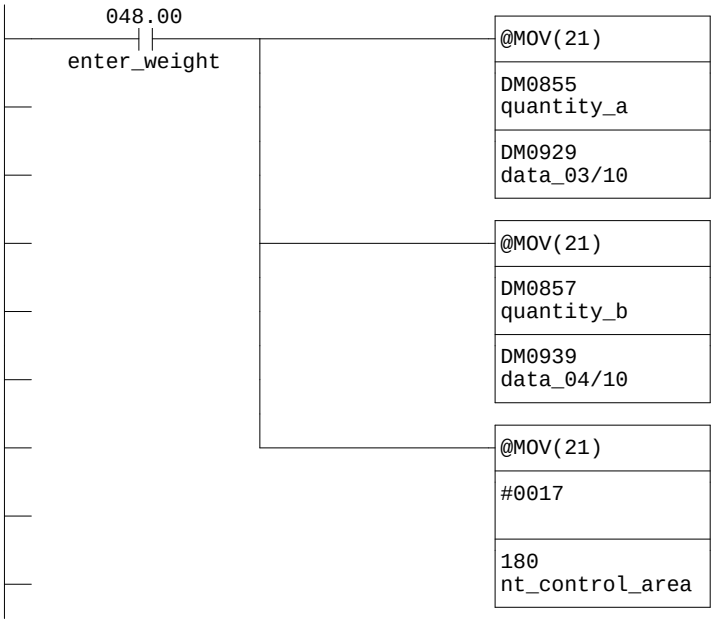

049.02
MCP_used
ADD(30)
DM0840
proportion_a
DM0841
proportion_b
DM0842
total_a+b
BIN(23)
DM0842
total_a+b
DM0844
total_a+b_hex
BIN(23)
DM0852
req_ammount
DM0854
req_hex


049.02
MCP_used
MOV(21)
#0000
DM0860
a_SCL_setup_1
MOV(21)
#0000
DM0861
a_SCL_setup_2
MOV(21)
DM0840
proportion_a
DM0862
a_SCL_setup_3
MOV(21)
DM0844
total_a+b_hex
DM0863
a_SCL_setup_4


049.02
MCP_used
SCL(66)
DM0854
req_hex
DM0860
a_SCL_setup_1
DM0855
quantity_a

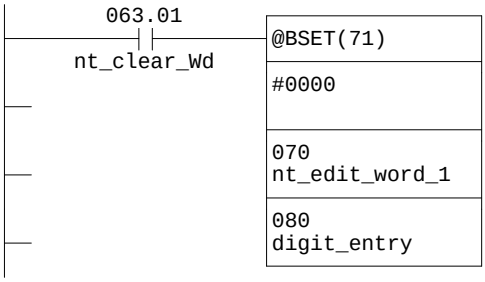

049.02
MCP_used
MOV(21)
#0000
DM0870
b_SCL_setup_1
MOV(21)
#0000
DM0871
b_SCL_setup_2
MOV(21)
DM0841
proportion_b
DM0872
b_SCL_setup_3
MOV(21)
DM0844
total_a+b_hex
DM0873
b_SCL_setup_4


049.02
MCP_used
SCL(66)
DM0854
req_hex
DM0870
b_SCL_setup_1
DM0857
quantity_b

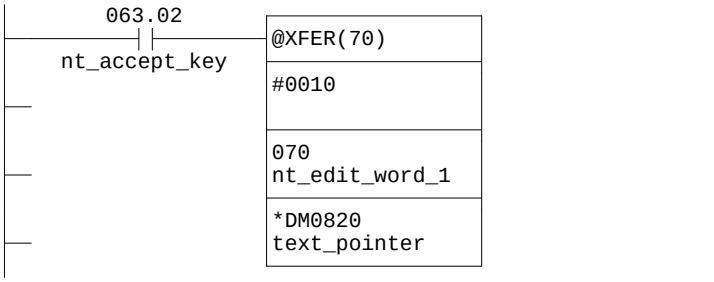

048.00
enter_weight
@MOV(21)
DM0855
quantity_a
DM0929
data_03/10
@MOV(21)
DM0857
quantity_b
DM0939
data_04/10
@MOV(21)
#0017
180
nt_control_area

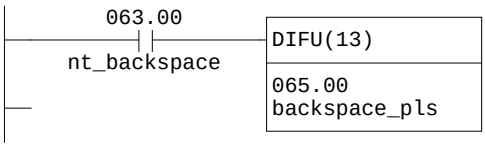
Main 9 - Text edit word

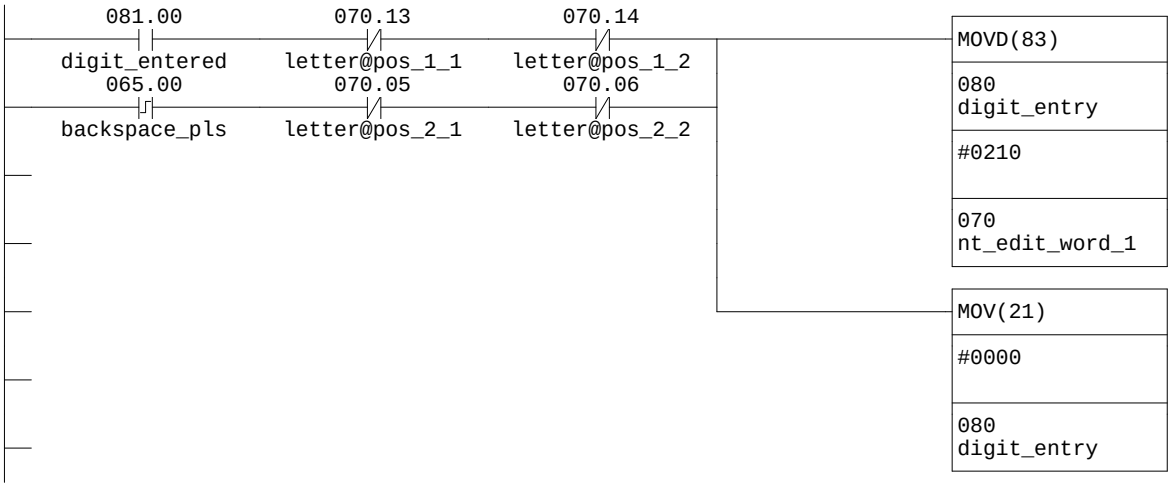
Network 1 - Clear edit wd.

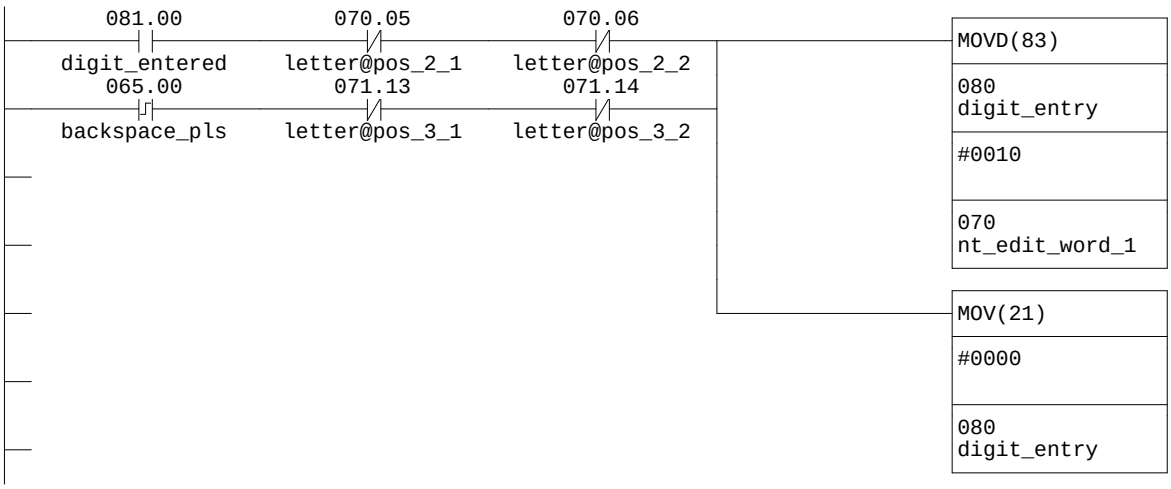


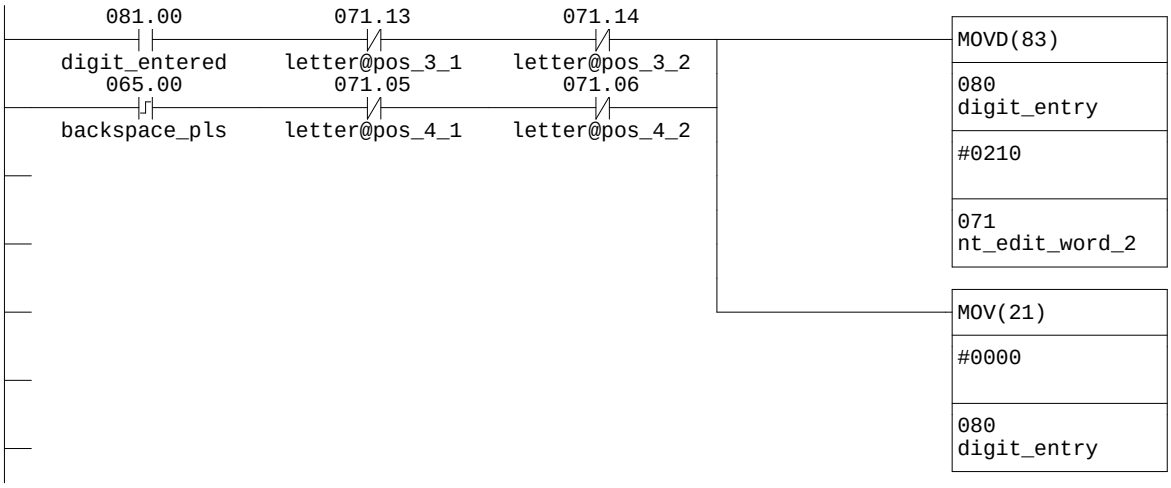
Network 2 - Accept TEMP.

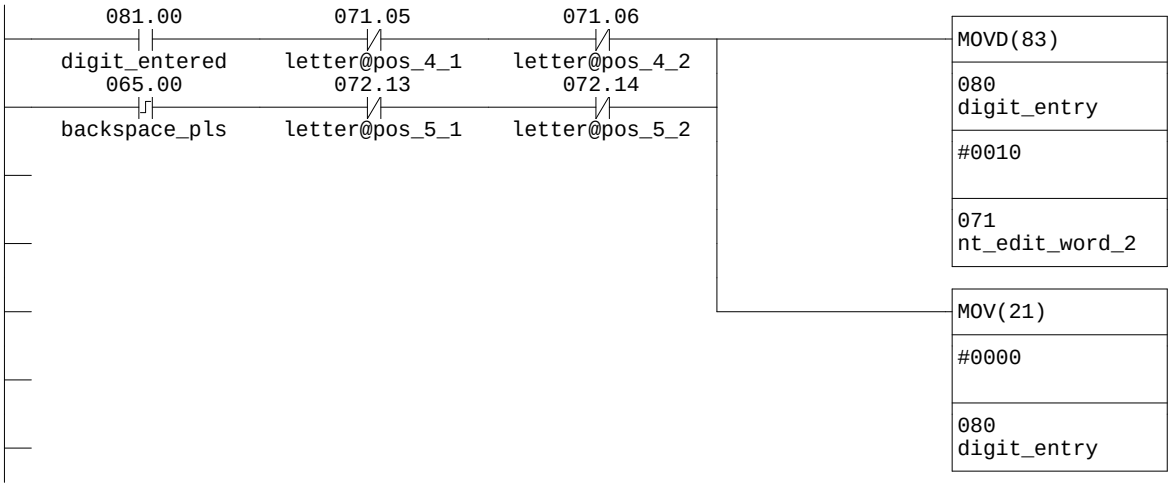


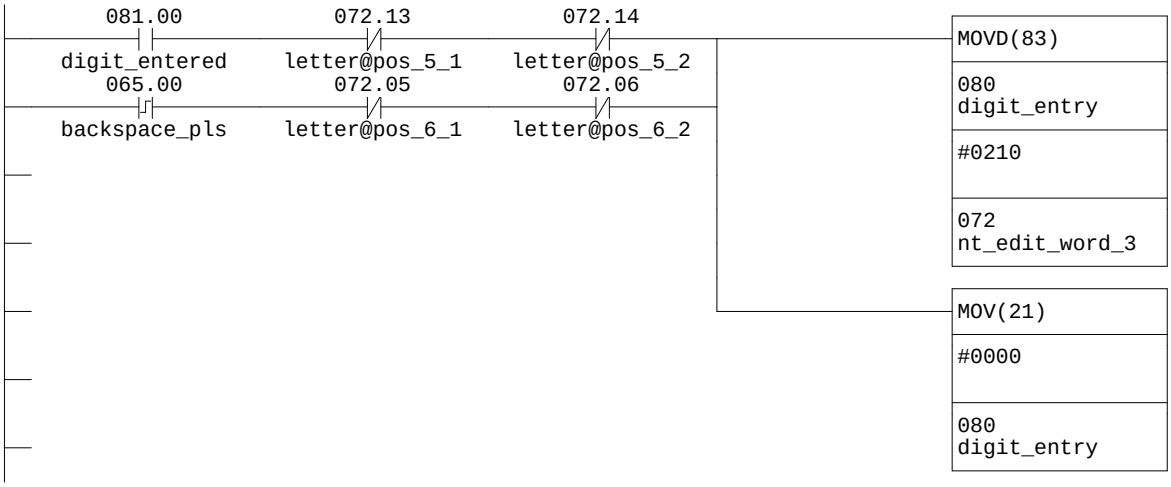


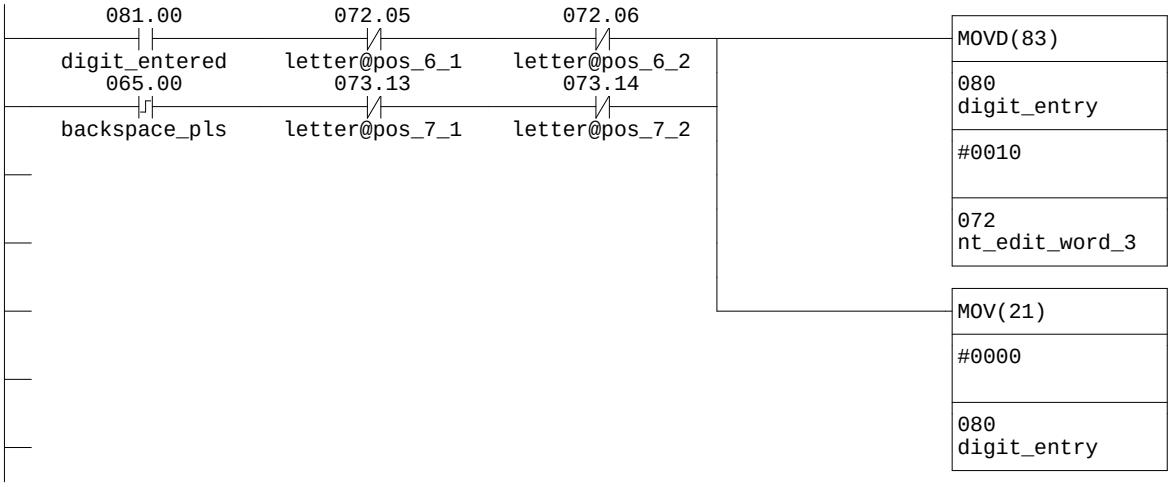

081.00
digit_entered
070.13
letter@pos_1_1
070.14
letter@pos_1_2
065.00
backspace_pls
070.05
letter@pos_2_1
070.06
letter@pos_2_2
MOVD(83)
080
digit_entry
#0210
070
nt_edit_word_1
MOV(21)
#0000
080
digit_entry

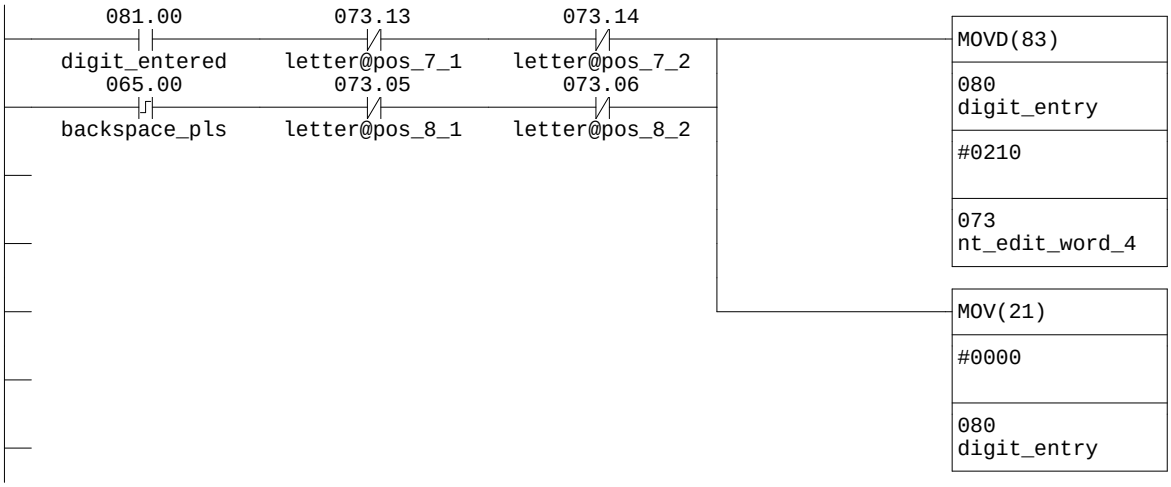

081.00
digit_entered
070.05
letter@pos_2_1
070.06
letter@pos_2_2
065.00
backspace_pls
071.13
letter@pos_3_1
071.14
letter@pos_3_2
MOVD(83)
080
digit_entry
#0010
070
nt_edit_word_1
MOV(21)
#0000
080
digit_entry

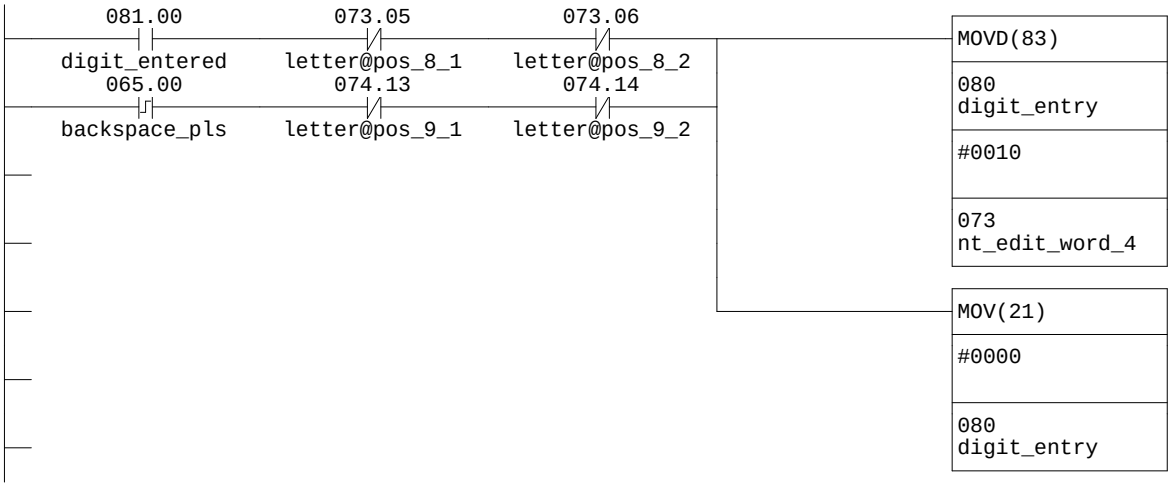

081.00
digit_entered
071.13
letter@pos_3_1
071.14
letter@pos_3_2
065.00
backspace_pls
071.05
letter@pos_4_1
071.06
letter@pos_4_2
MOVD(83)
080
digit_entry
#0210
071
nt_edit_word_2
MOV(21)
#0000
080
digit_entry

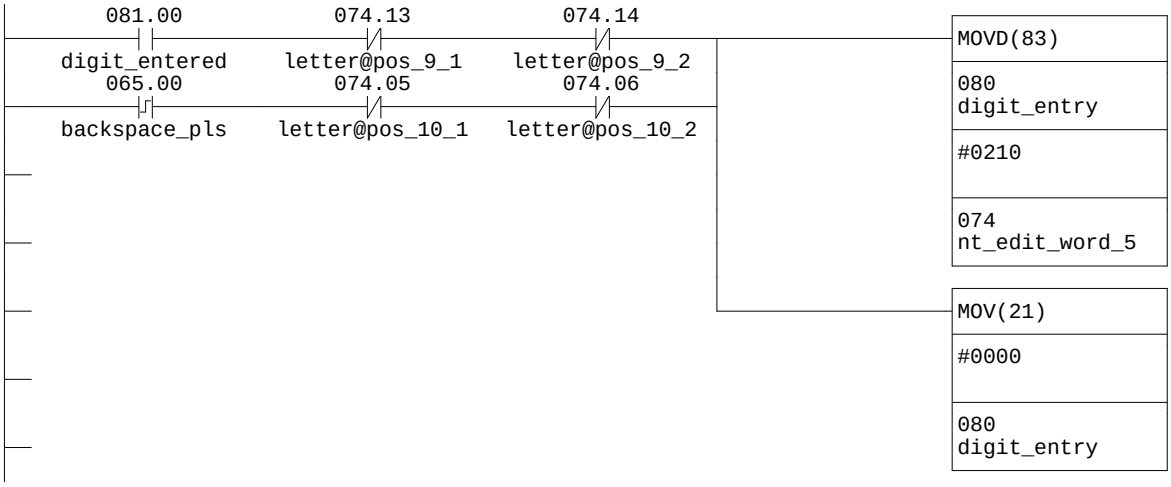

081.00
digit_entered
071.05
letter@pos_4_1
071.06
letter@pos_4_2
065.00
backspace_pls
072.13
letter@pos_5_1
072.14
letter@pos_5_2
MOVD(83)
080
digit_entry
#0010
071
nt_edit_word_2
MOV(21)
#0000
080
digit_entry

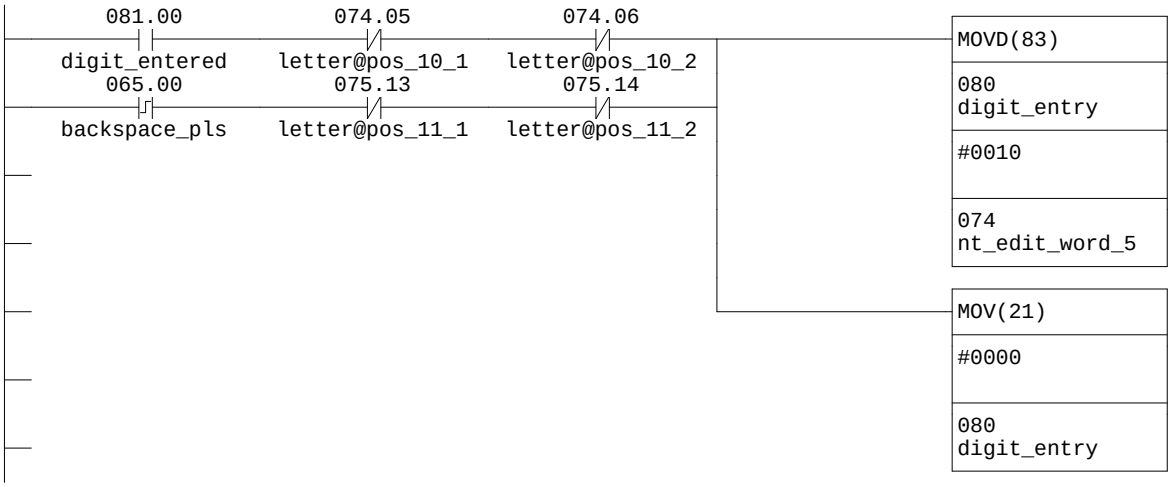

081.00
digit_entered
072.13
letter@pos_5_1
072.14
letter@pos_5_2
065.00
backspace_pls
072.05
letter@pos_6_1
072.06
letter@pos_6_2
MOVD(83)
080
digit_entry
#0210
072
nt_edit_word_3
MOV(21)
#0000
080
digit_entry

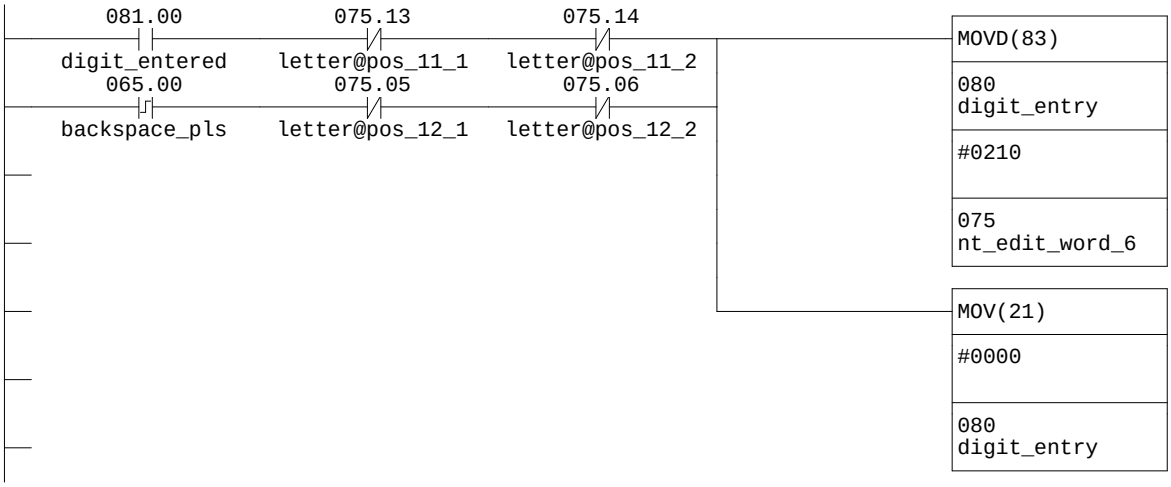

081.00
digit_entered
072.05
letter@pos_6_1
072.06
letter@pos_6_2
065.00
backspace_pls
073.13
letter@pos_7_1
073.14
letter@pos_7_2
MOVD(83)
080
digit_entry
#0010
072
nt_edit_word_3
MOV(21)
#0000
080
digit_entry

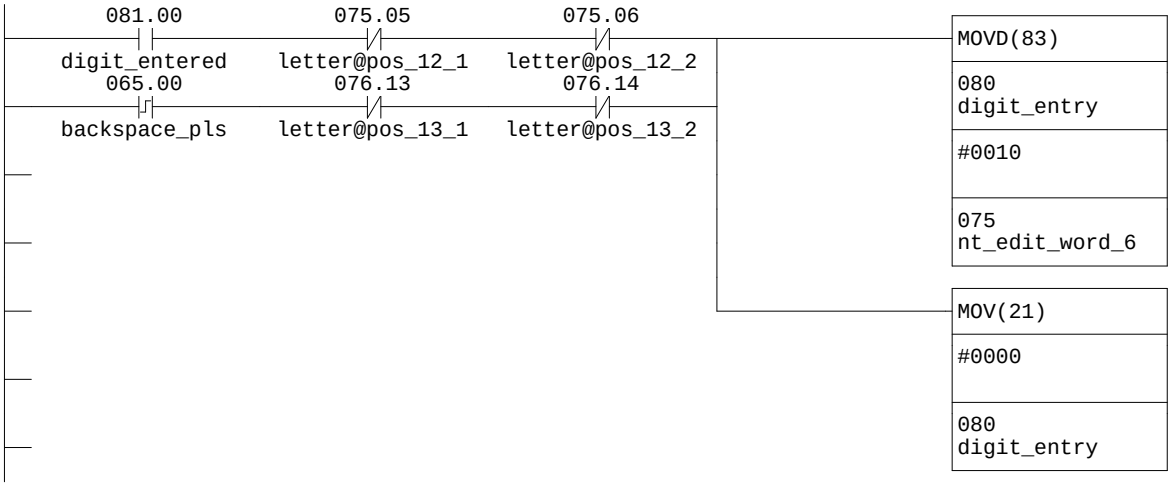

081.00
digit_entered
073.13
letter@pos_7_1
073.14
letter@pos_7_2
065.00
backspace_pls
073.05
letter@pos_8_1
073.06
letter@pos_8_2
MOVD(83)
080
digit_entry
#0210
073
nt_edit_word_4
MOV(21)
#0000
080
digit_entry

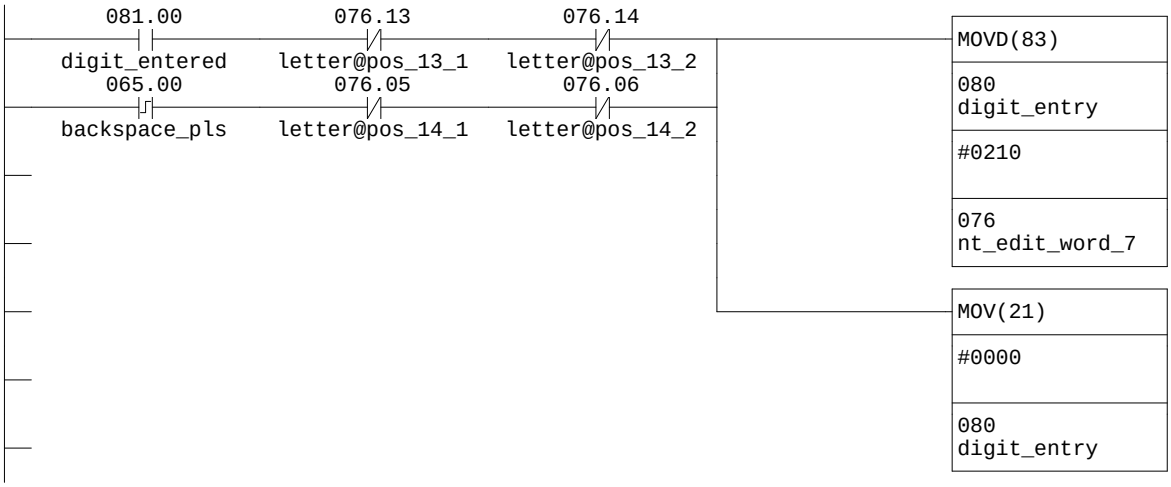

081.00
digit_entered
073.05
letter@pos_8_1
073.06
letter@pos_8_2
065.00
backspace_pls
074.13
letter@pos_9_1
074.14
letter@pos_9_2
MOVD(83)
080
digit_entry
#0010
073
nt_edit_word_4
MOV(21)
#0000
080
digit_entry

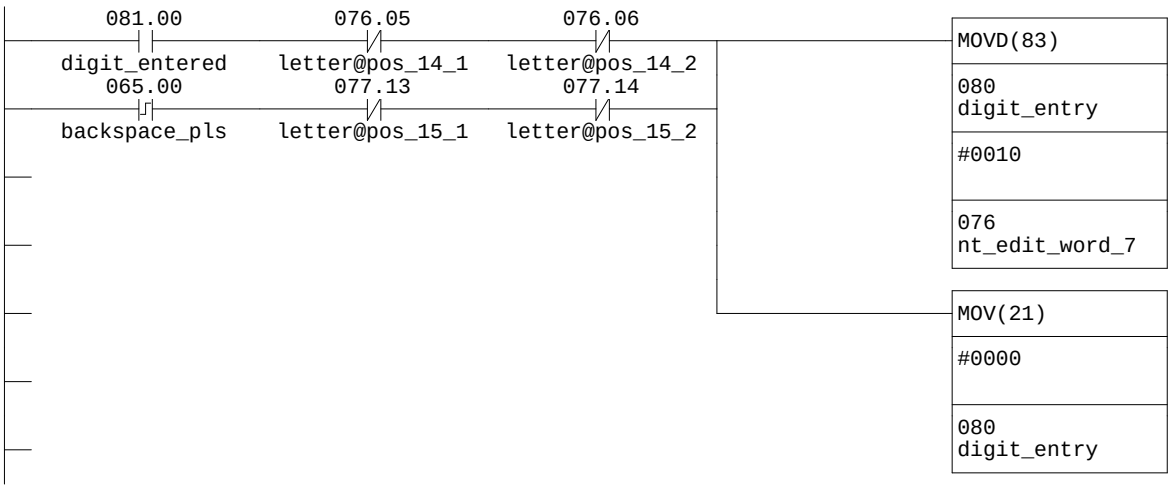

081.00
digit_entered
074.13
letter@pos_9_1
074.14
letter@pos_9_2
065.00
backspace_pls
074.05
letter@pos_10_1
074.06
letter@pos_10_2
MOVD(83)
080
digit_entry
#0210
074
nt_edit_word_5
MOV(21)
#0000
080
digit_entry

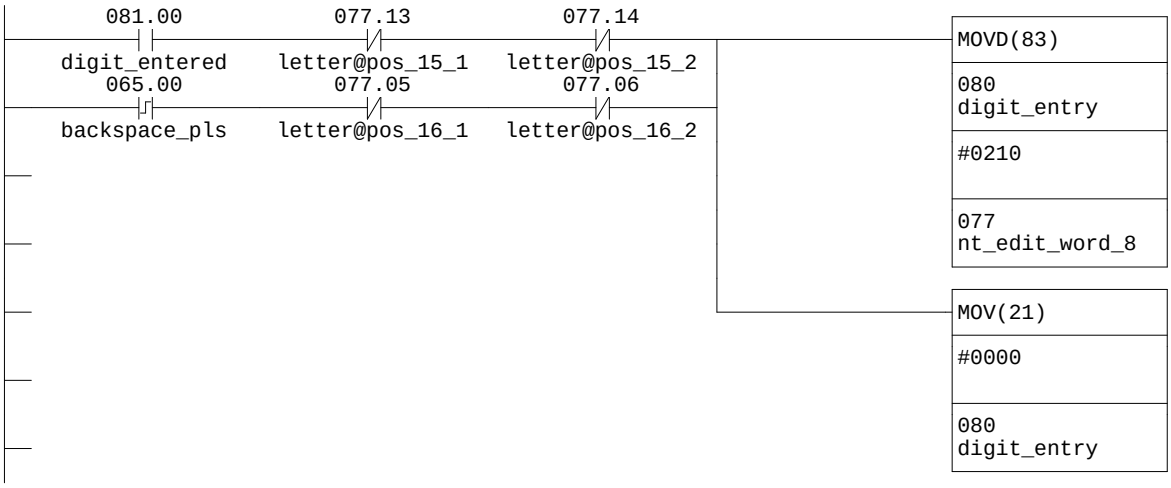

081.00
digit_entered
074.05
letter@pos_10_1
074.06
letter@pos_10_2
065.00
backspace_pls
075.13
letter@pos_11_1
075.14
letter@pos_11_2
MOVD(83)
080
digit_entry
#0010
074
nt_edit_word_5
MOV(21)
#0000
080
digit_entry

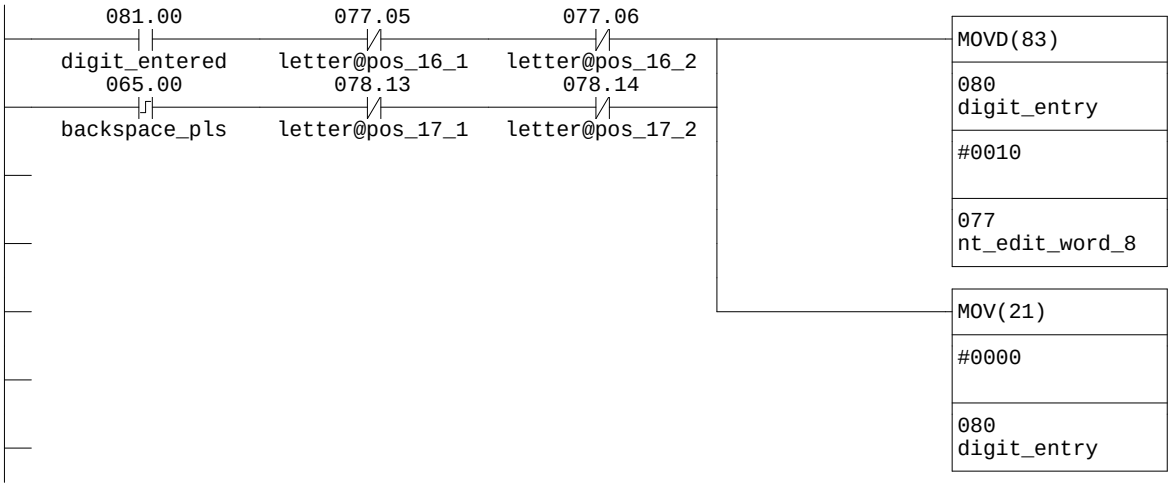

081.00
digit_entered
075.13
letter@pos_11_1
075.14
letter@pos_11_2
065.00
backspace_pls
075.05
letter@pos_12_1
075.06
letter@pos_12_2
MOVD(83)
080
digit_entry
#0210
075
nt_edit_word_6
MOV(21)
#0000
080
digit_entry

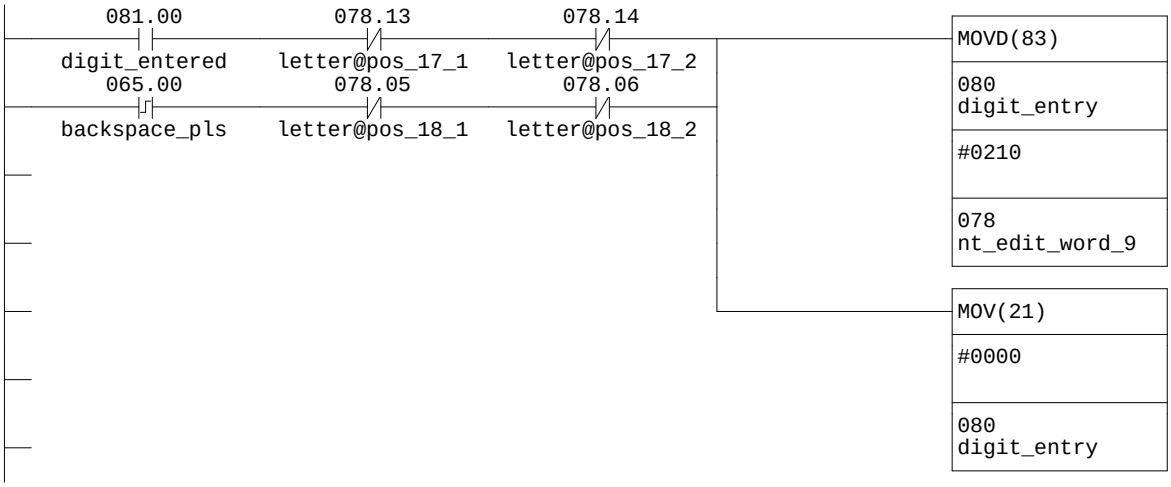

081.00
digit_entered
075.05
letter@pos_12_1
075.06
letter@pos_12_2
065.00
backspace_pls
076.13
letter@pos_13_1
076.14
letter@pos_13_2
MOVD(83)
080
digit_entry
#0010
075
nt_edit_word_6
MOV(21)
#0000
080
digit_entry

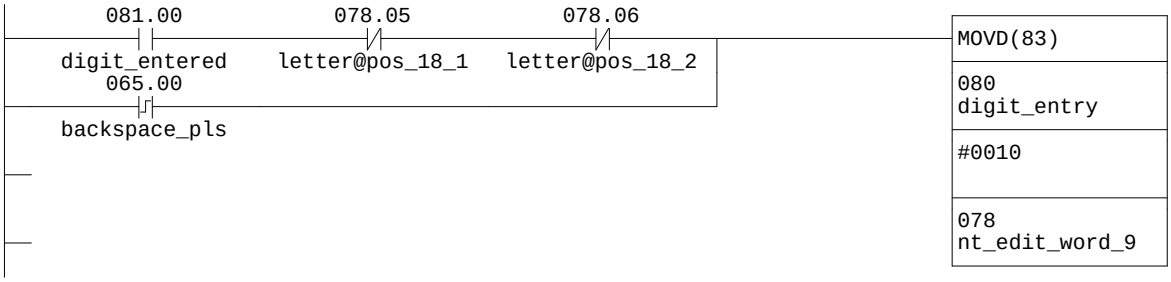

081.00
digit_entered
076.13
letter@pos_13_1
076.14
letter@pos_13_2
065.00
backspace_pls
076.05
letter@pos_14_1
076.06
letter@pos_14_2
MOVD(83)
080
digit_entry
#0210
076
nt_edit_word_7
MOV(21)
#0000
080
digit_entry

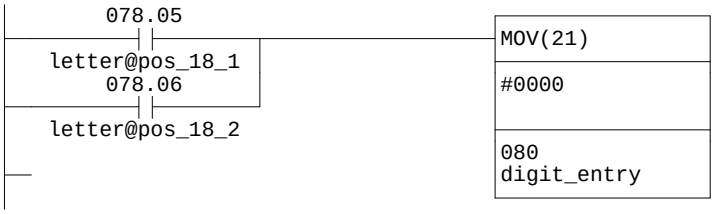

081.00
digit_entered
076.05
letter@pos_14_1
076.06
letter@pos_14_2
065.00
backspace_pls
077.13
letter@pos_15_1
077.14
letter@pos_15_2
MOVD(83)
080
digit_entry
#0010
076
nt_edit_word_7
MOV(21)
#0000
080
digit_entry


081.00
digit_entered
077.13
letter@pos_15_1
077.14
letter@pos_15_2
065.00
backspace_pls
077.05
letter@pos_16_1
077.06
letter@pos_16_2
MOVD(83)
080
digit_entry
#0210
077
nt_edit_word_8
MOV(21)
#0000
080
digit_entry

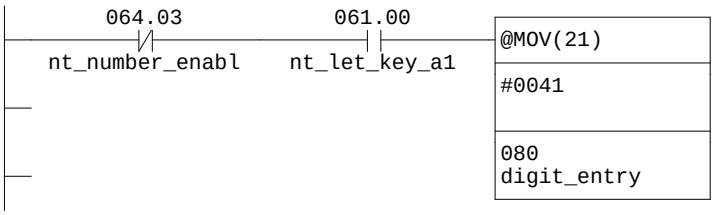

081.00
digit_entered
077.05
letter@pos_16_1
077.06
letter@pos_16_2
065.00
backspace_pls
078.13
letter@pos_17_1
078.14
letter@pos_17_2
MOVD(83)
080
digit_entry
#0010
077
nt_edit_word_8
MOV(21)
#0000
080
digit_entry

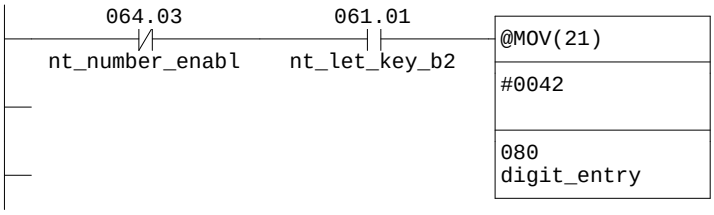

081.00
digit_entered
078.13
letter@pos_17_1
078.14
letter@pos_17_2
065.00
backspace_pls
078.05
letter@pos_18_1
078.06
letter@pos_18_2
MOVD(83)
080
digit_entry
#0210
078
nt_edit_word_9
MOV(21)
#0000
080
digit_entry

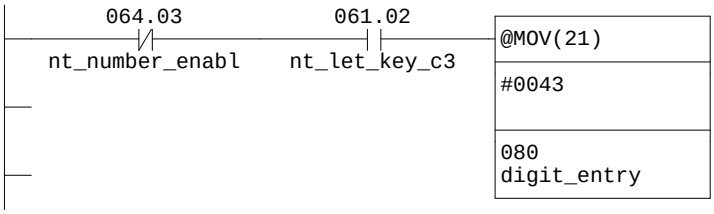

081.00
digit_entered
078.05
letter@pos_18_1
078.06
letter@pos_18_2
065.00
backspace_pls
MOVD(83)
080
digit_entry
#0010
078
nt_edit_word_9

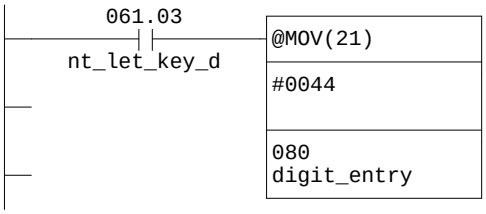

078.05
letter@pos_18_1
078.06
letter@pos_18_2
MOV(21)
#0000
080
digit_entry

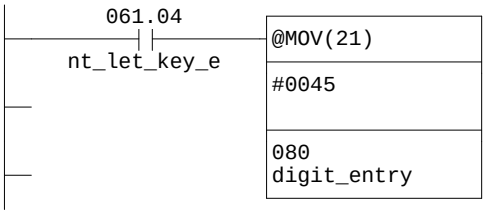
Network 24 - Enter letters

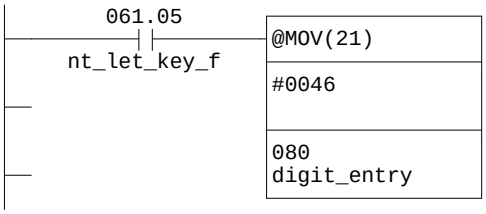


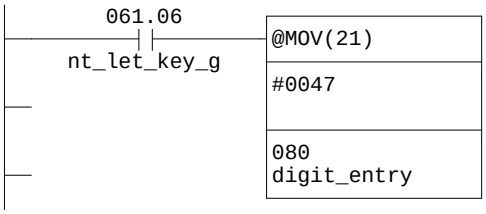


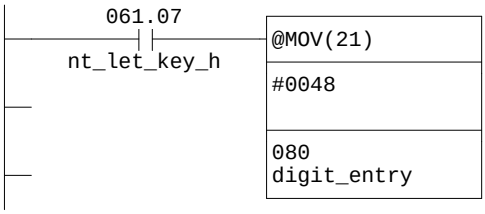


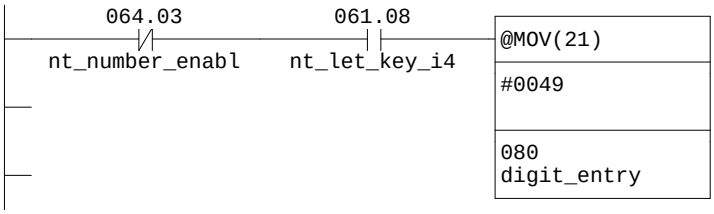


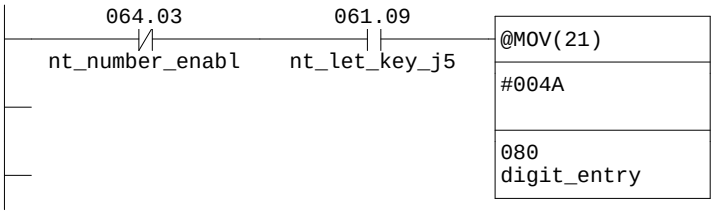


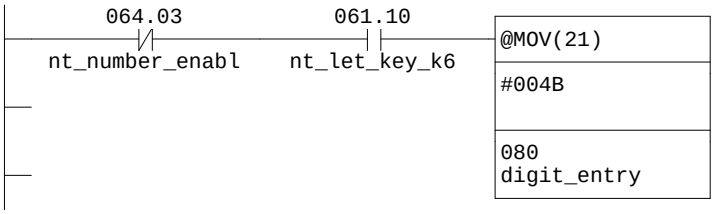


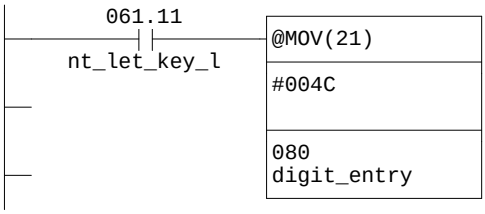


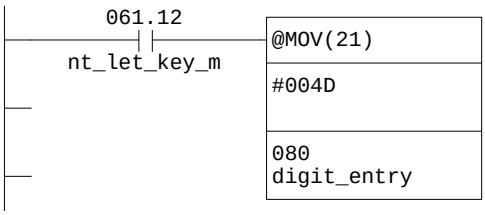

061.07
nt_let_key_h
@MOV(21)
#0048
080
digit_entry

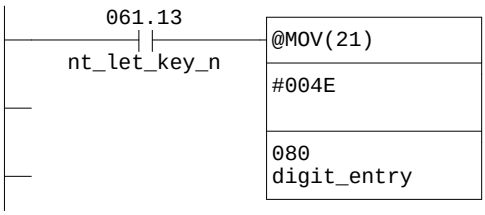

064.03
nt_number_enabl
061.08
nt_let_key_i4
@MOV(21)
#0049
080
digit_entry

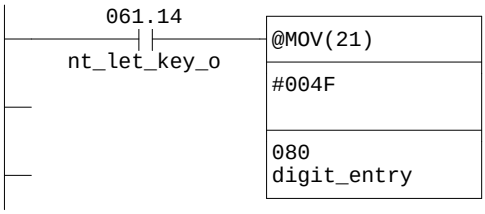

064.03
nt_number_enabl
061.09
nt_let_key_j5
@MOV(21)
#004A
080
digit_entry

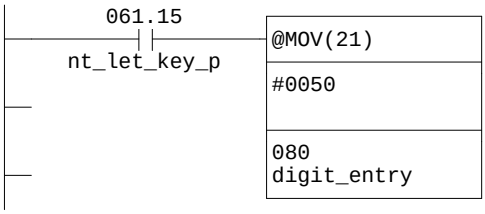

064.03
nt_number_enabl
061.10
nt_let_key_k6
@MOV(21)
#004B
080
digit_entry

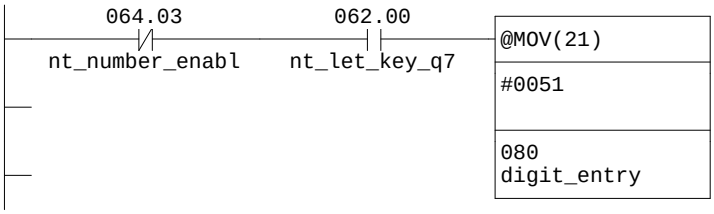

061.11
nt_let_key_l
@MOV(21)
#004C
080
digit_entry

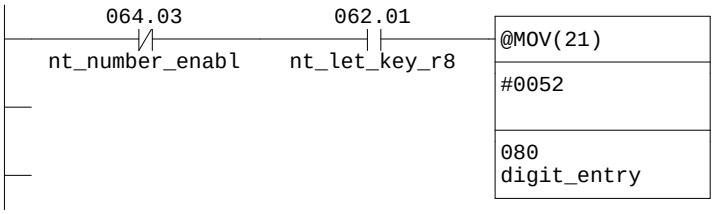

061.12
nt_let_key_m
@MOV(21)
#004D
080
digit_entry

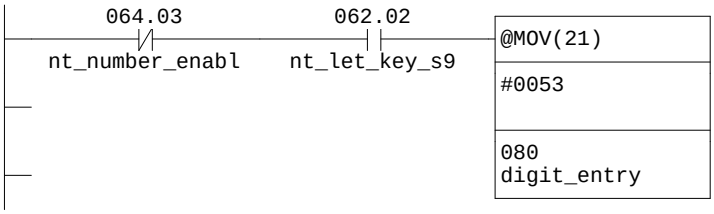

061.13
nt_let_key_n
@MOV(21)
#004E
080
digit_entry

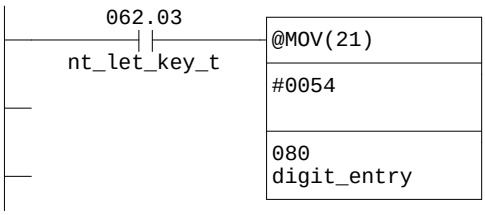

061.14
nt_let_key_o
@MOV(21)
#004F
080
digit_entry

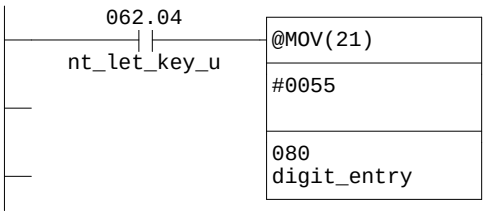

061.15
nt_let_key_p
@MOV(21)
#0050
080
digit_entry

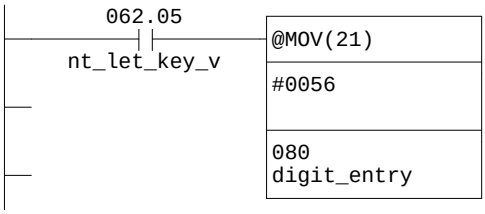

064.03
nt_number_enabl
062.00
nt_let_key_q7
@MOV(21)
#0051
080
digit_entry

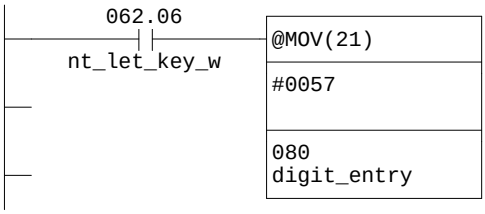

064.03
nt_number_enabl
062.01
nt_let_key_r8
@MOV(21)
#0052
080
digit_entry

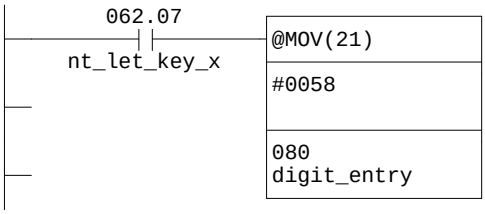

064.03
nt_number_enabl
062.02
nt_let_key_s9
@MOV(21)
#0053
080
digit_entry

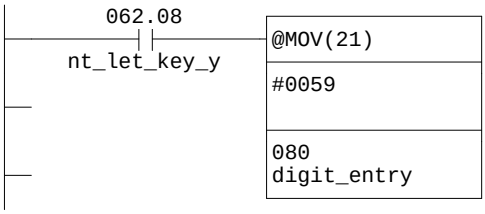

062.03
nt_let_key_t
@MOV(21)
#0054
080
digit_entry

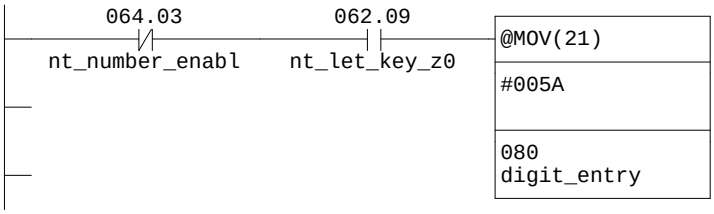

062.04
nt_let_key_u
@MOV(21)
#0055
080
digit_entry



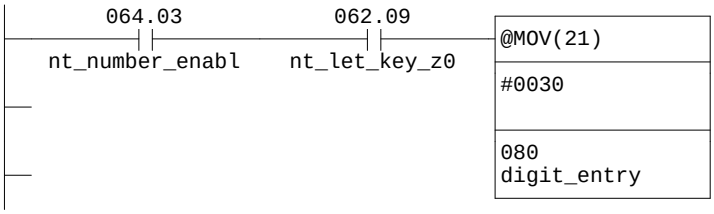


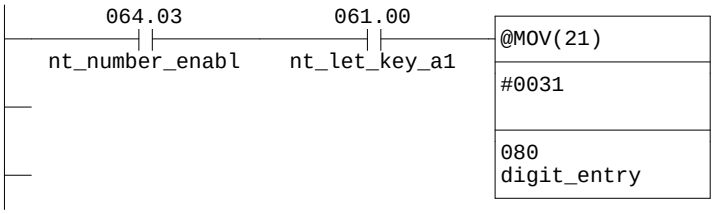


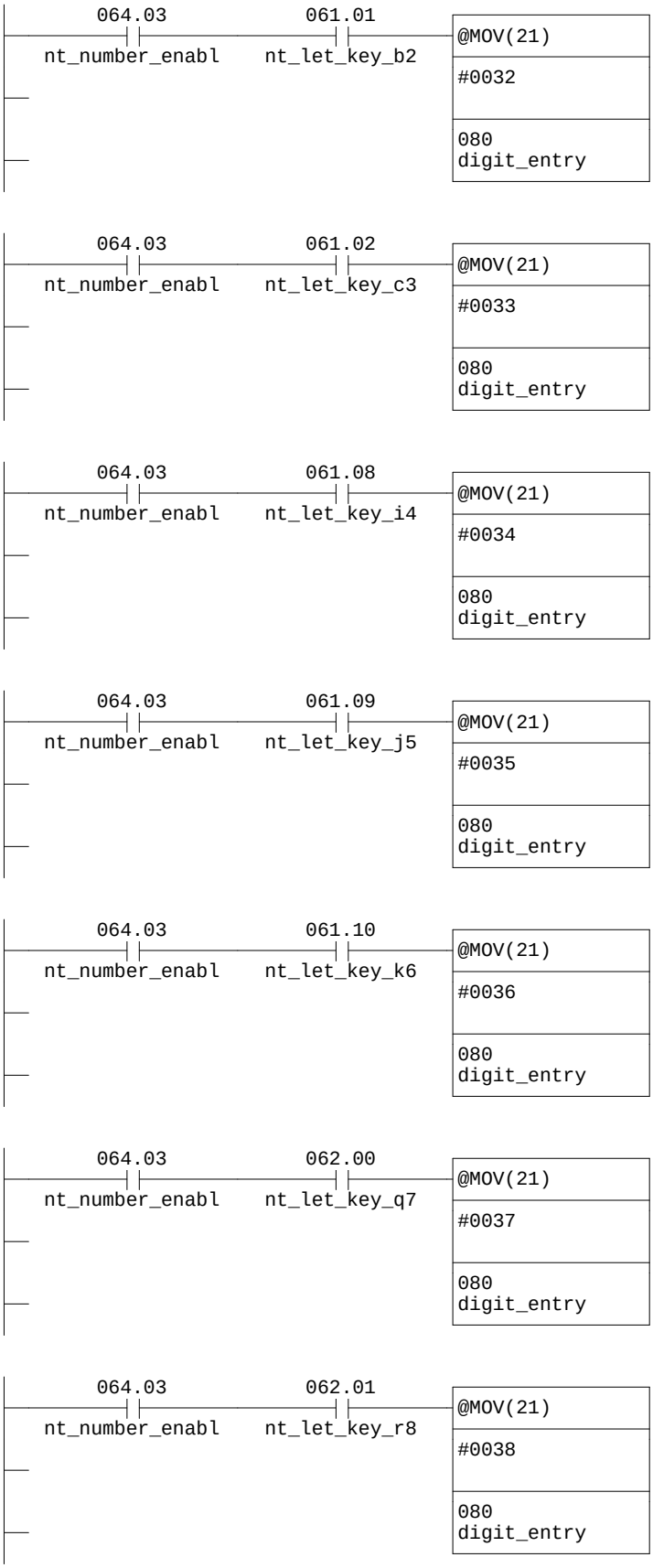


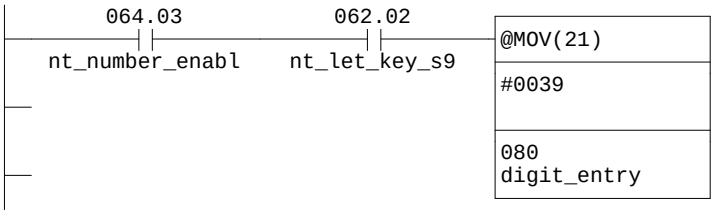


Network 50 - Number entry

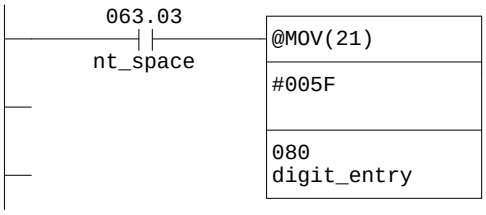





064.03
nt_number_enabl
061.01
nt_let_key_b2
@MOV(21)
#0032
080
digit_entry
064.03
nt_number_enabl
061.02
nt_let_key_c3
@MOV(21)
#0033
080
digit_entry
064.03
nt_number_enabl
061.08
nt_let_key_i4
@MOV(21)
#0034
080
digit_entry
064.03
nt_number_enabl
061.09
nt_let_key_j5
@MOV(21)
#0035
080
digit_entry
064.03
nt_number_enabl
061.10
nt_let_key_k6
@MOV(21)
#0036
080
digit_entry
064.03
nt_number_enabl
062.00
nt_let_key_q7
@MOV(21)
#0037
080
digit_entry
064.03
nt_number_enabl
062.01
nt_let_key_r8
@MOV(21)
#0038
080
digit_entry

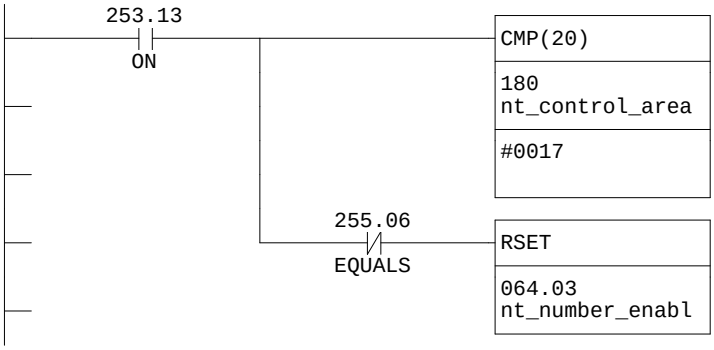


Network 60 - Spacebar



Network 61 - Reset Num Lock

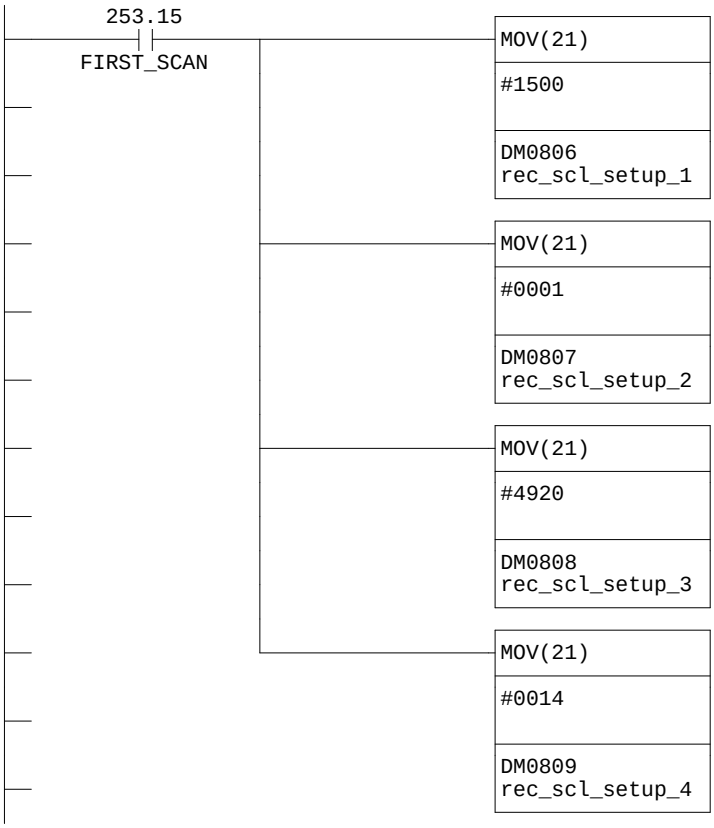
This rung resets the Number Lock when the screen is left.



Main 10 - Recipe data

Recipe data handling

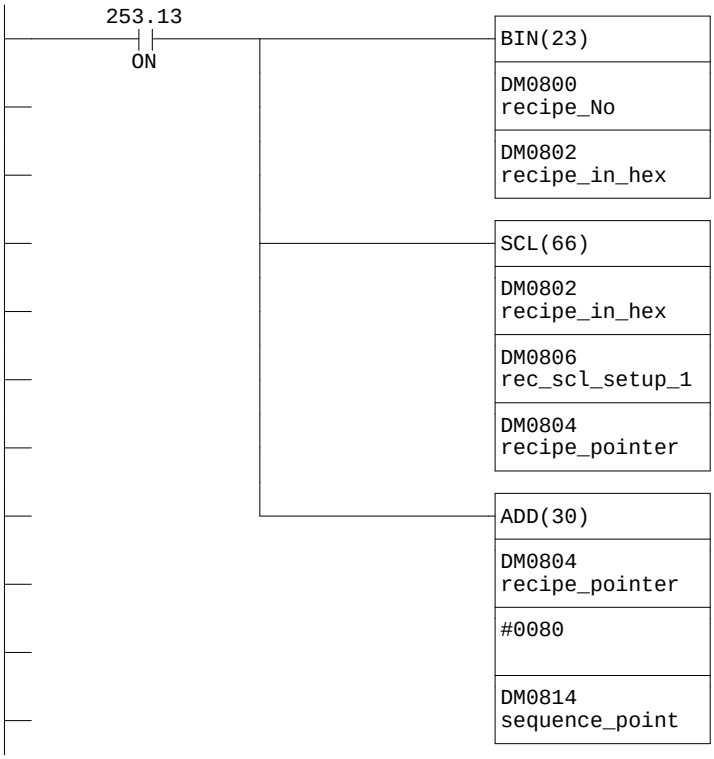
Network 1 - Set scaling



Network 2 - Set pointer

Set recipe 1st word pointers

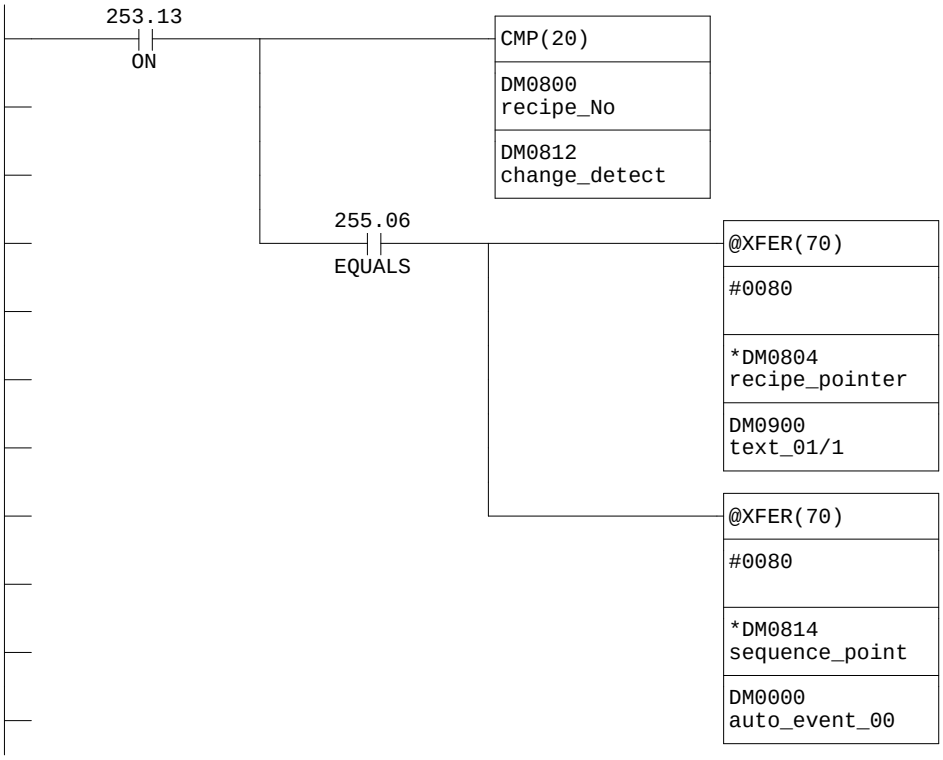
NOTE:- Pointer value changed on ADD command from #0100 to #0080

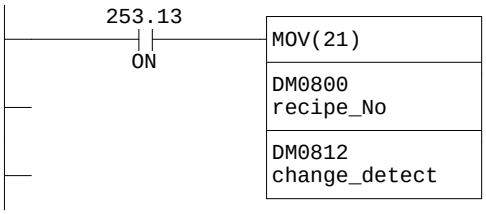


Network 3 - Recipe change

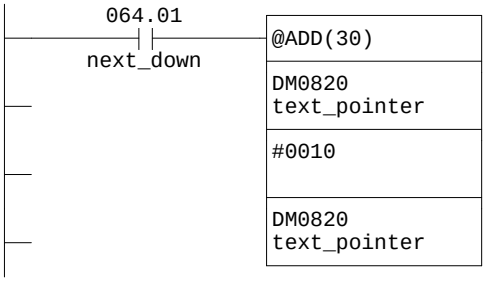
Detect recipe change then upload data from the store.

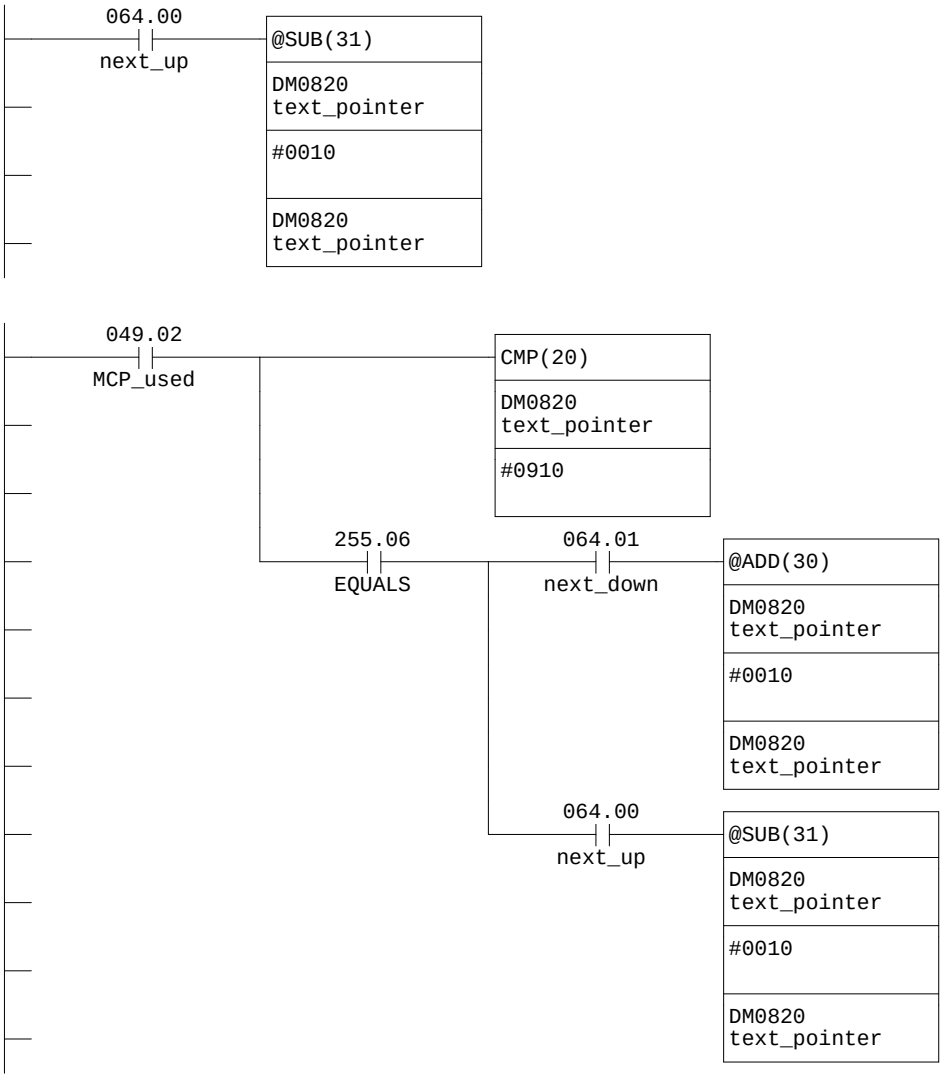
NOTE:- Changed XFER from #0100 to #0080 to stop corruption of DM areas



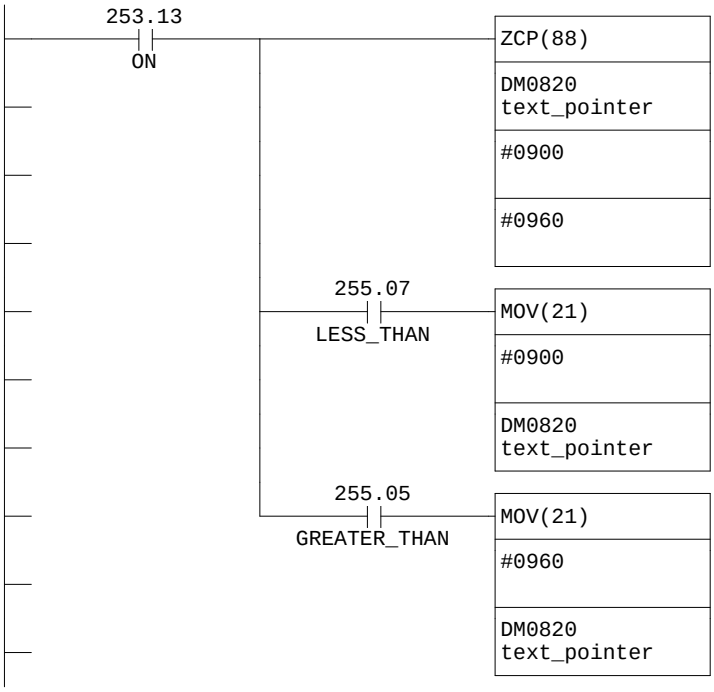


Network 5 - Select text

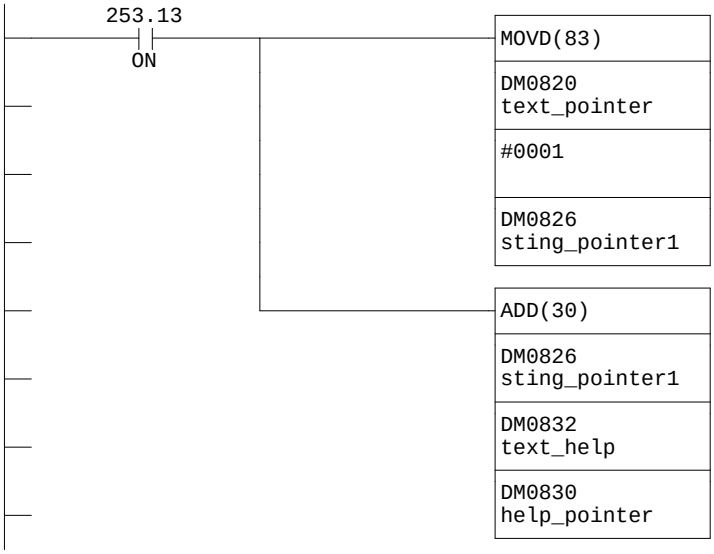


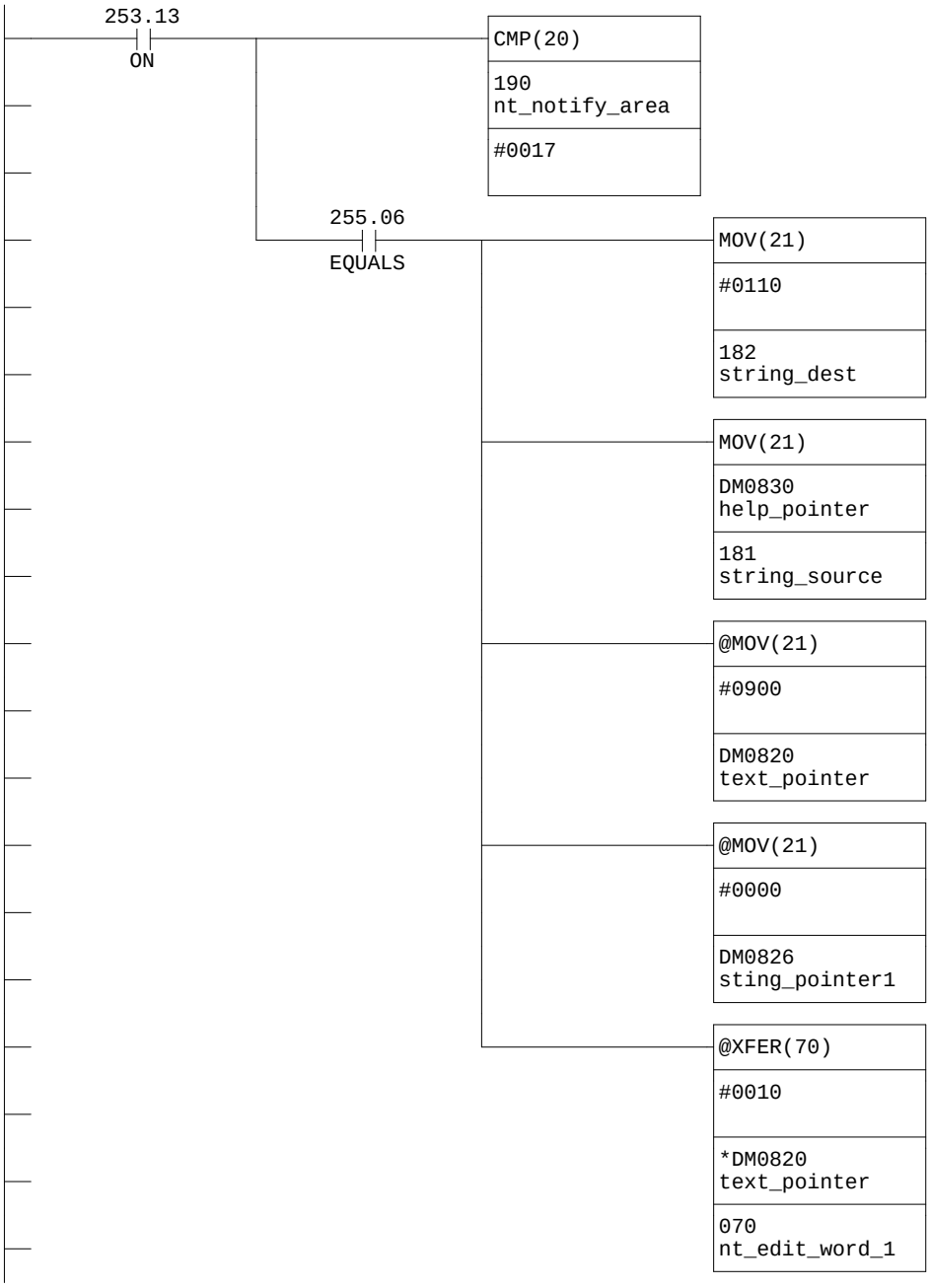

064.00
next_up
@SUB(31)
DM0820
text_pointer
#0010
DM0820
text_pointer
049.02
MCP_used
CMP(20)
DM0820
text_pointer
#0910
255.06
EQUALS
064.01
next_down
@ADD(30)
DM0820
text_pointer
#0010
DM0820
text_pointer
064.00
next_up
@SUB(31)
DM0820
text_pointer
#0010
DM0820
text_pointer

Network 8 - Text limits



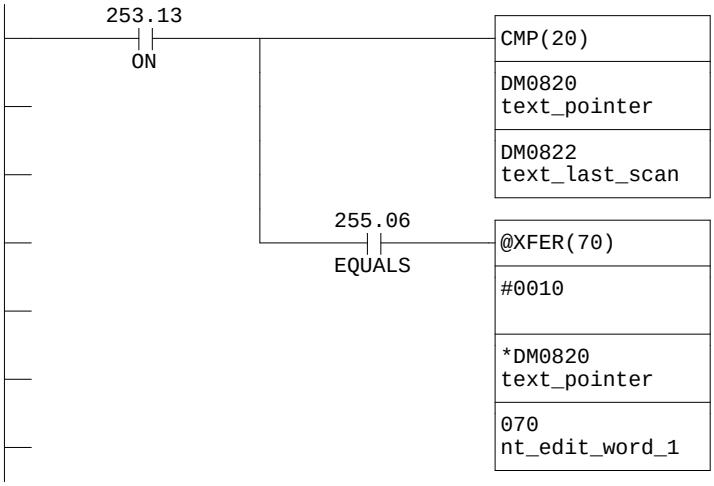
Network 9 - Text help

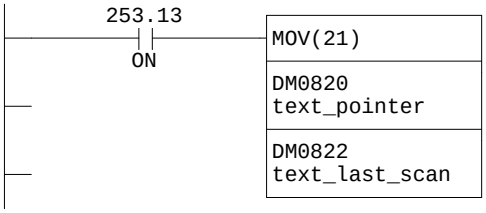



253.13
ON
CMP(20)
190
nt_notify_area
#0017
255.06
EQUALS
MOV(21)
#0110
182
string_dest
MOV(21)
DM0830
help_pointer
181
string_source
@MOV(21)
#0900
DM0820
text_pointer
@MOV(21)
#0000
DM0826
sting_pointer1
@XFER(70)
#0010
*DM0820
text_pointer
070
nt_edit_word_1

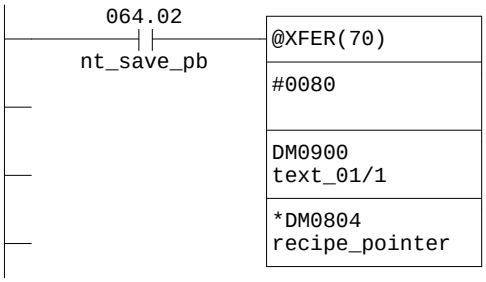
Network 11 - Text change

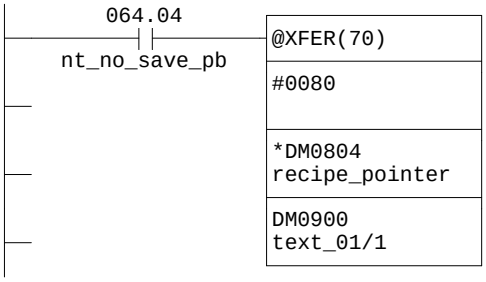
Detect text change then upload data from the active area.



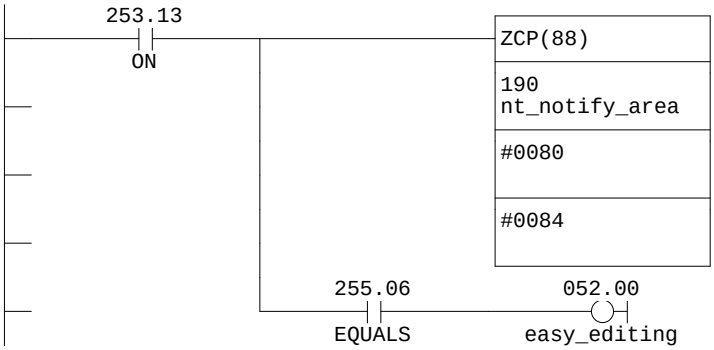


Network 13 - Save recipe



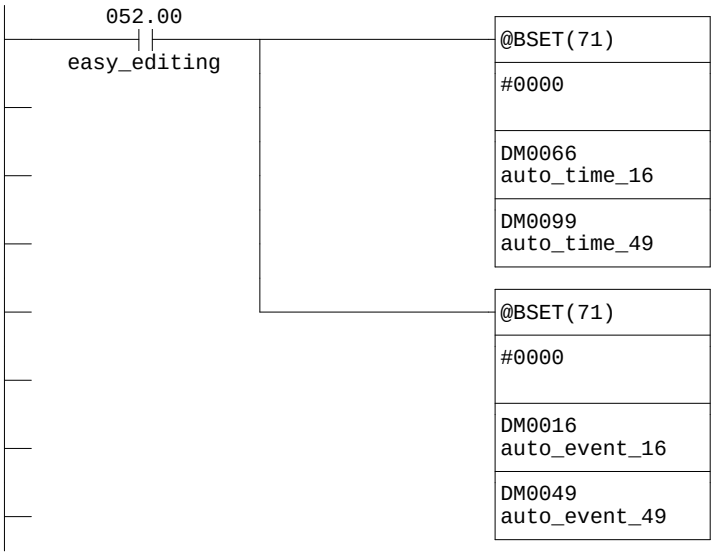


Main 11 - Easy edit



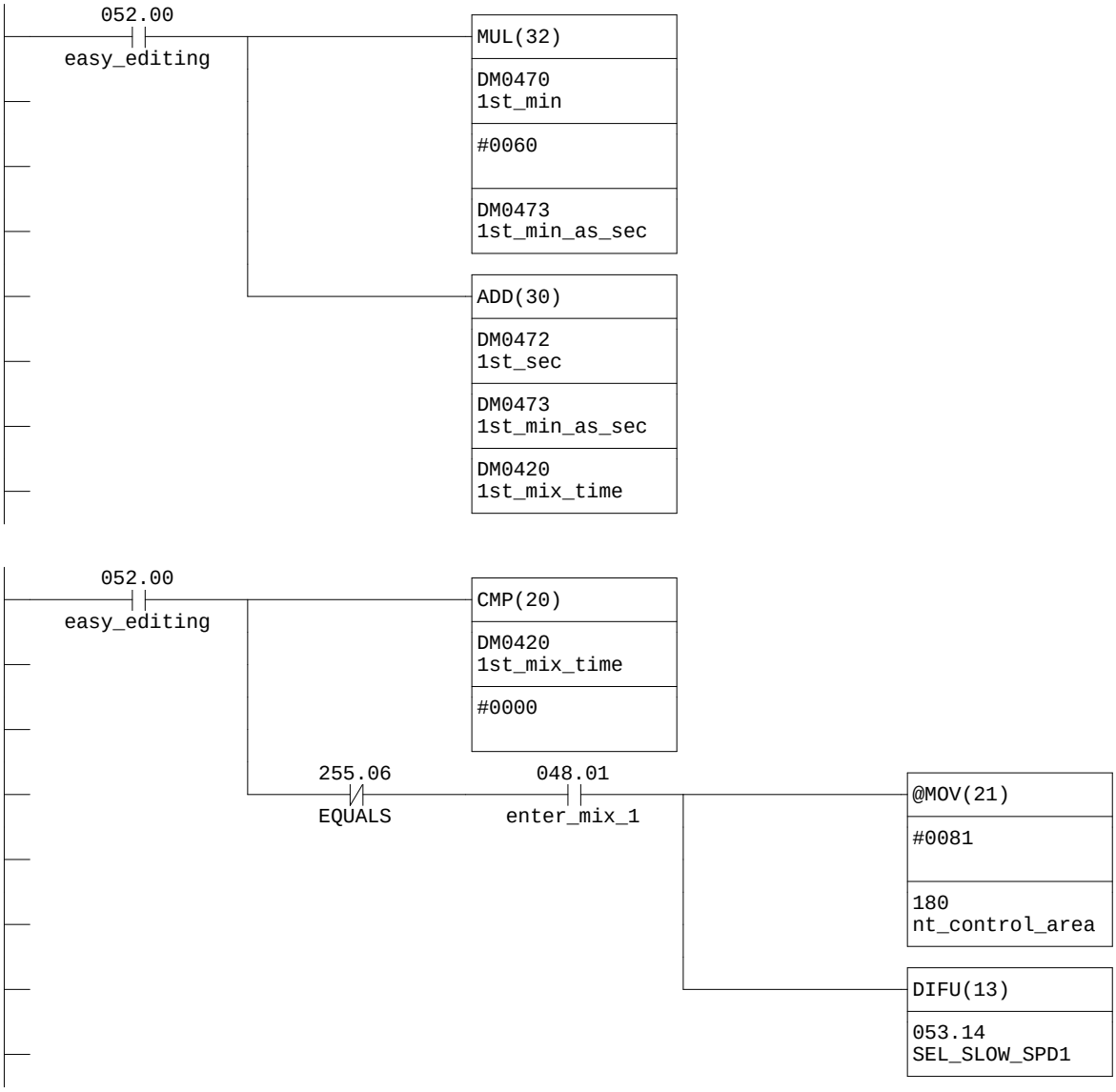
Network 2 - Unused DM's

Set all unused data memories in the active editing area to #0000

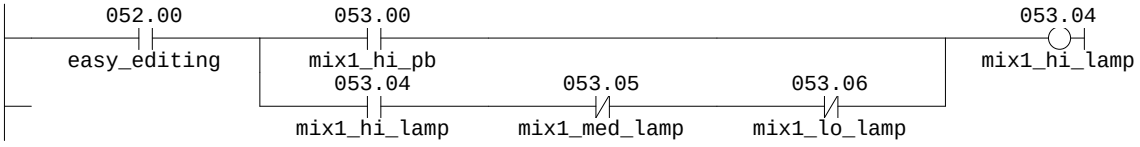


Network 3 - Mix 1 convert

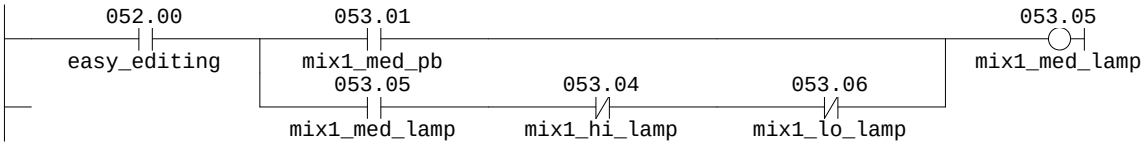
Convert mix times to seconds



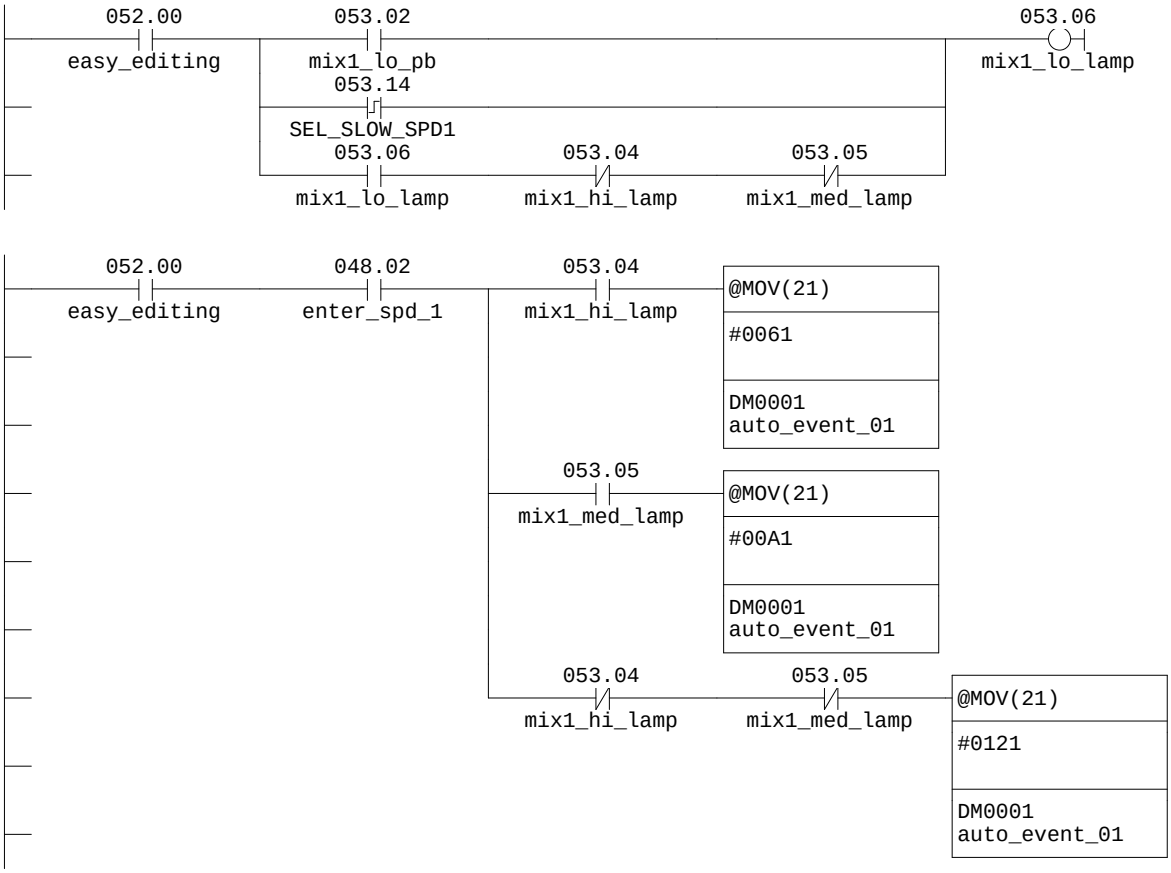
Network 5 - Speed 1



Network 6 - Speed 1

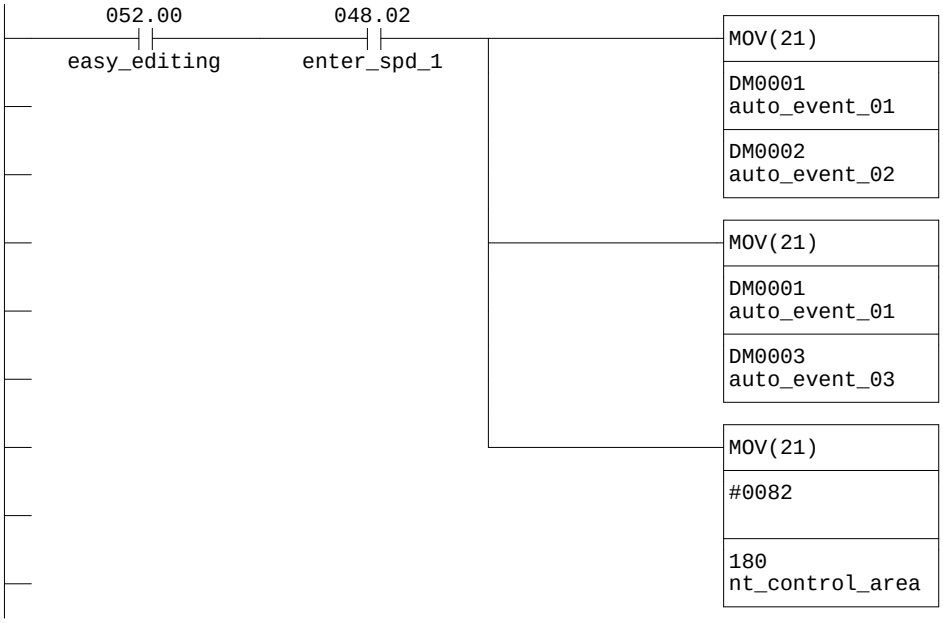


Network 7 - Speed 1



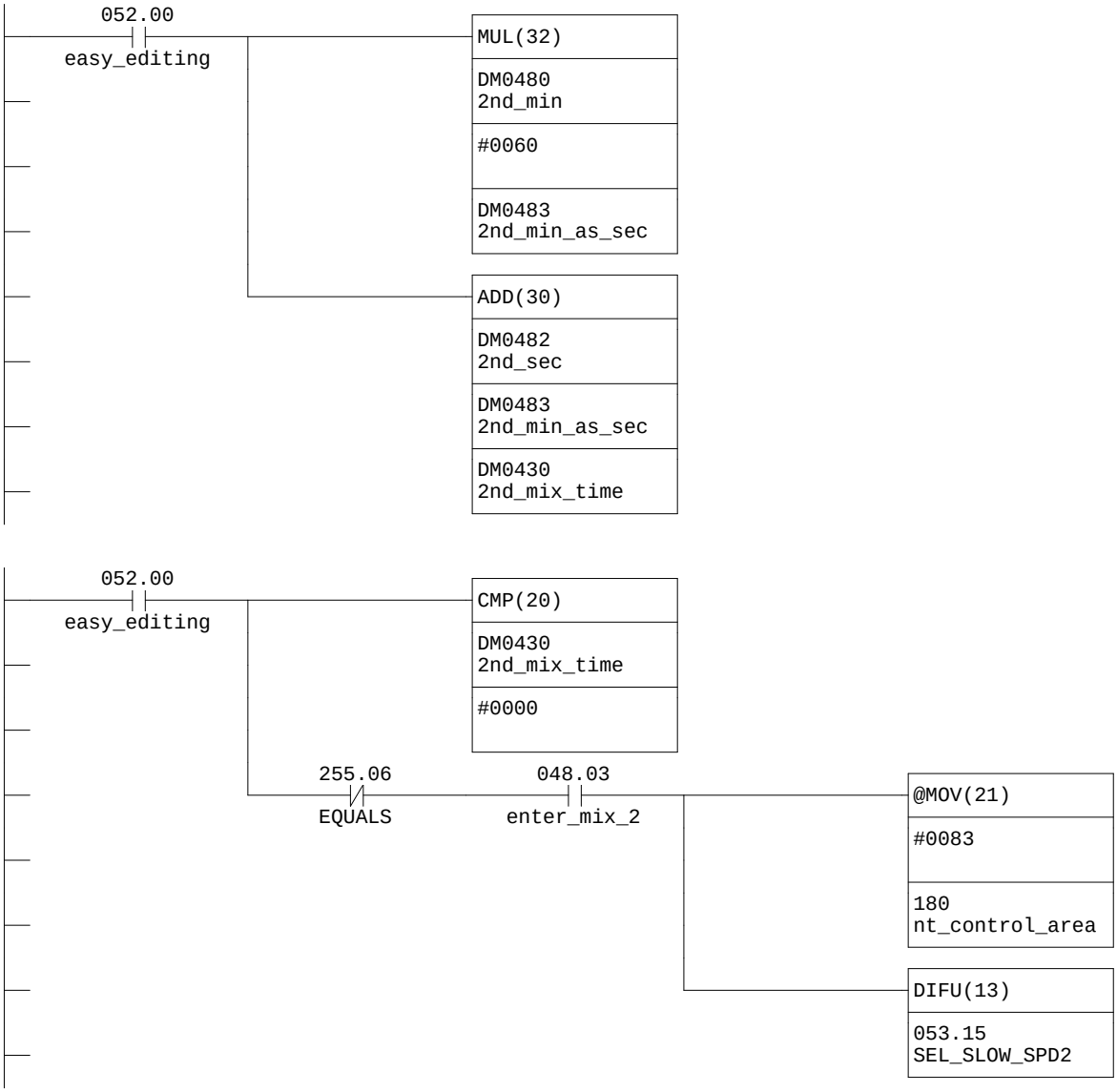
Network 9 - 3 steps

Make the first three steps the same in case the program needs editing at a later date.

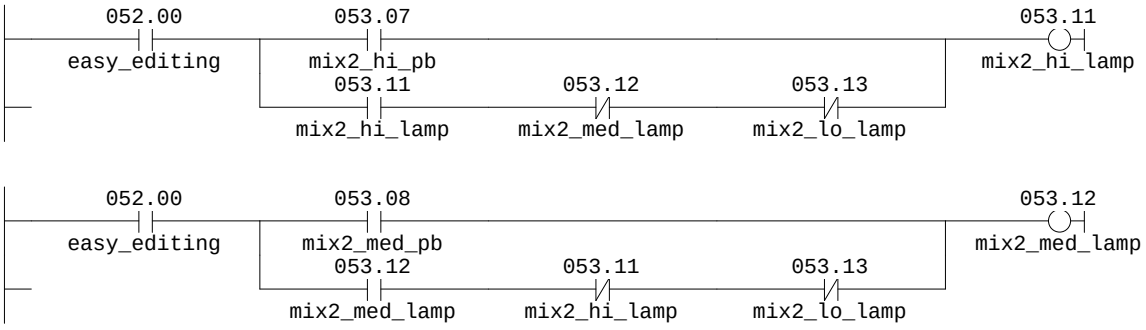


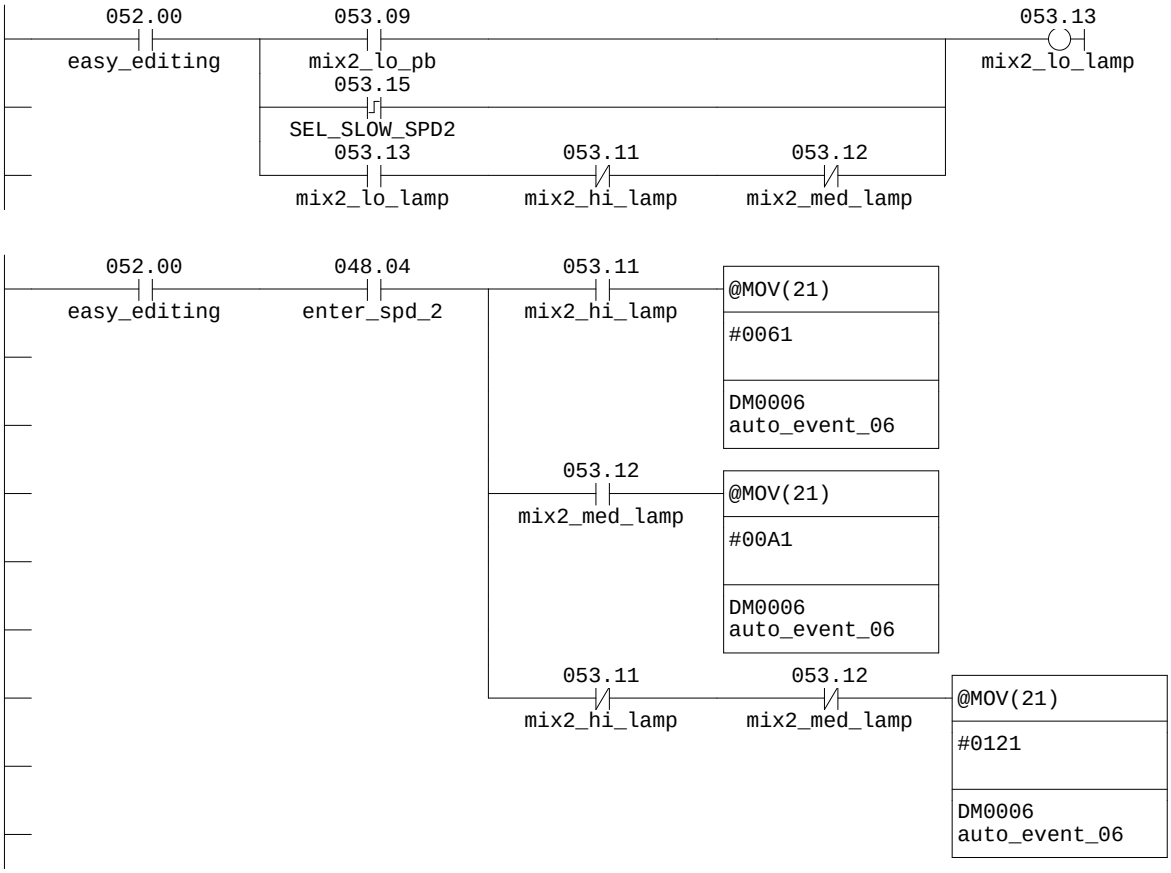
Network 10 - Mix 2 convert

Convert mix times to seconds



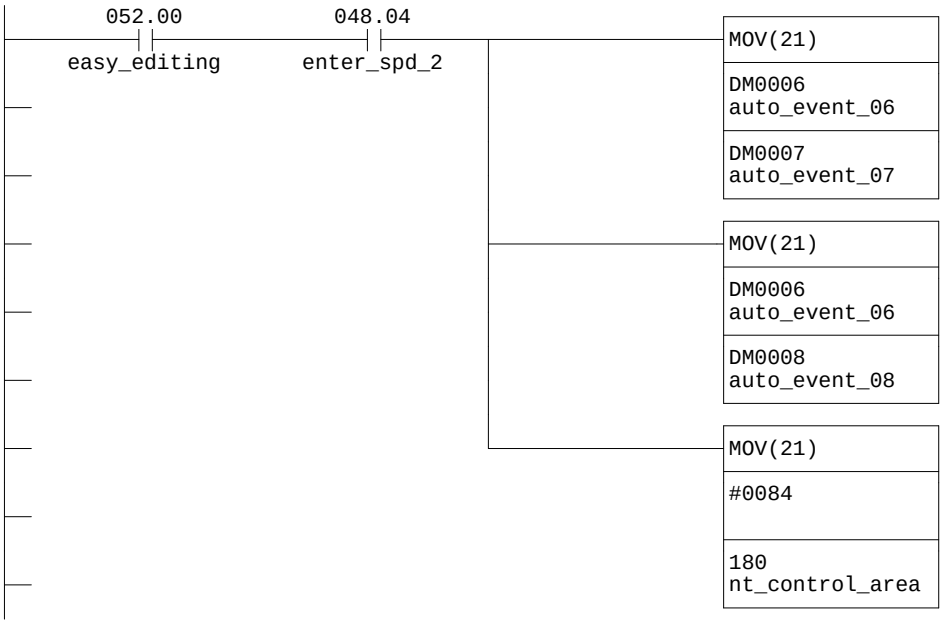
Network 12 - Speed 2





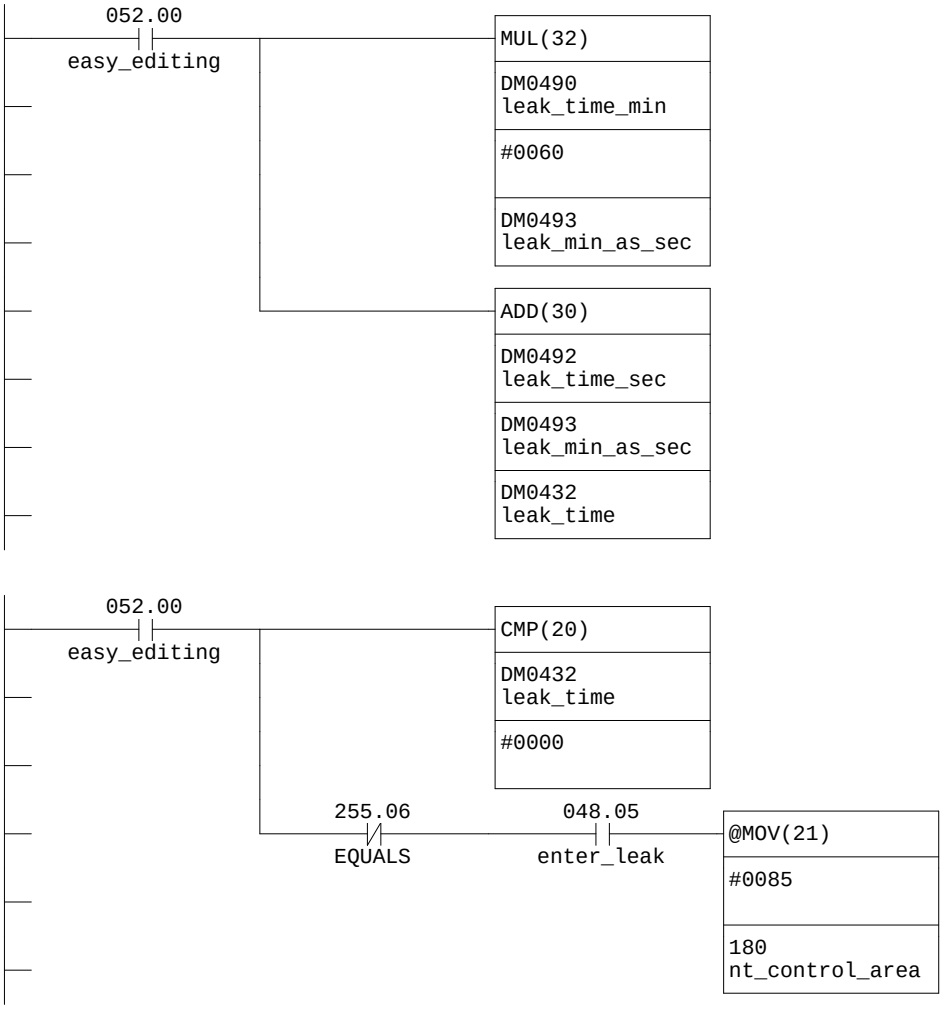
Network 16 - 3 steps

Make the next three steps the same in case the program needs editing at a later date.

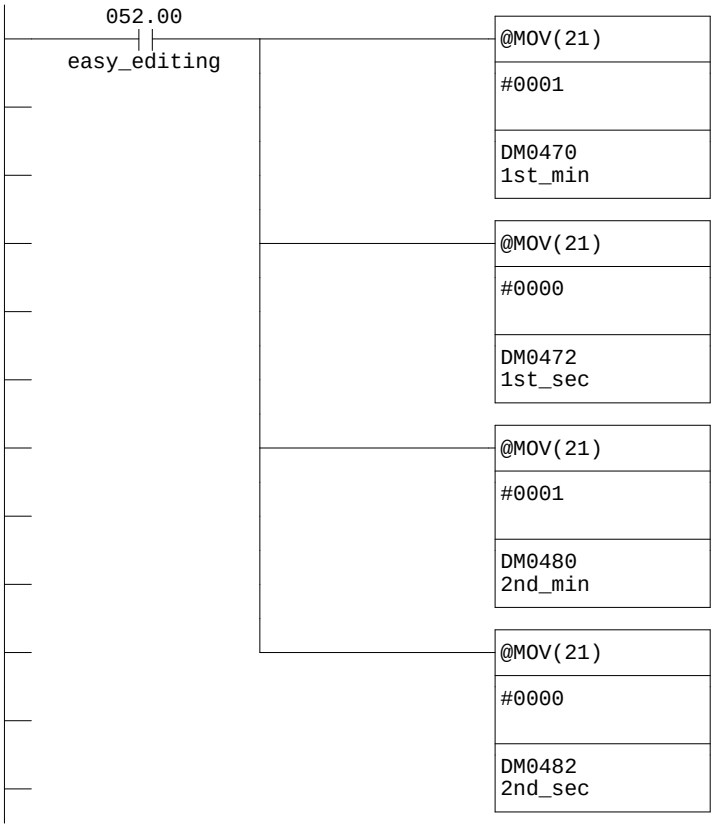


Network 17 - Leak convert

Convert Leak time to seconds

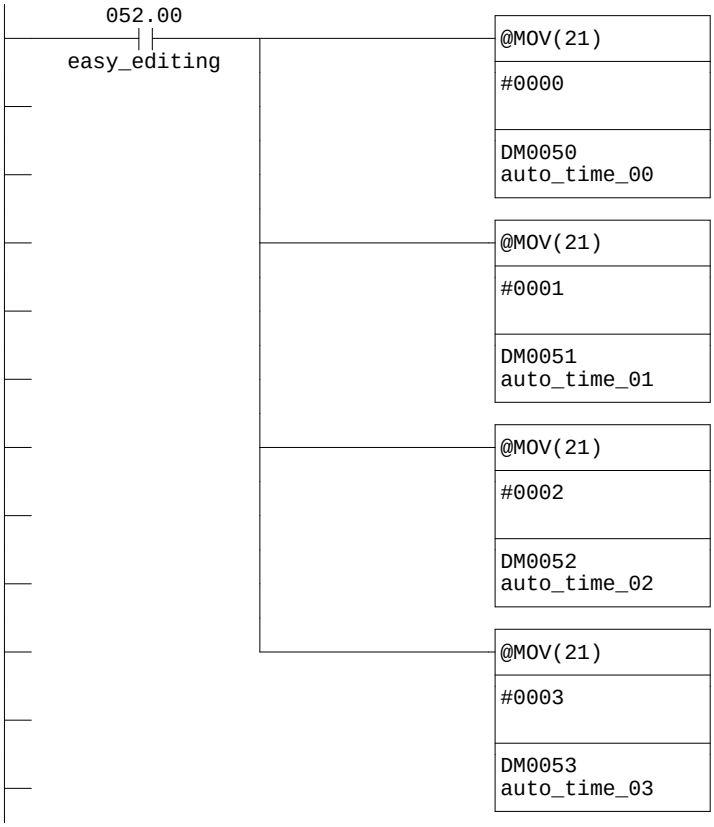


Network 19 - Default mix tim

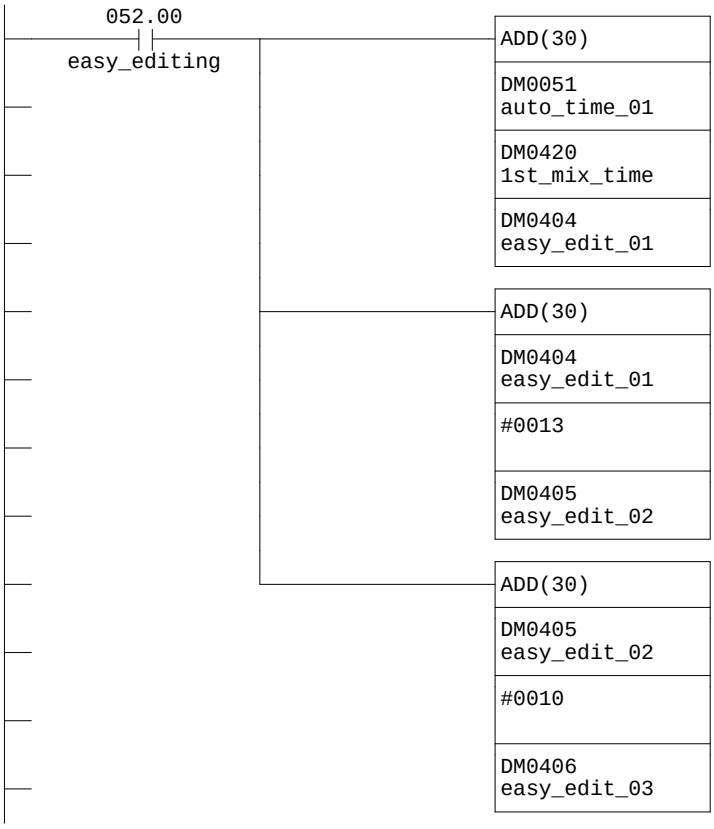


Network 20 - Set tim 0-3

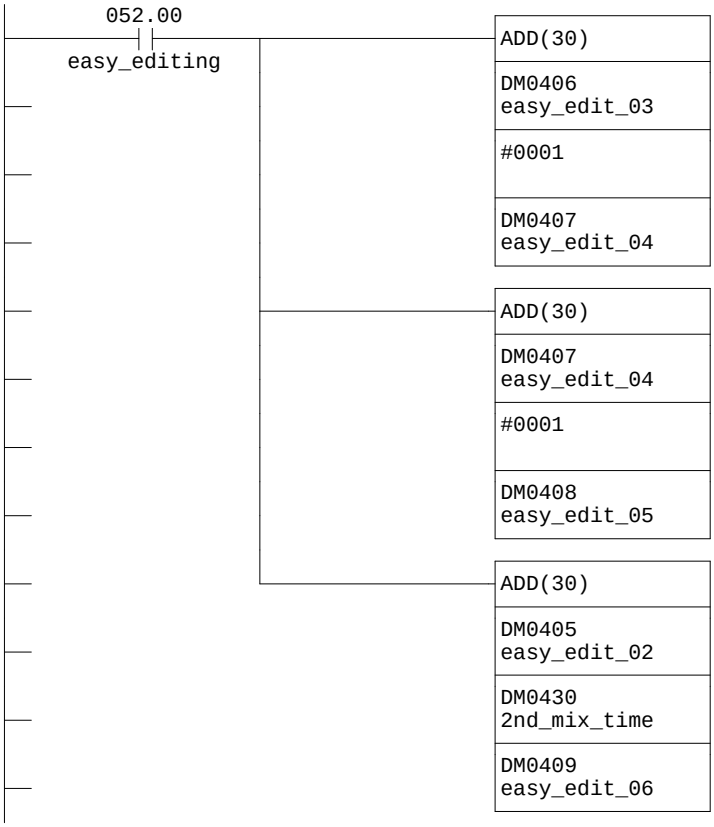
Set the first four time intervals



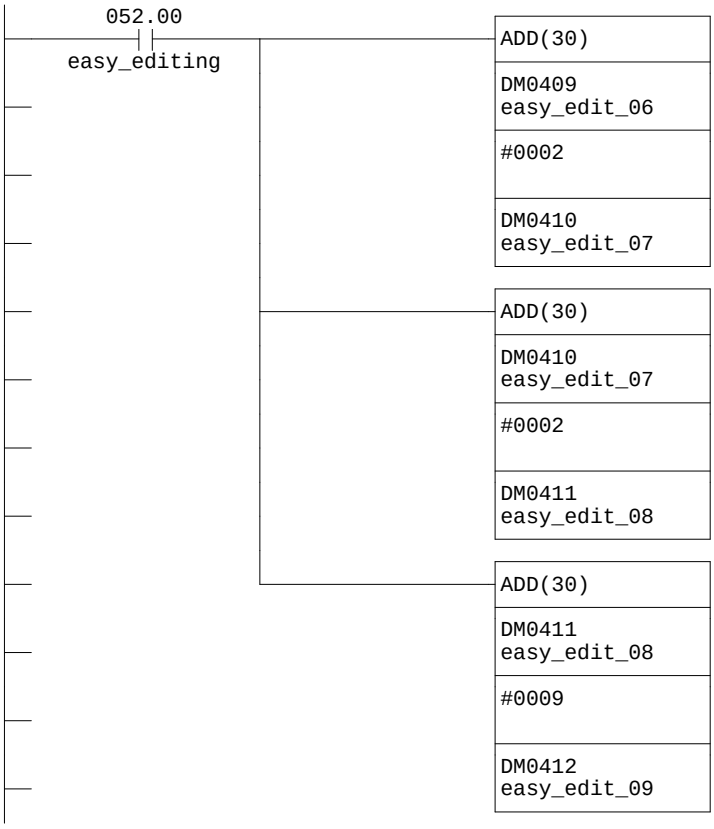
Network 21 - Set tim 4-6



Network 22 - Set tim 7-9



Network 23 - Set tim 10-12

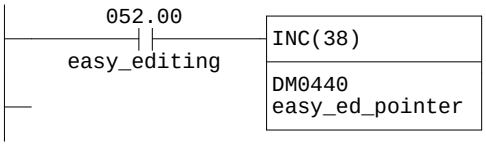


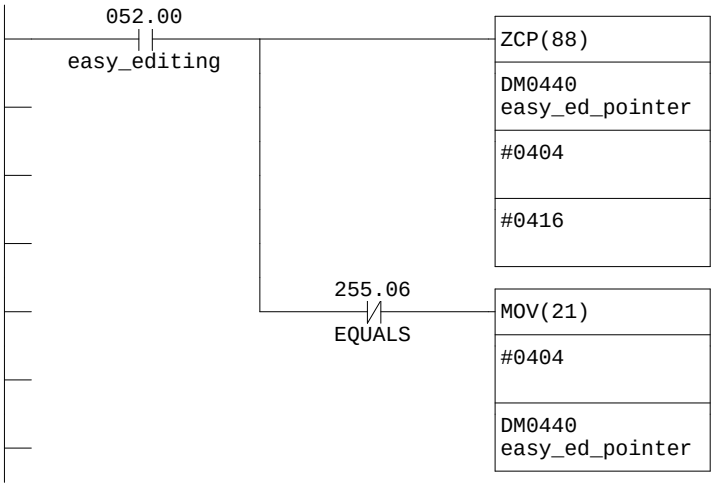
Network 24 - Set tim 13-15

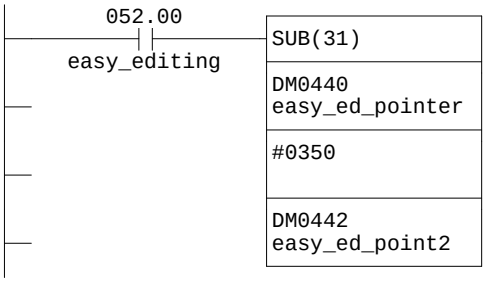
The last ADD(30) instuction in this network adds the fixed "LEAK TIME DM434" to the easy edit program.
This is set at 25sec for the 001, 60 seconds for the 004 and 120 seconds for the 005.

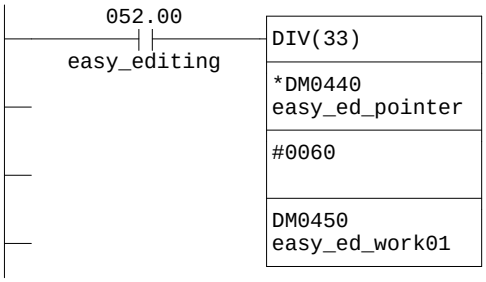
Network 25 - Convert

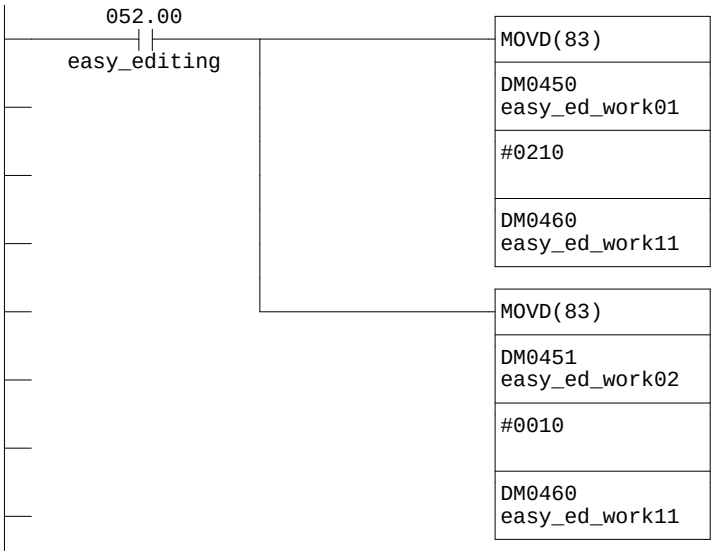
Convert all results to minutes + seconds

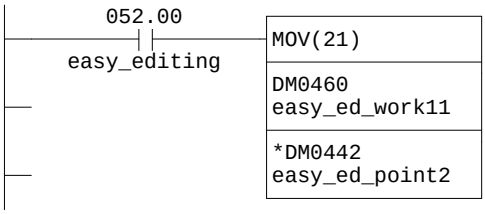



052.00
easy_editing
ZCP(88)
DM0440
easy_ed_pointer
#0404
#0416
255.06
EQUALS
MOV(21)
#0404
DM0440
easy_ed_pointer

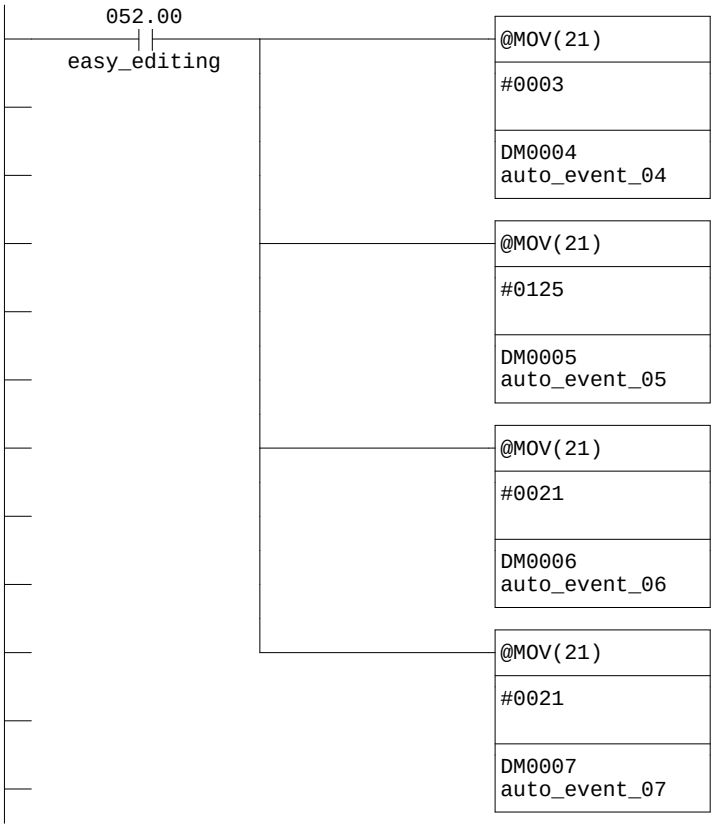

052.00
easy_editing
SUB(31)
DM0440
easy_ed_pointer
#0350
DM0442
easy_ed_point2

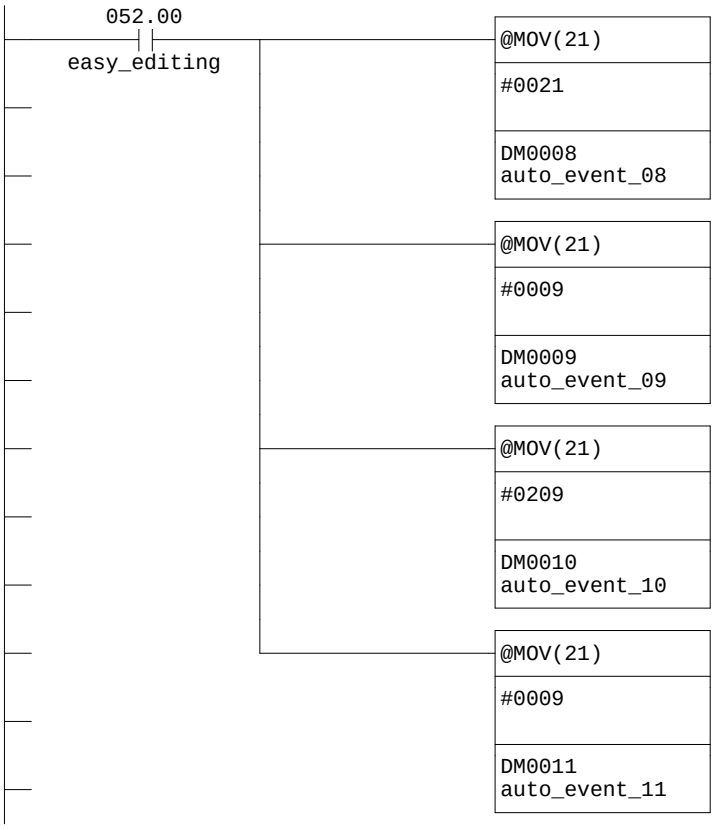

052.00
easy_editing
DIV(33)
*DM0440
easy_ed_pointer
#0060
DM0450
easy_ed_work01

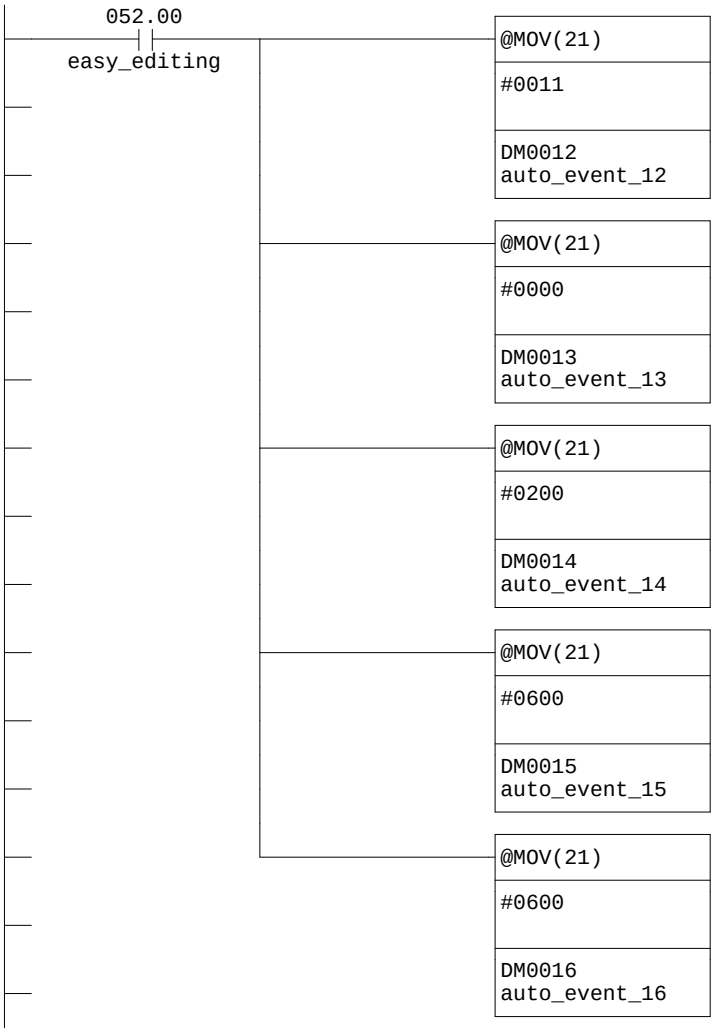

052.00
easy_editing
MOVD(83)
DM0450
easy_ed_work01
#0210
DM0460
easy_ed_work11
MOVD(83)
DM0451
easy_ed_work02
#0010
DM0460
easy_ed_work11


052.00
easy_editing
MOV(21)
DM0460
easy_ed_work11
*DM0442
easy_ed_point2

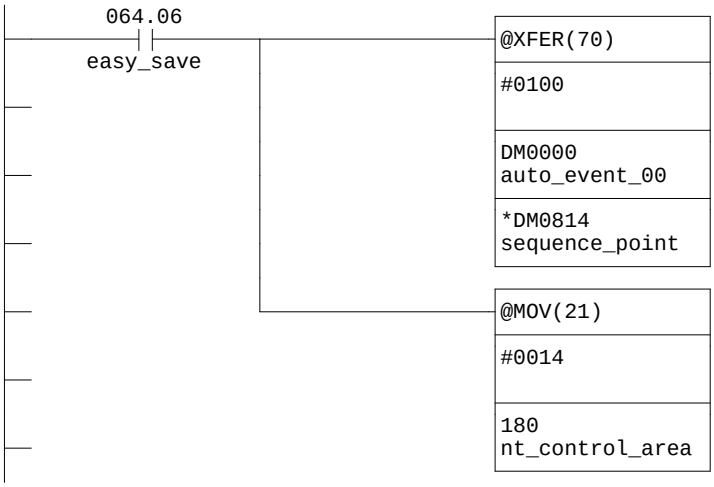

052.00
easy_editing
@MOV(21)
#0001
DM0000
auto_event_00
@MOV(21)
#0021
DM0001
auto_event_01
@MOV(21)
#0021
DM0002
auto_event_02
@MOV(21)
#0021
DM0003
auto_event_03

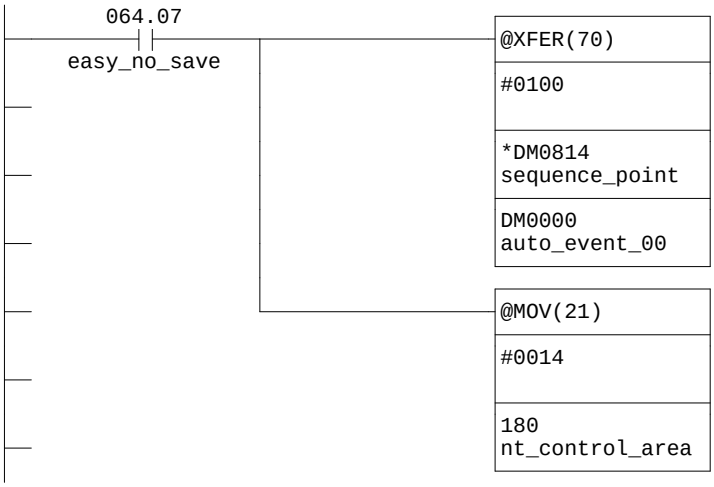

052.00
easy_editing
@MOV(21)
#0003
DM0004
auto_event_04
@MOV(21)
#0125
DM0005
auto_event_05
@MOV(21)
#0021
DM0006
auto_event_06
@MOV(21)
#0021
DM0007
auto_event_07


052.00
easy_editing
@MOV(21)
#0021
DM0008
auto_event_08
@MOV(21)
#0009
DM0009
auto_event_09
@MOV(21)
#0209
DM0010
auto_event_10
@MOV(21)
#0009
DM0011
auto_event_11



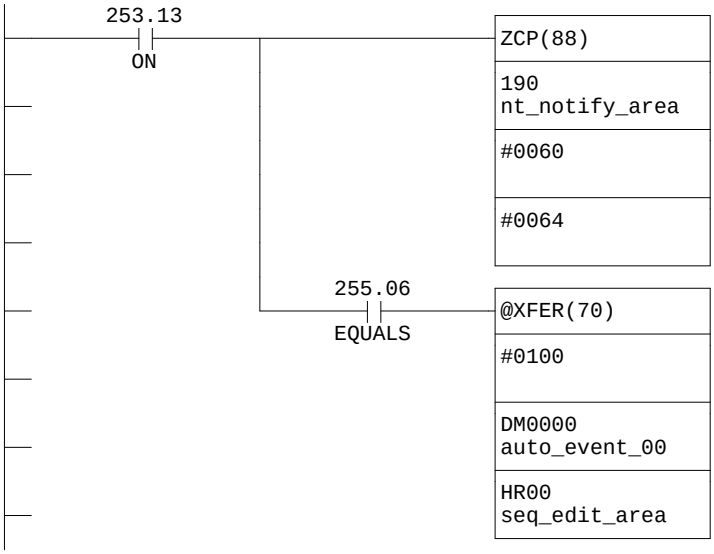
Network 35 - Save easy prog

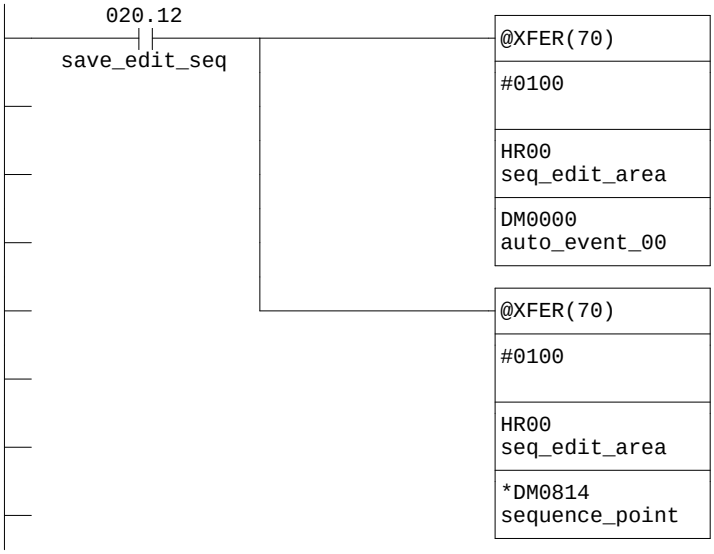




Main 12 - Advanced edit

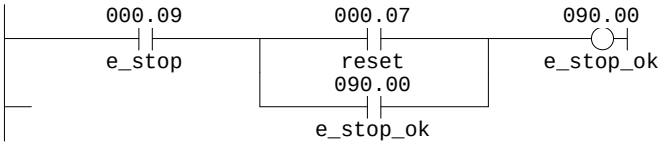
Network 1 - Move to edit





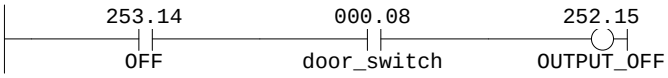
Main 13 - E/stop

Network 1 - E/Stop

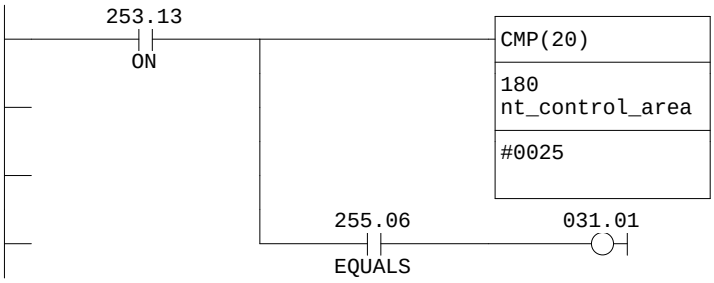


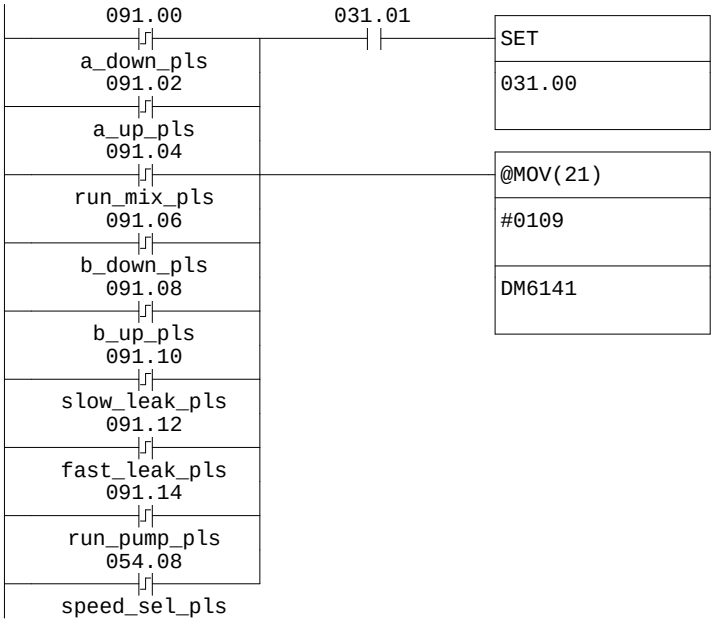
Network 2 - Door switch

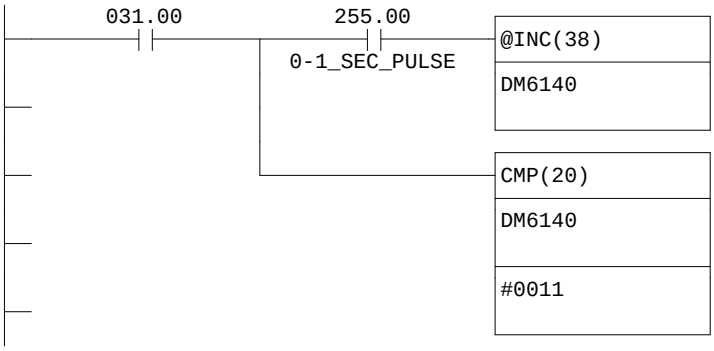
Network inhibited (25314) on the heated cup/oven machines, as the system off bit also disables the temperature conrol output.
The Door switch in the open position will turn the output inhibit bit on. This prevents any output from the PLC

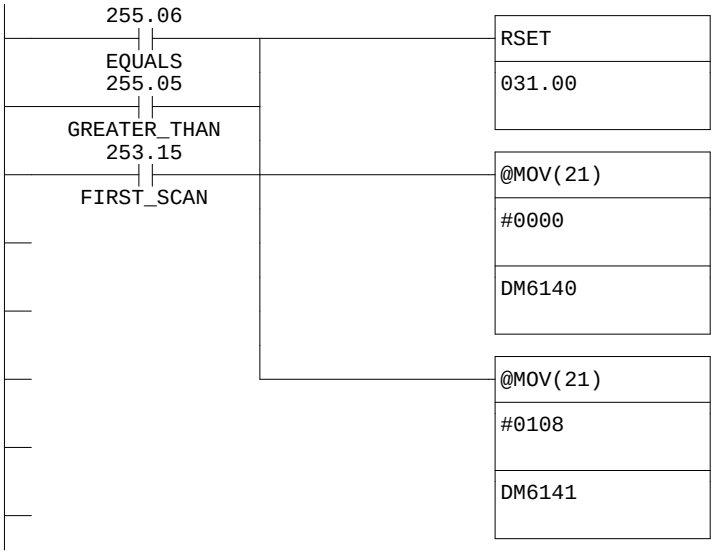


Main 14 - Manual control

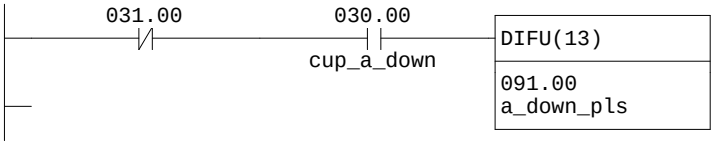


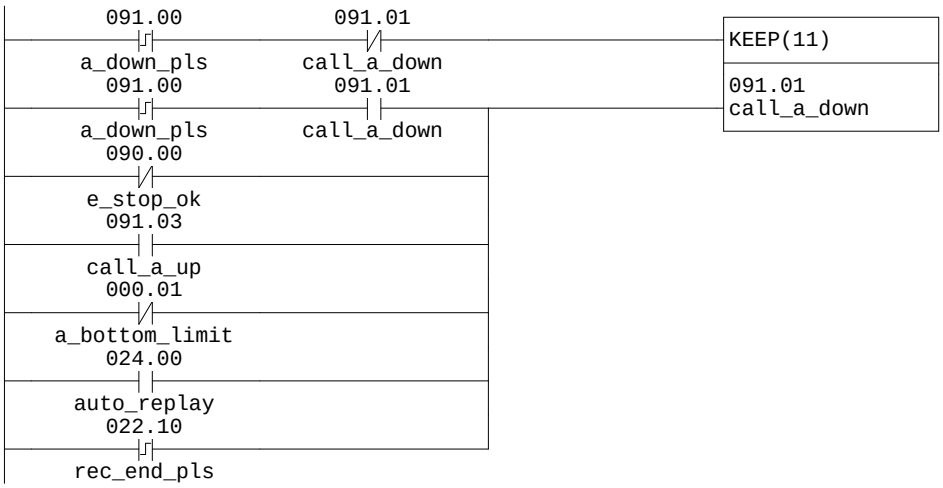




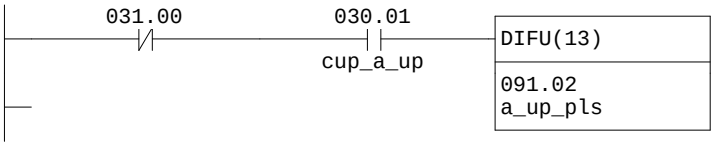


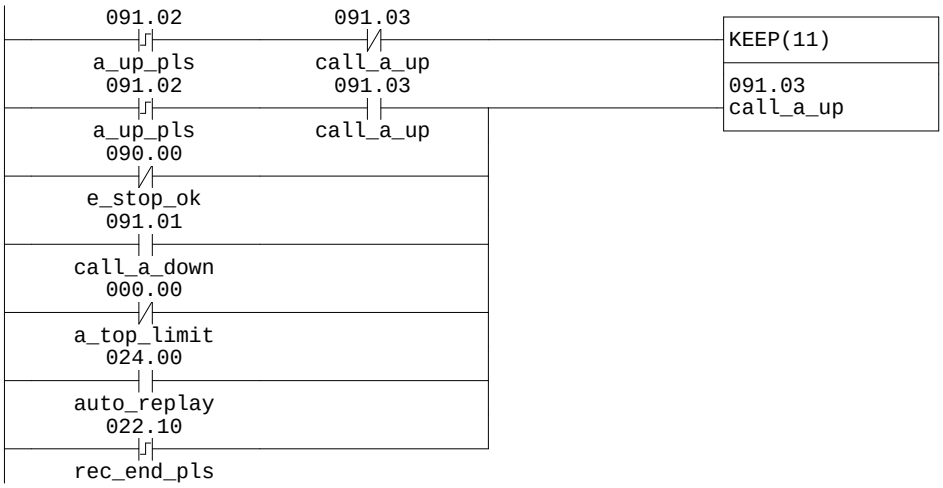
Network 5 - Lower "A"



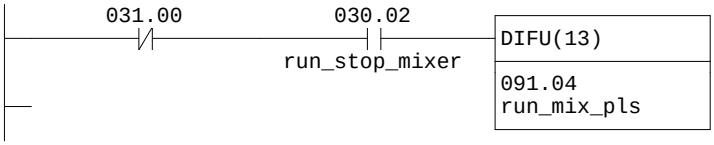


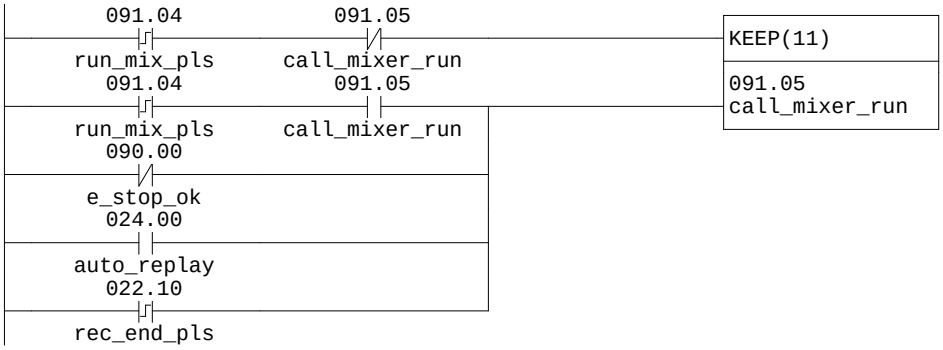
Network 7 - Raise "A"



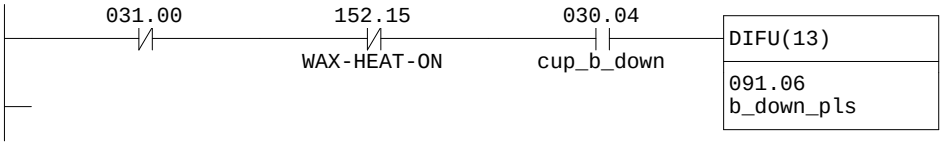


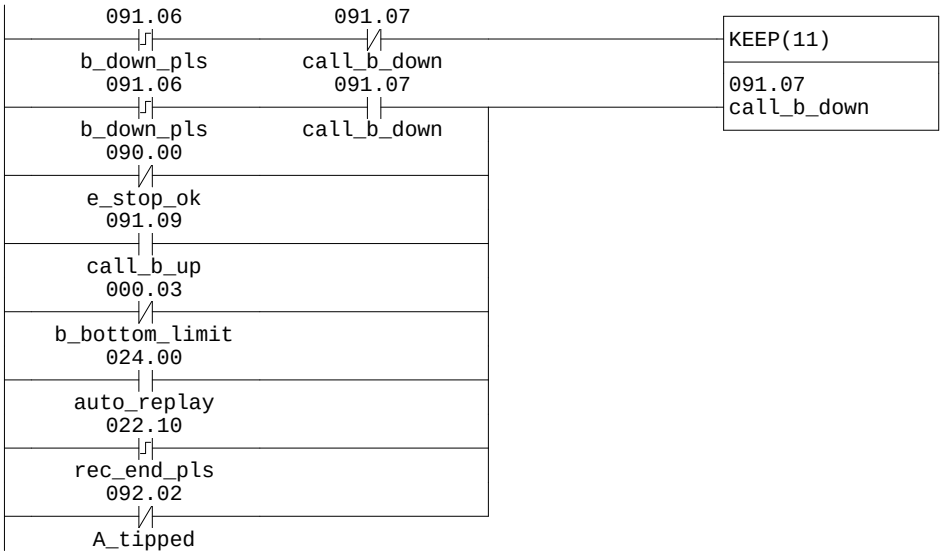
Network 9 - Run mixer



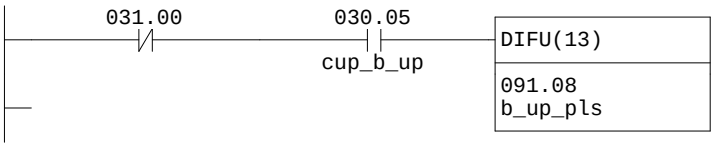


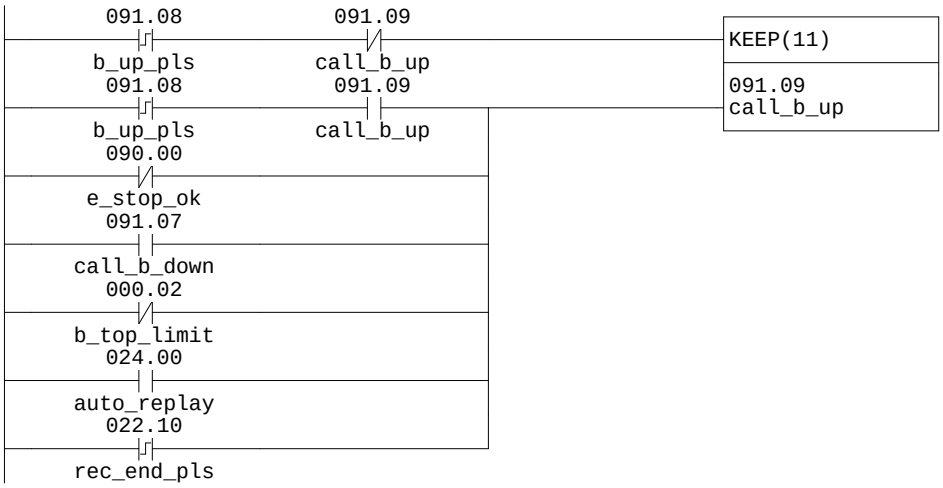
Network 11 - Lower "B"



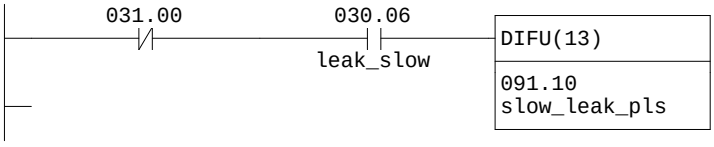


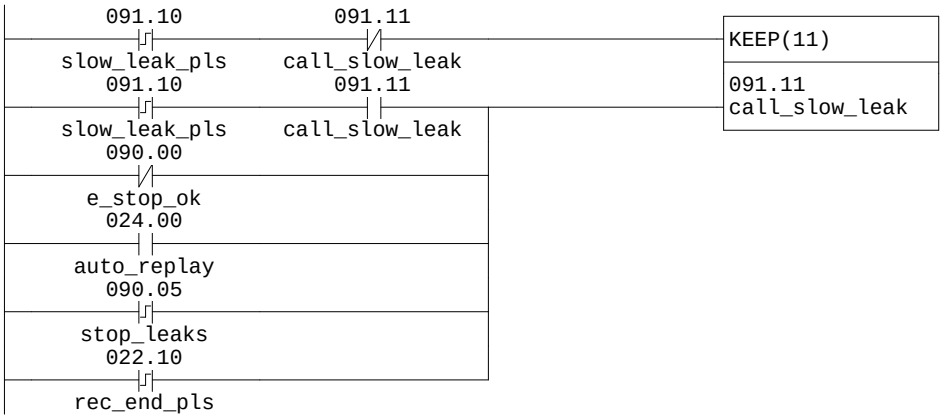
Network 13 - Raise "B"



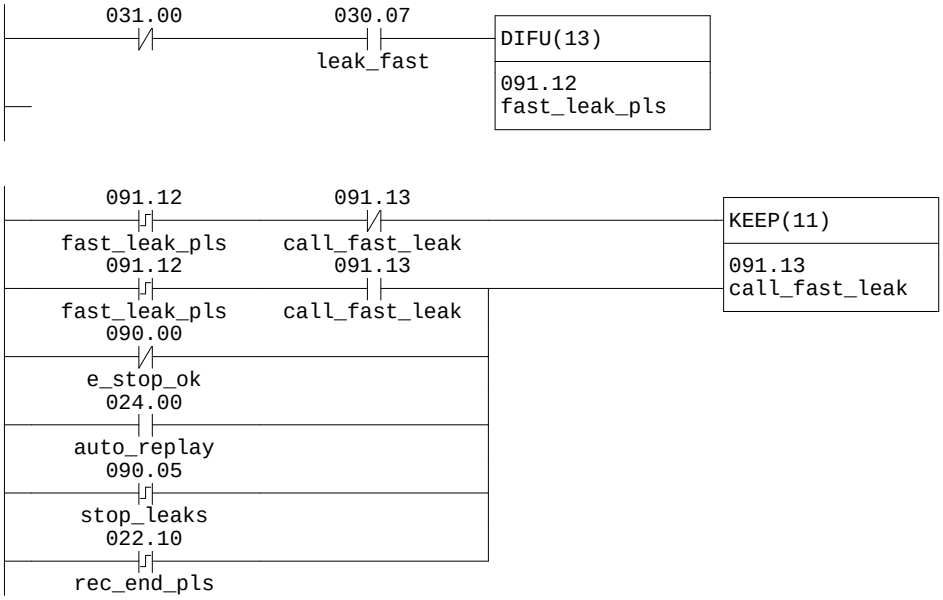


Network 15 - Slow leak

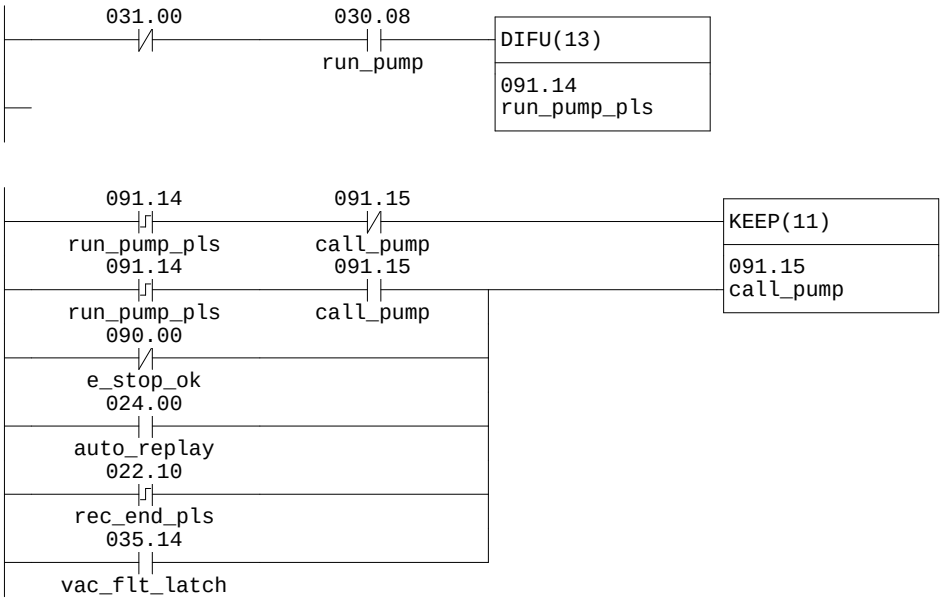


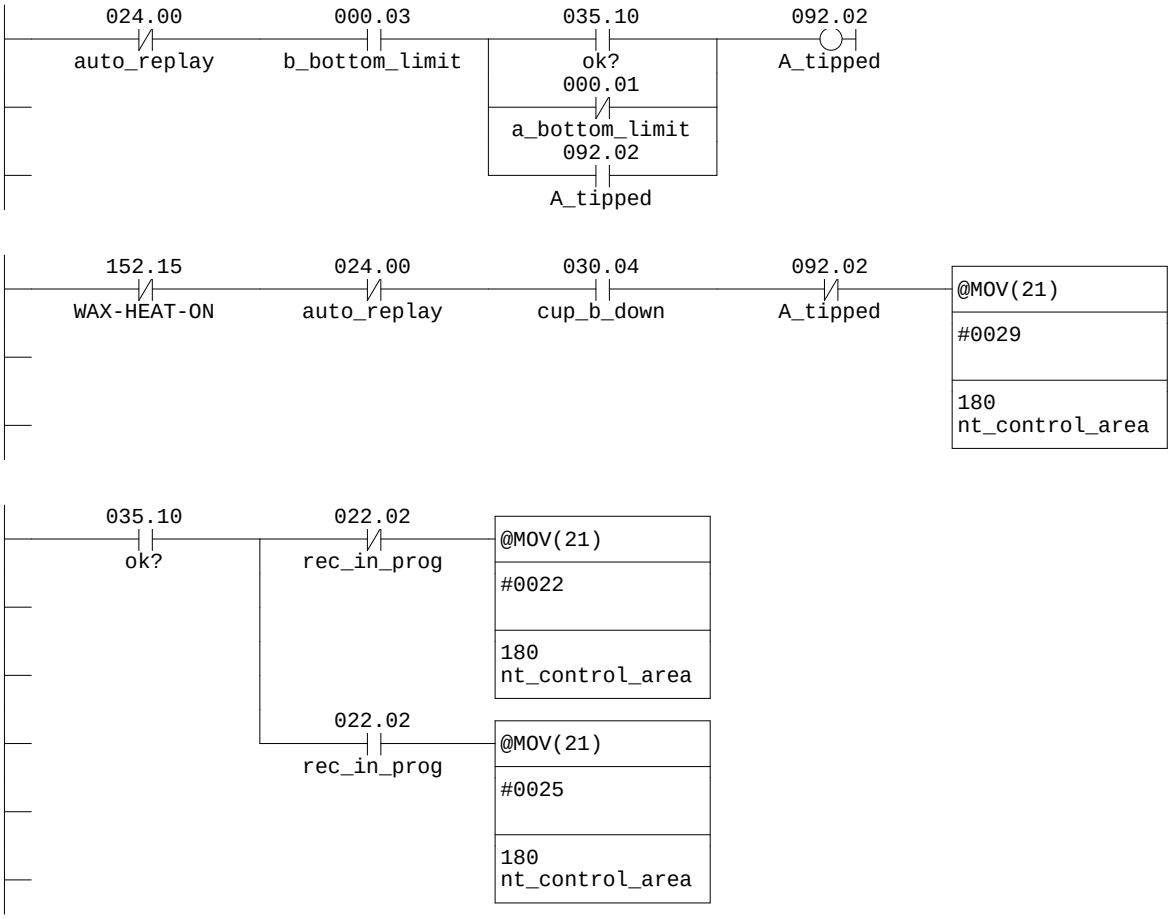


Network 17 - Fast leak

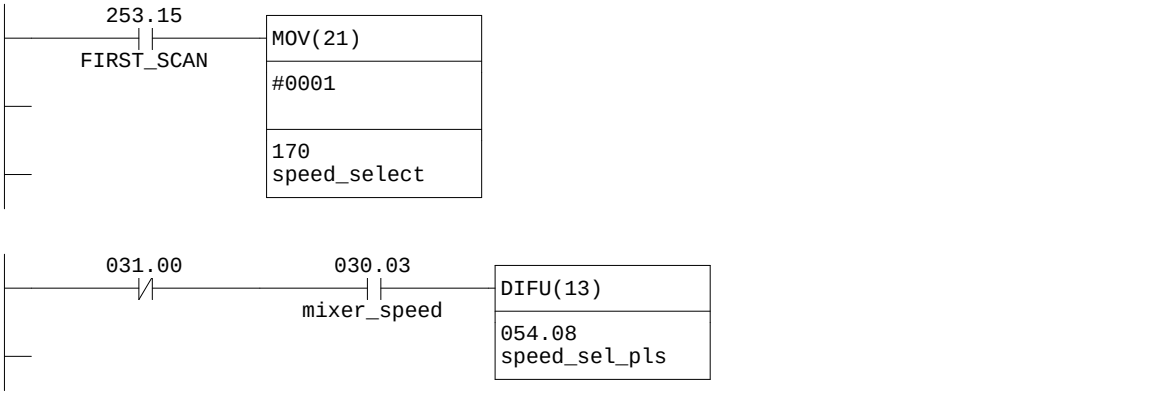


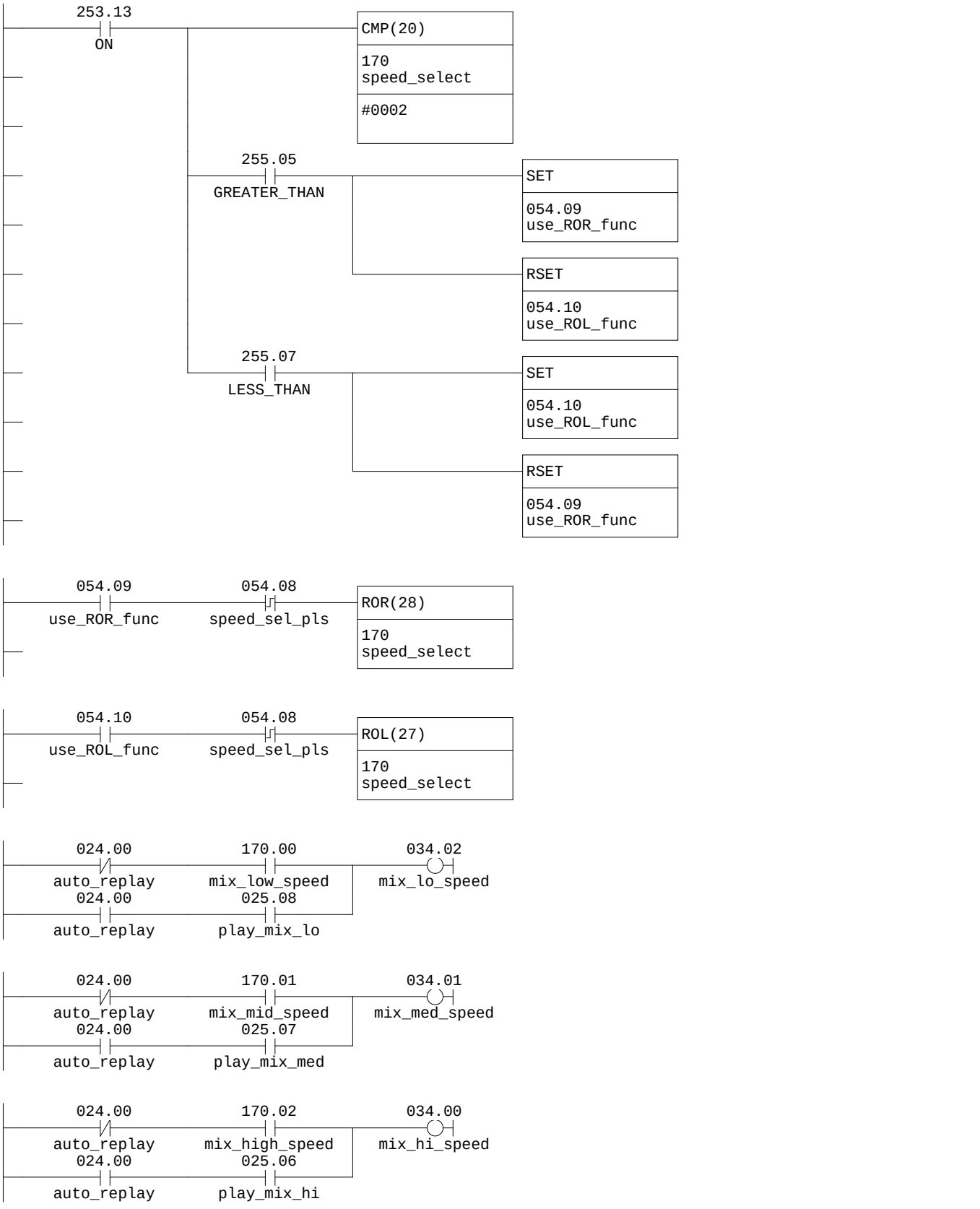
Network 19 - Run Pump





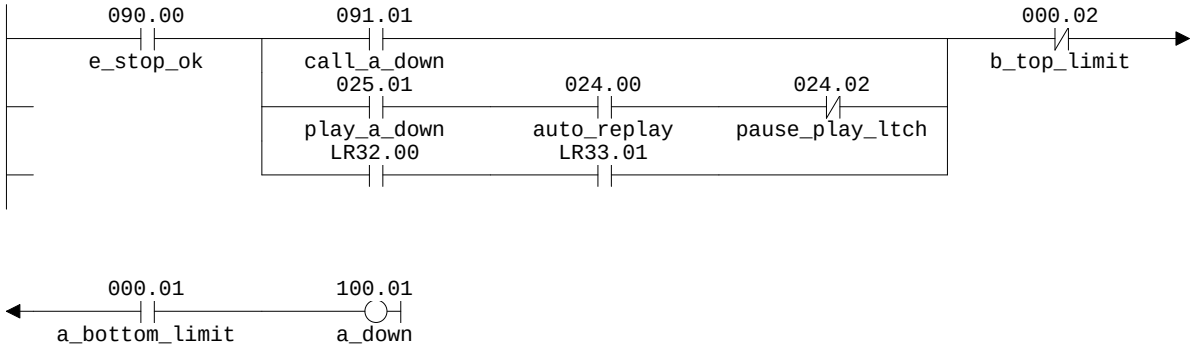
Main 15 - Speed select



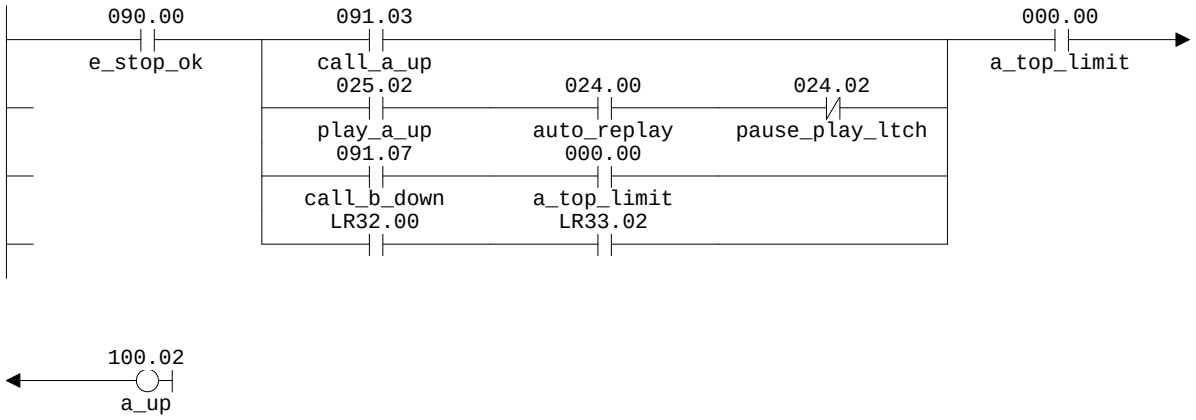

253.13
ON
CMP(20)
170
speed_select
#0002
255.05
GREATER_THAN
SET
054.09
use_ROR_func
RSET
054.10
use_ROL_func
255.07
LESS_THAN
SET
054.10
use_ROL_func
RSET
054.09
use_ROR_func
054.09
use_ROR_func
054.08
speed_sel_pls
ROR(28)
170
speed_select
054.10
use_ROL_func
054.08
speed_sel_pls
ROL(27)
170
speed_select
024.00
auto_replay
170.00
mix_low_speed
034.02
mix_lo_speed
024.00
auto_replay
025.08
play_mix_lo
024.00
auto_replay
170.01
mix_mid_speed
034.01
mix_med_speed
024.00
auto_replay
025.07
play_mix_med
024.00
auto_replay
170.02
mix_high_speed
034.00
mix_hi_speed
024.00
auto_replay
025.06
play_mix_hi

Main 16 - Outputs

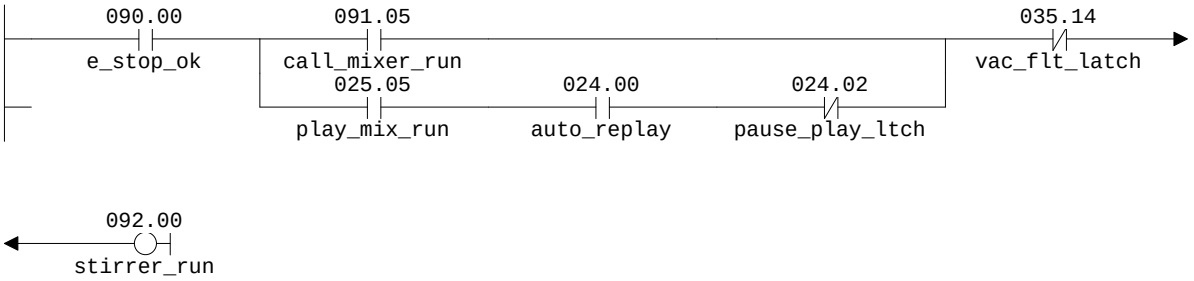
Network 1 - Lower "A"



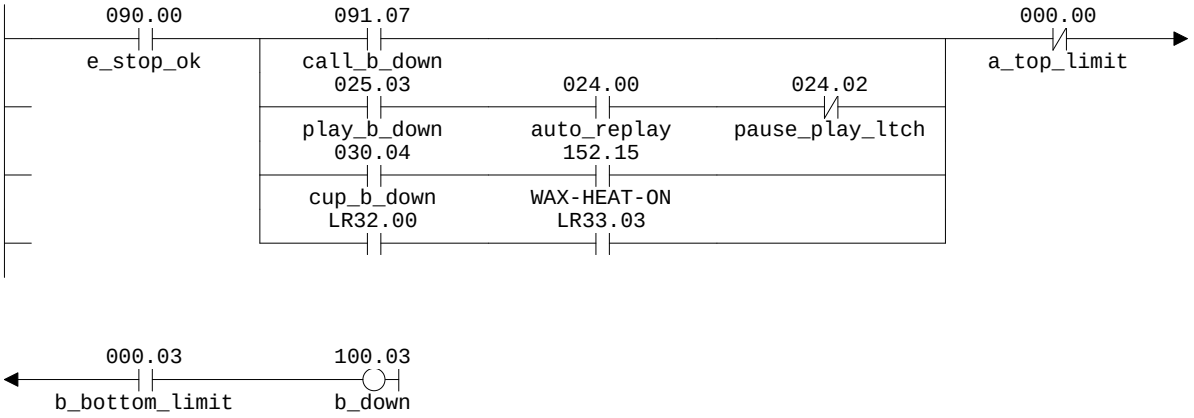
Network 2 - Raise "A"



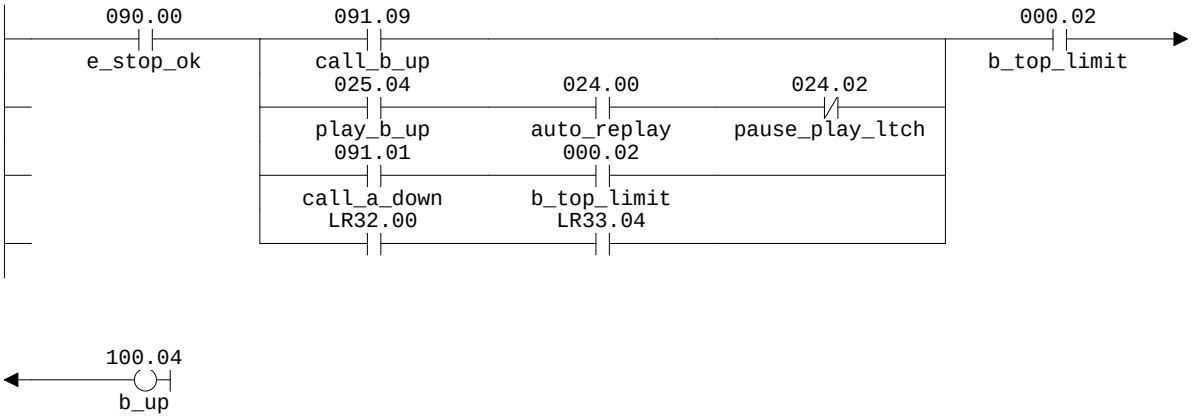
Network 3 - Run mixer



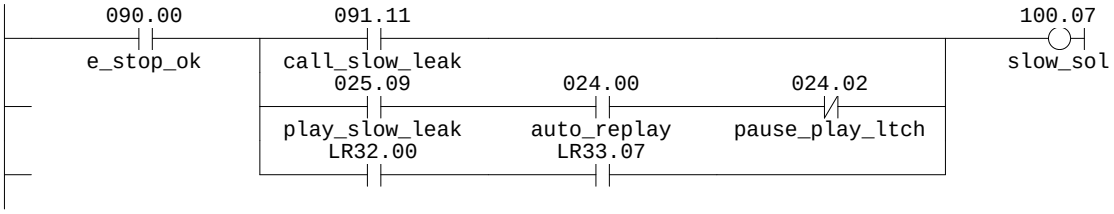
Network 4 - Lower "B"



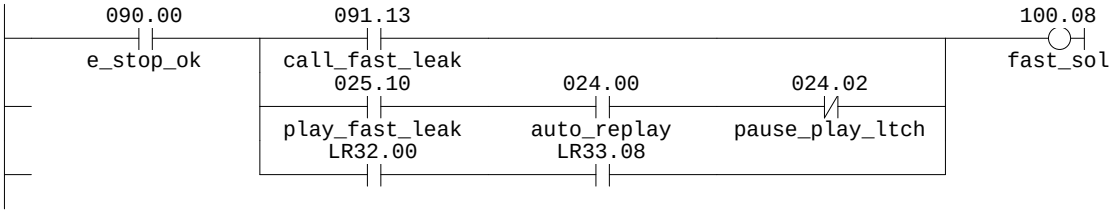
Network 5 - Raise "B"



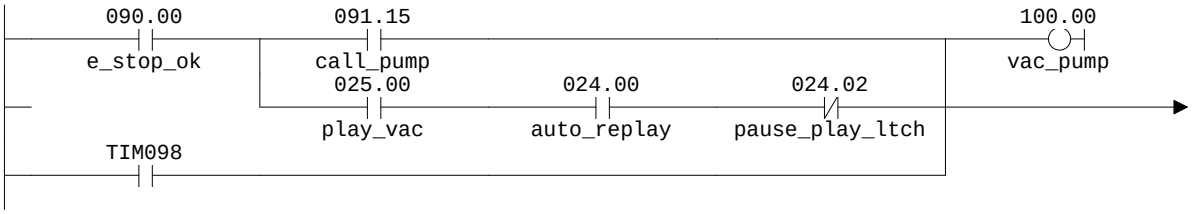
Network 6 - Leak slow

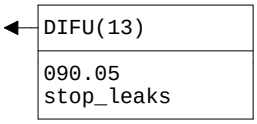


Network 7 - Leak fast

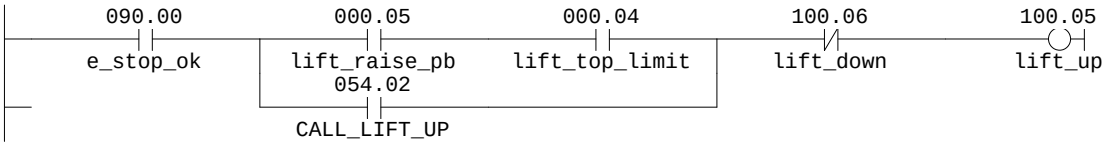


Network 8 - Pump

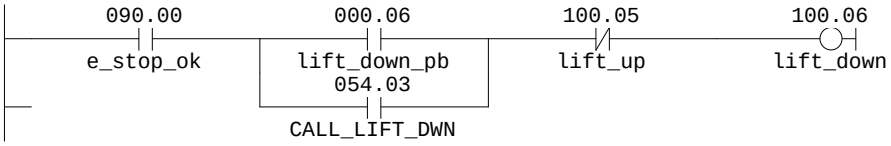




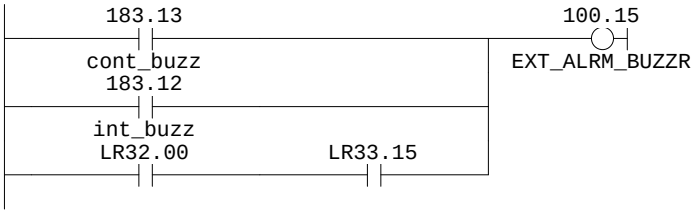
Network 9 - Hoist up



Network 10 - Hoist down

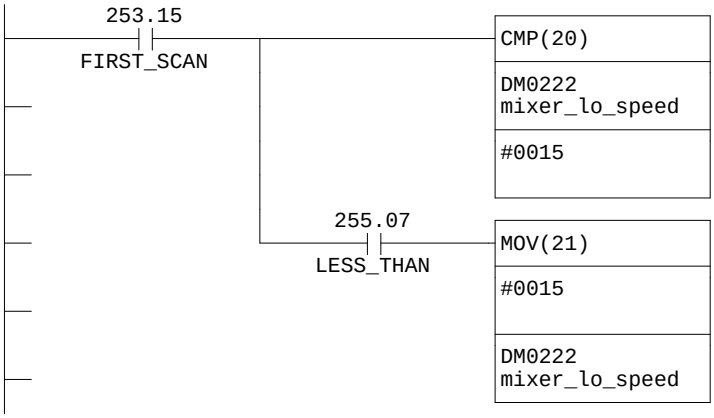


Network 11 - External Alarm

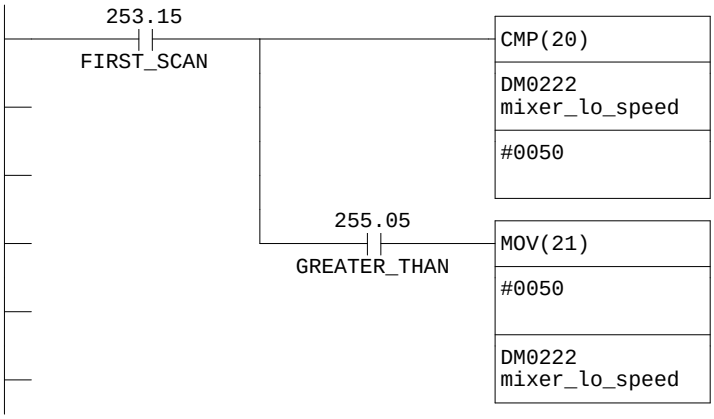


Main 17 - Speed output

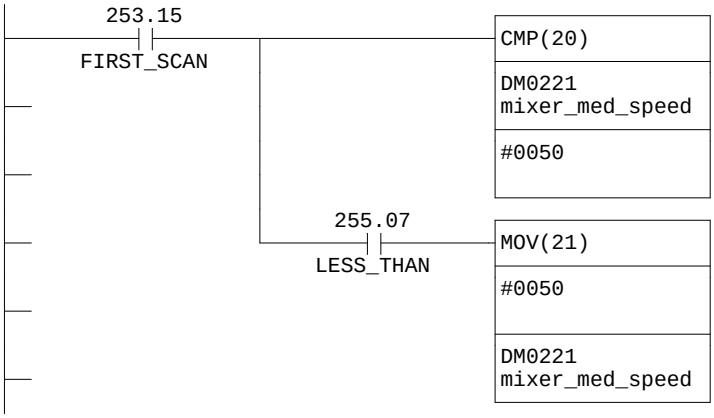
Network 1 - Default Lo



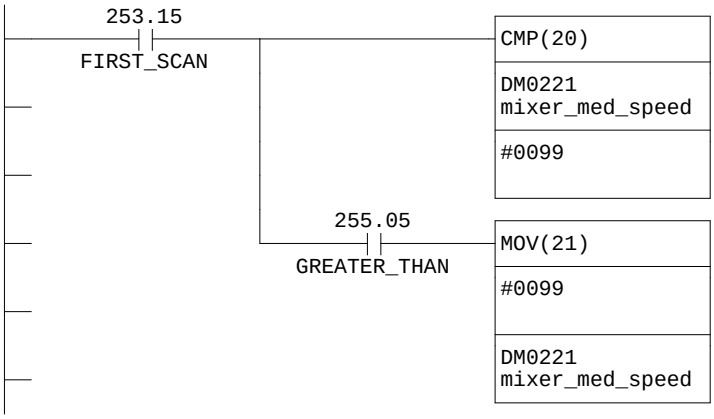
Network 2 - Default Lo



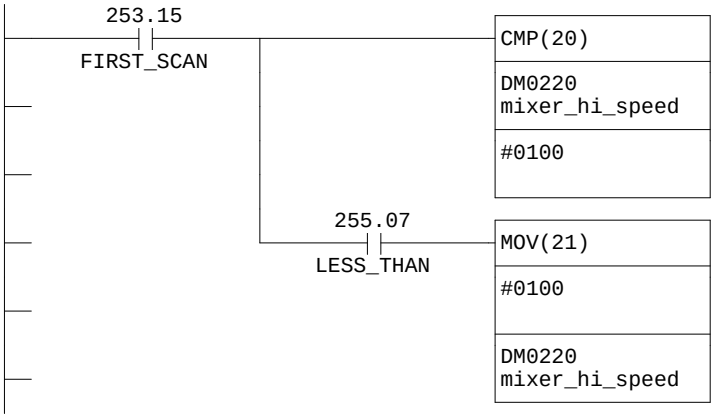
Network 3 - Default Med



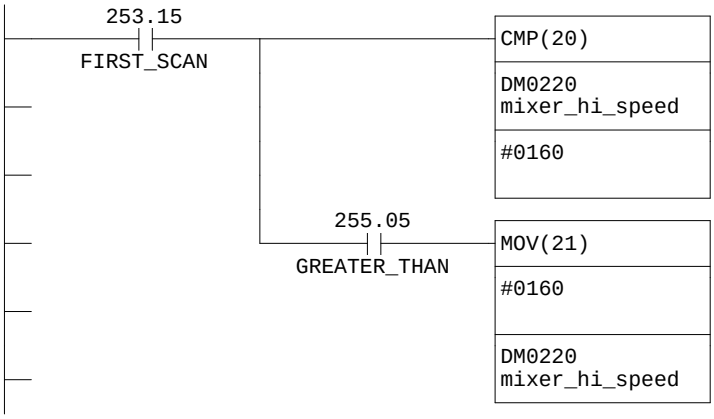
Network 4 - Default Med



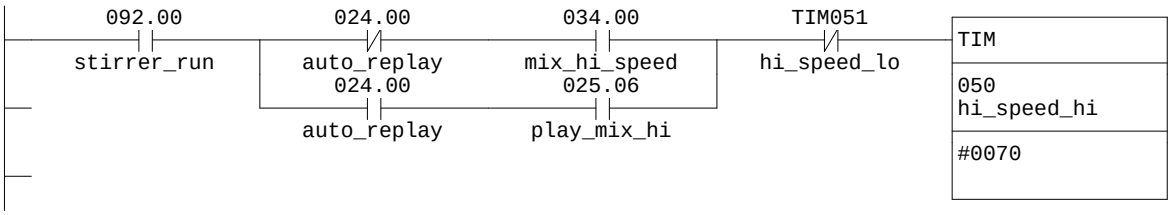
Network 5 - Default Hi

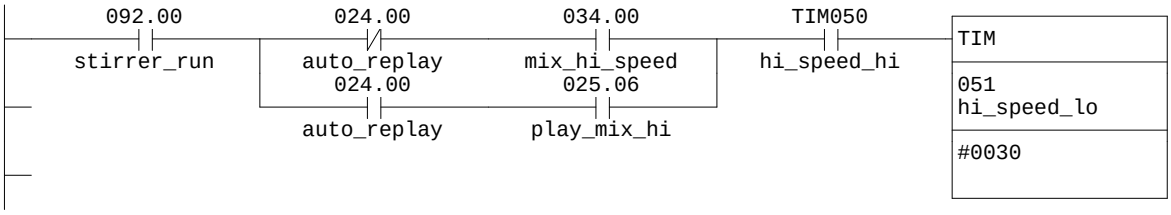


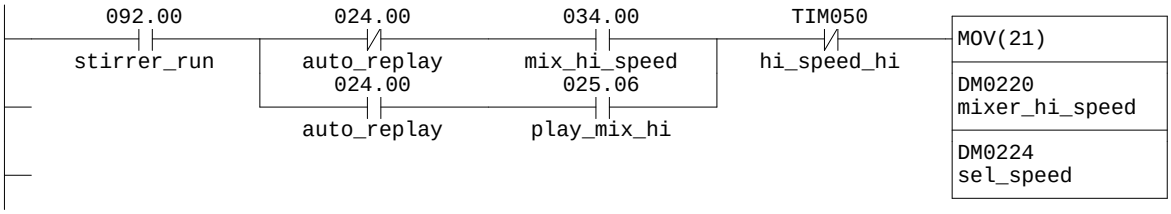
Network 6 - Default Hi

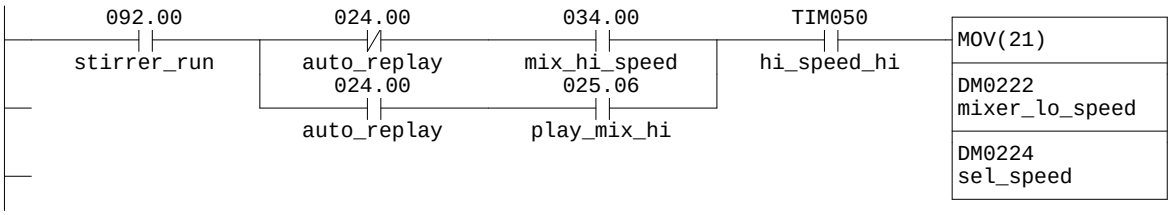


Network 7 - Hi

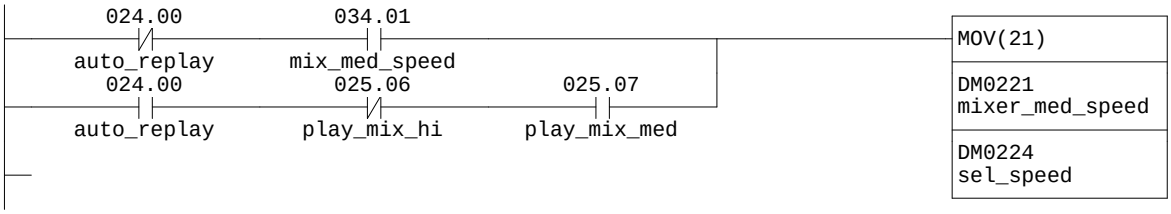




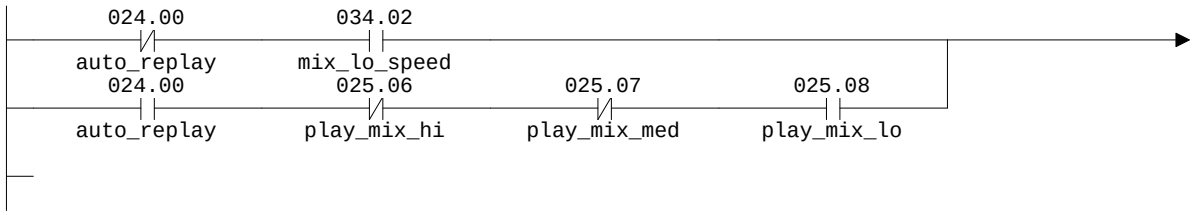


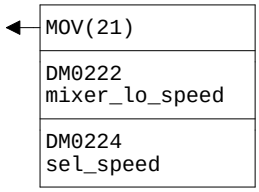


Network 11 - Med

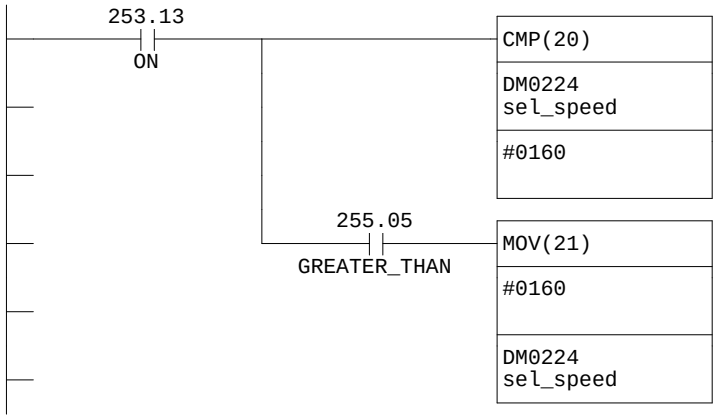


Network 12 - Lo



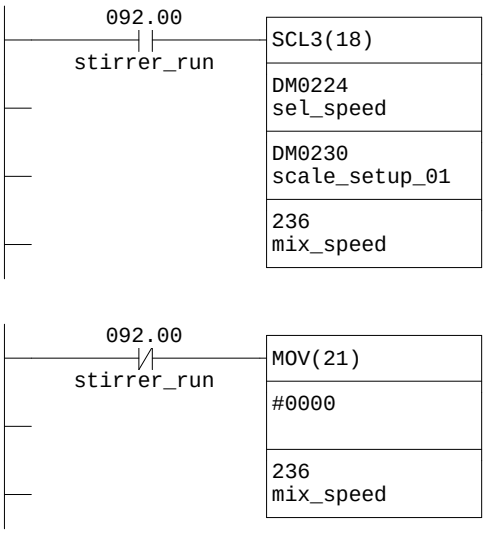


Network 13 - Max speed



Network 14 - Set scaling

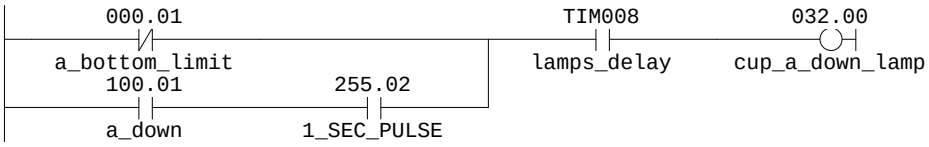
Network 15 - Scale output



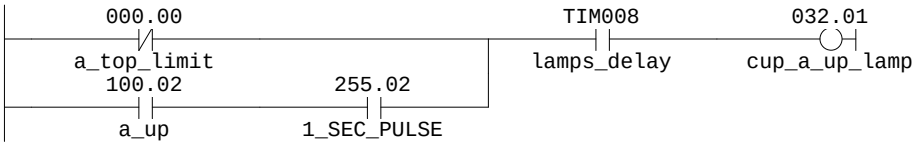
Main 18 - Indicators

PB status lamps etc.

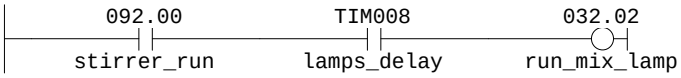
Network 1 - A down



Network 2 - A up

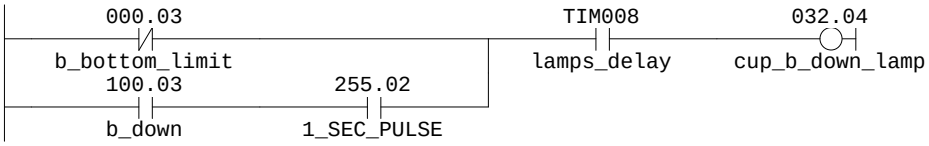


Network 3 - Run mixer

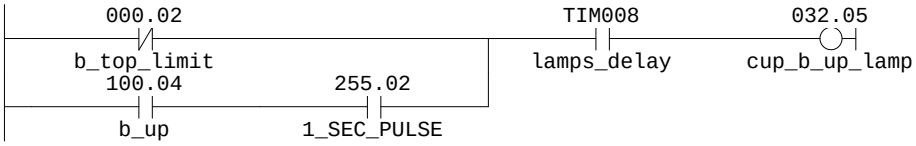


Network 4 - Mixer speed

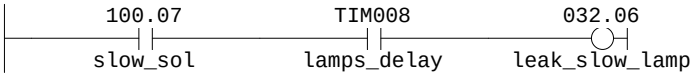
Network 5 - B down



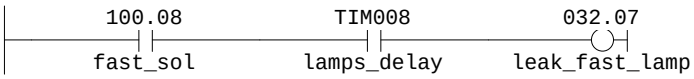
Network 6 - B up



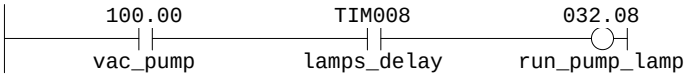
Network 7 - Slow leak



Network 8 - Fast leak

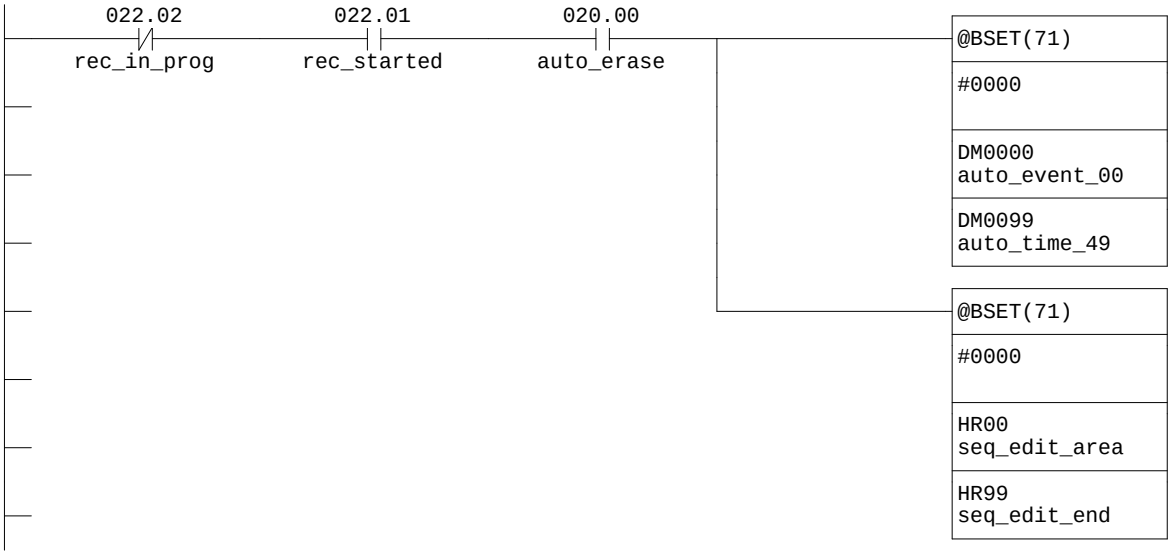


Network 9 - Pump run

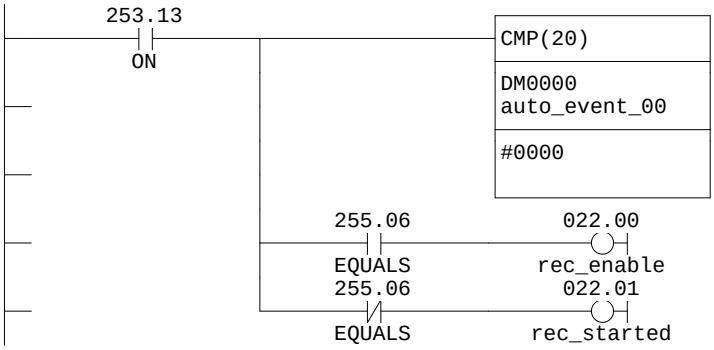


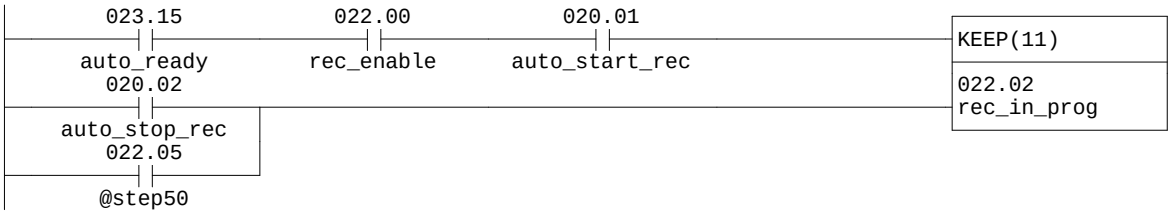
Main 19 - Auto record

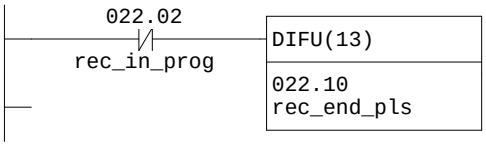
Network 1 - Erase active

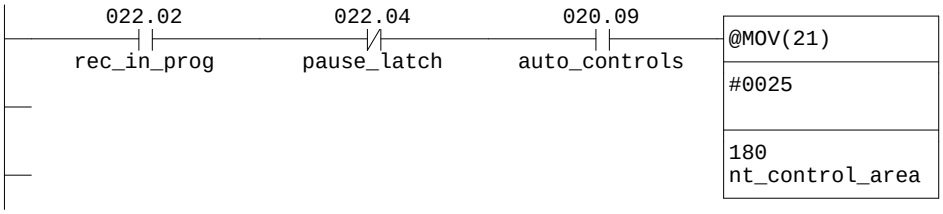


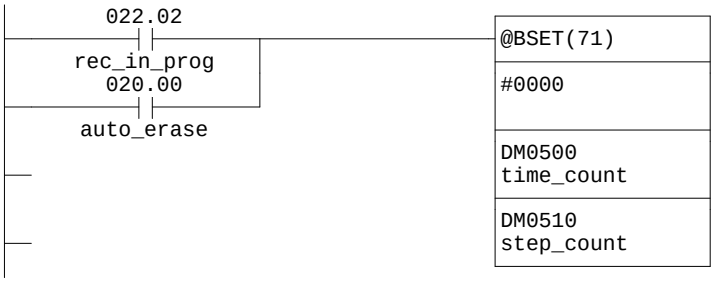
Network 2 - Record start



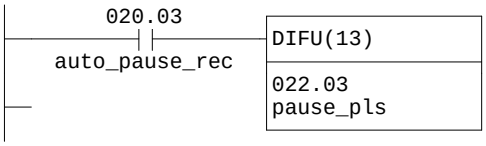


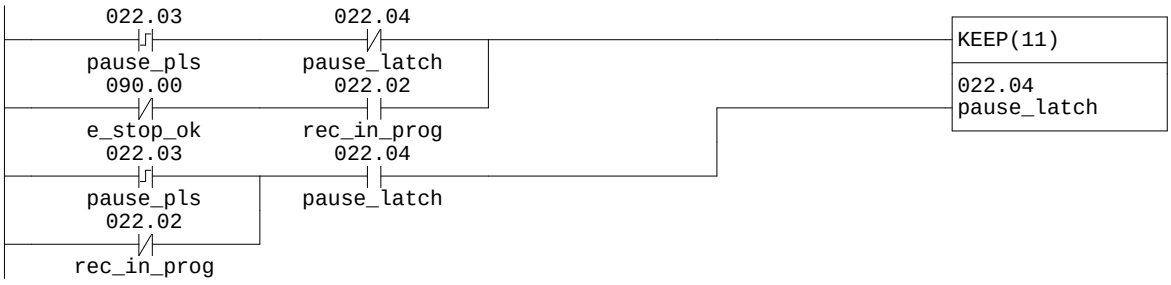


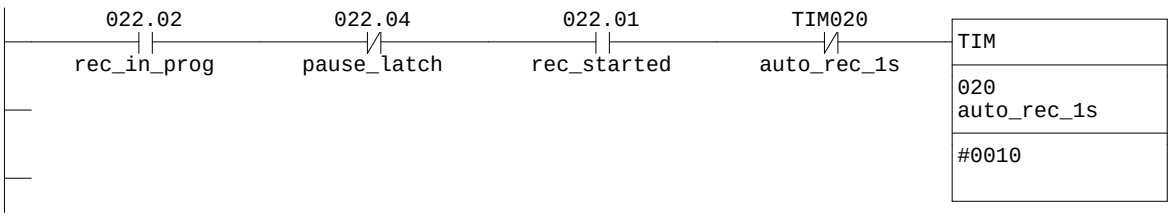


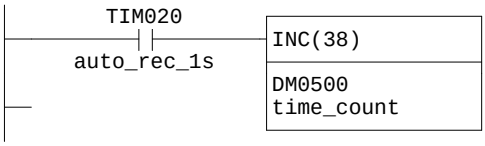


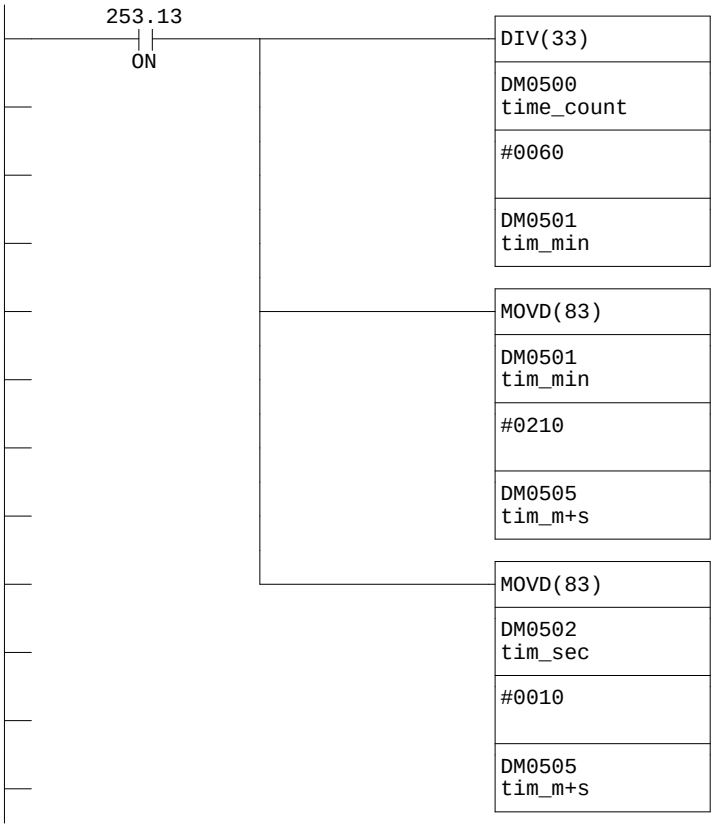
Network 7 - Pause?



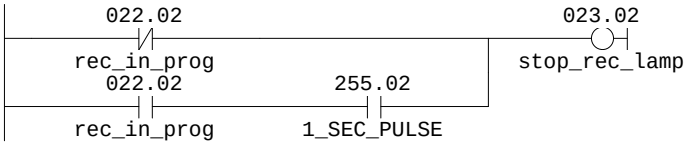




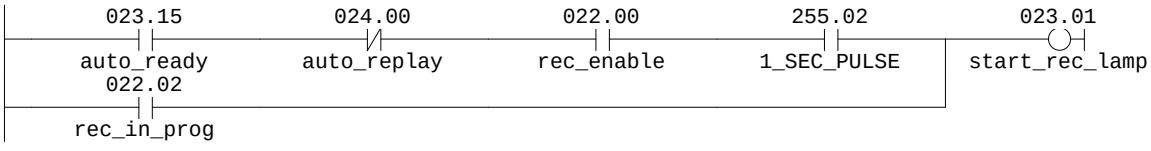




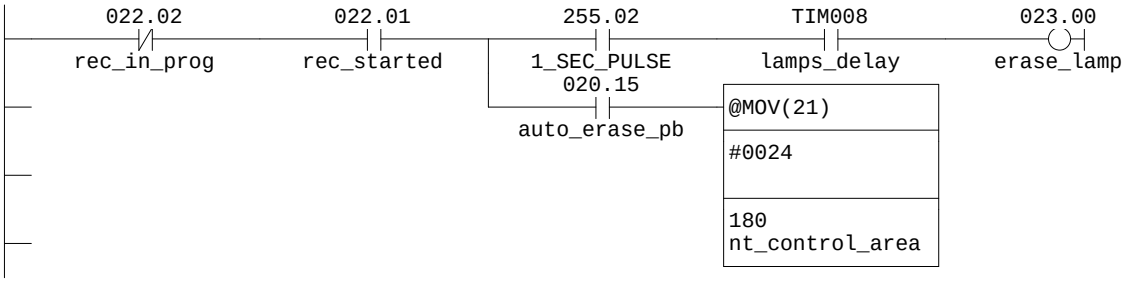
Network 12 - Stop lamp



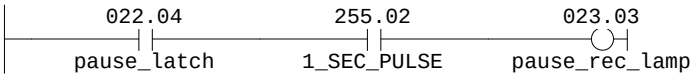
Network 13 - Start lamp



Network 14 - Erase pb+lamp

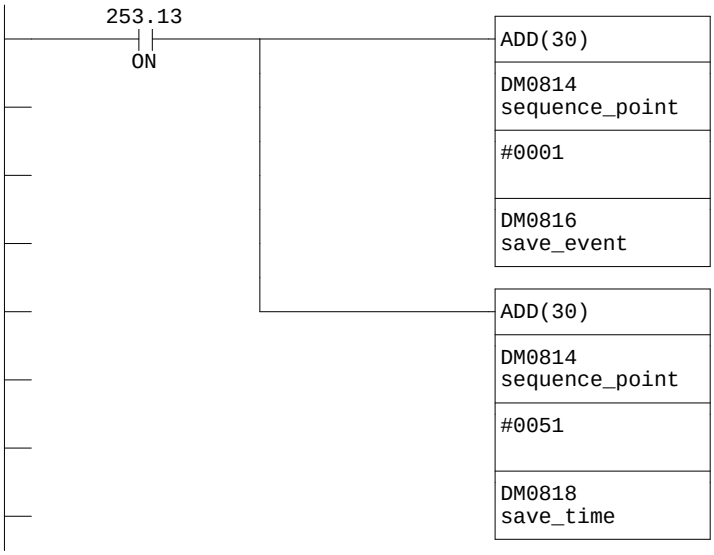


Network 15 - Pause lamp

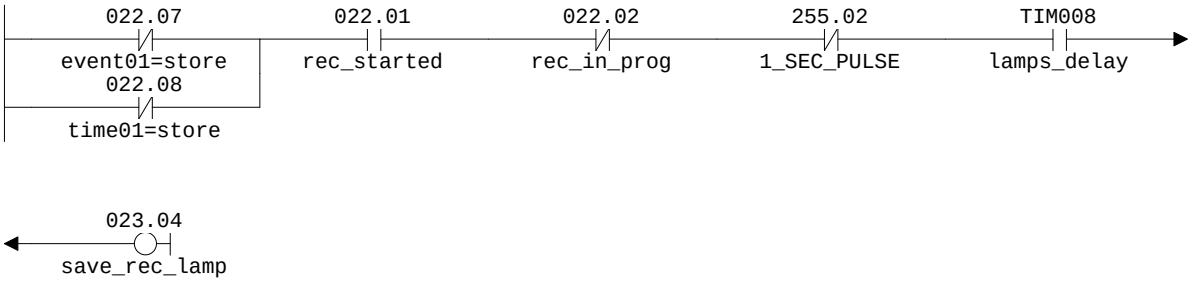


Network 16 - Save pointers

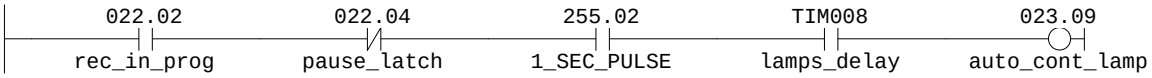
Set the recipe data store checking pointers



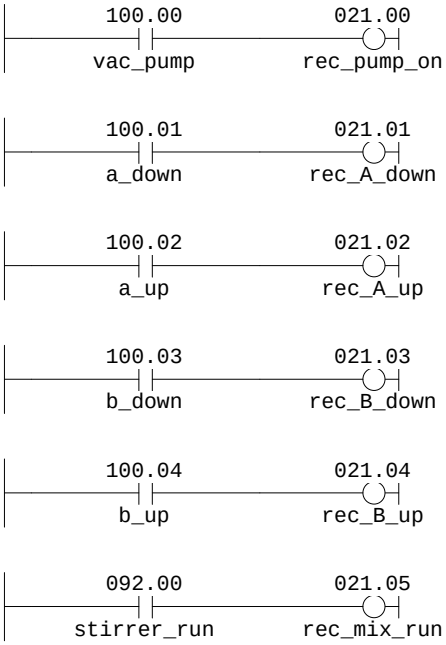
Network 19 - Save lamp

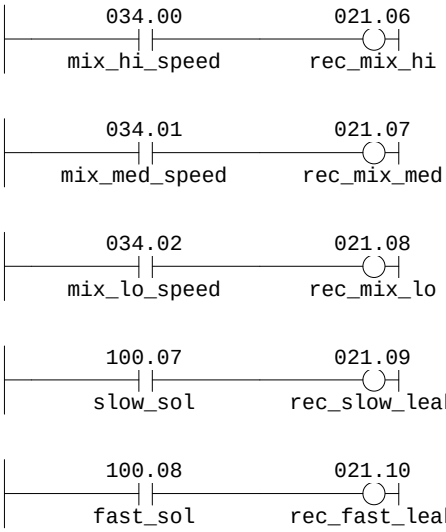


Network 20 - Show cont. lamp

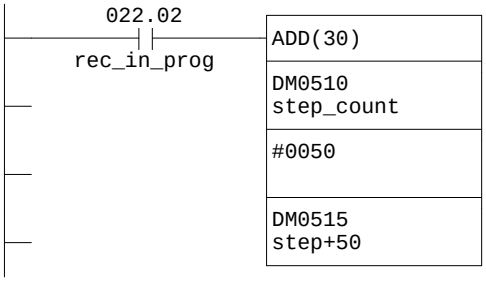


Network 21 - Record bits

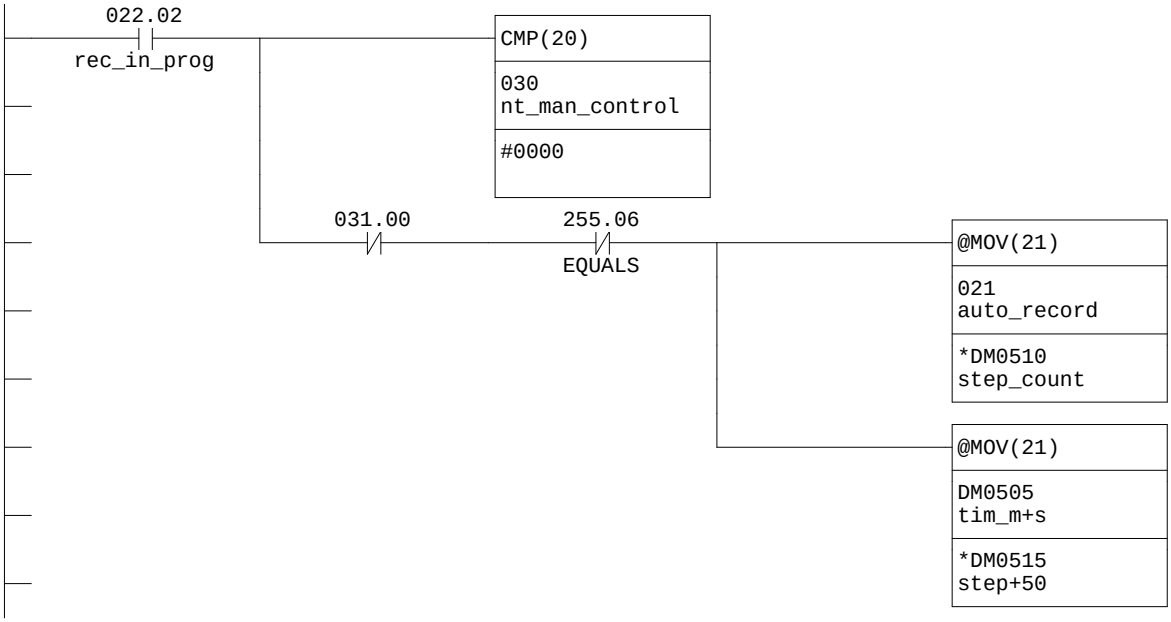




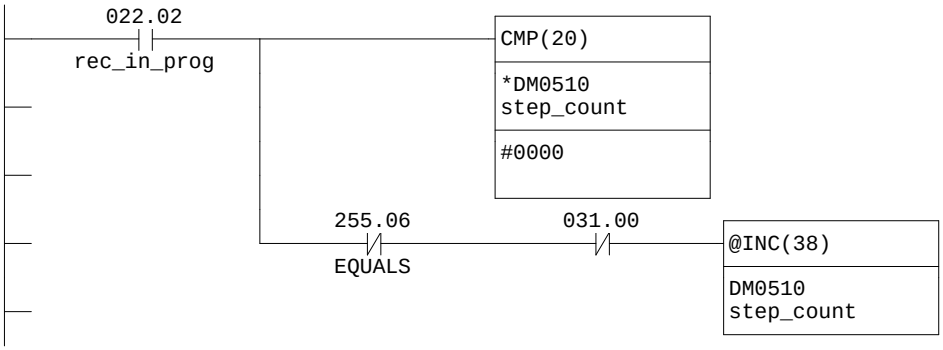
Network 32 - Set tim pointer



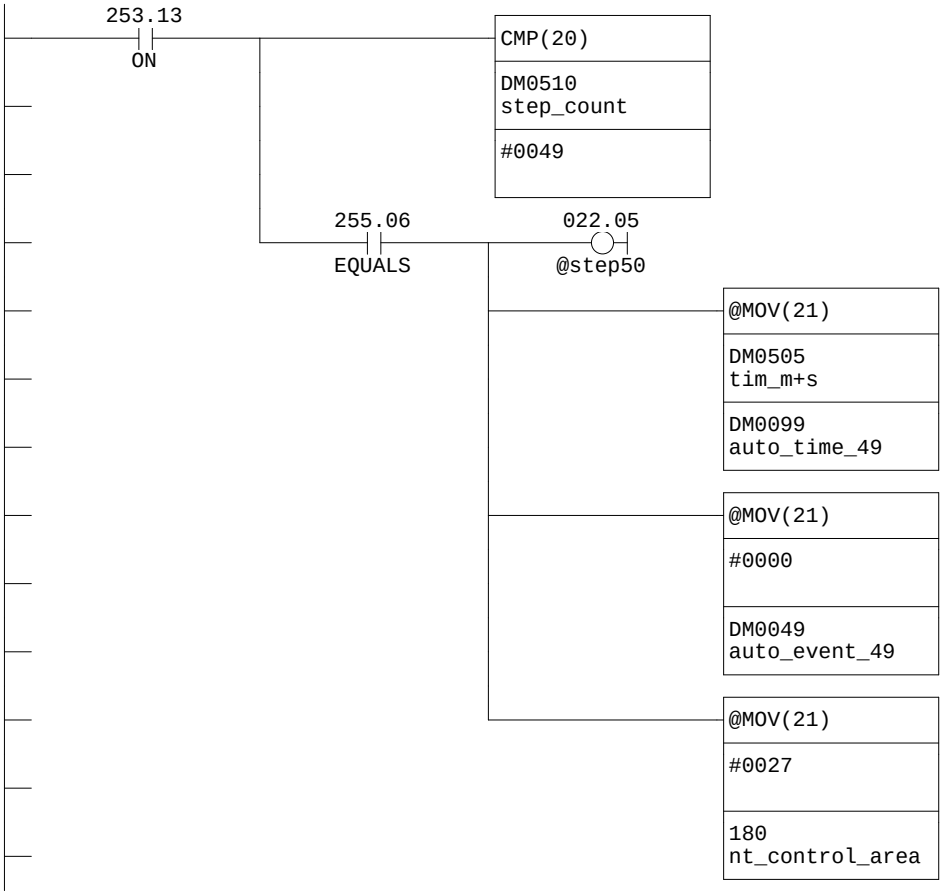
Network 33 - Record segment



Network 34 - Goto next step



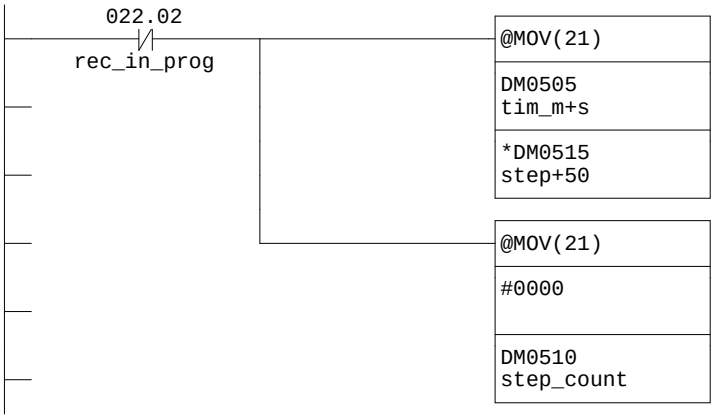
Network 35 - Last step?



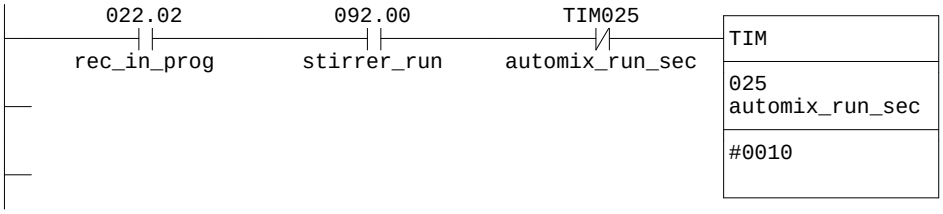
Network 36 - Cycle end

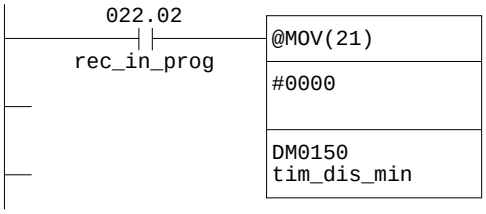
At the cycle end record the time and enter NO actions

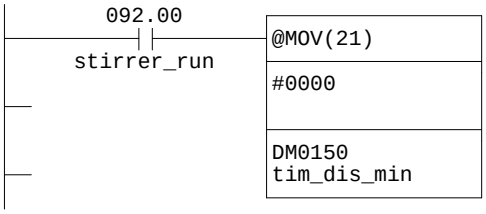
NOTE:- MOV command changed to enable clearing of step counter.

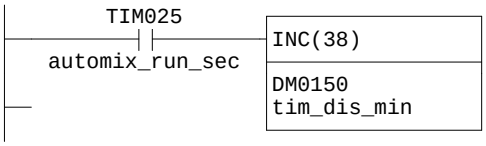


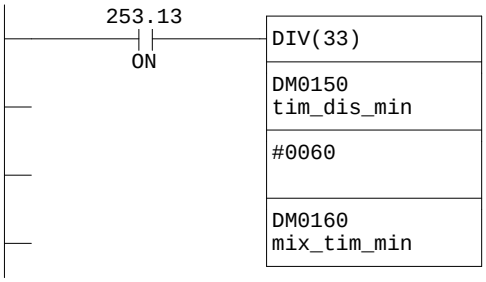
Network 37 - Save auto seq'



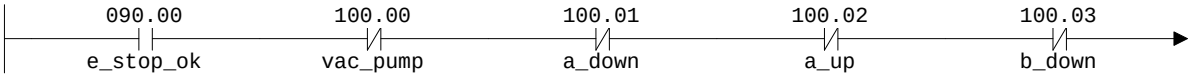


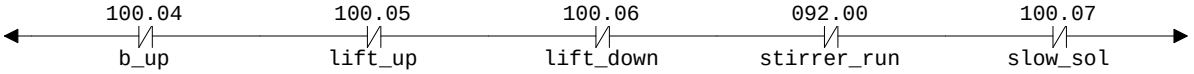


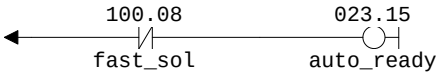


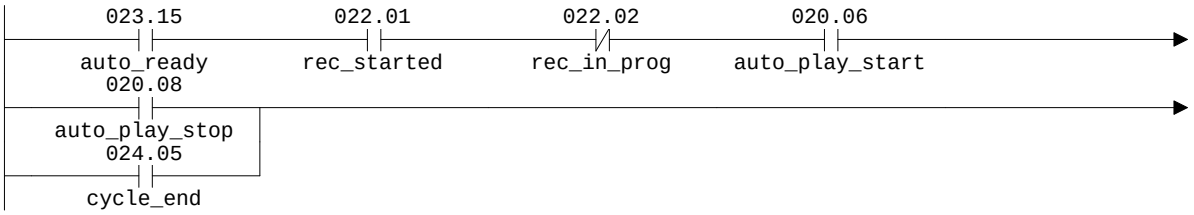


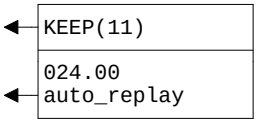
Main 20 - Auto Replay

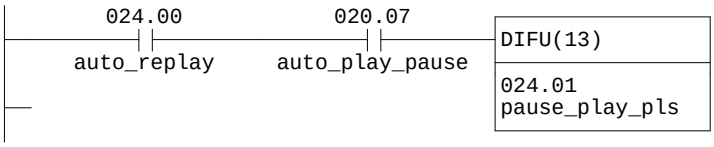


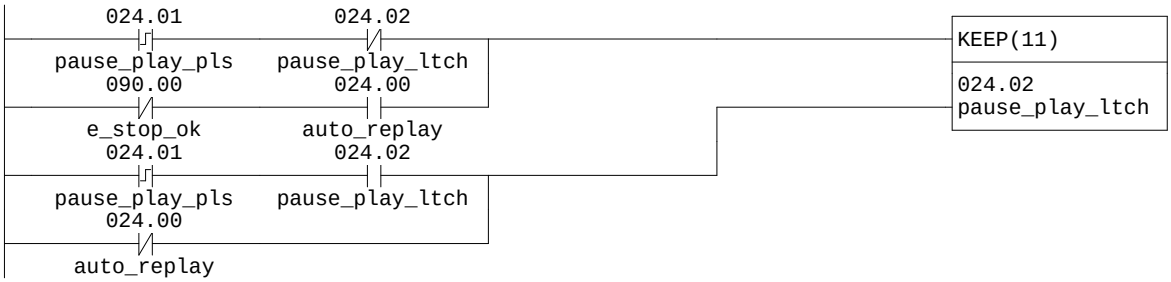


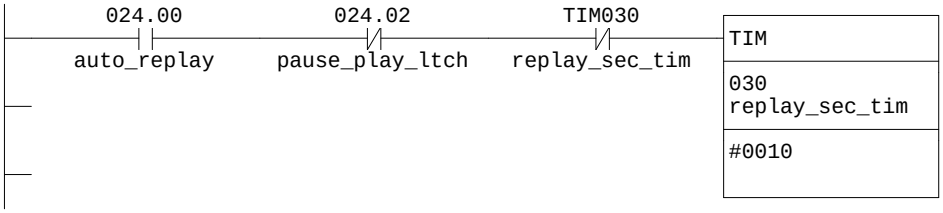






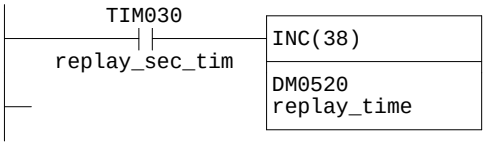


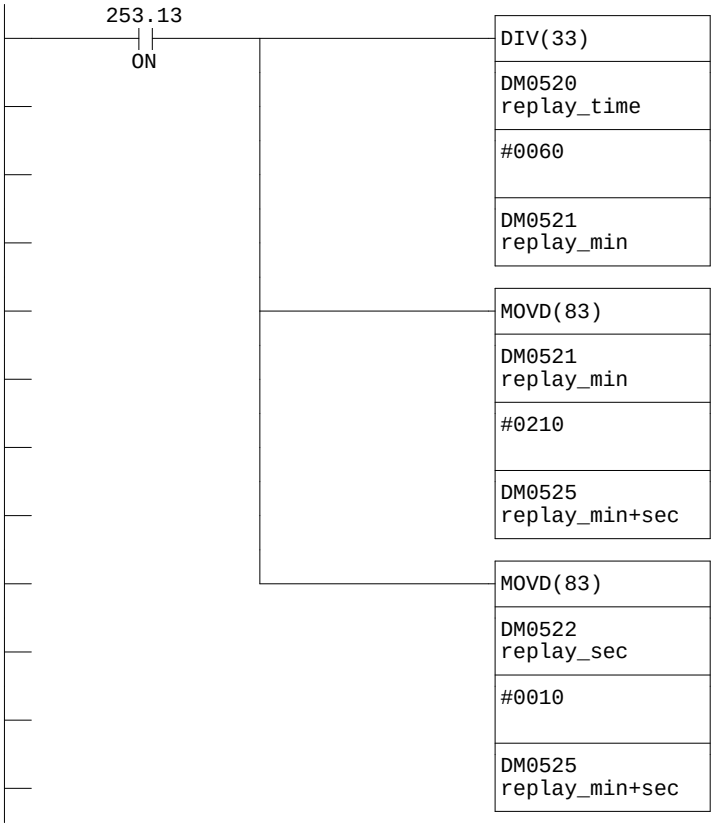




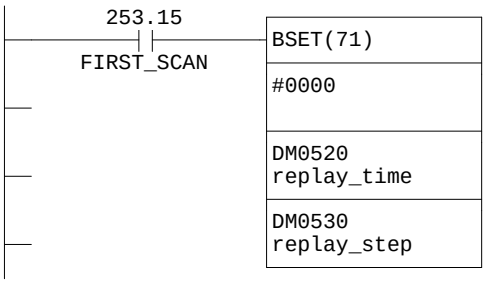
Network 6 - Time in seconds

Auto replay time in seconds



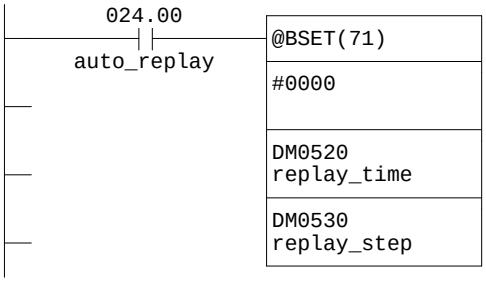


Network 8 - Reset@power on



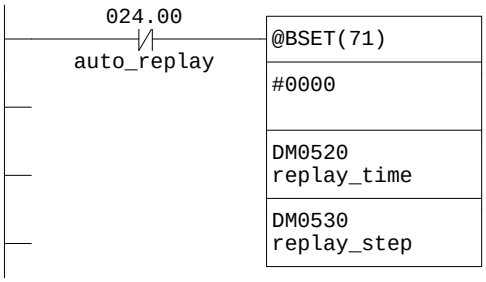
Network 9 - Reset timer

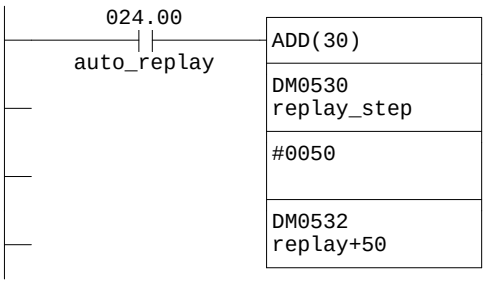
Reset auto replay timer at auto relay start

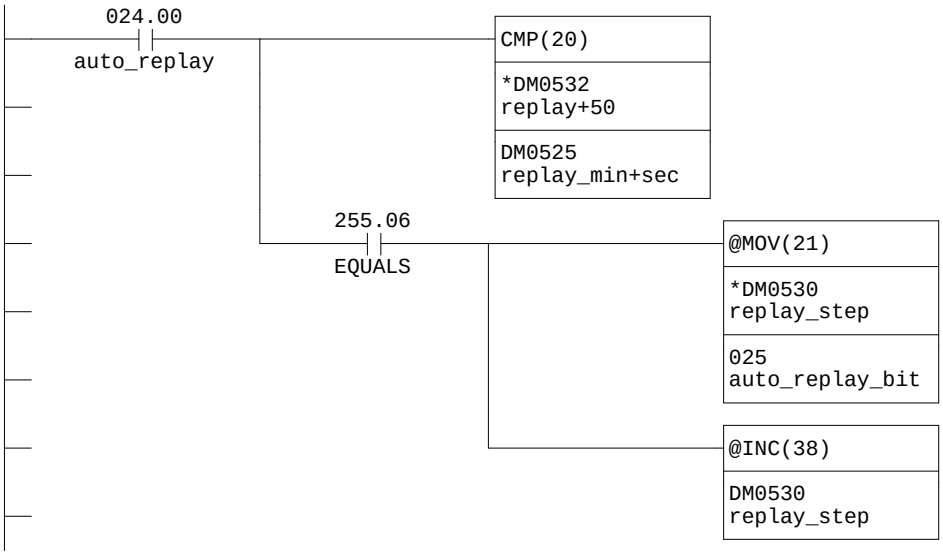


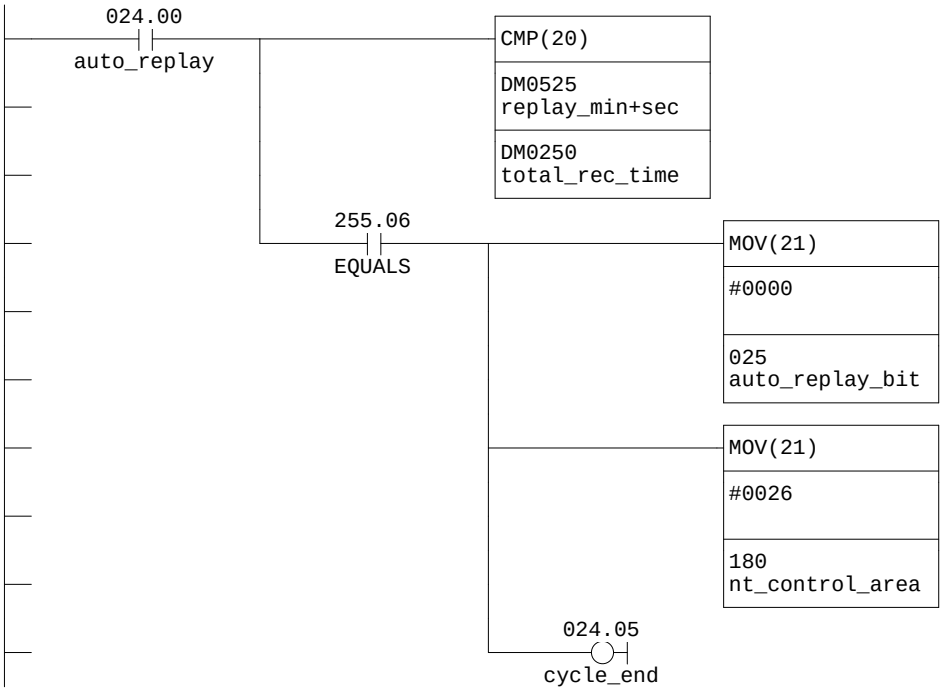
Network 10 - Reset timer

Reset auto replay timer at auto relay stop

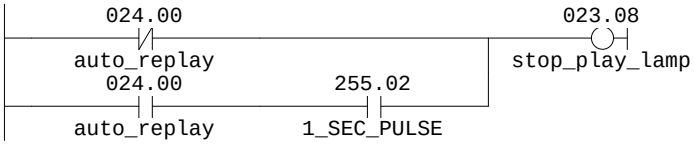




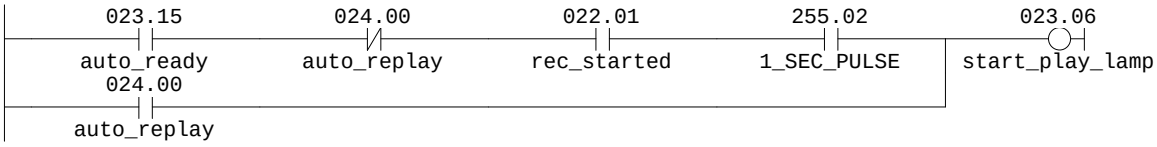




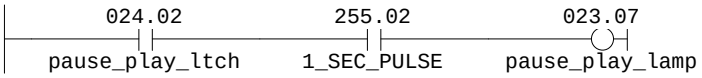
Network 14 - Stop lamp



Network 15 - Start lamp



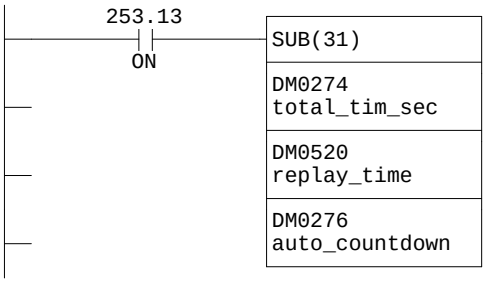
Network 16 - Pause lamp



Network 17 - Rec Tim in Secs

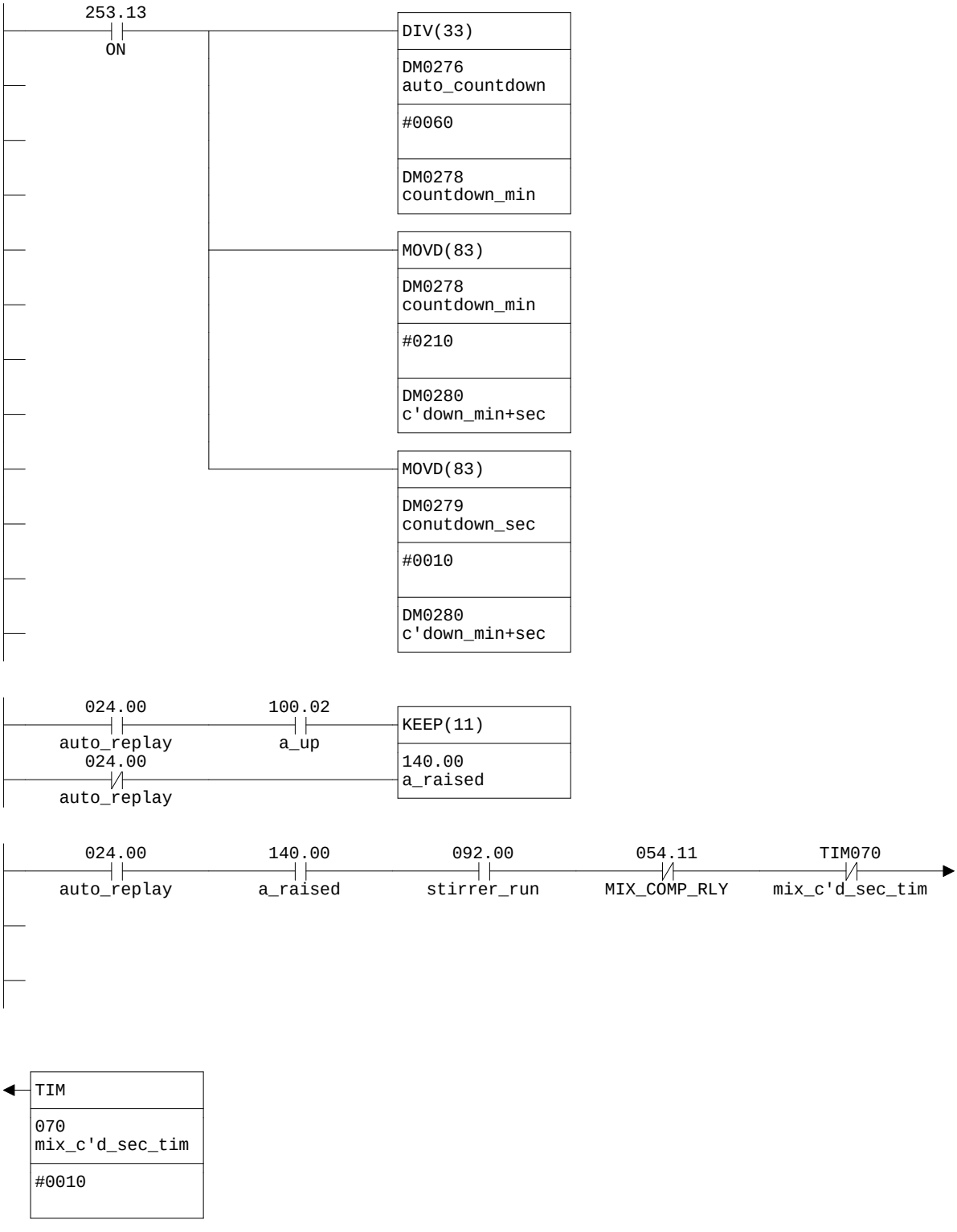
Convert total recipe time to seconds.

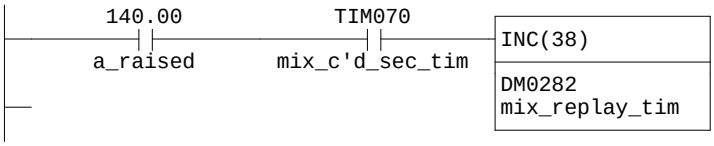
Network 18 - Countdown sec



Network 19 - C'down min+sec

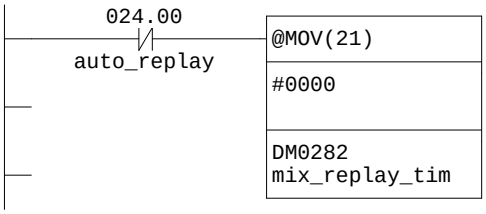
Convert countdown register to minutes and seconds in one register.





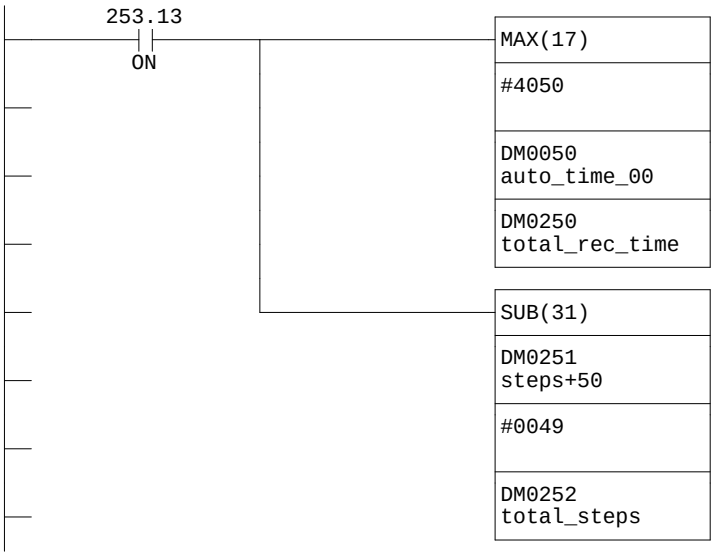
Network 23 - Mix Complete

Mix time complete. Stop countdown.
NOTE:- This rung may need removing. I suspect that the timer should be set to the time it took the mixer to run rather that anything else.

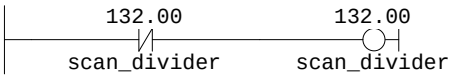


Main 21 - Auto Time+Steps

Detect recipe time and number of steps used

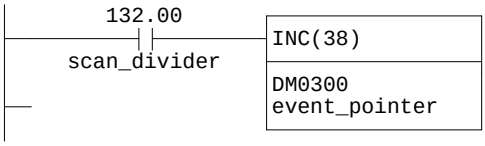


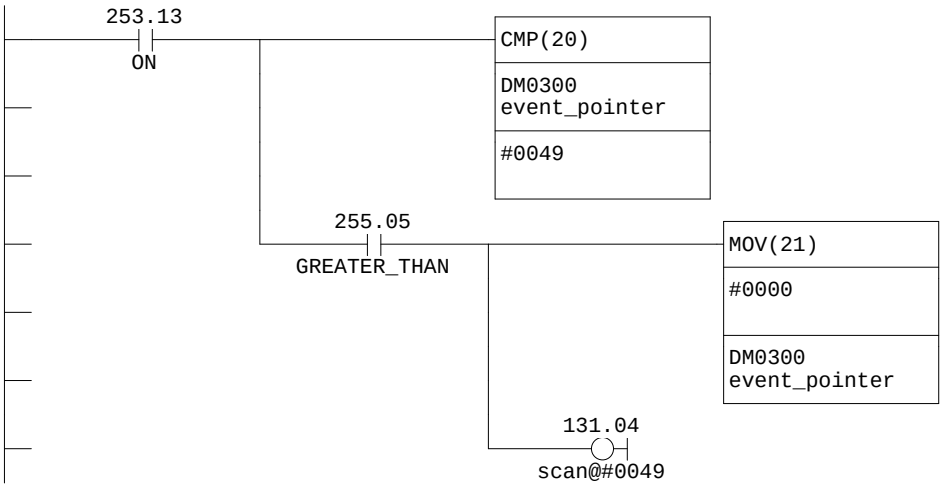
Main 22 - Auto Mix time



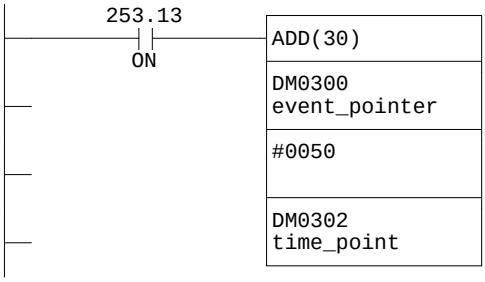
Network 2 - Scan DM's

Scan active recipe

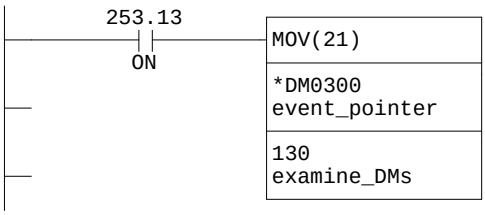


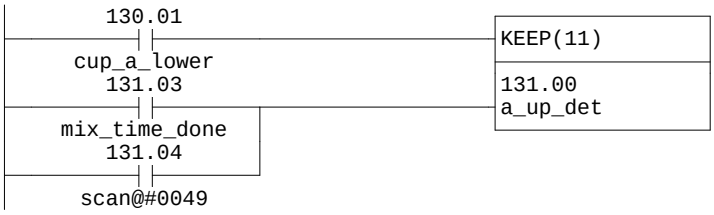


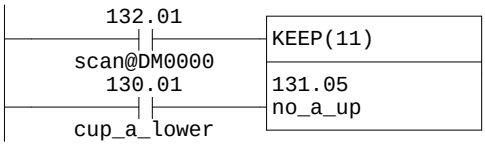
Network 5 - Set tim pointer

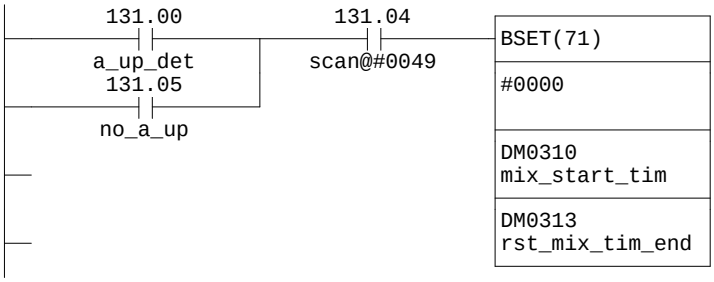


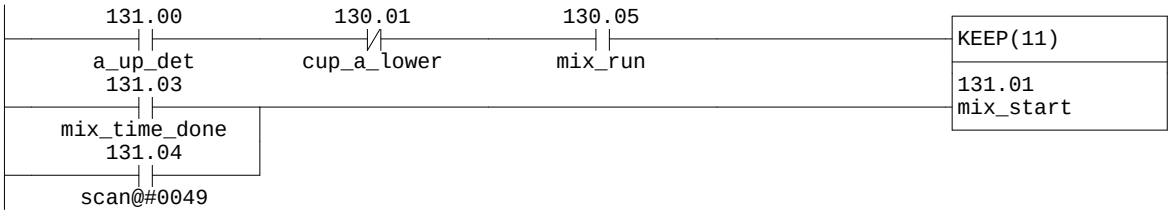
Network 6 - Scan events

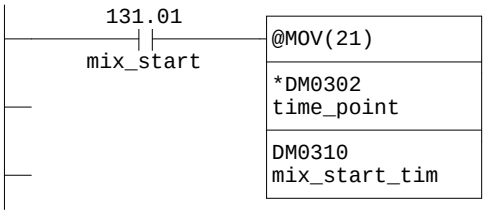


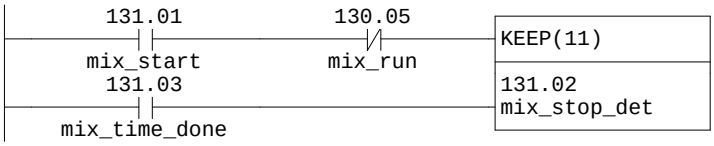


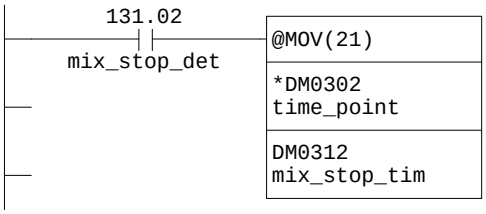


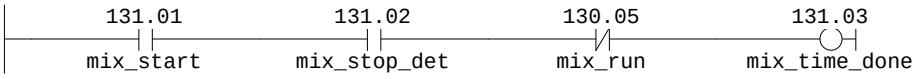






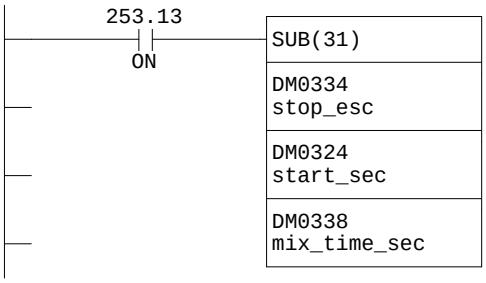


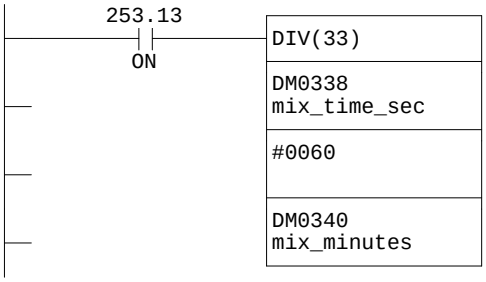


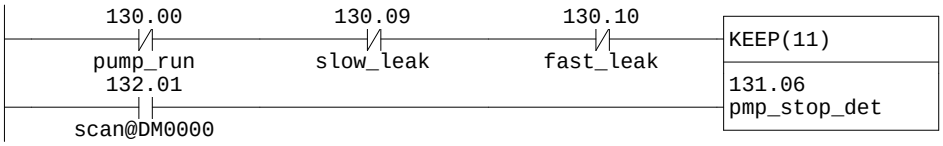


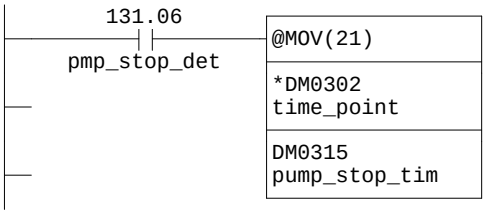
Network 15 - Convert start

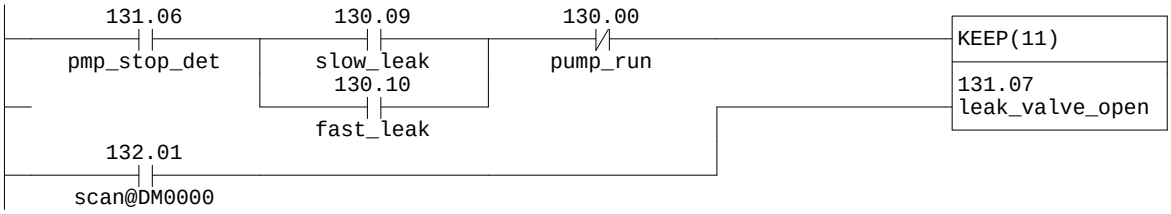
Network 16 - Convert stop

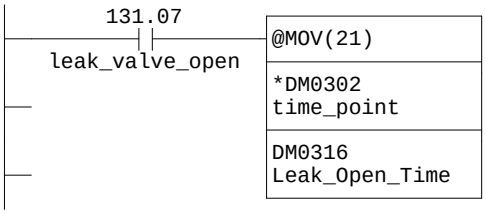





130.00
pump_run
130.09
slow_leak
130.10
fast_leak
KEEP(11)
131.06
pmp_stop_det
132.01
scan@DM0000

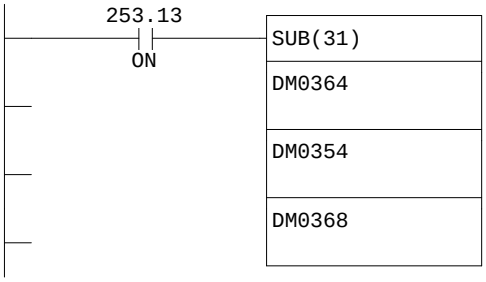

131.06
pmp_stop_det
@MOV(21)
*DM0302
time_point
DM0315
pump_stop_tim

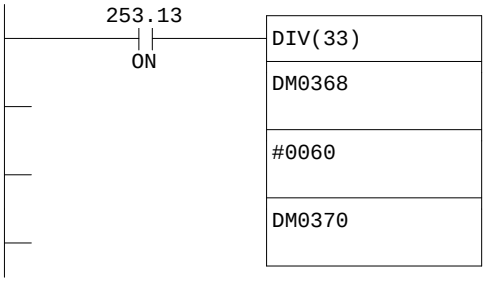

131.06
pmp_stop_det
130.09
slow_leak
130.10
fast_leak
130.00
pump_run
KEEP(11)
131.07
leak_valve_open
132.01
scan@DM0000


131.07
leak_valve_open
@MOV(21)
*DM0302
time_point
DM0316
Leak_Open_Time

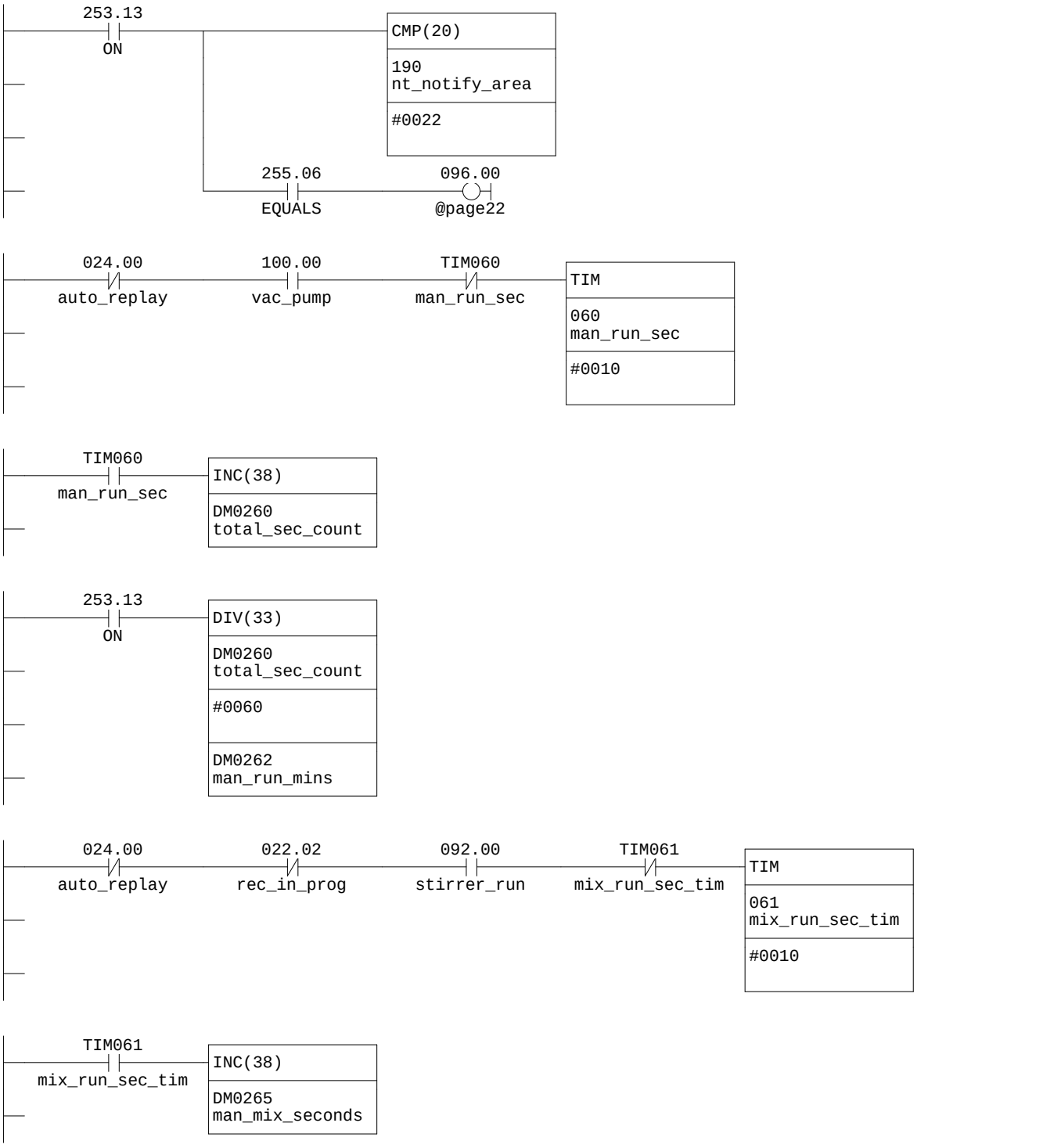
Network 23 - Convert start

Network 24 - Convert stop



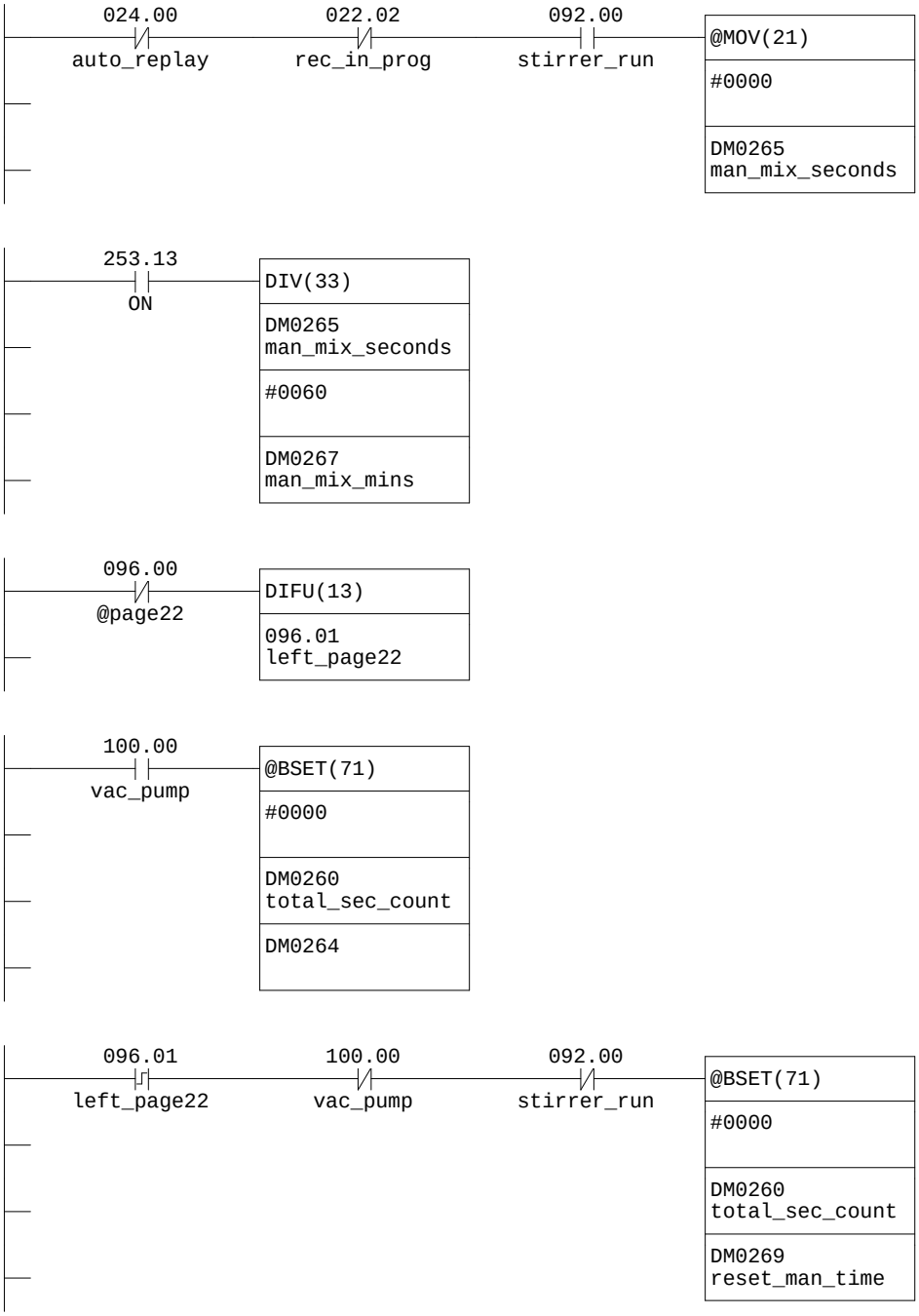


Main 23 - Manual timers

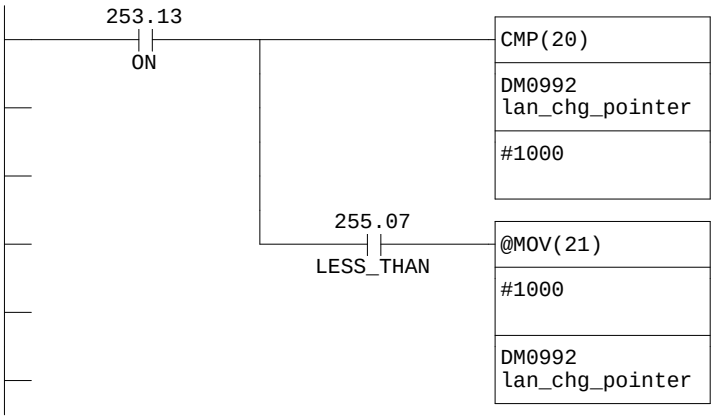


Network 7 - Reset Mix Time

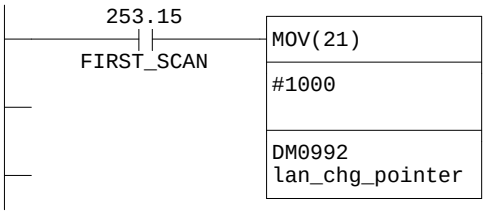
Reset Manual Mixer Timer when starting the mixer.

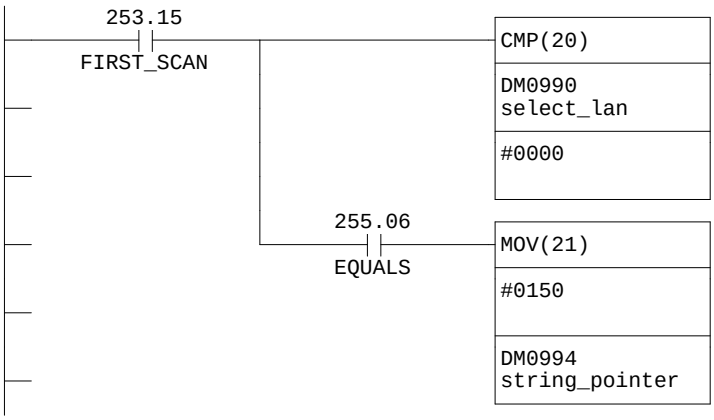


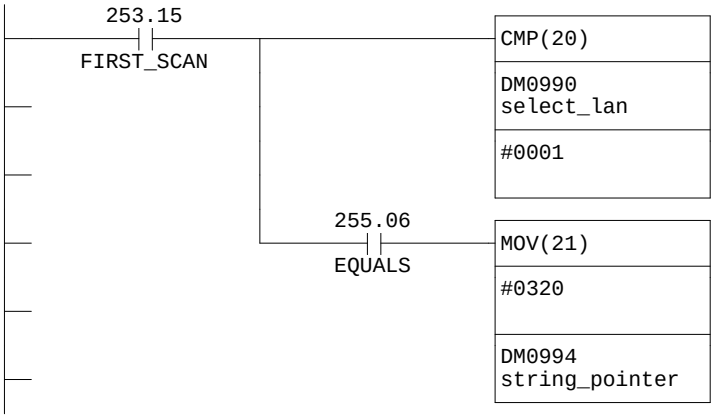
Main 24 - Language

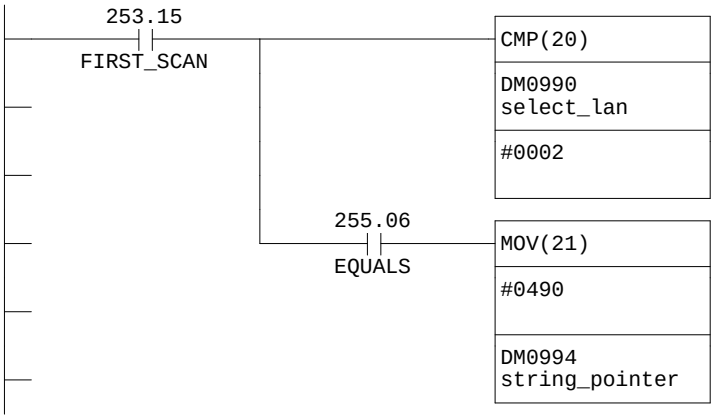


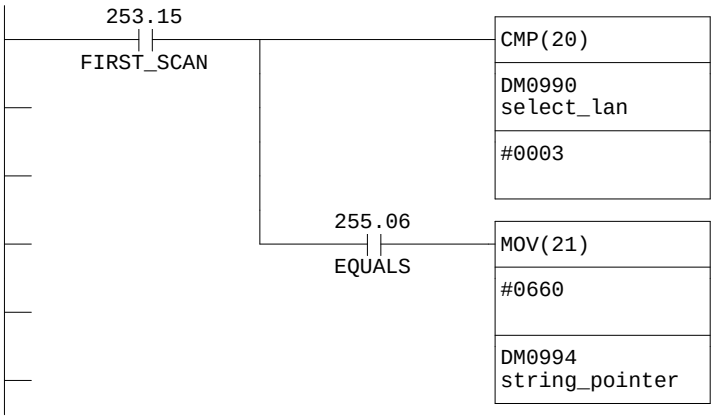
Network 2 - Text

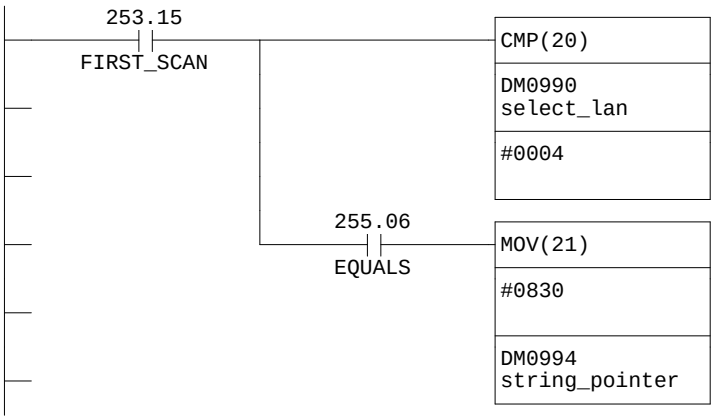


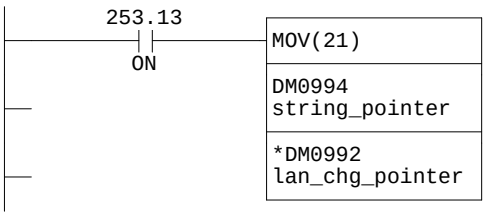


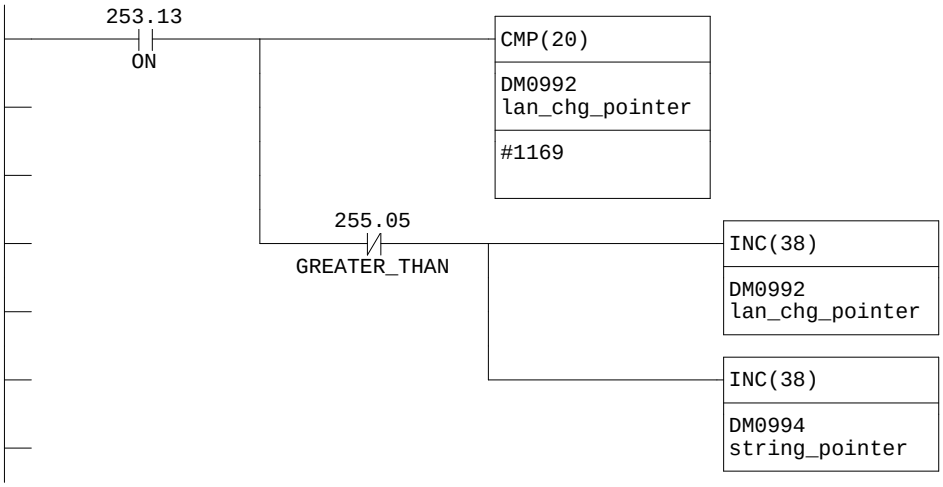



253.15
FIRST_SCAN
CMP(20)
DM0990
select_lan
#0002
255.06
EQUALS
MOV(21)
#0490
DM0994
string_pointer

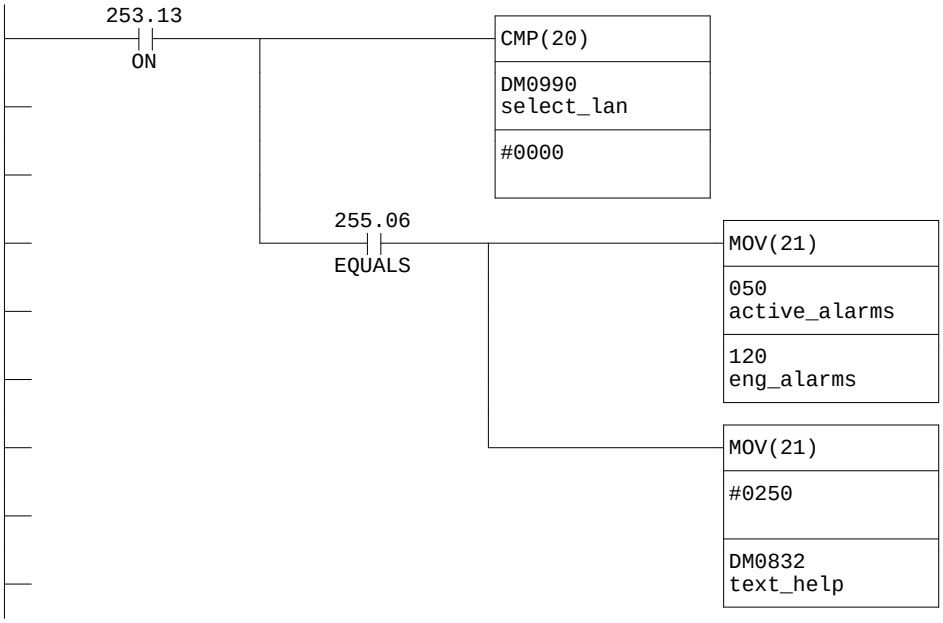

253.15
FIRST_SCAN
CMP(20)
DM0990
select_lan
#0003
255.06
EQUALS
MOV(21)
#0660
DM0994
string_pointer

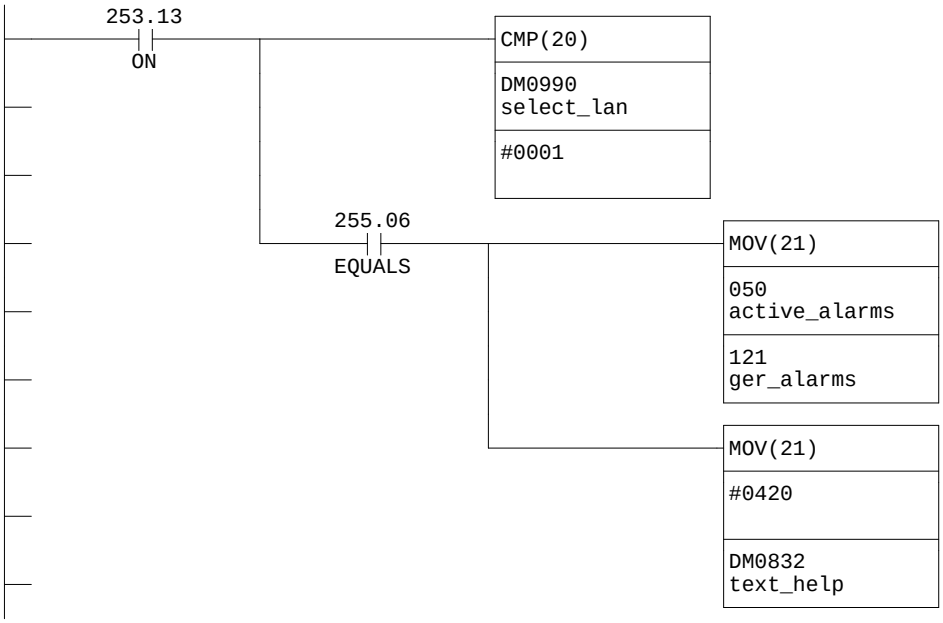

253.15
FIRST_SCAN
CMP(20)
DM0990
select_lan
#0004
255.06
EQUALS
MOV(21)
#0830
DM0994
string_pointer

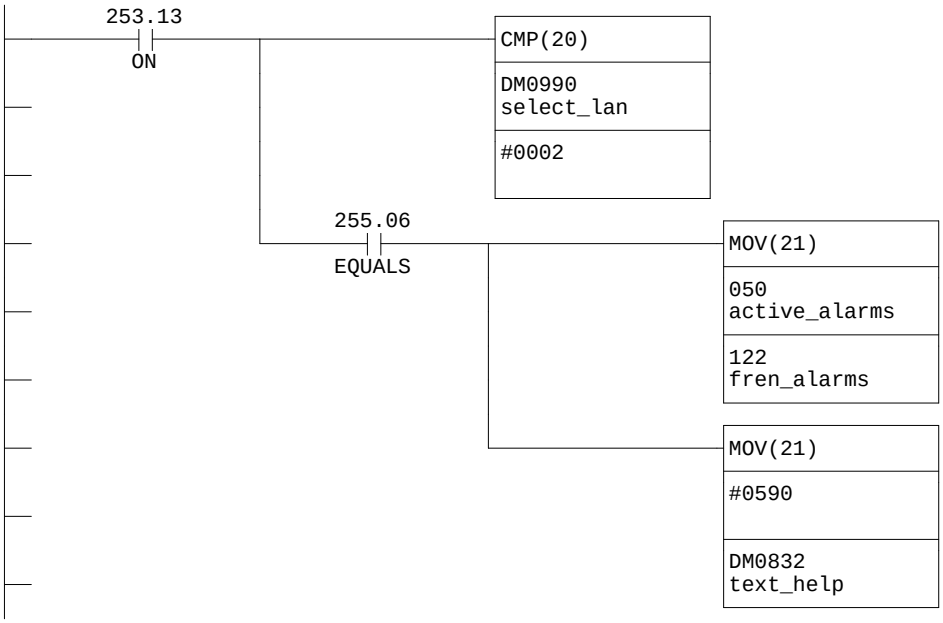

253.13
ON
MOV(21)
DM0994
string_pointer
*DM0992
lan_chg_pointer

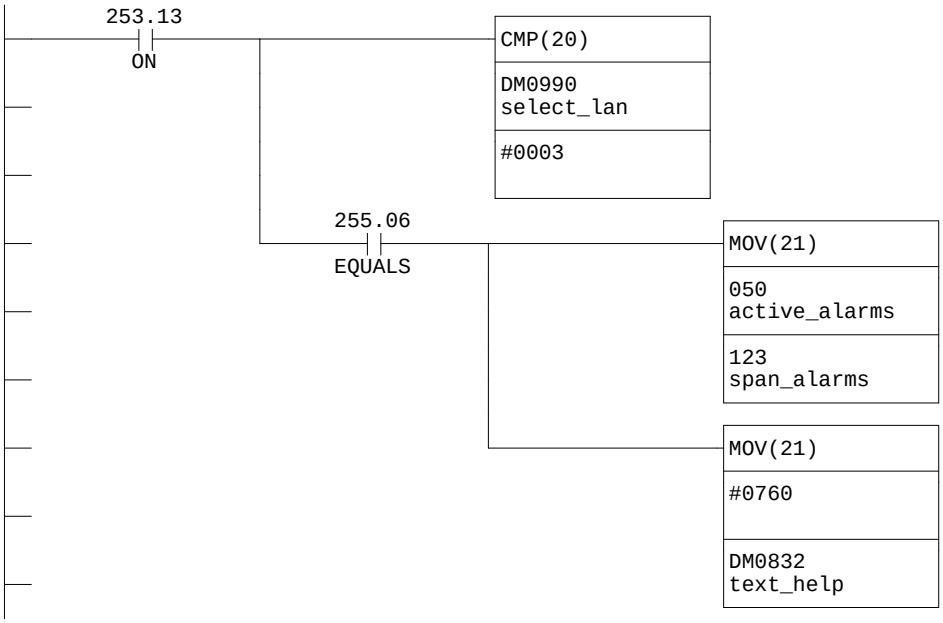


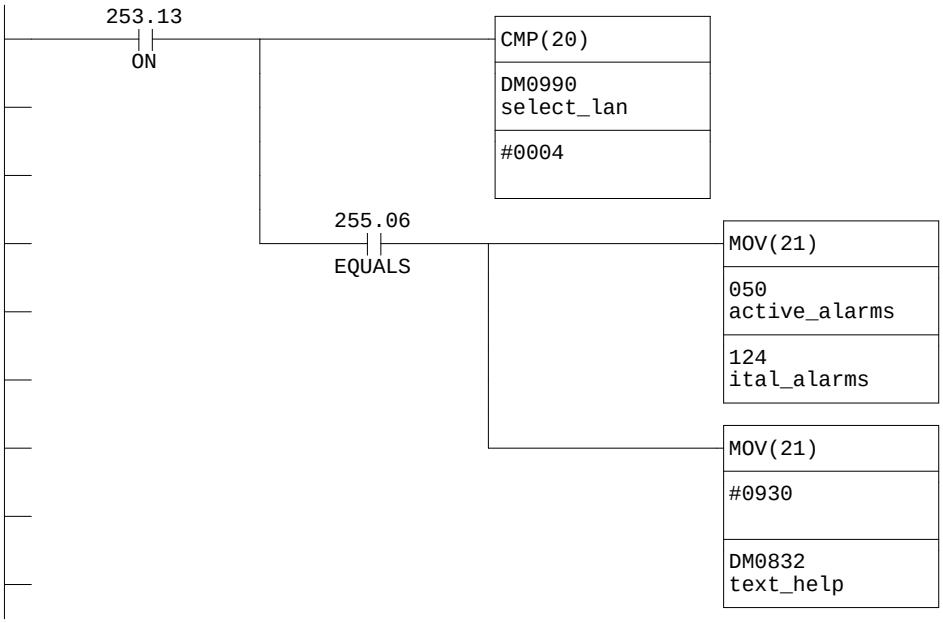
Network 10 - Alarms




253.13
ON
CMP(20)
DM0990
select_lan
#0001
255.06
EQUALS
MOV(21)
050
active_alarms
121
ger_alarms
MOV(21)
#0420
DM0832
text_help


253.13
ON
CMP(20)
DM0990
select_lan
#0002
255.06
EQUALS
MOV(21)
050
active_alarms
122
fren_alarms
MOV(21)
#0590
DM0832
text_help

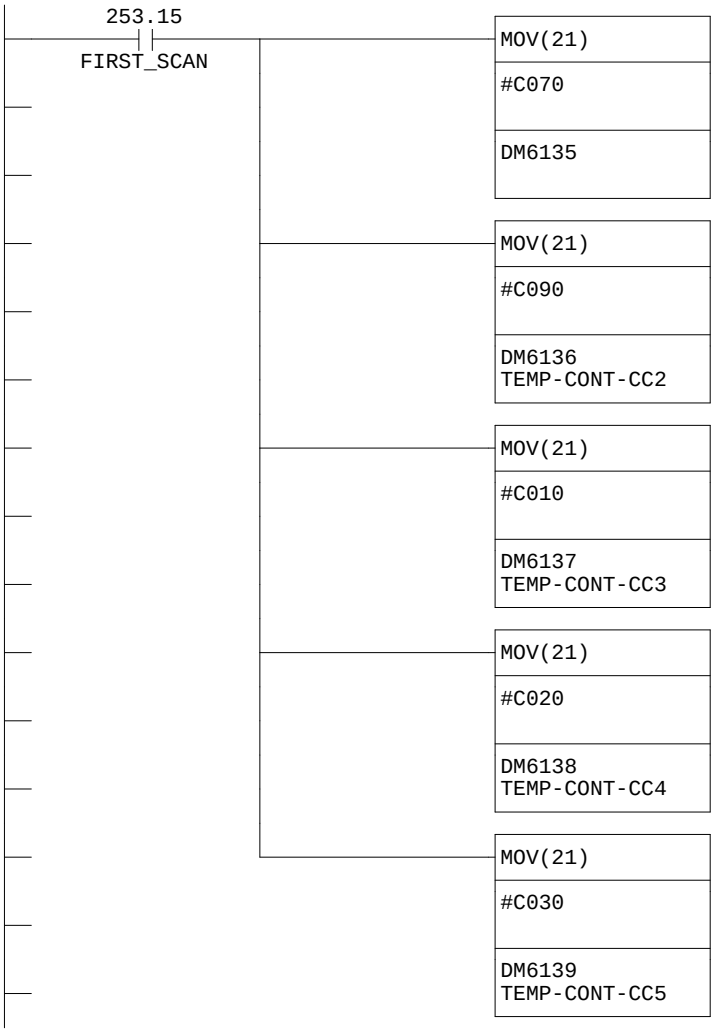

253.13
ON
CMP(20)
DM0990
select_lan
#0003
255.06
EQUALS
MOV(21)
050
active_alarms
123
span_alarms
MOV(21)
#0760
DM0832
text_help


253.13
ON
CMP(20)
DM0990
select_lan
#0004
255.06
EQUALS
MOV(21)
050
active_alarms
124
ital_alarms
MOV(21)
#0930
DM0832
text_help

Main 25 - Temp-settings

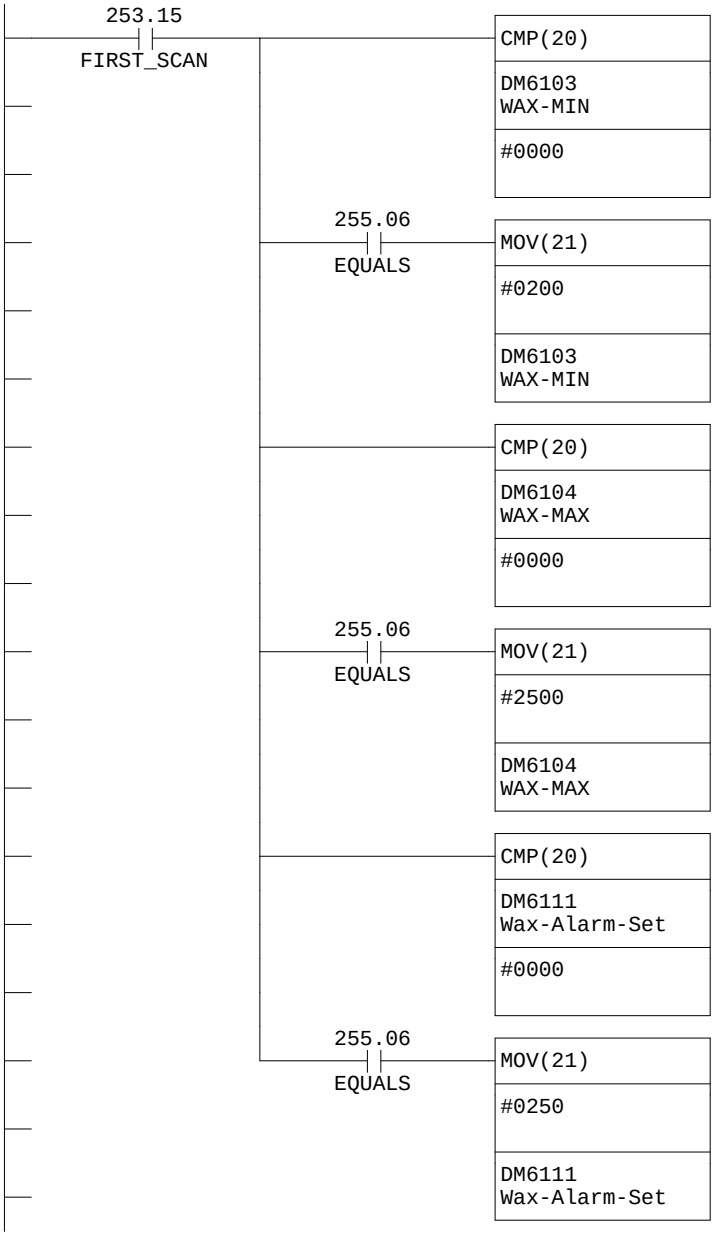
Network 1 - Temp comm codes

Sets temperature command codes PV, Status, P, I and D values



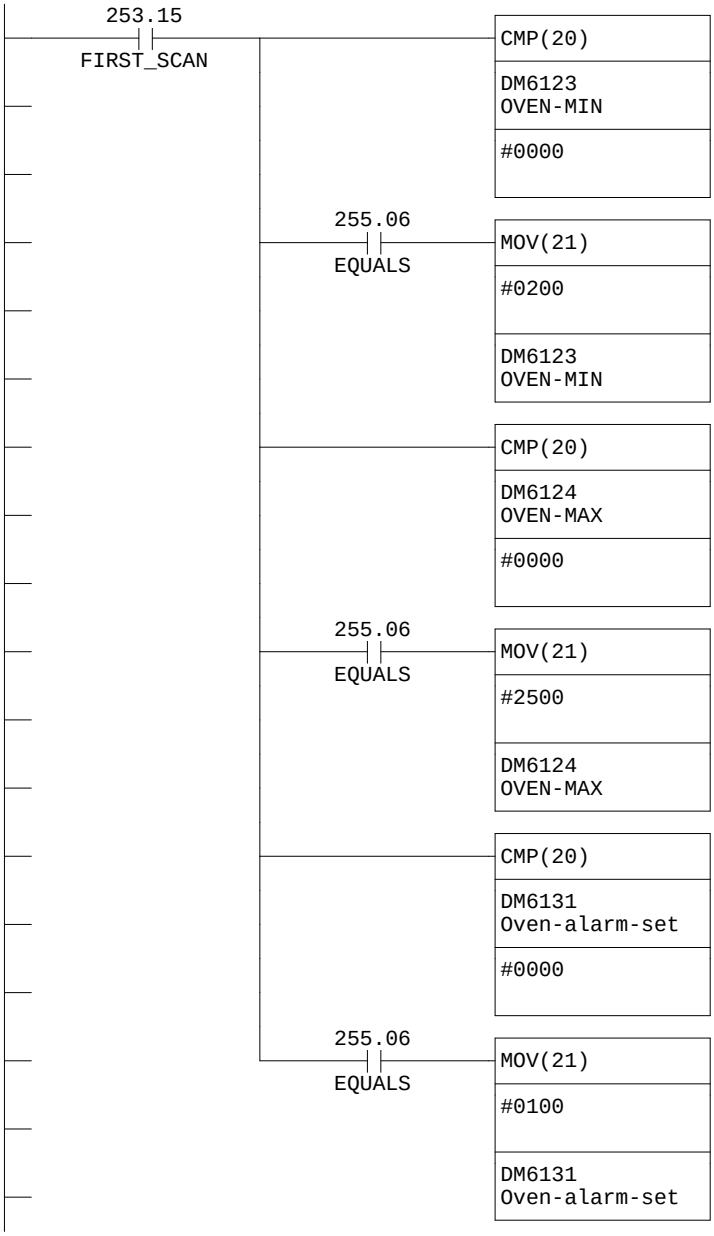
Network 2 - Wax initiate

Initalises the the wax temperature control settings, eg:- Span limits
and alarm value



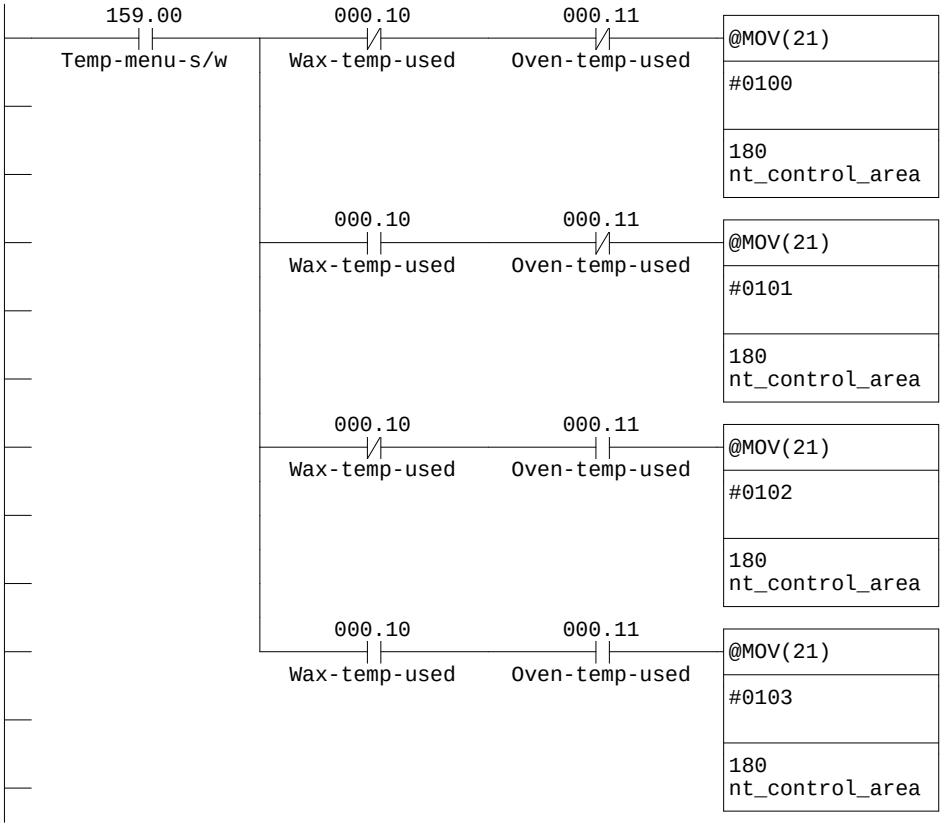
Network 3 - Oven initiate

Initalises the the Oven temperature control settings, eg:- Span limits
and alarm value



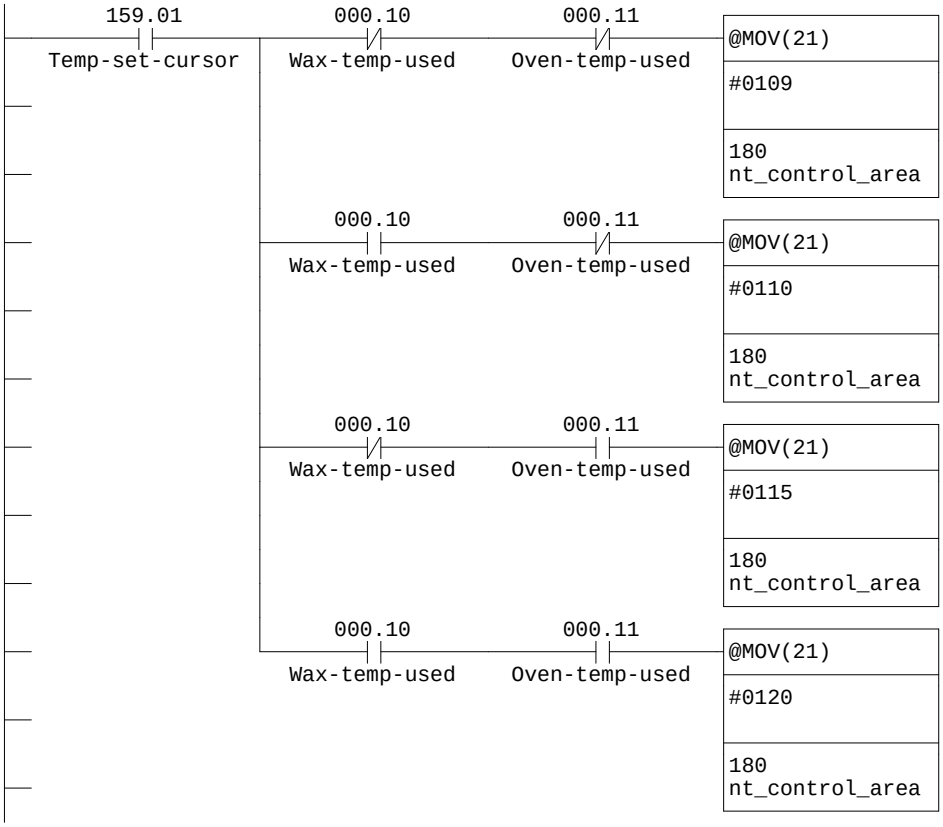
Network 4 - Temp options 1

Selects which Temperature control option(s) are installed and permits acces to the relevant control page on the MMI



Network 5 - Temp options 2

Selects which Temperature control option(s) are installed and permits access via engineering password page the to the relevant Span limiting settings page on the MMI

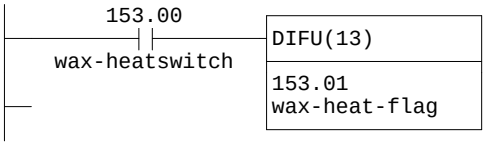


Main 26 - Wax-sw-init

This block controls the Wax Temperature loop setting and display for the on and off states

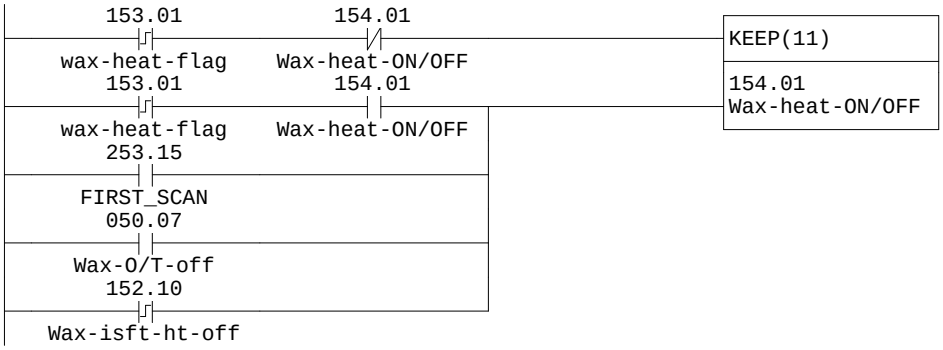
Network 1 - Heat/sw strobe

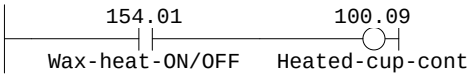
Gives a single pulse when the Wax heat switch on the NT is pressed



Network 2 - Heat/sw toggle

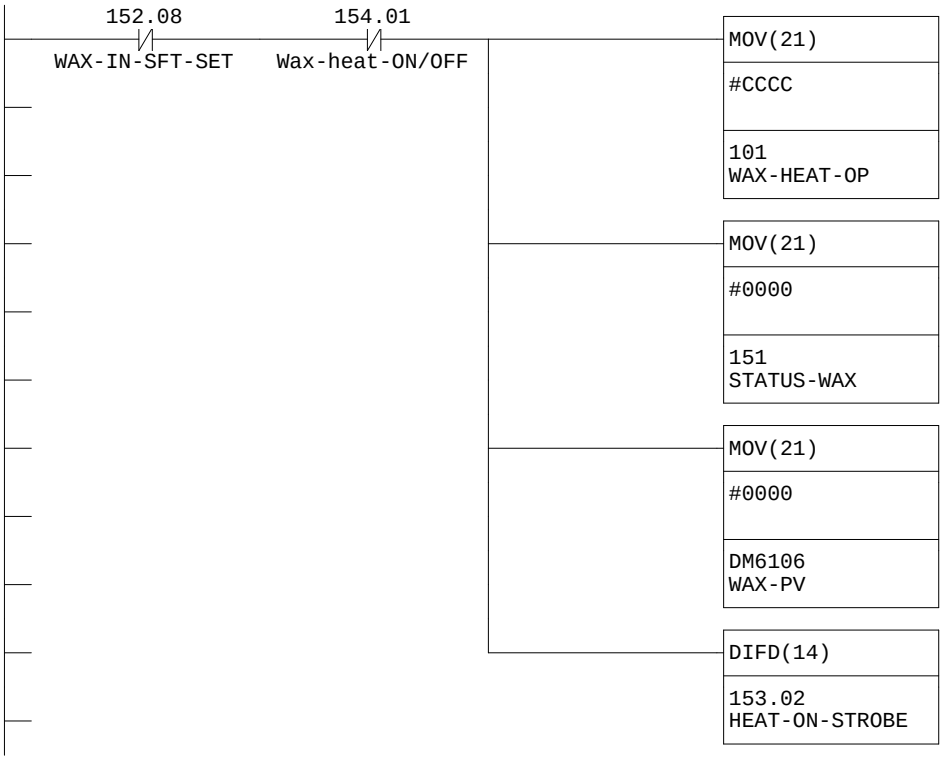
Uses the heatswitch puse to toggle bit 154.01 on & off. First scan sets the heat to off position



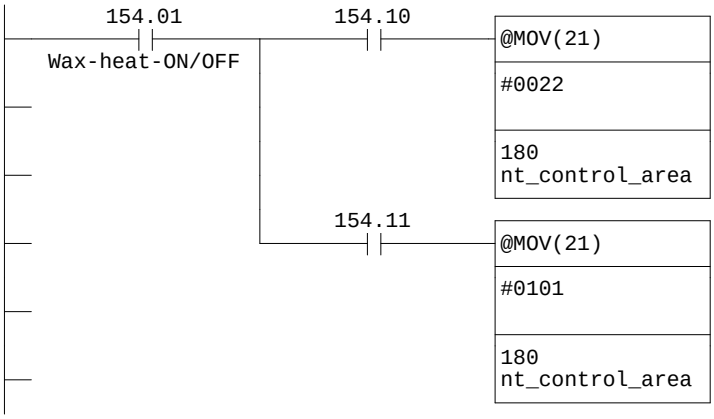


Network 4 - Heat off seting

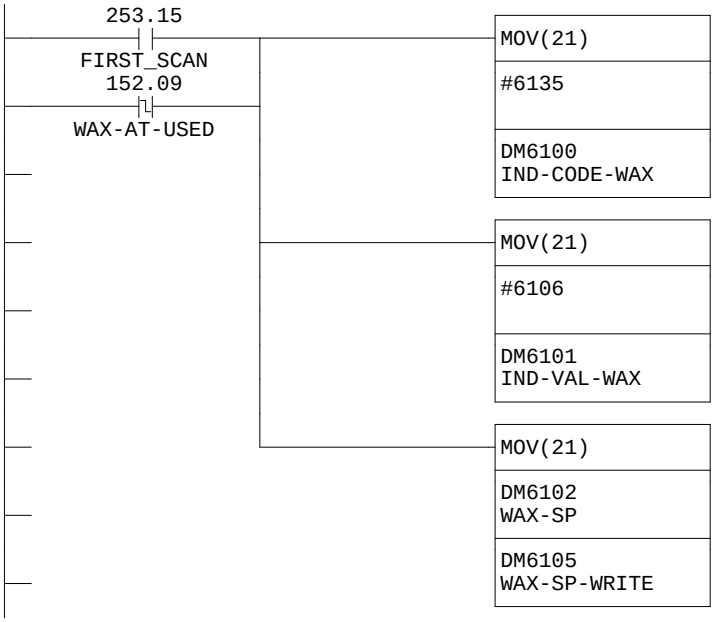
When the heat switch is toggled off then #CCCC stops the temperature controller from working. This block also sets the PV to display Zero and the staus bits to off.
Bit 153.02 is used to initiate the Shift register for the Wax temperature control loop read cycle.

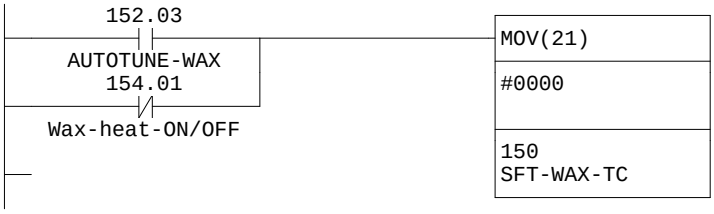


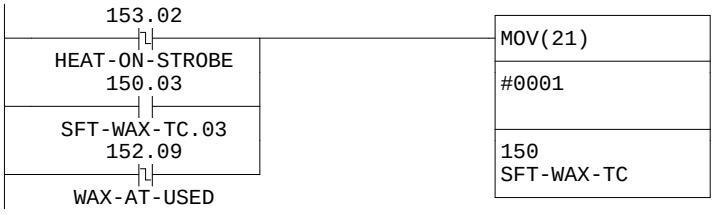
Network 5 - Max-Manual-ops



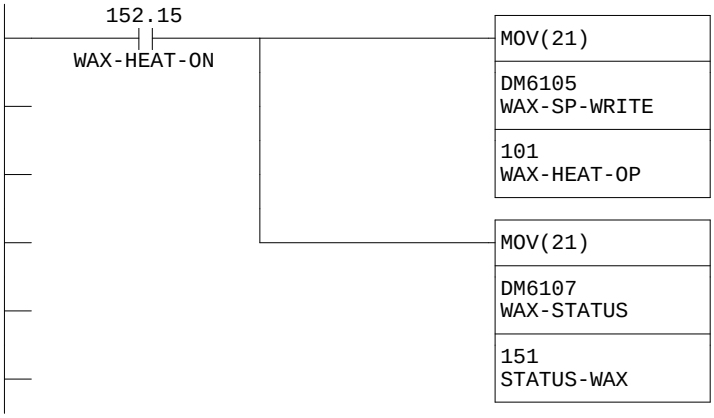
Main 27 - Wax-temp-cont

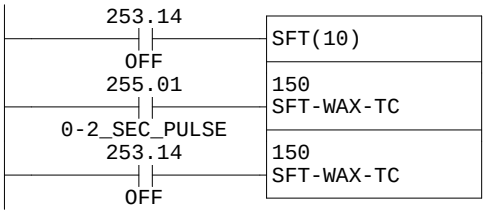


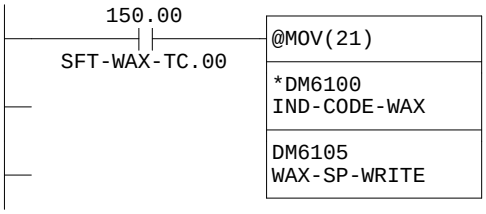


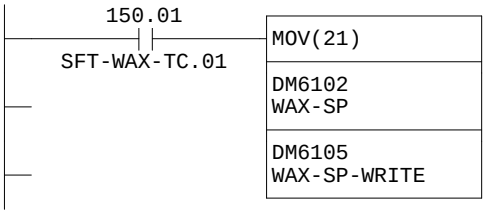


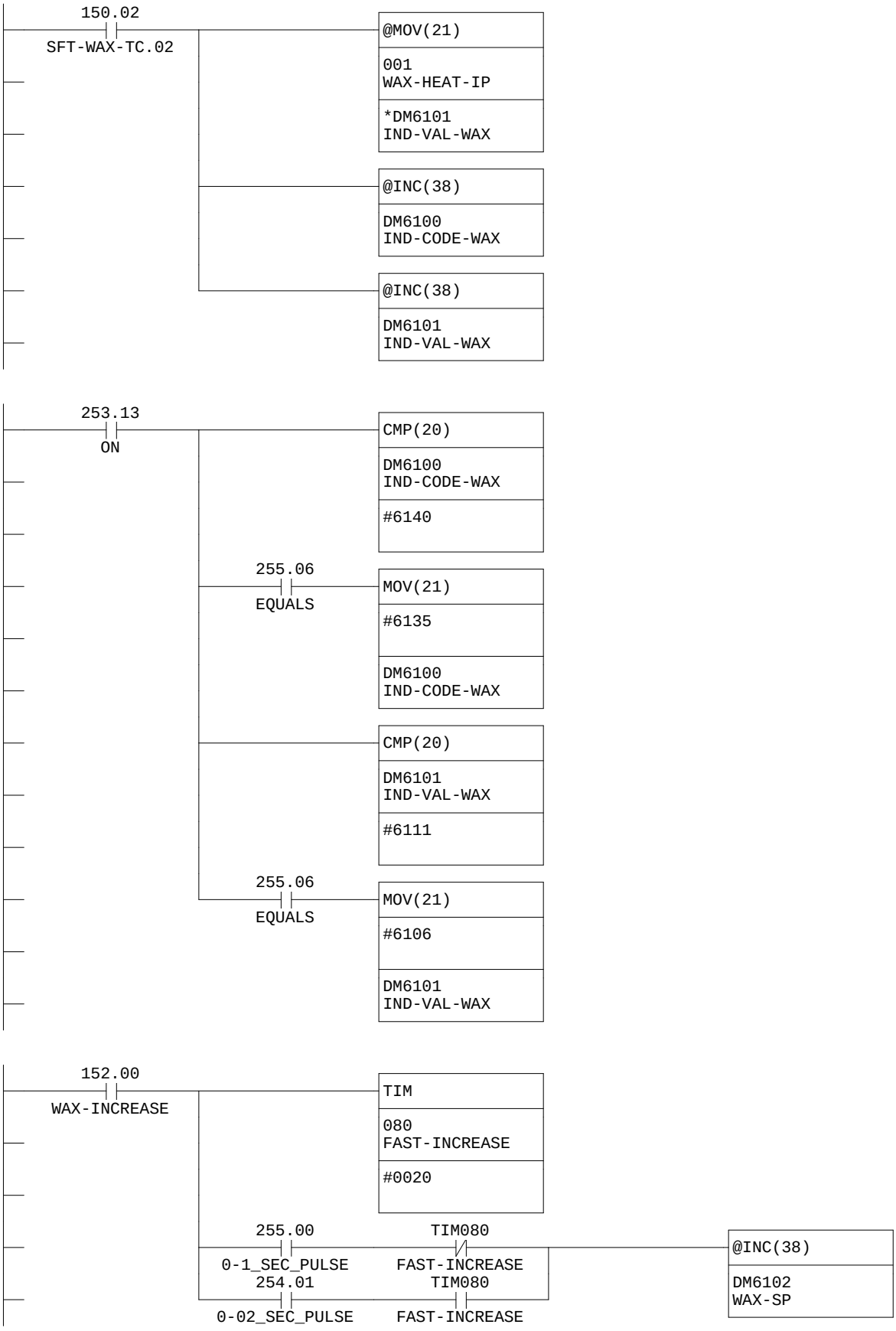

154.01
Wax-heat-ON/OFF
CMP(20)
#FFFF
001
WAX-HEAT-IP
255.06
EQUALS
152.15
WAX-HEAT-ON

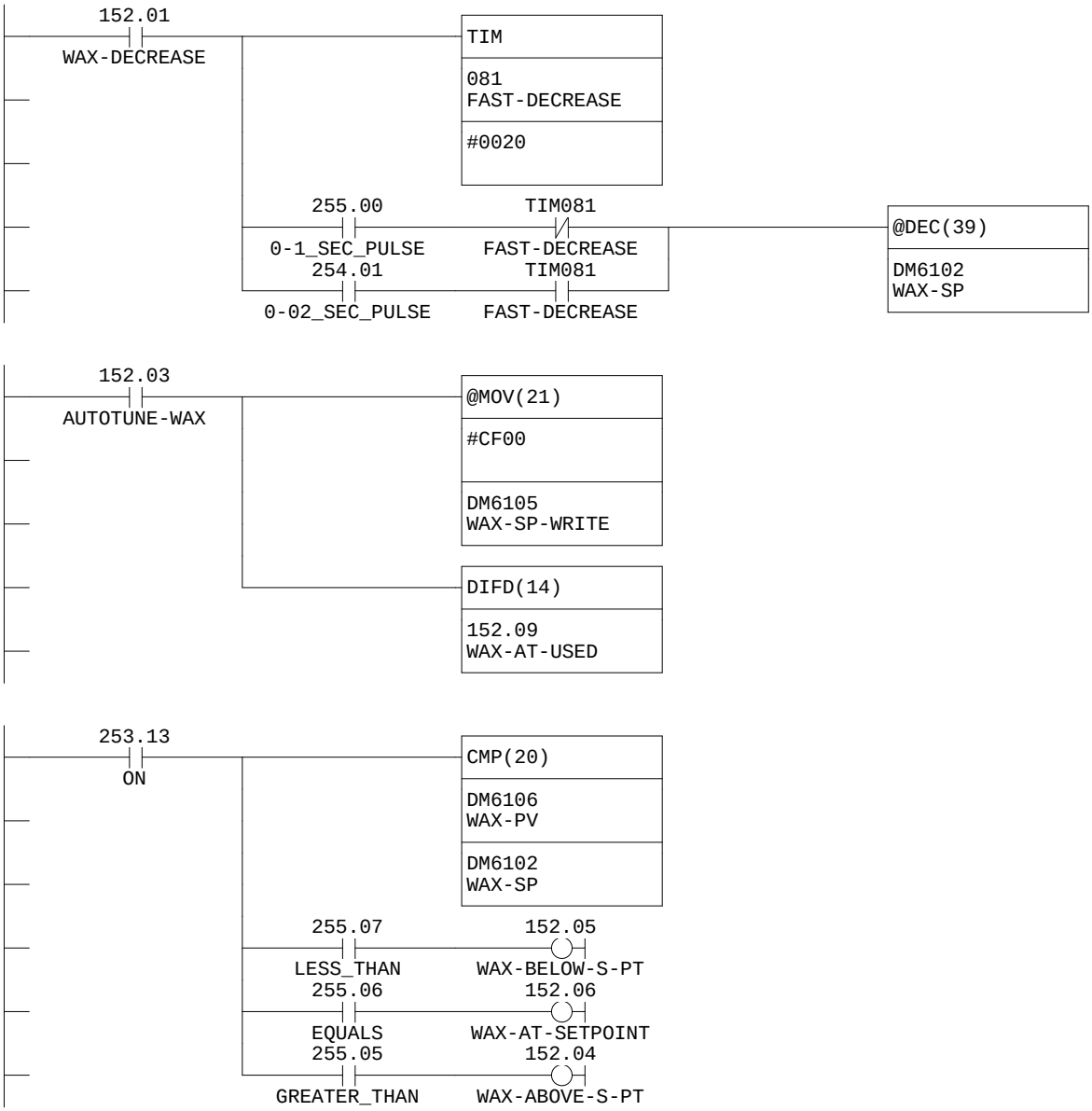

152.15
WAX-HEAT-ON
MOV(21)
DM6105
WAX-SP-WRITE
101
WAX-HEAT-OP
MOV(21)
DM6107
WAX-STATUS
151
STATUS-WAX

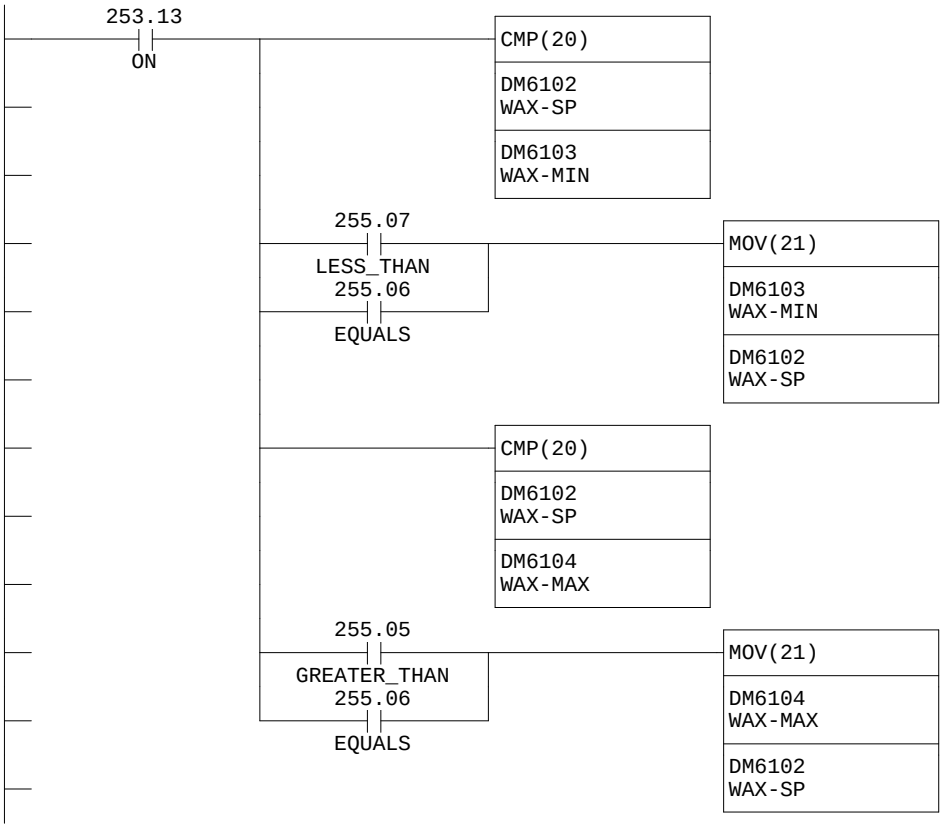

253.14
OFF
255.01
0-2_SEC_PULSE
253.14
OFF
SFT(10)
150
SFT-WAX-TC
150
SFT-WAX-TC


150.00
SFT-WAX-TC.00
@MOV(21)
*DM6100
IND-CODE-WAX
DM6105
WAX-SP-WRITE


150.01
SFT-WAX-TC.01
MOV(21)
DM6102
WAX-SP
DM6105
WAX-SP-WRITE


150.02
SFT-WAX-TC.02
@MOV(21)
001
WAX-HEAT-IP
*DM6101
IND-VAL-WAX
@INC(38)
DM6100
IND-CODE-WAX
@INC(38)
DM6101
IND-VAL-WAX
253.13
ON
CMP(20)
DM6100
IND-CODE-WAX
#6140
255.06
EQUALS
MOV(21)
#6135
DM6100
IND-CODE-WAX
CMP(20)
DM6101
IND-VAL-WAX
#6111
255.06
EQUALS
MOV(21)
#6106
DM6101
IND-VAL-WAX
152.00
WAX-INCREASE
TIM
080
FAST-INCREASE
#0020
255.00
0-1_SEC_PULSE
TIM080
FAST-INCREASE
254.01
0-02_SEC_PULSE
TIM080
FAST-INCREASE
@INC(38)
DM6102
WAX-SP


152.01
WAX-DECREASE
TIM
081
FAST-DECREASE
#0020
255.00
0-1_SEC_PULSE
TIM081
FAST-DECREASE
254.01
0-02_SEC_PULSE
TIM081
FAST-DECREASE
@DEC(39)
DM6102
WAX-SP
152.03
AUTOTUNE-WAX
@MOV(21)
#CF00
DM6105
WAX-SP-WRITE
DIFD(14)
152.09
WAX-AT-USED
253.13
ON
CMP(20)
DM6106
WAX-PV
DM6102
WAX-SP
255.07
LESS_THAN
152.05
WAX-BELOW-S-PT
255.06
EQUALS
152.06
WAX-AT-SETPOINT
255.05
GREATER_THAN
152.04
WAX-ABOVE-S-PT

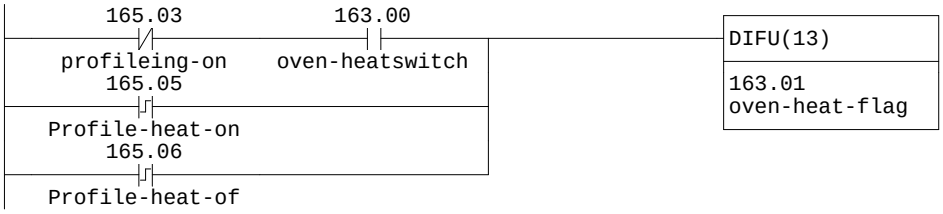


Main 28 - Oven-sw-init

This block controls the Oven Temperature loop setting and display for the on and off states

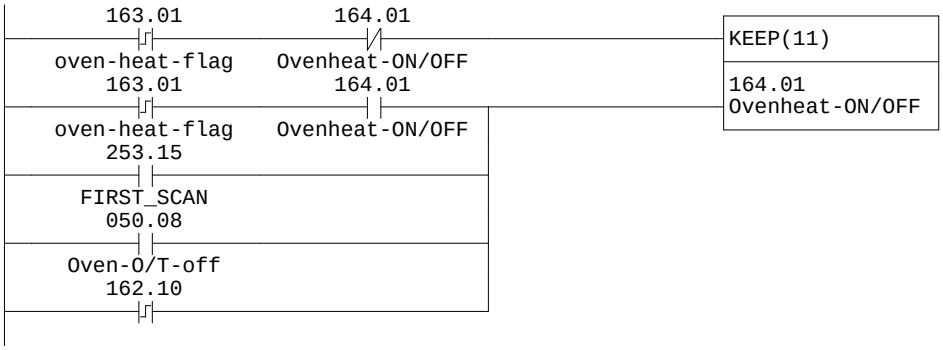
Network 1 - Heat/sw strobe

Gives a single pulse when the Oven heat switch on the NT is pressed



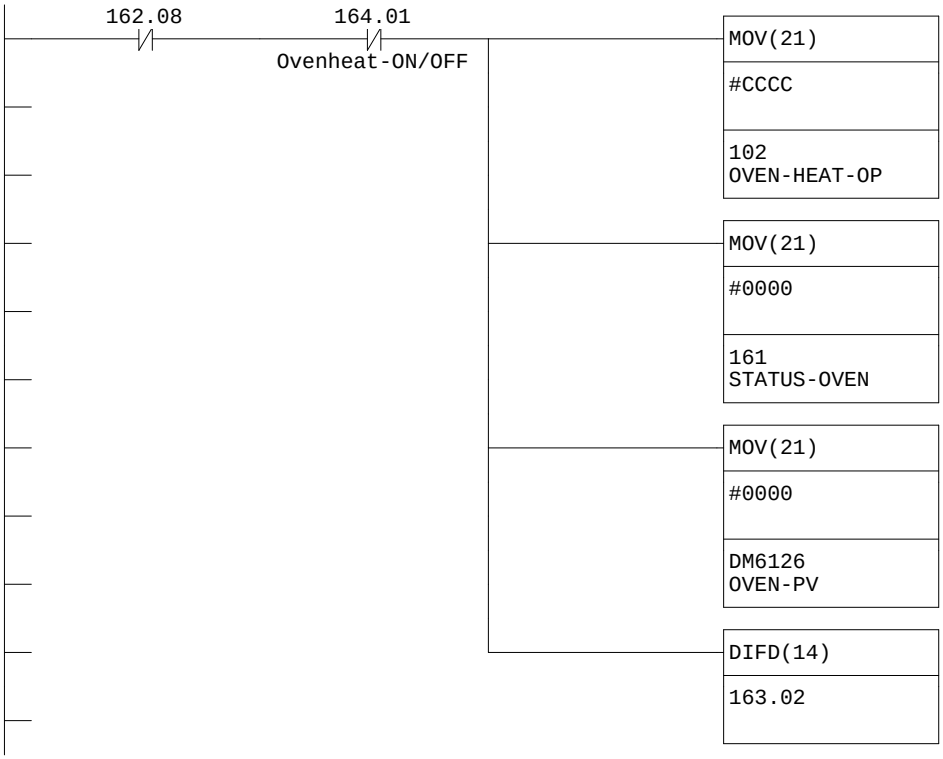
Network 2 - Heat/sw toggle

Uses the heatswitch puse to toggle bit 154.01 on & off. Furst scan sets the heat to off position

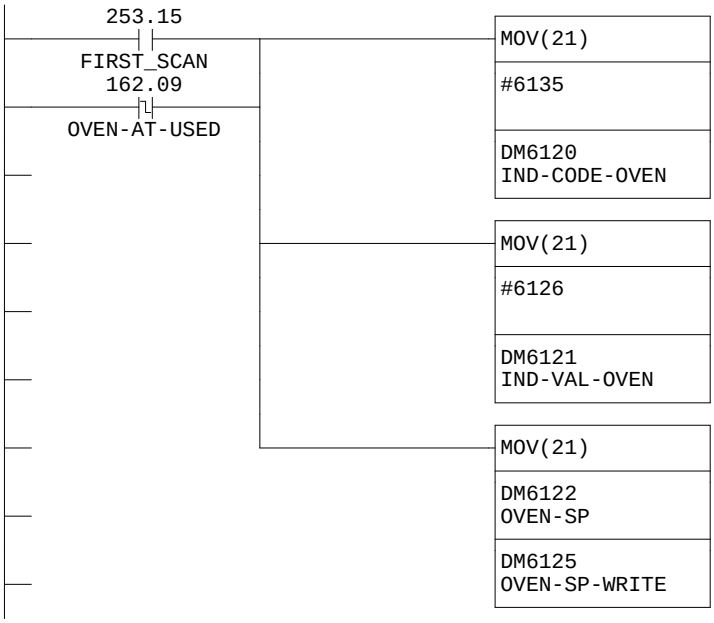


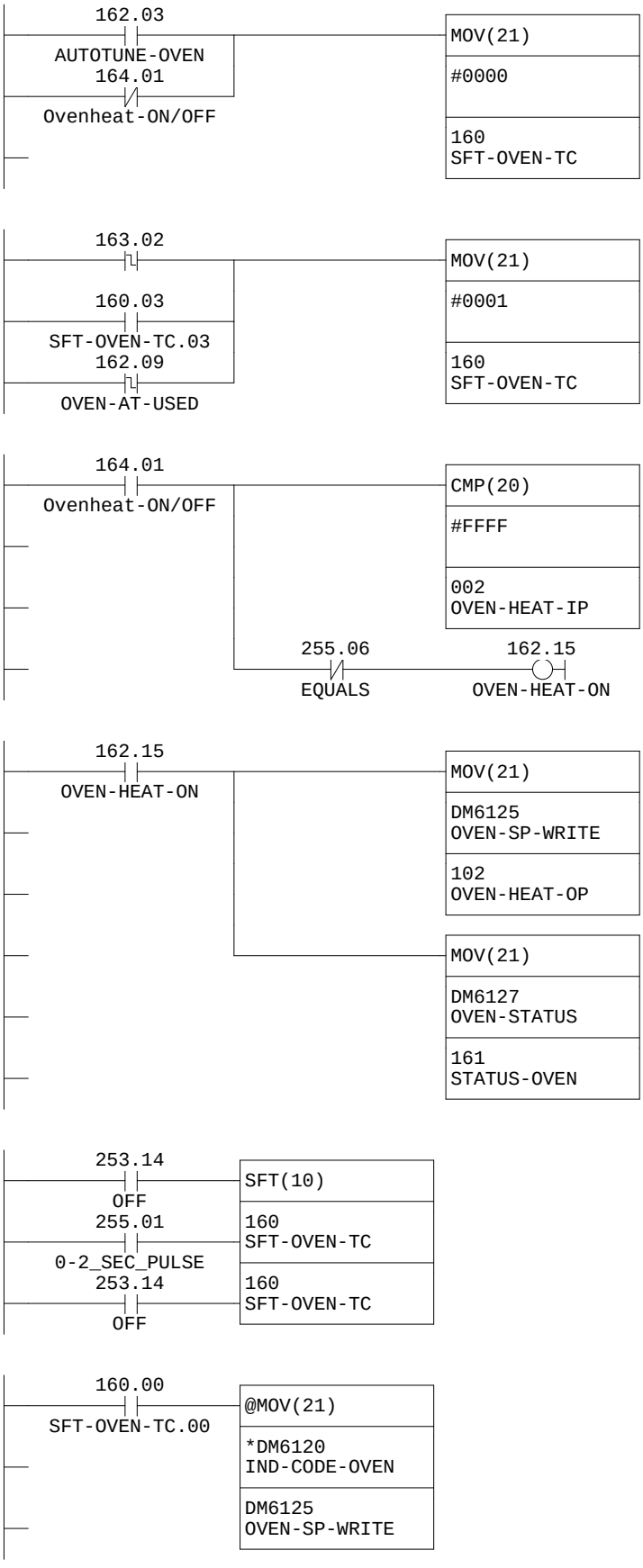
Network 3 - Heat off seting

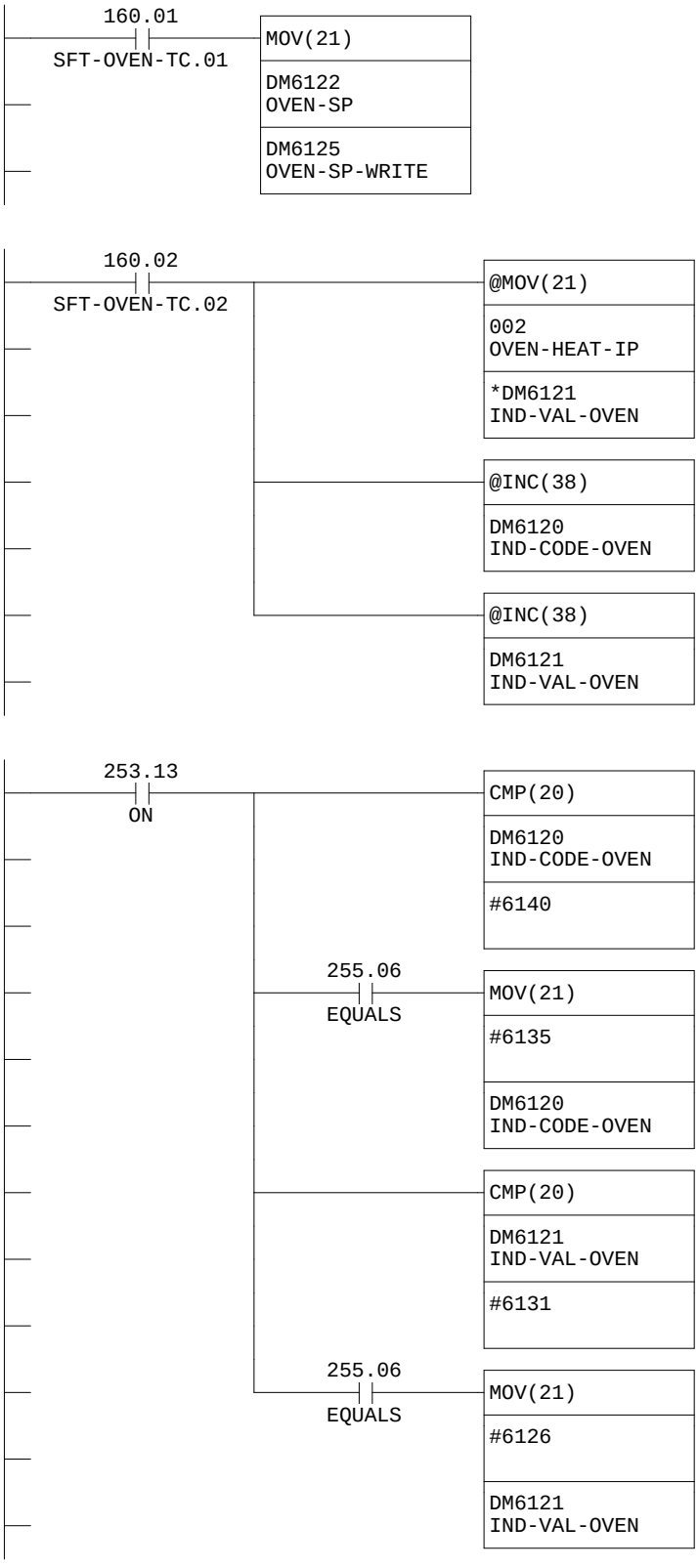
When the heat switch is toggled off then #CCCC stops the temperature controller from working. This block also sets the PV to display Zero and the staus bits to off.
Bit 163.02 is used to initiate the Shift register for the Oven temperature control loop read cycle.

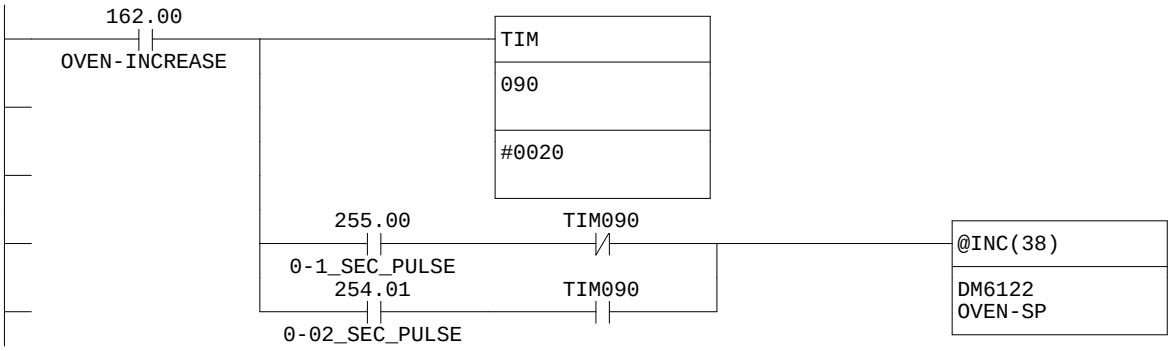


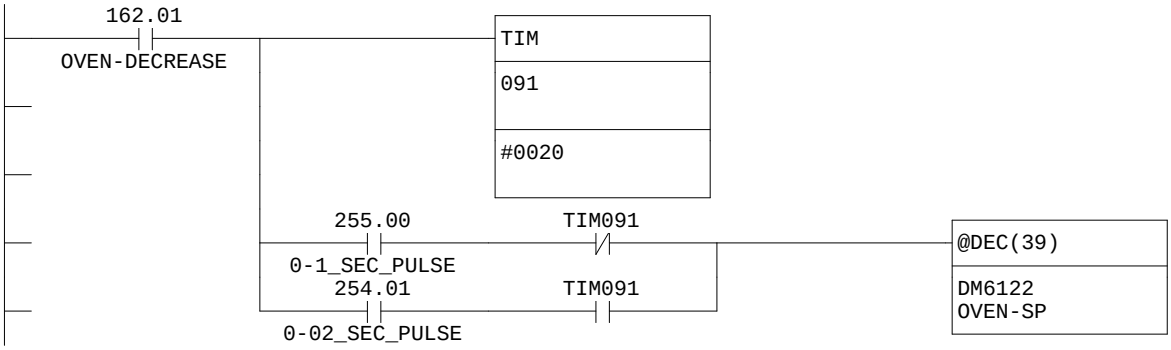
Main 29 - Oven-temp-cont

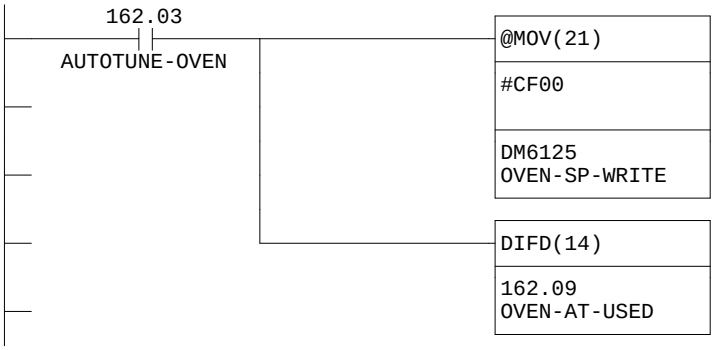


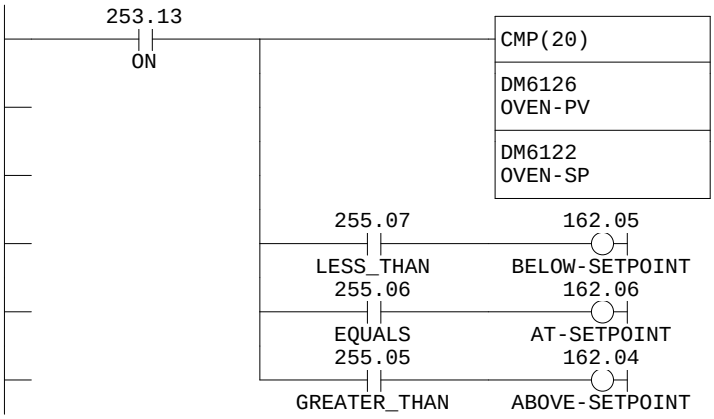

162.03
AUTOTUNE-OVEN
164.01
Ovenheat-ON/OFF
MOV(21)
#0000
160
SFT-OVEN-TC
163.02
160.03
SFT-OVEN-TC.03
162.09
OVEN-AT-USED
MOV(21)
#0001
160
SFT-OVEN-TC
164.01
Ovenheat-ON/OFF
CMP(20)
#FFFF
002
OVEN-HEAT-IP
255.06
EQUALS
162.15
OVEN-HEAT-ON
162.15
OVEN-HEAT-ON
MOV(21)
DM6125
OVEN-SP-WRITE
102
OVEN-HEAT-OP
MOV(21)
DM6127
OVEN-STATUS
161
STATUS-OVEN
253.14
OFF
255.01
0-2_SEC_PULSE
253.14
OFF
SFT(10)
160
SFT-OVEN-TC
160
SFT-OVEN-TC
160.00
SFT-OVEN-TC.00
@MOV(21)
*DM6120
IND-CODE-OVEN
DM6125
OVEN-SP-WRITE

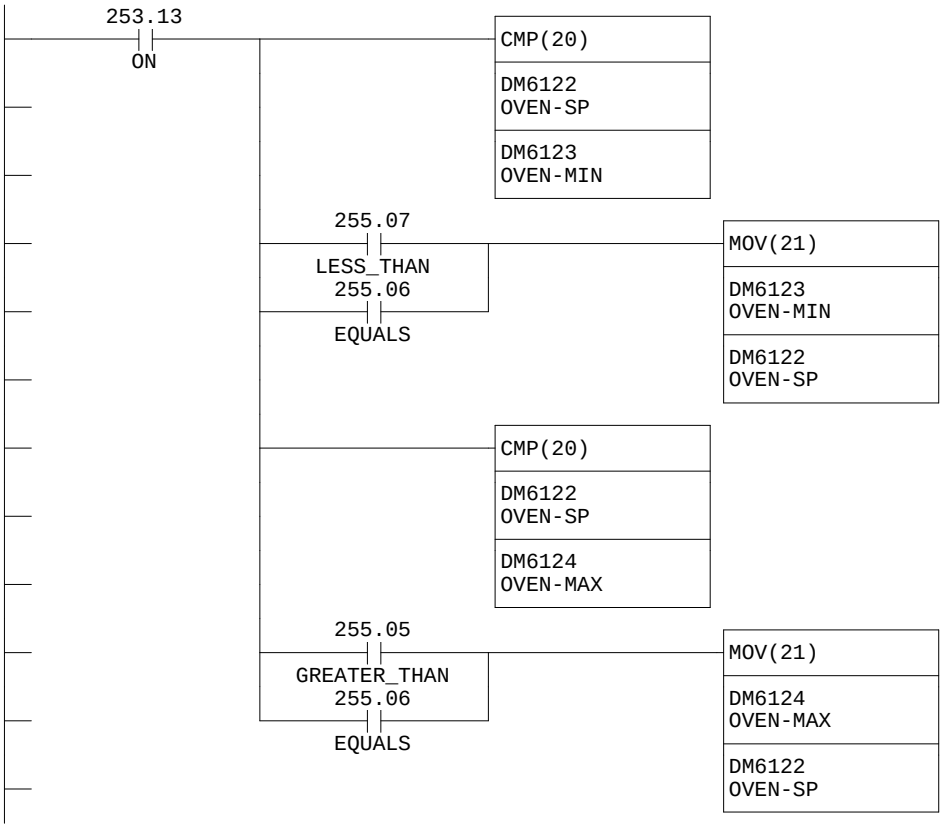

160.01
SFT-OVEN-TC.01
MOV(21)
DM6122
OVEN-SP
DM6125
OVEN-SP-WRITE
160.02
SFT-OVEN-TC.02
@MOV(21)
002
OVEN-HEAT-IP
*DM6121
IND-VAL-OVEN
@INC(38)
DM6120
IND-CODE-OVEN
@INC(38)
DM6121
IND-VAL-OVEN
253.13
ON
CMP(20)
DM6120
IND-CODE-OVEN
#6140
255.06
EQUALS
MOV(21)
#6135
DM6120
IND-CODE-OVEN
CMP(20)
DM6121
IND-VAL-OVEN
#6131
255.06
EQUALS
MOV(21)
#6126
DM6121
IND-VAL-OVEN


162.00
OVEN-INCREASE
TIM
090
#0020
255.00
0-1_SEC_PULSE
TIM090
254.01
0-02_SEC_PULSE
TIM090
@INC(38)
DM6122
OVEN-SP


162.01
OVEN-DECREASE
TIM
091
#0020
255.00
0-1_SEC_PULSE
TIM091
254.01
0-02_SEC_PULSE
TIM091
@DEC(39)
DM6122
OVEN-SP


162.03
AUTOTUNE-OVEN
@MOV(21)
#CF00
DM6125
OVEN-SP-WRITE
DIFD(14)
162.09
OVEN-AT-USED

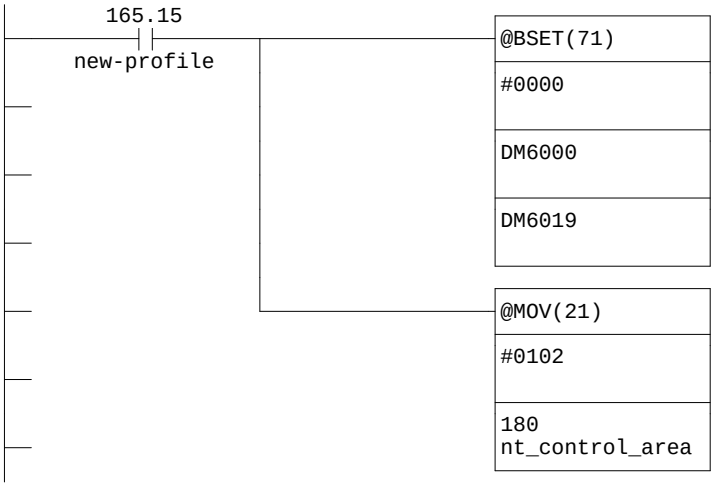

253.13
ON
CMP(20)
DM6126
OVEN-PV
DM6122
OVEN-SP
255.07
LESS_THAN
162.05
BELOW-SETPOINT
255.06
EQUALS
162.06
AT-SETPOINT
255.05
GREATER_THAN
162.04
ABOVE-SETPOINT



Main 30 - Oven-profiling

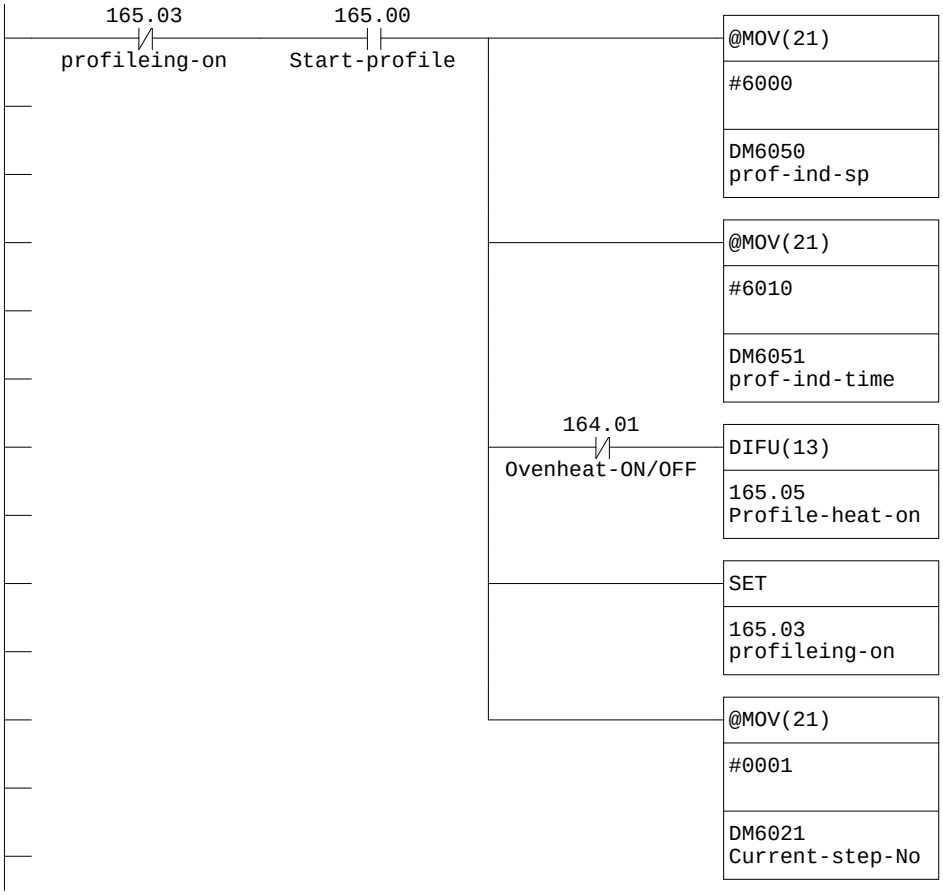
Network 1 - New profile

Resets all TEN set points and TEN dwell times to zero for a new program entry



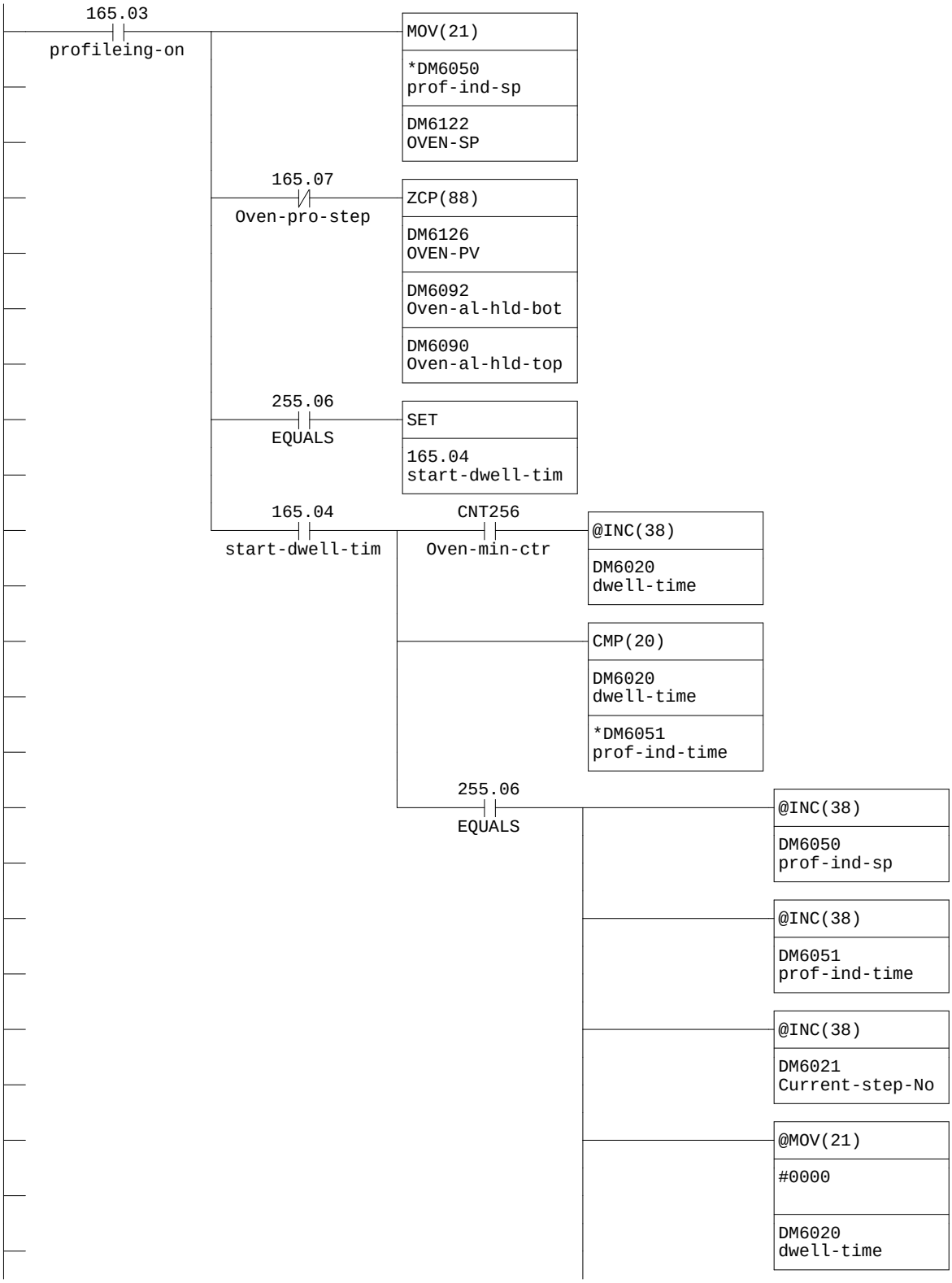
Network 2 - Start Profile

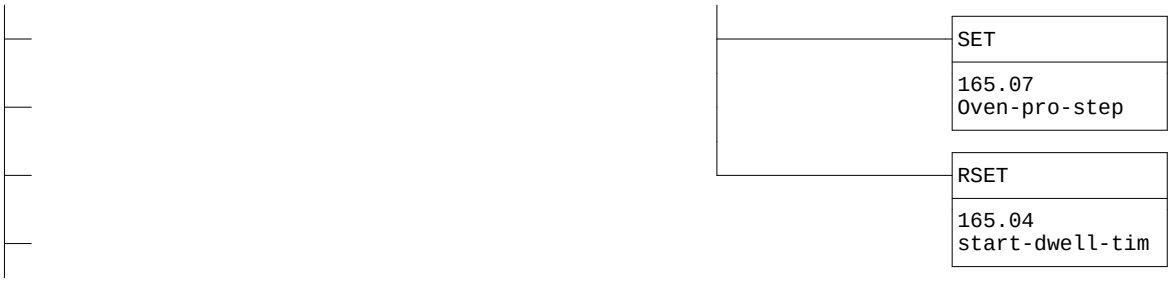
Initalises the indirect DM for the SP and dwell time to the Inatially desired values and sets the profiling flag (165.03) on.



Network 3 - Step Sequence

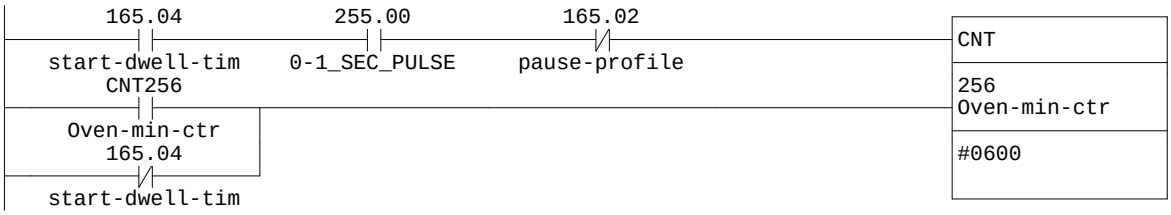
This block runs each profile step sequence:-
Compairs the PV to the desired temperature +/-2 degs, and then starts the dwell time for this segment, when complete resets the timer and steps to the next desired values.





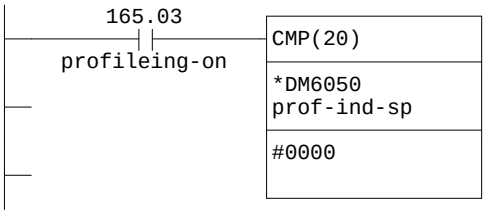
Network 4 - Minute-counter

Counter used to record 60 secs time elapsed.



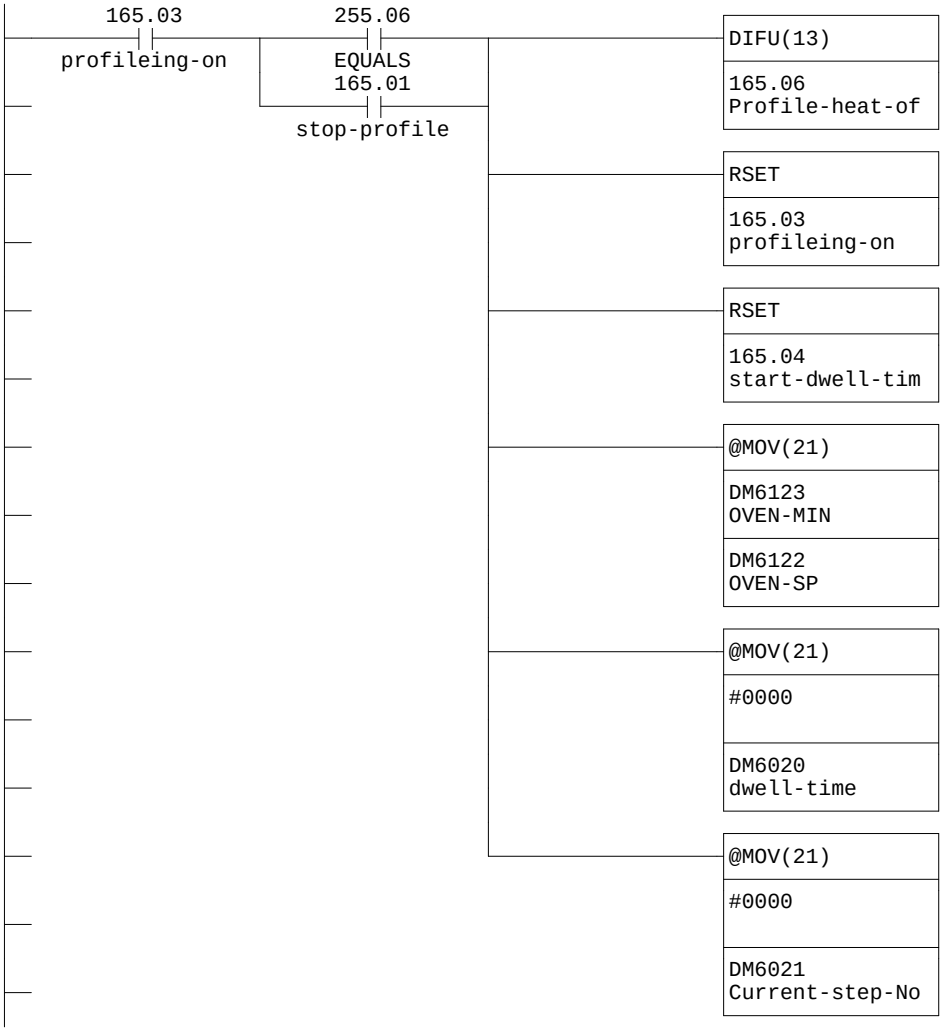
Network 5 - End profile

Compares the SP to #0000 ie:- This = end of profile.



Network 6 - Stop Profile

This effectivly stops the profiling sequence and sets the SP to the minimum value set on the SP limiting page.

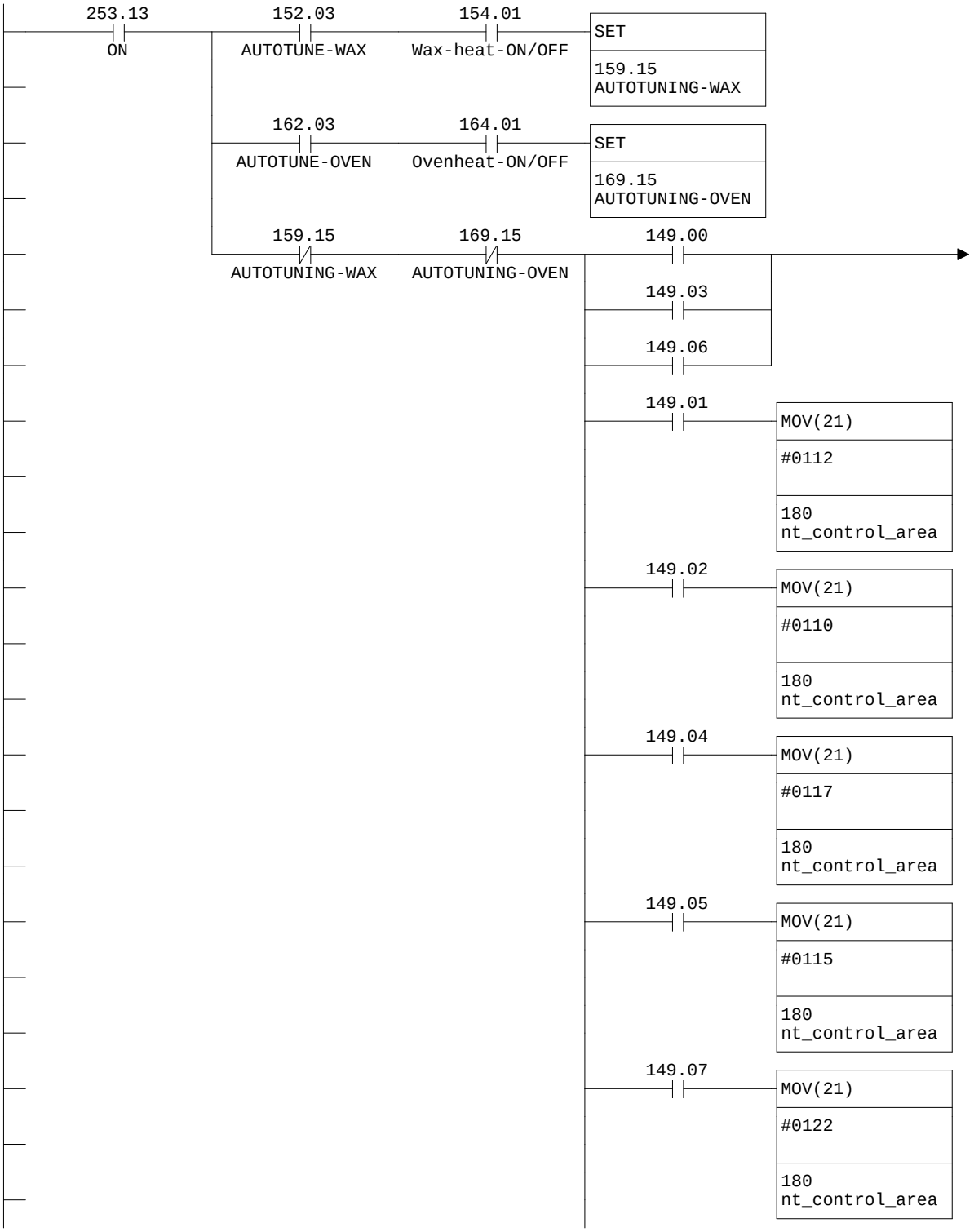


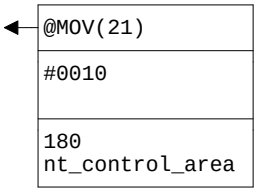
Main 31 - Advanced-Temp

Advanced functions for both temperature control loops.
Autotune and Input Shift.

Network 1 - Autotune-pg1

Autotune selected for either or both heating loops. This block keeps the Autotune page selected to prohibit other changes being made whilst Auto-tuning.
NOTE:- HEAT MUST BE SWITCHED ON TO ENABLE AUTOTUNE

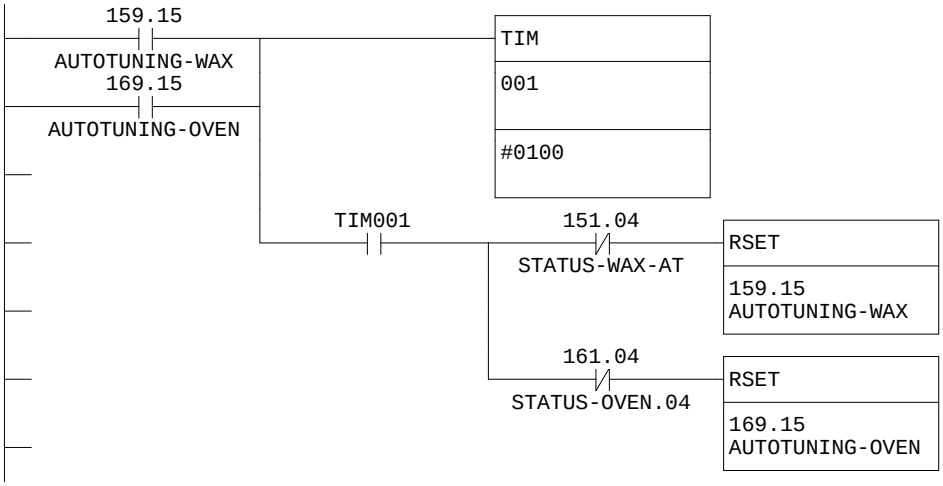



@MOV(21)
#0010
180
nt_control_area

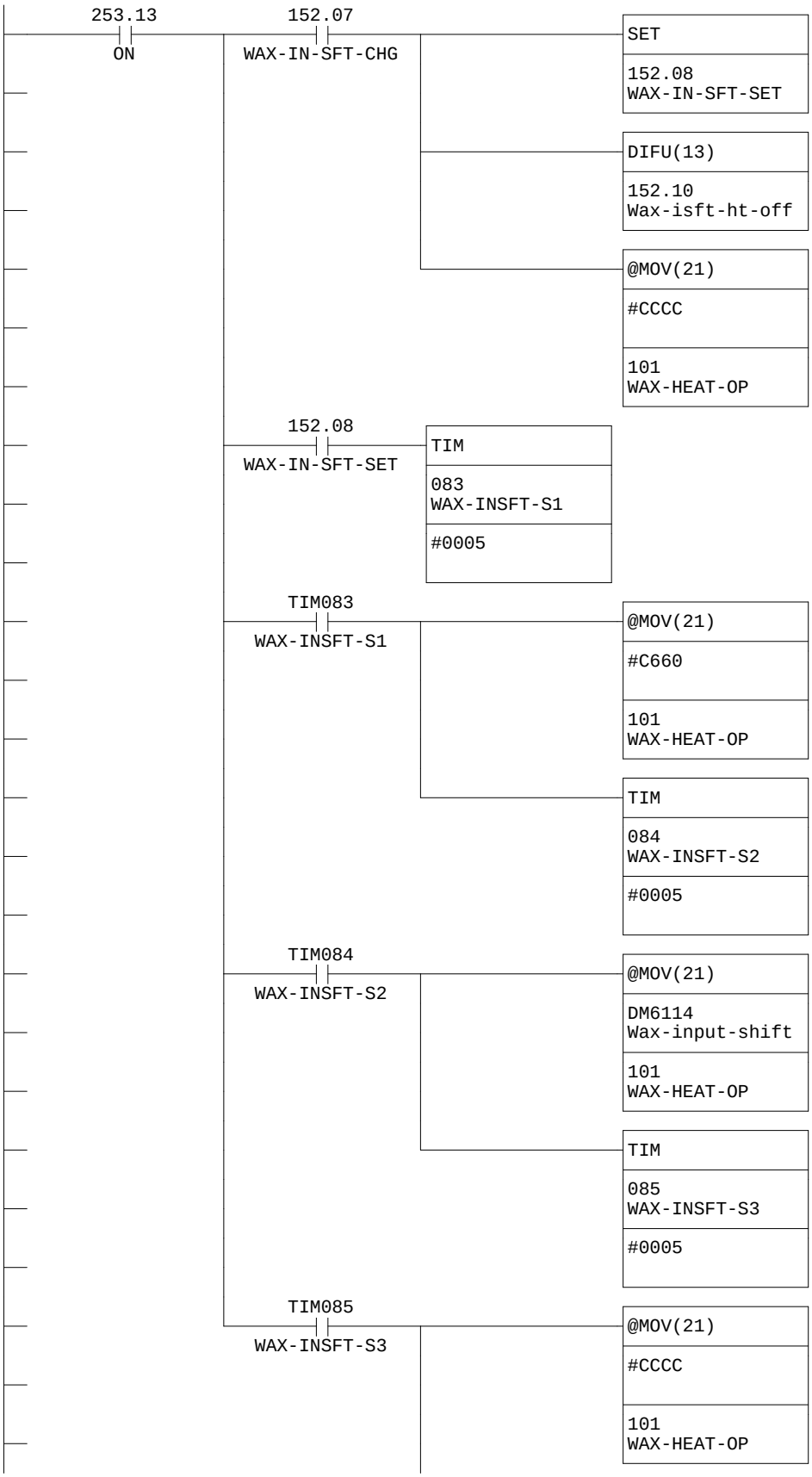

149.08
MOV(21)
#0120
180
nt_control_area

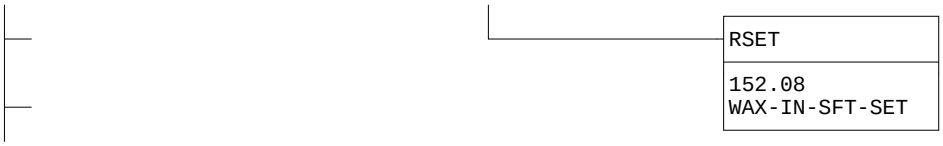
Network 2 - Autotune-pg2

This block gives a 10 sec delay to enable the Autotune flag to be set confirming that the Autotune is commencing. If this flag is not registered then the screen lock (above) will be released.

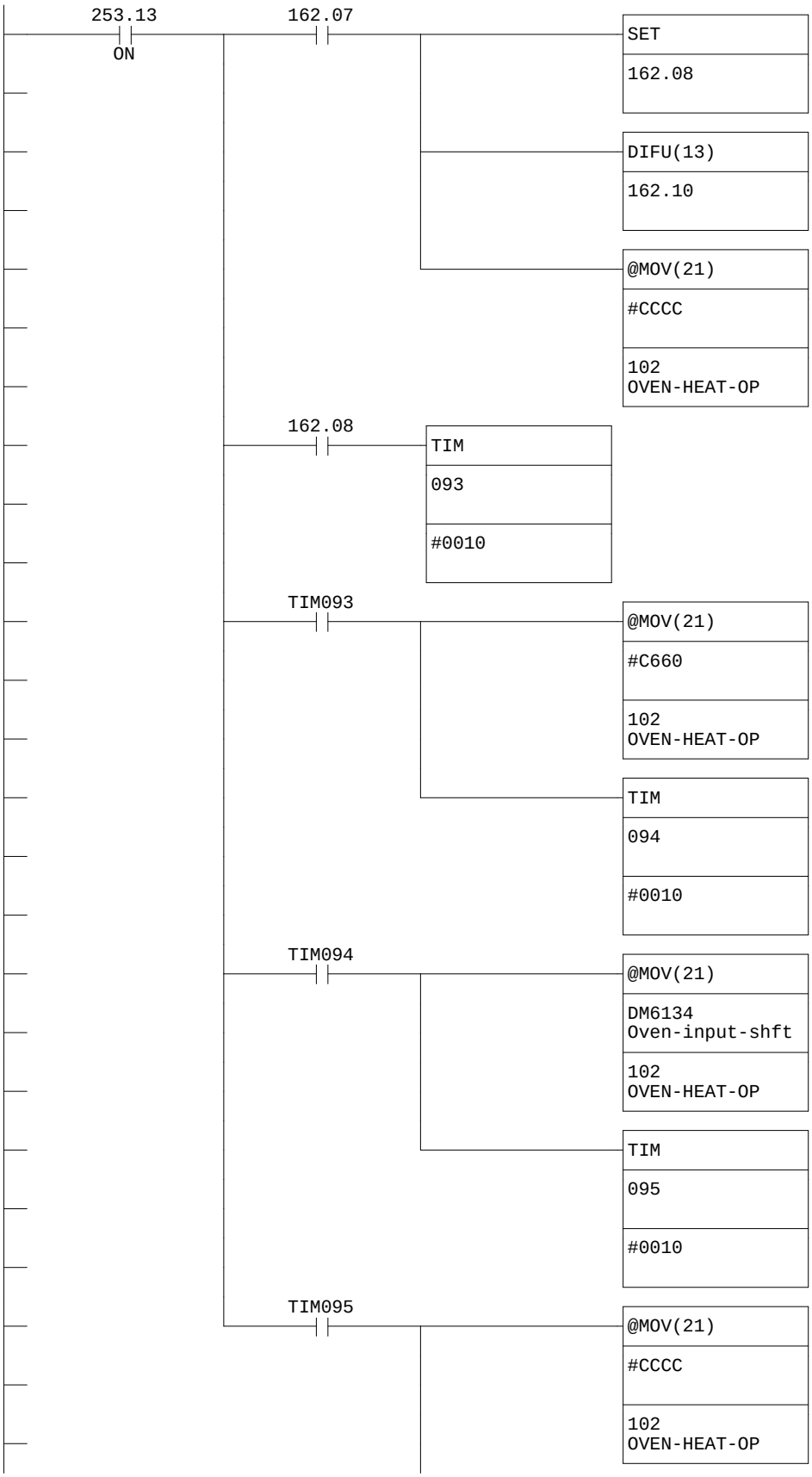


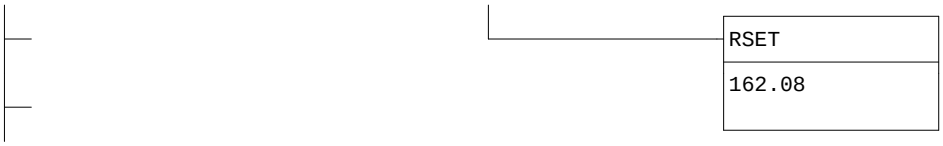
Network 3 - Input shift wax




RSET
152.08
WAX-IN-SFT-SET

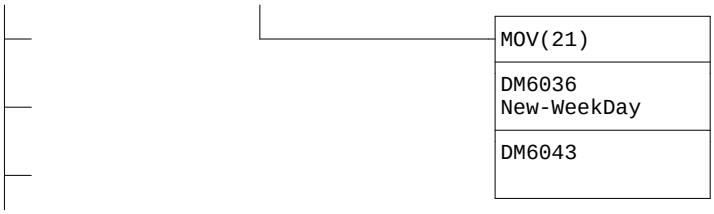
Network 4 - Input shift ovn



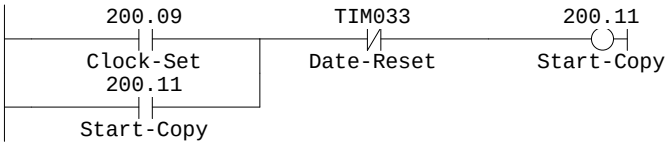

RSET
162.08

Main 32 - Clock set

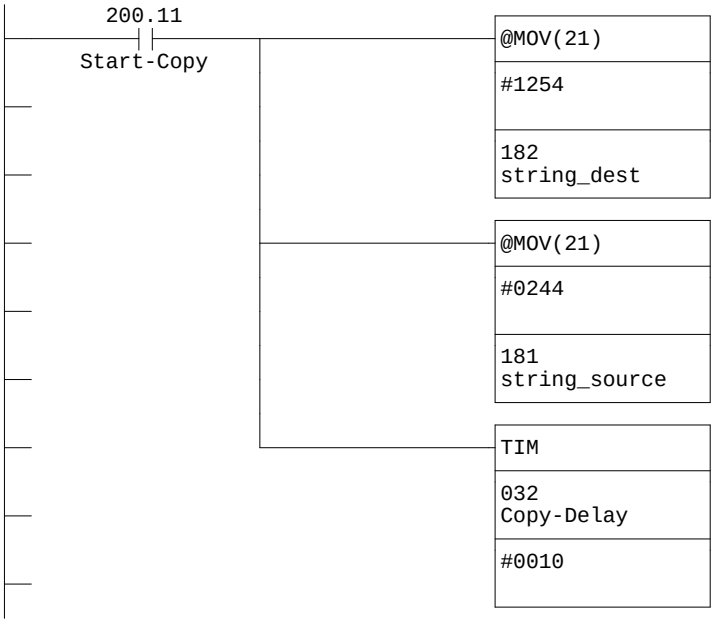
Network 1 - NT Clock set 1



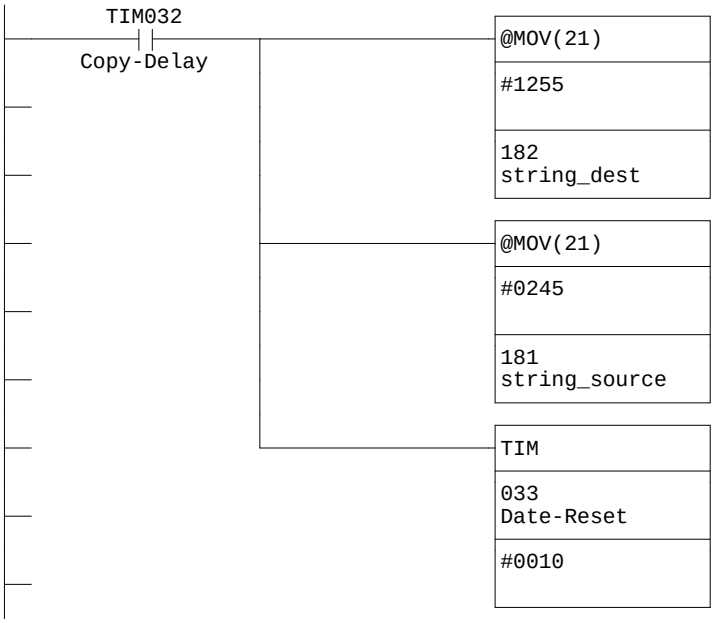
Network 2 - NT Clock set 2

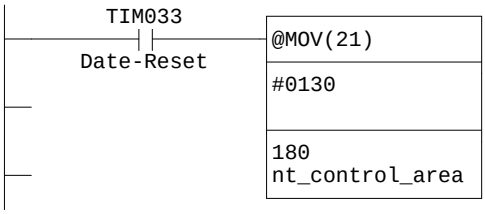


Network 3 - NT Clock set 3

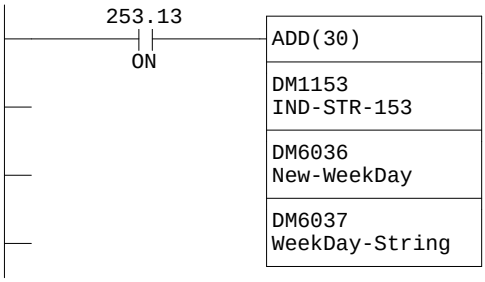


Network 4 - NT Clock set 4

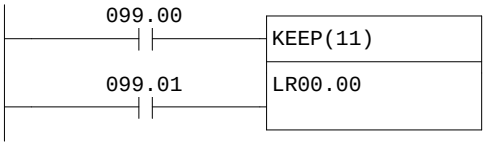


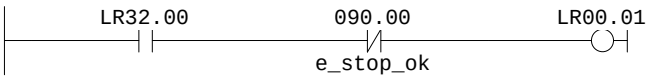


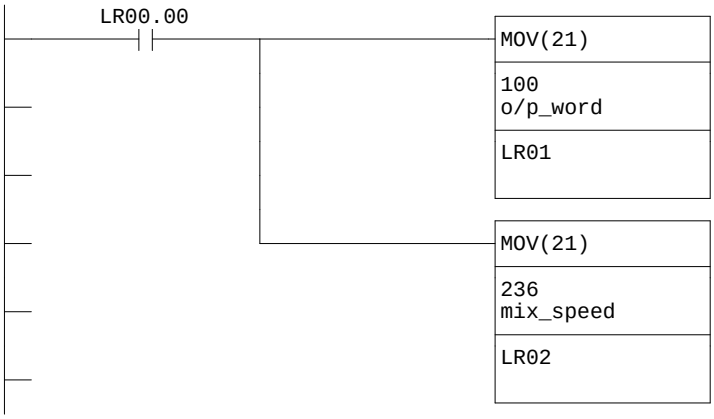
Network 6 - NT Clock Set 5

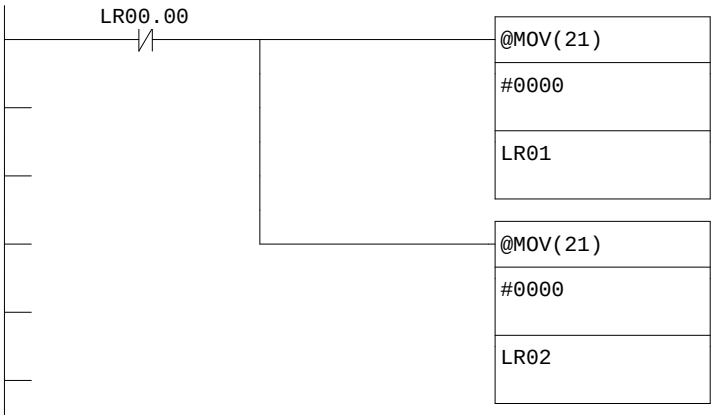


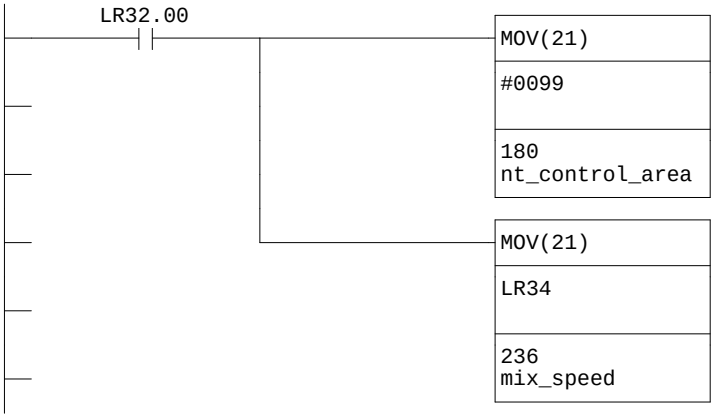
Main 33 - LINK-CONTROL

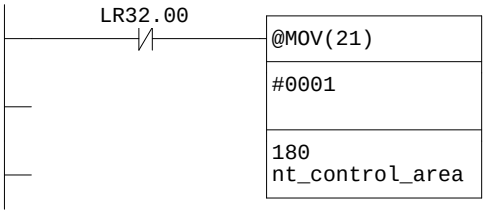


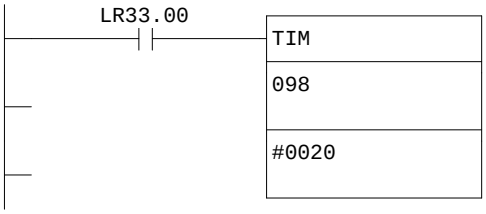



LR00.00
MOV(21)
100
o/p_word
LR01
MOV(21)
236
mix_speed
LR02

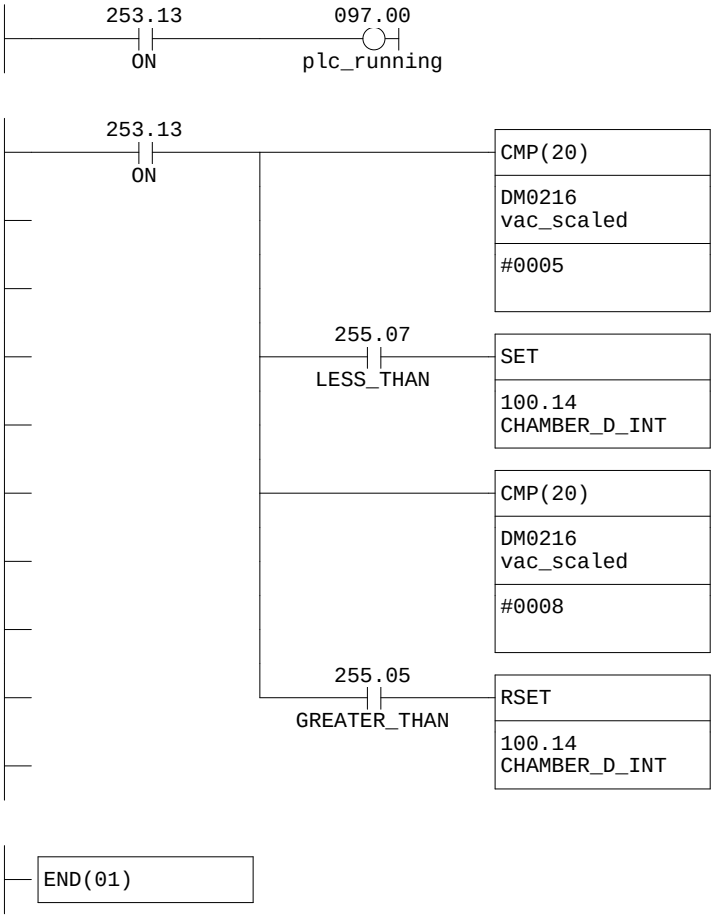

LR00.00
@MOV(21)
#0000
LR01
@MOV(21)
#0000
LR02


LR32.00
MOV(21)
#0099
180
nt_control_area
MOV(21)
LR34
236
mix_speed


LR32.00
@MOV(21)
#0001
180
nt_control_area


LR33.00
TIM
098
#0020

Main 34 - End


253.13
ON
097.00
plc_running
253.13
ON
CMP(20)
DM0216
vac_scaled
#0005
255.07
LESS_THAN
SET
100.14
CHAMBER_D_INT
CMP(20)
DM0216
vac_scaled
#0008
255.05
GREATER_THAN
RSET
100.14
CHAMBER_D_INT
END(01)

Startup Processing
    Startup Mode : MONITOR
    IOM Hold Bit Status : Reset
    Forced Status Hold Bit : Reset

Cycle Time Settings
    RS232C Port Service Time : Disabled
    Peripheral Port Service Time : Disabled
    Word for Pulse Output : IR0
    Cycle Monitor Time : Fixed at 120 ms
    Scan Time : Variable

Error Settings
    Detect long cycles
    Detect low battery voltage

Peripheral Port Settings
    Use Default 9600,7,E,2
    Communications Mode : Host link
    Start code : Disabled
    End code : Number of bytes received : 256
    Transmission delay (*10ms) : 0
    Node number : 0

RS232C Port Settings
    Use Default 9600,7,E,2
    Communications Mode : 1-to-1 NT link
    Words linked for 1:1 link : LR 00 to LR 63
    Start code : Disabled
    End code : Number of bytes received : 256
    Transmission delay (*10ms) : 0
    Node number : 0